Lower Duwamish Waterway

NPDES Inspection Sampling Support 2014/2015

Prepared for

Toxics Cleanup Program
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Appendix R
Boeing Developmental Center

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This report is intended to be used in its entirety. Taking or using in any way excerpts from this report are not permitted and any party doing so does so at its own risk.

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R-1 Introduction and Background

Facility Name	Boeing Developmental Center
Facility/Site ID	2101
Address	9725 East Marginal Way S Tukwila, WA 98108-4040
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR000146
Permit Monitoring Requirements	Turbidity, pH, total zinc, total copper, petroleum–oil, grease
SIC Code	3728: Aircraft Parts and Equipment
Inspection Date	December 2, 3, 15, and 22, 2014
Grab Samples	6 water samples; 4 solids samples
Sample ID(s)	BD-OWS-02-20141203-W BD-MH-5.16-20141215-W BD-MH-11.31-20141215-W BD-MH-1.32-20141222-W BD-OWS-14-20141222-W BD-MH-12.56-20141222-W BD-MH-9.66-20141203-S BD-MH-10.9-20141203-S BD-MH-13.43-20141202-S BD-OWS-15-20141203-S
Water Sample Analytes	Total metals, mercury, PCB congeners, dioxins/furans, SVOCs, alkalinity/carbonate/bicarbonate, anions, specific conductance, pH, TOC, DOC, TSS
Solids Sample Analytes	Total metals, mercury, PCB Aroclors, PCB congeners, dioxins/furans, SVOCs, VOCs, TPH-diesel/motor oil, TPH-gasoline, grain size, TOC
Split Samples with Facility	Yes

The Boeing Developmental Center conducts manufacturing, assembly, and testing of aerospace components. The property is made up of engineering and research laboratories, tool fabrication facilities, painting operations and limited machining operations on-site. The site consists of 174 acres, approximately 54 percent of which is owned by Boeing. The entire site is covered under the National Pollutant Discharge Elimination System (NPDES) stormwater permit. Over 40 designated buildings are located on the site; with the largest being the 9-101 manufacturing building. Activities at the site include manufacturing, fabrication, composite material assembly, painting and other plant activities. The majority of the site consists of developed parking, storage areas, and transportation lanes. There are a large garbage compactor for solid waste disposal and hauls for recyclable cardboard adjacent to the parking area. The compactor is located on a decant

station pad that conveys runoff to the sanitary sewer (Boeing 2011). An overview of the facility is presented in Figure R-1.

R-1.1 Stormwater Conveyance

Stormwater from Boeing Developmental Center is collected by a conventional storm sewer system with catch basins, oil/water separators, and associated piping. Essentially all of the stormwater collected by this system is discharged to the Lower Duwamish Waterway (LDW) via 18 outfalls located on the western banks of the facility. There are nine main stormwater conveyance lines and thirteen in-line oil/water separators at the facility. Smaller site drainage areas are not serviced with oil/water separators and discharge directly into the LDW. Of the thirteen oil/water separators at the facility, twelve (12) are baffle-type oil/water separators. The thirteenth is a venturi style sediment separator designated as DC2S, located in the transportation lane southeast of the 9-140 building (Boeing 2011). A facility drainage map is presented in Figure R-1.

R-1.2 Recent Compliance History

In 2011, the Boeing Developmental Center triggered Level 2 and Level 3 Corrective Actions for copper and zinc, respectively. On November 13, 2012, Ecology issued Administrative Order #9597 to the Boeing Developmental Center granting the facility a time extension to implement the corrective actions (Ecology 2012). Boeing implemented best management practices including storing stock metal materials indoors, increased street sweeping, and a source identification study for copper and zinc (Boeing 2013).

Based on available discharge monitoring reports, Boeing Developmental Center exceeded benchmarks for zinc during the 1st quarter of 2015 at DC5 and during the 3rd quarter of 2014 at DC1, DC5, and DC2 (Ecology 2015).

R-2 Inspection and Sampling

R-2.1 December 2014 Stormwater Compliance Inspection

In December 2014, Ecology conducted a stormwater compliance inspection at the Boeing Developmental Center. Leidos assisted Ecology with inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at drainage structures, preparing written and photographic documentation, and assessing whether the drainage structures contained sufficient sampleable material. The coordinates of sample locations are plotted on Figure R-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments R-1 and R-2, respectively.

The field team inspected the following stormwater conveyance structures at the Boeing Developmental Center, as shown on Figure R-2 (structures where samples were collected are shown in bold):

- **Oil/water separator 15 (BD-OWS-15)**
- **Oil/water separator 14 (BD-OWS-14)**
- **Oil/water separator 02 (BD-OWS-02)**
- Manhole 14.25 (BD-MH-14.25)
- Manhole 14.27 (BD-MH-14.27)
- **Manhole 13.43 (BD-MH-13.43)**
- Manhole 12.58 (BD-MH-12.58)
- **Manhole 12.56 (BD-MH-12.56)**
- **Manhole 11.31 (BD-MH-11.31)**
- **Manhole 10.9 (BD-MH-10.9)**
- **Manhole 9.66 (BD-MH-9.66)**
- **Manhole 5.16 (BD-MH-5.16)**
- Manhole 2.18 (BD-MH-2.18)
- **Manhole 1.32 (BD-MH-1.32).**

Locations BD-OWS-02, BD-OWS-14, BD-MH-12.56, BD-MH-11.31, BD-MH-5.16, and BD-MH-1.32 contained sufficient water to collect a water grab sample. Locations BD-OWS-15, BD-MH-13.43, BD-MH-10.9, and BD-MH-9.66 contained sufficient sampleable material to collect solids samples. Samples were collected in December over the course of four days (December 2, 3, 15, and 22).

R-2.2 Stormwater Conveyance System Sampling

Ecology collected six water samples and four solids samples from the stormwater conveyance system at the Boeing Developmental Center. Sample locations, analytes, and analytical methods are listed on Table R-1. Results for water samples are presented in Tables R-2 through R-6. Results for the solids samples are presented in Table R-7 through R-10. Chain of custody forms and the laboratory reports are provided as Attachments R-3 and R-4, respectively. Split sample results provided by the Boeing Developmental Centers are presented in Attachment R-5.

R-2.2.1 Water Sample

Water sample BD-OWS-14-20141222-W was collected from the influent chamber of OWS-14 (Figure R-2 and Attachment R-1). OWS-14 is located at the northwest area of the Boeing Developmental Center and receives stormwater from an area that drains the northwest parking lots and building 9-08. Stormwater is conveyed from OWS-14 to outfall DC14 to the LDW. The water had a yellowish-brown tinge and slight sheen was observed on the water surface during sample collection.

Water sample BD-MH-12.56-20141222-W was collected from MH-12.56 (Figure R-2 and Attachment R-1), which receives stormwater from a grassy area between parking lots in the west-northwest portion of the Boeing Developmental Center. MH-12.56 has the potential to be tidally influenced and has a channelized bottom structure. Stormwater is conveyed from MH-12.56 and discharges to the LDW via outfall DC12.

Water sample BD-MH-11.31-20141215-W was collected from MH-11.31 (Figure R-2 and Attachment R-1), which is located in the west-northwest area of the Boeing Developmental Center. MH-11.31 receives stormwater from an area that drains the west and northwest parking lots and building 9-99. Stormwater is conveyed from MH-11.31 to OWS-11, and then discharges to the LDW via outfall DC11.

Water sample BD-MH-5.16-20141215-W was collected from MH-5.16 (Figure R-2 and Attachment R-1), which is located near the southwest bank of the Boeing Developmental Center. MH-5.16 receives stormwater from an area that drains paved driveways and the roofs of buildings 9-80, 9-85, and 9-102. Stormwater is conveyed from MH-5.16 and discharges to the LDW via outfall DC5.

Water sample BD-OWS-02-20141203-W was collected from the effluent chamber of OWS-02 (Figure R-2 and Attachment R-1), which is located in the southwest area of the Boeing Developmental Center. OWS-02 receives stormwater from an area that drains the southeast side of building 9-101. Stormwater is conveyed from OWS-02 and discharges to the LDW via outfall DC-2.

Water sample BD-MH-1.32-20141222-W was collected from MH-1.32 (Figure R-2 and Attachment R-1), which is located in the southern area of the Boeing Developmental Center. MH-1.32 receives stormwater from an area that drains the southern parking lot. Stormwater is conveyed from 1.32M to OWS-01, and then discharges to the LDW via outfall DC1.

R-2.2.2 Solids Samples

Solids sample BD-OWS-15-20141203-S was collected from OWS-15 (Figure R-2 and Attachment R-1). The oil/water separator is located in the northern area of the facility and receives stormwater from an area that drains the northeast parking lots, buildings 9-07 and 9-77, and the Museum of Flight. Stormwater is conveyed from OWS-15 and discharges to the LDW via outfall DC15. The sample consisted of black silty/clay sediment with a strong petroleum odor.

Solids sample BD-MH-13.43-20141202-S was collected from manhole MH-13.43 (Figure R-2 and Attachment R-1), which is located in the west-northwest area of the Boeing Developmental Center. MH-13.43 receives stormwater from an area that drains the northwest and west parking lots and building 9-12. Stormwater is conveyed from MH-13.43 to OWS-13, and then discharges to the LDW via outfall DC-13. The sample consisted of black fine sandy sediment with a slight odor.

Solids sample BD-MH-10.9-20141203-S was collected from MH-10.9 (Figure R-2 and Attachment R-1), which is located in the west area of the Boeing Developmental Center. MH-10.9 receives stormwater from an area that drains the west parking lots and buildings 9-99 and 9-98. Stormwater is conveyed from MH-10.9 to OWS-10, and then discharges to the LDW via outfall DC10. During large flow events, stormwater is diverted from MH-10.9 to MH-10.6 and does not enter OWS-10. The solids sample from MH-10.9 consisted of dark gray coarse sandy, silty/clay sediment with no noticeable odor.

Solids sample BD-MH-9.66-20141203-S was collected from manhole MH-9.66 (Figure R-2 and Attachment R-1), which is located in the western area of the Boeing Developmental Center. MH-

9.66 receives stormwater from an area that drains a parking lot and building 9-96. Stormwater is conveyed from MH-9.66 to OWS-9, and then discharges to the LDW via outfall DC9. The sample consisted of gray coarse-to-medium sandy, gravel sediment with no detectable odor.

R-3 Results

R-3.1 Chemical Analysis

Ecology collected six water and four solids samples during the December 2014 stormwater compliance inspection at Boeing Developmental Center. Analytical methods, chemical results and regulatory criteria are presented in Tables R-1 through R-10.

All chemical results were independently validated by EcoChem, Inc. of Seattle, WA. A compliance-level, U.S. Environmental Protection Agency (EPA) Stage 2A data validation was performed on all chemistry results. Data validation was performed following EPA guidance (EPA 1994, 2008, 2009, 2010). The data validation report is available as Attachment 1 to the NPDES Inspection Sampling Support (2014/2015) Report (Leidos 2015).

The zinc concentration in water sample BD-OWS-02 exceeded the ISGP benchmark and the marine chronic and acute WA WQC. Total PCB congeners exceeded the marine chronic WA WQC in sample BD-OWS-02 and either the NTR or NR WQC (or both criteria) in all six water samples. Concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,23-cd)pyrene exceeded the NTR or NR WQC (or both criteria) in three samples (Table R-4).

Dry weight concentrations of the following chemicals exceeded the SMS/AET criteria or MTCA Method A cleanup levels in one or more solids sample.

- Metals: cadmium, mercury, silver, zinc,
- PCBs: total PCB Aroclors, total PCB congeners,
- PAHs: benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, total benzofluoranthenes, total HPAHs, and total LPAHs.
- TPH: diesel and motor oil-range hydrocarbons.

Total cPAHs in all four solids samples exceeded the LDW RAL. The dioxin/furan TEQ exceeded the LDW RAL in three solids samples (Table R-8). Organic carbon-normalized concentrations of the following chemicals in solids sample BD-MH-9.66 exceeded the SCO: bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and total PCB Aroclors. Bis(2-ethylhexyl)phthalate and total PCB Aroclor concentrations also exceeded the CSL (Table R-9).

R-3.2 Inspection Results and Permit Compliance Requirements

The Ecology inspection report was not available for review.

R-4 References

Boeing. 2011. Stormwater Pollution Prevention Plan, Boeing Developmental Center. Permit #WAR-000146. Prepared by The Boeing Company. January 2011.

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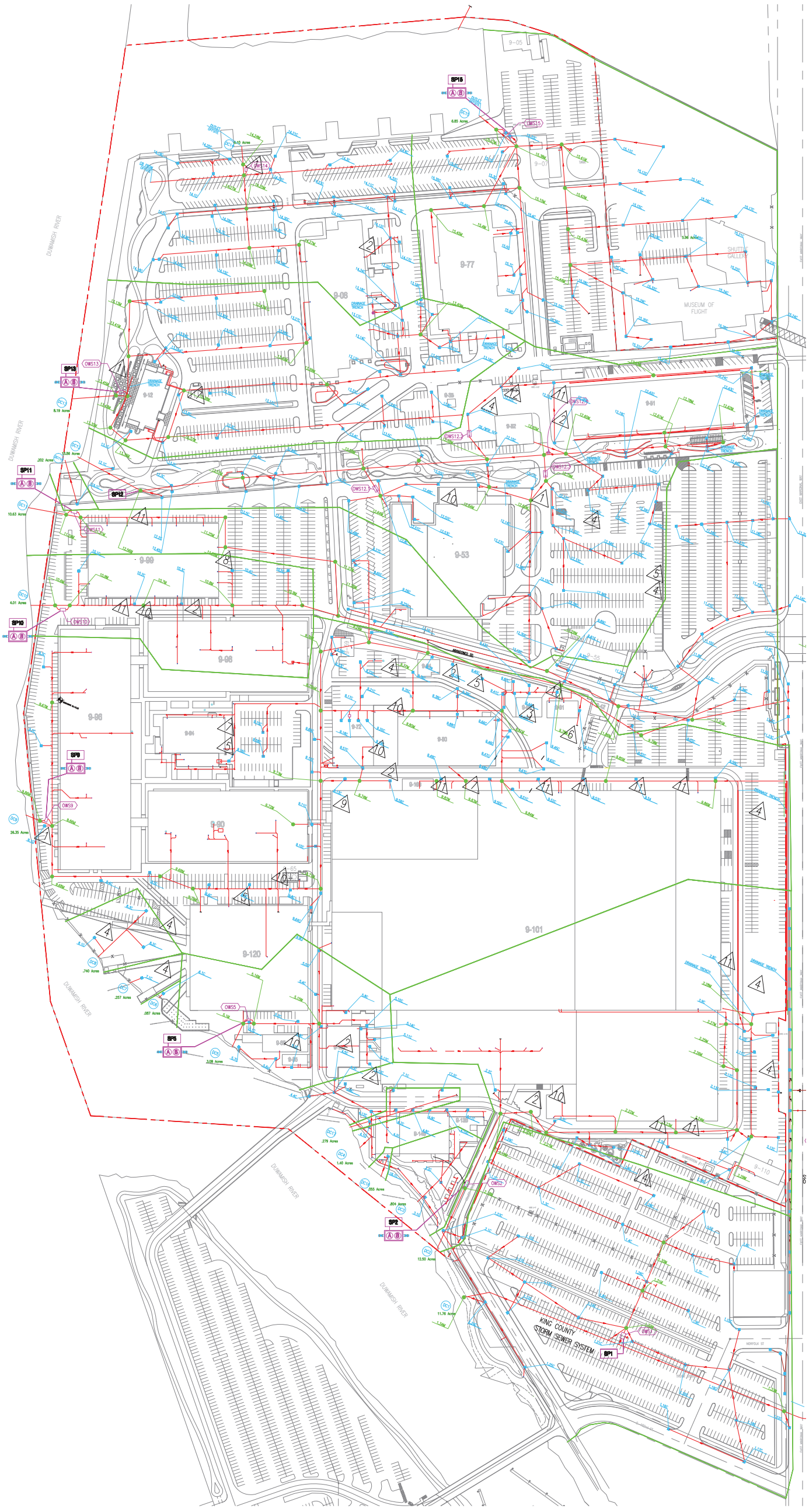
Figures

DEVELOPMENTAL CENTER STORMWATER DRAINAGE MAP



LEGEND:

- SAMPLE POINTS
- OUTFALL POINTS
- OIL/WATER SEPERATOR (STORM)
- CATCH BASINS
- MANHOLES
- STORM DRAINS
- DRAINAGE AREAS
- PROPERTY LINE
- FENCE LINE
- 2 OUTSIDE FUEL TANKS (NOT INCLUDING COMPRESSED GASES)
- 3 HAZARDOUS MATERIALS AND HAZARDOUS WASTE BUILDING.
- 4 EQUIPMENT STORAGE
- 5 SOLID WASTE CONTAINERS
- 6 DATA DESTROY, PAPER SHREDDER
- 7 CONTAINER, KITCHEN GREASE
- 8 OIL/WATER SEPARATOR, SANITARY
- 9 GROUND WATER PUMP AND TREAT
- 10 COOLING TOWERS
- 11 DUST COLLECTOR (OUTDOORS)
- 12 FUEL STATION

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Figure R-1. Boeing Developmental Center SWPPP Map

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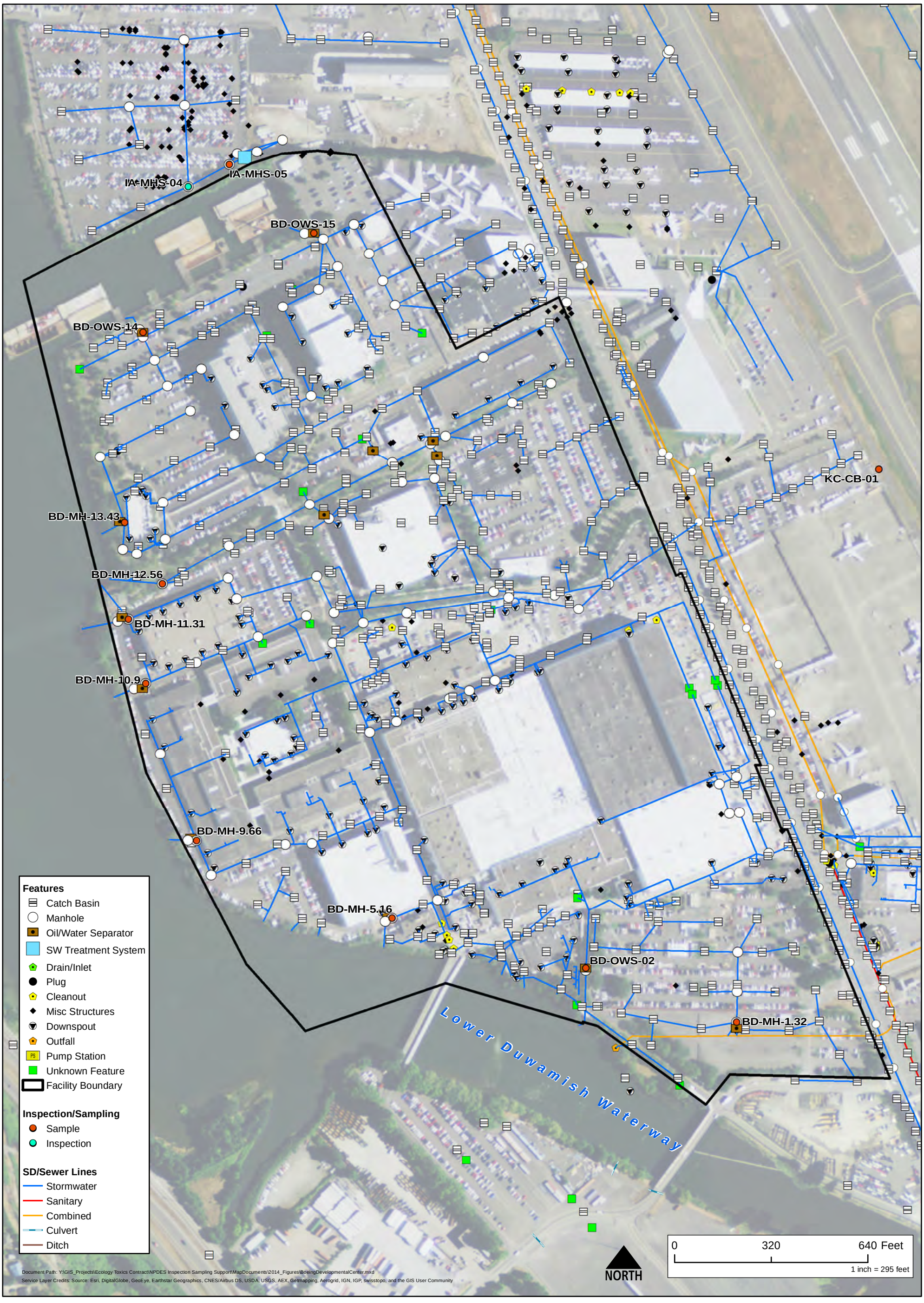

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Figure R-2. Boeing Developmental Center Inspection and Sampling Locations

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Tables

Acronyms and Abbreviations Used in Tables

<	not detected
%	percent
2LAET	Second Lowest Apparent Effects Threshold
$CaCO_3$	calcium carbonate
CB	chlorobiphenyl
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSL	Cleanup Screening Level
EF	exceedance factor (sample result / criteria value)
EMPC	estimated maximum possible concentration
EPA	U.S. Environmental Protection Agency
HHO	human health – consumption of organisms only
HPAH	high molecular weight polycyclic aromatic hydrocarbon
ICP-MS	Inductively coupled plasma – mass spectrometry
ISGP	Industrial Stormwater General Permit
J	estimated concentration
JN	estimated concentration
LAET	Lower Apparent Effects Threshold
LDW	Lower Duwamish Waterway
LPAH	low molecular weight polycyclic aromatic hydrocarbon
MA	marine acute
MC	marine chronic
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
MTCA	Model Toxics Control Act
na	not analyzed
nd	not detected

ng/kg	nanograms per kilogram
NPDES	National Pollutant Discharge Elimination System
NR WQC	National Recommended Water Quality Criteria
NTR WQC	National Toxics Rule Water Quality Criteria
NTU	Nephelometric Turbidity Units
OC	organic carbon
ORP	Oxidation Reduction Potential
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
pg/L	picograms per liter
PSEP	Puget Sound Estuary Program
R	rejected during data validation review
RAL	Remedial Action Level
RL	reporting limit
SCO	Sediment Cleanup Objective
SDL	sample detection limit
SIM	Selected ion monitoring
SMS	Washington State Sediment Management Standards
std units	standard units
SVOC	Semivolatile organic compound
SW	Surface water
TEQ	toxic equivalency
TPH	Total petroleum hydrocarbon
U	not detected
U*	Flagged as EMPC by the laboratory; this was changed to U (non-detect) during data validation
VOC	volatile organic compound
WA WQC	Washington State Water Quality Criteria
WQC	Water Quality Criteria

Table R-1
Sampling Locations and Analytical Methods
Boeing Developmental Center

Analyte	Method	Sample Location / Collection Date									
		BD-MH-1.32 12/22/2014	BD-MH-5.16 12/15/2014	BD-MH-9.66 12/3/2014	BD-MH-10.9 12/3/2014	BD-MH-11.31 12/15/2014	BD-MH-12.56 12/22/2014	BD-MH-13.43 12/2/2014	BD-OWS-02 12/3/2014	BD-OWS-14 12/22/2014	BD-OWS-15 12/3/2014
Water Samples											
Metals (total)	EPA 200.8	●	●			●	●		●	●	
Mercury (total, dissolved) (a)	EPA 245.1	●	●			●	●		●	●	
PCB Congeners	EPA 1668C	●	●			●	●		●	●	
SVOCs	SW 8270D-Low	●	●			●	●		●	●	
Dioxins/furans	EPA 1613B	●	●			●	●		●	●	
Alkalinity/Bicarbonate/Carbonate	SM 2320B	●	●			●	●		●	●	
Anions	EPA 300.0	●	●			●	●		●	●	
Specific Conductance	EPA 120.1	●	●			●	●		●	●	
pH	SM 4500H+B	●	●			●	●		●	●	
Total organic carbon	SM 5310B	●	●			●	●		●	●	
Dissolved organic carbon	SM 5310B	●	●			●	●		●	●	
Total suspended solids	SM 2540D	●	●			●	●		●	●	
Solids Samples											
Metals (total)	SW 6020			●	●			●			●
Mercury	SW 7471A			●	●			●			●
PCB Aroclors	EPA 8082			●	●			●			●
PCB Congeners	EPA 1668C			●	●			●			●
Dioxins/furans	EPA 1613B			●	●			●			●
SVOCs	SW 8270D-Low			●	●			●			●
VOCs	SW 8260B-Low			●	●			●			●
TPH-diesel/motor oil	NWTPH-Dx			●	●			●			●
TPH-gasoline	NWTPH-Gx			●	●			●			●
Grain size	PSEP Plumb 1981			●	●			●			●
Total organic carbon	PSEP 9060			●	●			●			●

Bullet indicates a sample was collected for the listed analyte at the specified location.

Table R-2. Water Quality Data - Field Measurements
Boeing Developmental Center

		Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
		Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	**ISGP Benchmark**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters								
Flow	--	Yes/No	No	No	No	No	No	No
pH	5.0 to 9.0	std units	6.3	5.9	6.0	6.0	**9.3**	6.1
Conductivity	--	mS/cm	0.05	0.59 a	3.7 b	0.80	0.10 a	1.1
Temperature	--	degrees C	10.1	7.6	7.3	10.0	9.5	9.3
Total Dissolved Solids	--	mg/L	29	379	2,380	511	65	696
Turbidity	25	NTU	**121**	7.0	3.0	2.8	1.6	2.5
Oil & Grease	No visible sheen	Yes/No	No	No	No	No	No	No
Dissolved Oxygen	--	mg/L	7.4	23	14	9.1	17	11
ORP	--	mV	192	208	159	217	125	172

Results in **bold** exceed the ISGP benchmark.

a - Field form incorrectly lists units as S/cm; should be mS/cm

b - Field form incorrectly lists units a uS/cm; should be mS/cm

Table R-3. Water Sample Results
Boeing Developmental Center

Analyte	ISGP Benchmark	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC HHO	NR WQC HHO	Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
						Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
							Result	Result	Result	Result	Result	Result
Total Metals (µg/L)												
Antimony	--	--	--	--	--		**3.3**	**0.097 J**	**0.10 J**	**0.17 J**	**2.9**	**0.23 J**
Arsenic	150	36	69	--	--		**1.0**	**0.91 J**	**0.88 J**	**0.83 J**	< 1.0 U	**0.82 J**
Beryllium	--	--	--	--	--		< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U
Cadmium	2.1	9.4	42	--	--		**0.18 J**	< 0.050 U	< 0.059 U	< 0.40 U	**0.081 J**	< 0.40 U
Chromium	--	--	--	--	--		**0.77**	**0.96**	**0.29 J**	**0.45**	**1.1**	**0.37 J**
Chromium, hexavalent	--	--	--	--	--		na	na	na	na	na	na
Copper	14	3.7	5.8	--	--		**5.8**	**1.9**	**0.80 J**	< 1.5 U	**3.3**	**1.9**
Lead	81.6	8.5	221	--	--		**2.4**	**0.76**	**0.11 J**	**0.17 J**	**0.72**	**0.23 J**
Mercury	1.4	0.025	2.1	--	--		< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Nickel	--	8.3	75	--	--		1.7 J	**0.74 J**	**0.63 J**	**1.3 J**	**0.77 J**	**0.78 J**
Selenium	5	71	291	--	--		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Silver	3.8	--	2.2	--	--		< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U	< 0.40 U
Thallium	--	--	--	--	--		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Zinc	117	86	95	--	--		**54**	**15**	**4.7**	**17**	**130**	**28 J**
PCB Congeners (µg/L) [a]												
Total PCB Congeners	--	0.03	10	1.70E-04	6.40E-05		**2.52E-04**	**0.011**	**0.00191**	**0.0000956 J**	**0.054 J**	**1.64E-04 J**
PCB TEQ, nd SDL*0	--	0.03	10	--	--		**1.00E-07 J**	**6.00E-07 J**	**3.80E-09 J**	0.00E+00 U	**1.10E-06 J**	**5.00E-11 J**
PCB TEQ, nd SDL*0.5	--	0.03	10	--	--		**1.20E-07 J**	**6.40E-07 J**	**1.40E-07 J**	8.60E-08 U	**1.10E-06 J**	**9.20E-08 J**
PCB TEQ, nd SDL*1	--	0.03	10	--	--		**1.30E-07 J**	**6.70E-07 J**	**2.90E-07 J**	1.70E-07 U	**1.20E-06 J**	**1.80E-07 J**
Dioxins and Furans (pg/L) [a]												
2,3,7,8-TCDD	--	--	--	0.014	0.0051		< 0.770 U	< 1.66 U	< 0.938 U	< 1.11 U	< 0.895 U	< 1.11 U
1,2,3,7,8-PeCDD	--	--	--	--	--		< 1.28 U	< 1.53 U	< 1.06 U	< 0.734 U	< 0.907 U	< 1.78 U
1,2,3,4,7,8-HxCDD	--	--	--	--	--		< 2.53 U	< 5.11 U	< 2.18 U	< 1.91 U	< 1.75 U	< 2.84 U
1,2,3,6,7,8-HxCDD	--	--	--	--	--		< 4.57 U	< 4.77 U	< 2.21 U	< 1.86 U	< 1.87 U	< 5.66 U
1,2,3,7,8,9-HxCDD	--	--	--	--	--		< 2.72 U	< 5.08 U	< 2.04 U	< 2.00 U	< 2.10 U	< 3.15 U
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--		**3.84 J**	**35.4**	**11.5 J**	< 3.98 U	< 2.30 U*	**8.54 J**
OCDD	--	--	--	--	--		**26.3 J**	**250**	**88.8**	**10.7 J**	**16.6 J**	**57.4**
2,3,7,8-TCDF	--	--	--	--	--		< 0.745 U	< 1.24 U	< 0.776 U	< 0.795 U	< 0.751 U	< 0.731 U
1,2,3,7,8-PeCDF	--	--	--	--	--		< 0.611 U	< 1.40 U	< 0.829 U	< 0.558 U	< 1.01 U	< 0.784 U
2,3,4,7,8-PeCDF	--	--	--	--	--		< 0.66 U	< 1.54 U	< 0.506 U	< 0.594 U	< 0.994 U	< 0.893 U
1,2,3,4,7,8-HxCDF	--	--	--	--	--		< 0.519 U	< 1.70 U	< 0.588 U	< 0.572 U	< 0.747 U	< 1.31 U
1,2,3,6,7,8-HxCDF	--	--	--	--	--		< 0.596 U	< 1.98 U	< 0.671 U	< 0.594 U	< 0.873 U	< 1.40 U
1,2,3,7,8,9-HxCDF	--	--	--	--	--		< 0.66 U	< 3.58 U	< 1.13 U	< 0.685 U	< 0.864 U	< 1.39 U
2,3,4,6,7,8-HxCDF	--	--	--	--	--		< 0.454 U	< 2.36 U	< 0.76 U	< 0.456 U	< 0.528 U	< 0.983 U
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--		< 1.22 U	**18.8 J**	< 2.07 U*	< 0.981 U	< 1.74 U	**4.56 J**
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--		< 0.976 U	< 3.47 U	< 0.717 U	< 0.575 U	< 1.61 U	< 1.61 U
OCDF	--	--	--	--	--		**1.99 J**	**56.9**	**5.49 J**	< 1.19 U	< 2.28 U	**12.7 J**
Total TCDD	--	--	--	--	--		< 0.77 U	< 1.66 U	< 0.939 U	< 1.11 U	< 0.895 U	< 1.11 U
Total PeCDD	--	--	--	--	--		< 1.28 U	< 2.70 U	< 1.84 U	< 1.13 U	< 1.71 U	< 1.78 U
Total HxCDD	--	--	--	--	--		< 4.58 U	< 3.94 U*	< 4.32 U	< 3.15 U	< 2.85 U	< 5.82 U
Total HpCDD	--	--	--	--	--		**9.77**	**35.4 J**	**21.9**	< 3.98 U	< 4.94 U*	**19.6**
Total TCDF	--	--	--	--	--		< 0.745 U	< 1.24 U	< 1.34 U	< 0.795 U	< 1.45 U	< 0.983 U
Total PeCDF	--	--	--	--	--		< 1.01 U	**1.74**	< 0.858 U	< 0.794 U	< 1.38 U	< 1.29 U
Total HxCDF	--	--	--	--	--		< 0.451 U	**12.3 J**	< 0.900 U*	< 0.691 U	< 0.966 U	**3.15**
Total HpCDF	--	--	--	--	--		< 1.73 U	**45.4**	< 4.86 U*	< 1.01 U	< 2.24 U	**11.4**
Dioxin/Furan TEQ, nd SDL*0	--	--	--	--	--		**0.0469 J**	**0.634 J**	**0.143 J**	**0.0032 J**	**0.00498 J**	**0.152 J**
Dioxin/Furan TEQ, nd SDL*0.5	--	--	--	--	--		**1.83 J**	**3.79 J**	**1.76 J**	**1.49 J**	**1.57 J**	**2.62 J**
Dioxin/Furan TEQ, nd SDL*1	--	--	--	--	--		**3.62 J**	**6.95 J**	**3.38 J**	**2.99 J**	**3.14 J**	**5.10 J**

Table R-3. Water Sample Results
Boeing Developmental Center

Analyte	ISGP Benchmark	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC HHO	NR WQC HHO	Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
						Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
							Result	Result	Result	Result	Result	Result
PAHs (µg/L)												
1-Methylnaphthalene	--	--	--	--	--		< 0.057 U	< 0.058 U	< 0.058 U	< 0.058 U	< 0.057 U	< 0.058 U
2-Chloronaphthalene	--	--	--	--	1,600		< 0.057 U	< 0.058 U	< 0.058 U	< 0.058 U	< 0.057 U	< 0.058 U
2-Methylnaphthalene	--	--	--	--	--		< 0.19 U	< 0.19 U	< 0.19 U	< 0.19 U	< 0.19 U	< 0.19 U
Acenaphthene	--	--	--	--	990		< 0.095 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.095 U	< 0.096 U
Acenaphthylene	--	--	--	--	--		< 0.076 U	< 0.077 U	< 0.077 U	< 0.077 U	< 0.076 U	< 0.077 U
Anthracene	--	--	--	110,000	40,000		**0.013 J**	< 0.038 U	< 0.039 U	**0.014 J**	< 0.038 U	< 0.038 UJ
Benzo(a)anthracene	--	--	--	0.031	0.018		**0.033 J**	< 0.058 U	< 0.058 U	**0.089**	< 0.057 U	< 0.058 U
Benzo(a)pyrene	--	--	--	0.031	0.018		**0.051 J**	< 0.038 U	< 0.039 U	**0.12 J**	< 0.038 U	< 0.038 UJ
Benzo(b)fluoranthene	--	--	--	0.031	0.018		**0.11**	< 0.077 U	< 0.077 U	**0.31**	< 0.076 U	**0.040 J**
Benzo(g,h,i)perylene	--	--	--	--	--		**0.025 J**	< 0.058 U	< 0.058 U	**0.062**	< 0.057 U	< 0.058 U
Benzo(k)fluoranthene	--	--	--	0.031	0.018		**0.024 J**	< 0.058 U	< 0.058 U	**0.11**	< 0.057 U	< 0.058 U
Chrysene	--	--	--	0.031	0.018		**0.072**	< 0.038 U	< 0.039 U	**0.15**	< 0.038 U	**0.026 J**
Dibenz(a,h)anthracene	--	--	--	0.031	0.018		< 0.057 U	< 0.058 U	< 0.058 U	**0.019 J**	< 0.057 U	< 0.058 U
Dibenzofuran	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
Fluoranthene	--	--	--	370	140		**0.13**	< 0.048 U	< 0.048 U	**0.35**	**0.024 J**	**0.047 J**
Fluorene	--	--	--	14,000	5,300		< 0.057 U	< 0.058 U	< 0.058 U	< 0.058 U	< 0.057 U	< 0.058 U
Indeno(1,2,3-cd)pyrene	--	--	--	0.031	0.018		**0.025 J**	< 0.058 U	< 0.058 U	**0.088**	< 0.057 U	< 0.058 U
Naphthalene	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
Phenanthrene	--	--	--	--	--		**0.048 J**	< 0.077 U	< 0.077 U	**0.14**	< 0.076 U	< 0.077 U
Pyrene	--	--	--	11,000	4,000		**0.11**	< 0.058 U	< 0.058 U	**0.30**	**0.020 J**	**0.033 J**
Total Benzofluoranthenes	--	--	--	--	--		**0.13 J**	< 0.077 U	< 0.077 U	**0.42**	< 0.076 U	**0.040 J**
Total HPAHs	--	--	--	--	--		**0.58 J**	< 0.077 U	< 0.077 U	**1.6 J**	**0.044 J**	**0.15 J**
Total LPAHs	--	--	--	--	--		**0.061 J**	< 0.38 U	< 0.39 U	**0.15 J**	< 0.38 U	< 0.38 U
Total PAHs	--	--	--	--	--		**0.64 J**	< 0.38 U	< 0.39 U	**1.8 J**	**0.044 J**	**0.15 J**
cPAHs, nd RL*0	--	--	--	--	--		**0.071 J**	< 0 U	< 0 U	**0.18 J**	< 0 U	**0.0043 J**
cPAHs, nd RL*0.5	--	--	--	--	--		**0.074 J**	< 0.035 U	< 0.035 U	**0.18 J**	< 0.034 U	**0.035 J**
cPAHs, nd RL*1	--	--	--	--	--		**0.077 J**	< 0.069 U	< 0.070 U	**0.18 J**	< 0.069 U	**0.065 J**
Phthalates (µg/L)												
bis(2-Ethylhexyl)phthalate	--	--	--	5.9	2.2		< 2.8 U	< 2.9 U	< 2.9 U	**1.3 J**	< 2.8 U	< 2.9 U
Butylbenzylphthalate	--	--	--	--	1,900		< 0.57 U	< 0.58 U	< 0.58 U	< 0.58 U	< 0.57 U	< 0.58 U
Di-n-Butylphthalate	--	--	--	12,000	4,500		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.15 U	< 0.38 U
Diethylphthalate	--	--	--	120,000	44,000		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.11 U	< 0.38 U
Dimethylphthalate	--	--	--	2,900,000	1,100,000		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
Di-n-Octyl phthalate	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	**0.90**	**1.7**	< 0.38 U
Phenols (µg/L)												
2,3,4,6-Tetrachlorophenol	--	--	--	--	--		< 0.66 U	< 0.67 U	< 0.68 U	< 0.67 U	< 0.66 U	< 0.67 U
2,4,5-Trichlorophenol	--	--	--	--	3,600		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
2,4,6-Trichlorophenol	--	--	--	6.5	2.4		< 0.57 U	< 0.58 U	< 0.58 U	< 0.58 U	< 0.57 U	< 0.58 U
2,4-Dichlorophenol	--	--	--	790	290		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
2,4-Dimethylphenol	--	--	--	--	850		< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U
2,4-Dinitrophenol	--	--	--	14,000	5,300		< 4.7 U	< 4.8 U	< 4.8 U	< 4.8 U	< 4.7 U	< 4.8 U
2-Chlorophenol	--	--	--	--	150		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
2-Methylphenol	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
2-Nitrophenol	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
4,6-Dinitro-2-Methylphenol	--	--	--	765	280		< 3.8 U	< 3.8 U	< 3.9 U	< 3.8 U	< 3.8 U	< 3.8 U
4-Chloro-3-methylphenol	--	--	--	--	--		< 0.38 U	< 0.38 U	< 0.39 U	< 0.38 U	< 0.38 U	< 0.38 U
4-Methylphenol	--	--	--	--	--		< 0.76 U	< 0.77 U	< 0.77 U	< 0.77 U	< 0.76 U	< 0.77 U
4-Nitrophenol	--	--	--	--	--		< 2.8 U	< 2.9 U	< 2.9 U	< 2.9 U	< 2.8 U	< 2.9 U

Table R-3. Water Sample Results
Boeing Developmental Center

					Location ID	BD-MH-1.32			BD-MH-5.16			BD-MH-11.31			BD-MH-12.56			BD-OWS-02			BD-OWS-14		
					Collection Date	12/22/2014			12/15/2014			12/15/2014			12/22/2014			12/3/2014			12/22/2014		
Analyte	ISGP Benchmark	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC HHO	NR WQC HHO	Result			Result			Result			Result			Result			Result		
Pentachlorophenol	--	7.9	13	8.2	3.0	**0.14**	**J**		< 0.67	U		**0.15**	**J**		< 0.67	U		< 0.66	U		< 0.67	U	
Phenol	--	--	--	4,600,000	860,000	< 0.57	U		< 0.58	U		< 0.58	U		< 0.58	U		< 0.57	U		< 0.58	U	
Other SVOCs (µg/L)																							
1,2,4-Trichlorobenzene	--	--	--	--	70	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
1,2-Dichlorobenzene	--	--	--	17,000	1,300	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
1,3-Dichlorobenzene	--	--	--	2,600	960	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
1,4-Dichlorobenzene	--	--	--	2,600	190	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
2,4-Dinitrotoluene	--	--	--	9.1	3.4	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
2,6-Dinitrotoluene	--	--	--	--	--	**0.27**	**J**		< 0.38	U		< 0.39	U		< 0.38	U		**0.25**	**J**		< 0.38	U	
2-Nitroaniline	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
3,3'-Dichlorobenzidine	--	--	--	0.077	0.028	R			< 1.9	U		< 1.9	U		R			< 1.9	U		R		
3-Nitroaniline	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
4-Bromophenyl-phenylether	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
4-Chloroaniline	--	--	--	--	--	R			< 0.38	UJ		< 0.39	UJ		R			< 0.38	UJ		R		
4-Chlorophenyl-phenylether	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
4-Nitroaniline	--	--	--	--	--	< 0.57	U		< 0.58	U		< 0.58	U		< 0.58	U		< 0.57	U		< 0.58	U	
Benzoic Acid	--	--	--	--	--	< 2.8	U		**0.75**	**J**		< 2.9	U		< 2.9	U		**0.92**	**J**		< 2.9	U	
Benzyl Alcohol	--	--	--	--	--	< 0.13	U		< 0.38	U		< 0.39	U		< 0.13	U		< 0.38	U		< 0.38	U	
2,2'-Oxybis(1-Chloropropane)	--	--	--	170,000	65,000	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
bis(2-Chloroethoxy) Methane	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
Bis-(2-Chloroethyl) Ether	--	--	--	1.4	0.53	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
Carbazole	--	--	--	--	--	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
Hexachlorobenzene	--	--	--	0.00077	0.00029	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
Hexachlorobutadiene	--	--	--	50	18	< 0.57	U		< 0.58	U		< 0.58	U		< 0.58	U		< 0.57	U		< 0.58	U	
Hexachlorocyclopentadiene	--	--	--	17,000	1,100	< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U	
Hexachloroethane	--	--	--	8.9	3.3	< 0.57	U		< 0.58	U		< 0.58	U		< 0.58	U		< 0.57	U		< 0.58	U	
Isophorone	--	--	--	600	960	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
Nitrobenzene	--	--	--	1,900	690	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
N-Nitrosodimethylamine	--	--	--	8.1	3.0	< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U		< 1.9	U	
N-Nitroso-Di-N-Propylamine	--	--	--	--	0.51	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	
N-Nitrosodiphenylamine	--	--	--	16	6.0	< 0.38	U		< 0.38	U		< 0.39	U		< 0.38	U		< 0.38	U		< 0.38	U	

Results in **bold** are detections.

Results that are shaded in gray exceed one or more criteria.

a - Total PCB congeners and PCB/dioxin/furan TEQs include only congeners that met identification criteria as required by EPA Method1668C (PCBs) or EPA Method 1613B (dioxins/furans).

PCB and dioxin/furan congeners identified with a U* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

Table R-4. Water Sample Results Compared to Criteria
Boeing Developmental Center

Location ID	BD-MH-1.32					BD-MH-5.16					BD-MH-11.31				
Collection Date	12/22/2014					12/15/2014					12/15/2014				
	Exceedance Factor					Exceedance Factor					Exceedance Factor				
Analyte	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms
Total Metals															
Zinc															
PCB Congeners															
Total PCB Congeners				1.5	3.9				63	167				11	30
PAHs															
Benzo(a)anthracene				1.1	1.8										
Benzo(a)pyrene				1.6	2.8										
Benzo(b)fluoranthene				3.5	6.1										
Benzo(k)fluoranthene					1.3										
Chrysene				2.3	4.0										
Dibenz(a,h)anthracene															
Indeno(1,2,3-cd)pyrene					1.4										

Exceedance Factors (EFs) are presented for detected concentrations only.

Only chemicals with EF > 1 are shown.

The EFs are calculated (result divided by criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the WA, NTR, or NR Water Quality Criteria.

Table R-4. Water Sample Results Compared to Criteria
Boeing Developmental Center

Location ID	BD-MH-12.56					BD-OWS-02					BD-OWS-14				
Collection Date	12/22/2014					12/3/2014					12/22/2014				
	Exceedance Factor					Exceedance Factor					Exceedance Factor				
Analyte	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms
Total Metals															
Zinc						1.1	1.5	1.4							
PCB Congeners															
Total PCB Congeners					1.5		1.8		315	838					2.6
PAHs															
Benzo(a)anthracene				2.9	4.9										
Benzo(a)pyrene				3.9	6.7										
Benzo(b)fluoranthene				10	17									1.3	2.2
Benzo(k)fluoranthene				3.5	6.1										
Chrysene				4.8	8.3										1.4
Dibenz(a,h)anthracene					1.1										
Indeno(1,2,3-cd)pyrene				2.8	4.9										

Exceedance Factors (EFs) are presented for detected concentrations only.

Only chemicals with EF > 1 are shown.

The EFs are calculated (result divided by criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the WA, NTR, or NR Water Quality Criteria.

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	Result	Result	Result	Result	Result	Result
Total PCB Congeners (µg/L)	0.000252 J	0.0107 J	0.00191 J	0.000956 J	0.0536 J	0.000164 J
Total PCB Congeners (pg/L)	252 J	10,700 J	1,910 J	95.6 J	53,600 J	164 J
Total Mono-CB (pg/L)	< 0.882 U	1.70 J	< 2.55 U	< 1.13 U	13.8 J	< 1.84 U
PCB-1	< 0.871 U	1.70 J	< 2.55 U	< 1.07 U	13.8	< 1.83 U
PCB-2	< 0.882 U	< 1.34 U	< 2.36 U	< 1.13 U	< 2.01 U*	< 1.84 U
PCB-3	< 0.452 U*	< 1.30 U	< 2.29 U	< 1.13 U	< 3.00 U*	< 1.84 U
Total Di-CB (pg/L)	2.31 J	67.2 J	52.1 J	4.01 J	625 J	15.5 J
PCB-4/10	< 4.22 U	7.53 J	10.2 J	< 8.52 U*	251	8.90 J
PCB-5/8	< 3.51 U	9.46 J	13.1 J	< 3.98 U	131	< 3.56 U
PCB-6	< 3.60 U	5.74 J	7.33 J	< 4.08 U	93.5	< 3.66 U
PCB-7/9	< 3.55 U	< 4.98 U	< 6.91 U	< 4.03 U	15.4 J	< 3.61 U
PCB-11	< 8.77 U	31.2	12.5	< 7.78 U	< 29.4 U*	< 3.51 U
PCB-12/13	< 3.23 U	< 4.64 U	< 6.60 U	< 3.89 U	< 15.0 U*	< 3.56 U
PCB-14	< 2.79 U	< 4.14 U	< 5.89 U	< 3.35 U	< 10.6 U	< 3.07 U
PCB-15	2.31 J	13.3	8.94 J	4.01 J	134	6.55
Total Tri-CB (pg/L)	18.0 J	268 J	210 J	50.3 J	5,160 J	41.5 J
PCB-16/32	< 4.88 U	31.9	24.2	< 9.03 U	643	< 15.2 U
PCB-17	1.96 J	15.0	14.8	5.50	371	5.90
PCB-18	5.96	35.9	35.5	15.7	1,040	18.0
PCB-19	< 0.923 U	6.22	7.15	3.94 J	147	9.86
PCB-20/21/33	< 1.83 U*	19.2	13.0 J	2.82 J	142	< 1.17 U*
PCB-22	< 1.23 U*	17.8	12.1	< 2.19 U	313	< 0.701 U
PCB-23	< 0.527 U	< 1.93 U	< 1.23 U	< 0.888 U	< 1.22 U	< 0.674 U
PCB-24/27	< 0.586 U	5.97 J	7.57 J	3.39 J	93.0	< 5.85 U*
PCB-25	< 0.581 U	5.62	5.84	< 2.64 U*	63.0	< 0.743 U
PCB-26	< 0.515 U	12.9	16.3	4.75 J	139	3.30 J
PCB-28	6.39	53.4	36.9	7.08	1,120	< 5.82 U*
PCB-29	< 0.527 U	< 1.91 U	< 1.21 U	< 0.888 U	< 2.86 U*	< 0.674 U
PCB-30	< 0.583 U	< 1.59 U	< 0.889 U	< 0.927 U	< 0.901 U	< 1.01 U
PCB-31	3.68 J	36.9	23.9	7.08	654	4.40 J
PCB-34	< 0.490 U	< 2.01 U	< 1.28 U	< 0.826 U	< 4.28 U*	< 0.627 U
PCB-35	< 0.550 U	2.08 J	< 1.17 U	< 0.867 U	5.66	< 0.654 U
PCB-36	< 0.531 U	< 1.69 U	< 1.17 U	< 0.838 U	< 1.24 U	< 0.633 U
PCB-37	< 3.23 U	23.5	12.3	< 0.807 U	417	< 1.75 U
PCB-38	< 0.556 U	1.77 J	< 1.19 U	< 0.877 U	15.6	< 0.662 U
PCB-39	< 0.547 U	< 1.64 U	< 1.13 U	< 0.864 U	< 1.20 U	< 0.652 U

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	Result	Result	Result	Result	Result	Result
Total Tetra-CB (pg/L)	55.4 J	1,020 J	345 J	37.0 J	23,800 J	32.5 J
PCB-40	2.92 J	17.4	7.68	< 1.50 U	545	< 2.77 U*
PCB-41/64/71/72	< 10.8 U	87.3	32.8	< 6.44 U	2,570	< 16.1 U
PCB-42/59	3.79 J	32.6	12.6	2.39 J	989	5.34 J
PCB-43/49	< 9.25 U	92.6	43.2	< 10.3 U	2,140	< 18.9 U
PCB-44	< 13.8 U	120	36.0	< 6.68 U	2,750	< 14.6 U
PCB-45	1.74 J	13.5	4.87 J	< 1.62 U*	421	3.89 J
PCB-46	< 1.05 U	6.11	1.83 J	< 1.49 U	172	2.38 J
PCB-47	15.5	36.0	18.0	17.5	776	< 7.66 U
PCB-48/75	1.57 J	11.9	4.08 J	1.06 J	497	< 1.69 U*
PCB-50	< 0.991 U	< 2.29 U	< 3.44 U	< 1.33 U	6.18	< 1.48 U
PCB-51	3.49 J	12.7	7.50	5.31	105	2.75 J
PCB-52/69	< 21.8 U	183	56.9	< 16.7 U	2,720	< 31.2 U
PCB-53	1.94 J	22.7	12.3	< 3.27 U*	343	9.03
PCB-54	< 0.753 U	< 1.67 U*	< 2.77 U	< 1.01 U	< 4.93 U*	< 1.12 U
PCB-55	< 0.743 U	4.28 J	< 2.21 U	< 0.921 U	40.4	< 0.920 U
PCB-56/60	< 7.93 U	62.3	19.8	< 2.68 U*	2,150	< 5.88 U*
PCB-57	< 0.748 U	< 1.46 U	< 2.25 U	< 0.988 U	15.3	< 1.05 U
PCB-58	< 0.737 U	< 1.47 U	< 2.27 U	< 0.974 U	< 5.65 U*	< 1.04 U
PCB-61/70	17.6	141	34.8	6.54 J	2,280	9.10 J
PCB-62	< 0.711 U	< 1.78 U	< 2.76 U	< 0.945 U	< 1.06 U	< 1.09 U
PCB-63	< 0.720 U	3.96 J	< 2.24 U	< 0.952 U	95.6	< 1.01 U
PCB-65	< 0.733 U	< 1.73 U	< 2.68 U	< 0.975 U	< 1.03 U	< 1.13 U
PCB-67	< 0.767 U	2.79 J	< 2.33 U	< 1.01 U	70.5	< 1.08 U
PCB-68	3.22 J	1.88 J	2.56 J	4.24 J	13.1	< 0.920 U
PCB-73	< 0.704 U	< 1.68 U	< 2.76 U	< 1.00 U	< 1.06 U	< 1.08 U
PCB-74	< 5.42 U	45.1	13.4	< 2.57 U	1,380	< 3.88 U*
PCB-76/66	< 10.0 U	91.4	29.8	< 3.91 U	3,400	< 9.20 U
PCB-77	3.65 J	16.8	4.80 J	< 1.04 U	273	< 1.07 U
PCB-78	< 0.818 U	< 1.42 U	< 2.04 U	< 1.06 U	7.07	< 1.09 U
PCB-79	< 0.788 U	7.28	2.20 J	< 0.977 U	< 29.8 U*	< 0.976 U
PCB-80	< 0.691 U	< 1.24 U	< 1.92 U	< 0.855 U	< 0.800 U	< 0.855 U
PCB-81	< 0.746 U	4.36 J	< 1.83 U	< 0.968 U	18.8	< 0.994 U
Total Penta-CB (pg/L)	60.6 J	3,350 J	476 J	4.33 J	17,800 J	36.5 J
PCB-82	7.94	70.7	8.22	< 4.04 U	515	3.00 J
PCB-83	< 1.71 U	< 2.52 U	< 3.24 U	< 2.50 U	< 2.90 U*	< 2.75 U

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	Result	Result	Result	Result	Result	Result
PCB-84/92	< 23.9 U	211	33.1	< 5.49 U	1,240	< 13.2 U
PCB-85/116	< 6.47 U*	89.0	< 10.1 U*	< 2.98 U	726	3.69 J
PCB-86	< 2.74 U	< 3.75 U	< 4.82 U	< 4.02 U	< 5.09 U	< 4.42 U
PCB-87/117/125	< 20.7 U	199	23.8	< 4.15 U	1,130	< 8.32 U*
PCB-88/91	6.38	83.6	15.4	< 3.21 U	610	6.65
PCB-89	< 2.55 U	4.10 J	< 3.41 U	< 3.79 U	71.5	< 4.20 U
PCB-90/101	< 50.9 U	524	71.5	< 10.6 U	2,610	< 26.9 U
PCB-93	< 2.32 U	< 3.48 U	< 3.39 U	< 3.40 U	< 2.27 U	< 4.32 U
PCB-94	< 2.18 U	2.45 J	< 3.46 U	< 3.19 U	22.4	< 4.05 U
PCB-95/98/102	< 38.6 U	381	65.2	< 11.9 U	1,990	< 23.9 U
PCB-96	< 1.49 U	3.28 J	2.02 J	< 2.30 U	36.4	< 2.88 U
PCB-97	14.3	157	22.1	< 3.20 U	975	9.61
PCB-99	18.9	201	30.7	4.33 J	1,390	12.0
PCB-100	< 1.69 U	< 1.42 J*	< 3.07 U	< 2.61 U	10.9	< 3.27 U
PCB-103	< 1.69 U	2.05 J	2.16 J	< 2.60 U	21.6	< 3.25 U
PCB-104	< 1.29 U	< 2.42 U	< 2.45 U	< 1.99 U	< 1.55 U	< 2.49 U
PCB-105	< 18.7 U	170	27.4	< 2.10 U	837	< 8.07 U
PCB-106/118	< 48.5 U	451	63.8	< 8.11 U	2,100	< 19.9 U
PCB-107/109	4.00 J	34.5	6.50 J	< 2.24 U	178	1.55 J
PCB-108/112	2.38 J	23.1	3.62 J	< 2.95 U	178	< 1.96 U*
PCB-110	< 64.4 U	676	91.8	< 12.5 U	2,760	< 32.5 U
PCB-111/115	0.823 J	7.28 J	1.74 J	< 2.24 U	67.6	< 2.46 U
PCB-113	< 1.90 U	< 2.56 U	< 3.27 U	< 2.82 U	< 3.41 U	< 3.12 U
PCB-114	1.16 J	9.07	< 2.12 U	< 1.26 U	66.5	< 1.29 U
PCB-119	0.894 J	10.3	2.90 J	< 2.21 U	72.5	< 2.43 U
PCB-120	< 1.43 U	< 2.15 U	< 2.76 U	< 2.09 U	< 4.83 U*	< 2.30 U
PCB-121	< 1.40 U	< 2.07 U	< 2.01 U	< 2.05 U	< 1.35 U	< 2.60 U
PCB-122	< 1.44 U	4.47 J	< 2.33 U	< 1.50 U	39.6	< 1.53 U
PCB-123	< 1.00 U*	7.32	< 2.79 U	< 2.39 U	< 48.2 U*	< 2.87 U
PCB-124	2.79 J	21.1	4.07 J	< 2.30 U	88.0	< 2.75 U
PCB-126	0.995 J	5.78	< 2.24 U	< 1.30 U	9.88	< 1.35 U
PCB-127	< 1.31 U	< 2.10 U	< 2.16 U	< 1.38 U	< 1.66 U	< 1.36 U
Total Hexa-CB (pg/L)	41.3 J	3,540 J	505 J	< 10.7 U	5,000 J	10.4 J
PCB-128/162	< 12.8 U*	138	18.9	< 2.38 U	160	< 6.92 U
PCB-129	< 3.98 U*	41.7	5.05	< 2.24 U	65.8	< 2.27 U*
PCB-130	6.58	58.5	7.87	< 2.47 U	78.6	< 2.69 U*

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	Result	Result	Result	Result	Result	Result
PCB-131	< 1.62 U	< 3.37 U	< 2.82 U	< 2.44 U	< 0.356 U*	< 2.50 U
PCB-132/161	< 23.3 U	216	35.5	< 1.84 U	335	< 11.0 U
PCB-133/142	2.44 J	18.5	3.28 J	< 2.27 U	37.9	1.90 J
PCB-134/143	< 3.77 U*	40.3	4.92 J	< 2.21 U	76.5	2.90 J
PCB-135	10.6	84.7	< 13.2 U*	< 4.59 U	173	< 4.64 U
PCB-136	9.68	77.0	13.8	< 3.21 U	170	3.87 J
PCB-137	4.98	45.5	4.61 J	< 1.93 U	70.2	< 1.45 U*
PCB-138/163/164	< 89.9 U	882	121	< 10.7 U	1,010	< 38.6 U
PCB-139/149	< 63.5 U	578	92.7	< 7.11 U*	1,000	< 33.2 U
PCB-140	< 3.03 U	4.18 J	< 3.56 U	< 4.71 U	< 9.45 U*	< 4.76 U
PCB-141	< 17.4 U	177	22.6	< 1.97 U	196	< 7.56 U
PCB-144	3.05 J	28.8	5.84	< 4.28 U	69.1	< 4.32 U
PCB-145	< 2.15 U	< 2.93 U	< 3.84 U	< 3.35 U	< 2.42 U	< 3.38 U
PCB-146/165	< 12.1 U	99.6	16.1	< 1.91 U	138	< 6.74 U
PCB-147	< 3.02 U	15.2	< 2.88 U*	< 4.70 U	47.3	< 4.75 U
PCB-148	< 2.88 U	< 4.33 U	< 3.78 U	< 4.48 U	< 3.59 U	< 4.52 U
PCB-150	< 2.09 U	< 3.01 U	< 3.94 U	< 3.25 U	< 2.49 U	< 3.28 U
PCB-151	< 15.4 U	141	23.6	< 4.48 U	236	< 8.17 U
PCB-152	< 2.02 U	< 2.92 U	< 3.82 U	< 3.13 U	< 2.16 U*	< 3.16 U
PCB-153	< 67.5 U	662	97.6	< 10.2 U	823	< 33.4 U
PCB-154	< 2.65 U	7.99	< 3.17 U	< 4.11 U	14.4	< 4.15 U
PCB-155	< 1.97 U	< 2.82 U	< 3.70 U	< 3.06 U	< 2.34 U	< 3.09 U
PCB-156	< 8.45 U	71.6	9.45	< 1.26 U	95.4	< 3.56 U
PCB-157	< 1.57 U*	19.4	3.36 J	< 1.34 U	23.5	< 1.51 U
PCB-158/160	< 10.6 U	97.2	12.8	< 1.50 U	127	< 3.87 U*
PCB-159	< 0.968 U	< 2.49 U	< 1.86 U	< 1.42 U	5.56	< 1.50 U
PCB-166	< 1.04 U	< 3.09 U	< 1.94 U	< 1.52 U	4.86	< 1.60 U
PCB-167	3.93 J	37.1	5.68	< 1.36 U	42.8	1.76 J
PCB-168	< 1.01 U	< 2.25 U	< 1.88 U	< 1.52 U	< 1.13 U*	< 1.56 U
PCB-169	< 1.02 U	< 2.26 U	< 1.93 U	< 1.40 U	< 2.00 U	< 1.59 U
Total Hepta-CB (pg/L)	33.9 J	1,930	264 J	< 5.36 U	1,000 J	12.2 J
PCB-170	< 25.4 U	244	33.6	< 2.00 U	122	< 7.87 U
PCB-171	8.08	63.2	9.04	< 1.54 U	35.9	2.91 J
PCB-172	5.25	47.9	7.14	< 1.66 U	19.7	2.43 J
PCB-173	< 1.27 U	5.99	< 3.16 U	< 2.04 U	< 3.86 U*	< 1.64 U
PCB-174	< 28.3 U	224	28.5	< 1.74 U	116	< 13.3 U

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
Collection Date	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	Result	Result	Result	Result	Result	Result
PCB-175	< 1.18 U	9.63	< 3.08 U	< 2.10 U	< 4.97 U*	< 1.54 U
PCB-176	3.14 J	24.0	3.76 J	< 1.51 U	17.4	1.59 J
PCB-177	< 17.5 U	132	19.1	< 1.77 U	68.9	< 7.25 U
PCB-178	5.51	43.3	6.76	< 2.04 U	27.5	3.17 J
PCB-179	< 10.0 U	76.5	12.6	< 1.58 U	57.1	< 5.97 U
PCB-180	< 59.8 U	533	66.4	< 5.36 U	242	< 25.4 U
PCB-181	< 1.04 U	< 2.18 U	< 2.69 U	< 1.67 U	< 1.46 U*	< 1.34 U
PCB-182/187	< 38.2 U	278	43.0	< 4.00 U	161	< 17.4 U
PCB-183	< 15.0 U	125	18.6	< 1.80 U	77.5	< 6.74 U
PCB-184	< 0.926 U	< 1.89 U	< 2.41 U	< 1.64 U	< 1.42 U	< 1.21 U
PCB-185	3.03 J	23.3	3.60 J	< 1.60 U	13.2	< 1.29 U
PCB-186	< 0.850 U	< 1.83 U	< 2.34 U	< 1.51 U	< 1.38 U	< 1.11 U
PCB-188	< 0.814 U	< 1.67 U	< 2.12 U	< 1.44 U	< 1.25 U	< 1.06 U
PCB-189	1.11 J	10.2	1.36 J	< 1.21 U	4.50 J	< 0.935 U
PCB-190	4.58 J	52.5	6.25	< 1.16 U	24.5	2.07 J
PCB-191	< 1.30 U*	12.1	1.41 J	< 1.21 U	4.08 J	< 0.971 U
PCB-192	< 0.807 U	< 1.94 U	< 2.40 U	< 1.29 U	< 1.43 U	< 1.04 U
PCB-193	3.18 J	27.5	3.46 J	< 1.21 U	11.0	< 0.976 U
Total Octa-CB (pg/L)	35.8 J	435 J	46.3 J	< 3.62 U	246 J	11.3 J
PCB-194	< 14.3 U	99.9	14.6	< 1.85 U	44.6	< 5.06 U
PCB-195	5.71	37.0	5.51	< 1.24 U	16.9	2.76 J
PCB-196/203	21.7	130	19.8	< 2.93 U*	63.6	8.58 J
PCB-197	< 1.57 U	4.29 J	< 2.33 U	< 2.30 U	< 2.21 U*	< 2.28 U
PCB-198	< 2.44 U	7.16	< 3.37 U	< 3.56 U	3.41 J	< 3.53 U
PCB-199	< 21.8 U	114	< 15.3 U*	< 3.62 U	59.8	< 7.46 U
PCB-200	2.28 J	12.1	< 2.92 U	< 2.60 U	7.58	< 2.57 U
PCB-201	< 1.96 U*	10.1	2.82 J	< 2.45 U	< 6.25 U*	< 2.43 U
PCB-202	5.42	15.6	3.59 J	< 2.64 U	11.2	< 2.61 U
PCB-204	< 1.71 U	< 1.45 U	< 2.52 U	< 2.50 U	< 2.56 U	< 2.47 U
PCB-205	0.736 J	5.33	< 0.861 U	< 0.877 U	39.3	< 0.831 U
Total Nona-CB (pg/L)	3.31 J	34.3 J	6.14 J	< 1.71 U	2.05 J	4.35 J
PCB-206	< 7.83 U*	25.2	6.14	< 1.71 U	< 11.9 U*	3.25 J
PCB-207	1.20 J	3.11 J	< 0.944 U	< 0.902 U	2.05 J	< 0.727 U
PCB-208	2.11 J	5.98	< 1.99 U*	< 0.915 U	< 3.94 U*	1.10 J
Deca-CB (pg/L)	1.47 J	6.24	2.41 J	< 1.35 U	< 2.52 U	< 1.49 U
PCB-209	1.47 J	6.24	2.41 J	< 1.35 U	< 2.52 U	< 1.49 U*

Table R-5. Water Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-1.32		BD-MH-5.16		BD-MH-11.31		BD-MH-12.56		BD-OWS-02		BD-OWS-14	
Collection Date	12/22/2014		12/15/2014		12/15/2014		12/22/2014		12/3/2014		12/22/2014	
Analyte	Result		Result		Result		Result		Result		Result	
PCB TEQ, nd SDL*0	0.100	J	0.600	J	0.00380	J	0	U	1.10	J	0.00005	J
PCB TEQ, nd SDL*0.5	0.120	J	0.640	J	0.140	J	0.0860	U	1.10	J	0.0920	J
PCB TEQ, nd SDL*1	0.130	J	0.670	J	0.290	J	0.170	U	1.20	J	0.180	J

Total PCB congeners and total PCB homologs include only congeners that met identification criteria as required by EPA Method 1668C.

Table R-6. Water Sample Results - Conventionals
Boeing Developmental Center

		Location ID	BD-MH-1.32	BD-MH-5.16	BD-MH-11.31	BD-MH-12.56	BD-OWS-02	BD-OWS-14
		Collection	12/22/2014	12/15/2014	12/15/2014	12/22/2014	12/3/2014	12/22/2014
Analyte	ISGP Benchmark	Units	Result	Result	Result	Result	Result	Result
Conventionals								
Alkalinity	--	mg/L	19	28	40	27	< 5 U	29
Bicarbonate	--	mg/L $CaCO_3$	19	28	40	27	< 5 U	29
Carbonate	--	mg/L $CaCO_3$	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloride	--	mg/L	1.1 J	130	970	460 J	na	270 J
Specific Conductance	--	µmhos/cm	52	570	3800	1700	62	1000
Hydroxide	--	mg/L $CaCO_3$	na	na	na	na	na	na
Nitrate	--	mg/L	0.26 J	0.48 J	0.46 J	0.49 J	0.49 J	0.42 J
pH	5-9	std units	6.87	7.28 J	7.21 J	7.03	6.44 J	7.10
Salinity	--	mg/L	na	na	na	na	na	na
Sulfate	--	mg/L	0.65 J	19	110 J	64 J	na	38 J
Dissolved Organic Carbon	--	mg/L	4.7	2.5	2.5	3.4	1.9	2.6
Total Organic Carbon	--	mg/L	4.4	2.4	2.3	2.9	1.7	2.8
Total Suspended Solids[a]	30	mg/L	< 10 U	17	< 5 U	< 10 U	6.7	20
Turbidity	25	NTU	na	na	na	na	na	na
Oil & Grease	--	mg/L	na	na	na	na	na	na
Oil & Grease - Polar	--	mg/L	na	na	na	na	na	na
Oil & Grease - Silica Gel Treated	--	mg/L	na	na	na	na	na	na

a - The ISGP benchmark for Total Suspended Solids becomes effective on January 1, 2017.

Shaded results exceed the ISGP benchmark for that parameter.

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID: BD-MH-9.66 Collection Date: 12/3/2014 Result		Location ID: BD-MH-10.9 Collection Date: 12/3/2014 Result		Location ID: BD-MH-13.43 Collection Date: 12/2/2014 Result		Location ID: BD-OWS-15 Collection Date: 12/3/2014 Result	
Metals (Total) (mg/kg)											
Antimony	--	--	mg/kg	**3.4**		**14**		**6.7**		**19**	
Arsenic	57	93	mg/kg	**22**		**17**		**13**		**8.6**	
Beryllium	--	--	mg/kg	**0.27**		**0.28**	**J**	**0.25**	**J**	**0.17**	**J**
Cadmium	5.1	6.7	mg/kg	**2.8**		**7.3**		**2.6**		**7.1**	
Chromium	260	270	mg/kg	**67**	**J**	**140**		**67**	**J**	**48**	**J**
Copper	390	390	mg/kg	**110**		**290**		**190**		**150**	
Lead	450	530	mg/kg	**160**		**430**		**150**		**100**	
Mercury	0.41	0.59	mg/kg	**0.25**		**0.60**		**0.18**		**0.16**	
Nickel	--	--	mg/kg	**49**		**64**		**37**		**32**	
Selenium	--	--	mg/kg	**0.4**	**J**	**1.6**	**J**	**0.9**	**J**	**1.2**	**J**
Silver	6.1	6.1	mg/kg	**1.1**		**97**		**1.9**		**0.72**	
Thallium	--	--	mg/kg	< 0.6	U	< 1.3	U	< 0.96	U	< 1.7	U
Zinc	410	960	mg/kg	**870**		**1,600**		**850**		**850**	
PCB Aroclors (µg/kg)											
Aroclor 1016	--	--	µg/kg	< 13	U	< 290	U	< 22	U	< 37	U
Aroclor 1221	--	--	µg/kg	< 14	U	< 320	U	< 24	U	< 41	U
Aroclor 1232	--	--	µg/kg	< 14	U	< 320	U	< 24	U	< 41	U
Aroclor 1242	--	--	µg/kg	< 13	U	< 290	U	< 22	U	< 37	U
Aroclor 1248	--	--	µg/kg	< 13	U	< 290	U	< 22	U	< 37	U
Aroclor 1254	--	--	µg/kg	< 13	UJ	< 290	UJ	< 22	UJ	< 37	U
Aroclor 1260	--	--	µg/kg	**1,100**	**J**	**650**	**J**	**2,000**	**J**	< 37	U
Total PCB Aroclors	130	1,000	µg/kg	**1,100**	**J**	**650**	**J**	**2,000**	**J**	< 41	U
PCB Congeners (ug/kg) [b]											
Total PCB Congeners	130	1,000	µg/kg	**1,660**	**J**	**11,500**	**J**	**902**	**J**	**412**	**J**
PCB TEQ, nd SDL*0	--	--	µg/kg	**0.05**	**J**	**0.139**	**J**	**0.0541**		**0.04**	
PCB TEQ, nd SDL*0.5	--	--	µg/kg	**0.05**	**J**	**0.139**	**J**	**0.0541**		**0.04**	
PCB TEQ, nd SDL*1	--	--	µg/kg	**0.05**	**J**	**0.139**	**J**	**0.0541**		**0.04**	
Dioxins and Furans (ng/kg)											
2,3,7,8-TCDD	--	--	ng/kg	< 0.776	U*	**3.94**		< 5.39	U*	**7.74**	
1,2,3,7,8-PeCDD	--	--	ng/kg	**2.44**	**J**	**15.7**		**40.4**		**48.5**	
1,2,3,4,7,8-HxCDD	--	--	ng/kg	**3.5**		**27.4**		**45**		**49.2**	
1,2,3,6,7,8-HxCDD	--	--	ng/kg	**11.8**		**84.8**		**91.6**		**103**	
1,2,3,7,8,9-HxCDD	--	--	ng/kg	**7.05**		**57.7**		**164**		**204**	

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID: BD-MH-9.66 Collection Date: 12/3/2014 Result	Location ID: BD-MH-10.9 Collection Date: 12/3/2014 Result	Location ID: BD-MH-13.43 Collection Date: 12/2/2014 Result	Location ID: BD-OWS-15 Collection Date: 12/3/2014 Result
1,2,3,4,6,7,8-HpCDD	--	--	ng/kg	349	1,680	1,770	2,040
OCDD	--	--	ng/kg	3,710	16,900 J	17,200	17,300
2,3,7,8-TCDF	--	--	ng/kg	7.65	74.8	6.98	7.79
1,2,3,7,8-PeCDF	--	--	ng/kg	2.78	17.2	5.32 J	6.2 J
2,3,4,7,8-PeCDF	--	--	ng/kg	5.69	34.3	7.4 J	9.22 J
1,2,3,4,7,8-HxCDF	--	--	ng/kg	14.2	48.3	15.8 J	18.4 J
1,2,3,6,7,8-HxCDF	--	--	ng/kg	5.04	30.7	14.1 J	16.2 J
1,2,3,7,8,9-HxCDF	--	--	ng/kg	1.06 J	3.33	< 2.11 U	3.53 J
2,3,4,6,7,8-HxCDF	--	--	ng/kg	4.97	31.3	18.9 J	22.3 J
1,2,3,4,6,7,8-HpCDF	--	--	ng/kg	49.5	277	200	277
1,2,3,4,7,8,9-HpCDF	--	--	ng/kg	6.78	29.3	16.6 J	17.4 J
OCDF	--	--	ng/kg	134	648	543	609
Dioxin/Furan TEQ, nd SDL*0	25	--	ng/kg	15 J	91 J	100 J	130 J
Dioxin/Furan TEQ, nd SDL*0.5	25	--	ng/kg	15 J	91 J	110 J	130 J
Dioxin/Furan TEQ, nd SDL*1	25	--	ng/kg	16 J	91 J	110 J	130 J
Total TCDD	--	--	ng/kg	8.69 U*	66.7	118 J	90.5 J
Total TCDF	--	--	ng/kg	66.8 U*	557 J	129 J	122 J
Total PeCDD	--	--	ng/kg	19.9	138	350	319
Total PeCDF	--	--	ng/kg	67.1	457	170	175 J
Total HxCDD	--	--	ng/kg	94	766	1220	1280
Total HxCDF	--	--	ng/kg	91.6	505	299	345
Total HpCDD	--	--	ng/kg	692	3350	3640	4460
Total HpCDF	--	--	ng/kg	161	770	551	655
PAHs (µg/kg)							
1-Methylnaphthalene	--	--	µg/kg	15 J	150 J	340 J	370 J
2-Chloronaphthalene	--	--	µg/kg	< 26 U	< 580 U	< 450 U	< 760 U
2-Methylnaphthalene	670	1,400	µg/kg	18 J	< 580 U	320 J	310 J
Acenaphthene	500	730	µg/kg	45	2,200	11,000	4,500
Acenaphthylene	1,300	1,300	µg/kg	39	< 580 U	890	270 J
Anthracene	960	4,400	µg/kg	200	4,600	39,000	8,400
Benzo(a)anthracene	1,300	1,600	µg/kg	960	16,000	230,000	32,000
Benzo(a)pyrene	1,600	3,000	µg/kg	1,100	20,000	220,000	40,000
Benzo(g,h,i)perylene	670	720	µg/kg	320	7,700	85,000	16,000
Chrysene	1,400	2,800	µg/kg	1,300	24,000	300,000	49,000

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID / Collection Date	BD-MH-9.66 12/3/2014 Result	BD-MH-10.9 12/3/2014 Result	BD-MH-13.43 12/2/2014 Result	BD-OWS-15 12/3/2014 Result
Dibenz(a,h)anthracene	230	540	µg/kg		**79**	**2,100**	**27,000**	**4,700**
Dibenzofuran	540	700	µg/kg		**32 J**	**1,600 J**	**7,700**	**3,800**
Fluoranthene	1,700	2,500	µg/kg		**2,200**	**56,000**	**640,000**	**110,000**
Fluorene	540	1,000	µg/kg		**70**	**2,500**	**14,000**	**4,900**
Indeno(1,2,3-cd)pyrene	600	690	µg/kg		**450**	**10,000**	**120,000**	**22,000**
Naphthalene	2,100	2,400	µg/kg		**25 J**	< 580 U	**630**	**220 J**
Phenanthrene	1,500	5,400	µg/kg		**1,200**	**40,000**	**310,000**	**80,000**
Pyrene	2,600	3,300	µg/kg		**1,900**	**44,000**	**500,000**	**86,000**
Total Benzofluoranthenes	3,200	3,600	µg/kg		**2,400**	**45,000**	**570,000**	**93,000**
Total HPAHs	12,000	17,000	µg/kg		**1,100**	**220,000 J**	**2,700,000**	**450,000**
Total LPAHs	5,200	13,000	µg/kg		**1,600**	**49,000**	**380,000**	**98,000**
cPAHs, nd RL*0	1,000	--	µg/kg		**1,500 J**	**28,000 J**	**318,000**	**56,000 J**
cPAHs, nd RL*0.5	1,000	--	µg/kg		**1,500 J**	**28,000 J**	**318,000**	**56,000 J**
cPAHs, nd RL*1	1,000	--	µg/kg		**1,500 J**	**28,000 J**	**318,000**	**56,000 J**
Phthalates (µg/kg)								
bis(2-Ethylhexyl)phthalate	1,300	1,900	µg/kg		**1,900**	**2,900 J**	**15,000**	**10,000 J**
Butylbenzylphthalate	63	900	µg/kg		**180 J**	< 5,800 U	< 4,500 U	< 7,600 U
Di-n-Butylphthalate	1,400	5,100	µg/kg		**160 J**	< 15,000 U	< 11,000 U	< 19,000 U
Diethylphthalate	200	1,200	µg/kg		< 260 U	< 5,800 U	< 4,500 U	< 7,600 U
Dimethylphthalate	71	160	µg/kg		**10 J**	< 2,900 U	**230 J**	**470 J**
Di-n-Octyl phthalate	6,200	--	µg/kg		**270 J**	**1,400 J**	**2,500 J**	**3,300 J**
Phenols (µg/kg)								
2,4,5-Trichlorophenol	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2,4,6-Trichlorophenol	--	--	µg/kg		< 190 U	< 4,400 U	< 3,400 U	< 5,700 U
2,4-Dichlorophenol	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2,4-Dimethylphenol	29	29	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2,4-Dinitrophenol	--	--	µg/kg		< 1,300 U	< 29,000 U	< 23,000 U	< 38,000 U
2-Chlorophenol	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2-Methylphenol	63	63	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2-Nitrophenol	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4,6-Dinitro-2-Methylphenol	--	--	µg/kg		< 1,300 U	< 29,000 U	< 23,000 U	< 38,000 U
4-Chloro-3-methylphenol	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4-Methylphenol	670	670	µg/kg		< 260 U	< 5,800 U	< 4,500 U	< 7,600 U
4-Nitrophenol	--	--	µg/kg		< 1,300 U	< 29,000 U	< 23,000 U	< 38,000 U

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID	BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
				Collection Date	12/3/2014	12/3/2014	12/2/2014	12/3/2014
					Result	Result	Result	Result
Pentachlorophenol	360	690	µg/kg		**97 J**	< 5,800 U	< 4,500 U	< 7,600 U
Phenol	420	1,200	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Other SVOCs (µg/kg)								
1,2,4-Trichlorobenzene	31	51	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
1,2-Dichlorobenzene	35	50	µg/kg		< 71 U	< 1,600 U	< 1,200 U	< 2,100 U
1,3-Dichlorobenzene	--	--	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
1,4-Dichlorobenzene	110	120	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
2,4-Dinitrotoluene	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2,6-Dinitrotoluene	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2-Nitroaniline	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
3,3'-Dichlorobenzidine	--	--	µg/kg		< 260 U	< 5,800 U	< 4,500 U	< 7,600 U
3-Nitroaniline	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4-Bromophenyl-phenylether	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4-Chloroaniline	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4-Chlorophenyl-phenylether	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
4-Nitroaniline	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Benzoic Acid	650	650	µg/kg		< 3,200 U	< 73,000 U	< 57,000 U	< 96,000 U
Benzyl Alcohol	57	73	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
2,2'-Oxybis(1-Chloropropane)	--	--	µg/kg		< 320 U	< 7,300 U	< 5,700 U	< 9,600 U
bis(2-Chloroethoxy) Methane	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Bis-(2-Chloroethyl) Ether	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Carbazole	--	--	µg/kg		**160**	**6,400**	**46,000**	**14,000**
Hexachlorobenzene	22	70	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
Hexachlorobutadiene	11	120	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
Hexachlorocyclopentadiene	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Hexachloroethane	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Isophorone	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
Nitrobenzene	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
N-Nitrosodimethylamine	--	--	µg/kg		< 1300 U	< 29,000 U	< 23,000 U	< 38,000 U
N-Nitroso-Di-N-Propylamine	--	--	µg/kg		< 130 U	< 2,900 U	< 2,300 U	< 3,800 U
N-Nitrosodiphenylamine	28	40	µg/kg		< 65 U	< 1,500 U	< 1,100 U	< 1,900 U
VOCs (µg/kg)								
1,1,1,2-Tetrachloroethane	--	--	µg/kg		< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
1,1,1-Trichloroethane	--	--	µg/kg		< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID	BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
				Collection Date	12/3/2014	12/3/2014	12/2/2014	12/3/2014
				Result	Result	Result	Result	Result
1,1,2,2-Tetrachloroethane	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
1,1,2-Trichloroethane	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
1,1-Dichloroethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
1,1-Dichloroethene	--	--	µg/kg	< 3.3 U	< 17 U	< 11 U	< 15 U
1,1-Dichloropropene	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
1,2,3-Trichlorobenzene	--	--	µg/kg	< 1.3 UJ	**4.4 J**	< 4.3 UJ	< 6.2 UJ
1,2,3-Trichloropropane	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
1,2,4-Trimethylbenzene	--	--	µg/kg	< 1.3 UJ	**1.6 J**	< 4.3 UJ	**17 J**
1,2-Dibromo-3-chloropropane	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
1,2-Dibromoethane	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
1,2-Dichloroethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
1,2-Dichloropropane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
1,3,5-Trimethylbenzene	--	--	µg/kg	< 3.3 UJ	< 17 UJ	< 11 UJ	**2.3 J**
1,3-Dichloropropane	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
2,2-Dichloropropane	--	--	µg/kg	< 3.3 U	< 17 U	< 11 U	< 15 U
2-Chloroethylvinylether	--	--	µg/kg	< 3.3 UJ	< 17 UJ	< 11 UJ	< 15 UJ
2-Chlorotoluene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
2-Hexanone	--	--	µg/kg	< 3.3 UJ	< 17 UJ	< 11 UJ	< 15 UJ
4-Chlorotoluene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
Acetone	--	--	µg/kg	**11**	**220 J**	**47**	**290 J**
Acrolein	--	--	µg/kg	< 20 U	< 100 U	< 64 U	< 92 U
Acrylonitrile	--	--	µg/kg	< 6.6 U	< 34 U	< 21 U	< 31 U
Benzene	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	**1.2 J**
Bromobenzene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
Bromochloromethane	--	--	µg/kg	< 1.3 U	< 6.8 U	< 4.3 U	< 6.2 U
Bromoform	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
Bromomethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Carbon Disulfide	--	--	µg/kg	< 0.66 U	**0.92 J**	**2.3**	**11 J**
Carbon Tetrachloride	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Chlorobenzene	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
Dibromochloromethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Chloroethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Chloroform	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Chloromethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U

Table R-7. Solids Sample Results
Boeing Developmental Center

Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Location ID: BD-MH-9.66 Collection Date: 12/3/2014 Result	Location ID: BD-MH-10.9 Collection Date: 12/3/2014 Result	Location ID: BD-MH-13.43 Collection Date: 12/2/2014 Result	Location ID: BD-OWS-15 Collection Date: 12/3/2014 Result
cis-1,2-Dichloroethene	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
cis-1,3-Dichloropropene	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
Dibromomethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Bromodichloromethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Dichlorodifluoromethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Ethylbenzene	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	**4.9 J**
Isopropylbenzene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**1.4 J**
m,p-Xylene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**4.3 J**
2-Butanone	--	--	µg/kg	< 6.6 U	< 34 U	< 21 U	, 31 U
Iodomethane	--	--	µg/kg	< 10 U	< 51 U	< 32 U	< 46 U
4-Methyl-2-Pentanone (MIBK)	--	--	µg/kg	< 3.3 UJ	**5.6 J**	< 11 UJ	< 15 UJ
Methyl tert-Butyl Ether	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Methylene Chloride	--	--	µg/kg	< 10 U	< 51 U	< 32 U	< 46 U
n-Butylbenzene	--	--	µg/kg	< 1.3 UJ	**1.8 J**	< 4.3 UJ	**2.9 J**
n-Propylbenzene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**3.3 J**
o-Xylene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**4.1 J**
4-Isopropyltoluene	--	--	µg/kg	< 1.3 UJ	**1.7 J**	, 4.3 UJ	**12 J**
sec-Butylbenzene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
Styrene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	< 6.2 UJ
tert-Butylbenzene	--	--	µg/kg	< 1.3 UJ	**1.6 J**	< 4.3 UJ	< 6.2 UJ
Tetrachloroethene	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
Toluene	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**46 J**
Total Xylenes	--	--	µg/kg	< 1.3 UJ	< 6.8 UJ	< 4.3 UJ	**8.4 J**
trans-1,2-Dichloroethene	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
trans-1,3-Dichloropropene	--	--	µg/kg	< 0.66 UJ	< 3.4 UJ	< 2.1 UJ	< 3.1 UJ
trans-1,4-Dichloro-2-butene	--	--	µg/kg	< 3.3 UJ	< 17 UJ	< 11 UJ	< 15 UJ
Trichloroethene	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Trichlorofluoromethane	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
Vinyl Acetate	--	--	µg/kg	< 3.3 U	< 17 U	< 11 U	< 15 U
Vinyl Chloride	--	--	µg/kg	< 0.66 U	< 3.4 U	< 2.1 U	< 3.1 U
TPH (mg/kg)							
Gasoline-Range Hydrocarbons	30/100	--	mg/kg	< 1.9 U	**18 J**	**4.8 J**	**9.5 J**
Diesel-Range Hydrocarbons	2,000	--	mg/kg	**180 J**	**950 J**	**4,100 J**	**2,200 J**
Motor Oil-Range Hydrocarbons	2,000	--	mg/kg	**1,100 J**	**6,600 J**	**10,000 J**	**7,100 J**

Table R-7. Solids Sample Results
Boeing Developmental Center

Location ID				BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
Collection Date				12/3/2014	12/3/2014	12/2/2014	12/3/2014
Analyte	SMS Criteria SCO/ LAET[a]	SMS Criteria CSL/ 2LAET	Unit	Result	Result	Result	Result
Grain size (%)							
Clay	--	--	%	0.40	3.6	3.4	3.6
Silt	--	--	%	3.2	61	37	36
Sand	--	--	%	93	32	58	48
Gravel	--	--	%	3.4	3.0	1.4	13
Cobbles	--	--	%	0.0	0.0	0.0	0.0
Conventionals (%)							
Total Organic Carbon	--	--	%	1.5	15	8.3	17
Total Solids	--	--	%	75.9	33.8	43.1	25.5

a - LDW RALs are presented for cPAHs and dioxin/furan TEQs. MTCA Method A cleanup levels for soil are presented for TPH.

b - Total PCB congeners and PCB/dioxin/furan TEQs include only congeners that met identification criteria as required by EPA Method1668C (PCBs) or EPA Method 1613B (dioxins/furans).

PCB and dioxin/furan congeners identified with a U* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

Petroleum hydrocarbon results are compared to MTCA Method A cleanup levels. Two cleanup levels are available for TPH-Gasoline under MTCA Method A. The more stringent value (30 mg/kg) is applied for facilities where benzene has been detected.

Results in **bold** are detections.

Results shaded in gray exceed one or more criteria.

Table R-8. Solids Sample Results Compared to Dry Weight Criteria
Boeing Developmental Center

Location ID	BD-MH-9.66		BD-MH-10.9		BD-MH-13.43		BD-OWS-15	
Collection Date	12/3/2014		12/3/2014		12/2/2014		12/3/2014	
Analyte	Exceedance Factor		Exceedance Factor		Exceedance Factor		Exceedance Factor	
	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET
Metals (Total)								
Cadmium			1.4	1.1				
Mercury			1.5	1.0				
Silver			16	16				
Zinc	2.1		3.9	1.7	2.1		2.1	
PCBs								
Total PCB Aroclors	8.5	1.1	5.0		15	2.0		
Total PCB Congeners	13	1.7	88	11.5	6.9		3.2	
Dioxins and Furans								
Dioxin/Furan TEQ, nd SDL*0			3.7		4.0		5.2	
Dioxin/Furan TEQ, nd SDL*0.5			3.7		4.4		5.2	
Dioxin/Furan TEQ, nd SDL*1			3.7		4.4		5.2	
PAHs								
Acenaphthene			4.4	3.0	22	15	9.0	6.2
Anthracene			4.8	1.0	41	8.9	8.8	1.9
Benzo(a)anthracene			12	10	177	144	25	20
Benzo(a)pyrene			13	6.7	138	73	25	13
Benzo(g,h,i)perylene			11	11	127	118	24	22
Chrysene			17	8.6	214	107	35	18
Dibenz(a,h)anthracene			9.1	3.9	117	50	20	8.7
Dibenzofuran			3.0	2.3	14	11	7.0	5.4
Fluoranthene	1.3		33	22	376	256	65	44
Fluorene			4.6	2.5	26	14	9.1	4.9
Indeno(1,2,3-cd)pyrene			17	14	200	174	37	32
Phenanthrene			27	7.4	207	57	53	15
Pyrene			17	13	192	152	33	26
Total Benzofluoranthenes			14	13	178	158	29	26
Total HPAHs			18	13	225	159	38	26
Total LPAHs			9.4	3.8	73	29	19	7.5
cPAHs, nd RL*0	1.5		28		318		56	
cPAHs, nd RL*0.5	1.5		28		318		56	
cPAHs, nd RL*1	1.5		28		318		56	

Table R-8. Solids Sample Results Compared to Dry Weight Criteria
Boeing Developmental Center

Location ID	BD-MH-9.66		BD-MH-10.9		BD-MH-13.43		BD-OWS-15	
Collection Date	12/3/2014		12/3/2014		12/2/2014		12/3/2014	
Analyte	Exceedance Factor		Exceedance Factor		Exceedance Factor		Exceedance Factor	
	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET
Phthalates								
bis(2-Ethylhexyl)phthalate	1.5		2.2	1.5	12	7.9	7.7	5.3
Dimethylphthalate					3.2	1.4	6.6	2.9
TPH								
Diesel-Range Hydrocarbons					2.1		1.1	
Motor Oil-Range Hydrocarbons			3.3		5.0		3.6	

Exceedance factors are presented for detected concentrations that exceed the SMS/AET criteria, LDW RALs (dioxins/furans and cPAHs), or MTCA Method A cleanup levels for soil (TPH).

The exceedance factors are calculated (result divided by criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the identified criterion.

Table R-9. Solids Sample Results Compared to Organic Carbon-Normalized Criteria
Boeing Developmental Center

Location ID			BD-MH-9.66		
Collection Date			12/03/2014		
Analyte	SMS Criteria		Result	EF	
	SCO	CSL		SCO	CSL
PAHs (mg/kg OC)					
2-Methylnaphthalene	38	64	**1.2 J**		
Acenaphthene	16	57	**3.0**		
Acenaphthylene	66	66	**2.6**		
Anthracene	220	1,200	**13**		
Benzo(a)anthracene	110	270	**64**		
Benzo(a)pyrene	99	210	**73**		
Benzo(g,h,i)perylene	31	78	**21**		
Chrysene	110	460	**87**		
Dibenz(a,h)anthracene	12	33	**5.3**		
Dibenzofuran	15	58	**2.1 J**		
Fluoranthene	160	1,200	**147**		
Fluorene	23	79	**4.7**		
Indeno(1,2,3-cd)pyrene	34	88	**30**		
Naphthalene	99	170	**1.7 J**		
Phenanthrene	100	480	**80**		
Pyrene	1,000	1,400	**127**		
Total Benzofluoranthenes	230	450	**160**		
Total HPAHs	960	5,300	**73**		
Total LPAHs	370	780	**107**		
Phthalates (mg/kg OC)					
bis(2-Ethylhexyl)phthalate	47	78	**127**	2.7	1.6
Butylbenzylphthalate	4.9	64	**12 J**	2.4	
Di-n-Butylphthalate	220	1,700	**11 J**		
Diethylphthalate	61	110	< 17 U		
Dimethylphthalate	53	53	**0.67 J**		
Di-n-Octyl phthalate	58	4,500	**18 J**		
Other SVOCs (mg/kg OC)					
1,2,4-Trichlorobenzene	0.81	1.8	< 4.3 U		
1,2-Dichlorobenzene	2.3	2.3	< 4.7 U		
1,4-Dichlorobenzene	3.1	9	< 4.3 U		
Hexachlorobenzene	0.38	2.3	< 4.3 U		
Hexachlorobutadiene	3.9	6.2	< 4.3 U		
N-Nitrosodiphenylamine	11	11	< 4.3 U		
PCB Aroclors (mg/kg OC)					
Total PCB Aroclors	12	65	**73 J**	6.1	1.1

Only samples with TOC content between 0.5 and 4.0% are OC-normalized for comparison with SMS OC-normalized criteria.

Exceedance Factors (EFs) are presented for detected concentrations that exceed the SMS criteria only.

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
Collection Date	**12/3/2014**	**12/3/2014**	**12/2/2014**	**12/3/2014**
Analyte	**Result**	**Result**	**Result**	**Result**
Total PCB Congeners (ng/kg)[a]	1,660,000 J	11,500,000 J	902,000 J	412,000 J
Total Monochlorobiphenyl (ng/kg)[a]	106	401	425	7,920
PCB-1	59.6	139	170	5,070
PCB-2	13.1	132	116	759
PCB-3	33.2	130	139	2,090
Total Dichlorobiphenyl (ng/kg)[a]	1,590	6,330	3,630	19,000
PCB-4/10	83.3	304	174	2,030
PCB-5/8	271	1,050	667	4,550
PCB-6	48.4	202	146	1,230
PCB-7/9	32.2	110	< 167 U	2,600
PCB-11	613	2,790	1,800	5,870
PCB-12/13	35.9	230	112	903
PCB-14	< 18.2 U	< 42.3 U	< 215 U	< 1,060 U
PCB-15	509	1,640	727	1,880
Total Trichlorobiphenyl (ng/kg)[a]	10,300 J	22,000	8,450 J	14,300 J
PCB-16/32	1,570	1,980	1,150	2,180
PCB-17	457	843	530	1,250
PCB-18	1,050	2,720	656	1,960
PCB-19	182	331	< 211 U*	559
PCB-20/21/33	731	2,310	998	1,650
PCB-22	491	1,200	545	758
PCB-23	< 7.00 U	< 16.5 U	< 31.8 U	< 47.7 U
PCB-24/27	97.1	249	186	< 326 U*
PCB-25	90.3	269	< 157 U*	271
PCB-26	206	770	423	624
PCB-28	2,600	2,700	1,100	1,270
PCB-29	< 5.82 U*	29.6	< 37.7 U	< 56.5 U
PCB-30	< 3.31 U	< 4.84 U	< 25.5 U	< 98.1 U
PCB-31	1,660	3,340	1,710	2,160
PCB-34	14.8	23.0	< 35.8 U	< 53.7 U
PCB-35	64.5	734	167	366
PCB-36	19.5	104	< 47.0 U	152
PCB-37	764	4,070	985	1,140
PCB-38	324	221	< 44.8 U	< 76.9 U
PCB-39	8.80	62.5	< 48.2 U	< 82.7 U

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
Collection Date	12/3/2014	12/3/2014	12/2/2014	12/3/2014
Analyte	Result	Result	Result	Result
Total Tetrachlorobiphenyl (ng/kg)[a]	190,000 J	532,000 J	59,200 J	42,100 J
PCB-40	1,220	5,010	412	225
PCB-41/64/71/72	14,000	26,100	7,100	2,430
PCB-42/59	7,300	5,470	1,220	1,050
PCB-43/49	35,300 J	38,000 J	4,170	2,940
PCB-44	13,600 J	61,000 J	7,070	4,470
PCB-45	665	1,580	662	540
PCB-46	2,190	896	316	246
PCB-47	21,000 J	7,490	993	802
PCB-48/75	1,030	1,800	500	593
PCB-50	27.5	28.3	< 56.4 U	< 35.2 U
PCB-51	2,640	1,040	229	167
PCB-52/69	26,300 J	134,000 J	12,900	6,120
PCB-53	6,140	3,750	778	609
PCB-54	67.3	67.6	< 18.3 U*	< 28.1 U
PCB-55	459	1,930	228	170
PCB-56/60	3,880	18,900	3,050	2,900
PCB-57	55.8	182	< 27.8 U*	49.9
PCB-58	322	210	< 14.9 U*	< 52.3 U
PCB-61/70	22,000 J	122,000 J	10,700	8,810
PCB-62	< 12.9 U	< 10.7 U	< 53.6 U	< 40.0 U
PCB-63	860	1,410	185	278
PCB-65	< 12.8 U	< 10.6 U	< 53.4 U	< 39.9 U
PCB-67	88.3	894	118	229
PCB-68	961	216	23.3	< 17.4 U*
PCB-73	95.2	< 9.07 U	< 49.4 U	< 36.2 U
PCB-74	3,450	17,500 J	2,300	2,690
PCB-76/66	24,000 J	39,900 J	4,580	5,500
PCB-77	1,380	30,500 J	1,260	1,050
PCB-78	< 10.2 U	< 10.2 U	< 37.1 U	< 29.4 U
PCB-79	802	4,210	325	197
PCB-80	< 10.0 U	< 7.21 U	< 34.8 U	< 27.4 U
PCB-81	94.2	8,310	92.9	72.5

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66		BD-MH-10.9		BD-MH-13.43		BD-OWS-15	
Collection Date	12/3/2014		12/3/2014		12/2/2014		12/3/2014	
Analyte	Result		Result		Result		Result	
Total Pentachlorobiphenyl (ng/kg)[a]	438,000	J	3,340,000	J	270,000		116,000	J
PCB-82	4,880		68,300	J	5,180		2,340	
PCB-83	< 7.31	U	< 28.1	U	< 54.1	U	< 58.8	U
PCB-84/92	31,700	J	207,000	J	18,400		7,740	
PCB-85/116	6,820		68,700	J	5,860		2,490	
PCB-86	< 13.2	U	< 50.6	U	120		70.2	
PCB-87/117/125	16,500		187,000	J	14,900		5,930	
PCB-88/91	17,000		53,200	J	5,290		2,460	
PCB-89	286		2,340		361		177	
PCB-90/101	77,500	J	581,000	J	46,200		22,400	
PCB-93	< 12.9	U	< 41.0	U	< 96.7	U	< 104	U
PCB-94	780		1,500		178		109	
PCB-95/98/102	54,400	J	382,000	J	36,900		13,900	
PCB-96	651		1,010		109		< 75.1	U
PCB-97	16,500	J	149,000	J	12,100		4,910	
PCB-99	33,000	J	154,000	J	12,800		5,530	
PCB-100	922		997		76.0		< 91.2	U
PCB-103	1,230		2,440		163		103	
PCB-104	17.9		< 64.1	U*	< 56.8	U	< 72.2	U
PCB-105	12,900	J	216,000	J	13,900		6,830	
PCB-106/118	60,000	J	546,000	J	36,400		16,000	
PCB-107/109	5,530		32,000	J	2,440		1,080	
PCB-108/112	4,010		22,900	J	1,860		779	
PCB-110	84,100	J	581,000	J	51,000		21,000	
PCB-111/115	659		6,370		655		220	
PCB-113	132		1,900		< 51.0	U	< 1,240	U*
PCB-114	754		10,300		743		437	
PCB-119	3,830		7,740		549		252	
PCB-120	564		1,600		192		< 53.3	U
PCB-121	< 6.71	U	< 21.4	U	< 50.4	U	< 54.5	U
PCB-122	530		6,570		516		231	
PCB-123	631		8,250		635		300	
PCB-124	1,990		24,900	J	1,750		652	
PCB-126	446		13,500	J	504		358	
PCB-127	< 8.52	U	< 390	U	< 85.2	U	< 236	U

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66		BD-MH-10.9		BD-MH-13.43		BD-OWS-15	
Collection Date	12/3/2014		12/3/2014		12/2/2014		12/3/2014	
Analyte	Result		Result		Result		Result	
Total Hexachlorobiphenyl (ng/kg)[a]	552,000	J	4,140,000	J	322,000	J	113,000	
PCB-128/162	14,800		167,000	J	10,400		5,050	
PCB-129	4,970		56,900	J	3,650		1,580	
PCB-130	6,580		61,200	J	4,420		2,000	
PCB-131	< 20.5	U	< 417	U	< 86.2	U	< 88.5	U
PCB-132/161	31,000	J	294,000	J	20,100		8,900	
PCB-133/142	3,440		30,700	J	2,160		896	
PCB-134/143	6,740		55,100	J	3,890		1,530	
PCB-135	16,200	J	95,600	J	9,150		2,910	
PCB-136	15,000	J	87,700	J	8,420		2,660	
PCB-137	4,630		37,900	J	3,130		1,200	
PCB-138/163/164	116,000	J	979,000	J	67,700		23,300	
PCB-139/149	113,000	J	605,000	J	64,600		21,400	
PCB-140	618		2,280		371		156	
PCB-141	25,200	J	212,000	J	14,700		4,820	
PCB-144	5,940		38,300	J	3,940		1,240	
PCB-145	20.5		164		< 61.5	U	< 44.5	U
PCB-146/165	15,300		119,000	J	8,180		3,160	
PCB-147	2,930		8,700		1,190		482	
PCB-148	120		353		< 99.3	U	< 71.8	U
PCB-150	276		779		80.9		< 53.5	U
PCB-151	33,700	J	188,000	J	18,800		5,070	
PCB-152	126		477		75.1		36.1	
PCB-153	106,000	J	802,000	J	57,200	J	18,800	
PCB-154	1,470		5,510		506		257	
PCB-155	< 9.62	U	29.5		< 66.4	U	< 48.0	U
PCB-156	9,300		107,000	J	6,750		2,660	
PCB-157	2,080		24,700	J	1,470		661	
PCB-158/160	12,300		113,000	J	8,220		3,060	
PCB-159	< 14.5	U	< 375	U	< 71.9	U	< 64.8	U
PCB-166	323		3,480		239		111	
PCB-167	4,080		41,300	J	2,670		1,140	
PCB-168	190		762		85.5		< 55.4	U
PCB-169	28.7		314		55.4		< 69.4	U

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66	BD-MH-10.9	BD-MH-13.43	BD-OWS-15
Collection Date	12/3/2014	12/3/2014	12/2/2014	12/3/2014
Analyte	Result	Result	Result	Result
Total Heptachlorobiphenyl (ng/kg)[a]	360,000 J	2,490,000 J	185,000 J	66,800
PCB-170	40,700 J	242,000 J	20,600	7,660
PCB-171	10,100 J	70,100 J	5,200	1,740
PCB-172	5,940	41,200	3,190	1,190
PCB-173	1,110	6,550	597	184
PCB-174	45,900 J	329,000 J	24,000	7,270
PCB-175	1,740	11,600	878	313
PCB-176	5,290	35,500	2,670	908
PCB-177	26,900 J	188,000 J	14,000	4,480
PCB-178	8,410	59,200 J	4,090	1,600
PCB-179	19,800 J	138,000 J	9,640	3,450
PCB-180	104,000 J	729,000 J	55,900 J	20,500
PCB-181	145	1,070	76.5	< 44.2 U
PCB-182/187	46,400 J	342,000 J	22,300	9,480
PCB-183	22,700 J	159,000 J	11,200	4,260
PCB-184	25.6	227	< 19.8 U	< 23.3 U
PCB-185	4,300	32,800	2,300	812
PCB-186	< 15.1 U	33.1	< 22.2 U	< 26.1 U
PCB-188	72.7	507	43.7	24.4
PCB-189	1,520	10,300	783	338
PCB-190	8,220	48,600	4,000	1,380
PCB-191	1,740	11,400	907	340
PCB-192	< 17.2 U	< 101 U	< 28.7 U	< 35.0 U
PCB-193	5,000	32,700	2,540	874
Total Octachlorobiphenyl (ng/kg)[a]	101,000 J	799,000 J	47,800	22,000 J
PCB-194	24,500 J	191,000 J	11,800	4,740
PCB-195	9,710	70,100 J	4,160	1,740
PCB-196/203	28,900 J	212,000 J	13,400	6,620
PCB-197	957	7,730	453	244
PCB-198	1,130	13,500 J	517	< 189 U*
PCB-199	24,400 J	189,000 J	11,400	5,620
PCB-200	3,190	25,700 J	1,550	686
PCB-201	3,060	29,300 J	1,550	795
PCB-202	4,270	52,100 J	2,360	1,330
PCB-204	< 8.27 U	102	< 44.7 U	< 70.8 U
PCB-205	1,170	8,810	558	218

Table R-10. Solids Sample Results - PCB Congeners
Boeing Developmental Center

Location ID	BD-MH-9.66		BD-MH-10.9		BD-MH-13.43	BD-OWS-15
Collection Date	**12/3/2014**		**12/3/2014**		**12/2/2014**	**12/3/2014**
Analyte	**Result**		**Result**		**Result**	**Result**
Total Nonachlorobiphenyl (ng/kg)[a]	9,740		200,000	J	5,490	4,130
PCB-206	7,240		146,000	J	4,020	2,660
PCB-207	893		13,600	J	526	608
PCB-208	1,610		39,900	J	941	858
Decachlorobiphenyl (ng/kg)	522		16,700	J	461	6,580
PCB-209	522		16,700	J	461	6,580
PCB TEQ, nd SDL*0	50.0	J	139	J	54.1	40.0
PCB TEQ, nd SDL*0.5	50.0	J	139	J	54.1	40.0
PCB TEQ, nd SDL*1	50.0	J	139	J	54.1	40.0

a - Total PCBs and total PCB homologs include only congeners that met identification criteria as required by EPA Method1668C.

PCB congeners identified with a U* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

Attachment R-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: BD-OWS-15	**N➔**
Structure Type: Oil Water Separator	
General Location: North area of facility	
Characteristics: 15’ to bottom of structure, 7’ to depth of water, 2-3” of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-OWS-15-20141203-W	
Drainage Information:	
OWS-15 is located at the north area of the Boeing Developmental Center. OWS-15 receives stormwater from an area that drains the northeast parking lots, buildings, and the Museum of Flight. Stormwater is conveyed from OWS-15 to outfall DC-15 that discharges to the LDW.	**N➔**

Conveyance Structure Information	
Structure Identification Number: BD-MH-14.25	**N↑** 
Structure Type: Manhole	
General Location: Northwest area of facility	
Characteristics: Negligible standing water or solids	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: **--**	
Drainage Information:	
MH-14.25 is located in the northwest area of the Boeing Developmental Center facility. MH-14.25 receives stormwater from an area that drains the northwest and north-central parking lots and buildings. Stormwater is conveyed from MH-14.25 to OWS 14, which is then conveyed to outfall DC-14 that discharges to the LDW.	**N←** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-14.27	**N↓**
Structure Type: Manhole	
General Location: Northwest area of facility	
Characteristics: Negligible standing water or solids	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: **--**	

Drainage Information:	
MH-14.27 is located in the northwest area of the Boeing Developmental Center. MH-14.27 receives stormwater from an area that drains the northwest and north-central parking lots. Stormwater is conveyed from MH-14.27 to OWS 14, which is then conveyed to outfall DC-14 that discharges to the LDW.	**N←**

Conveyance Structure Information	
Structure Identification Number: BD-OWS-14	**N↑**
Structure Type: Oil Water Separator	
General Location: Northwest corner of facility	
Characteristics: 13’ to bottom of structure, 4.5’ to depth of water, <1” of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-OWS-14-20141222-W	
Drainage Information:	
OWS-14 is located at the northwest area of the Boeing Developmental Center facility. OWS-14 receives stormwater from an area that drains the northwest parking lots and building 9-08. Stormwater is conveyed from OWS-14 to outfall DC-14 that discharges to the LDW.	**N↗**

Conveyance Structure Information	
Structure Identification Number: BD-MH-13.43	**N↑** 
Structure Type: Manhole	
General Location: West-northwest area of facility	
Characteristics: 2-3” depth of water, 24-36” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-13.43-20141202-S	
Drainage Information:	
MH-13.43 is located in the west-northwest area of the Boeing Developmental Center facility. MH-13.43 receives stormwater from an area that drains the northwest and west parking lots and buildings. Stormwater is conveyed from MH-13.43 to OWS 13, which is then conveyed to outfall DC-13 that discharges to the LDW.	**N←** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-12.58	**N🡐**  12/02/2014, 10:13:33
Structure Type: Manhole	
General Location: North-central area of facility	
Characteristics: 15’ to bottom of structure, 14.8’ depth to water, 1-2” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: **--**	
Drainage Information:	
MH-12.58 is located in the north-central area of the Boeing Developmental Center facility. MH-12.58 receives stormwater from an area that drains a grassy area between parking lots. Stormwater is conveyed from MH-12.58 to MH-12.57 and eventually to outfall DC-12 that discharges to the LDW.	**N🡖**  12/02/2014, 10:15:28

Conveyance Structure Information	
Structure Identification Number: BD-MH-12.56	**N←** 
Structure Type: Manhole	
General Location: West-northwest area of facility	
Characteristics: 14’ to bottom of structure, 13.5’ depth to water, <1” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-12.56-20141222-W	
Drainage Information:	
MH-12.56 is located in the west-northwest area of the Boeing Developmental Center facility. MH-12.56 receives stormwater from an area that drains a grassy area between parking lots. Stormwater is conveyed from MH-12.56 to outfall DC-12 that discharges to the LDW.	**N↘** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-11.31	**N➔** 
Structure Type: Manhole	
General Location: West-northwest area of facility	
Characteristics: 14’ to bottom of structure, 11.5’ depth of water, <1” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-11.31-20141215-W	
Drainage Information:	
MH-11.31 is located in the west-northwest area of the Boeing Developmental Center facility. MH-11.31 receives stormwater from an area that drains the west, north west parking lots and buildings. Stormwater is conveyed from MH-11.31 to OWS 11, then to outfall DC-11 that discharges to the LDW.	**N➘** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-10.9	**N🡐** 
Structure Type: Manhole	
General Location: West area of facility	
Characteristics: 8.3’ to bottom of structure, 8’ depth to water, 3-4” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-10.9-20141203-S	
Drainage Information:	
MH-10.9 is located in the west area of the Boeing Developmental Center facility. MH-10.9 receives stormwater from an area that drains the west parking lots and buildings. Stormwater is conveyed from MH-10.9 to OWS 10, then to outfall DC-10 that discharges to the LDW.	**N🡖** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-9.66	**N➔** 
Structure Type: Manhole	
General Location: West area of facility	
Characteristics: 11’ to bottom of structure, 10.5’ depth to water, 4” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-9.66-120314-S	
Drainage Information:	
MH-9.66 is located in the western area of the Boeing Developmental Center facility. MH-9.66 receives stormwater from an area that drains a parking lot and the 9-96 building. Stormwater is conveyed from MH-9.66 to OWS 9, then to outfall DC-9 that discharges to the LDW.	**N➔** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-5.16	**N↑** 
Structure Type: Manhole	
General Location: Southwest area of facility	
Characteristics: 14’ to bottom of structure, 11’ to depth of water, <1” of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-5.16-20141215-W	
Drainage Information:	
MH-5.16 is located near the southwest bank of the Boeing Developmental Center facility. MH-5.16 receives stormwater from an area that drains the building roofs and paved driveways. Stormwater is conveyed from MH-5.16 to outfall DC-5 that discharges to the LDW.	

Conveyance Structure Information	
Structure Identification Number: BD-OWS-02	**N↑** 
Structure Type: Oil Water Separator	
General Location: Southwest area of facility	
Characteristics: 14’ to bottom of structure, 10-11’ to depth of water, 1” of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-OWS-02-20141203-W	
Drainage Information:	
OWS-02 is located in the southwest area of the Boeing Developmental Center facility. OWS-02 receives stormwater from an area that drains the southeast side of building 9-101. Stormwater is conveyed from OWS-02 to outfall DC-2 that discharges to the LDW.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: BD-MH-2.18	**N↑**
Structure Type: Manhole	
General Location: Southwest area of facility	
Characteristics: 12’ to bottom of structure, 12’ depth to water, <1” depth of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: --	
Drainage Information:	
MH-2.18 is located in the southwest area of the Boeing Developmental Center facility. MH-2.18 receives stormwater from OWS-02, which receives stormwater from an area that drains the southeast side of building 9-101. Stormwater is conveyed from MH-2.18 to outfall DC-2 that discharges to the LDW.	**N↑**

Conveyance Structure Information	
Structure Identification Number: BD-MH-1.32	**N↑** 
Structure Type: Manhole	
General Location: South area of facility	
Characteristics: 7.5’ to bottom of structure, 7’ depth to water, <1” of sediment	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Manhole cover	
Volume Gauge: --	
Sample ID: BD-MH-1.32-20141222-W	
Drainage Information:	
MH-1.32 is located in the southern area of the Boeing Developmental Center facility. MH-1.32 receives stormwater from an area that drains the southern area parking lot. Stormwater is conveyed from MH-1.32 to OWS 1, then to outfall DC-1 that discharges to the LDW. Stormwater can also be conveyed via a bypass to the King County storm sewer system.	

Attachment R-2
Field Documentation

Location ~~Boeing Developmental Ctr~~ Date 12/02/14

Project / Client NPDES/Ecology

0610 M. Ivancevich stops to purchase ice while en route to storage unit.

0625 M. Ivancevich arrives at storage unit, begins prepping sampling equipment.

0645 C. Nancarrow arrives at storage unit, helps prep & load van.

0730 Leidos departs storage unit, en route to BDC.

0800 Leidos arrives at BDC.

0810 Leidos enters Boeing visitor center to begin badging process.

0815 Mahloub Alam/EZY arrives.

0825 Leidos, Ecology, & Boeing mob to N portion of site, @ OWS 15

0837 C. Nancarrow conducts H&S meeting.

0845 Investigating OWS 15. Approx 15' deep. Likely enough sampleable solids. Approx. 2-3" in corners. Inflow from SE. Water approx. 7' bgs. OWS 15 sampleable for solids & water.

0912 @ OWS 14. Covers are paved, unable open.

0929 @ MH 1425 M. 3 inlets, channelized.

Location BDC Date 12/02/14

Project / Client NPDES/Ecology

Negligable standing water, adjacent to outlet. Outlet goes N, inlets from E, S, & W. Not enough sampleable material.

0941 @ MH 13.43M. 2 shallow inlets from SE, approx 4". Large, approx 24" inlets from S, W, & N. Outlet, approx 12", to OWS to NW. Approx. 2-3 inches water, ~~6-8 inches solids~~. MAM 2-3 feet solids.

0957 @ MH 12.56M - tidally influenced, no OWS. Will move upgradient to MH 12.58M.

1012 @ MH 12.58M - large ~24" outlet flowing ~~N~~ MAM West, inlet from N, S, E, large ~24". Approx. 15' deep, only 1-2" water. Some solids, gravely, negligible fines, approx 1-2". Not enough sampleable material. Not even on bottom, not just channelized.

1025 @ OWS 11 & MH 11.31M. Investigating MH 11.31M. 11.5' to water surface. 14' deep, approx 2.5' water. Water

is churning slightly, indicating roof drainage (no rain recently), groundwater infiltration, or tidally influenced. Inlets from S&E, outlet to OWS to W. Not enough sampleable solids.

1042 @ OWS 11, access on upgradient/E side. Approx 22-24' deep. Inlet from E/SE. No sampleable solids.

1056 @ MH 10.9M. Has a diversion weir only 2-3" of water. 2-3" solids - good location for solids sample. Very large inlet from E, outlet to OWS. If large flow, diversion weir diverts to MH W of OWS.

1118 @ OWS 5. Investigating MH 5.16M, upgradient of OWS 5. Film/sheen on water. Inlets & outlets below water surface. OWS 5 is NW. Inlet on E according to map. Approx 14' deep. Sheen on S side swirls, sheen on N half more organic, breaks up. Sheen on SW mfg greyish, on N brownish. Seems to have a

diversion weir. Water approx 3' deep. Negligible solids.

1130 Investigating OWS 5, inlet on E side. Slight sheen noticeable. Approx 18' deep. Negligible solids. Approx 8'-10' deep water.

1145 @ OWS 2. Lids @ OWS 2 indicate Vortechnics Stormwater Treatment System.

1155 @ MH 2.18M (one of BDC's sampling locations), downgradient of OWS. Negligible solids and water. Approx 12' deep.

1211 @ OWS 2, MH farthest N/upgradient. Approx 3-4ft water, slight sheen. Approx 1" solids uniform across bottom. Approx 14' deep sump.

1237 @ MH N of OWS 1. Outlet N to OWS 1. (MH 1.32M). Approx 7' to top of water. 7.5' deep total. Bypass SW to King County line. Small amount of solids, not enough for full suite. Pocket under ladder (E side).

Location BDC Date 12/02/14

Project / Client NPDES/Ecology

Inlet from N (~3') & E (~2').
Large outlet S to OWS 1. Inlet from W (~3').

1250 Breaking for lunch & bathroom.

1347 Discussing sampling locations.
Collect solids from:
(1) MH 13.43 M
(4) OWS 15
(5) MH 1.32 M → sampling MH 9.66 M instead
(2) MH 17.31 M
(4) MH 5.16 M
(3) MH 10.9 M
Collect water from:
(1) OWS 2 (voltage effluent)
(3) MH-12.58 (OWS 12.1)
Need to request access to OWS 14. Need to investigate OWS 9.

1415 Back onsite @ BDC.

1430 @ MH 13.43 M, setting up for solids sampling. ID # BD-MH-13.43-20141202-S

1507 Began sampling solids @ MH 13.43 M.

1535 Sampling completed @ MH 13.43 M.

1605 Leidos offsite, en route to Home Depot to purchase 22' sampling pole.

1720 M. Ivancevich & C Nancarrow arrive @ storage unit, unload van.

1732 Leidos secures storage unit. MM 12/02/14

Location BDC Date 12/03/14

Project / Client NPDES/Ecology

0712 M. Ivancevich arrives at storage unit, loads sampling equipment.

0725 M. Ivancevich secures storage unit, en route to Tullys to pick up C. Nancarrow

0735 M. Ivancevich & C Nancarrow depart Tully's, en route to BDC.

0755 Leidos arrives at BDC visitor center.

0807 Onsite with Boeing escort, Jolene. @ OWS 9, investigating MH 9.66 M.

0812 C. Nancarrow conduct HSE meeting.

0820 Investigating MH 9.66 M. Good location for solids sampling.

0825 Began setting up for sampling at MH 9.66 M.

0902 Began solids sampling @ MH 9.66 M. Sample ID: BD-MH-9.66-20141203-S

0940 Sampling completed @ MH 9.66 M. Mobbed to OWS 15.

0950 Began setting up for solids sampling at OWS 15, sampling ID: BD-OWS-15-20141203-S

Location BDC Date 12/03/14

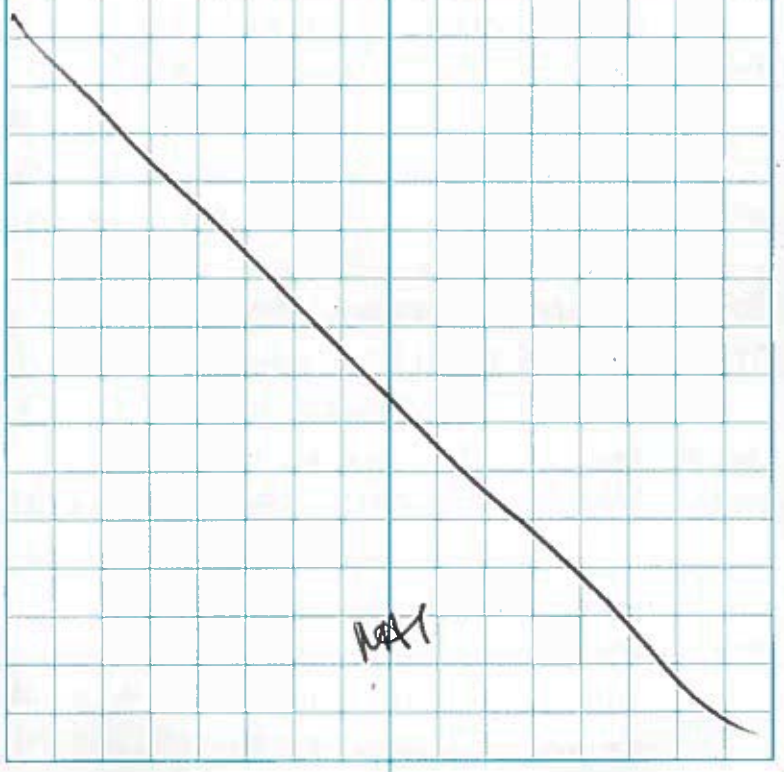
Project / Client NPDES/Ecology

1033 Began solids sampling at OWS 15.
1140 Completed sampling @ OWS 15. Breaking for lunch.
NOTE: Sampling at OWS 15 was from the influent chamber.
1238 @ OWS 2 to sample effluent from Vortex system.
1331 Relinquished 1 cooler to Paco/ Test America courier.
1356 Began sampling effluent at OWS2. Sample ID: BD-OWS-02-20141203-W
1440 Completed sampling at OWS-02. Mobbed to MH-10.9M.
1450 Began setting up at MH-10.9M for solids sampling.
1513 Began solids sampling at MH-10.9M. Sample ID: BD-MH-10.9-20141203-S
1545 Completed sampling at MH 10.9M. Began COC for transfer of splits to BDC.
1600 Relinquished split samples to BDC
1610 Leidos offsite, en route to storage unit.
1625 M. Ivancevich arrives at storage unit, unloads sampling materials & coolers.

Location BDC Date 12/03/14

Project / Client NPDES/Ecology

1700 M. Ivancevich offsite
1680 C. Wilson arrives at storage unit to assist w/ demob
1755 C. Wilson delivers samples to Fedex to ship overnight to Vista Analytical
1810 Return to storage unit to decon and sample pump
2025 C. Wilson offsite



Location Boeing Developmental Center Date 12/15/14

Project / Client NPDES/Ecology

0600 C. Wilson at Bothell office to print labels and pickup van

0635 Depart Bothell office

0717 Arrive at field storage unit to pick up M. Ivancevich and additional gear

0745 Depart field office for BDC

0800 Arrive at BDC and meet C. Nancarrow and Boeing staff Jolene + Colleen

0830 Investigated location 14.27 M to determine if location was sampleable. Location did not contain sufficient solids but had potential for water sampling

0850 Setup to collect a water sample at 11.31 M. Will collect split sample

0910 Began water sampling at 11.31 M. Sample ID: BD-MH-11.31-20141215-W

0930 completed sampling at 11.31 M, decoming equipment.

0946 Mobbed to 12.58 M. Not enough water to sample. Moving to 5.16 M.

1004 Setup to collect a water sample at 5.16M. Will collect split sample.

1030 Began water sampling at 5.16 M. Sample ID: BD-MH-5.16-20141215-W

Location BDC Date 12/15/14

Project / Client NPDES/Ecology

1049 Completed sampling at 5.16M, decoming & break down equipment.

1105 Mobbed to 1.32 M. Not enough solids to sample at 1.32 M.

1120 Leidos offsite for lunch.

1215 Leidos on standby, awaiting input/response from Ecology re: additional sampling locations, COC edits.

1306 M. Ivancevich received a call from C. Nancarrow to relinquish samples to Jolene/BDC.

1311 M. Ivancevich & C. Wilson onsite to relinquish samples.

1320 Relinquished split samples to BDC.

1322 Leidos offsite, en route to storage unit/field office.

1331 Leidos arrives at field storage unit, unloads sampling van, prepares samples for shipment & courier pickup.

1356 M. Ivancevich relinquished TA sample cooler to Paco/TA courier.

1428 C. Wilson offsite.

1505 M. Ivancevich secures field storage

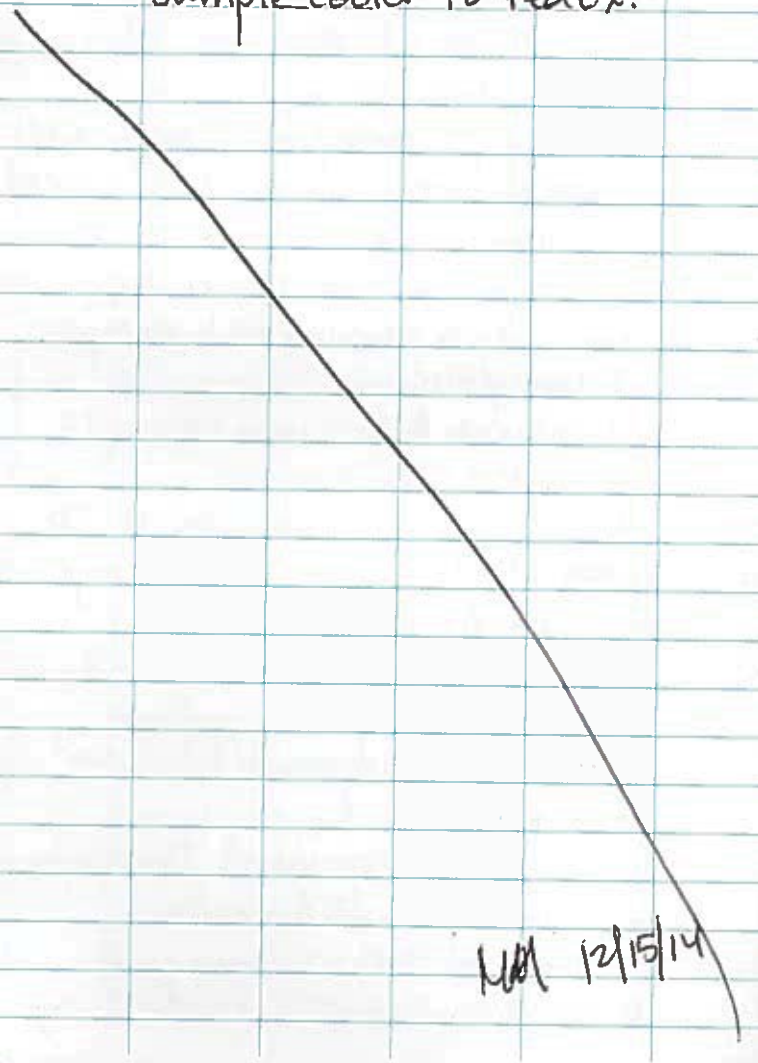
46

Location BDC Date 12/15/14

Project / Client NPDES/Ecology

unit, departs for FedEx.

1515 M. Ivancevich relinquishes Vista sample cooler to FedEx.



MM 12/15/14

Location Boeing Developmental Center Date 12/22/14

Project / Client NPDES / Ecology

0530 C. Wilson arrives at Bothell Office Loads field van

0550 Depart office + stop to get ice

0630 Arrive at field office

0700 M. Ivancevich onsite

0740 Field team finishes loading vehicle and departs for BDC

0800 Field team arrives at BDC, meets escort Gordon Ware, at visitor center.

0805 Mobbed to OWS 14.

0815 Investigating influent chamber to OWS 14. Surrounding area is paved parking lot. Approx 13' deep, 8.5' water. Negligible solids, will collect a water sample.

0840 Collecting water sample at OWS 14 (influent) Sample ID: BD-OWS-14-20141222-W

0920 Sampling completed at OWS 14. Mobbed to 12.56 M.

0930 Investigating 12.56 M. Approx 14' to bottom. ~~2~~ 4-5" water. No solids.

1010 Collecting water sample at 12.56 M. Sample ID: BD-MH-12.56-20141222-W

1100 Completed sampling at 12.56 M.

Location Boeing Developmental Center Date 12/22/14

Project / Client NPDES/Ecology

Mobbed to 1.32M. Approx 8' to water surface, 8'3" to bottom.

1140 Began water sampling at 1.32M. Sample ID: BD-MH-1.32-20141222-W. While attempting to collect water sample for SVOCs, some of the solids were kicked up into the water system due to low sample volume. Starved the first sample taken to analyze priority since collected prior to solids disturbance.

1242 Relinquished split sample cooler to Gordon/Boeing.

1250 Leidos offsite for lunch break.

1357 Field team arrives at field storage unit, unloading sampling van & preparing samples for shipment/pickup.

1412 Began prepping to collect rinse blanks, using Talex water. Sample ID: QC-EB-02-20141222-W.

1450 Began collecting equipment rinse.

1530 C. Wilson offsite to return WQ

Location Boeing Developmental Center Date 12/22/14

Project / Client NPDES/Ecology

Meter & sampling van. Transfers TA coolers to Bothell office for courier pickup on 12/23/14.

1550 M. Ivancevich secures field storage unit, departs for FedEx.

1600 M. Ivancevich relinquishes Vista sampling cooler to FedEx.

MAI 12/22/14

leidos

Sediment Collection Form

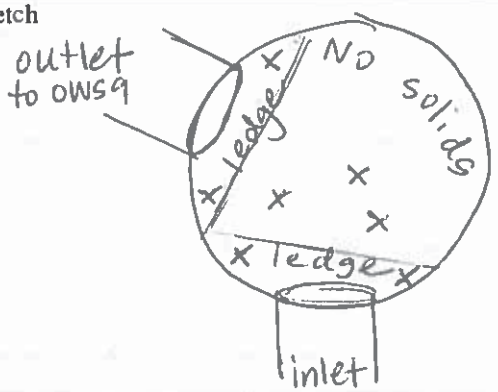
Project: NPDES Sampling Support **Location ID:** MH 9.66M

Facility Name: Boeing Developmental Center **Sample ID:** BD-MH-9.66-20141203-S

Sampled By: MI, CN **Date:** 12 / 03 / 2014 **Time:** 0902

Structure Type:	Dimensions: standard	Standing Water:	Flow:
MH	W_____ L_____	(Y) / N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
11 ft	10.5 ft	4 in	Discrete / Composite (circle one)

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	(None)	
(Gravel)	Brown	Slight	
(Sand) C M F	Brown surface	Moderate	
Silt/clay	(Gray)	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Solids located under ledges / sampling locations under ledges.

Recorded By/Date: M. Ivancevich, 12/03/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

leidos

Sediment Collection Form

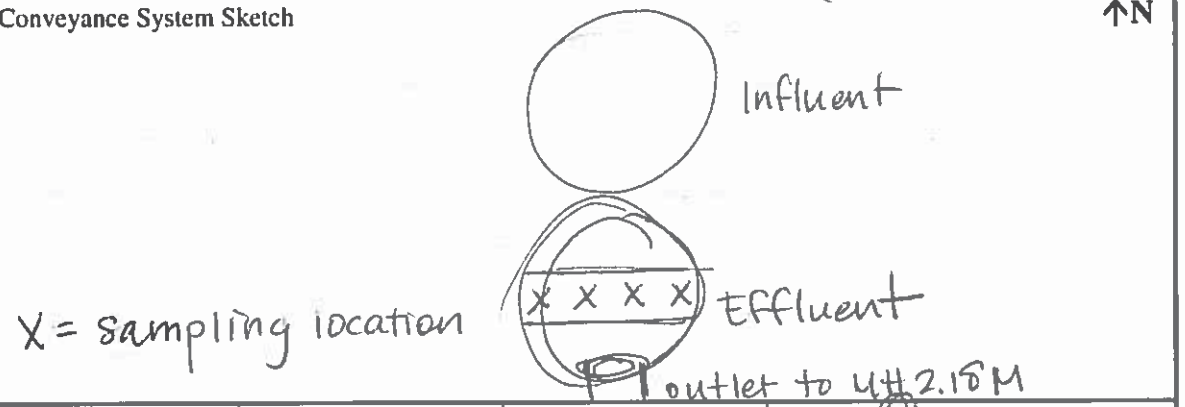
Project: NPDES Sampling Support **Location ID:** OWS-2

Facility Name: BDC **Sample ID:** BD-OWS-02-20141203-W

Sampled By: ML, CN **Date:** 12 / 03 / 2014 **Time:** 1356

Structure Type:	Dimensions: standard W_____ L_____	Standing Water: (Y) / N	Flow: Y / (N)
OWS			

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled (Y) / N Discrete / Composite (circle one)
14 ft	10 - 11 ft	1 in	

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: sampled effluent from OWS 2 / vortex system. Very clear water.

Recorded By/Date: M. Ivancevich, 12/03/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

leidos

Sediment Collection Form

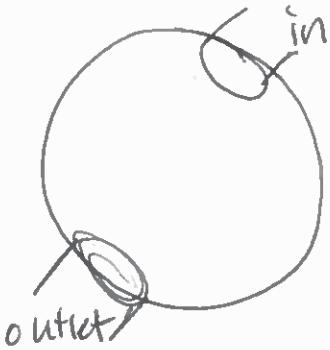
Project: NPDES Sampling Support **Location ID:** MH 2.18 M

Facility Name: BDC **Sample ID:**

Sampled By: **Date:** 12 / 02 / 2014 **Time:**

Structure Type: ~~Standard~~ MH	Dimensions: Standard W L	Standing Water: Y (N)	Flow: Y (N)

Conveyance System Sketch



Depth to Bottom: 12 ft	Depth to Water: — ft	Depth of Sediment: — in	Sampled: Y / N Discrete / Composite *(circle one)*

Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Downgradient of OWS 2. One of BDC's sampling locations. Negligible water and solids.

Recorded By/Date: M. Ivancevich, 12/02/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

leidos

Sediment Collection Form

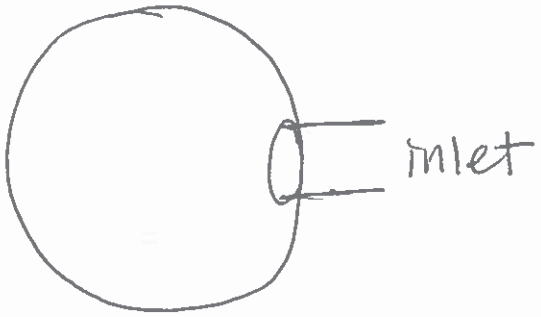
Project: NPDES Sampling Support **Location ID:** OWS5

Facility Name: BDC **Sample ID:**

Sampled By: **Date:** 12 / 02 / 2014 **Time:** 1130

Structure Type:	Dimensions:	Standing Water:	Flow:
OWS	W L	(Y) N	Y (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y (N)
18 ft	8-10 ft	— in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Slight sheen noticeable on water surface. Negligible solids.

Recorded By/Date: M. Ivancevich, 12/02/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

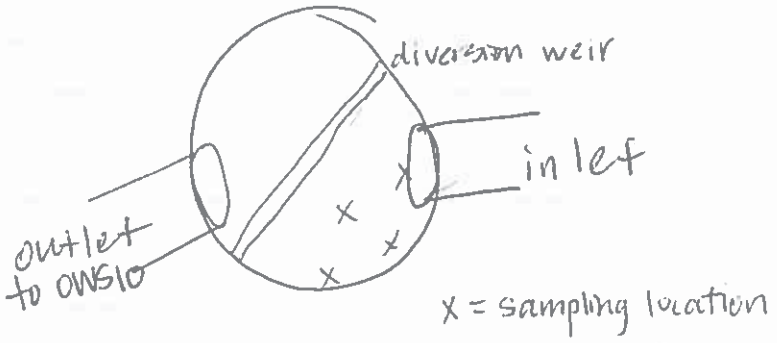
Project: NPDES Sampling Support **Location ID:** MH 10.9 M

Facility Name: BDC **Sample ID:** BD-MH-10.9-20141203-S

Sampled By: MI, CN **Date:** 12 / 03 / 2014 **Time:** 1513

Structure Type:	Dimensions: standard W_____ L_____	Standing Water: Y / N	Flow: Y / N
MH		Y (N)	

Conveyance System Sketch ↑N



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N Discrete / Composite *(circle one)*
8.3 ft	8 ft	3-4 in	

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES:

Recorded By/Date: M. Ivancenda, 12/03/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

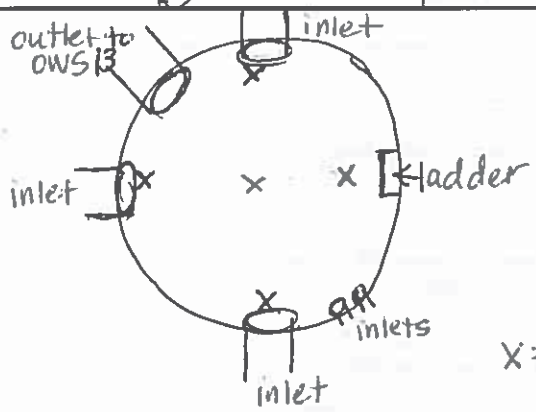
Project: NPDES Sampling Support **Location ID:** MH-13.43 M

Facility Name: Boeing Developmental Center **Sample ID:** BD-MH-13.43-20141202-S

Sampled By: MI & CN **Date:** 12 / 02 / 2014 **Time:** 1507

Structure Type:	Dimensions: standard	Standing Water:	Flow:
MH	W_____L_____	(Y) / N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
_____ft	_____ft	_____in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	(Slight)	
Sand C M (F)	Brown surface	Moderate	
Silt/clay	Gray	Strong	
(Organic matter)	(Black)	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	_____
		Petroleum	GPS ID:
			_____

NOTES: Dark, gelatenous sediment.

Recorded By/Date: M. Ivancevich 12/02/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

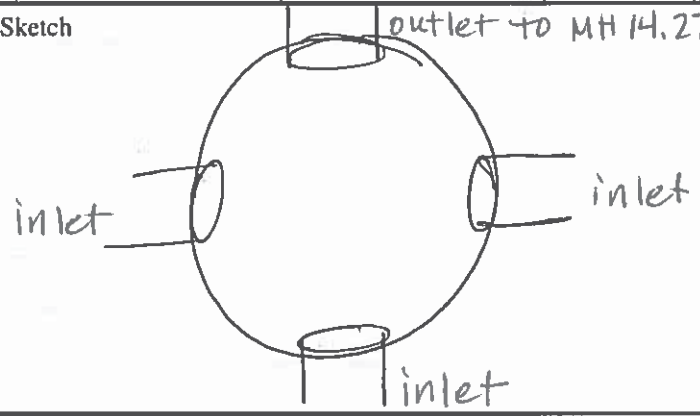
Project: NPDES Sampling Support **Location ID:** MH-14.25M

Facility Name: BDC **Sample ID:**

Sampled By: **Date:** 12 / 02 / 2014 **Time:** 0929

Structure Type: MH	Dimensions: Standard W L	Standing Water: (Y) N	Flow: Y (N)

Conveyance System Sketch



Depth to Bottom: ft	Depth to Water: ft	Depth of Sediment: in	Sampled: Y (N) Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Channelized; negligible standing water, solids.

Recorded By/Date: M. Ivancevich, 12/02/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

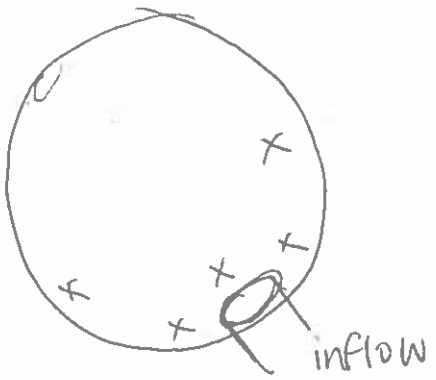
Project: NPDES Sampling Support **Location ID:** OWS 15

Facility Name: BDU **Sample ID:** BD-OWS-15-20141203-S

Sampled By: MI, CN **Date:** 12 / 03 / 2014 **Time:** 1033

Structure Type: MH OWS	Dimensions: standard W_____ L_____	Standing Water: (Y) N	Flow: Y / (N)

Conveyance System Sketch ↑N



X = sampling locations

Depth to Bottom: 15 ft	Depth to Water: 7 ft	Depth of Sediment: 2-3 in	Sampled: (Y) / N Discrete / Composite (circle one)
Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
Cobble Gravel Sand C M F Silt/clay Organic matter Debris	Drab olive Brown Brown surface Gray Black Tan	None Slight Moderate Strong Overwhelming H_2S Petroleum	Photo ID(s): _____ GPS ID: _____

NOTES: Sheen observed.

Recorded By/Date: M. Ivanovich, 12/03/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

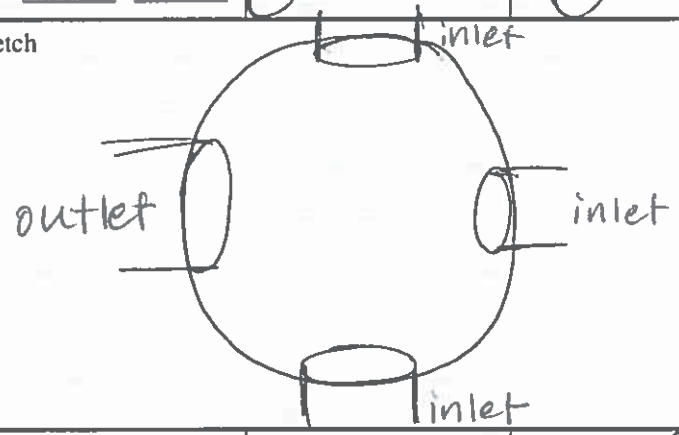
Project: NPDES Sampling Support **Location ID:** MH 12.58 M

Facility Name: BDC **Sample ID:**

Sampled By: **Date:** 12 / 02 / 2014 **Time:** 1012

Structure Type:	Dimensions:	Standing Water:	Flow:
MH	W L	(Y) N	Y (N)

Conveyance System Sketch ↑N



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y (N)
15 ft	14.8 ft	~~14.10~~ 1-2 in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
(Gravel)	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Only 1-2" of water & 1-2" solids. Negligible sampling material. Bottom of structure not even but not channelized.

Recorded By/Date: M.Ivancevich, 12/02/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

leidos

Sediment Collection Form

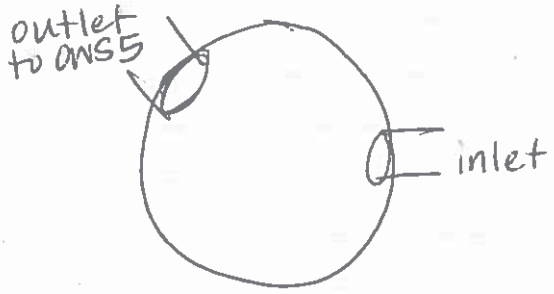
Project: NPDES Sampling Support **Location ID:** MH 5.16 M

Facility Name: BDC **Sample ID:** BD-MH-5.16-20141215-W

Sampled By: MI, CW **Date:** 12 / 15 / 2014 **Time:** 1030

Structure Type:	Dimensions: Standard W_____ L_____	Standing Water: Y / N	Flow: Y / N
MH			

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N Discrete / Composite *(circle one)*
14 ft	11 ft	— in	

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: System sketch based on SWPPP map - inlet(s) & outlet(s) below water surface. Film/sheen observed on water surface. Sheen on South portion swirls. Sheen on North portion more organic, breaks up. Sheen on South is greyish while sheen on North is brownish. Seems to have a diversion weir. Negligible solids.

Recorded By/Date: MI 12/15/14 **Reviewed By/Date:** 12/17/14

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Sediment Collection Form

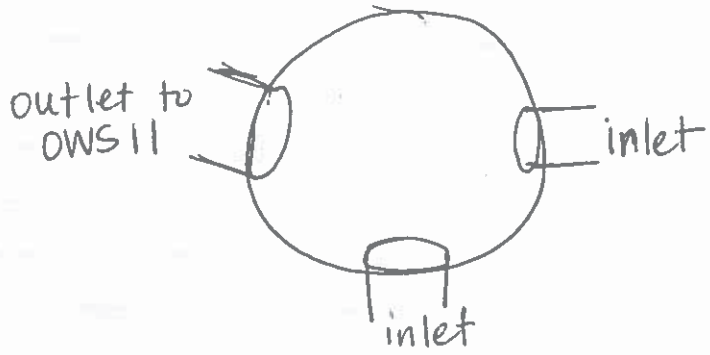
Project: NPDES Sampling Support **Location ID:** MH 11.31 M

Facility Name: Boeing Developmental Center **Sample ID:** BD-MH-11.31-2014 12 15-W

Sampled By: MI, CW **Date:** 12 / 15 / 2014 **Time:** 0910

Structure Type:	Dimensions: Standard	Standing Water:	Flow:
MH	W_____ L_____	Y / N	Y / N

Conveyance System Sketch ↑N



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N
14 ft	11.5 ft	— in	Discrete / Composite (circle one)

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: 12/02/14 - Water is churning slightly, indicating one of three things:
① Roof drainage (no rain recently)
② Groundwater infiltration
③ Tidally influenced

Recorded By/Date: MI 12/15/14 **Reviewed By/Date:** 12/17/14

Version2 -030311

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Sediment Collection Form

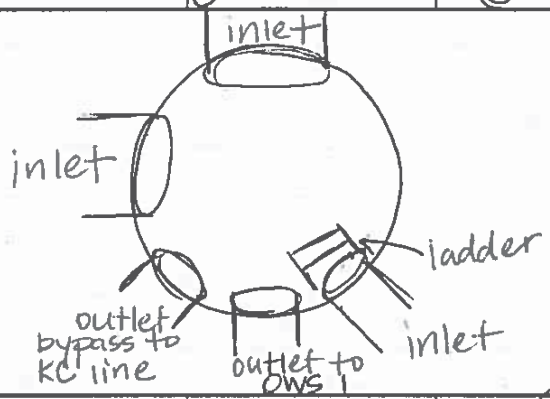
Project: NPDES Sampling Support **Location ID:** MH 1.32 M

Facility Name: BDC **Sample ID:** BD-MH-1.32-20141222

Sampled By: ~~MH~~ MM, CW **Date:** 12 / 02 / 2014 **Time:** 1237

Structure Type:	Dimensions: Standard	Standing Water:	Flow:
MH	W_____ L_____	Y / N	Y / N

Conveyance System Sketch



↑N

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N MM
7.5 ft	7 ft	_____ in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	_____
		Petroleum	GPS ID:
			_____

NOTES: Small pocket of solids under ladder, not enough to run a full analytical suite. 8 gal water sample collected on 12/22/14 at 1140. While attempting to collect water sample for SVOCs, some of the solids were kicked up in the water system due to low sample volume.

Recorded By/Date: MI 12/02/14 **Reviewed By/Date:** _____

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Sediment Collection Form

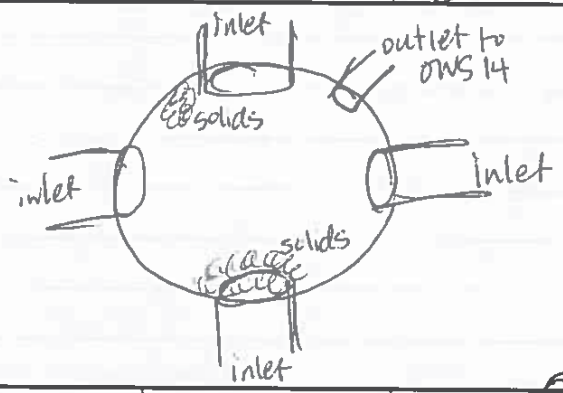
Project: NPDES Sampling Support **Location ID:** 14.27 M

Facility Name: Boeing Developmental Center **Sample ID:** _____

Sampled By: _____ **Date:** 12 / 15 / 2014 **Time:** 0830

Structure Type: MH	Dimensions: Standard W_____ L_____	Standing Water: Y / N	Flow: Y (N)

Conveyance System Sketch ↑N



Depth to Bottom: _____ ft	Depth to Water: _____ ft	Depth of Sediment: _____ in	Sampled: Y (N) Discrete / Composite *(circle one)*
Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
Cobble Gravel Sand C M F Silt/clay Organic matter Debris	Drab olive Brown Brown surface Gray Black Tan	None Slight Moderate Strong Overwhelming H_2S Petroleum	Photo ID(s): _____ GPS ID: _____

NOTES: _____

Recorded By/Date: ML 12/05/14 **Reviewed By/Date:** _____

Version2 -030311

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Sediment Collection Form

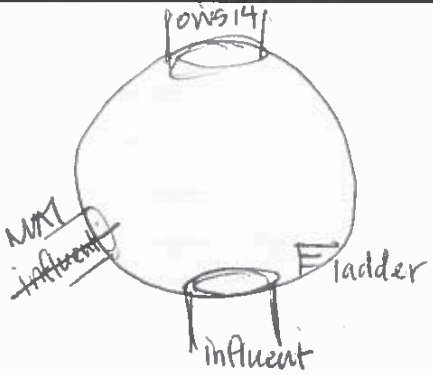
Project: NPDES Sampling Support **Location ID:** OWS 14

Facility Name: Boeing Developmental Center **Sample ID:** BD-OWS-14-20141222-W

Sampled By: MT, CW **Date:** 12 / 22 / 2014 **Time:** 0840

Structure Type:	Dimensions: ~~Standard~~	Standing Water:	Flow:
OWS	W_____ L_____	(Y) / N	Y / (N)

Conveyance System Sketch



↑N

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
13 ft	4.5 ft	— in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Surrounding area a paved parking lot. Influent & effluent pipes below water surface. Yellowish-brown tinge to water. No odor, slight sheen observed. Influent from S. ~~Ap~~ MH Line from 14.27M likely T's. 14.27M SW of OWS 14.

Recorded By/Date: ~~MT~~ 12/22/14 **Reviewed By/Date:** _____

Version2 -030311

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Sediment Collection Form

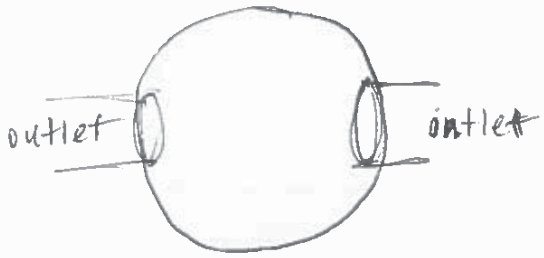
Project: NPDES Sampling Support **Location ID:** 12.56 M

Facility Name: Boeing Developmental Center **Sample ID:** BD-MH-12.56-20141222-W

Sampled By: MI, CW **Date:** 12 / 22 / 2014 **Time:** 1010

Structure Type:	Dimensions: Standard W ____ L ____	Standing Water: (Y) / N	Flow: Y (N)
MH			

Conveyance System Sketch ↑N



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
14 ft	13.5 ft	____ in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID:

NOTES: Located in grassy area between paved parking lots. Outlet front approx 24". Possibly tidally influenced. Low tide at 11:15 am. Channelized bottom.

Recorded By/Date: MAT 12/22/14 **Reviewed By/Date:** _____

Version2 -030311

leidos

SURFACE WATER SAMPLING FORM

Client: Department of Ecology Site: Boeing Developmental Center Job #: 309382

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Dissolved Oxygen	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
BD-OWS-02-20141203-W	1356	12/03/14	N	9.34	0.100 ☑ S/cm	9.48	0.065	17.26	1.7	NO	ORP = 125
~~BD-MH-11-5-20141215-W~~	~~0710~~	~~12/15/14~~	~~N~~	~~6~~	☐ S/cm	~~8.51~~					~~MH~~
BD-MH-11-3-20141215-W	0910	12/15/14	N	6.0	3.72 ☑ mS/cm	7.34	2.38 g/L	14.08	3	No	ORP = 159 mV
BD-MH-5.16-20141215-W	1030	12/15/14	N	5.93	0.593 ☑ S/cm	7.56	0.379 g/L	23.37	7	No	ORP = 208 mV
					☐ S/cm						
					☐ S/cm						
					☐ S/cm						
					☐ S/cm						
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					☐ S/cm						
					☐ S/cm						
					☐ S/cm						

Sample Date: 12/03/2014

12/15/2014

leidos

SURFACE WATER SAMPLING FORM

Client: Department of Ecology Site: Boeing Developmental Center Job #: 309382

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Dissolved Oxygen	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
BD-OWS-14-20141222-W	0840	12/22/14	No	6.07	1.09 ☑ mS/cm	9.31	0.6969/L	11.04 mg/L	2.5	N	ORP=172 mV
BD-MH-12.5-20141222-W	1010	12/22/14	No	6.02	0.798 ☑ mS/cm	10.02	0.5119/L	9.12 mg/L	2.8	N	ORP=217 mV
BD-MH-1.32-20141222-W	1140	12/22/14	No	6.27	0.045 ☑ mS/cm	10.13	0.0299/L	7.35 mg/L	121	N	ORP=192 mV; High turbidity due to solids disturbance while sampling
					☐ S/cm						
					☐ S/cm						
					☐ S/cm						
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Sample Date: 12/22/2014

Attachment R-3
Chain of Custody Forms

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	**Project Manager: Christine Nancarrow**	**Site Contact: Melissa Ivancevich**	**Date:** 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 2 COCs
18912 N Creek Pkwy, Ste. 101	**Analysis Turnaround Time**			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			
Site: Lower Duwamish Waterway	☐ 2 days			Job / SDG No.:
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB Aroclors (Method 8082)	SVOC (Method 8270D/8270D-SIM)	TPH-Diesel (NWTPH-Dx)	Metals (Method 6020/7471A)	Total Solids (Method SM2540B)	TPH-Gasoline (NWTPH-Gx)	VOCs (EPA 8260B)	TOC (Plumb1981/9060)	Particle Size (PSEP_Plumb1981)	Sample Specific Notes:
~~BD-MH-9.6-20141203-S~~	~~12/03/14~~	~~0903~~	~~C~~	~~Sed~~	~~6~~					1			1	2	1	1	NOT
~~BD-MH-15-20141203-S~~	~~12/03/14~~	~~1039~~	~~C~~	~~Sed~~	~~6~~					1			1	2	1	1	NOT
BD-MH-10.9-20141203-S	12/3/14	1513	C	Sed	5					1			1	2	✓1	✓1	TOC & Particle size are both in the 16oz jar
														6			

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 3868869 | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by: Melissa Ivancevich. Melissa	Company: Leidos	Date/Time: 12/03/14	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	2 of 2 COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			Job / SDG No.:
Site: Lower Duwamish Waterway	☐ 2 days			
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	Sample Specific Notes:
BD-OWS-02-20141203-W	12/03/14	1356	C	W	9	N		2	1		2			1	2	1	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH									4					3			

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 3868869 | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by: Melissa Ivancevich. Melissa Ivancevich	Company: Leidos	Date/Time: 12/03/14	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

46549

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	**Analysis Turnaround Time**			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			
Site: Lower Duwamish Waterway	☐ 2 days			Job / SDG No.:
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB Aroclors (Method 8082)	SVOC (Method 8270D/8270D-SIM)	TPH-Diesel (NWTPH-Dx)	Metals (Method 6020/7471A)	Total Solids (Method SM2540B)	TPH-Gasoline (NWTPH-Gx)	VOCs (EPA 8260B)	TOC (Plumb1981/9060)	Particle Size (PSEP_Plumb1981)	Sample Specific Notes:
BD-MH-13.43-20141202-S	12/02/14	1507	C	Sed	6									2			
BD-MH-9.66-20141203-S	12/03/14	0902	C	Sed	6									2			
BD-OWS-15-20141203-S	12/03/14	1033	C	Sed	10					1			1	2	1	1	

580-46549 Chain of Custody

Cooler/TB Dig/IR cor 2.5 °C unc 2.8 °C A2
Cooler Dsc Lg Blue/Wht @ Lab 1430
Wet/Packs Packing Other
w/o

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH — 6

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

	Company	Date/Time		Company	Date/Time
Relinquished by: Melissa Ivancevich	Leidos	12/03/14 1350	Received by:	TH-SEA	12/3/14 1338
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

46717

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/19/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			
Site: Lower Duwamish Waterway	☐ 2 days			Job / SDG No.:
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	Sample Specific Notes:
BD-MH-11.31-20141215-W	12/15/14	0910	G	W	9	N		2	1	2				1	2	1	
BD-MH-5.16-20141215-W	12/15/14	1030	G	W	9	N		2	1	√2	√2	√2	√2	1	2	1	

580-46717 Chain of Custody

A2
Cooler/TB Dig/IR cor 11.2°C unc 11.5°C
Cooler Dsc 1445 @Lab 1445
Wet/Packs Packing ~~Bubble~~ ~~Bubble~~
w/o

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH — 4 — 3

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company	Date/Time	Received by:	Company	Date/Time
Relinquished by: Melissa Ivancevich	Leidos	12/15/14 1352		TASEA	12/15/14 1352
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

46851

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/22/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	**Analysis Turnaround Time**			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			
Site: Lower Duwamish Waterway	☐ 2 days			Job / SDG No.:
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	PCB Aroclors (8082)	Sample Specific Notes:
BD-DWS-14-20141222-W	12/22/14	0840	G	W	9	N		✓	✓			✓		✓	✓	✓		
BD-MH-12.56-20141222-W	12/22/14	1010	G	W	9	N		✓	✓			✓		✓	✓	✓		
BD-MH-1.32-20141222-W	12/22/14	1140	G	W	9	N		✓	✓			✓		✓	✓	✓		
QC-EB-02-20141222-W	12/22/14	1450	G	W	6	N		✓	✓								✓	

IR2
Cooler/TB Dig/IR cor 2.3°C unc 2.0°C
Cooler Dsc Lg Blue/White Lab 1430
Wet/Packs Packing Bubble
w/cs

IR2
Cooler/TB Dig/IR cor 2.1°C unc 1.8°C
Cooler Dsc Lg Blue/White Lab 1430
Wet/Packs Packing Bubble
w/cs

12/23/14

580-46851 Chain of Custody

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH — 4 — 3

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Corey Wilson	Leidos	12/23/14 1040		TASE/T	12/23/14 1040
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Vista

CHAIN OF COUSTODY

FOR LABORATORY USE ONLY

Laboratory Project ID: ____________ Storage Secured: Yes ☐ No ☐

Storage ID ____________ Temp ________ °C

TAT: (Check One):
Standard: ○ 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify: ___

Project I.D.: 1406647 P.O.# PO1016356[illegible] Sampler: [illegible] (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax#
[illegible]	[illegible]	12[illegible] N Creek Pkwy	Bothell	WA	[illegible]	206[illegible]	

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[illegible]	[illegible]				

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: [illegible]

Method of Shipment: [illegible]

Tracking No.: [illegible]

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Container(s) Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	WHO-29
BD-GWS-09-2014[illegible]	10/[illegible]/14	1356	[illegible]	4	A	AQ		✓								✓		✓			
BD-MH-9.66-2014[illegible]	10/6/14	0909	Manhole	1	G	SD		✓								✓		✓			
BD-GWS-15-2014[illegible]	10/6/14	[illegible]	[illegible]	1	G	SD		✓								✓		✓			
BD-MH-10.9-2014[illegible]	10/6/14	1512	[illegible]	1	G	SD		✓								✓		✓			
BD-MH-13.43-2014[illegible]	10/6/14	1507	Manhole	1	G	SD		✓								✓		✓			

Special Instructions/Comments: [illegible]

SEND DOCUMENTATION AND RESULTS TO:

Name: [illegible]
Company: SAME AS ABOVE
Address: ____________
City: ____________ State: ______ Zip: ______
Phone: ____________ Fax: ____________
Email: ____________

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other ________

*Bottle Preservative Type: T = Thiosulfate,
O = Other [illegible]

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
AQ = Aqueous, O = Other ________

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

Vista

CHAIN OF CUSTODY

FOR LABORATORY USE ONLY Storage Secured

Laboratory Project ID:_____ Yes ☐ No ☐

Storage ID_____ Temp _____°°C

TAT: (Check One):
Standard: ⬭ 21 Days
Rush (surcharge may apply):
⬭ 14 days ⬭ 7 days Specify:___

Project I.D.:_____ P.O.#_____ Sampler: M. Vancewh, C. Wilson (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax#
Sunshine Nancarrow	Leidos	18912 N. Creek Pkwy Ste 101	Bothell,	WA	98011	(206) 300-2144	

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Melissa Vancewh Melissa Vancewh	12/15/14	1455			
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: Sample Control

Method of Shipment: FedEx

Tracking No.: 706459792404

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1668 PBDE	EPA1614 PAH	EPA1614 WHO-29	CARB429
BD-MH-11.3-20141215-W	12/15/14	0910	BDC	4	A	EF		H								½		½					
BD-MH-5.16-20141215-W	12/15/14	1030	BDC	4	A	EF		H								½		½					

Special Instructions/Comments: Hold samples for 1613/Furans.

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company:_____
Address:_____
City:_____ State:_____ Zip:_____
Phone:_____ Fax:_____
Email: nancarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

CHAIN OF CUSTODY

Vista

FOR LABORATORY USE ONLY Storage Secured

Laboratory Project ID:_____ Yes ☐ No ☐

Storage ID_____ Temp _____°C

TAT: (Check One):
Standard: ◉ 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.: 1400647 P.O.# P010163569 Sampler: M. Ivancich, C. Wilson (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax#
Christine Narcarrow	Leidos	19912 N. Creek Pkwy Ste 101	Bothell	WA	98011	(206)300-2144	

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Melissa Ivancich / Melissa Smith	12/22/14	1532			
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN:_____

Method of Shipment: FedEX

Tracking No.:_____

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF PCDD/PCDF	EPA8280 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1668 PBDE	EPA1614 PAH	CARB429 WHO-29
BD-DWS-14-20141222-W	12/22/14	0840	BDL	4	A	EF		H						✓		✓			
BD-MH-12.56-20141222-W	12/22/14	1010	BDL	4	A	EF		H						✓		✓			
BD-MH-1.32-20141222-W	12/22/14	1140	BDL	4	A	EF		H						✓		✓			
QC-EB-02-20141222-W	12/22/14	1450	Field office	4	A	EF		✓						✓		✓			

Special Instructions/Comments: H = hold for analysis

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company:_____
Address:_____
City:_____ State:_____ Zip:_____
Phone:_____ Fax:_____
Email: narcarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

Attachment R-4
Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-46549-1
Client Project/Site: NPDES SAMPLING SUPPORT

For:
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

Attn: Christine Nancarrow

Kristine D. Allen

Authorized for release by:
12/22/2014 4:29:18 PM

Kristine Allen, Manager of Project Management
(253)248-4970
kristine.allen@testamericainc.com

Table of Contents

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Job ID: 580-46549-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 12/3/2014 1:38 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA

Method(s) 8260B: The method blank for batch 177655 contained tert-butylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The method blank for batch 177453 contained Acetone, Naphthalene, tert-Butylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: Internal standard responses (1,4-dichlorobenzene-d4 and chlorobenzene-d5) were below acceptance limits for the following samples: BD-MH-13.43-20141202-S (580-46549-1), BD-MH-9.66-20141203-S (580-46549-2), BD-OWS-15-20141203-S (580-46549-3). The samples shows evidence of matrix interference and the results were confirmed by re-analysis. Data has been reported from the re-analysis batch.

Method(s) 8260B: Surrogate (4-bromofluorobenzene) recovery for the following sample(s) was outside control limits: BD-MH-13.43-20141202-S (580-46549-1), BD-MH-9.66-20141203-S (580-46549-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Surrogate (4-bromofluorobenzene and toluene-d8) recovery for the following samples was outside control limits: BD-OWS-15-20141203-S (580-46549-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Gx: The method blank for batch 177469 contained Gasoline above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D: The method blank for prep batch 177445 contained Butyl benzyl phthalate and Pentachlorophenol above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 178426 recovered outside the RRF minimum criteria, for Bis(2-chloroethoxy)methane, Isophorone and Nitrobenzene. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported.

Method(s) 8270D: In analytical batch 178426, the following sample(s) was diluted due to the nature of the sample matrix: (580-46549-1 MS), (580-46549-1 MSD), BD-MH-13.43-20141202-S (580-46549-1). As such, MS/MSD spike recoveries were diluted out for multiple analytes and are not reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 178495 recovered outside the +/-20%D and/or RRF minimum criteria for Benzyl alcohol, Bis(2-chloroethoxy)methane, Isophorone, N-Nitrosodi-n-propylamine and Nitrobenzene. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported.

Method(s) 8270D: Surrogate recovery for the following sample(s) was outside control limits: BD-OWS-15-20141203-S (580-46549-3). Evidence of matrix interference is present, as seen in the chromatogram; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8082: In batch 177851 and 178046, the following sample(s) required a copper clean-up to reduce matrix interferences caused

Job ID: 580-46549-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

by sulfur: BD-MH-13.43-20141202-S (580-46549-1), BD-MH-9.66-20141203-S (580-46549-2), BD-OWS-15-20141203-S (580-46549-3). Lot# H25604

Method(s) 8082: In batch 177851, the following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are PCB-1254 and PCB-1260 and they quantified as the predominant Aroclor: BD-MH-13.43-20141202-S (580-46549-1), BD-MH-9.66-20141203-S (580-46549-2).

Method(s) NWTPH-Dx: In analysis batch 177696, for the following sample from preparation batch 177744: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: BD-OWS-15-20141203-S (580-46549-3).

Method(s) NWTPH-Dx: In analysis batch 177678, for the following sample(s) from preparation batch 177510: The following sample(s) contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: BD-MH-13.43-20141202-S (580-46549-1), BD-MH-9.66-20141203-S (580-46549-2).

Method(s) NWTPH-Dx: In analysis batch 177678, for the following sample(s) from preparation batch 177510: 580-46549-1 MS. Surrogate recovery for the following sample(s) was outside control limits. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Geotechnical
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery exceeds the control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-13.43-20141202-S
Date Collected: 12/02/14 15:07
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-1
Matrix: Solid
Percent Solids: 43.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1,1-Trichloroethane	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1,2,2-Tetrachloroethane	ND	*	4.3	1.9	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1,2-Trichloroethane	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1-Dichloroethane	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1-Dichloroethene	ND		11	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,1-Dichloropropene	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2,3-Trichlorobenzene	ND	*	4.3	1.3	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2,3-Trichloropropane	ND	*	2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2,4-Trichlorobenzene	ND	*	4.3	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2,4-Trimethylbenzene	ND	*	4.3	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2-Dibromo-3-Chloropropane	ND	*	4.3	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2-Dibromoethane	ND	*	2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2-Dichlorobenzene	ND	*	4.3	1.3	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2-Dichloroethane	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,2-Dichloropropane	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,3,5-Trimethylbenzene	ND	*	11	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,3-Dichlorobenzene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,3-Dichloropropane	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
1,4-Dichlorobenzene	ND	*	2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
2,2-Dichloropropane	ND		11	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
2-Butanone	ND		21	6.4	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
2-Chloroethyl vinyl ether	ND	*	11	3.0	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
2-Chlorotoluene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
2-Hexanone	ND	*	11	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
4-Chlorotoluene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
4-Isopropyltoluene	ND	*	4.3	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
4-Methyl-2-pentanone	ND	*	11	3.2	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Acetone	**47**		32	5.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Acrolein	ND		64	17	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Acrylonitrile	ND		21	6.0	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Benzene	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Bromobenzene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Bromochloromethane	ND		4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Bromodichloromethane	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Bromoform	ND	*	2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Bromomethane	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Carbon disulfide	**2.3**		2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Carbon tetrachloride	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Chlorobenzene	ND	*	2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Chlorodibromomethane	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Chloroethane	ND		2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Chloroform	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Chloromethane	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
cis-1,2-Dichloroethene	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
cis-1,3-Dichloropropene	ND	*	2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Dibromomethane	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Dichlorodifluoromethane	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1

Client Sample ID: BD-MH-13.43-20141202-S
Date Collected: 12/02/14 15:07
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-1
Matrix: Solid
Percent Solids: 43.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND	*	2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Hexachloro-1,3-butadiene	ND	*	4.3	1.3	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Iodomethane	ND		32	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Isopropylbenzene	ND	*	4.3	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Methyl tert-butyl ether	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Methylene Chloride	ND		32	6.4	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
m-Xylene & p-Xylene	ND	*	4.3	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Naphthalene	**1.1**	**J ***	11	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
n-Butylbenzene	ND	*	4.3	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
N-Propylbenzene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
o-Xylene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
sec-Butylbenzene	ND	*	4.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Styrene	ND	*	4.3	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
tert-Butylbenzene	ND	*	4.3	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Tetrachloroethene	ND	*	2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Toluene	ND	*	4.3	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
trans-1,2-Dichloroethene	ND		2.1	0.85	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
trans-1,3-Dichloropropene	ND	*	2.1	0.43	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
trans-1,4-Dichloro-2-butene	ND	*	11	3.6	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Trichloroethene	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Trichlorofluoromethane	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Vinyl acetate	ND		11	1.3	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1
Vinyl chloride	ND		2.1	0.64	ug/Kg	☼	12/03/14 13:38	12/08/14 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*131*		*71 - 136*	*12/03/14 13:38*	*12/08/14 20:28*	*1*
4-Bromofluorobenzene (Surr)	*135*	** X*	*70 - 120*	*12/03/14 13:38*	*12/08/14 20:28*	*1*
Dibromofluoromethane (Surr)	*119*		*75 - 132*	*12/03/14 13:38*	*12/08/14 20:28*	*1*
Toluene-d8 (Surr)	*115*	*	*80 - 120*	*12/03/14 13:38*	*12/08/14 20:28*	*1*
Trifluorotoluene (Surr)	*75*		*65 - 140*	*12/03/14 13:38*	*12/08/14 20:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1100	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
1,2-Dichlorobenzene	ND		1200	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
1,3-Dichlorobenzene	ND		1100	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
1,4-Dichlorobenzene	ND		1100	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
1-Methylnaphthalene	**340**	**J**	680	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,2'-oxybis[1-chloropropane]	ND		5700	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4,5-Trichlorophenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4,6-Trichlorophenol	ND		3400	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4-Dichlorophenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4-Dimethylphenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4-Dinitrophenol	ND		23000	4500	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,4-Dinitrotoluene	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2,6-Dinitrotoluene	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2-Chloronaphthalene	ND		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2-Chlorophenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2-Methylnaphthalene	**320**	**J**	450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2-Methylphenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-13.43-20141202-S
Date Collected: 12/02/14 15:07
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-1
Matrix: Solid
Percent Solids: 43.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
2-Nitrophenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
3 & 4 Methylphenol	ND		4500	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
3,3'-Dichlorobenzidine	ND		4500	680	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
3-Nitroaniline	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4,6-Dinitro-2-methylphenol	ND		23000	2300	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Bromophenyl phenyl ether	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Chloro-3-methylphenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Chloroaniline	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Chlorophenyl phenyl ether	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Nitroaniline	ND		2300	450	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
4-Nitrophenol	ND		23000	5700	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Acenaphthene	**11000**		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Acenaphthylene	**890**		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Anthracene	**39000**		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Benzo[a]pyrene	**220000**		680	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Benzo[g,h,i]perylene	**85000**		570	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Benzoic acid	ND		57000	17000	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Benzyl alcohol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Bis(2-chloroethoxy)methane	ND		2300	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Bis(2-chloroethyl)ether	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Bis(2-ethylhexyl) phthalate	**15000**		14000	1100	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Butyl benzyl phthalate	ND		4500	1100	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Carbazole	**46000**		2300	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Dibenz(a,h)anthracene	**27000**		910	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Dibenzofuran	**7700**		2300	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Diethyl phthalate	ND		4500	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Dimethyl phthalate	**230**	**J**	2300	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Di-n-butyl phthalate	ND		11000	1100	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Di-n-octyl phthalate	**2500**	**J**	11000	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Fluorene	**14000**		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Hexachlorobenzene	ND		1100	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Hexachlorobutadiene	ND		1100	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Hexachlorocyclopentadiene	ND		2300	230	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Hexachloroethane	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Indeno[1,2,3-cd]pyrene	**120000**		910	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Isophorone	ND		2300	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Naphthalene	**630**		450	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Nitrobenzene	ND		2300	770	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
N-Nitrosodimethylamine	ND		23000	5700	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
N-Nitrosodi-n-propylamine	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
N-Nitrosodiphenylamine	ND		1100	110	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Pentachlorophenol	ND		4500	450	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100
Phenol	ND		2300	340	ug/Kg	☼	12/05/14 09:52	12/17/14 23:48	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*96*		*28 - 143*	*12/05/14 09:52*	*12/17/14 23:48*	*100*
2-Fluorobiphenyl	*105*		*42 - 140*	*12/05/14 09:52*	*12/17/14 23:48*	*100*
2-Fluorophenol	*84*		*36 - 145*	*12/05/14 09:52*	*12/17/14 23:48*	*100*
Nitrobenzene-d5	*109*		*38 - 141*	*12/05/14 09:52*	*12/17/14 23:48*	*100*

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-13.43-20141202-S
Date Collected: 12/02/14 15:07
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-1
Matrix: Solid
Percent Solids: 43.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	44		38 - 149	12/05/14 09:52	12/17/14 23:48	100
Terphenyl-d14	134		42 - 151	12/05/14 09:52	12/17/14 23:48	100

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	230000		4500	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Benzo[b]fluoranthene	400000		4500	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Benzo[k]fluoranthene	170000		5700	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Chrysene	300000		5700	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Fluoranthene	640000		4500	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Phenanthrene	310000		4500	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000
Pyrene	500000		4500	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 16:43	1000

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	4.8	J B	14	1.7	mg/Kg	☼	12/05/14 09:38	12/05/14 21:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		50 - 150	12/05/14 09:38	12/05/14 21:28	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.022	0.0071	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1221	ND		0.024	0.018	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1232	ND		0.024	0.015	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1242	ND		0.022	0.0046	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1248	ND		0.022	0.0066	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1254	ND		0.022	0.0046	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1
Arochlor 1260	2.0		0.022	0.0066	mg/Kg	☼	12/05/14 10:17	12/10/14 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		45 - 135	12/05/14 10:17	12/10/14 18:34	1
DCB Decachlorobiphenyl	60		50 - 140	12/05/14 10:17	12/10/14 18:34	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	4100	Y	57	13	mg/Kg	☼	12/08/14 10:00	12/09/14 13:58	1
Motor Oil (>C24-C36)	10000	Y	110	21	mg/Kg	☼	12/08/14 10:00	12/09/14 13:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	113		50 - 150	12/08/14 10:00	12/09/14 13:58	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		0.96	0.34	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Lead	150		0.38	0.025	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Antimony	6.7		0.38	0.080	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Beryllium	0.25	J	0.38	0.067	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Cadmium	2.6		0.38	0.015	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Chromium	67		0.38	0.22	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Copper	190		0.76	0.19	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-13.43-20141202-S
Date Collected: 12/02/14 15:07
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-1
Matrix: Solid
Percent Solids: 43.1

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	37		0.96	0.15	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Selenium	0.86	J	1.3	0.39	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Silver	1.9		0.38	0.023	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Thallium	ND		0.96	0.25	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10
Zinc	850		3.8	2.1	mg/Kg	☼	12/05/14 10:28	12/05/14 15:02	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.18		0.036	0.011	mg/Kg	☼	12/08/14 16:58	12/09/14 07:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	43		0.10	0.10	%			12/05/14 09:46	1
Total Organic Carbon	83000		2000	250	mg/Kg			12/09/14 09:22	1

Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/04/14 18:03	1
Gravel	1.4				%			12/04/14 18:03	1
Sand	58				%			12/04/14 18:03	1
Silt	37				%			12/04/14 18:03	1
Clay	3.4				%			12/04/14 18:03	1

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-9.66-20141203-S
Date Collected: 12/03/14 09:02
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-2
Matrix: Solid
Percent Solids: 75.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1,1-Trichloroethane	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1,2,2-Tetrachloroethane	ND	*	1.3	0.60	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1,2-Trichloroethane	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1-Dichloroethane	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1-Dichloroethene	ND		3.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,1-Dichloropropene	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2,3-Trichlorobenzene	ND	*	1.3	0.40	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2,3-Trichloropropane	ND	*	0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2,4-Trichlorobenzene	ND	*	1.3	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2,4-Trimethylbenzene	ND	*	1.3	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2-Dibromo-3-Chloropropane	ND	*	1.3	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2-Dibromoethane	ND	*	0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2-Dichlorobenzene	ND	*	1.3	0.40	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2-Dichloroethane	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,2-Dichloropropane	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,3,5-Trimethylbenzene	ND	*	3.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,3-Dichlorobenzene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,3-Dichloropropane	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
1,4-Dichlorobenzene	ND	*	0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
2,2-Dichloropropane	ND		3.3	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
2-Butanone	ND		6.6	2.0	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
2-Chloroethyl vinyl ether	ND	*	3.3	0.93	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
2-Chlorotoluene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
2-Hexanone	ND	*	3.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
4-Chlorotoluene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
4-Isopropyltoluene	ND	*	1.3	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
4-Methyl-2-pentanone	ND	*	3.3	1.0	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Acetone	**11**		10	1.6	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Acrolein	ND		20	5.4	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Acrylonitrile	ND		6.6	1.9	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Benzene	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Bromobenzene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Bromochloromethane	ND		1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Bromodichloromethane	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Bromoform	ND	*	0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Bromomethane	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Carbon disulfide	ND		0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Carbon tetrachloride	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Chlorobenzene	ND	*	0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Chlorodibromomethane	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Chloroethane	ND		0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Chloroform	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Chloromethane	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
cis-1,2-Dichloroethene	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
cis-1,3-Dichloropropene	ND	*	0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Dibromomethane	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Dichlorodifluoromethane	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-9.66-20141203-S
Date Collected: 12/03/14 09:02
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-2
Matrix: Solid
Percent Solids: 75.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND	*	0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Hexachloro-1,3-butadiene	ND	*	1.3	0.40	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Iodomethane	ND		10	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Isopropylbenzene	ND	*	1.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Methyl tert-butyl ether	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Methylene Chloride	ND		10	2.0	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
m-Xylene & p-Xylene	ND	*	1.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Naphthalene	ND	*	3.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
n-Butylbenzene	ND	*	1.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
N-Propylbenzene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
o-Xylene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
sec-Butylbenzene	ND	*	1.3	0.33	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Styrene	ND	*	1.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
tert-Butylbenzene	ND	*	1.3	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Tetrachloroethene	ND	*	0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Toluene	ND	*	1.3	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
trans-1,2-Dichloroethene	ND		0.66	0.27	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
trans-1,3-Dichloropropene	ND	*	0.66	0.13	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
trans-1,4-Dichloro-2-butene	ND	*	3.3	1.1	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Trichloroethene	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Trichlorofluoromethane	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Vinyl acetate	ND		3.3	0.40	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1
Vinyl chloride	ND		0.66	0.20	ug/Kg	☼	12/03/14 13:38	12/08/14 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*71 - 136*	*12/03/14 13:38*	*12/08/14 20:54*	*1*
4-Bromofluorobenzene (Surr)	*125*	** X*	*70 - 120*	*12/03/14 13:38*	*12/08/14 20:54*	*1*
Dibromofluoromethane (Surr)	*112*		*75 - 132*	*12/03/14 13:38*	*12/08/14 20:54*	*1*
Toluene-d8 (Surr)	*105*	*	*80 - 120*	*12/03/14 13:38*	*12/08/14 20:54*	*1*
Trifluorotoluene (Surr)	*81*		*65 - 140*	*12/03/14 13:38*	*12/08/14 20:54*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		65	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
1,2-Dichlorobenzene	ND		71	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
1,3-Dichlorobenzene	ND		65	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
1,4-Dichlorobenzene	ND		65	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
1-Methylnaphthalene	**15**	**J**	39	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,2'-oxybis[1-chloropropane]	ND		320	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4,5-Trichlorophenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4,6-Trichlorophenol	ND		190	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4-Dichlorophenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4-Dimethylphenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4-Dinitrophenol	ND		1300	260	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,4-Dinitrotoluene	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2,6-Dinitrotoluene	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2-Chloronaphthalene	ND		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2-Chlorophenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2-Methylnaphthalene	**18**	**J**	26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2-Methylphenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-9.66-20141203-S
Date Collected: 12/03/14 09:02
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-2
Matrix: Solid
Percent Solids: 75.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
2-Nitrophenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
3 & 4 Methylphenol	ND		260	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
3,3'-Dichlorobenzidine	ND		260	39	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
3-Nitroaniline	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4,6-Dinitro-2-methylphenol	ND		1300	130	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Bromophenyl phenyl ether	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Chloro-3-methylphenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Chloroaniline	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Chlorophenyl phenyl ether	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Nitroaniline	ND		130	26	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
4-Nitrophenol	ND		1300	320	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Acenaphthene	**45**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Acenaphthylene	**39**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Anthracene	**200**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzo[a]anthracene	**960**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzo[a]pyrene	**1100**		39	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzo[b]fluoranthene	**1700**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzo[g,h,i]perylene	**320**		32	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzo[k]fluoranthene	**710**		32	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzoic acid	ND		3200	970	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Benzyl alcohol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Bis(2-chloroethoxy)methane	ND		130	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Bis(2-chloroethyl)ether	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Bis(2-ethylhexyl) phthalate	**1900**		780	65	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Butyl benzyl phthalate	**180**	**J**	260	65	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Carbazole	**160**		130	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Chrysene	**1300**		32	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Dibenz(a,h)anthracene	**79**		52	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Dibenzofuran	**32**	**J**	130	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Diethyl phthalate	ND		260	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Dimethyl phthalate	**10**	**J**	130	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Di-n-butyl phthalate	**160**	**J**	650	65	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Di-n-octyl phthalate	**270**	**J**	650	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Fluoranthene	**2200**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Fluorene	**70**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Hexachlorobenzene	ND		65	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Hexachlorobutadiene	ND		65	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Hexachlorocyclopentadiene	ND		130	13	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Hexachloroethane	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Indeno[1,2,3-cd]pyrene	**450**		52	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Isophorone	ND		130	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Naphthalene	**25**	**J**	26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Nitrobenzene	ND		130	44	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
N-Nitrosodimethylamine	ND		1300	320	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
N-Nitrosodi-n-propylamine	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
N-Nitrosodiphenylamine	ND		65	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Pentachlorophenol	**97**	**J**	260	26	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Phenanthrene	**1200**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-9.66-20141203-S
Date Collected: 12/03/14 09:02
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-2
Matrix: Solid
Percent Solids: 75.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		130	19	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10
Pyrene	**1900**		26	6.5	ug/Kg	☼	12/05/14 09:52	12/18/14 20:28	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*77*		*28 - 143*	*12/05/14 09:52*	*12/18/14 20:28*	*10*
2-Fluorobiphenyl	*97*		*42 - 140*	*12/05/14 09:52*	*12/18/14 20:28*	*10*
2-Fluorophenol	*89*		*36 - 145*	*12/05/14 09:52*	*12/18/14 20:28*	*10*
Nitrobenzene-d5	*88*		*38 - 141*	*12/05/14 09:52*	*12/18/14 20:28*	*10*
Phenol-d5	*95*		*38 - 149*	*12/05/14 09:52*	*12/18/14 20:28*	*10*
Terphenyl-d14	*107*		*42 - 151*	*12/05/14 09:52*	*12/18/14 20:28*	*10*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1.9**	**J B**	5.6	0.70	mg/Kg	☼	12/05/14 09:38	12/05/14 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*50 - 150*	*12/05/14 09:38*	*12/05/14 22:01*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.013	0.0041	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1221	ND		0.014	0.010	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1232	ND		0.014	0.0090	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1242	ND		0.013	0.0027	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1248	ND		0.013	0.0038	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1254	ND		0.013	0.0027	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1
Arochlor 1260	**1.1**		0.013	0.0038	mg/Kg	☼	12/05/14 10:17	12/10/14 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*114*		*45 - 135*	*12/05/14 10:17*	*12/10/14 18:49*	*1*
DCB Decachlorobiphenyl	*89*		*50 - 140*	*12/05/14 10:17*	*12/10/14 18:49*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**180**	**Y**	30	6.9	mg/Kg	☼	12/08/14 10:00	12/09/14 14:55	1
Motor Oil (>C24-C36)	**1100**	**Y**	61	11	mg/Kg	☼	12/08/14 10:00	12/09/14 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*12/08/14 10:00*	*12/09/14 14:55*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**22**		0.60	0.22	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Lead	**160**		0.24	0.016	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Antimony	**3.4**		0.24	0.051	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Beryllium	**0.27**		0.24	0.042	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Cadmium	**2.8**		0.24	0.0096	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Chromium	**67**		0.24	0.14	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Copper	**110**		0.48	0.12	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Nickel	**49**		0.60	0.098	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Selenium	**0.41**	**J**	0.84	0.24	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-9.66-20141203-S
Date Collected: 12/03/14 09:02
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-2
Matrix: Solid
Percent Solids: 75.9

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.1		0.24	0.014	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Thallium	ND		0.60	0.16	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10
Zinc	870		2.4	1.3	mg/Kg	☼	12/05/14 10:28	12/05/14 15:28	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.25		0.019	0.0061	mg/Kg	☼	12/08/14 16:58	12/09/14 07:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	76		0.10	0.10	%			12/05/14 09:46	1
Total Organic Carbon	15000		2000	250	mg/Kg			12/09/14 09:22	1

Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/04/14 18:03	1
Gravel	3.4				%			12/04/14 18:03	1
Sand	93				%			12/04/14 18:03	1
Silt	3.2				%			12/04/14 18:03	1
Clay	0.40				%			12/04/14 18:03	1

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1,1-Trichloroethane	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1,2,2-Tetrachloroethane	ND	*	6.2	2.8	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1,2-Trichloroethane	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1-Dichloroethane	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1-Dichloroethene	ND		15	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,1-Dichloropropene	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2,3-Trichlorobenzene	ND	*	6.2	1.8	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2,3-Trichloropropane	ND	*	3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2,4-Trichlorobenzene	ND	*	6.2	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2,4-Trimethylbenzene	**17**	*	6.2	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2-Dibromo-3-Chloropropane	ND	*	6.2	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2-Dibromoethane	ND	*	3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2-Dichlorobenzene	ND	*	6.2	1.8	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2-Dichloroethane	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,2-Dichloropropane	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,3,5-Trimethylbenzene	**2.3**	**J** *	15	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,3-Dichlorobenzene	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,3-Dichloropropane	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
1,4-Dichlorobenzene	ND	*	3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
2,2-Dichloropropane	ND		15	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
2-Butanone	ND		31	9.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
2-Chloroethyl vinyl ether	ND	*	15	4.3	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
2-Chlorotoluene	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
2-Hexanone	ND	*	15	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
4-Chlorotoluene	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
4-Isopropyltoluene	**12**	*	6.2	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
4-Methyl-2-pentanone	ND	*	15	4.6	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Acetone	**290**		46	7.4	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Acrolein	ND		92	25	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Acrylonitrile	ND		31	8.6	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Benzene	**1.2**	**J**	3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Bromobenzene	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Bromochloromethane	ND		6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Bromodichloromethane	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Bromoform	ND	*	3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Bromomethane	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Carbon disulfide	**11**		3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Carbon tetrachloride	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Chlorobenzene	ND	*	3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Chlorodibromomethane	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Chloroethane	ND		3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Chloroform	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Chloromethane	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
cis-1,2-Dichloroethene	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
cis-1,3-Dichloropropene	ND	*	3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Dibromomethane	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Dichlorodifluoromethane	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**4.9**	*	3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Hexachloro-1,3-butadiene	ND	*	6.2	1.8	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Iodomethane	ND		46	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Isopropylbenzene	**1.4**	J *	6.2	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Methyl tert-butyl ether	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Methylene Chloride	ND		46	9.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
m-Xylene & p-Xylene	**4.3**	J *	6.2	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Naphthalene	**65**	*	15	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
n-Butylbenzene	**2.9**	J *	6.2	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
N-Propylbenzene	**3.3**	J *	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
o-Xylene	**4.1**	J *	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
sec-Butylbenzene	ND	*	6.2	1.5	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Styrene	ND	*	6.2	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
tert-Butylbenzene	ND	*	6.2	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Tetrachloroethene	ND	*	3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Toluene	**46**	*	6.2	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
trans-1,2-Dichloroethene	ND		3.1	1.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
trans-1,3-Dichloropropene	ND	*	3.1	0.62	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
trans-1,4-Dichloro-2-butene	ND	*	15	5.2	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Trichloroethene	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Trichlorofluoromethane	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Vinyl acetate	ND		15	1.8	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1
Vinyl chloride	ND		3.1	0.92	ug/Kg	☼	12/03/14 13:38	12/08/14 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*124*		*71 - 136*	*12/03/14 13:38*	*12/08/14 21:20*	*1*
4-Bromofluorobenzene (Surr)	*152*	*X	*70 - 120*	*12/03/14 13:38*	*12/08/14 21:20*	*1*
Dibromofluoromethane (Surr)	*114*		*75 - 132*	*12/03/14 13:38*	*12/08/14 21:20*	*1*
Toluene-d8 (Surr)	*124*	*X	*80 - 120*	*12/03/14 13:38*	*12/08/14 21:20*	*1*
Trifluorotoluene (Surr)	*75*		*65 - 140*	*12/03/14 13:38*	*12/08/14 21:20*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1900	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
1,2-Dichlorobenzene	ND		2100	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
1,3-Dichlorobenzene	ND		1900	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
1,4-Dichlorobenzene	ND		1900	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
1-Methylnaphthalene	**370**	J	1100	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,2'-oxybis[1-chloropropane]	ND		9600	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4,5-Trichlorophenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4,6-Trichlorophenol	ND		5700	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4-Dichlorophenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4-Dimethylphenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4-Dinitrophenol	ND		38000	7600	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,4-Dinitrotoluene	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2,6-Dinitrotoluene	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2-Chloronaphthalene	ND		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2-Chlorophenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2-Methylnaphthalene	**310**	J	760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2-Methylphenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
2-Nitrophenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
3 & 4 Methylphenol	ND		7600	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
3,3'-Dichlorobenzidine	ND		7600	1100	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
3-Nitroaniline	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4,6-Dinitro-2-methylphenol	ND		38000	3800	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Bromophenyl phenyl ether	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Chloro-3-methylphenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Chloroaniline	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Chlorophenyl phenyl ether	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Nitroaniline	ND		3800	760	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
4-Nitrophenol	ND		38000	9600	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Acenaphthene	**4500**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Acenaphthylene	**270**	**J**	760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Anthracene	**8400**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzo[a]anthracene	**32000**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzo[a]pyrene	**40000**		1100	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzo[b]fluoranthene	**67000**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzo[g,h,i]perylene	**16000**		960	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzo[k]fluoranthene	**26000**		960	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzoic acid	ND		96000	29000	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Benzyl alcohol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Bis(2-chloroethoxy)methane	ND		3800	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Bis(2-chloroethyl)ether	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Bis(2-ethylhexyl) phthalate	**10000**	**J**	23000	1900	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Butyl benzyl phthalate	ND		7600	1900	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Carbazole	**14000**		3800	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Chrysene	**49000**		960	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Dibenz(a,h)anthracene	**4700**		1500	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Dibenzofuran	**3800**		3800	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Diethyl phthalate	ND		7600	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Dimethyl phthalate	**470**	**J**	3800	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Di-n-butyl phthalate	ND		19000	1900	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Di-n-octyl phthalate	**3300**	**J**	19000	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Fluoranthene	**110000**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Fluorene	**4900**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Hexachlorobenzene	ND		1900	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Hexachlorobutadiene	ND		1900	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Hexachlorocyclopentadiene	ND		3800	380	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Hexachloroethane	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Indeno[1,2,3-cd]pyrene	**22000**		1500	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Isophorone	ND		3800	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Naphthalene	**220**	**J**	760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Nitrobenzene	ND		3800	1300	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
N-Nitrosodimethylamine	ND		38000	9600	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
N-Nitrosodi-n-propylamine	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
N-Nitrosodiphenylamine	ND		1900	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Pentachlorophenol	ND		7600	760	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Phenanthrene	**80000**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		3800	570	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100
Pyrene	**86000**		760	190	ug/Kg	☼	12/05/14 09:52	12/18/14 18:23	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*160*	*X*	*28 - 143*	*12/05/14 09:52*	*12/18/14 18:23*	*100*
2-Fluorobiphenyl	*98*		*42 - 140*	*12/05/14 09:52*	*12/18/14 18:23*	*100*
2-Fluorophenol	*75*		*36 - 145*	*12/05/14 09:52*	*12/18/14 18:23*	*100*
Nitrobenzene-d5	*86*		*38 - 141*	*12/05/14 09:52*	*12/18/14 18:23*	*100*
Phenol-d5	*102*		*38 - 149*	*12/05/14 09:52*	*12/18/14 18:23*	*100*
Terphenyl-d14	*105*		*42 - 151*	*12/05/14 09:52*	*12/18/14 18:23*	*100*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**9.5**	**J B**	26	3.2	mg/Kg	☼	12/05/14 09:38	12/05/14 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*12/05/14 09:38*	*12/05/14 23:39*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.037	0.012	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1221	ND		0.041	0.030	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1232	ND		0.041	0.026	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1242	ND		0.037	0.0078	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1248	ND		0.037	0.011	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1254	ND		0.037	0.0078	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1
Arochlor 1260	ND		0.037	0.011	mg/Kg	☼	12/05/14 10:17	12/10/14 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*45 - 135*	*12/05/14 10:17*	*12/10/14 19:04*	*1*
DCB Decachlorobiphenyl	*53*		*50 - 140*	*12/05/14 10:17*	*12/10/14 19:04*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**2200**	**Y**	95	22	mg/Kg	☼	12/09/14 13:35	12/09/14 16:36	1
Motor Oil (>C24-C36)	**7100**	**Y**	190	35	mg/Kg	☼	12/09/14 13:35	12/09/14 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*12/09/14 13:35*	*12/09/14 16:36*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**8.6**		1.7	0.60	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Lead	**100**		0.67	0.044	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Antimony	**19**		0.67	0.14	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Beryllium	**0.17**	**J**	0.67	0.12	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Cadmium	**7.1**		0.67	0.027	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Chromium	**48**		0.67	0.38	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Copper	**150**		1.3	0.33	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Nickel	**32**		1.7	0.27	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Selenium	**1.2**	**J**	2.4	0.68	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.72		0.67	0.040	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Thallium	ND		1.7	0.44	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10
Zinc	850		6.7	3.8	mg/Kg	☼	12/05/14 10:29	12/05/14 15:32	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16		0.059	0.019	mg/Kg	☼	12/08/14 16:58	12/09/14 07:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	26		0.10	0.10	%			12/05/14 09:46	1
Total Organic Carbon	170000		2000	250	mg/Kg			12/09/14 09:22	1

Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/04/14 18:03	1
Gravel	13				%			12/04/14 18:03	1
Sand	48				%			12/04/14 18:03	1
Silt	36				%			12/04/14 18:03	1
Clay	3.6				%			12/04/14 18:03	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-177654/1-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177654

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,1-Trichloroethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.90	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2-Trichloroethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloroethene	ND		5.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloropropene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,3-Trichlorobenzene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,4-Trimethylbenzene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dibromoethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichlorobenzene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichloropropane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3,5-Trimethylbenzene	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3-Dichlorobenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3-Dichloropropane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2,2-Dichloropropane	ND		5.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Butanone	ND		10	3.0	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Chloroethyl vinyl ether	ND		5.0	1.4	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Hexanone	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Methyl-2-pentanone	ND		5.0	1.5	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acetone	ND		15	2.4	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acrolein	ND		30	8.2	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acrylonitrile	ND		10	2.8	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Benzene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromobenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromochloromethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromodichloromethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromoform	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromomethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Carbon disulfide	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Carbon tetrachloride	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chlorobenzene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chlorodibromomethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloroethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloroform	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Dibromomethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177654/1-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177654

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Ethylbenzene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Hexachloro-1,3-butadiene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Iodomethane	ND		15	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Methyl tert-butyl ether	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Methylene Chloride	ND		15	3.0	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Naphthalene	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
N-Propylbenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
o-Xylene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
sec-Butylbenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Styrene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
tert-Butylbenzene	0.293	J	2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Tetrachloroethene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Toluene	ND		2.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,2-Dichloroethene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,4-Dichloro-2-butene	ND		5.0	1.7	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Trichloroethene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Trichlorofluoromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Vinyl acetate	ND		5.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Vinyl chloride	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 136*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 132*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*12/08/14 18:12*	*12/08/14 18:40*	*1*

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	30.0	29.8		ug/Kg		99	72 - 123
1,1,1-Trichloroethane	30.0	37.3		ug/Kg		124	63 - 135
1,1,2,2-Tetrachloroethane	30.0	28.0		ug/Kg		93	73 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	35.4		ug/Kg		118	66 - 163
1,1,2-Trichloroethane	30.0	28.5		ug/Kg		95	77 - 124
1,1-Dichloroethane	30.0	29.6		ug/Kg		99	70 - 128
1,1-Dichloroethene	30.0	33.1		ug/Kg		110	70 - 133
1,1-Dichloropropene	30.0	31.0		ug/Kg		103	77 - 125
1,2,3-Trichlorobenzene	30.0	31.1		ug/Kg		104	61 - 130
1,2,3-Trichloropropane	30.0	29.5		ug/Kg		98	77 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	30.0	30.6		ug/Kg		102	61 - 130
1,2,4-Trimethylbenzene	30.0	30.6		ug/Kg		102	79 - 124
1,2-Dibromo-3-Chloropropane	30.0	28.3		ug/Kg		94	53 - 132
1,2-Dibromoethane	30.0	28.3		ug/Kg		94	69 - 126
1,2-Dichlorobenzene	30.0	28.9		ug/Kg		96	79 - 117
1,2-Dichloroethane	30.0	31.0		ug/Kg		103	71 - 128
1,2-Dichloropropane	30.0	28.8		ug/Kg		96	76 - 161
1,3,5-Trimethylbenzene	30.0	31.7		ug/Kg		106	80 - 125
1,3-Dichlorobenzene	30.0	28.7		ug/Kg		96	79 - 119
1,3-Dichloropropane	30.0	28.3		ug/Kg		94	77 - 123
1,4-Dichlorobenzene	30.0	28.4		ug/Kg		95	79 - 117
2,2-Dichloropropane	30.0	29.9		ug/Kg		100	56 - 144
2-Butanone	120	122		ug/Kg		101	30 - 160
2-Chloroethyl vinyl ether	30.0	26.6		ug/Kg		89	60 - 150
2-Chlorotoluene	30.0	30.0		ug/Kg		100	79 - 122
2-Hexanone	120	115		ug/Kg		96	45 - 145
4-Chlorotoluene	30.0	30.7		ug/Kg		102	80 - 122
4-Isopropyltoluene	30.0	32.0		ug/Kg		107	78 - 126
4-Methyl-2-pentanone	120	115		ug/Kg		96	45 - 145
Acetone	120	117		ug/Kg		97	20 - 160
Acrolein	178	156		ug/Kg		88	10 - 125
Acrylonitrile	300	277		ug/Kg		92	74 - 117
Benzene	30.0	28.8		ug/Kg		96	70 - 128
Bromobenzene	30.0	28.9		ug/Kg		96	80 - 120
Bromochloromethane	30.0	28.3		ug/Kg		94	78 - 123
Bromodichloromethane	30.0	31.6		ug/Kg		105	58 - 133
Bromoform	30.0	29.2		ug/Kg		97	50 - 124
Bromomethane	30.0	29.2		ug/Kg		97	57 - 148
Carbon disulfide	30.0	29.5		ug/Kg		98	45 - 160
Carbon tetrachloride	30.0	32.6		ug/Kg		109	59 - 145
Chlorobenzene	30.0	27.9		ug/Kg		93	75 - 120
Chlorodibromomethane	30.0	29.2		ug/Kg		97	42 - 129
Chloroethane	30.0	27.1		ug/Kg		90	48 - 167
Chloroform	30.0	30.3		ug/Kg		101	78 - 125
Chloromethane	30.0	33.2		ug/Kg		111	55 - 136
cis-1,2-Dichloroethene	30.0	32.9		ug/Kg		110	70 - 130
cis-1,3-Dichloropropene	30.0	29.4		ug/Kg		98	69 - 129
Dibromomethane	30.0	30.0		ug/Kg		100	78 - 126
Dichlorodifluoromethane	30.0	34.0		ug/Kg		113	38 - 150
Ethylbenzene	30.0	28.9		ug/Kg		96	78 - 126
Hexachloro-1,3-butadiene	30.0	33.5		ug/Kg		112	68 - 134
Iodomethane	30.0	34.0		ug/Kg		113	44 - 148
Isopropylbenzene	30.0	29.2		ug/Kg		97	79 - 127
Methyl tert-butyl ether	30.0	28.4		ug/Kg		95	65 - 125
Methylene Chloride	30.0	33.1		ug/Kg		110	57 - 146
m-Xylene & p-Xylene	30.0	29.4		ug/Kg		98	78 - 126
Naphthalene	30.0	30.0		ug/Kg		100	14 - 170
n-Butylbenzene	30.0	32.3		ug/Kg		108	78 - 128

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	30.0	31.0		ug/Kg		103	81 - 127
o-Xylene	30.0	28.7		ug/Kg		96	77 - 127
sec-Butylbenzene	30.0	31.8		ug/Kg		106	78 - 128
Styrene	30.0	28.7		ug/Kg		96	79 - 127
tert-Butylbenzene	30.0	30.1		ug/Kg		100	71 - 136
Tetrachloroethene	30.0	29.5		ug/Kg		98	56 - 155
Toluene	30.0	27.6		ug/Kg		92	75 - 126
trans-1,2-Dichloroethene	30.0	33.6		ug/Kg		112	76 - 131
trans-1,3-Dichloropropene	30.0	29.6		ug/Kg		99	72 - 129
trans-1,4-Dichloro-2-butene	30.0	32.9		ug/Kg		110	42 - 160
Trichloroethene	30.0	29.9		ug/Kg		100	83 - 124
Trichlorofluoromethane	30.0	36.0		ug/Kg		120	47 - 165
Vinyl acetate	60.5	58.7		ug/Kg		97	19 - 144
Vinyl chloride	30.0	31.7		ug/Kg		106	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 136*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*
Dibromofluoromethane (Surr)	*103*		*75 - 132*
Toluene-d8 (Surr)	*96*		*80 - 120*
Trifluorotoluene (Surr)	*98*		*65 - 140*

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	30.0	31.8		ug/Kg		106	72 - 123	6	20
1,1,1-Trichloroethane	30.0	39.1		ug/Kg		130	63 - 135	5	20
1,1,2,2-Tetrachloroethane	30.0	30.9		ug/Kg		103	73 - 125	10	22
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	38.8		ug/Kg		129	66 - 163	9	30
1,1,2-Trichloroethane	30.0	27.8		ug/Kg		93	77 - 124	3	18
1,1-Dichloroethane	30.0	30.3		ug/Kg		101	70 - 128	2	21
1,1-Dichloroethene	30.0	35.7		ug/Kg		119	70 - 133	7	23
1,1-Dichloropropene	30.0	30.1		ug/Kg		100	77 - 125	3	16
1,2,3-Trichlorobenzene	30.0	32.6		ug/Kg		109	61 - 130	5	23
1,2,3-Trichloropropane	30.0	30.3		ug/Kg		101	77 - 123	3	23
1,2,4-Trichlorobenzene	30.0	32.0		ug/Kg		107	61 - 130	4	22
1,2,4-Trimethylbenzene	30.0	30.6		ug/Kg		102	79 - 124	0	18
1,2-Dibromo-3-Chloropropane	30.0	30.2		ug/Kg		101	53 - 132	7	27
1,2-Dibromoethane	30.0	27.9		ug/Kg		93	69 - 126	1	21
1,2-Dichlorobenzene	30.0	29.6		ug/Kg		99	79 - 117	2	17
1,2-Dichloroethane	30.0	30.4		ug/Kg		101	71 - 128	2	18
1,2-Dichloropropane	30.0	29.4		ug/Kg		98	76 - 161	2	15
1,3,5-Trimethylbenzene	30.0	31.8		ug/Kg		106	80 - 125	1	18
1,3-Dichlorobenzene	30.0	28.8		ug/Kg		96	79 - 119	0	17
1,3-Dichloropropane	30.0	27.4		ug/Kg		91	77 - 123	3	19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	30.0	27.9		ug/Kg		93	79 - 117	2	18
2,2-Dichloropropane	30.0	34.1		ug/Kg		114	56 - 144	13	21
2-Butanone	120	124		ug/Kg		103	30 - 160	2	30
2-Chloroethyl vinyl ether	30.0	24.4		ug/Kg		81	60 - 150	8	30
2-Chlorotoluene	30.0	29.6		ug/Kg		99	79 - 122	1	18
2-Hexanone	120	119		ug/Kg		99	45 - 145	4	30
4-Chlorotoluene	30.0	29.8		ug/Kg		99	80 - 122	3	18
4-Isopropyltoluene	30.0	31.5		ug/Kg		105	78 - 126	1	18
4-Methyl-2-pentanone	120	126		ug/Kg		105	45 - 145	10	30
Acetone	120	127		ug/Kg		106	20 - 160	9	30
Acrolein	178	176		ug/Kg		99	10 - 125	12	30
Acrylonitrile	300	291		ug/Kg		97	74 - 117	5	30
Benzene	30.0	29.0		ug/Kg		97	70 - 128	1	19
Bromobenzene	30.0	28.3		ug/Kg		94	80 - 120	2	19
Bromochloromethane	30.0	29.8		ug/Kg		99	78 - 123	5	19
Bromodichloromethane	30.0	30.2		ug/Kg		101	58 - 133	5	19
Bromoform	30.0	28.3		ug/Kg		94	50 - 124	3	25
Bromomethane	30.0	34.8		ug/Kg		116	57 - 148	18	29
Carbon disulfide	30.0	32.4		ug/Kg		108	45 - 160	10	30
Carbon tetrachloride	30.0	34.4		ug/Kg		115	59 - 145	5	19
Chlorobenzene	30.0	27.9		ug/Kg		93	75 - 120	0	21
Chlorodibromomethane	30.0	29.1		ug/Kg		97	42 - 129	1	23
Chloroethane	30.0	31.3		ug/Kg		104	48 - 167	14	53
Chloroform	30.0	30.9		ug/Kg		103	78 - 125	2	17
Chloromethane	30.0	40.0		ug/Kg		133	55 - 136	19	26
cis-1,2-Dichloroethene	30.0	34.0		ug/Kg		113	70 - 130	3	19
cis-1,3-Dichloropropene	30.0	27.6		ug/Kg		92	69 - 129	6	19
Dibromomethane	30.0	28.9		ug/Kg		96	78 - 126	4	18
Dichlorodifluoromethane	30.0	40.9		ug/Kg		136	38 - 150	19	26
Ethylbenzene	30.0	30.5		ug/Kg		102	78 - 126	5	23
Hexachloro-1,3-butadiene	30.0	31.7		ug/Kg		106	68 - 134	5	21
Iodomethane	30.0	36.0		ug/Kg		120	44 - 148	6	30
Isopropylbenzene	30.0	31.0		ug/Kg		103	79 - 127	6	20
Methyl tert-butyl ether	30.0	30.8		ug/Kg		103	65 - 125	8	30
Methylene Chloride	30.0	36.1		ug/Kg		120	57 - 146	9	21
m-Xylene & p-Xylene	30.0	30.7		ug/Kg		102	78 - 126	5	23
Naphthalene	30.0	32.1		ug/Kg		107	14 - 170	7	50
n-Butylbenzene	30.0	32.3		ug/Kg		108	78 - 128	0	17
N-Propylbenzene	30.0	30.0		ug/Kg		100	81 - 127	3	20
o-Xylene	30.0	30.9		ug/Kg		103	77 - 127	7	22
sec-Butylbenzene	30.0	31.4		ug/Kg		105	78 - 128	1	17
Styrene	30.0	29.7		ug/Kg		99	79 - 127	3	21
tert-Butylbenzene	30.0	28.2		ug/Kg		94	71 - 136	6	27
Tetrachloroethene	30.0	29.1		ug/Kg		97	56 - 155	2	27
Toluene	30.0	28.0		ug/Kg		93	75 - 126	2	19
trans-1,2-Dichloroethene	30.0	35.5		ug/Kg		118	76 - 131	5	18
trans-1,3-Dichloropropene	30.0	27.7		ug/Kg		92	72 - 129	7	20
trans-1,4-Dichloro-2-butene	30.0	32.1		ug/Kg		107	42 - 160	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene			30.0	28.5		ug/Kg		95	83 - 124	5	17
Trichlorofluoromethane			30.0	40.7		ug/Kg		136	47 - 165	12	54
Vinyl acetate			60.5	60.8		ug/Kg		100	19 - 144	3	30
Vinyl chloride			30.0	39.2		ug/Kg		130	67 - 131	21	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*71 - 136*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 132*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*105*		*65 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-177445/1-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,2-Dichlorobenzene	ND		5.5	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,3-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,4-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,2'-oxybis[1-chloropropane]	ND		25	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4,6-Trichlorophenol	ND		15	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dichlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dimethylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dinitrophenol	ND		100	20	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dinitrotoluene	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,6-Dinitrotoluene	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Chloronaphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Chlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Methylnaphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Methylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Nitroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Nitrophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3,3'-Dichlorobenzidine	ND		20	3.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3-Nitroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4,6-Dinitro-2-methylphenol	ND		100	10	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Bromophenyl phenyl ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chloro-3-methylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chloroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chlorophenyl phenyl ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Nitroaniline	ND		10	2.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Nitrophenol	ND		100	25	ug/Kg		12/05/14 09:52	12/17/14 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177445/1-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Acenaphthylene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Anthracene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[a]anthracene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[a]pyrene	ND		3.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[b]fluoranthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[g,h,i]perylene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[k]fluoranthene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzoic acid	ND		250	75	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzyl alcohol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-chloroethoxy)methane	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-chloroethyl)ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-ethylhexyl) phthalate	ND		60	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Butyl benzyl phthalate	5.45	J	20	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Carbazole	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Chrysene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dibenz(a,h)anthracene	ND		4.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dibenzofuran	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Diethyl phthalate	ND		20	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dimethyl phthalate	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Di-n-butyl phthalate	ND		50	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Di-n-octyl phthalate	ND		50	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Fluoranthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Fluorene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorobenzene	ND		5.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachloroethane	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Isophorone	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Naphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Nitrobenzene	ND		10	3.4	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodimethylamine	ND		100	25	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodiphenylamine	ND		5.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Pentachlorophenol	7.45	J	20	2.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Phenanthrene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Phenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Pyrene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*68*		*28 - 143*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
2-Fluorobiphenyl	*75*		*42 - 140*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
2-Fluorophenol	*72*		*36 - 145*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Nitrobenzene-d5	*75*		*38 - 141*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Phenol-d5	*74*		*38 - 149*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Terphenyl-d14	*92*		*42 - 151*	*12/05/14 09:52*	*12/17/14 17:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177445/2-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	87.9		ug/Kg		88	66 - 115
1,2-Dichlorobenzene	100	79.9		ug/Kg		80	64 - 112
1,3-Dichlorobenzene	100	74.7		ug/Kg		75	64 - 111
1,4-Dichlorobenzene	100	82.5		ug/Kg		83	65 - 110
1-Methylnaphthalene	100	88.4		ug/Kg		88	62 - 118
2,2'-oxybis[1-chloropropane]	100	61.0		ug/Kg		61	41 - 126
2,4,5-Trichlorophenol	100	91.4		ug/Kg		91	57 - 133
2,4,6-Trichlorophenol	100	87.1		ug/Kg		87	62 - 133
2,4-Dichlorophenol	100	88.6		ug/Kg		89	68 - 125
2,4-Dimethylphenol	100	80.1		ug/Kg		80	54 - 139
2,4-Dinitrophenol	200	102		ug/Kg		51	20 - 141
2,4-Dinitrotoluene	100	93.1		ug/Kg		93	68 - 121
2,6-Dinitrotoluene	100	90.1		ug/Kg		90	66 - 123
2-Chloronaphthalene	100	86.5		ug/Kg		86	68 - 112
2-Chlorophenol	100	80.3		ug/Kg		80	68 - 117
2-Methylnaphthalene	100	82.3		ug/Kg		82	64 - 119
2-Methylphenol	100	84.5		ug/Kg		85	71 - 116
2-Nitroaniline	100	95.9		ug/Kg		96	64 - 112
2-Nitrophenol	100	81.7		ug/Kg		82	67 - 127
3 & 4 Methylphenol	100	86.8		ug/Kg		87	70 - 116
3,3'-Dichlorobenzidine	200	138		ug/Kg		69	20 - 103
3-Nitroaniline	100	60.9		ug/Kg		61	27 - 103
4,6-Dinitro-2-methylphenol	200	149		ug/Kg		75	48 - 130
4-Bromophenyl phenyl ether	100	91.1		ug/Kg		91	68 - 122
4-Chloro-3-methylphenol	100	92.0		ug/Kg		92	69 - 121
4-Chloroaniline	100	32.2		ug/Kg		32	20 - 103
4-Chlorophenyl phenyl ether	100	88.2		ug/Kg		88	75 - 108
4-Nitroaniline	100	79.9		ug/Kg		80	58 - 108
4-Nitrophenol	200	170		ug/Kg		85	20 - 165
Acenaphthene	100	88.1		ug/Kg		88	68 - 116
Acenaphthylene	100	76.6		ug/Kg		77	68 - 120
Anthracene	100	92.6		ug/Kg		93	73 - 116
Benzo[a]anthracene	100	86.6		ug/Kg		87	76 - 119
Benzo[a]pyrene	100	95.6		ug/Kg		96	72 - 117
Benzo[b]fluoranthene	100	92.6		ug/Kg		93	63 - 132
Benzo[g,h,i]perylene	100	94.8		ug/Kg		95	55 - 139
Benzo[k]fluoranthene	100	93.1		ug/Kg		93	63 - 119
Benzoic acid	200	124	J	ug/Kg		62	29 - 158
Benzyl alcohol	100	80.3		ug/Kg		80	55 - 123
Bis(2-chloroethoxy)methane	100	82.0		ug/Kg		82	69 - 107
Bis(2-chloroethyl)ether	100	76.1		ug/Kg		76	62 - 110
Bis(2-ethylhexyl) phthalate	100	102		ug/Kg		102	62 - 144
Butyl benzyl phthalate	100	97.8		ug/Kg		98	69 - 142
Carbazole	100	97.4		ug/Kg		97	76 - 135
Chrysene	100	93.8		ug/Kg		94	75 - 114
Dibenz(a,h)anthracene	100	95.8		ug/Kg		96	56 - 134
Dibenzofuran	100	84.5		ug/Kg		85	72 - 109
Diethyl phthalate	100	90.7		ug/Kg		91	73 - 116

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177445/2-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethyl phthalate	100	87.8		ug/Kg		88	78 - 117
Di-n-butyl phthalate	100	98.2		ug/Kg		98	66 - 140
Di-n-octyl phthalate	100	102		ug/Kg		102	65 - 141
Fluoranthene	100	89.3		ug/Kg		89	73 - 125
Fluorene	100	87.2		ug/Kg		87	70 - 121
Hexachlorobenzene	100	92.8		ug/Kg		93	66 - 117
Hexachlorobutadiene	100	83.6		ug/Kg		84	65 - 116
Hexachlorocyclopentadiene	100	70.0		ug/Kg		70	46 - 131
Hexachloroethane	100	74.9		ug/Kg		75	62 - 120
Indeno[1,2,3-cd]pyrene	100	91.1		ug/Kg		91	56 - 127
Isophorone	100	86.2		ug/Kg		86	67 - 119
Naphthalene	100	81.2		ug/Kg		81	62 - 112
Nitrobenzene	100	83.3		ug/Kg		83	64 - 118
N-Nitrosodimethylamine	100	88.0	J	ug/Kg		88	38 - 133
N-Nitrosodi-n-propylamine	100	82.1		ug/Kg		82	62 - 116
N-Nitrosodiphenylamine	100	96.8		ug/Kg		97	73 - 115
Pentachlorophenol	200	142		ug/Kg		71	45 - 117
Phenanthrene	100	94.3		ug/Kg		94	73 - 106
Phenol	100	82.6		ug/Kg		83	63 - 111
Pyrene	100	92.8		ug/Kg		93	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*82*		*28 - 143*
2-Fluorobiphenyl	*73*		*42 - 140*
2-Fluorophenol	*74*		*36 - 145*
Nitrobenzene-d5	*72*		*38 - 141*
Phenol-d5	*78*		*38 - 149*
Terphenyl-d14	*90*		*42 - 151*

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	86.6		ug/Kg		87	66 - 115	1	28
1,2-Dichlorobenzene	100	82.2		ug/Kg		82	64 - 112	3	30
1,3-Dichlorobenzene	100	77.8		ug/Kg		78	64 - 111	4	30
1,4-Dichlorobenzene	100	81.2		ug/Kg		81	65 - 110	2	30
1-Methylnaphthalene	100	86.1		ug/Kg		86	62 - 118	3	30
2,2'-oxybis[1-chloropropane]	100	63.6		ug/Kg		64	41 - 126	4	57
2,4,5-Trichlorophenol	100	89.8		ug/Kg		90	57 - 133	2	30
2,4,6-Trichlorophenol	100	85.8		ug/Kg		86	62 - 133	1	30
2,4-Dichlorophenol	100	85.6		ug/Kg		86	68 - 125	3	30
2,4-Dimethylphenol	100	81.7		ug/Kg		82	54 - 139	2	30
2,4-Dinitrophenol	200	96.4	J	ug/Kg		48	20 - 141	5	36
2,4-Dinitrotoluene	100	89.2		ug/Kg		89	68 - 121	4	30
2,6-Dinitrotoluene	100	91.0		ug/Kg		91	66 - 123	1	30
2-Chloronaphthalene	100	89.1		ug/Kg		89	68 - 112	3	25

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chlorophenol	100	85.5		ug/Kg		86	68 - 117	6	27
2-Methylnaphthalene	100	85.2		ug/Kg		85	64 - 119	3	27
2-Methylphenol	100	85.0		ug/Kg		85	71 - 116	1	25
2-Nitroaniline	100	91.2		ug/Kg		91	64 - 112	5	22
2-Nitrophenol	100	85.4		ug/Kg		85	67 - 127	4	30
3 & 4 Methylphenol	100	92.1		ug/Kg		92	70 - 116	6	27
3,3'-Dichlorobenzidine	200	142		ug/Kg		71	20 - 103	2	60
3-Nitroaniline	100	66.4		ug/Kg		66	27 - 103	9	33
4,6-Dinitro-2-methylphenol	200	139		ug/Kg		70	48 - 130	7	22
4-Bromophenyl phenyl ether	100	86.7		ug/Kg		87	68 - 122	5	30
4-Chloro-3-methylphenol	100	85.9		ug/Kg		86	69 - 121	7	27
4-Chloroaniline	100	42.3		ug/Kg		42	20 - 103	27	60
4-Chlorophenyl phenyl ether	100	88.5		ug/Kg		89	75 - 108	0	30
4-Nitroaniline	100	83.9		ug/Kg		84	58 - 108	5	32
4-Nitrophenol	200	175		ug/Kg		88	20 - 165	3	30
Acenaphthene	100	89.7		ug/Kg		90	68 - 116	2	27
Acenaphthylene	100	78.9		ug/Kg		79	68 - 120	3	28
Anthracene	100	89.9		ug/Kg		90	73 - 116	3	27
Benzo[a]anthracene	100	83.0		ug/Kg		83	76 - 119	4	27
Benzo[a]pyrene	100	93.4		ug/Kg		93	72 - 117	2	30
Benzo[b]fluoranthene	100	89.5		ug/Kg		90	63 - 132	3	30
Benzo[g,h,i]perylene	100	93.0		ug/Kg		93	55 - 139	2	28
Benzo[k]fluoranthene	100	91.9		ug/Kg		92	63 - 119	1	30
Benzoic acid	200	118	J	ug/Kg		59	29 - 158	5	28
Benzyl alcohol	100	88.4		ug/Kg		88	55 - 123	10	60
Bis(2-chloroethoxy)methane	100	84.3		ug/Kg		84	69 - 107	3	30
Bis(2-chloroethyl)ether	100	81.2		ug/Kg		81	62 - 110	6	22
Bis(2-ethylhexyl) phthalate	100	94.6		ug/Kg		95	62 - 144	7	30
Butyl benzyl phthalate	100	91.3		ug/Kg		91	69 - 142	7	30
Carbazole	100	94.9		ug/Kg		95	76 - 135	3	30
Chrysene	100	89.6		ug/Kg		90	75 - 114	5	26
Dibenz(a,h)anthracene	100	95.3		ug/Kg		95	56 - 134	0	30
Dibenzofuran	100	85.0		ug/Kg		85	72 - 109	1	30
Diethyl phthalate	100	83.6		ug/Kg		84	73 - 116	8	26
Dimethyl phthalate	100	87.9		ug/Kg		88	78 - 117	0	30
Di-n-butyl phthalate	100	96.5		ug/Kg		96	66 - 140	2	30
Di-n-octyl phthalate	100	101		ug/Kg		101	65 - 141	1	30
Fluoranthene	100	87.0		ug/Kg		87	73 - 125	3	30
Fluorene	100	89.1		ug/Kg		89	70 - 121	2	30
Hexachlorobenzene	100	90.0		ug/Kg		90	66 - 117	3	30
Hexachlorobutadiene	100	86.1		ug/Kg		86	65 - 116	3	30
Hexachlorocyclopentadiene	100	72.2		ug/Kg		72	46 - 131	3	29
Hexachloroethane	100	78.5		ug/Kg		79	62 - 120	5	30
Indeno[1,2,3-cd]pyrene	100	91.1		ug/Kg		91	56 - 127	0	29
Isophorone	100	84.7		ug/Kg		85	67 - 119	2	30
Naphthalene	100	82.6		ug/Kg		83	62 - 112	2	26
Nitrobenzene	100	85.0		ug/Kg		85	64 - 118	2	30
N-Nitrosodimethylamine	100	86.9	J	ug/Kg		87	38 - 133	1	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine			100	90.2		ug/Kg		90	62 - 116	9	28
N-Nitrosodiphenylamine			100	91.5		ug/Kg		91	73 - 115	6	30
Pentachlorophenol			200	143		ug/Kg		71	45 - 117	0	23
Phenanthrene			100	90.6		ug/Kg		91	73 - 106	4	28
Phenol			100	81.0		ug/Kg		81	63 - 111	2	26
Pyrene			100	88.6		ug/Kg		89	70 - 120	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*81*		*28 - 143*
2-Fluorobiphenyl	*75*		*42 - 140*
2-Fluorophenol	*75*		*36 - 145*
Nitrobenzene-d5	*73*		*38 - 141*
Phenol-d5	*77*		*38 - 149*
Terphenyl-d14	*87*		*42 - 151*

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		229	ND		ug/Kg	☼	NC	66 - 115
1,2-Dichlorobenzene	ND		229	ND		ug/Kg	☼	NC	64 - 112
1,3-Dichlorobenzene	ND		229	ND		ug/Kg	☼	NC	64 - 111
1,4-Dichlorobenzene	ND		229	ND		ug/Kg	☼	NC	65 - 110
1-Methylnaphthalene	340	J	229	525	J	ug/Kg	☼	82	62 - 118
2,2'-oxybis[1-chloropropane]	ND		229	ND		ug/Kg	☼	NC	41 - 126
2,4,5-Trichlorophenol	ND		229	ND		ug/Kg	☼	NC	57 - 133
2,4,6-Trichlorophenol	ND		229	ND		ug/Kg	☼	NC	62 - 133
2,4-Dichlorophenol	ND		229	ND		ug/Kg	☼	NC	68 - 125
2,4-Dimethylphenol	ND		229	ND		ug/Kg	☼	NC	54 - 139
2,4-Dinitrophenol	ND		459	ND		ug/Kg	☼	NC	20 - 141
2,4-Dinitrotoluene	ND		229	467	J	ug/Kg	☼	NC	68 - 121
2,6-Dinitrotoluene	ND		229	ND		ug/Kg	☼	NC	66 - 123
2-Chloronaphthalene	ND		229	277	J F1	ug/Kg	☼	121	68 - 112
2-Chlorophenol	ND		229	ND		ug/Kg	☼	NC	68 - 117
2-Methylnaphthalene	320	J	229	496		ug/Kg	☼	76	64 - 119
2-Methylphenol	ND		229	ND		ug/Kg	☼	NC	71 - 116
2-Nitroaniline	ND		229	373	J	ug/Kg	☼	NC	64 - 112
2-Nitrophenol	ND		229	ND		ug/Kg	☼	NC	67 - 127
3 & 4 Methylphenol	ND		229	ND		ug/Kg	☼	NC	70 - 116
3,3'-Dichlorobenzidine	ND		459	ND		ug/Kg	☼	NC	20 - 103
3-Nitroaniline	ND		229	ND		ug/Kg	☼	NC	27 - 103
4,6-Dinitro-2-methylphenol	ND		459	ND		ug/Kg	☼	NC	48 - 130
4-Bromophenyl phenyl ether	ND		229	ND		ug/Kg	☼	NC	68 - 122
4-Chloro-3-methylphenol	ND		229	618	J	ug/Kg	☼	NC	69 - 121
4-Chloroaniline	ND		229	ND		ug/Kg	☼	NC	20 - 103
4-Chlorophenyl phenyl ether	ND		229	ND		ug/Kg	☼	NC	75 - 108
4-Nitroaniline	ND		229	ND		ug/Kg	☼	NC	58 - 108

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Nitrophenol	ND		459	6780	J	ug/Kg	☼	NC	20 - 165
Acenaphthene	11000		229	7730	4	ug/Kg	☼	-1386	68 - 116
Acenaphthylene	890		229	1080		ug/Kg	☼	85	68 - 120
Anthracene	39000		229	32000	4	ug/Kg	☼	-3071	73 - 116
Benzo[a]pyrene	220000		229	195000	4	ug/Kg	☼	-11993	72 - 117
Benzo[g,h,i]perylene	85000		229	71100	4	ug/Kg	☼	-6068	55 - 139
Benzoic acid	ND		459	ND		ug/Kg	☼	NC	29 - 158
Benzyl alcohol	ND		229	686	J	ug/Kg	☼	NC	55 - 123
Bis(2-chloroethoxy)methane	ND		229	341	J F1	ug/Kg	☼	149	69 - 107
Bis(2-chloroethyl)ether	ND		229	ND		ug/Kg	☼	NC	62 - 110
Bis(2-ethylhexyl) phthalate	15000		229	12000	J 4	ug/Kg	☼	-1125	62 - 144
Butyl benzyl phthalate	ND		229	1590	J	ug/Kg	☼	NC	69 - 142
Carbazole	46000		229	38700	4	ug/Kg	☼	-3086	76 - 135
Dibenz(a,h)anthracene	27000		229	22700	4	ug/Kg	☼	-2049	56 - 134
Dibenzofuran	7700		229	5860	4	ug/Kg	☼	-822	72 - 109
Diethyl phthalate	ND		229	ND		ug/Kg	☼	NC	73 - 116
Dimethyl phthalate	230	J	229	471	J	ug/Kg	☼	104	78 - 117
Di-n-butyl phthalate	ND		229	ND		ug/Kg	☼	NC	66 - 140
Di-n-octyl phthalate	2500	J	229	3040	J 4	ug/Kg	☼	256	65 - 141
Fluorene	14000		229	11000	4	ug/Kg	☼	-1360	70 - 121
Hexachlorobenzene	ND		229	155	J	ug/Kg	☼	68	66 - 117
Hexachlorobutadiene	ND		229	ND		ug/Kg	☼	NC	65 - 116
Hexachlorocyclopentadiene	ND		229	ND		ug/Kg	☼	NC	46 - 131
Hexachloroethane	ND		229	ND		ug/Kg	☼	NC	62 - 120
Indeno[1,2,3-cd]pyrene	120000		229	98900	4	ug/Kg	☼	-7947	56 - 127
Isophorone	ND		229	260	J	ug/Kg	☼	113	67 - 119
Naphthalene	630		229	885		ug/Kg	☼	111	62 - 112
Nitrobenzene	ND		229	ND		ug/Kg	☼	NC	64 - 118
N-Nitrosodimethylamine	ND		229	ND		ug/Kg	☼	NC	38 - 133
N-Nitrosodi-n-propylamine	ND		229	ND		ug/Kg	☼	NC	62 - 116
N-Nitrosodiphenylamine	ND		229	293	J F1	ug/Kg	☼	128	73 - 115
Pentachlorophenol	ND		459	1700	J	ug/Kg	☼	NC	45 - 117
Phenol	ND		229	ND		ug/Kg	☼	NC	63 - 111

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*115*		*28 - 143*
2-Fluorobiphenyl	*106*		*42 - 140*
2-Fluorophenol	*86*		*36 - 145*
Nitrobenzene-d5	*108*		*38 - 141*
Phenol-d5	*39*		*38 - 149*
Terphenyl-d14	*98*		*42 - 151*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-46549-1 MSD
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		231	ND		ug/Kg	☼	NC	66 - 115	NC	28
1,2-Dichlorobenzene	ND		231	ND		ug/Kg	☼	NC	64 - 112	NC	60
1,3-Dichlorobenzene	ND		231	ND		ug/Kg	☼	NC	64 - 111	NC	60
1,4-Dichlorobenzene	ND		231	ND		ug/Kg	☼	NC	65 - 110	NC	32
1-Methylnaphthalene	340	J	231	496	J	ug/Kg	☼	69	62 - 118	6	30
2,2'-oxybis[1-chloropropane]	ND		231	ND		ug/Kg	☼	NC	41 - 126	NC	60
2,4,5-Trichlorophenol	ND		231	ND		ug/Kg	☼	NC	57 - 133	NC	60
2,4,6-Trichlorophenol	ND		231	ND		ug/Kg	☼	NC	62 - 133	NC	60
2,4-Dichlorophenol	ND		231	ND		ug/Kg	☼	NC	68 - 125	NC	60
2,4-Dimethylphenol	ND		231	ND		ug/Kg	☼	NC	54 - 139	NC	60
2,4-Dinitrophenol	ND		463	ND		ug/Kg	☼	NC	20 - 141	NC	60
2,4-Dinitrotoluene	ND		231	ND		ug/Kg	☼	NC	68 - 121	NC	31
2,6-Dinitrotoluene	ND		231	ND		ug/Kg	☼	NC	66 - 123	NC	60
2-Chloronaphthalene	ND		231	267	J F1	ug/Kg	☼	115	68 - 112	4	25
2-Chlorophenol	ND		231	ND		ug/Kg	☼	NC	68 - 117	NC	27
2-Methylnaphthalene	320	J	231	450	J F1	ug/Kg	☼	55	64 - 119	10	27
2-Methylphenol	ND		231	ND		ug/Kg	☼	NC	71 - 116	NC	25
2-Nitroaniline	ND		231	495	J	ug/Kg	☼	NC	64 - 112	28	60
2-Nitrophenol	ND		231	ND		ug/Kg	☼	NC	67 - 127	NC	60
3 & 4 Methylphenol	ND		231	ND		ug/Kg	☼	NC	70 - 116	NC	27
3,3'-Dichlorobenzidine	ND		463	ND		ug/Kg	☼	NC	20 - 103	NC	60
3-Nitroaniline	ND		231	ND		ug/Kg	☼	NC	27 - 103	NC	60
4,6-Dinitro-2-methylphenol	ND		463	ND		ug/Kg	☼	NC	48 - 130	NC	60
4-Bromophenyl phenyl ether	ND		231	ND		ug/Kg	☼	NC	68 - 122	NC	60
4-Chloro-3-methylphenol	ND		231	506	J	ug/Kg	☼	NC	69 - 121	20	27
4-Chloroaniline	ND		231	ND		ug/Kg	☼	NC	20 - 103	NC	60
4-Chlorophenyl phenyl ether	ND		231	ND		ug/Kg	☼	NC	75 - 108	NC	60
4-Nitroaniline	ND		231	478	J	ug/Kg	☼	NC	58 - 108	NC	60
4-Nitrophenol	ND		463	5890	J	ug/Kg	☼	NC	20 - 165	14	33
Acenaphthene	11000		231	6820	4	ug/Kg	☼	-1768	68 - 116	13	27
Acenaphthylene	890		231	940	F1	ug/Kg	☼	24	68 - 120	14	28
Anthracene	39000		231	28800	4	ug/Kg	☼	-4410	73 - 116	10	27
Benzo[a]pyrene	220000		231	185000	4	ug/Kg	☼	-16390	72 - 117	5	30
Benzo[g,h,i]perylene	85000		231	60800	4	ug/Kg	☼	-10474	55 - 139	16	28
Benzoic acid	ND		463	ND		ug/Kg	☼	NC	29 - 158	NC	60
Benzyl alcohol	ND		231	697	J	ug/Kg	☼	NC	55 - 123	2	60
Bis(2-chloroethoxy)methane	ND		231	292	J F1	ug/Kg	☼	126	69 - 107	15	60
Bis(2-chloroethyl)ether	ND		231	ND		ug/Kg	☼	NC	62 - 110	NC	60
Bis(2-ethylhexyl) phthalate	15000		231	11000	J 4	ug/Kg	☼	-1561	62 - 144	9	60
Butyl benzyl phthalate	ND		231	ND		ug/Kg	☼	NC	69 - 142	NC	60
Carbazole	46000		231	37200	4	ug/Kg	☼	-3723	76 - 135	4	60
Dibenz(a,h)anthracene	27000		231	16000	4 F2	ug/Kg	☼	-4928	56 - 134	35	30
Dibenzofuran	7700		231	5320	4	ug/Kg	☼	-1048	72 - 109	10	60
Diethyl phthalate	ND		231	ND		ug/Kg	☼	NC	73 - 116	NC	26
Dimethyl phthalate	230	J	231	608	J F1	ug/Kg	☼	162	78 - 117	25	60
Di-n-butyl phthalate	ND		231	ND		ug/Kg	☼	NC	66 - 140	NC	60

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-46549-1 MSD
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Di-n-octyl phthalate	2500	J	231	2740	J 4	ug/Kg	☼	127	65 - 141	10	31
Fluorene	14000		231	9630	4	ug/Kg	☼	-1926	70 - 121	13	31
Hexachlorobenzene	ND		231	ND	F1	ug/Kg	☼	0	66 - 117	NC	60
Hexachlorobutadiene	ND		231	ND		ug/Kg	☼	NC	65 - 116	NC	60
Hexachlorocyclopentadiene	ND		231	ND	F1	ug/Kg	☼	0	46 - 131	NC	60
Hexachloroethane	ND		231	ND		ug/Kg	☼	NC	62 - 120	NC	60
Indeno[1,2,3-cd]pyrene	120000		231	87700	4	ug/Kg	☼	-12726	56 - 127	12	29
Isophorone	ND		231	240	J	ug/Kg	☼	104	67 - 119	8	60
Naphthalene	630		231	761	F1	ug/Kg	☼	56	62 - 112	15	26
Nitrobenzene	ND		231	ND		ug/Kg	☼	NC	64 - 118	NC	60
N-Nitrosodimethylamine	ND		231	ND		ug/Kg	☼	NC	38 - 133	NC	60
N-Nitrosodi-n-propylamine	ND		231	ND		ug/Kg	☼	NC	62 - 116	NC	28
N-Nitrosodiphenylamine	ND		231	316	J F1	ug/Kg	☼	137	73 - 115	8	60
Pentachlorophenol	ND		463	1820	J F1	ug/Kg	☼	394	45 - 117	7	68
Phenol	ND		231	ND		ug/Kg	☼	NC	63 - 111	NC	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*112*		*28 - 143*
2-Fluorobiphenyl	*88*		*42 - 140*
2-Fluorophenol	*89*		*36 - 145*
Nitrobenzene-d5	*110*		*38 - 141*
Phenol-d5	*80*		*38 - 149*
Terphenyl-d14	*123*		*42 - 151*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 178495

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene - DL	230000		229	186000	4	ug/Kg	☼	-17900	76 - 119
Benzo[b]fluoranthene - DL	400000		229	348000	4	ug/Kg	☼	-22693	63 - 132
Benzo[k]fluoranthene - DL	170000		229	143000	4	ug/Kg	☼	-10270	63 - 119
Chrysene - DL	300000		229	254000	4	ug/Kg	☼	-18999	75 - 114
Fluoranthene - DL	640000		229	530000	4	ug/Kg	☼	-47638	73 - 125
Phenanthrene - DL	310000		229	242000	4	ug/Kg	☼	-28573	73 - 106
Pyrene - DL	500000		229	424000	4	ug/Kg	☼	-35231	70 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Lab Sample ID: 580-46549-1 MSD — **Client Sample ID: BD-MH-13.43-20141202-S**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 178495 — **Prep Batch: 177445**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene - DL	230000		231	166000	4	ug/Kg	☼	-26216	76 - 119	11	27
Benzo[b]fluoranthene - DL	400000		231	339000	4	ug/Kg	☼	-26354	63 - 132	3	31
Benzo[k]fluoranthene - DL	170000		231	118000	4	ug/Kg	☼	-21149	63 - 119	19	31
Chrysene - DL	300000		231	243000	4	ug/Kg	☼	-23772	75 - 114	5	26
Fluoranthene - DL	640000		231	526000	4	ug/Kg	☼	-48700	73 - 125	1	36
Phenanthrene - DL	310000		231	235000	4	ug/Kg	☼	-31214	73 - 106	3	28
Pyrene - DL	500000		231	413000	4	ug/Kg	☼	-39583	70 - 120	3	31

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-177438/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.805	J	4.0	0.50	mg/Kg		12/05/14 09:38	12/05/14 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*12/05/14 09:38*	*12/05/14 13:51*	*1*

Lab Sample ID: LCS 580-177438/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	40.0	31.5		mg/Kg		79	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Lab Sample ID: LCSD 580-177438/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	40.0	32.1		mg/Kg		80	68 - 120	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-46549-2 MS
Matrix: Solid
Analysis Batch: 177469

Client Sample ID: BD-MH-9.66-20141203-S
Prep Type: Total/NA
Prep Batch: 177438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1.9	J B	65.1	63.5		mg/Kg	☼	95	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*

Lab Sample ID: 580-46549-2 MSD
Matrix: Solid
Analysis Batch: 177469

Client Sample ID: BD-MH-9.66-20141203-S
Prep Type: Total/NA
Prep Batch: 177438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	1.9	J B	65.1	68.3		mg/Kg	☼	102	50 - 150	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-177449/1-A
Matrix: Solid
Analysis Batch: 177851

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.010	0.0032	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1221	ND		0.011	0.0080	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1232	ND		0.011	0.0070	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1242	ND		0.010	0.0021	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1248	ND		0.010	0.0030	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1254	ND		0.010	0.0021	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1260	ND		0.010	0.0030	mg/Kg		12/05/14 10:17	12/10/14 17:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*45 - 135*	*12/05/14 10:17*	*12/10/14 17:48*	*1*
DCB Decachlorobiphenyl	*88*		*50 - 140*	*12/05/14 10:17*	*12/10/14 17:48*	*1*

Lab Sample ID: LCS 580-177449/2-A
Matrix: Solid
Analysis Batch: 177851

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016	0.100	0.0967		mg/Kg		97	40 - 140
Arochlor 1260	0.100	0.0929		mg/Kg		93	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*45 - 135*
DCB Decachlorobiphenyl	*92*		*50 - 140*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 580-177449/3-A
Matrix: Solid
Analysis Batch: 177851

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177449

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arochlor 1016			0.100	0.104		mg/Kg		104	40 - 140	7	20
Arochlor 1260			0.100	0.0924		mg/Kg		92	60 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*		*45 - 135*
DCB Decachlorobiphenyl	*82*		*50 - 140*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-177510/1-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		25	5.7	mg/Kg		12/08/14 10:00	12/09/14 13:00	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		12/08/14 10:00	12/09/14 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*108*		*50 - 150*	*12/08/14 10:00*	*12/09/14 13:00*	*1*

Lab Sample ID: LCS 580-177510/2-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177510

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)			500	473		mg/Kg		95	70 - 125
Motor Oil (>C24-C36)			502	472		mg/Kg		94	64 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*

Lab Sample ID: LCSD 580-177510/3-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177510

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			500	499		mg/Kg		100	70 - 125	5	16
Motor Oil (>C24-C36)			502	497		mg/Kg		99	64 - 127	5	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*96*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177510

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	4100	Y	1150	4980		mg/Kg	☼	80	70 - 125
Motor Oil (>C24-C36)	10000	Y	1160	10300	4	mg/Kg	☼	21	64 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*156*	*X*	*50 - 150*

Lab Sample ID: 580-46549-1 MSD
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177510

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	4100	Y	1140	4450	F1	mg/Kg	☼	34	70 - 125	11	16
Motor Oil (>C24-C36)	10000	Y	1140	9380	4	mg/Kg	☼	-62	64 - 127	10	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*106*		*50 - 150*

Lab Sample ID: MB 580-177744/1-A
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		25	5.7	mg/Kg		12/09/14 13:35	12/09/14 15:41	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		12/09/14 13:35	12/09/14 15:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*12/09/14 13:35*	*12/09/14 15:41*	*1*

Lab Sample ID: LCS 580-177744/2-A
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	500	457		mg/Kg		91	70 - 125
Motor Oil (>C24-C36)	502	480		mg/Kg		96	64 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*

Lab Sample ID: LCSD 580-177744/3-A
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177744

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	500	422		mg/Kg		84	70 - 125	8	16
Motor Oil (>C24-C36)	502	441		mg/Kg		88	64 - 127	9	17

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-177744/3-A
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177744

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	81		50 - 150

Lab Sample ID: 580-46549-3 MS
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: BD-OWS-15-20141203-S
Prep Type: Total/NA
Prep Batch: 177744

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	2200	Y	1930	5630	F1	mg/Kg	☼	177	70 - 125
Motor Oil (>C24-C36)	7100	Y	1930	14200	F1	mg/Kg	☼	364	64 - 127

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl	133		50 - 150

Lab Sample ID: 580-46549-3 MSD
Matrix: Solid
Analysis Batch: 177696

Client Sample ID: BD-OWS-15-20141203-S
Prep Type: Total/NA
Prep Batch: 177744

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	2200	Y	1960	5150	F1	mg/Kg	☼	150	70 - 125	9	16
Motor Oil (>C24-C36)	7100	Y	1960	13300	F1	mg/Kg	☼	315	64 - 127	6	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	129		50 - 150

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-177450/16-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	0.036	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Lead	ND		0.040	0.0026	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Antimony	ND		0.040	0.0084	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Beryllium	ND		0.040	0.0070	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Cadmium	ND		0.040	0.0016	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Chromium	ND		0.040	0.023	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Copper	ND		0.080	0.020	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Nickel	ND		0.10	0.016	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Selenium	ND		0.14	0.040	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Silver	ND		0.040	0.0024	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Thallium	ND		0.10	0.026	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Zinc	ND		0.40	0.22	mg/Kg		12/05/14 10:29	12/05/14 14:47	2

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-177450/17-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	186		mg/Kg		93	80 - 120
Lead	50.0	44.2		mg/Kg		88	80 - 120
Antimony	150	135		mg/Kg		90	80 - 120
Beryllium	5.00	4.74		mg/Kg		95	80 - 120
Cadmium	5.00	4.66		mg/Kg		93	80 - 120
Chromium	20.0	18.1		mg/Kg		91	80 - 120
Copper	25.0	23.1		mg/Kg		92	80 - 120
Nickel	50.0	47.5		mg/Kg		95	80 - 120
Selenium	200	188		mg/Kg		94	80 - 120
Silver	30.0	27.1		mg/Kg		90	80 - 120
Thallium	200	178		mg/Kg		89	80 - 120
Zinc	200	186		mg/Kg		93	80 - 120

Lab Sample ID: LCSD 580-177450/18-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177450

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	187		mg/Kg		93	80 - 120	0	20
Lead	50.0	44.3		mg/Kg		89	80 - 120	0	20
Antimony	150	136		mg/Kg		91	80 - 120	1	20
Beryllium	5.00	4.76		mg/Kg		95	80 - 120	0	20
Cadmium	5.00	4.54		mg/Kg		91	80 - 120	3	20
Chromium	20.0	17.9		mg/Kg		90	80 - 120	1	20
Copper	25.0	23.0		mg/Kg		92	80 - 120	1	20
Nickel	50.0	46.9		mg/Kg		94	80 - 120	1	20
Selenium	200	187		mg/Kg		94	80 - 120	1	20
Silver	30.0	27.1		mg/Kg		90	80 - 120	0	20
Thallium	200	179		mg/Kg		90	80 - 120	1	20
Zinc	200	185		mg/Kg		93	80 - 120	0	20

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	13		434	434		mg/Kg	☼	97	80 - 120
Lead	150		109	238		mg/Kg	☼	81	80 - 120
Antimony	6.7		326	307		mg/Kg	☼	92	80 - 120
Beryllium	0.25	J	10.9	10.8		mg/Kg	☼	98	80 - 120
Cadmium	2.6		10.9	13.1		mg/Kg	☼	96	80 - 120
Chromium	67		43.4	147	F1	mg/Kg	☼	186	80 - 120
Copper	190		54.3	253		mg/Kg	☼	118	80 - 120
Nickel	37		109	154		mg/Kg	☼	108	80 - 120
Selenium	0.86	J	434	419		mg/Kg	☼	96	80 - 120
Silver	1.9		65.1	63.0		mg/Kg	☼	94	80 - 120
Thallium	ND		434	401		mg/Kg	☼	92	80 - 120
Zinc	850		434	1310		mg/Kg	☼	107	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-46549-1 MSD — **Client Sample ID: BD-MH-13.43-20141202-S**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177556 — **Prep Batch: 177450**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	13		427	416		mg/Kg	☼	94	80 - 120	4	20
Lead	150		107	226	F1	mg/Kg	☼	71	80 - 120	5	20
Antimony	6.7		321	298		mg/Kg	☼	91	80 - 120	3	20
Beryllium	0.25	J	10.7	10.1		mg/Kg	☼	92	80 - 120	7	20
Cadmium	2.6		10.7	12.5		mg/Kg	☼	93	80 - 120	4	20
Chromium	67		42.7	103	F2	mg/Kg	☼	85	80 - 120	36	20
Copper	190		53.4	236		mg/Kg	☼	86	80 - 120	7	20
Nickel	37		107	141		mg/Kg	☼	98	80 - 120	9	20
Selenium	0.86	J	427	409		mg/Kg	☼	95	80 - 120	3	20
Silver	1.9		64.1	60.4		mg/Kg	☼	91	80 - 120	4	20
Thallium	ND		427	391		mg/Kg	☼	91	80 - 120	3	20
Zinc	850		427	1220		mg/Kg	☼	86	80 - 120	7	20

Lab Sample ID: 580-46549-1 DU — **Client Sample ID: BD-MH-13.43-20141202-S**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177556 — **Prep Batch: 177450**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	13		12.6		mg/Kg	☼	0.9	20
Lead	150		133		mg/Kg	☼	13	20
Antimony	6.7		6.81		mg/Kg	☼	2	20
Beryllium	0.25	J	0.230	J	mg/Kg	☼	8	20
Cadmium	2.6		2.55		mg/Kg	☼	1	20
Chromium	67		55.0		mg/Kg	☼	19	20
Copper	190		188		mg/Kg	☼	0.9	20
Nickel	37		37.9		mg/Kg	☼	2	20
Selenium	0.86	J	0.964	J	mg/Kg	☼	11	20
Silver	1.9		1.96		mg/Kg	☼	0.6	20
Thallium	ND		ND		mg/Kg	☼	NC	20
Zinc	850		857		mg/Kg	☼	1	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-177645/16-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177697 — **Prep Batch: 177645**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0053	mg/Kg		12/08/14 16:58	12/09/14 06:54	1

Lab Sample ID: LCS 580-177645/17-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177697 — **Prep Batch: 177645**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.147		mg/Kg		88	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-177645/18-A
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177645

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.141		mg/Kg		85	80 - 120	4	20

Lab Sample ID: 580-46549-1 MS
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177645

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.18		0.334	0.608	F1	mg/Kg	☼	127	80 - 120		

Lab Sample ID: 580-46549-1 MSD
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177645

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.18		0.297	0.508		mg/Kg	☼	109	80 - 120	18	20

Lab Sample ID: 580-46549-1 DU
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA
Prep Batch: 177645

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.18			0.170		mg/Kg	☼			8	20

Method: 2540B - Percent Moisture

Lab Sample ID: 580-46549-1 DU
Matrix: Solid
Analysis Batch: 177440

Client Sample ID: BD-MH-13.43-20141202-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	43			43		%				0.9	20

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-177721/3
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000	250	mg/Kg			12/09/14 09:22	1

Lab Sample ID: LCS 580-177721/4
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			2850	3020		mg/Kg		106	27.8 - 170		

Method: 9060_PSEP - TOC (Puget Sound) (Continued)

Lab Sample ID: LCSD 580-177721/5
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon			2850	2840		mg/Kg		100	27.8 - 170	6	35

Lab Sample ID: 580-46549-2 MS
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: BD-MH-9.66-20141203-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	15000		122000	129000		mg/Kg		94	50 - 140		

Lab Sample ID: 580-46549-2 MSD
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: BD-MH-9.66-20141203-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	15000		122000	130000		mg/Kg		93	50 - 140	0	35

Lab Sample ID: 580-46549-2 DU
Matrix: Solid
Analysis Batch: 177721

Client Sample ID: BD-MH-9.66-20141203-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	15000			13600		mg/Kg				11	50

Lab Chronicle

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-MH-13.43-20141202-S

Lab Sample ID: 580-46549-1

Date Collected: 12/02/14 15:07
Matrix: Solid
Date Received: 12/03/14 14:30
Percent Solids: 43.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			177654	12/03/14 13:38	IWH	TAL SEA
Total/NA	Analysis	8260B		1	177655	12/08/14 20:28	IWH	TAL SEA
Total/NA	Prep	3550B			177445	12/05/14 09:52	ALL	TAL SEA
Total/NA	Analysis	8270D		100	178426	12/17/14 23:48	AHP	TAL SEA
Total/NA	Prep	3550B	DL		177445	12/05/14 09:52	ALL	TAL SEA
Total/NA	Analysis	8270D	DL	1000	178495	12/18/14 16:43	AHP	TAL SEA
Total/NA	Prep	5035			177438	12/05/14 09:38	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	177469	12/05/14 21:28	AS	TAL SEA
Total/NA	Prep	3550B			177449	12/05/14 10:17	ALL	TAL SEA
Total/NA	Analysis	8082		1	177851	12/10/14 18:34	ALC	TAL SEA
Total/NA	Prep	3546			177510	12/08/14 10:00	RMB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	177678	12/09/14 13:58	JJP	TAL SEA
Total/NA	Prep	3050B			177450	12/05/14 10:28	PAB	TAL SEA
Total/NA	Analysis	6020		10	177556	12/05/14 15:02	FCW	TAL SEA
Total/NA	Prep	7471A			177645	12/08/14 16:58	PAB	TAL SEA
Total/NA	Analysis	7471A		1	177697	12/09/14 07:01	FCW	TAL SEA
Total/NA	Analysis	2540B		1	177440	12/05/14 09:46	ALL	TAL SEA
Total/NA	Analysis	9060_PSEP		1	177721	12/09/14 09:22	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	177401	12/04/14 18:03	LKC	TAL SEA

Client Sample ID: BD-MH-9.66-20141203-S

Lab Sample ID: 580-46549-2

Date Collected: 12/03/14 09:02
Matrix: Solid
Date Received: 12/03/14 14:30
Percent Solids: 75.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			177654	12/03/14 13:38	IWH	TAL SEA
Total/NA	Analysis	8260B		1	177655	12/08/14 20:54	IWH	TAL SEA
Total/NA	Prep	3550B			177445	12/05/14 09:52	ALL	TAL SEA
Total/NA	Analysis	8270D		10	178495	12/18/14 20:28	AHP	TAL SEA
Total/NA	Prep	5035			177438	12/05/14 09:38	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	177469	12/05/14 22:01	AS	TAL SEA
Total/NA	Prep	3550B			177449	12/05/14 10:17	ALL	TAL SEA
Total/NA	Analysis	8082		1	177851	12/10/14 18:49	ALC	TAL SEA
Total/NA	Prep	3546			177510	12/08/14 10:00	RMB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	177678	12/09/14 14:55	JJP	TAL SEA
Total/NA	Prep	3050B			177450	12/05/14 10:28	PAB	TAL SEA
Total/NA	Analysis	6020		10	177556	12/05/14 15:28	FCW	TAL SEA
Total/NA	Prep	7471A			177645	12/08/14 16:58	PAB	TAL SEA
Total/NA	Analysis	7471A		1	177697	12/09/14 07:11	FCW	TAL SEA
Total/NA	Analysis	2540B		1	177440	12/05/14 09:46	ALL	TAL SEA
Total/NA	Analysis	9060_PSEP		1	177721	12/09/14 09:22	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	177401	12/04/14 18:03	LKC	TAL SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Client Sample ID: BD-OWS-15-20141203-S
Date Collected: 12/03/14 10:33
Date Received: 12/03/14 14:30

Lab Sample ID: 580-46549-3
Matrix: Solid
Percent Solids: 25.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			177654	12/03/14 13:38	IWH	TAL SEA
Total/NA	Analysis	8260B		1	177655	12/08/14 21:20	IWH	TAL SEA
Total/NA	Prep	3550B			177445	12/05/14 09:52	ALL	TAL SEA
Total/NA	Analysis	8270D		100	178495	12/18/14 18:23	AHP	TAL SEA
Total/NA	Prep	5035			177438	12/05/14 09:38	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	177469	12/05/14 23:39	AS	TAL SEA
Total/NA	Prep	3550B			177449	12/05/14 10:17	ALL	TAL SEA
Total/NA	Analysis	8082		1	177851	12/10/14 19:04	ALC	TAL SEA
Total/NA	Prep	3550B			177744	12/09/14 13:35	ALL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	177696	12/09/14 16:36	JJP	TAL SEA
Total/NA	Prep	3050B			177450	12/05/14 10:29	PAB	TAL SEA
Total/NA	Analysis	6020		10	177556	12/05/14 15:32	FCW	TAL SEA
Total/NA	Prep	7471A			177645	12/08/14 16:58	PAB	TAL SEA
Total/NA	Analysis	7471A		1	177697	12/09/14 07:13	FCW	TAL SEA
Total/NA	Analysis	2540B		1	177440	12/05/14 09:46	ALL	TAL SEA
Total/NA	Analysis	9060_PSEP		1	177721	12/09/14 09:22	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	177401	12/04/14 18:03	LKC	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

Sample Summary

Client: Leidos, Inc.
Project/Site: NPDES SAMPLING SUPPORT

TestAmerica Job ID: 580-46549-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46549-1	BD-MH-13.43-20141202-S	Solid	12/02/14 15:07	12/03/14 14:30
580-46549-2	BD-MH-9.66-20141203-S	Solid	12/03/14 09:02	12/03/14 14:30
580-46549-3	BD-OWS-15-20141203-S	Solid	12/03/14 10:33	12/03/14 14:30

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

46549

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	**Analysis Turnaround Time**			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			Job / SDG No.:
Site: Lower Duwamish Waterway	☐ 2 days			
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB Aroclors (Method 8082)	SVOC (Method 8270D/8270D-SIM)	TPH-Diesel (NWTPH-Dx)	Metals (Method 6020/7471A)	Total Solids (Method SM2540B)	TPH-Gasoline (NWTPH-Gx)	VOCs (EPA 8260B)	TOC (Plumb1981/9060)	Particle Size (PSEP_Plumb1981)	Sample Specific Notes:
BD-MH-13.43-20141202-S	12/02/14	1507	C	Sed	6									2			
BD-MH-9.66-20141203-S	12/03/14	0902	C	Sed	6									2			
BD-OWS-15-20141203-S	12/03/14	1033	C	Sed	10					1			1	2	1	1	

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580-46549 Chain of Custody

A2
Cooler/TB Dig/IR cor 2.5 °C unc 2.8 °C
Cooler Dsc Lg Blue/Wht @ Lab 1430
Wet/Packs Packing Other
w/o

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH — 6

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company	Date/Time		Company	Date/Time
Relinquished by: Melissa Ivancevich	Leidos	12/03/14 1350	Received by:	TH-5EA	12/3/14 1338
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

12/2/2014

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-46549-1

Login Number: 46549

List Source: TestAmerica Seattle

List Number: 1

Creator: Tyson, Benjamin C

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-46558-1
Client Project/Site: NPDES Sampling Support
Revision: 1

For:
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

Attn: Christine Nancarrow

Kristine D. Allen

Authorized for release by:
2/6/2015 12:51:41 PM

Kristine Allen, Manager of Project Management
(253)248-4970
kristine.allen@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Job ID: 580-46558-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-46558-1

Comments
No additional comments.

Receipt
The samples were received on 12/4/2014 11:17 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2° C.

GC/MS VOA
Method(s) 8260B: The method blank for batch 177655 contained tert-butylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The method blank for batch 177454 contained Acetone, Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The method blank for batch 177453 contained Acetone, Naphthalene, tert-Butylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: Internal standard responses (1,4-dichlorobenzene-d4 and chlorobenzene-d5) were below acceptance limits for the following samples: BD-MH-10.9-20141203-S (580-46558-1). The samples shows evidence of matrix interference and the results were confirmed by re-analysis. Data has been reported from the re-analysis batch.

Method(s) 8260B: Recovery of the surrogates 1,2-Dichloroethane-d4,4-Bromofluorobenzene and Toluene-d8 for the following sample was outside control limits: BD-MH-10.9-20141203-S (580-46558-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed and the data has been reported.

Method(s) NWTPH-Gx: The method blank for batch 177469 contained Gasoline above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C, 8270D: The continuing calibration verification (CCV) associated with analytical batch 177847 recovered above the upper control limit for several analytes including the CCC compound 2-Nitrophenol. As such, all target comounds were evaluated to the +/-20%D criteria. Several analytes exceeded the +/-20%D criteria and indicated a potential high bias. The affected analytes were not detected above the RLs in the associated samples; therefore, the data have been flagged as appropriate and reported. The following samples are impacted: (CCVIS 580-177847/3), (LCS 580-177522/2-A), (LCSD 580-177522/3-A), (MB 580-177522/1-A), BD-OWS-02-20141203-W (580-46558-2).

Method(s) 8270C, 8270D: The method blank for preparation batch 177522 contained Butyl benzyl phthalate and Diethyl phthalate above the reporting limit (RL). The following samples associated with this method blank did not contain the target compounds above the RL: (MB 580-177522/1-A), BD-OWS-02-20141203-W (580-46558-2); therefore, re-extraction and/or re-analysis of samples were not performed.

Method(s) 8270C, 8270D: The following analyte(s) recovered outside control limits for the LCS associated with prep batch 177522: 4-Chloroaniline and Bis(2-ethylhexyl) phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

The following analyte(s) recovered outside control limits for the LCS associated with prep batch 177522: 4-Chloroaniline. In addition, the LCS recovered above the upper control limits for Bis(2-ethylhexyl)phthalate and Di-n-butyl phthalate. This is not indicative of a systematic

Job ID: 580-46558-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270C, 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 177522 recovered outside control limits for the following analytes: Bis(2-ethylhexyl)phthalate, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline and Pentachlorophenol.

Method(s) 8270D: The method blank for prep batch 177445 contained Butyl benzyl phthalate and Pentachlorophenol above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 178495 recovered outside the +/-20%D and/or RRF minimum criteria for Benzyl alcohol, Bis(2-chloroethoxy)methane, Isophorone, N-Nitrosodi-n-propylamine and Nitrobenzene. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8082: In batch 177851 and 178046, the following sample(s) required a copper clean-up to reduce matrix interferences caused by sulfur: (580-46558-1 MS), (580-46558-1 MSD), (LCS 580-177449/2-A), (LCSD 580-177449/3-A), (MB 580-177449/1-A), BD-MH-10.9-20141203-S (580-46558-1). Lot# H25604

Method(s) 8082: In batch 178046, the following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are PCB-1254 and PCB-1260 and they quantified as the predominant Aroclor: (580-46558-1 MS), (580-46558-1 MSD), BD-MH-10.9-20141203-S (580-46558-1).

Method(s) NWTPH-Dx: In analysis batch 177678, for the following sample from preparation batch 177510: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: BD-MH-10.9-20141203-S (580-46558-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Geotechnical

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits
B	Compound was found in the blank and sample.

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-MH-10.9-20141203-S
Date Collected: 12/03/14 15:13
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-1
Matrix: Solid
Percent Solids: 33.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1,1-Trichloroethane	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1,2,2-Tetrachloroethane	ND	*	6.8	3.1	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1,2-Trichloroethane	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1-Dichloroethane	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1-Dichloroethene	ND		17	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,1-Dichloropropene	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2,3-Trichlorobenzene	**4.4**	**J ***	6.8	2.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2,3-Trichloropropane	ND	*	3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2,4-Trichlorobenzene	**3.9**	**J ***	6.8	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2,4-Trimethylbenzene	**1.6**	**J ***	6.8	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2-Dibromo-3-Chloropropane	ND	*	6.8	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2-Dibromoethane	ND	*	3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2-Dichlorobenzene	ND	*	6.8	2.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2-Dichloroethane	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,2-Dichloropropane	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,3,5-Trimethylbenzene	ND	*	17	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,3-Dichlorobenzene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,3-Dichloropropane	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
1,4-Dichlorobenzene	ND	*	3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
2,2-Dichloropropane	ND		17	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
2-Butanone	ND		34	10	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
2-Chloroethyl vinyl ether	ND	*	17	4.8	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
2-Chlorotoluene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
2-Hexanone	ND	*	17	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
4-Chlorotoluene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
4-Isopropyltoluene	**1.7**	**J ***	6.8	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
4-Methyl-2-pentanone	**5.6**	**J ***	17	5.1	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Acetone	**220**		51	8.2	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Acrolein	ND		100	28	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Acrylonitrile	ND		34	9.5	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Benzene	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Bromobenzene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Bromochloromethane	ND		6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Bromodichloromethane	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Bromoform	ND	*	3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Bromomethane	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Carbon disulfide	**0.92**	**J**	3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Carbon tetrachloride	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Chlorobenzene	ND	*	3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Chlorodibromomethane	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Chloroethane	ND		3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Chloroform	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Chloromethane	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
cis-1,2-Dichloroethene	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
cis-1,3-Dichloropropene	ND	*	3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Dibromomethane	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Dichlorodifluoromethane	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-MH-10.9-20141203-S
Date Collected: 12/03/14 15:13
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-1
Matrix: Solid
Percent Solids: 33.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND	*	3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Hexachloro-1,3-butadiene	ND	*	6.8	2.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Iodomethane	ND		51	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Isopropylbenzene	ND	*	6.8	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Methyl tert-butyl ether	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Methylene Chloride	ND		51	10	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
m-Xylene & p-Xylene	ND	*	6.8	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Naphthalene	**5.8**	**J ***	17	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
n-Butylbenzene	**1.8**	**J ***	6.8	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
N-Propylbenzene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
o-Xylene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
sec-Butylbenzene	ND	*	6.8	1.7	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Styrene	ND	*	6.8	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
tert-Butylbenzene	**1.6**	**J * B**	6.8	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Tetrachloroethene	ND	*	3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Toluene	ND	*	6.8	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
trans-1,2-Dichloroethene	ND		3.4	1.4	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
trans-1,3-Dichloropropene	ND	*	3.4	0.68	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
trans-1,4-Dichloro-2-butene	ND	*	17	5.8	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Trichloroethene	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Trichlorofluoromethane	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Vinyl acetate	ND		17	2.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1
Vinyl chloride	ND		3.4	1.0	ug/Kg	☼	12/04/14 15:35	12/08/14 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*137*	*X*	*71 - 136*	*12/04/14 15:35*	*12/08/14 20:01*	*1*
4-Bromofluorobenzene (Surr)	*128*	** X*	*70 - 120*	*12/04/14 15:35*	*12/08/14 20:01*	*1*
Dibromofluoromethane (Surr)	*120*		*75 - 132*	*12/04/14 15:35*	*12/08/14 20:01*	*1*
Toluene-d8 (Surr)	*121*	** X*	*80 - 120*	*12/04/14 15:35*	*12/08/14 20:01*	*1*
Trifluorotoluene (Surr)	*72*		*65 - 140*	*12/04/14 15:35*	*12/08/14 20:01*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1500	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
1,2-Dichlorobenzene	ND		1600	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
1,3-Dichlorobenzene	ND		1500	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
1,4-Dichlorobenzene	ND		1500	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
1-Methylnaphthalene	**150**	**J**	870	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,2'-oxybis[1-chloropropane]	ND		7300	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4,5-Trichlorophenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4,6-Trichlorophenol	ND		4400	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4-Dichlorophenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4-Dimethylphenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4-Dinitrophenol	ND		29000	5800	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,4-Dinitrotoluene	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2,6-Dinitrotoluene	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2-Chloronaphthalene	ND		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2-Chlorophenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2-Methylnaphthalene	ND		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2-Methylphenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100

Client Sample ID: BD-MH-10.9-20141203-S
Date Collected: 12/03/14 15:13
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-1
Matrix: Solid
Percent Solids: 33.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
2-Nitrophenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
3 & 4 Methylphenol	ND		5800	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
3,3'-Dichlorobenzidine	ND		5800	870	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
3-Nitroaniline	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4,6-Dinitro-2-methylphenol	ND		29000	2900	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Bromophenyl phenyl ether	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Chloro-3-methylphenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Chloroaniline	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Chlorophenyl phenyl ether	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Nitroaniline	ND		2900	580	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
4-Nitrophenol	ND		29000	7300	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Acenaphthene	**2200**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Acenaphthylene	ND		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Anthracene	**4600**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzo[a]anthracene	**16000**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzo[a]pyrene	**20000**		870	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzo[b]fluoranthene	**33000**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzo[g,h,i]perylene	**7700**		730	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzo[k]fluoranthene	**12000**		730	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzoic acid	ND		73000	22000	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Benzyl alcohol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Bis(2-chloroethoxy)methane	ND		2900	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Bis(2-chloroethyl)ether	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Bis(2-ethylhexyl) phthalate	**2900**	**J**	17000	1500	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Butyl benzyl phthalate	ND		5800	1500	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Carbazole	**6400**		2900	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Chrysene	**24000**		730	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Dibenz(a,h)anthracene	**2100**		1200	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Dibenzofuran	**1600**	**J**	2900	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Diethyl phthalate	ND		5800	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Dimethyl phthalate	ND		2900	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Di-n-butyl phthalate	ND		15000	1500	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Di-n-octyl phthalate	**1400**	**J**	15000	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Fluoranthene	**56000**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Fluorene	**2500**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Hexachlorobenzene	ND		1500	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Hexachlorobutadiene	ND		1500	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Hexachlorocyclopentadiene	ND		2900	290	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Hexachloroethane	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Indeno[1,2,3-cd]pyrene	**10000**		1200	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Isophorone	ND		2900	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Naphthalene	ND		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Nitrobenzene	ND		2900	990	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
N-Nitrosodimethylamine	ND		29000	7300	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
N-Nitrosodi-n-propylamine	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
N-Nitrosodiphenylamine	ND		1500	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Pentachlorophenol	ND		5800	580	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Phenanthrene	**40000**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-MH-10.9-20141203-S
Date Collected: 12/03/14 15:13
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-1
Matrix: Solid
Percent Solids: 33.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2900	440	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100
Pyrene	**44000**		580	150	ug/Kg	☼	12/05/14 09:52	12/18/14 18:48	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*120*		*28 - 143*	*12/05/14 09:52*	*12/18/14 18:48*	*100*
2-Fluorobiphenyl	*44*		*42 - 140*	*12/05/14 09:52*	*12/18/14 18:48*	*100*
2-Fluorophenol	*58*		*36 - 145*	*12/05/14 09:52*	*12/18/14 18:48*	*100*
Nitrobenzene-d5	*43*		*38 - 141*	*12/05/14 09:52*	*12/18/14 18:48*	*100*
Phenol-d5	*63*		*38 - 149*	*12/05/14 09:52*	*12/18/14 18:48*	*100*
Terphenyl-d14	*67*		*42 - 151*	*12/05/14 09:52*	*12/18/14 18:48*	*100*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**18**	**J B**	24	3.0	mg/Kg	☼	12/05/14 12:00	12/09/14 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*50 - 150*	*12/05/14 12:00*	*12/09/14 19:12*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.29	0.094	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1221	ND		0.32	0.24	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1232	ND		0.32	0.21	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1242	ND		0.29	0.062	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1248	ND		0.29	0.088	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1254	ND		0.29	0.062	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10
Arochlor 1260	**6.5**		0.29	0.088	mg/Kg	☼	12/05/14 10:17	12/12/14 18:17	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*45 - 135*	*12/05/14 10:17*	*12/12/14 18:17*	*10*
DCB Decachlorobiphenyl	*109*		*50 - 140*	*12/05/14 10:17*	*12/12/14 18:17*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**950**	**Y**	72	16	mg/Kg	☼	12/08/14 10:00	12/09/14 15:14	1
Motor Oil (>C24-C36)	**6600**	**Y**	140	26	mg/Kg	☼	12/08/14 10:00	12/09/14 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*12/08/14 10:00*	*12/09/14 15:14*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**17**		1.3	0.46	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Lead	**430**		0.51	0.033	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Antimony	**14**		0.51	0.11	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Beryllium	**0.28**	**J**	0.51	0.089	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Cadmium	**7.3**		0.51	0.020	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Chromium	**140**		0.51	0.29	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Copper	**290**		1.0	0.25	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Nickel	**64**		1.3	0.21	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Selenium	**1.6**	**J**	1.8	0.51	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-MH-10.9-20141203-S
Date Collected: 12/03/14 15:13
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-1
Matrix: Solid
Percent Solids: 33.8

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	97		0.51	0.030	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Thallium	ND		1.3	0.33	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10
Zinc	1600		5.1	2.8	mg/Kg	☼	12/05/14 10:29	12/05/14 15:36	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.60		0.043	0.013	mg/Kg	☼	12/08/14 16:58	12/09/14 07:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	34		0.10	0.10	%			12/05/14 09:47	1
Total Organic Carbon	150000		2000	250	mg/Kg			12/09/14 09:22	1

Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/04/14 18:03	1
Gravel	3.0				%			12/04/14 18:03	1
Sand	32				%			12/04/14 18:03	1
Silt	61				%			12/04/14 18:03	1
Clay	3.6				%			12/04/14 18:03	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-OWS-02-20141203-W
Date Collected: 12/03/14 13:56
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4-Dinitrophenol	ND	^	4.7	0.95	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,4-Dinitrotoluene	ND	^	0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,6-Dinitrotoluene	**0.25**	**J ^**	0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
2-Nitrophenol	ND	^	0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
3-Nitroaniline	ND	*	0.38	0.11	ug/L		12/06/14 09:55	12/10/14 20:33	1
4,6-Dinitro-2-methylphenol	ND	^	3.8	0.95	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
4-Nitrophenol	ND		2.8	0.95	ug/L		12/06/14 09:55	12/10/14 20:33	1
Acenaphthene	ND		0.095	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Anthracene	ND		0.038	0.0095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzoic acid	**0.92**	**J ^**	2.8	0.57	ug/L		12/06/14 09:55	12/10/14 20:33	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Bis(2-ethylhexyl) phthalate	ND	*	2.8	1.1	ug/L		12/06/14 09:55	12/10/14 20:33	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/06/14 09:55	12/10/14 20:33	1
Carbazole	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Chrysene	ND		0.038	0.012	ug/L		12/06/14 09:55	12/10/14 20:33	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Diethyl phthalate	**0.11**	**J B**	0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-OWS-02-20141203-W
Date Collected: 12/03/14 13:56
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.15**	**J B ***	0.38	0.12	ug/L		12/06/14 09:55	12/10/14 20:33	1
Di-n-octyl phthalate	**1.7**		0.38	0.17	ug/L		12/06/14 09:55	12/10/14 20:33	1
Fluoranthene	**0.024**	**J**	0.047	0.012	ug/L		12/06/14 09:55	12/10/14 20:33	1
Fluorene	ND		0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Hexachlorocyclopentadiene	ND	^	1.9	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Indeno[1,2,3-cd]pyrene	ND	^	0.057	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Isophorone	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Naphthalene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/06/14 09:55	12/10/14 20:33	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Pentachlorophenol	ND	*	0.66	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Phenanthrene	ND		0.076	0.019	ug/L		12/06/14 09:55	12/10/14 20:33	1
Phenol	ND		0.57	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1
Pyrene	**0.020**	**J**	0.057	0.012	ug/L		12/06/14 09:55	12/10/14 20:33	1
2,3,4,6-Tetrachlorophenol	ND		0.66	0.095	ug/L		12/06/14 09:55	12/10/14 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*121*		*44 - 125*	*12/06/14 09:55*	*12/10/14 20:33*	*1*
2-Fluorobiphenyl	*73*		*50 - 120*	*12/06/14 09:55*	*12/10/14 20:33*	*1*
2-Fluorophenol	*55*		*30 - 134*	*12/06/14 09:55*	*12/10/14 20:33*	*1*
Nitrobenzene-d5	*67*		*59 - 120*	*12/06/14 09:55*	*12/10/14 20:33*	*1*
Phenol-d5	*66*		*52 - 120*	*12/06/14 09:55*	*12/10/14 20:33*	*1*
Terphenyl-d14	*110*		*64 - 150*	*12/06/14 09:55*	*12/10/14 20:33*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		12/08/14 12:17	12/09/14 10:36	1
Antimony	**0.0029**		0.00040	0.000080	mg/L		12/08/14 12:17	12/09/14 10:36	1
Beryllium	ND		0.00040	0.00010	mg/L		12/08/14 12:17	12/09/14 10:36	1
Cadmium	**0.000081**	**J**	0.00040	0.000028	mg/L		12/08/14 12:17	12/09/14 10:36	1
Chromium	**0.0011**		0.00040	0.00027	mg/L		12/08/14 12:17	12/09/14 10:36	1
Copper	**0.0033**		0.0010	0.00011	mg/L		12/08/14 12:17	12/09/14 10:36	1
Lead	**0.00072**		0.00040	0.000034	mg/L		12/08/14 12:17	12/09/14 10:36	1
Nickel	**0.00077**	**J**	0.0030	0.00040	mg/L		12/08/14 12:17	12/09/14 10:36	1
Selenium	ND		0.0010	0.00071	mg/L		12/08/14 12:17	12/09/14 10:36	1
Silver	ND		0.00040	0.000030	mg/L		12/08/14 12:17	12/09/14 10:36	1
Thallium	ND		0.0010	0.00028	mg/L		12/08/14 12:17	12/09/14 10:36	1
Zinc	**0.13**		0.0040	0.0019	mg/L		12/08/14 12:17	12/09/14 10:36	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/09/14 10:57	12/09/14 13:30	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Client Sample ID: BD-OWS-02-20141203-W
Date Collected: 12/03/14 13:56
Date Received: 12/04/14 11:17

Lab Sample ID: 580-46558-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**62**		10	10	umhos/cm			12/05/14 15:00	1
Nitrate as N	**0.49**	**J**	0.90	0.20	mg/L			12/04/14 17:53	1
Alkalinity	ND		5.0	5.0	mg/L			12/16/14 09:26	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/16/14 09:26	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/16/14 09:26	1
Total Suspended Solids	ND		6.7	6.7	mg/L			12/09/14 13:45	1
pH	**6.44**	**HF**	0.0100	0.0100	SU			12/04/14 16:34	1
Total Organic Carbon	**1.7**		1.0	0.33	mg/L			12/04/14 16:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**1.9**		1.0	0.33	mg/L			12/04/14 16:44	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-177654/1-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177654

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,1-Trichloroethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.90	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1,2-Trichloroethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloroethene	ND		5.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,1-Dichloropropene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,3-Trichlorobenzene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2,4-Trimethylbenzene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dibromoethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichlorobenzene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichloroethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,2-Dichloropropane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3,5-Trimethylbenzene	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3-Dichlorobenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,3-Dichloropropane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2,2-Dichloropropane	ND		5.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Butanone	ND		10	3.0	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Chloroethyl vinyl ether	ND		5.0	1.4	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
2-Hexanone	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
4-Methyl-2-pentanone	ND		5.0	1.5	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acetone	ND		15	2.4	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acrolein	ND		30	8.2	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Acrylonitrile	ND		10	2.8	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Benzene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromobenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromochloromethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromodichloromethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromoform	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Bromomethane	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Carbon disulfide	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Carbon tetrachloride	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chlorobenzene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chlorodibromomethane	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloroethane	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloroform	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Chloromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Dibromomethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177654/1-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177654

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Ethylbenzene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Hexachloro-1,3-butadiene	ND		2.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Iodomethane	ND		15	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Methyl tert-butyl ether	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Methylene Chloride	ND		15	3.0	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Naphthalene	ND		5.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
N-Propylbenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
o-Xylene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
sec-Butylbenzene	ND		2.0	0.50	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Styrene	ND		2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
tert-Butylbenzene	0.293	J	2.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Tetrachloroethene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Toluene	ND		2.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,2-Dichloroethene	ND		1.0	0.40	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
trans-1,4-Dichloro-2-butene	ND		5.0	1.7	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Trichloroethene	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Trichlorofluoromethane	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Vinyl acetate	ND		5.0	0.60	ug/Kg		12/08/14 18:12	12/08/14 18:40	1
Vinyl chloride	ND		1.0	0.30	ug/Kg		12/08/14 18:12	12/08/14 18:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 136*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 132*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*	*12/08/14 18:12*	*12/08/14 18:40*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*12/08/14 18:12*	*12/08/14 18:40*	*1*

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	30.0	29.8		ug/Kg		99	72 - 123
1,1,1-Trichloroethane	30.0	37.3		ug/Kg		124	63 - 135
1,1,2,2-Tetrachloroethane	30.0	28.0		ug/Kg		93	73 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	35.4		ug/Kg		118	66 - 163
1,1,2-Trichloroethane	30.0	28.5		ug/Kg		95	77 - 124
1,1-Dichloroethane	30.0	29.6		ug/Kg		99	70 - 128
1,1-Dichloroethene	30.0	33.1		ug/Kg		110	70 - 133
1,1-Dichloropropene	30.0	31.0		ug/Kg		103	77 - 125
1,2,3-Trichlorobenzene	30.0	31.1		ug/Kg		104	61 - 130
1,2,3-Trichloropropane	30.0	29.5		ug/Kg		98	77 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	30.0	30.6		ug/Kg		102	61 - 130
1,2,4-Trimethylbenzene	30.0	30.6		ug/Kg		102	79 - 124
1,2-Dibromo-3-Chloropropane	30.0	28.3		ug/Kg		94	53 - 132
1,2-Dibromoethane	30.0	28.3		ug/Kg		94	69 - 126
1,2-Dichlorobenzene	30.0	28.9		ug/Kg		96	79 - 117
1,2-Dichloroethane	30.0	31.0		ug/Kg		103	71 - 128
1,2-Dichloropropane	30.0	28.8		ug/Kg		96	76 - 161
1,3,5-Trimethylbenzene	30.0	31.7		ug/Kg		106	80 - 125
1,3-Dichlorobenzene	30.0	28.7		ug/Kg		96	79 - 119
1,3-Dichloropropane	30.0	28.3		ug/Kg		94	77 - 123
1,4-Dichlorobenzene	30.0	28.4		ug/Kg		95	79 - 117
2,2-Dichloropropane	30.0	29.9		ug/Kg		100	56 - 144
2-Butanone	120	122		ug/Kg		101	30 - 160
2-Chloroethyl vinyl ether	30.0	26.6		ug/Kg		89	60 - 150
2-Chlorotoluene	30.0	30.0		ug/Kg		100	79 - 122
2-Hexanone	120	115		ug/Kg		96	45 - 145
4-Chlorotoluene	30.0	30.7		ug/Kg		102	80 - 122
4-Isopropyltoluene	30.0	32.0		ug/Kg		107	78 - 126
4-Methyl-2-pentanone	120	115		ug/Kg		96	45 - 145
Acetone	120	117		ug/Kg		97	20 - 160
Acrolein	178	156		ug/Kg		88	10 - 125
Acrylonitrile	300	277		ug/Kg		92	74 - 117
Benzene	30.0	28.8		ug/Kg		96	70 - 128
Bromobenzene	30.0	28.9		ug/Kg		96	80 - 120
Bromochloromethane	30.0	28.3		ug/Kg		94	78 - 123
Bromodichloromethane	30.0	31.6		ug/Kg		105	58 - 133
Bromoform	30.0	29.2		ug/Kg		97	50 - 124
Bromomethane	30.0	29.2		ug/Kg		97	57 - 148
Carbon disulfide	30.0	29.5		ug/Kg		98	45 - 160
Carbon tetrachloride	30.0	32.6		ug/Kg		109	59 - 145
Chlorobenzene	30.0	27.9		ug/Kg		93	75 - 120
Chlorodibromomethane	30.0	29.2		ug/Kg		97	42 - 129
Chloroethane	30.0	27.1		ug/Kg		90	48 - 167
Chloroform	30.0	30.3		ug/Kg		101	78 - 125
Chloromethane	30.0	33.2		ug/Kg		111	55 - 136
cis-1,2-Dichloroethene	30.0	32.9		ug/Kg		110	70 - 130
cis-1,3-Dichloropropene	30.0	29.4		ug/Kg		98	69 - 129
Dibromomethane	30.0	30.0		ug/Kg		100	78 - 126
Dichlorodifluoromethane	30.0	34.0		ug/Kg		113	38 - 150
Ethylbenzene	30.0	28.9		ug/Kg		96	78 - 126
Hexachloro-1,3-butadiene	30.0	33.5		ug/Kg		112	68 - 134
Iodomethane	30.0	34.0		ug/Kg		113	44 - 148
Isopropylbenzene	30.0	29.2		ug/Kg		97	79 - 127
Methyl tert-butyl ether	30.0	28.4		ug/Kg		95	65 - 125
Methylene Chloride	30.0	33.1		ug/Kg		110	57 - 146
m-Xylene & p-Xylene	30.0	29.4		ug/Kg		98	78 - 126
Naphthalene	30.0	30.0		ug/Kg		100	14 - 170
n-Butylbenzene	30.0	32.3		ug/Kg		108	78 - 128

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177654/2-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	30.0	31.0		ug/Kg		103	81 - 127
o-Xylene	30.0	28.7		ug/Kg		96	77 - 127
sec-Butylbenzene	30.0	31.8		ug/Kg		106	78 - 128
Styrene	30.0	28.7		ug/Kg		96	79 - 127
tert-Butylbenzene	30.0	30.1		ug/Kg		100	71 - 136
Tetrachloroethene	30.0	29.5		ug/Kg		98	56 - 155
Toluene	30.0	27.6		ug/Kg		92	75 - 126
trans-1,2-Dichloroethene	30.0	33.6		ug/Kg		112	76 - 131
trans-1,3-Dichloropropene	30.0	29.6		ug/Kg		99	72 - 129
trans-1,4-Dichloro-2-butene	30.0	32.9		ug/Kg		110	42 - 160
Trichloroethene	30.0	29.9		ug/Kg		100	83 - 124
Trichlorofluoromethane	30.0	36.0		ug/Kg		120	47 - 165
Vinyl acetate	60.5	58.7		ug/Kg		97	19 - 144
Vinyl chloride	30.0	31.7		ug/Kg		106	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 136*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*
Dibromofluoromethane (Surr)	*103*		*75 - 132*
Toluene-d8 (Surr)	*96*		*80 - 120*
Trifluorotoluene (Surr)	*98*		*65 - 140*

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	30.0	31.8		ug/Kg		106	72 - 123	6	20
1,1,1-Trichloroethane	30.0	39.1		ug/Kg		130	63 - 135	5	20
1,1,2,2-Tetrachloroethane	30.0	30.9		ug/Kg		103	73 - 125	10	22
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	38.8		ug/Kg		129	66 - 163	9	30
1,1,2-Trichloroethane	30.0	27.8		ug/Kg		93	77 - 124	3	18
1,1-Dichloroethane	30.0	30.3		ug/Kg		101	70 - 128	2	21
1,1-Dichloroethene	30.0	35.7		ug/Kg		119	70 - 133	7	23
1,1-Dichloropropene	30.0	30.1		ug/Kg		100	77 - 125	3	16
1,2,3-Trichlorobenzene	30.0	32.6		ug/Kg		109	61 - 130	5	23
1,2,3-Trichloropropane	30.0	30.3		ug/Kg		101	77 - 123	3	23
1,2,4-Trichlorobenzene	30.0	32.0		ug/Kg		107	61 - 130	4	22
1,2,4-Trimethylbenzene	30.0	30.6		ug/Kg		102	79 - 124	0	18
1,2-Dibromo-3-Chloropropane	30.0	30.2		ug/Kg		101	53 - 132	7	27
1,2-Dibromoethane	30.0	27.9		ug/Kg		93	69 - 126	1	21
1,2-Dichlorobenzene	30.0	29.6		ug/Kg		99	79 - 117	2	17
1,2-Dichloroethane	30.0	30.4		ug/Kg		101	71 - 128	2	18
1,2-Dichloropropane	30.0	29.4		ug/Kg		98	76 - 161	2	15
1,3,5-Trimethylbenzene	30.0	31.8		ug/Kg		106	80 - 125	1	18
1,3-Dichlorobenzene	30.0	28.8		ug/Kg		96	79 - 119	0	17
1,3-Dichloropropane	30.0	27.4		ug/Kg		91	77 - 123	3	19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	30.0	27.9		ug/Kg		93	79 - 117	2	18
2,2-Dichloropropane	30.0	34.1		ug/Kg		114	56 - 144	13	21
2-Butanone	120	124		ug/Kg		103	30 - 160	2	30
2-Chloroethyl vinyl ether	30.0	24.4		ug/Kg		81	60 - 150	8	30
2-Chlorotoluene	30.0	29.6		ug/Kg		99	79 - 122	1	18
2-Hexanone	120	119		ug/Kg		99	45 - 145	4	30
4-Chlorotoluene	30.0	29.8		ug/Kg		99	80 - 122	3	18
4-Isopropyltoluene	30.0	31.5		ug/Kg		105	78 - 126	1	18
4-Methyl-2-pentanone	120	126		ug/Kg		105	45 - 145	10	30
Acetone	120	127		ug/Kg		106	20 - 160	9	30
Acrolein	178	176		ug/Kg		99	10 - 125	12	30
Acrylonitrile	300	291		ug/Kg		97	74 - 117	5	30
Benzene	30.0	29.0		ug/Kg		97	70 - 128	1	19
Bromobenzene	30.0	28.3		ug/Kg		94	80 - 120	2	19
Bromochloromethane	30.0	29.8		ug/Kg		99	78 - 123	5	19
Bromodichloromethane	30.0	30.2		ug/Kg		101	58 - 133	5	19
Bromoform	30.0	28.3		ug/Kg		94	50 - 124	3	25
Bromomethane	30.0	34.8		ug/Kg		116	57 - 148	18	29
Carbon disulfide	30.0	32.4		ug/Kg		108	45 - 160	10	30
Carbon tetrachloride	30.0	34.4		ug/Kg		115	59 - 145	5	19
Chlorobenzene	30.0	27.9		ug/Kg		93	75 - 120	0	21
Chlorodibromomethane	30.0	29.1		ug/Kg		97	42 - 129	1	23
Chloroethane	30.0	31.3		ug/Kg		104	48 - 167	14	53
Chloroform	30.0	30.9		ug/Kg		103	78 - 125	2	17
Chloromethane	30.0	40.0		ug/Kg		133	55 - 136	19	26
cis-1,2-Dichloroethene	30.0	34.0		ug/Kg		113	70 - 130	3	19
cis-1,3-Dichloropropene	30.0	27.6		ug/Kg		92	69 - 129	6	19
Dibromomethane	30.0	28.9		ug/Kg		96	78 - 126	4	18
Dichlorodifluoromethane	30.0	40.9		ug/Kg		136	38 - 150	19	26
Ethylbenzene	30.0	30.5		ug/Kg		102	78 - 126	5	23
Hexachloro-1,3-butadiene	30.0	31.7		ug/Kg		106	68 - 134	5	21
Iodomethane	30.0	36.0		ug/Kg		120	44 - 148	6	30
Isopropylbenzene	30.0	31.0		ug/Kg		103	79 - 127	6	20
Methyl tert-butyl ether	30.0	30.8		ug/Kg		103	65 - 125	8	30
Methylene Chloride	30.0	36.1		ug/Kg		120	57 - 146	9	21
m-Xylene & p-Xylene	30.0	30.7		ug/Kg		102	78 - 126	5	23
Naphthalene	30.0	32.1		ug/Kg		107	14 - 170	7	50
n-Butylbenzene	30.0	32.3		ug/Kg		108	78 - 128	0	17
N-Propylbenzene	30.0	30.0		ug/Kg		100	81 - 127	3	20
o-Xylene	30.0	30.9		ug/Kg		103	77 - 127	7	22
sec-Butylbenzene	30.0	31.4		ug/Kg		105	78 - 128	1	17
Styrene	30.0	29.7		ug/Kg		99	79 - 127	3	21
tert-Butylbenzene	30.0	28.2		ug/Kg		94	71 - 136	6	27
Tetrachloroethene	30.0	29.1		ug/Kg		97	56 - 155	2	27
Toluene	30.0	28.0		ug/Kg		93	75 - 126	2	19
trans-1,2-Dichloroethene	30.0	35.5		ug/Kg		118	76 - 131	5	18
trans-1,3-Dichloropropene	30.0	27.7		ug/Kg		92	72 - 129	7	20
trans-1,4-Dichloro-2-butene	30.0	32.1		ug/Kg		107	42 - 160	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177654/3-A
Matrix: Solid
Analysis Batch: 177655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177654

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene			30.0	28.5		ug/Kg		95	83 - 124	5	17
Trichlorofluoromethane			30.0	40.7		ug/Kg		136	47 - 165	12	54
Vinyl acetate			60.5	60.8		ug/Kg		100	19 - 144	3	30
Vinyl chloride			30.0	39.2		ug/Kg		130	67 - 131	21	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*71 - 136*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 132*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*105*		*65 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-177445/1-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,2-Dichlorobenzene	ND		5.5	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,3-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1,4-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,2'-oxybis[1-chloropropane]	ND		25	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4,6-Trichlorophenol	ND		15	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dichlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dimethylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dinitrophenol	ND		100	20	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,4-Dinitrotoluene	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2,6-Dinitrotoluene	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Chloronaphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Chlorophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Methylnaphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Methylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Nitroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
2-Nitrophenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3,3'-Dichlorobenzidine	ND		20	3.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
3-Nitroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4,6-Dinitro-2-methylphenol	ND		100	10	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Bromophenyl phenyl ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chloro-3-methylphenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chloroaniline	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Chlorophenyl phenyl ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Nitroaniline	ND		10	2.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
4-Nitrophenol	ND		100	25	ug/Kg		12/05/14 09:52	12/17/14 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177445/1-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Acenaphthylene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Anthracene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[a]anthracene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[a]pyrene	ND		3.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[b]fluoranthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[g,h,i]perylene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzo[k]fluoranthene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzoic acid	ND		250	75	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Benzyl alcohol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-chloroethoxy)methane	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-chloroethyl)ether	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Bis(2-ethylhexyl) phthalate	ND		60	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Butyl benzyl phthalate	5.45	J	20	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Carbazole	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Chrysene	ND		2.5	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dibenz(a,h)anthracene	ND		4.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dibenzofuran	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Diethyl phthalate	ND		20	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Dimethyl phthalate	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Di-n-butyl phthalate	ND		50	5.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Di-n-octyl phthalate	ND		50	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Fluoranthene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Fluorene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorobenzene	ND		5.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Hexachloroethane	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Isophorone	ND		10	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Naphthalene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Nitrobenzene	ND		10	3.4	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodimethylamine	ND		100	25	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
N-Nitrosodiphenylamine	ND		5.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Pentachlorophenol	7.45	J	20	2.0	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Phenanthrene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Phenol	ND		10	1.5	ug/Kg		12/05/14 09:52	12/17/14 17:56	1
Pyrene	ND		2.0	0.50	ug/Kg		12/05/14 09:52	12/17/14 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*68*		*28 - 143*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
2-Fluorobiphenyl	*75*		*42 - 140*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
2-Fluorophenol	*72*		*36 - 145*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Nitrobenzene-d5	*75*		*38 - 141*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Phenol-d5	*74*		*38 - 149*	*12/05/14 09:52*	*12/17/14 17:56*	*1*
Terphenyl-d14	*92*		*42 - 151*	*12/05/14 09:52*	*12/17/14 17:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177445/2-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	87.9		ug/Kg		88	66 - 115
1,2-Dichlorobenzene	100	79.9		ug/Kg		80	64 - 112
1,3-Dichlorobenzene	100	74.7		ug/Kg		75	64 - 111
1,4-Dichlorobenzene	100	82.5		ug/Kg		83	65 - 110
1-Methylnaphthalene	100	88.4		ug/Kg		88	62 - 118
2,2'-oxybis[1-chloropropane]	100	61.0		ug/Kg		61	41 - 126
2,4,5-Trichlorophenol	100	91.4		ug/Kg		91	57 - 133
2,4,6-Trichlorophenol	100	87.1		ug/Kg		87	62 - 133
2,4-Dichlorophenol	100	88.6		ug/Kg		89	68 - 125
2,4-Dimethylphenol	100	80.1		ug/Kg		80	54 - 139
2,4-Dinitrophenol	200	102		ug/Kg		51	20 - 141
2,4-Dinitrotoluene	100	93.1		ug/Kg		93	68 - 121
2,6-Dinitrotoluene	100	90.1		ug/Kg		90	66 - 123
2-Chloronaphthalene	100	86.5		ug/Kg		86	68 - 112
2-Chlorophenol	100	80.3		ug/Kg		80	68 - 117
2-Methylnaphthalene	100	82.3		ug/Kg		82	64 - 119
2-Methylphenol	100	84.5		ug/Kg		85	71 - 116
2-Nitroaniline	100	95.9		ug/Kg		96	64 - 112
2-Nitrophenol	100	81.7		ug/Kg		82	67 - 127
3 & 4 Methylphenol	100	86.8		ug/Kg		87	70 - 116
3,3'-Dichlorobenzidine	200	138		ug/Kg		69	20 - 103
3-Nitroaniline	100	60.9		ug/Kg		61	27 - 103
4,6-Dinitro-2-methylphenol	200	149		ug/Kg		75	48 - 130
4-Bromophenyl phenyl ether	100	91.1		ug/Kg		91	68 - 122
4-Chloro-3-methylphenol	100	92.0		ug/Kg		92	69 - 121
4-Chloroaniline	100	32.2		ug/Kg		32	20 - 103
4-Chlorophenyl phenyl ether	100	88.2		ug/Kg		88	75 - 108
4-Nitroaniline	100	79.9		ug/Kg		80	58 - 108
4-Nitrophenol	200	170		ug/Kg		85	20 - 165
Acenaphthene	100	88.1		ug/Kg		88	68 - 116
Acenaphthylene	100	76.6		ug/Kg		77	68 - 120
Anthracene	100	92.6		ug/Kg		93	73 - 116
Benzo[a]anthracene	100	86.6		ug/Kg		87	76 - 119
Benzo[a]pyrene	100	95.6		ug/Kg		96	72 - 117
Benzo[b]fluoranthene	100	92.6		ug/Kg		93	63 - 132
Benzo[g,h,i]perylene	100	94.8		ug/Kg		95	55 - 139
Benzo[k]fluoranthene	100	93.1		ug/Kg		93	63 - 119
Benzoic acid	200	124	J	ug/Kg		62	29 - 158
Benzyl alcohol	100	80.3		ug/Kg		80	55 - 123
Bis(2-chloroethoxy)methane	100	82.0		ug/Kg		82	69 - 107
Bis(2-chloroethyl)ether	100	76.1		ug/Kg		76	62 - 110
Bis(2-ethylhexyl) phthalate	100	102		ug/Kg		102	62 - 144
Butyl benzyl phthalate	100	97.8		ug/Kg		98	69 - 142
Carbazole	100	97.4		ug/Kg		97	76 - 135
Chrysene	100	93.8		ug/Kg		94	75 - 114
Dibenz(a,h)anthracene	100	95.8		ug/Kg		96	56 - 134
Dibenzofuran	100	84.5		ug/Kg		85	72 - 109
Diethyl phthalate	100	90.7		ug/Kg		91	73 - 116

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177445/2-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177445

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dimethyl phthalate			100	87.8		ug/Kg		88	78 - 117		
Di-n-butyl phthalate			100	98.2		ug/Kg		98	66 - 140		
Di-n-octyl phthalate			100	102		ug/Kg		102	65 - 141		
Fluoranthene			100	89.3		ug/Kg		89	73 - 125		
Fluorene			100	87.2		ug/Kg		87	70 - 121		
Hexachlorobenzene			100	92.8		ug/Kg		93	66 - 117		
Hexachlorobutadiene			100	83.6		ug/Kg		84	65 - 116		
Hexachlorocyclopentadiene			100	70.0		ug/Kg		70	46 - 131		
Hexachloroethane			100	74.9		ug/Kg		75	62 - 120		
Indeno[1,2,3-cd]pyrene			100	91.1		ug/Kg		91	56 - 127		
Isophorone			100	86.2		ug/Kg		86	67 - 119		
Naphthalene			100	81.2		ug/Kg		81	62 - 112		
Nitrobenzene			100	83.3		ug/Kg		83	64 - 118		
N-Nitrosodimethylamine			100	88.0	J	ug/Kg		88	38 - 133		
N-Nitrosodi-n-propylamine			100	82.1		ug/Kg		82	62 - 116		
N-Nitrosodiphenylamine			100	96.8		ug/Kg		97	73 - 115		
Pentachlorophenol			200	142		ug/Kg		71	45 - 117		
Phenanthrene			100	94.3		ug/Kg		94	73 - 106		
Phenol			100	82.6		ug/Kg		83	63 - 111		
Pyrene			100	92.8		ug/Kg		93	70 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*82*		*28 - 143*
2-Fluorobiphenyl	*73*		*42 - 140*
2-Fluorophenol	*74*		*36 - 145*
Nitrobenzene-d5	*72*		*38 - 141*
Phenol-d5	*78*		*38 - 149*
Terphenyl-d14	*90*		*42 - 151*

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			100	86.6		ug/Kg		87	66 - 115	1	28
1,2-Dichlorobenzene			100	82.2		ug/Kg		82	64 - 112	3	30
1,3-Dichlorobenzene			100	77.8		ug/Kg		78	64 - 111	4	30
1,4-Dichlorobenzene			100	81.2		ug/Kg		81	65 - 110	2	30
1-Methylnaphthalene			100	86.1		ug/Kg		86	62 - 118	3	30
2,2'-oxybis[1-chloropropane]			100	63.6		ug/Kg		64	41 - 126	4	57
2,4,5-Trichlorophenol			100	89.8		ug/Kg		90	57 - 133	2	30
2,4,6-Trichlorophenol			100	85.8		ug/Kg		86	62 - 133	1	30
2,4-Dichlorophenol			100	85.6		ug/Kg		86	68 - 125	3	30
2,4-Dimethylphenol			100	81.7		ug/Kg		82	54 - 139	2	30
2,4-Dinitrophenol			200	96.4	J	ug/Kg		48	20 - 141	5	36
2,4-Dinitrotoluene			100	89.2		ug/Kg		89	68 - 121	4	30
2,6-Dinitrotoluene			100	91.0		ug/Kg		91	66 - 123	1	30
2-Chloronaphthalene			100	89.1		ug/Kg		89	68 - 112	3	25

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chlorophenol	100	85.5		ug/Kg		86	68 - 117	6	27
2-Methylnaphthalene	100	85.2		ug/Kg		85	64 - 119	3	27
2-Methylphenol	100	85.0		ug/Kg		85	71 - 116	1	25
2-Nitroaniline	100	91.2		ug/Kg		91	64 - 112	5	22
2-Nitrophenol	100	85.4		ug/Kg		85	67 - 127	4	30
3 & 4 Methylphenol	100	92.1		ug/Kg		92	70 - 116	6	27
3,3'-Dichlorobenzidine	200	142		ug/Kg		71	20 - 103	2	60
3-Nitroaniline	100	66.4		ug/Kg		66	27 - 103	9	33
4,6-Dinitro-2-methylphenol	200	139		ug/Kg		70	48 - 130	7	22
4-Bromophenyl phenyl ether	100	86.7		ug/Kg		87	68 - 122	5	30
4-Chloro-3-methylphenol	100	85.9		ug/Kg		86	69 - 121	7	27
4-Chloroaniline	100	42.3		ug/Kg		42	20 - 103	27	60
4-Chlorophenyl phenyl ether	100	88.5		ug/Kg		89	75 - 108	0	30
4-Nitroaniline	100	83.9		ug/Kg		84	58 - 108	5	32
4-Nitrophenol	200	175		ug/Kg		88	20 - 165	3	30
Acenaphthene	100	89.7		ug/Kg		90	68 - 116	2	27
Acenaphthylene	100	78.9		ug/Kg		79	68 - 120	3	28
Anthracene	100	89.9		ug/Kg		90	73 - 116	3	27
Benzo[a]anthracene	100	83.0		ug/Kg		83	76 - 119	4	27
Benzo[a]pyrene	100	93.4		ug/Kg		93	72 - 117	2	30
Benzo[b]fluoranthene	100	89.5		ug/Kg		90	63 - 132	3	30
Benzo[g,h,i]perylene	100	93.0		ug/Kg		93	55 - 139	2	28
Benzo[k]fluoranthene	100	91.9		ug/Kg		92	63 - 119	1	30
Benzoic acid	200	118	J	ug/Kg		59	29 - 158	5	28
Benzyl alcohol	100	88.4		ug/Kg		88	55 - 123	10	60
Bis(2-chloroethoxy)methane	100	84.3		ug/Kg		84	69 - 107	3	30
Bis(2-chloroethyl)ether	100	81.2		ug/Kg		81	62 - 110	6	22
Bis(2-ethylhexyl) phthalate	100	94.6		ug/Kg		95	62 - 144	7	30
Butyl benzyl phthalate	100	91.3		ug/Kg		91	69 - 142	7	30
Carbazole	100	94.9		ug/Kg		95	76 - 135	3	30
Chrysene	100	89.6		ug/Kg		90	75 - 114	5	26
Dibenz(a,h)anthracene	100	95.3		ug/Kg		95	56 - 134	0	30
Dibenzofuran	100	85.0		ug/Kg		85	72 - 109	1	30
Diethyl phthalate	100	83.6		ug/Kg		84	73 - 116	8	26
Dimethyl phthalate	100	87.9		ug/Kg		88	78 - 117	0	30
Di-n-butyl phthalate	100	96.5		ug/Kg		96	66 - 140	2	30
Di-n-octyl phthalate	100	101		ug/Kg		101	65 - 141	1	30
Fluoranthene	100	87.0		ug/Kg		87	73 - 125	3	30
Fluorene	100	89.1		ug/Kg		89	70 - 121	2	30
Hexachlorobenzene	100	90.0		ug/Kg		90	66 - 117	3	30
Hexachlorobutadiene	100	86.1		ug/Kg		86	65 - 116	3	30
Hexachlorocyclopentadiene	100	72.2		ug/Kg		72	46 - 131	3	29
Hexachloroethane	100	78.5		ug/Kg		79	62 - 120	5	30
Indeno[1,2,3-cd]pyrene	100	91.1		ug/Kg		91	56 - 127	0	29
Isophorone	100	84.7		ug/Kg		85	67 - 119	2	30
Naphthalene	100	82.6		ug/Kg		83	62 - 112	2	26
Nitrobenzene	100	85.0		ug/Kg		85	64 - 118	2	30
N-Nitrosodimethylamine	100	86.9	J	ug/Kg		87	38 - 133	1	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177445/3-A
Matrix: Solid
Analysis Batch: 178426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177445

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine			100	90.2		ug/Kg		90	62 - 116	9	28
N-Nitrosodiphenylamine			100	91.5		ug/Kg		91	73 - 115	6	30
Pentachlorophenol			200	143		ug/Kg		71	45 - 117	0	23
Phenanthrene			100	90.6		ug/Kg		91	73 - 106	4	28
Phenol			100	81.0		ug/Kg		81	63 - 111	2	26
Pyrene			100	88.6		ug/Kg		89	70 - 120	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*81*		*28 - 143*
2-Fluorobiphenyl	*75*		*42 - 140*
2-Fluorophenol	*75*		*36 - 145*
Nitrobenzene-d5	*73*		*38 - 141*
Phenol-d5	*77*		*38 - 149*
Terphenyl-d14	*87*		*42 - 151*

Lab Sample ID: MB 580-177522/1-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177522

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4-Dinitrophenol	ND	^	5.0	1.0	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,4-Dinitrotoluene	ND	^	0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,6-Dinitrotoluene	ND	^	0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
2-Nitrophenol	ND	^	0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/06/14 09:54	12/10/14 12:34	1
4,6-Dinitro-2-methylphenol	ND	^	4.0	1.0	ug/L		12/06/14 09:54	12/10/14 12:34	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177522/1-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177522

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	ND		3.0	1.0	ug/L		12/06/14 09:54	12/10/14 12:34	1
Acenaphthene	ND		0.10	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Anthracene	ND		0.040	0.010	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzoic acid	ND	^	3.0	0.60	ug/L		12/06/14 09:54	12/10/14 12:34	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Bis(2-ethylhexyl) phthalate	4.28		3.0	1.2	ug/L		12/06/14 09:54	12/10/14 12:34	1
Butyl benzyl phthalate	0.226	J	0.60	0.20	ug/L		12/06/14 09:54	12/10/14 12:34	1
Carbazole	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Chrysene	ND		0.040	0.013	ug/L		12/06/14 09:54	12/10/14 12:34	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Diethyl phthalate	0.102	J	0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Di-n-butyl phthalate	1.46		0.40	0.13	ug/L		12/06/14 09:54	12/10/14 12:34	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/06/14 09:54	12/10/14 12:34	1
Fluoranthene	ND		0.050	0.013	ug/L		12/06/14 09:54	12/10/14 12:34	1
Fluorene	ND		0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Hexachlorocyclopentadiene	ND	^	2.0	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Indeno[1,2,3-cd]pyrene	ND	^	0.060	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Isophorone	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Naphthalene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		12/06/14 09:54	12/10/14 12:34	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Phenanthrene	ND		0.080	0.020	ug/L		12/06/14 09:54	12/10/14 12:34	1
Phenol	ND		0.60	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1
Pyrene	ND		0.060	0.013	ug/L		12/06/14 09:54	12/10/14 12:34	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		12/06/14 09:54	12/10/14 12:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*107*		*44 - 125*	*12/06/14 09:54*	*12/10/14 12:34*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/06/14 09:54*	*12/10/14 12:34*	*1*
2-Fluorophenol	*63*		*30 - 134*	*12/06/14 09:54*	*12/10/14 12:34*	*1*
Nitrobenzene-d5	*73*		*59 - 120*	*12/06/14 09:54*	*12/10/14 12:34*	*1*
Phenol-d5	*75*		*52 - 120*	*12/06/14 09:54*	*12/10/14 12:34*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-177522/1-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177522

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	109		64 - 150	12/06/14 09:54	12/10/14 12:34	1

Lab Sample ID: LCS 580-177522/2-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177522

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.50		ug/L		75	40 - 125
1,2-Dichlorobenzene	2.00	1.47		ug/L		73	44 - 125
1,3-Dichlorobenzene	2.00	1.28		ug/L		64	40 - 125
1,4-Dichlorobenzene	2.00	1.34		ug/L		67	40 - 125
1-Methylnaphthalene	2.00	1.60		ug/L		80	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.27		ug/L		63	44 - 130
2,4,5-Trichlorophenol	2.00	1.95		ug/L		98	66 - 130
2,4,6-Trichlorophenol	2.00	1.86		ug/L		93	55 - 140
2,4-Dichlorophenol	2.00	1.86		ug/L		93	50 - 140
2,4-Dimethylphenol	2.00	1.53	J	ug/L		77	30 - 135
2,4-Dinitrophenol	4.00	5.07	^	ug/L		127	24 - 146
2,4-Dinitrotoluene	2.00	2.51	^	ug/L		126	73 - 126
2,6-Dinitrotoluene	2.00	2.22	^	ug/L		111	67 - 134
2-Chloronaphthalene	2.00	1.58		ug/L		79	55 - 125
2-Chlorophenol	2.00	1.70		ug/L		85	57 - 125
2-Methylnaphthalene	2.00	1.56		ug/L		78	56 - 125
2-Methylphenol	2.00	1.52		ug/L		76	60 - 130
2-Nitroaniline	2.00	2.10		ug/L		105	52 - 140
2-Nitrophenol	2.00	2.06	^	ug/L		103	55 - 140
3 & 4 Methylphenol	2.00	1.59		ug/L		79	60 - 130
3,3'-Dichlorobenzidine	4.00	1.27	J	ug/L		32	20 - 175
3-Nitroaniline	2.00	0.997		ug/L		50	22 - 124
4,6-Dinitro-2-methylphenol	4.00	5.33	^	ug/L		133	50 - 136
4-Bromophenyl phenyl ether	2.00	2.08		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	1.75		ug/L		88	65 - 145
4-Chloroaniline	2.00	ND	*	ug/L		1	20 - 150
4-Chlorophenyl phenyl ether	2.00	1.96		ug/L		98	59 - 125
4-Nitroaniline	2.00	1.85		ug/L		93	49 - 125
4-Nitrophenol	4.00	4.54		ug/L		113	35 - 153
Acenaphthene	2.00	1.68		ug/L		84	63 - 125
Acenaphthylene	2.00	1.48		ug/L		74	62 - 125
Anthracene	2.00	1.90		ug/L		95	50 - 125
Benzo[a]anthracene	2.00	1.96		ug/L		98	65 - 125
Benzo[a]pyrene	2.00	1.99		ug/L		99	45 - 125
Benzo[b]fluoranthene	2.00	2.34		ug/L		117	70 - 129
Benzo[g,h,i]perylene	2.00	2.33		ug/L		117	65 - 153
Benzo[k]fluoranthene	2.00	2.11		ug/L		105	70 - 123
Benzoic acid	4.00	3.54	^	ug/L		89	20 - 144
Benzyl alcohol	2.00	1.41		ug/L		70	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.49		ug/L		74	59 - 125
Bis(2-chloroethyl)ether	2.00	1.50		ug/L		75	55 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-177522/2-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177522

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	2.00	5.06	*	ug/L		253	70 - 185
Butyl benzyl phthalate	2.00	2.39		ug/L		119	60 - 167
Carbazole	2.00	2.33		ug/L		116	75 - 142
Chrysene	2.00	2.00		ug/L		100	70 - 125
Dibenz(a,h)anthracene	2.00	2.15		ug/L		108	69 - 154
Dibenzofuran	2.00	1.83		ug/L		92	60 - 125
Diethyl phthalate	2.00	2.12		ug/L		106	60 - 150
Dimethyl phthalate	2.00	1.99		ug/L		100	65 - 155
Di-n-butyl phthalate	2.00	3.55	*	ug/L		178	55 - 167
Di-n-octyl phthalate	2.00	2.03		ug/L		102	55 - 150
Fluoranthene	2.00	2.24		ug/L		112	70 - 145
Fluorene	2.00	1.88		ug/L		94	69 - 125
Hexachlorobenzene	2.00	2.26		ug/L		113	61 - 125
Hexachlorobutadiene	2.00	1.39		ug/L		69	25 - 125
Hexachlorocyclopentadiene	2.00	1.64	J ^	ug/L		82	20 - 125
Hexachloroethane	2.00	1.27		ug/L		63	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.53	^	ug/L		126	70 - 136
Isophorone	2.00	1.54		ug/L		77	64 - 125
Naphthalene	2.00	1.51		ug/L		75	56 - 125
Nitrobenzene	2.00	1.67		ug/L		84	62 - 125
N-Nitrosodimethylamine	2.00	1.64	J	ug/L		82	33 - 143
N-Nitrosodi-n-propylamine	2.00	1.41		ug/L		70	60 - 120
N-Nitrosodiphenylamine	2.00	1.87		ug/L		94	40 - 135
Pentachlorophenol	4.00	2.36		ug/L		59	20 - 145
Phenanthrene	2.00	2.01		ug/L		101	70 - 125
Phenol	2.00	1.54		ug/L		77	53 - 130
Pyrene	2.00	2.20		ug/L		110	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	2.29		ug/L		115	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*114*		*44 - 125*
2-Fluorobiphenyl	*71*		*50 - 120*
2-Fluorophenol	*63*		*30 - 134*
Nitrobenzene-d5	*69*		*59 - 120*
Phenol-d5	*69*		*52 - 120*
Terphenyl-d14	*106*		*64 - 150*

Lab Sample ID: LCSD 580-177522/3-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177522

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.61		ug/L		80	40 - 125	7	20
1,2-Dichlorobenzene	2.00	1.59		ug/L		79	44 - 125	8	20
1,3-Dichlorobenzene	2.00	1.44		ug/L		72	40 - 125	11	20
1,4-Dichlorobenzene	2.00	1.45		ug/L		72	40 - 125	8	20
1-Methylnaphthalene	2.00	1.72		ug/L		86	54 - 125	7	20
2,2'-oxybis[1-chloropropane]	2.00	1.35		ug/L		67	44 - 130	6	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177522/3-A
Matrix: Water
Analysis Batch: 177847

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177522

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	2.00	1.94		ug/L		97	66 - 130	1	20
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 140	5	20
2,4-Dichlorophenol	2.00	1.96		ug/L		98	50 - 140	5	20
2,4-Dimethylphenol	2.00	1.49	J	ug/L		75	30 - 135	3	20
2,4-Dinitrophenol	4.00	5.19	^	ug/L		130	24 - 146	2	20
2,4-Dinitrotoluene	2.00	2.39	^	ug/L		120	73 - 126	5	20
2,6-Dinitrotoluene	2.00	2.27	^	ug/L		113	67 - 134	2	20
2-Chloronaphthalene	2.00	1.66		ug/L		83	55 - 125	5	20
2-Chlorophenol	2.00	1.80		ug/L		90	57 - 125	5	20
2-Methylnaphthalene	2.00	1.66		ug/L		83	56 - 125	6	20
2-Methylphenol	2.00	1.68		ug/L		84	60 - 130	10	20
2-Nitroaniline	2.00	2.24		ug/L		112	52 - 140	7	20
2-Nitrophenol	2.00	2.26	^	ug/L		113	55 - 140	9	20
3 & 4 Methylphenol	2.00	1.66		ug/L		83	60 - 130	5	20
3,3'-Dichlorobenzidine	4.00	2.50	*	ug/L		62	20 - 175	65	20
3-Nitroaniline	2.00	1.36	*	ug/L		68	22 - 124	31	20
4,6-Dinitro-2-methylphenol	4.00	5.38	^	ug/L		135	50 - 136	1	20
4-Bromophenyl phenyl ether	2.00	2.08		ug/L		104	62 - 132	0	20
4-Chloro-3-methylphenol	2.00	1.77		ug/L		89	65 - 145	1	20
4-Chloroaniline	2.00	0.440	*	ug/L		22	20 - 150	175	20
4-Chlorophenyl phenyl ether	2.00	1.95		ug/L		97	59 - 125	1	20
4-Nitroaniline	2.00	1.78		ug/L		89	49 - 125	4	20
4-Nitrophenol	4.00	4.09		ug/L		102	35 - 153	10	20
Acenaphthene	2.00	1.74		ug/L		87	63 - 125	4	20
Acenaphthylene	2.00	1.60		ug/L		80	62 - 125	7	20
Anthracene	2.00	1.80		ug/L		90	50 - 125	5	20
Benzo[a]anthracene	2.00	1.92		ug/L		96	65 - 125	3	20
Benzo[a]pyrene	2.00	1.83		ug/L		92	45 - 125	8	20
Benzo[b]fluoranthene	2.00	2.13		ug/L		106	70 - 129	10	20
Benzo[g,h,i]perylene	2.00	2.20		ug/L		110	65 - 153	6	20
Benzo[k]fluoranthene	2.00	2.01		ug/L		101	70 - 123	4	20
Benzoic acid	4.00	3.83	^	ug/L		96	20 - 144	8	20
Benzyl alcohol	2.00	1.45		ug/L		73	41 - 144	3	20
Bis(2-chloroethoxy)methane	2.00	1.53		ug/L		76	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.64		ug/L		82	55 - 125	9	20
Bis(2-ethylhexyl) phthalate	2.00	2.34	J *	ug/L		117	70 - 185	74	20
Butyl benzyl phthalate	2.00	2.29		ug/L		115	60 - 167	4	20
Carbazole	2.00	2.18		ug/L		109	75 - 142	7	20
Chrysene	2.00	1.92		ug/L		96	70 - 125	4	20
Dibenz(a,h)anthracene	2.00	2.12		ug/L		106	69 - 154	2	20
Dibenzofuran	2.00	1.86		ug/L		93	60 - 125	1	20
Diethyl phthalate	2.00	2.05		ug/L		103	60 - 150	3	20
Dimethyl phthalate	2.00	1.95		ug/L		98	65 - 155	2	20
Di-n-butyl phthalate	2.00	2.96		ug/L		148	55 - 167	18	20
Di-n-octyl phthalate	2.00	1.87		ug/L		94	55 - 150	8	20
Fluoranthene	2.00	2.12		ug/L		106	70 - 145	6	20
Fluorene	2.00	1.85		ug/L		93	69 - 125	1	20
Hexachlorobenzene	2.00	2.15		ug/L		108	61 - 125	5	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-177522/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177847 — **Prep Batch: 177522**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobutadiene			2.00	1.44		ug/L		72	25 - 125	3	20
Hexachlorocyclopentadiene			2.00	1.67	J ^	ug/L		83	20 - 125	2	20
Hexachloroethane			2.00	1.41		ug/L		70	30 - 125	10	20
Indeno[1,2,3-cd]pyrene			2.00	2.31	^	ug/L		116	70 - 136	9	20
Isophorone			2.00	1.65		ug/L		82	64 - 125	7	20
Naphthalene			2.00	1.62		ug/L		81	56 - 125	7	20
Nitrobenzene			2.00	1.69		ug/L		84	62 - 125	1	20
N-Nitrosodimethylamine			2.00	1.81	J	ug/L		90	33 - 143	10	20
N-Nitrosodi-n-propylamine			2.00	1.47		ug/L		74	60 - 120	4	20
N-Nitrosodiphenylamine			2.00	1.81		ug/L		91	40 - 135	3	20
Pentachlorophenol			4.00	1.84	*	ug/L		46	20 - 145	25	20
Phenanthrene			2.00	1.93		ug/L		96	70 - 125	4	20
Phenol			2.00	1.63		ug/L		82	53 - 130	6	20
Pyrene			2.00	2.15		ug/L		107	70 - 133	3	20
2,3,4,6-Tetrachlorophenol			2.00	2.19		ug/L		109	60 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*117*		*44 - 125*
2-Fluorobiphenyl	*78*		*50 - 120*
2-Fluorophenol	*69*		*30 - 134*
Nitrobenzene-d5	*80*		*59 - 120*
Phenol-d5	*77*		*52 - 120*
Terphenyl-d14	*108*		*64 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-177438/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.805	J	4.0	0.50	mg/Kg		12/05/14 09:38	12/05/14 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*12/05/14 09:38*	*12/05/14 13:51*	*1*

Lab Sample ID: LCS 580-177438/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			40.0	31.5		mg/Kg		79	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-177438/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177469 — **Prep Batch: 177438**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			40.0	32.1		mg/Kg		80	68 - 120	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-177449/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177851 — **Prep Batch: 177449**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.010	0.0032	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1221	ND		0.011	0.0080	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1232	ND		0.011	0.0070	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1242	ND		0.010	0.0021	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1248	ND		0.010	0.0030	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1254	ND		0.010	0.0021	mg/Kg		12/05/14 10:17	12/10/14 17:48	1
Arochlor 1260	ND		0.010	0.0030	mg/Kg		12/05/14 10:17	12/10/14 17:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*45 - 135*	*12/05/14 10:17*	*12/10/14 17:48*	*1*
DCB Decachlorobiphenyl	*88*		*50 - 140*	*12/05/14 10:17*	*12/10/14 17:48*	*1*

Lab Sample ID: LCS 580-177449/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177851 — **Prep Batch: 177449**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016			0.100	0.0967		mg/Kg		97	40 - 140
Arochlor 1260			0.100	0.0929		mg/Kg		93	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*45 - 135*
DCB Decachlorobiphenyl	*92*		*50 - 140*

Lab Sample ID: LCSD 580-177449/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177851 — **Prep Batch: 177449**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arochlor 1016			0.100	0.104		mg/Kg		104	40 - 140	7	20
Arochlor 1260			0.100	0.0924		mg/Kg		92	60 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*		*45 - 135*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 580-177449/3-A
Matrix: Solid
Analysis Batch: 177851

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177449

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	82		50 - 140

Lab Sample ID: 580-46558-1 MS
Matrix: Solid
Analysis Batch: 178046

Client Sample ID: BD-MH-10.9-20141203-S
Prep Type: Total/NA
Prep Batch: 177449

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016	ND		0.291	0.448	F1	mg/Kg	☼	154	40 - 140
Arochlor 1260	6.5		0.291	6.54	4	mg/Kg	☼	18	60 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	89		45 - 135
DCB Decachlorobiphenyl	114		50 - 140

Lab Sample ID: 580-46558-1 MSD
Matrix: Solid
Analysis Batch: 178046

Client Sample ID: BD-MH-10.9-20141203-S
Prep Type: Total/NA
Prep Batch: 177449

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arochlor 1016	ND		0.283	0.494	F1	mg/Kg	☼	175	40 - 140	10	20
Arochlor 1260	6.5		0.283	7.82	4	mg/Kg	☼	471	60 - 130	18	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	97		45 - 135
DCB Decachlorobiphenyl	117		50 - 140

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-177510/1-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		25	5.7	mg/Kg		12/08/14 10:00	12/09/14 13:00	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		12/08/14 10:00	12/09/14 13:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	108		50 - 150	12/08/14 10:00	12/09/14 13:00	1

Lab Sample ID: LCS 580-177510/2-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	500	473		mg/Kg		95	70 - 125
Motor Oil (>C24-C36)	502	472		mg/Kg		94	64 - 127

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-177510/2-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177510

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	88		50 - 150

Lab Sample ID: LCSD 580-177510/3-A
Matrix: Solid
Analysis Batch: 177678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177510

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			500	499		mg/Kg		100	70 - 125	5	16
Motor Oil (>C24-C36)			502	497		mg/Kg		99	64 - 127	5	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	96		50 - 150

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-177612/20-A
Matrix: Water
Analysis Batch: 177734

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		12/08/14 12:18	12/09/14 09:28	1
Antimony	ND		0.00040	0.000080	mg/L		12/08/14 12:18	12/09/14 09:28	1
Beryllium	ND		0.00040	0.00010	mg/L		12/08/14 12:18	12/09/14 09:28	1
Cadmium	ND		0.00040	0.000028	mg/L		12/08/14 12:18	12/09/14 09:28	1
Chromium	ND		0.00040	0.00027	mg/L		12/08/14 12:18	12/09/14 09:28	1
Copper	ND		0.0010	0.00011	mg/L		12/08/14 12:18	12/09/14 09:28	1
Lead	ND		0.00040	0.000034	mg/L		12/08/14 12:18	12/09/14 09:28	1
Nickel	ND		0.0030	0.00040	mg/L		12/08/14 12:18	12/09/14 09:28	1
Selenium	ND		0.0010	0.00071	mg/L		12/08/14 12:18	12/09/14 09:28	1
Silver	ND		0.00040	0.000030	mg/L		12/08/14 12:18	12/09/14 09:28	1
Thallium	ND		0.0010	0.00028	mg/L		12/08/14 12:18	12/09/14 09:28	1
Zinc	ND		0.0040	0.0019	mg/L		12/08/14 12:18	12/09/14 09:28	1

Lab Sample ID: LCS 580-177612/21-A
Matrix: Water
Analysis Batch: 177734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177612

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			0.100	0.101		mg/L		101	85 - 115
Antimony			0.100	0.106		mg/L		106	85 - 115
Beryllium			0.100	0.100		mg/L		100	85 - 115
Cadmium			0.100	0.104		mg/L		104	85 - 115
Chromium			0.100	0.104		mg/L		104	85 - 115
Copper			0.100	0.101		mg/L		101	85 - 115
Lead			0.100	0.104		mg/L		104	85 - 115
Nickel			0.100	0.0992		mg/L		99	85 - 115
Selenium			0.100	0.104		mg/L		104	85 - 115
Silver			0.100	0.104		mg/L		104	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-177612/21-A
Matrix: Water
Analysis Batch: 177734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.100	0.104		mg/L		104	85 - 115
Zinc	0.100	0.0998		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-177612/22-A
Matrix: Water
Analysis Batch: 177734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.100		mg/L		100	85 - 115	1	20
Antimony	0.100	0.104		mg/L		104	85 - 115	1	20
Beryllium	0.100	0.101		mg/L		101	85 - 115	0	20
Cadmium	0.100	0.103		mg/L		103	85 - 115	1	20
Chromium	0.100	0.102		mg/L		102	85 - 115	2	20
Copper	0.100	0.0988		mg/L		99	85 - 115	2	20
Lead	0.100	0.103		mg/L		103	85 - 115	1	20
Nickel	0.100	0.0982		mg/L		98	85 - 115	1	20
Selenium	0.100	0.103		mg/L		103	85 - 115	1	20
Silver	0.100	0.103		mg/L		103	85 - 115	1	20
Thallium	0.100	0.104		mg/L		104	85 - 115	0	20
Zinc	0.100	0.0993		mg/L		99	85 - 115	0	20

Lab Sample ID: 580-46558-2 MS
Matrix: Water
Analysis Batch: 177734

Client Sample ID: BD-OWS-02-20141203-W
Prep Type: Total/NA
Prep Batch: 177612

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.100	0.100		mg/L		100	70 - 130
Antimony	0.0029		0.100	0.109		mg/L		106	70 - 130
Beryllium	ND		0.100	0.0988		mg/L		99	70 - 130
Cadmium	0.000081	J	0.100	0.104		mg/L		104	70 - 130
Chromium	0.0011		0.100	0.102		mg/L		101	70 - 130
Copper	0.0033		0.100	0.104		mg/L		101	70 - 130
Lead	0.00072		0.100	0.105		mg/L		105	70 - 130
Nickel	0.00077	J	0.100	0.0983		mg/L		98	70 - 130
Selenium	ND		0.100	0.102		mg/L		102	70 - 130
Silver	ND		0.100	0.104		mg/L		104	70 - 130
Thallium	ND		0.100	0.106		mg/L		106	70 - 130
Zinc	0.13		0.100	0.229		mg/L		95	70 - 130

Lab Sample ID: 580-46558-2 MSD
Matrix: Water
Analysis Batch: 177734

Client Sample ID: BD-OWS-02-20141203-W
Prep Type: Total/NA
Prep Batch: 177612

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.100	0.0972		mg/L		97	70 - 130	3	20
Antimony	0.0029		0.100	0.105		mg/L		102	70 - 130	3	20
Beryllium	ND		0.100	0.0994		mg/L		99	70 - 130	1	20
Cadmium	0.000081	J	0.100	0.0997		mg/L		100	70 - 130	4	20
Chromium	0.0011		0.100	0.101		mg/L		100	70 - 130	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-46558-2 MSD — **Client Sample ID: BD-OWS-02-20141203-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177734 — **Prep Batch: 177612**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	0.0033		0.100	0.101		mg/L		97	70 - 130	3	20
Lead	0.00072		0.100	0.101		mg/L		101	70 - 130	4	20
Nickel	0.00077	J	0.100	0.0954		mg/L		95	70 - 130	3	20
Selenium	ND		0.100	0.0999		mg/L		100	70 - 130	2	20
Silver	ND		0.100	0.102		mg/L		102	70 - 130	2	20
Thallium	ND		0.100	0.102		mg/L		102	70 - 130	3	20
Zinc	0.13		0.100	0.220		mg/L		85	70 - 130	4	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-177717/8-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177760 — **Prep Batch: 177717**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/09/14 10:57	12/09/14 13:14	1

Lab Sample ID: LCS 580-177717/9-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177760 — **Prep Batch: 177717**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00189		mg/L		95	85 - 115

Lab Sample ID: LCSD 580-177717/10-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177760 — **Prep Batch: 177717**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00188		mg/L		94	85 - 115	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-177450/16-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177556 — **Prep Batch: 177450**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	0.036	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Lead	ND		0.040	0.0026	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Antimony	ND		0.040	0.0084	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Beryllium	ND		0.040	0.0070	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Cadmium	ND		0.040	0.0016	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Chromium	ND		0.040	0.023	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Copper	ND		0.080	0.020	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Nickel	ND		0.10	0.016	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Selenium	ND		0.14	0.040	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Silver	ND		0.040	0.0024	mg/Kg		12/05/14 10:29	12/05/14 14:47	2
Thallium	ND		0.10	0.026	mg/Kg		12/05/14 10:29	12/05/14 14:47	2

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-177450/16-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.40	0.22	mg/Kg		12/05/14 10:29	12/05/14 14:47	2

Lab Sample ID: LCS 580-177450/17-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	186		mg/Kg		93	80 - 120
Lead	50.0	44.2		mg/Kg		88	80 - 120
Antimony	150	135		mg/Kg		90	80 - 120
Beryllium	5.00	4.74		mg/Kg		95	80 - 120
Cadmium	5.00	4.66		mg/Kg		93	80 - 120
Chromium	20.0	18.1		mg/Kg		91	80 - 120
Copper	25.0	23.1		mg/Kg		92	80 - 120
Nickel	50.0	47.5		mg/Kg		95	80 - 120
Selenium	200	188		mg/Kg		94	80 - 120
Silver	30.0	27.1		mg/Kg		90	80 - 120
Thallium	200	178		mg/Kg		89	80 - 120
Zinc	200	186		mg/Kg		93	80 - 120

Lab Sample ID: LCSD 580-177450/18-A
Matrix: Solid
Analysis Batch: 177556

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177450

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	187		mg/Kg		93	80 - 120	0	20
Lead	50.0	44.3		mg/Kg		89	80 - 120	0	20
Antimony	150	136		mg/Kg		91	80 - 120	1	20
Beryllium	5.00	4.76		mg/Kg		95	80 - 120	0	20
Cadmium	5.00	4.54		mg/Kg		91	80 - 120	3	20
Chromium	20.0	17.9		mg/Kg		90	80 - 120	1	20
Copper	25.0	23.0		mg/Kg		92	80 - 120	1	20
Nickel	50.0	46.9		mg/Kg		94	80 - 120	1	20
Selenium	200	187		mg/Kg		94	80 - 120	1	20
Silver	30.0	27.1		mg/Kg		90	80 - 120	0	20
Thallium	200	179		mg/Kg		90	80 - 120	1	20
Zinc	200	185		mg/Kg		93	80 - 120	0	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-177645/16-A
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 177645

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0053	mg/Kg		12/08/14 16:58	12/09/14 06:54	1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-177645/17-A
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 177645

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.167	0.147		mg/Kg		88	80 - 120		

Lab Sample ID: LCSD 580-177645/18-A
Matrix: Solid
Analysis Batch: 177697

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 177645

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.141		mg/Kg		85	80 - 120	4	20

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 580-177514/1
Matrix: Water
Analysis Batch: 177514

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			12/05/14 15:00	1

Lab Sample ID: LCS 580-177514/2
Matrix: Water
Analysis Batch: 177514

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			500	525		umhos/cm		105	90 - 110		

Lab Sample ID: 580-46558-2 DU
Matrix: Water
Analysis Batch: 177514

Client Sample ID: BD-OWS-02-20141203-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	62			62.1		umhos/cm				0.3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-177546/1
Matrix: Water
Analysis Batch: 177546

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90	0.20	mg/L			12/04/14 17:10	1

Lab Sample ID: LCS 580-177546/2
Matrix: Water
Analysis Batch: 177546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			1.80	1.83		mg/L		102	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 580-177546/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177546

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.80	1.84		mg/L		102	90 - 110	1	15

Lab Sample ID: 580-46558-2 MS — **Client Sample ID: BD-OWS-02-20141203-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177546

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.49	J	1.80	2.32		mg/L		102	90 - 110

Lab Sample ID: 580-46558-2 DU — **Client Sample ID: BD-OWS-02-20141203-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 177546

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.49	J	0.490	J	mg/L		0	10

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-177721/3 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177721

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000	250	mg/Kg			12/09/14 09:22	1

Lab Sample ID: LCS 580-177721/4 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2850	3020		mg/Kg		106	27.8 - 170

Lab Sample ID: LCSD 580-177721/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 177721

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2850	2840		mg/Kg		100	27.8 - 170	6	35

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 580-178255/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178255

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100	97.9		mg/L		98	85 - 115

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-177746/1
Matrix: Water
Analysis Batch: 177746

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			12/09/14 13:45	1

Lab Sample ID: LCS 580-177746/2
Matrix: Water
Analysis Batch: 177746

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	30.0	28.8		mg/L		96	70.6 - 120

Lab Sample ID: LCSD 580-177746/3
Matrix: Water
Analysis Batch: 177746

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	30.0	30.8		mg/L		103	70.6 - 120	7	20

Method: SM 4500 H+ B - pH

Lab Sample ID: 580-46558-2 DU
Matrix: Water
Analysis Batch: 177394

Client Sample ID: BD-OWS-02-20141203-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.44	HF	6.440		SU		0	1

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-177433/1
Matrix: Water
Analysis Batch: 177433

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			12/04/14 16:44	1

Lab Sample ID: LCS 580-177433/2
Matrix: Water
Analysis Batch: 177433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	16.5		mg/L		110	85 - 115

Client Sample ID: BD-MH-10.9-20141203-S

Lab Sample ID: 580-46558-1

Date Collected: 12/03/14 15:13

Matrix: Solid

Date Received: 12/04/14 11:17

Percent Solids: 33.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			177654	12/04/14 15:35	IWH	TAL SEA
Total/NA	Analysis	8260B		1	177655	12/08/14 20:01	IWH	TAL SEA
Total/NA	Prep	3550B			177445	12/05/14 09:52	ALL	TAL SEA
Total/NA	Analysis	8270D		100	178495	12/18/14 18:48	AHP	TAL SEA
Total/NA	Prep	5035			177438	12/05/14 12:00	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	177670	12/09/14 19:12	AS	TAL SEA
Total/NA	Prep	3550B			177449	12/05/14 10:17	ALL	TAL SEA
Total/NA	Analysis	8082		10	178046	12/12/14 18:17	ALC	TAL SEA
Total/NA	Prep	3546			177510	12/08/14 10:00	RMB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	177678	12/09/14 15:14	JJP	TAL SEA
Total/NA	Prep	3050B			177450	12/05/14 10:29	PAB	TAL SEA
Total/NA	Analysis	6020		10	177556	12/05/14 15:36	FCW	TAL SEA
Total/NA	Prep	7471A			177645	12/08/14 16:58	PAB	TAL SEA
Total/NA	Analysis	7471A		1	177697	12/09/14 07:27	FCW	TAL SEA
Total/NA	Analysis	2540B		1	177440	12/05/14 09:47	ALL	TAL SEA
Total/NA	Analysis	9060_PSEP		1	177721	12/09/14 09:22	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	177401	12/04/14 18:03	LKC	TAL SEA

Client Sample ID: BD-OWS-02-20141203-W

Lab Sample ID: 580-46558-2

Date Collected: 12/03/14 13:56

Matrix: Water

Date Received: 12/04/14 11:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			177522	12/06/14 09:55	RBD	TAL SEA
Total/NA	Analysis	8270D		1	177847	12/10/14 20:33	AHP	TAL SEA
Total/NA	Prep	200.8			177612	12/08/14 12:17	PAB	TAL SEA
Total/NA	Analysis	200.8		1	177734	12/09/14 10:36	FCW	TAL SEA
Total/NA	Prep	245.1			177717	12/09/14 10:57	PAB	TAL SEA
Total/NA	Analysis	245.1		1	177760	12/09/14 13:30	FCW	TAL SEA
Total/NA	Analysis	120.1		1	177514	12/05/14 15:00	JLS	TAL SEA
Total/NA	Analysis	300.0		1	177546	12/04/14 17:53	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	178255	12/16/14 09:26	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	177746	12/09/14 13:45	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	177394	12/04/14 16:34	LKC	TAL SEA
Dissolved	Analysis	SM 5310B		1	177433	12/04/14 16:44	JLS	TAL SEA
Total/NA	Analysis	SM 5310B		1	177433	12/04/14 16:44	JLS	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

Sample Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46558-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46558-1	BD-MH-10.9-20141203-S	Solid	12/03/14 15:13	12/04/14 11:17
580-46558-2	BD-OWS-02-20141203-W	Water	12/03/14 13:56	12/04/14 11:17

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

2/6/2015

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 2 COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			Job / SDG No.: 440-55878
Site: Lower Duwamish Waterway	☐ 2 days			
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	PCB Aroclors (Method 8082)	SVOC (Method 8270D/8270D-SIM)	TPH-Diesel (NWTPH-Dx)	Metals (Method 6020/7471A)	Total Solids (Method SM2540B)	TPH-Gasoline (NWTPH-Gx)	VOCs (EPA 8260B)	TOC (Plumb1981/9060)	Particle Size (PSEP_Plumb1981)	Sample Specific Notes:
~~BD-MH-9.6-20141203-S~~	~~12/03/14~~	~~0925~~	~~C~~	~~Sed~~	~~6~~					1			1	2	1	1	NOT
~~BD-DWS-15-20141203-S~~	~~12/03/14~~	~~1033~~	~~C~~	~~Sed~~	~~6~~					1			1	2	1	1	NOT
BD-MH-10.9-20141203-S	12/8/14	1553	C	Sed	5					1			1	2 ✓	1 ✓	1 ✓	TOC & Particle size are both in the 16oz jar

580-46558 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH — 6

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 3868869	Cooler Temp. (°C): Obs'd:_____ Corr'd:_____	Therm ID No.:_____

Relinquished by: Melissa Ivancevich	Company: Leidos	Date/Time: 12/03/14	Received by:	Company: TA-SEA	Date/Time: 12/4/14 1117
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/03/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			Job / SDG No.: 40350
Site: Lower Duwamish Waterway	☐ 2 days			
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	Sample Specific Notes:
BD-OWS-02-20141203-W	12/03/14	1356	C	W	9	N		2	1		2			1	2	1	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH — 4 — 3

IR1
Cooler/TB Dig/IR cor 0.2 °C unc 2.2 °C
Cooler Dsc L4 Bln/Wht@Lab 1510
Wet/Packs Packing Bubble
V/CS

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 3868869 | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Melissa Ivancevich Melissa Ivancevich	Leidos	12/03/14		TASEA	12/4/14 1117
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-46558-1

Login Number: 46558

List Source: TestAmerica Seattle

List Number: 1

Creator: Abello, Andrea N

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-46717-1
Client Project/Site: NPDES Sampling Support

For:
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

Attn: Christine Nancarrow

David Burk

Authorized for release by:
1/9/2015 3:12:24 PM
David Burk, Project Manager I
(253)248-4972
david.burk@testamericainc.com

Designee for

Kristine Allen, Manager of Project Management
(253)248-4970
kristine.allen@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Case Narrative

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Job ID: 580-46717-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 12/15/2014 1:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 11.2º C.

GC/MS Semi VOA

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 179445 recovered outside the response factor minimum criteria for Bis(2-chloroethoxy)methane, Isophorone and N-Nitrosodi-n-propylamine. A reporting limit (RL) standard was analyzed, and the affected analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported.

Method(s) 8270D: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with prep batch 178394: 4-Chloroaniline. This is not indicative of a systematic control problem because these were random marginal exceedances. In addition, the LCS recovered high for Bis(2-ethylhexyl)phthalate. This analyte was not detected in the associated samples. Data have been qualified and reported. Affected samples: (LCS 580-178394/2-A), (LCSD 580-178394/3-A), BD-MH-11.31-20141215-W (580-46717-1), BD-MH-5.16-20141215-W (580-46717-2)

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 178394 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, Bis(2-ethylhexyl)phthalate, 3-Nitroaniline and 4-Chloroaniline.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 200.8: The method blank for batch 178763 contained Cd above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-11.31-20141215-W
Date Collected: 12/15/14 09:10
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
1,2-Dichlorobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
1,3-Dichlorobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
1,4-Dichlorobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,2'-oxybis[1-chloropropane]	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4,5-Trichlorophenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4-Dichlorophenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,4-Dinitrotoluene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,6-Dinitrotoluene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Chlorophenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Methylphenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Nitroaniline	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
2-Nitrophenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
3-Nitroaniline	ND	*	0.39	0.12	ug/L		12/17/14 13:06	01/05/15 19:27	1
4,6-Dinitro-2-methylphenol	ND		3.9	0.96	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Bromophenyl phenyl ether	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Chloro-3-methylphenol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Chloroaniline	ND	*	0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Chlorophenyl phenyl ether	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/17/14 13:06	01/05/15 19:27	1
Acenaphthene	ND		0.096	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Anthracene	ND		0.039	0.0096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzoic acid	ND		2.9	0.58	ug/L		12/17/14 13:06	01/05/15 19:27	1
Benzyl alcohol	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Bis(2-chloroethoxy)methane	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Bis(2-chloroethyl)ether	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		12/17/14 13:06	01/05/15 19:27	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		12/17/14 13:06	01/05/15 19:27	1
Carbazole	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Chrysene	ND		0.039	0.013	ug/L		12/17/14 13:06	01/05/15 19:27	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Dibenzofuran	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Diethyl phthalate	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Dimethyl phthalate	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-11.31-20141215-W
Date Collected: 12/15/14 09:10
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		12/17/14 13:06	01/05/15 19:27	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		12/17/14 13:06	01/05/15 19:27	1
Fluoranthene	ND		0.048	0.013	ug/L		12/17/14 13:06	01/05/15 19:27	1
Fluorene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Hexachlorobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Isophorone	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Naphthalene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Nitrobenzene	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/17/14 13:06	01/05/15 19:27	1
N-Nitrosodi-n-propylamine	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
N-Nitrosodiphenylamine	ND		0.39	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Pentachlorophenol	**0.15**	**J**	0.68	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Phenanthrene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:27	1
Phenol	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1
Pyrene	ND		0.058	0.013	ug/L		12/17/14 13:06	01/05/15 19:27	1
2,3,4,6-Tetrachlorophenol	ND		0.68	0.096	ug/L		12/17/14 13:06	01/05/15 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*87*		*44 - 125*	*12/17/14 13:06*	*01/05/15 19:27*	*1*
2-Fluorobiphenyl	*70*		*50 - 120*	*12/17/14 13:06*	*01/05/15 19:27*	*1*
2-Fluorophenol	*75*		*30 - 134*	*12/17/14 13:06*	*01/05/15 19:27*	*1*
Nitrobenzene-d5	*82*		*59 - 120*	*12/17/14 13:06*	*01/05/15 19:27*	*1*
Phenol-d5	*77*		*52 - 120*	*12/17/14 13:06*	*01/05/15 19:27*	*1*
Terphenyl-d14	*90*		*64 - 150*	*12/17/14 13:06*	*01/05/15 19:27*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00088**	**J**	0.0010	0.00075	mg/L		12/22/14 14:22	12/23/14 14:36	1
Antimony	**0.00010**	**J**	0.00040	0.000080	mg/L		12/22/14 14:22	12/23/14 14:36	1
Beryllium	ND		0.00040	0.00010	mg/L		12/22/14 14:22	12/23/14 14:36	1
Cadmium	**0.000059**	**J B**	0.00040	0.000028	mg/L		12/22/14 14:22	12/23/14 14:36	1
Chromium	**0.00029**	**J**	0.00040	0.00027	mg/L		12/22/14 14:22	12/23/14 14:36	1
Copper	**0.00080**	**J**	0.0010	0.00011	mg/L		12/22/14 14:22	12/23/14 14:36	1
Lead	**0.00011**	**J**	0.00040	0.000034	mg/L		12/22/14 14:22	12/23/14 14:36	1
Nickel	**0.00063**	**J**	0.0030	0.00040	mg/L		12/22/14 14:22	12/23/14 14:36	1
Selenium	ND		0.0010	0.00071	mg/L		12/22/14 14:22	12/23/14 14:36	1
Silver	ND		0.00040	0.000030	mg/L		12/22/14 14:22	12/23/14 14:36	1
Thallium	ND		0.0010	0.00028	mg/L		12/22/14 14:22	12/23/14 14:36	1
Zinc	**0.0047**		0.0040	0.0019	mg/L		12/22/14 14:22	12/23/14 14:36	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/23/14 11:21	12/23/14 14:37	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-11.31-20141215-W
Date Collected: 12/15/14 09:10
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	3800		10	10	umhos/cm			12/23/14 20:10	1
Chloride	970		90	30	mg/L			12/16/14 16:28	100
Nitrate as N	0.46	J	0.90	0.20	mg/L			12/15/14 18:29	1
Sulfate	110	J	120	40	mg/L			12/16/14 16:28	100
Alkalinity	40		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	40		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	ND		5.0	5.0	mg/L			12/22/14 18:21	1
pH	7.21	HF	0.0100	0.0100	SU			12/15/14 17:49	1
Total Organic Carbon	2.3		1.0	0.33	mg/L			12/21/14 10:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	2.5		1.0	0.33	mg/L			12/21/14 10:07	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-5.16-20141215-W
Date Collected: 12/15/14 10:30
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
3-Nitroaniline	ND	*	0.38	0.12	ug/L		12/17/14 13:06	01/05/15 19:52	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/17/14 13:06	01/05/15 19:52	1
Acenaphthene	ND		0.096	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Anthracene	ND		0.038	0.0096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzoic acid	**0.75**	**J**	2.9	0.58	ug/L		12/17/14 13:06	01/05/15 19:52	1
Benzyl alcohol	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		12/17/14 13:06	01/05/15 19:52	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		12/17/14 13:06	01/05/15 19:52	1
Carbazole	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Chrysene	ND		0.038	0.012	ug/L		12/17/14 13:06	01/05/15 19:52	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-5.16-20141215-W
Date Collected: 12/15/14 10:30
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/17/14 13:06	01/05/15 19:52	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/17/14 13:06	01/05/15 19:52	1
Fluoranthene	ND		0.048	0.012	ug/L		12/17/14 13:06	01/05/15 19:52	1
Fluorene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Isophorone	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Naphthalene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/17/14 13:06	01/05/15 19:52	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Phenanthrene	ND		0.077	0.019	ug/L		12/17/14 13:06	01/05/15 19:52	1
Phenol	ND		0.58	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1
Pyrene	ND		0.058	0.012	ug/L		12/17/14 13:06	01/05/15 19:52	1
2,3,4,6-Tetrachlorophenol	ND		0.67	0.096	ug/L		12/17/14 13:06	01/05/15 19:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*87*		*44 - 125*	*12/17/14 13:06*	*01/05/15 19:52*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/17/14 13:06*	*01/05/15 19:52*	*1*
2-Fluorophenol	*74*		*30 - 134*	*12/17/14 13:06*	*01/05/15 19:52*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*12/17/14 13:06*	*01/05/15 19:52*	*1*
Phenol-d5	*76*		*52 - 120*	*12/17/14 13:06*	*01/05/15 19:52*	*1*
Terphenyl-d14	*87*		*64 - 150*	*12/17/14 13:06*	*01/05/15 19:52*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00091**	**J**	0.0010	0.00075	mg/L		12/22/14 14:22	12/23/14 14:40	1
Antimony	**0.000097**	**J**	0.00040	0.000080	mg/L		12/22/14 14:22	12/23/14 14:40	1
Beryllium	ND		0.00040	0.00010	mg/L		12/22/14 14:22	12/23/14 14:40	1
Cadmium	**0.000050**	**J B**	0.00040	0.000028	mg/L		12/22/14 14:22	12/23/14 14:40	1
Chromium	**0.00096**		0.00040	0.00027	mg/L		12/22/14 14:22	12/23/14 14:40	1
Copper	**0.0019**		0.0010	0.00011	mg/L		12/22/14 14:22	12/23/14 14:40	1
Lead	**0.00076**		0.00040	0.000034	mg/L		12/22/14 14:22	12/23/14 14:40	1
Nickel	**0.00074**	**J**	0.0030	0.00040	mg/L		12/22/14 14:22	12/23/14 14:40	1
Selenium	ND		0.0010	0.00071	mg/L		12/22/14 14:22	12/23/14 14:40	1
Silver	ND		0.00040	0.000030	mg/L		12/22/14 14:22	12/23/14 14:40	1
Thallium	ND		0.0010	0.00028	mg/L		12/22/14 14:22	12/23/14 14:40	1
Zinc	**0.015**		0.0040	0.0019	mg/L		12/22/14 14:22	12/23/14 14:40	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/23/14 11:21	12/23/14 14:39	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-5.16-20141215-W
Date Collected: 12/15/14 10:30
Date Received: 12/15/14 13:52

Lab Sample ID: 580-46717-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	570		10	10	umhos/cm			12/23/14 20:10	1
Chloride	130		9.0	3.0	mg/L			12/17/14 08:49	10
Nitrate as N	0.48	J	0.90	0.20	mg/L			12/15/14 18:43	1
Sulfate	19		1.2	0.40	mg/L			12/16/14 17:11	1
Alkalinity	28		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	28		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	17		5.0	5.0	mg/L			12/22/14 18:21	1
pH	7.28	HF	0.0100	0.0100	SU			12/15/14 18:17	1
Total Organic Carbon	2.4		1.0	0.33	mg/L			12/21/14 10:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	2.5		1.0	0.33	mg/L			12/21/14 10:07	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-178394/1-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 178394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/17/14 13:06	01/05/15 18:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/17/14 13:06	01/05/15 18:12	1
Acenaphthene	ND		0.10	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Anthracene	ND		0.040	0.010	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzoic acid	ND		3.0	0.60	ug/L		12/17/14 13:06	01/05/15 18:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/17/14 13:06	01/05/15 18:12	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/17/14 13:06	01/05/15 18:12	1
Carbazole	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Chrysene	ND		0.040	0.013	ug/L		12/17/14 13:06	01/05/15 18:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-178394/1-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 178394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/17/14 13:06	01/05/15 18:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/17/14 13:06	01/05/15 18:12	1
Fluoranthene	ND		0.050	0.013	ug/L		12/17/14 13:06	01/05/15 18:12	1
Fluorene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Isophorone	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Naphthalene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		12/17/14 13:06	01/05/15 18:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Phenanthrene	ND		0.080	0.020	ug/L		12/17/14 13:06	01/05/15 18:12	1
Phenol	ND		0.60	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1
Pyrene	ND		0.060	0.013	ug/L		12/17/14 13:06	01/05/15 18:12	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		12/17/14 13:06	01/05/15 18:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*84*		*44 - 125*	*12/17/14 13:06*	*01/05/15 18:12*	*1*
2-Fluorobiphenyl	*86*		*50 - 120*	*12/17/14 13:06*	*01/05/15 18:12*	*1*
2-Fluorophenol	*85*		*30 - 134*	*12/17/14 13:06*	*01/05/15 18:12*	*1*
Nitrobenzene-d5	*93*		*59 - 120*	*12/17/14 13:06*	*01/05/15 18:12*	*1*
Phenol-d5	*87*		*52 - 120*	*12/17/14 13:06*	*01/05/15 18:12*	*1*
Terphenyl-d14	*100*		*64 - 150*	*12/17/14 13:06*	*01/05/15 18:12*	*1*

Lab Sample ID: LCS 580-178394/2-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 178394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.95		ug/L		97	40 - 125
1,2-Dichlorobenzene	2.00	1.87		ug/L		94	44 - 125
1,3-Dichlorobenzene	2.00	1.69		ug/L		84	40 - 125
1,4-Dichlorobenzene	2.00	1.70		ug/L		85	40 - 125
1-Methylnaphthalene	2.00	1.99		ug/L		99	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.50		ug/L		75	44 - 130
2,4,5-Trichlorophenol	2.00	2.28		ug/L		114	66 - 130
2,4,6-Trichlorophenol	2.00	2.31		ug/L		115	55 - 140
2,4-Dichlorophenol	2.00	2.38		ug/L		119	50 - 140
2,4-Dimethylphenol	2.00	2.27		ug/L		114	30 - 135
2,4-Dinitrophenol	4.00	3.35	J	ug/L		84	24 - 146
2,4-Dinitrotoluene	2.00	2.27		ug/L		114	73 - 126
2,6-Dinitrotoluene	2.00	2.36		ug/L		118	67 - 134

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-178394/2-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 178394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	2.00	2.18		ug/L		109	55 - 125
2-Chlorophenol	2.00	2.10		ug/L		105	57 - 125
2-Methylnaphthalene	2.00	1.94		ug/L		97	56 - 125
2-Methylphenol	2.00	1.99		ug/L		100	60 - 130
2-Nitroaniline	2.00	2.41		ug/L		120	52 - 140
2-Nitrophenol	2.00	2.22		ug/L		111	55 - 140
3 & 4 Methylphenol	2.00	2.02		ug/L		101	60 - 130
3,3'-Dichlorobenzidine	4.00	3.31		ug/L		83	20 - 175
3-Nitroaniline	2.00	1.55		ug/L		78	22 - 124
4,6-Dinitro-2-methylphenol	4.00	4.56		ug/L		114	50 - 136
4-Bromophenyl phenyl ether	2.00	2.19		ug/L		110	62 - 132
4-Chloro-3-methylphenol	2.00	2.33		ug/L		117	65 - 145
4-Chloroaniline	2.00	0.240	J *	ug/L		12	20 - 150
4-Chlorophenyl phenyl ether	2.00	1.97		ug/L		98	59 - 125
4-Nitroaniline	2.00	1.68		ug/L		84	49 - 125
4-Nitrophenol	4.00	4.28		ug/L		107	35 - 153
Acenaphthene	2.00	2.16		ug/L		108	63 - 125
Acenaphthylene	2.00	1.86		ug/L		93	62 - 125
Anthracene	2.00	2.01		ug/L		100	50 - 125
Benzo[a]anthracene	2.00	1.86		ug/L		93	65 - 125
Benzo[a]pyrene	2.00	2.19		ug/L		110	45 - 125
Benzo[b]fluoranthene	2.00	2.26		ug/L		113	70 - 129
Benzo[g,h,i]perylene	2.00	2.13		ug/L		106	65 - 153
Benzo[k]fluoranthene	2.00	2.09		ug/L		104	70 - 123
Benzoic acid	4.00	3.59		ug/L		90	20 - 144
Benzyl alcohol	2.00	2.43		ug/L		122	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.97		ug/L		98	59 - 125
Bis(2-chloroethyl)ether	2.00	1.89		ug/L		94	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	12.5	*	ug/L		625	70 - 185
Butyl benzyl phthalate	2.00	2.11		ug/L		105	60 - 167
Carbazole	2.00	2.30		ug/L		115	75 - 142
Chrysene	2.00	1.97		ug/L		99	70 - 125
Dibenz(a,h)anthracene	2.00	2.18		ug/L		109	69 - 154
Dibenzofuran	2.00	2.09		ug/L		104	60 - 125
Diethyl phthalate	2.00	2.05		ug/L		102	60 - 150
Dimethyl phthalate	2.00	2.19		ug/L		109	65 - 155
Di-n-butyl phthalate	2.00	2.41		ug/L		120	55 - 167
Di-n-octyl phthalate	2.00	2.20		ug/L		110	55 - 150
Fluoranthene	2.00	2.03		ug/L		102	70 - 145
Fluorene	2.00	2.09		ug/L		105	69 - 125
Hexachlorobenzene	2.00	2.30		ug/L		115	61 - 125
Hexachlorobutadiene	2.00	1.84		ug/L		92	25 - 125
Hexachlorocyclopentadiene	2.00	1.61	J	ug/L		81	20 - 125
Hexachloroethane	2.00	1.65		ug/L		82	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.18		ug/L		109	70 - 136
Isophorone	2.00	2.23		ug/L		111	64 - 125
Naphthalene	2.00	2.00		ug/L		100	56 - 125
Nitrobenzene	2.00	2.31		ug/L		115	62 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-178394/2-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 178394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodimethylamine	2.00	2.23		ug/L		111	33 - 143
N-Nitrosodi-n-propylamine	2.00	2.18		ug/L		109	60 - 120
N-Nitrosodiphenylamine	2.00	2.22		ug/L		111	40 - 135
Pentachlorophenol	4.00	2.79		ug/L		70	20 - 145
Phenanthrene	2.00	2.14		ug/L		107	70 - 125
Phenol	2.00	1.88		ug/L		94	53 - 130
Pyrene	2.00	2.10		ug/L		105	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	2.25		ug/L		112	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*98*		*44 - 125*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*86*		*30 - 134*
Nitrobenzene-d5	*94*		*59 - 120*
Phenol-d5	*87*		*52 - 120*
Terphenyl-d14	*93*		*64 - 150*

Lab Sample ID: LCSD 580-178394/3-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 178394

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.82		ug/L		91	40 - 125	7	20
1,2-Dichlorobenzene	2.00	1.77		ug/L		89	44 - 125	5	20
1,3-Dichlorobenzene	2.00	1.61		ug/L		81	40 - 125	4	20
1,4-Dichlorobenzene	2.00	1.72		ug/L		86	40 - 125	1	20
1-Methylnaphthalene	2.00	1.86		ug/L		93	54 - 125	7	20
2,2'-oxybis[1-chloropropane]	2.00	1.40		ug/L		70	44 - 130	6	20
2,4,5-Trichlorophenol	2.00	2.25		ug/L		112	66 - 130	1	20
2,4,6-Trichlorophenol	2.00	2.07		ug/L		103	55 - 140	11	20
2,4-Dichlorophenol	2.00	2.11		ug/L		106	50 - 140	12	20
2,4-Dimethylphenol	2.00	2.03		ug/L		102	30 - 135	11	20
2,4-Dinitrophenol	4.00	3.12	J	ug/L		78	24 - 146	7	20
2,4-Dinitrotoluene	2.00	2.23		ug/L		112	73 - 126	2	20
2,6-Dinitrotoluene	2.00	2.15		ug/L		107	67 - 134	9	20
2-Chloronaphthalene	2.00	2.08		ug/L		104	55 - 125	5	20
2-Chlorophenol	2.00	2.10		ug/L		105	57 - 125	0	20
2-Methylnaphthalene	2.00	1.77		ug/L		88	56 - 125	9	20
2-Methylphenol	2.00	2.11		ug/L		106	60 - 130	6	20
2-Nitroaniline	2.00	2.36		ug/L		118	52 - 140	2	20
2-Nitrophenol	2.00	2.04		ug/L		102	55 - 140	8	20
3 & 4 Methylphenol	2.00	2.01		ug/L		101	60 - 130	1	20
3,3'-Dichlorobenzidine	4.00	1.80	J *	ug/L		45	20 - 175	59	20
3-Nitroaniline	2.00	1.08	*	ug/L		54	22 - 124	36	20
4,6-Dinitro-2-methylphenol	4.00	4.35		ug/L		109	50 - 136	5	20
4-Bromophenyl phenyl ether	2.00	2.02		ug/L		101	62 - 132	8	20
4-Chloro-3-methylphenol	2.00	2.15		ug/L		108	65 - 145	8	20
4-Chloroaniline	2.00	ND	*	ug/L		0.9	20 - 150	173	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-178394/3-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 178394

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chlorophenyl phenyl ether	2.00	1.91		ug/L		96	59 - 125	3	20
4-Nitroaniline	2.00	1.62		ug/L		81	49 - 125	4	20
4-Nitrophenol	4.00	3.97		ug/L		99	35 - 153	7	20
Acenaphthene	2.00	2.00		ug/L		100	63 - 125	8	20
Acenaphthylene	2.00	1.75		ug/L		88	62 - 125	6	20
Anthracene	2.00	1.87		ug/L		93	50 - 125	7	20
Benzo[a]anthracene	2.00	1.79		ug/L		89	65 - 125	4	20
Benzo[a]pyrene	2.00	2.05		ug/L		103	45 - 125	7	20
Benzo[b]fluoranthene	2.00	2.04		ug/L		102	70 - 129	10	20
Benzo[g,h,i]perylene	2.00	2.05		ug/L		102	65 - 153	4	20
Benzo[k]fluoranthene	2.00	2.18		ug/L		109	70 - 123	4	20
Benzoic acid	4.00	3.65		ug/L		91	20 - 144	2	20
Benzyl alcohol	2.00	2.15		ug/L		107	41 - 144	12	20
Bis(2-chloroethoxy)methane	2.00	1.87		ug/L		93	59 - 125	5	20
Bis(2-chloroethyl)ether	2.00	1.84		ug/L		92	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	2.21	J *	ug/L		110	70 - 185	140	20
Butyl benzyl phthalate	2.00	2.16		ug/L		108	60 - 167	3	20
Carbazole	2.00	2.10		ug/L		105	75 - 142	9	20
Chrysene	2.00	1.85		ug/L		93	70 - 125	6	20
Dibenz(a,h)anthracene	2.00	1.96		ug/L		98	69 - 154	11	20
Dibenzofuran	2.00	1.95		ug/L		98	60 - 125	7	20
Diethyl phthalate	2.00	1.94		ug/L		97	60 - 150	5	20
Dimethyl phthalate	2.00	2.06		ug/L		103	65 - 155	6	20
Di-n-butyl phthalate	2.00	2.28		ug/L		114	55 - 167	5	20
Di-n-octyl phthalate	2.00	2.16		ug/L		108	55 - 150	2	20
Fluoranthene	2.00	1.90		ug/L		95	70 - 145	7	20
Fluorene	2.00	1.96		ug/L		98	69 - 125	7	20
Hexachlorobenzene	2.00	2.19		ug/L		109	61 - 125	5	20
Hexachlorobutadiene	2.00	1.72		ug/L		86	25 - 125	7	20
Hexachlorocyclopentadiene	2.00	1.41	J	ug/L		71	20 - 125	13	20
Hexachloroethane	2.00	1.60		ug/L		80	30 - 125	3	20
Indeno[1,2,3-cd]pyrene	2.00	2.15		ug/L		108	70 - 136	1	20
Isophorone	2.00	2.05		ug/L		103	64 - 125	8	20
Naphthalene	2.00	1.79		ug/L		90	56 - 125	11	20
Nitrobenzene	2.00	2.14		ug/L		107	62 - 125	7	20
N-Nitrosodimethylamine	2.00	2.23		ug/L		111	33 - 143	0	20
N-Nitrosodi-n-propylamine	2.00	2.23		ug/L		112	60 - 120	3	20
N-Nitrosodiphenylamine	2.00	2.02		ug/L		101	40 - 135	9	20
Pentachlorophenol	4.00	2.34		ug/L		59	20 - 145	17	20
Phenanthrene	2.00	2.03		ug/L		102	70 - 125	5	20
Phenol	2.00	1.85		ug/L		93	53 - 130	2	20
Pyrene	2.00	2.00		ug/L		100	70 - 133	5	20
2,3,4,6-Tetrachlorophenol	2.00	2.08		ug/L		104	60 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*85*		*44 - 125*
2-Fluorobiphenyl	*79*		*50 - 120*
2-Fluorophenol	*80*		*30 - 134*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-178394/3-A
Matrix: Water
Analysis Batch: 179445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 178394

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*90*		*59 - 120*
Phenol-d5	*86*		*52 - 120*
Terphenyl-d14	*88*		*64 - 150*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-178763/9-A
Matrix: Water
Analysis Batch: 178888

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 178763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		12/22/14 14:22	12/23/14 13:51	1
Antimony	ND		0.00040	0.000080	mg/L		12/22/14 14:22	12/23/14 13:51	1
Beryllium	ND		0.00040	0.00010	mg/L		12/22/14 14:22	12/23/14 13:51	1
Cadmium	0.0000365	J	0.00040	0.000028	mg/L		12/22/14 14:22	12/23/14 13:51	1
Chromium	ND		0.00040	0.00027	mg/L		12/22/14 14:22	12/23/14 13:51	1
Copper	ND		0.0010	0.00011	mg/L		12/22/14 14:22	12/23/14 13:51	1
Lead	ND		0.00040	0.000034	mg/L		12/22/14 14:22	12/23/14 13:51	1
Nickel	ND		0.0030	0.00040	mg/L		12/22/14 14:22	12/23/14 13:51	1
Selenium	ND		0.0010	0.00071	mg/L		12/22/14 14:22	12/23/14 13:51	1
Silver	ND		0.00040	0.000030	mg/L		12/22/14 14:22	12/23/14 13:51	1
Thallium	ND		0.0010	0.00028	mg/L		12/22/14 14:22	12/23/14 13:51	1
Zinc	ND		0.0040	0.0019	mg/L		12/22/14 14:22	12/23/14 13:51	1

Lab Sample ID: LCS 580-178763/10-A
Matrix: Water
Analysis Batch: 178888

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 178763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0976		mg/L		98	85 - 115
Antimony	0.100	0.103		mg/L		103	85 - 115
Beryllium	0.100	0.0957		mg/L		96	85 - 115
Cadmium	0.100	0.103		mg/L		103	85 - 115
Chromium	0.100	0.0973		mg/L		97	85 - 115
Copper	0.100	0.0962		mg/L		96	85 - 115
Lead	0.100	0.0986		mg/L		99	85 - 115
Nickel	0.100	0.0969		mg/L		97	85 - 115
Selenium	0.100	0.102		mg/L		102	85 - 115
Silver	0.100	0.0995		mg/L		100	85 - 115
Thallium	0.100	0.0994		mg/L		99	85 - 115
Zinc	0.100	0.0965		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-178763/11-A
Matrix: Water
Analysis Batch: 178888

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 178763

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0979		mg/L		98	85 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-178763/11-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178888 — **Prep Batch: 178763**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.100	0.103		mg/L		103	85 - 115	0	20
Beryllium	0.100	0.0959		mg/L		96	85 - 115	0	20
Cadmium	0.100	0.102		mg/L		102	85 - 115	1	20
Chromium	0.100	0.0978		mg/L		98	85 - 115	1	20
Copper	0.100	0.0974		mg/L		97	85 - 115	1	20
Lead	0.100	0.0986		mg/L		99	85 - 115	0	20
Nickel	0.100	0.0981		mg/L		98	85 - 115	1	20
Selenium	0.100	0.103		mg/L		103	85 - 115	0	20
Silver	0.100	0.0992		mg/L		99	85 - 115	0	20
Thallium	0.100	0.0982		mg/L		98	85 - 115	1	20
Zinc	0.100	0.0971		mg/L		97	85 - 115	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-178854/23-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178881 — **Prep Batch: 178854**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/23/14 11:21	12/23/14 13:56	1

Lab Sample ID: LCS 580-178854/24-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178881 — **Prep Batch: 178854**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00193		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-178854/25-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178881 — **Prep Batch: 178854**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00188		mg/L		94	85 - 115	2	20

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 580-178918/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 178918

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			12/23/14 20:10	1

Method: 120.1 - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 580-178918/2
Matrix: Water
Analysis Batch: 178918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	500	519		umhos/cm		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-178252/1
Matrix: Water
Analysis Batch: 178252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90	0.20	mg/L			12/15/14 12:57	1

Lab Sample ID: LCS 580-178252/2
Matrix: Water
Analysis Batch: 178252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.80	1.84		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-178252/3
Matrix: Water
Analysis Batch: 178252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.80	1.84		mg/L		102	90 - 110	0	15

Lab Sample ID: MB 580-178379/1
Matrix: Water
Analysis Batch: 178379

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90	0.30	mg/L			12/16/14 09:42	1
Sulfate	ND		1.2	0.40	mg/L			12/16/14 09:42	1

Lab Sample ID: LCS 580-178379/2
Matrix: Water
Analysis Batch: 178379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.00	9.26		mg/L		103	90 - 110
Sulfate	12.0	12.8		mg/L		107	90 - 110

Lab Sample ID: LCSD 580-178379/3
Matrix: Water
Analysis Batch: 178379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.00	9.24		mg/L		103	90 - 110	0	15
Sulfate	12.0	12.6		mg/L		105	90 - 110	2	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-46717-1 MS
Matrix: Water
Analysis Batch: 178379

Client Sample ID: BD-MH-11.31-20141215-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	970		900	1950		mg/L		109	90 - 110
Sulfate	110	J	1200	1210		mg/L		92	90 - 110

Lab Sample ID: 580-46717-1 DU
Matrix: Water
Analysis Batch: 178379

Client Sample ID: BD-MH-11.31-20141215-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	970		1020		mg/L		5	10
Sulfate	110	J	112	J	mg/L		3	10

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 580-179034/2
Matrix: Water
Analysis Batch: 179034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100	107		mg/L		107	85 - 115

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-178800/1
Matrix: Water
Analysis Batch: 178800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			12/22/14 18:21	1

Lab Sample ID: LCS 580-178800/2
Matrix: Water
Analysis Batch: 178800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	30.0	28.8		mg/L		96	70.6 - 120

Lab Sample ID: LCSD 580-178800/19
Matrix: Water
Analysis Batch: 178800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	30.0	34.0		mg/L		113	70.6 - 120	17	20

Lab Sample ID: 580-46717-1 DU
Matrix: Water
Analysis Batch: 178800

Client Sample ID: BD-MH-11.31-20141215-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	ND		ND		mg/L		NC	20

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Method: SM 4500 H+ B - pH

Lab Sample ID: 580-46717-1 DU
Matrix: Water
Analysis Batch: 178335

Client Sample ID: BD-MH-11.31-20141215-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.21	HF		7.280		SU				1	1

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-178693/1
Matrix: Water
Analysis Batch: 178693

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			12/21/14 10:07	1

Lab Sample ID: LCS 580-178693/2
Matrix: Water
Analysis Batch: 178693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			15.0	15.3		mg/L		102	85 - 115		

Lab Chronicle

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Client Sample ID: BD-MH-11.31-20141215-W

Lab Sample ID: 580-46717-1

Date Collected: 12/15/14 09:10

Matrix: Water

Date Received: 12/15/14 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			178394	12/17/14 13:06	ALL	TAL SEA
Total/NA	Analysis	8270D		1	179445	01/05/15 19:27	AHP	TAL SEA
Total/NA	Prep	200.8			178763	12/22/14 14:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	178888	12/23/14 14:36	FCW	TAL SEA
Total/NA	Prep	245.1			178854	12/23/14 11:21	PAB	TAL SEA
Total/NA	Analysis	245.1		1	178881	12/23/14 14:37	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178918	12/23/14 20:10	LKC	TAL SEA
Total/NA	Analysis	300.0		1	178252	12/15/14 18:29	JLS	TAL SEA
Total/NA	Analysis	300.0		100	178379	12/16/14 16:28	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	178800	12/22/14 18:21	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	178335	12/15/14 17:49	LKC	TAL SEA
Dissolved	Filtration	FILTRATION			178692	12/21/14 09:30	JLS	TAL SEA
Dissolved	Analysis	SM 5310B		1	178693	12/21/14 10:07	JLS	TAL SEA
Total/NA	Analysis	SM 5310B		1	178693	12/21/14 10:07	JLS	TAL SEA

Client Sample ID: BD-MH-5.16-20141215-W

Lab Sample ID: 580-46717-2

Date Collected: 12/15/14 10:30

Matrix: Water

Date Received: 12/15/14 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			178394	12/17/14 13:06	ALL	TAL SEA
Total/NA	Analysis	8270D		1	179445	01/05/15 19:52	AHP	TAL SEA
Total/NA	Prep	200.8			178763	12/22/14 14:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	178888	12/23/14 14:40	FCW	TAL SEA
Total/NA	Prep	245.1			178854	12/23/14 11:21	PAB	TAL SEA
Total/NA	Analysis	245.1		1	178881	12/23/14 14:39	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178918	12/23/14 20:10	LKC	TAL SEA
Total/NA	Analysis	300.0		1	178252	12/15/14 18:43	JLS	TAL SEA
Total/NA	Analysis	300.0		1	178379	12/16/14 17:11	JLS	TAL SEA
Total/NA	Analysis	300.0		10	178379	12/17/14 08:49	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	178800	12/22/14 18:21	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	178335	12/15/14 18:17	LKC	TAL SEA
Dissolved	Filtration	FILTRATION			178692	12/21/14 09:30	JLS	TAL SEA
Dissolved	Analysis	SM 5310B		1	178693	12/21/14 10:07	JLS	TAL SEA
Total/NA	Analysis	SM 5310B		1	178693	12/21/14 10:07	JLS	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

Sample Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46717-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46717-1	BD-MH-11.31-20141215-W	Water	12/15/14 09:10	12/15/14 13:52
580-46717-2	BD-MH-5.16-20141215-W	Water	12/15/14 10:30	12/15/14 13:52

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

46717

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/15/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	**Analysis Turnaround Time**			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			
Site: Lower Duwamish Waterway	☐ 2 days			Job / SDG No.:
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	Sample Specific Notes:
BD-MH-11.31-20141215-W	12/15/14	0910	G	W	9	N		2	1		2			1	2	1	
BD-MH-5.16-20141215-W	12/15/14	1030	G	W	9	N		2	1	√2	√2	√2	√2	1	2	1	

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580-46717 Chain of Custody

A2
Cooler/TB Dig/IR cor 11.2°C unc 11.5°C
Cooler Dsc 1445 @Lab 1445
Wet/Packs Packing ~~Bubble~~ ~~Bubble~~
w/o

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH — 4 — 3

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company	Date/Time	Received by:	Company	Date/Time
Relinquished by: Melissa Ivancevich	Leidos	12/15/14 1352		TASEA	12/15/14 1352
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-46717-1

Login Number: 46717

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	no
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-46851-1
Client Project/Site: NPDES Sampling Support

For:
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

Attn: Christine Nancarrow

Kristine D. Allen

Authorized for release by:
1/23/2015 5:40:22 PM

Kristine Allen, Manager of Project Management
(253)248-4970
kristine.allen@testamericainc.com

Table of Contents

Job ID: 580-46851-1

Laboratory: TestAmerica Seattle

Narrative

Comments
No additional comments.

Receipt
The samples were received on 12/23/2014 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1º C and 2.3º C.

Except:

For sample 3 (QC-EB-02-20141222-W) the unpreserved container is asking for metals analysis. Logged-in as dissolved metals (lab filter) per container ID.

QC-EB-02-20141222-W (580-46851-4)

GC/MS Semi VOA
Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 179536 recovered above the upper control limit for Dibenz(a,h)anthracene and Benzo(g,h,i)perylene. Method 8270D allows <20% of compounds to fail the criteria; therefore, the data have been qualified and reported. The following samples are impacted: (CCVIS 580-179536/3), (LCS 580-179106/2-A), (LCSD 580-179106/3-A), (MB 580-179106/1-A).

Method(s) 8270D: In analytical batch 179536, multiple analyte(s) recovered outside control limits for the LCS/LCSD associated with prep batch 179106. These analytes were outside the Marginal Exceedance Limits; therefore, re-extraction and/or re-analysis was performed outside of prep holding time. Both sets of data have been reported. Affected samples: (LCS 580-179106/2-A), (LCSD 580-179106/3-A), BD-MH-1.32-20141222-W (580-46851-3), BD-MH-12.56-20141222-W (580-46851-2), BD-OWS-14-20141222-W (580-46851-1), QC-EB-02-20141222-W (580-46851-4)

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 179106 recovered outside control limits for multiple analytes.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 180398 recovered above the upper control limit for 2-Nitroaniline. Method 8270D allows <20% of compounds to fail criteria; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-180398/3), (LCS 580-180131/2-A), (LCSD 580-180131/3-A), (MB 580-180131/1-A).

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 180131 recovered outside control limits for Pentachlorophenol.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 179771 recovered above the upper control limit for Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene. Method 8270D allows <20% of compounds to fail criteria; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-179771/3), BD-MH-1.32-20141222-W (580-46851-3), BD-MH-12.56-20141222-W (580-46851-2), BD-OWS-14-20141222-W (580-46851-1), QC-EB-02-20141222-W (580-46851-4).
Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 180131 recovered outside control limits for Pentachlorophenol. LCS/LCSD percent recovery is in control for the affected analyte.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 180653 recovered above the upper control limit for several analytes. Method 8270D allows <20% of compounds to fail criteria in the CCV; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-180653/3), BD-MH-1.32-20141222-W (580-46851-3), BD-MH-12.56-20141222-W (580-46851-2), BD-OWS-14-20141222-W (580-46851-1), QC-EB-02-20141222-W (580-46851-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method(s) 245.1, 7470A: The method blank for batch 179880 contained Hg above the method detection limit. This target analyte

Job ID: 580-46851-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 7470A: The method blank for batch 179655 contained Hg above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3520C: In batch 180131, the following sample(s) were re-prepared outside of preparation holding time due to low LCS/LCSD recoveries in the original batch: BD-MH-1.32-20141222-W (580-46851-3), BD-MH-12.56-20141222-W (580-46851-2), BD-OWS-14-20141222-W (580-46851-1), QC-EB-02-20141222-W (580-46851-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
H	Sample was prepped or analyzed beyond the specified holding time

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-OWS-14-20141222-W
Date Collected: 12/22/14 08:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4-Dinitrophenol	ND	*	4.8	0.96	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
3-Nitroaniline	ND		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 18:26	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/29/14 17:27	01/08/15 18:26	1
Acenaphthene	ND		0.096	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Anthracene	ND	*	0.038	0.0096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzo[a]pyrene	ND	*	0.038	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzo[b]fluoranthene	**0.040**	**J**	0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzo[g,h,i]perylene	ND	^	0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzoic acid	ND		2.9	0.58	ug/L		12/29/14 17:27	01/08/15 18:26	1
Benzyl alcohol	ND	*	0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/29/14 17:27	01/08/15 18:26	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		12/29/14 17:27	01/08/15 18:26	1
Carbazole	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Chrysene	**0.026**	**J**	0.038	0.012	ug/L		12/29/14 17:27	01/08/15 18:26	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-OWS-14-20141222-W
Date Collected: 12/22/14 08:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 18:26	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/29/14 17:27	01/08/15 18:26	1
Fluoranthene	**0.047**	**J**	0.048	0.012	ug/L		12/29/14 17:27	01/08/15 18:26	1
Fluorene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Indeno[1,2,3-cd]pyrene	ND	^	0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Isophorone	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Naphthalene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/29/14 17:27	01/08/15 18:26	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Phenanthrene	ND		0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:26	1
Phenol	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1
Pyrene	**0.033**	**J**	0.058	0.012	ug/L		12/29/14 17:27	01/08/15 18:26	1
2,3,4,6-Tetrachlorophenol	ND		0.67	0.096	ug/L		12/29/14 17:27	01/08/15 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*44 - 125*	*12/29/14 17:27*	*01/08/15 18:26*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/29/14 17:27*	*01/08/15 18:26*	*1*
2-Fluorophenol	*86*		*30 - 134*	*12/29/14 17:27*	*01/08/15 18:26*	*1*
Nitrobenzene-d5	*82*		*59 - 120*	*12/29/14 17:27*	*01/08/15 18:26*	*1*
Phenol-d5	*74*		*52 - 120*	*12/29/14 17:27*	*01/08/15 18:26*	*1*
Terphenyl-d14	*91*		*64 - 150*	*12/29/14 17:27*	*01/08/15 18:26*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
1,2-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
1,3-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
1,4-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
1-Methylnaphthalene	ND	H	0.057	0.029	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,2'-oxybis[1-chloropropane]	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4,5-Trichlorophenol	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4,6-Trichlorophenol	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4-Dichlorophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4-Dimethylphenol	ND	H	1.9	0.29	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4-Dinitrophenol	ND	H	4.8	0.96	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,4-Dinitrotoluene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2,6-Dinitrotoluene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Chloronaphthalene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Chlorophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Methylnaphthalene	ND	H	0.19	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Methylphenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Nitroaniline	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
2-Nitrophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-OWS-14-20141222-W
Date Collected: 12/22/14 08:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND	H	0.76	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
3,3'-Dichlorobenzidine	ND	H	1.9	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
3-Nitroaniline	ND	H	0.38	0.11	ug/L		01/13/15 16:56	01/20/15 16:52	1
4,6-Dinitro-2-methylphenol	ND	H	3.8	0.96	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Bromophenyl phenyl ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Chloro-3-methylphenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Chloroaniline	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Chlorophenyl phenyl ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Nitroaniline	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
4-Nitrophenol	ND	H	2.9	0.96	ug/L		01/13/15 16:56	01/20/15 16:52	1
Acenaphthene	ND	H	0.096	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Acenaphthylene	ND	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Anthracene	**0.011**	**J H**	0.038	0.0096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzo[a]anthracene	**0.026**	**J H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzo[a]pyrene	**0.036**	**J H**	0.038	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzo[b]fluoranthene	**0.065**	**J H**	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzo[g,h,i]perylene	**0.049**	**J H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzo[k]fluoranthene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzoic acid	ND	H	2.9	0.57	ug/L		01/13/15 16:56	01/20/15 16:52	1
Benzyl alcohol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Bis(2-chloroethoxy)methane	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Bis(2-chloroethyl)ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Bis(2-ethylhexyl) phthalate	ND	H	2.9	1.1	ug/L		01/13/15 16:56	01/20/15 16:52	1
Butyl benzyl phthalate	ND	H	0.57	0.19	ug/L		01/13/15 16:56	01/20/15 16:52	1
Carbazole	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Chrysene	**0.042**	**H**	0.038	0.012	ug/L		01/13/15 16:56	01/20/15 16:52	1
Dibenz(a,h)anthracene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Dibenzofuran	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Diethyl phthalate	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Dimethyl phthalate	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Di-n-butyl phthalate	ND	H	0.38	0.12	ug/L		01/13/15 16:56	01/20/15 16:52	1
Di-n-octyl phthalate	ND	H	0.38	0.17	ug/L		01/13/15 16:56	01/20/15 16:52	1
Fluoranthene	**0.077**	**H**	0.048	0.012	ug/L		01/13/15 16:56	01/20/15 16:52	1
Fluorene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Hexachlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Hexachlorobutadiene	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Hexachlorocyclopentadiene	ND	H ^	1.9	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Hexachloroethane	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Indeno[1,2,3-cd]pyrene	**0.049**	**J H ^**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Isophorone	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Naphthalene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Nitrobenzene	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
N-Nitrosodimethylamine	ND	H	1.9	0.19	ug/L		01/13/15 16:56	01/20/15 16:52	1
N-Nitrosodi-n-propylamine	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
N-Nitrosodiphenylamine	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Pentachlorophenol	ND	H *	0.67	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Phenanthrene	**0.026**	**J H**	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 16:52	1
Phenol	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1
Pyrene	**0.069**	**H**	0.057	0.012	ug/L		01/13/15 16:56	01/20/15 16:52	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-OWS-14-20141222-W
Date Collected: 12/22/14 08:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	0.67	0.096	ug/L		01/13/15 16:56	01/20/15 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*99*		*44 - 125*	*01/13/15 16:56*	*01/20/15 16:52*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*01/13/15 16:56*	*01/20/15 16:52*	*1*
2-Fluorophenol	*72*		*30 - 134*	*01/13/15 16:56*	*01/20/15 16:52*	*1*
Nitrobenzene-d5	*103*		*59 - 120*	*01/13/15 16:56*	*01/20/15 16:52*	*1*
Phenol-d5	*93*		*52 - 120*	*01/13/15 16:56*	*01/20/15 16:52*	*1*
Terphenyl-d14	*100*		*64 - 150*	*01/13/15 16:56*	*01/20/15 16:52*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00082**	**J**	0.0010	0.00075	mg/L		01/16/15 11:25	01/19/15 10:25	1
Antimony	**0.00023**	**J**	0.00040	0.000080	mg/L		01/16/15 11:25	01/19/15 10:25	1
Beryllium	ND		0.00040	0.00010	mg/L		01/16/15 11:25	01/19/15 10:25	1
Cadmium	ND		0.00040	0.000028	mg/L		01/16/15 11:25	01/19/15 10:25	1
Chromium	**0.00037**	**J**	0.00040	0.00027	mg/L		01/16/15 11:25	01/19/15 10:25	1
Copper	**0.0019**		0.0010	0.00011	mg/L		01/16/15 11:25	01/19/15 10:25	1
Lead	**0.00023**	**J**	0.00040	0.000034	mg/L		01/16/15 11:25	01/19/15 10:25	1
Nickel	**0.00078**	**J**	0.0030	0.00040	mg/L		01/16/15 11:25	01/19/15 10:25	1
Selenium	ND		0.0010	0.00071	mg/L		01/16/15 11:25	01/19/15 10:25	1
Silver	ND		0.00040	0.000030	mg/L		01/16/15 11:25	01/19/15 10:25	1
Thallium	ND		0.0010	0.00028	mg/L		01/16/15 11:25	01/19/15 10:25	1
Zinc	**0.028**		0.0040	0.0019	mg/L		01/16/15 11:25	01/19/15 10:25	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 12:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 12:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**1000**		10	10	umhos/cm			12/24/14 14:43	1
Chloride	**270**		9.0	3.0	mg/L			01/08/15 10:11	10
Nitrate as N	**0.42**	**J**	0.90	0.20	mg/L			12/23/14 19:24	1
Sulfate	**38**		1.2	0.40	mg/L			01/07/15 19:21	1
Alkalinity	**29**		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	**29**		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	**20**		10	10	mg/L			12/24/14 17:05	1
pH	**7.10**	**HF**	0.0100	0.0100	SU			12/23/14 19:00	1
Total Organic Carbon	**2.8**		1.0	0.33	mg/L			01/02/15 15:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**2.6**		1.0	0.33	mg/L			01/06/15 15:43	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-12.56-20141222-W
Date Collected: 12/22/14 10:10
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4-Dinitrophenol	ND	*	4.8	0.96	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
3-Nitroaniline	ND		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 18:51	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/29/14 17:27	01/08/15 18:51	1
Acenaphthene	ND		0.096	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Anthracene	**0.014**	**J ***	0.038	0.0096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzo[a]anthracene	**0.089**		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzo[a]pyrene	**0.12**	*****	0.038	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzo[b]fluoranthene	**0.31**		0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzo[g,h,i]perylene	**0.062**	**^**	0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzo[k]fluoranthene	**0.11**		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzoic acid	ND		2.9	0.58	ug/L		12/29/14 17:27	01/08/15 18:51	1
Benzyl alcohol	**0.13**	**J ***	0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Bis(2-ethylhexyl) phthalate	**1.3**	**J**	2.9	1.1	ug/L		12/29/14 17:27	01/08/15 18:51	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		12/29/14 17:27	01/08/15 18:51	1
Carbazole	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Chrysene	**0.15**		0.038	0.012	ug/L		12/29/14 17:27	01/08/15 18:51	1
Dibenz(a,h)anthracene	**0.019**	**J**	0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-12.56-20141222-W
Date Collected: 12/22/14 10:10
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 18:51	1
Di-n-octyl phthalate	**0.90**		0.38	0.17	ug/L		12/29/14 17:27	01/08/15 18:51	1
Fluoranthene	**0.35**		0.048	0.012	ug/L		12/29/14 17:27	01/08/15 18:51	1
Fluorene	ND		0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Indeno[1,2,3-cd]pyrene	**0.088**	^	0.058	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Isophorone	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Naphthalene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/29/14 17:27	01/08/15 18:51	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Phenanthrene	**0.14**		0.077	0.019	ug/L		12/29/14 17:27	01/08/15 18:51	1
Phenol	ND		0.58	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1
Pyrene	**0.30**		0.058	0.012	ug/L		12/29/14 17:27	01/08/15 18:51	1
2,3,4,6-Tetrachlorophenol	ND		0.67	0.096	ug/L		12/29/14 17:27	01/08/15 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*82*		*44 - 125*	*12/29/14 17:27*	*01/08/15 18:51*	*1*
2-Fluorobiphenyl	*58*		*50 - 120*	*12/29/14 17:27*	*01/08/15 18:51*	*1*
2-Fluorophenol	*71*		*30 - 134*	*12/29/14 17:27*	*01/08/15 18:51*	*1*
Nitrobenzene-d5	*60*		*59 - 120*	*12/29/14 17:27*	*01/08/15 18:51*	*1*
Phenol-d5	*57*		*52 - 120*	*12/29/14 17:27*	*01/08/15 18:51*	*1*
Terphenyl-d14	*87*		*64 - 150*	*12/29/14 17:27*	*01/08/15 18:51*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
1,2-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
1,3-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
1,4-Dichlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
1-Methylnaphthalene	ND	H	0.057	0.029	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,2'-oxybis[1-chloropropane]	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4,5-Trichlorophenol	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4,6-Trichlorophenol	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4-Dichlorophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4-Dimethylphenol	ND	H	1.9	0.29	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4-Dinitrophenol	ND	H	4.8	0.96	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,4-Dinitrotoluene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2,6-Dinitrotoluene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Chloronaphthalene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Chlorophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Methylnaphthalene	ND	H	0.19	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Methylphenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Nitroaniline	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
2-Nitrophenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-12.56-20141222-W
Date Collected: 12/22/14 10:10
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND	H	0.76	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
3,3'-Dichlorobenzidine	ND	H	1.9	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
3-Nitroaniline	ND	H	0.38	0.11	ug/L		01/13/15 16:56	01/20/15 17:17	1
4,6-Dinitro-2-methylphenol	ND	H	3.8	0.96	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Bromophenyl phenyl ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Chloro-3-methylphenol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Chloroaniline	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Chlorophenyl phenyl ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Nitroaniline	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
4-Nitrophenol	ND	H	2.9	0.96	ug/L		01/13/15 16:56	01/20/15 17:17	1
Acenaphthene	ND	H	0.096	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Acenaphthylene	ND	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Anthracene	**0.013**	**J H**	0.038	0.0096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzo[a]anthracene	**0.047**	**J H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzo[a]pyrene	**0.062**	**H**	0.038	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzo[b]fluoranthene	**0.096**	**H**	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzo[g,h,i]perylene	**0.053**	**J H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzo[k]fluoranthene	**0.065**	**H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzoic acid	ND	H	2.9	0.57	ug/L		01/13/15 16:56	01/20/15 17:17	1
Benzyl alcohol	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Bis(2-chloroethoxy)methane	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Bis(2-chloroethyl)ether	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Bis(2-ethylhexyl) phthalate	**1.8**	**J H**	2.9	1.1	ug/L		01/13/15 16:56	01/20/15 17:17	1
Butyl benzyl phthalate	ND	H	0.57	0.19	ug/L		01/13/15 16:56	01/20/15 17:17	1
Carbazole	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Chrysene	**0.091**	**H**	0.038	0.012	ug/L		01/13/15 16:56	01/20/15 17:17	1
Dibenz(a,h)anthracene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Dibenzofuran	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Diethyl phthalate	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Dimethyl phthalate	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Di-n-butyl phthalate	ND	H	0.38	0.12	ug/L		01/13/15 16:56	01/20/15 17:17	1
Di-n-octyl phthalate	**0.19**	**J H**	0.38	0.17	ug/L		01/13/15 16:56	01/20/15 17:17	1
Fluoranthene	**0.15**	**H**	0.048	0.012	ug/L		01/13/15 16:56	01/20/15 17:17	1
Fluorene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Hexachlorobenzene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Hexachlorobutadiene	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Hexachlorocyclopentadiene	ND	H ^	1.9	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Hexachloroethane	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Indeno[1,2,3-cd]pyrene	**0.072**	**H ^**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Isophorone	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Naphthalene	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Nitrobenzene	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
N-Nitrosodimethylamine	ND	H	1.9	0.19	ug/L		01/13/15 16:56	01/20/15 17:17	1
N-Nitrosodi-n-propylamine	ND	H ^	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
N-Nitrosodiphenylamine	ND	H	0.38	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Pentachlorophenol	ND	H *	0.67	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Phenanthrene	**0.085**	**H**	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:17	1
Phenol	ND	H	0.57	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1
Pyrene	**0.13**	**H**	0.057	0.012	ug/L		01/13/15 16:56	01/20/15 17:17	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-12.56-20141222-W
Date Collected: 12/22/14 10:10
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	0.67	0.096	ug/L		01/13/15 16:56	01/20/15 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*44 - 125*	*01/13/15 16:56*	*01/20/15 17:17*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*01/13/15 16:56*	*01/20/15 17:17*	*1*
2-Fluorophenol	*80*		*30 - 134*	*01/13/15 16:56*	*01/20/15 17:17*	*1*
Nitrobenzene-d5	*91*		*59 - 120*	*01/13/15 16:56*	*01/20/15 17:17*	*1*
Phenol-d5	*87*		*52 - 120*	*01/13/15 16:56*	*01/20/15 17:17*	*1*
Terphenyl-d14	*94*		*64 - 150*	*01/13/15 16:56*	*01/20/15 17:17*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00083**	**J**	0.0010	0.00075	mg/L		01/16/15 11:25	01/19/15 10:29	1
Antimony	**0.00017**	**J**	0.00040	0.000080	mg/L		01/16/15 11:25	01/19/15 10:29	1
Beryllium	ND		0.00040	0.00010	mg/L		01/16/15 11:25	01/19/15 10:29	1
Cadmium	ND		0.00040	0.000028	mg/L		01/16/15 11:25	01/19/15 10:29	1
Chromium	**0.00045**		0.00040	0.00027	mg/L		01/16/15 11:25	01/19/15 10:29	1
Copper	**0.0015**		0.0010	0.00011	mg/L		01/16/15 11:25	01/19/15 10:29	1
Lead	**0.00017**	**J**	0.00040	0.000034	mg/L		01/16/15 11:25	01/19/15 10:29	1
Nickel	**0.0013**	**J**	0.0030	0.00040	mg/L		01/16/15 11:25	01/19/15 10:29	1
Selenium	ND		0.0010	0.00071	mg/L		01/16/15 11:25	01/19/15 10:29	1
Silver	ND		0.00040	0.000030	mg/L		01/16/15 11:25	01/19/15 10:29	1
Thallium	ND		0.0010	0.00028	mg/L		01/16/15 11:25	01/19/15 10:29	1
Zinc	**0.017**		0.0040	0.0019	mg/L		01/16/15 11:25	01/19/15 10:29	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 13:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 13:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**1700**		10	10	umhos/cm			12/24/14 14:43	1
Chloride	**460**		9.0	3.0	mg/L			01/08/15 10:25	10
Nitrate as N	**0.49**	**J**	0.90	0.20	mg/L			12/23/14 20:07	1
Sulfate	**64**		1.2	0.40	mg/L			01/07/15 19:35	1
Alkalinity	**27**		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	**27**		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	ND		10	10	mg/L			12/24/14 17:05	1
pH	**7.03**	**HF**	0.0100	0.0100	SU			12/23/14 19:01	1
Total Organic Carbon	**2.9**		1.0	0.33	mg/L			01/02/15 15:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**3.4**		1.0	0.33	mg/L			01/06/15 15:43	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-1.32-20141222-W
Date Collected: 12/22/14 11:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4-Dinitrophenol	ND	*	4.7	0.95	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,6-Dinitrotoluene	**0.27**	**J**	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/29/14 17:27	01/08/15 19:16	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.95	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
4-Nitrophenol	ND		2.8	0.95	ug/L		12/29/14 17:27	01/08/15 19:16	1
Acenaphthene	ND		0.095	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Anthracene	**0.013**	**J ***	0.038	0.0095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzo[a]anthracene	**0.033**	**J**	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzo[a]pyrene	**0.051**	****	0.038	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzo[b]fluoranthene	**0.11**		0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzo[g,h,i]perylene	**0.025**	**J ^**	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzo[k]fluoranthene	**0.024**	**J**	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzoic acid	ND		2.8	0.57	ug/L		12/29/14 17:27	01/08/15 19:16	1
Benzyl alcohol	**0.13**	**J ***	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Bis(2-ethylhexyl) phthalate	ND		2.8	1.1	ug/L		12/29/14 17:27	01/08/15 19:16	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/29/14 17:27	01/08/15 19:16	1
Carbazole	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Chrysene	**0.072**		0.038	0.012	ug/L		12/29/14 17:27	01/08/15 19:16	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-1.32-20141222-W
Date Collected: 12/22/14 11:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 19:16	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/29/14 17:27	01/08/15 19:16	1
Fluoranthene	**0.13**		0.047	0.012	ug/L		12/29/14 17:27	01/08/15 19:16	1
Fluorene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Indeno[1,2,3-cd]pyrene	**0.025**	**J ^**	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Isophorone	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Naphthalene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/29/14 17:27	01/08/15 19:16	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Pentachlorophenol	**0.14**	**J**	0.66	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Phenanthrene	**0.048**	**J**	0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:16	1
Phenol	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1
Pyrene	**0.11**		0.057	0.012	ug/L		12/29/14 17:27	01/08/15 19:16	1
2,3,4,6-Tetrachlorophenol	ND		0.66	0.095	ug/L		12/29/14 17:27	01/08/15 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*105*		*44 - 125*	*12/29/14 17:27*	*01/08/15 19:16*	*1*
2-Fluorobiphenyl	*75*		*50 - 120*	*12/29/14 17:27*	*01/08/15 19:16*	*1*
2-Fluorophenol	*62*		*30 - 134*	*12/29/14 17:27*	*01/08/15 19:16*	*1*
Nitrobenzene-d5	*75*		*59 - 120*	*12/29/14 17:27*	*01/08/15 19:16*	*1*
Phenol-d5	*69*		*52 - 120*	*12/29/14 17:27*	*01/08/15 19:16*	*1*
Terphenyl-d14	*95*		*64 - 150*	*12/29/14 17:27*	*01/08/15 19:16*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
1,2-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
1,3-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
1,4-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
1-Methylnaphthalene	ND	H	0.057	0.029	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,2'-oxybis[1-chloropropane]	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4,5-Trichlorophenol	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4,6-Trichlorophenol	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4-Dichlorophenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4-Dimethylphenol	ND	H	1.9	0.29	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4-Dinitrophenol	ND	H	4.8	0.95	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,4-Dinitrotoluene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2,6-Dinitrotoluene	**0.28**	**J H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Chloronaphthalene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Chlorophenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Methylnaphthalene	**0.019**	**J H**	0.19	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Methylphenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Nitroaniline	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
2-Nitrophenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-1.32-20141222-W
Date Collected: 12/22/14 11:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	0.22	J H	0.76	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
3,3'-Dichlorobenzidine	ND	H	1.9	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
3-Nitroaniline	ND	H	0.38	0.11	ug/L		01/13/15 16:56	01/20/15 17:42	1
4,6-Dinitro-2-methylphenol	ND	H	3.8	0.95	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Bromophenyl phenyl ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Chloro-3-methylphenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Chloroaniline	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Chlorophenyl phenyl ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Nitroaniline	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
4-Nitrophenol	ND	H	2.9	0.95	ug/L		01/13/15 16:56	01/20/15 17:42	1
Acenaphthene	0.024	J H	0.095	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Acenaphthylene	0.023	J H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Anthracene	0.055	H	0.038	0.0095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzo[a]anthracene	0.18	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzo[a]pyrene	0.31	H	0.038	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzo[b]fluoranthene	0.52	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzo[g,h,i]perylene	0.16	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzo[k]fluoranthene	0.24	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzoic acid	1.3	J H	2.9	0.57	ug/L		01/13/15 16:56	01/20/15 17:42	1
Benzyl alcohol	0.61	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Bis(2-chloroethoxy)methane	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Bis(2-chloroethyl)ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Bis(2-ethylhexyl) phthalate	7.3	H	2.9	1.1	ug/L		01/13/15 16:56	01/20/15 17:42	1
Butyl benzyl phthalate	ND	H	0.57	0.19	ug/L		01/13/15 16:56	01/20/15 17:42	1
Carbazole	0.17	J H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Chrysene	0.42	H	0.038	0.012	ug/L		01/13/15 16:56	01/20/15 17:42	1
Dibenz(a,h)anthracene	0.035	J H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Dibenzofuran	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Diethyl phthalate	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Dimethyl phthalate	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Di-n-butyl phthalate	0.12	J H	0.38	0.12	ug/L		01/13/15 16:56	01/20/15 17:42	1
Di-n-octyl phthalate	0.22	J H	0.38	0.17	ug/L		01/13/15 16:56	01/20/15 17:42	1
Fluoranthene	0.76	H	0.048	0.012	ug/L		01/13/15 16:56	01/20/15 17:42	1
Fluorene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Hexachlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Hexachlorobutadiene	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Hexachlorocyclopentadiene	ND	H ^	1.9	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Hexachloroethane	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Indeno[1,2,3-cd]pyrene	0.18	H ^	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Isophorone	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Naphthalene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Nitrobenzene	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
N-Nitrosodimethylamine	ND	H	1.9	0.19	ug/L		01/13/15 16:56	01/20/15 17:42	1
N-Nitrosodi-n-propylamine	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
N-Nitrosodiphenylamine	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Pentachlorophenol	0.17	J H *	0.67	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Phenanthrene	0.41	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 17:42	1
Phenol	0.14	J H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1
Pyrene	0.69	H	0.057	0.012	ug/L		01/13/15 16:56	01/20/15 17:42	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-MH-1.32-20141222-W
Date Collected: 12/22/14 11:40
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	0.67	0.095	ug/L		01/13/15 16:56	01/20/15 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*105*		*44 - 125*	*01/13/15 16:56*	*01/20/15 17:42*	*1*
2-Fluorobiphenyl	*86*		*50 - 120*	*01/13/15 16:56*	*01/20/15 17:42*	*1*
2-Fluorophenol	*79*		*30 - 134*	*01/13/15 16:56*	*01/20/15 17:42*	*1*
Nitrobenzene-d5	*99*		*59 - 120*	*01/13/15 16:56*	*01/20/15 17:42*	*1*
Phenol-d5	*91*		*52 - 120*	*01/13/15 16:56*	*01/20/15 17:42*	*1*
Terphenyl-d14	*98*		*64 - 150*	*01/13/15 16:56*	*01/20/15 17:42*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00075	mg/L		01/16/15 11:25	01/19/15 10:32	1
Antimony	**0.0033**		0.00040	0.000080	mg/L		01/16/15 11:25	01/19/15 10:32	1
Beryllium	ND		0.00040	0.00010	mg/L		01/16/15 11:25	01/19/15 10:32	1
Cadmium	**0.00018**	**J**	0.00040	0.000028	mg/L		01/16/15 11:25	01/19/15 10:32	1
Chromium	**0.00077**		0.00040	0.00027	mg/L		01/16/15 11:25	01/19/15 10:32	1
Copper	**0.0058**		0.0010	0.00011	mg/L		01/16/15 11:25	01/19/15 10:32	1
Lead	**0.0024**		0.00040	0.000034	mg/L		01/16/15 11:25	01/19/15 10:32	1
Nickel	**0.0017**	**J**	0.0030	0.00040	mg/L		01/16/15 11:25	01/19/15 10:32	1
Selenium	ND		0.0010	0.00071	mg/L		01/16/15 11:25	01/19/15 10:32	1
Silver	ND		0.00040	0.000030	mg/L		01/16/15 11:25	01/19/15 10:32	1
Thallium	ND		0.0010	0.00028	mg/L		01/16/15 11:25	01/19/15 10:32	1
Zinc	**0.054**		0.0040	0.0019	mg/L		01/16/15 11:25	01/19/15 10:32	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 13:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**52**		10	10	umhos/cm			12/24/14 14:43	1
Chloride	**1.1**		0.90	0.30	mg/L			01/07/15 19:50	1
Nitrate as N	**0.26**	**J**	0.90	0.20	mg/L			12/23/14 20:21	1
Sulfate	**0.65**	**J**	1.2	0.40	mg/L			01/07/15 19:50	1
Alkalinity	**19**		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	**19**		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	ND		10	10	mg/L			12/24/14 17:05	1
pH	**6.87**	**HF**	0.0100	0.0100	SU			12/23/14 19:03	1
Total Organic Carbon	**4.4**		1.0	0.33	mg/L			01/02/15 15:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**4.7**		1.0	0.33	mg/L			01/06/15 15:43	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,2'-oxybis[1-chloropropane]	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4-Dinitrophenol	ND	*	4.8	0.95	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Methylnaphthalene	**0.027**	**J**	0.19	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Methylphenol	**0.11**	**J**	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
2-Nitrophenol	**0.096**	**J**	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
3 & 4 Methylphenol	**0.44**	**J**	0.76	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/29/14 17:27	01/08/15 19:41	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.95	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/29/14 17:27	01/08/15 19:41	1
Acenaphthene	ND		0.095	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Anthracene	ND	*	0.038	0.0095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzo[a]pyrene	ND	*	0.038	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzo[g,h,i]perylene	ND	^	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzoic acid	**5.3**		2.9	0.57	ug/L		12/29/14 17:27	01/08/15 19:41	1
Benzyl alcohol	**2.1**	*****	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/29/14 17:27	01/08/15 19:41	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/29/14 17:27	01/08/15 19:41	1
Carbazole	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Chrysene	ND		0.038	0.012	ug/L		12/29/14 17:27	01/08/15 19:41	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Diethyl phthalate	**9.4**		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Dimethyl phthalate	**1.5**		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.93**		0.38	0.12	ug/L		12/29/14 17:27	01/08/15 19:41	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/29/14 17:27	01/08/15 19:41	1
Fluoranthene	ND		0.048	0.012	ug/L		12/29/14 17:27	01/08/15 19:41	1
Fluorene	**0.021**	**J**	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Indeno[1,2,3-cd]pyrene	ND	^	0.057	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Isophorone	**0.18**	**J**	0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Naphthalene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
N-Nitrosodimethylamine	ND		1.9	0.19	ug/L		12/29/14 17:27	01/08/15 19:41	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Pentachlorophenol	ND		0.67	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Phenanthrene	ND		0.076	0.019	ug/L		12/29/14 17:27	01/08/15 19:41	1
Phenol	**3.6**		0.57	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1
Pyrene	ND		0.057	0.012	ug/L		12/29/14 17:27	01/08/15 19:41	1
2,3,4,6-Tetrachlorophenol	ND		0.67	0.095	ug/L		12/29/14 17:27	01/08/15 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*93*		*44 - 125*	*12/29/14 17:27*	*01/08/15 19:41*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/29/14 17:27*	*01/08/15 19:41*	*1*
2-Fluorophenol	*99*		*30 - 134*	*12/29/14 17:27*	*01/08/15 19:41*	*1*
Nitrobenzene-d5	*89*		*59 - 120*	*12/29/14 17:27*	*01/08/15 19:41*	*1*
Phenol-d5	*94*		*52 - 120*	*12/29/14 17:27*	*01/08/15 19:41*	*1*
Terphenyl-d14	*115*		*64 - 150*	*12/29/14 17:27*	*01/08/15 19:41*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
1,2-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
1,3-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
1,4-Dichlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
1-Methylnaphthalene	ND	H	0.057	0.028	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,2'-oxybis[1-chloropropane]	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4,5-Trichlorophenol	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4,6-Trichlorophenol	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4-Dichlorophenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4-Dimethylphenol	ND	H	1.9	0.28	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4-Dinitrophenol	ND	H	4.7	0.95	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,4-Dinitrotoluene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2,6-Dinitrotoluene	**0.78**	**H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Chloronaphthalene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Chlorophenol	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Methylnaphthalene	**0.038**	**J H**	0.19	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Methylphenol	**0.16**	**J H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Nitroaniline	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
2-Nitrophenol	**0.13**	**J H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	**0.45**	**J H**	0.76	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
3,3'-Dichlorobenzidine	ND	H	1.9	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
3-Nitroaniline	ND	H	0.38	0.11	ug/L		01/13/15 16:56	01/20/15 18:07	1
4,6-Dinitro-2-methylphenol	ND	H	3.8	0.95	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Bromophenyl phenyl ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Chloro-3-methylphenol	**0.35**	**J H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Chloroaniline	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Chlorophenyl phenyl ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Nitroaniline	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
4-Nitrophenol	ND	H	2.8	0.95	ug/L		01/13/15 16:56	01/20/15 18:07	1
Acenaphthene	ND	H	0.095	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Acenaphthylene	ND	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Anthracene	ND	H	0.038	0.0095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzo[a]anthracene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzo[a]pyrene	ND	H	0.038	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzo[b]fluoranthene	ND	H	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzo[g,h,i]perylene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzo[k]fluoranthene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzoic acid	**5.2**	**H**	2.8	0.57	ug/L		01/13/15 16:56	01/20/15 18:07	1
Benzyl alcohol	**2.1**	**H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Bis(2-chloroethoxy)methane	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Bis(2-chloroethyl)ether	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Bis(2-ethylhexyl) phthalate	ND	H	2.8	1.1	ug/L		01/13/15 16:56	01/20/15 18:07	1
Butyl benzyl phthalate	ND	H	0.57	0.19	ug/L		01/13/15 16:56	01/20/15 18:07	1
Carbazole	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Chrysene	ND	H	0.038	0.012	ug/L		01/13/15 16:56	01/20/15 18:07	1
Dibenz(a,h)anthracene	ND	H	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Dibenzofuran	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Diethyl phthalate	**10**	**H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Dimethyl phthalate	**1.6**	**H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Di-n-butyl phthalate	**0.95**	**H**	0.38	0.12	ug/L		01/13/15 16:56	01/20/15 18:07	1
Di-n-octyl phthalate	ND	H	0.38	0.17	ug/L		01/13/15 16:56	01/20/15 18:07	1
Fluoranthene	ND	H	0.047	0.012	ug/L		01/13/15 16:56	01/20/15 18:07	1
Fluorene	**0.021**	**J H**	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Hexachlorobenzene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Hexachlorobutadiene	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Hexachlorocyclopentadiene	ND	H ^	1.9	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Hexachloroethane	ND	H	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Indeno[1,2,3-cd]pyrene	ND	H ^	0.057	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Isophorone	**0.22**	**J H**	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Naphthalene	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Nitrobenzene	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
N-Nitrosodimethylamine	ND	H	1.9	0.19	ug/L		01/13/15 16:56	01/20/15 18:07	1
N-Nitrosodi-n-propylamine	ND	H ^	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
N-Nitrosodiphenylamine	ND	H	0.38	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Pentachlorophenol	ND	H *	0.66	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Phenanthrene	**0.019**	**J H**	0.076	0.019	ug/L		01/13/15 16:56	01/20/15 18:07	1
Phenol	**3.6**	**H**	0.57	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1
Pyrene	ND	H	0.057	0.012	ug/L		01/13/15 16:56	01/20/15 18:07	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	0.66	0.095	ug/L		01/13/15 16:56	01/20/15 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*114*		*44 - 125*	*01/13/15 16:56*	*01/20/15 18:07*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*01/13/15 16:56*	*01/20/15 18:07*	*1*
2-Fluorophenol	*89*		*30 - 134*	*01/13/15 16:56*	*01/20/15 18:07*	*1*
Nitrobenzene-d5	*102*		*59 - 120*	*01/13/15 16:56*	*01/20/15 18:07*	*1*
Phenol-d5	*94*		*52 - 120*	*01/13/15 16:56*	*01/20/15 18:07*	*1*
Terphenyl-d14	*102*		*64 - 150*	*01/13/15 16:56*	*01/20/15 18:07*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.49	0.064	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1221	ND		0.49	0.067	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1232	ND		0.49	0.054	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1242	ND		0.49	0.077	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1248	ND		0.49	0.059	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1254	ND		0.49	0.078	ug/L		12/29/14 15:05	12/30/14 20:49	1
PCB-1260	ND		0.49	0.056	ug/L		12/29/14 15:05	12/30/14 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*26 - 124*	*12/29/14 15:05*	*12/30/14 20:49*	*1*
DCB Decachlorobiphenyl	*106*		*38 - 121*	*12/29/14 15:05*	*12/30/14 20:49*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		01/16/15 11:25	01/19/15 10:36	1
Antimony	ND		0.00040	0.000080	mg/L		01/16/15 11:25	01/19/15 10:36	1
Beryllium	ND		0.00040	0.00010	mg/L		01/16/15 11:25	01/19/15 10:36	1
Cadmium	ND		0.00040	0.000028	mg/L		01/16/15 11:25	01/19/15 10:36	1
Chromium	ND		0.00040	0.00027	mg/L		01/16/15 11:25	01/19/15 10:36	1
Copper	**0.00034**	**J**	0.0010	0.00011	mg/L		01/16/15 11:25	01/19/15 10:36	1
Lead	ND		0.00040	0.000034	mg/L		01/16/15 11:25	01/19/15 10:36	1
Nickel	ND		0.0030	0.00040	mg/L		01/16/15 11:25	01/19/15 10:36	1
Selenium	ND		0.0010	0.00071	mg/L		01/16/15 11:25	01/19/15 10:36	1
Silver	ND		0.00040	0.000030	mg/L		01/16/15 11:25	01/19/15 10:36	1
Thallium	ND		0.0010	0.00028	mg/L		01/16/15 11:25	01/19/15 10:36	1
Zinc	ND		0.0040	0.0019	mg/L		01/16/15 11:25	01/19/15 10:36	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		12/29/14 11:05	12/29/14 16:01	1
Antimony	ND		0.00040	0.000080	mg/L		12/29/14 11:05	12/29/14 16:01	1
Beryllium	ND		0.00040	0.00010	mg/L		12/29/14 11:05	12/29/14 16:01	1
Cadmium	ND		0.00040	0.000028	mg/L		12/29/14 11:05	12/29/14 16:01	1
Chromium	ND		0.00040	0.00027	mg/L		12/29/14 11:05	12/29/14 16:01	1
Copper	**0.00016**	**J**	0.0010	0.00011	mg/L		12/29/14 11:05	12/29/14 16:01	1
Lead	ND		0.00040	0.000034	mg/L		12/29/14 11:05	12/29/14 16:01	1
Nickel	ND		0.0030	0.00040	mg/L		12/29/14 11:05	12/29/14 16:01	1
Selenium	ND		0.0010	0.00071	mg/L		12/29/14 11:05	12/29/14 16:01	1
Silver	ND		0.00040	0.000030	mg/L		12/29/14 11:05	12/29/14 16:01	1

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00028	mg/L		12/29/14 11:05	12/29/14 16:01	1
Zinc	ND		0.0040	0.0019	mg/L		12/29/14 11:05	12/29/14 16:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 13:14	1

Method: 7470A - Mercury (Dissolved) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		01/07/15 10:17	01/07/15 13:58	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-179106/1-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/29/14 17:27	01/06/15 11:36	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/29/14 17:27	01/06/15 11:36	1
Acenaphthene	ND		0.10	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Anthracene	ND		0.040	0.010	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzo[g,h,i]perylene	ND	^	0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzoic acid	ND		3.0	0.60	ug/L		12/29/14 17:27	01/06/15 11:36	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/29/14 17:27	01/06/15 11:36	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/29/14 17:27	01/06/15 11:36	1
Carbazole	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Chrysene	ND		0.040	0.013	ug/L		12/29/14 17:27	01/06/15 11:36	1
Dibenz(a,h)anthracene	ND	^	0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-179106/1-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/29/14 17:27	01/06/15 11:36	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/29/14 17:27	01/06/15 11:36	1
Fluoranthene	ND		0.050	0.013	ug/L		12/29/14 17:27	01/06/15 11:36	1
Fluorene	ND		0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Isophorone	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Naphthalene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		12/29/14 17:27	01/06/15 11:36	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Phenanthrene	ND		0.080	0.020	ug/L		12/29/14 17:27	01/06/15 11:36	1
Phenol	ND		0.60	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1
Pyrene	ND		0.060	0.013	ug/L		12/29/14 17:27	01/06/15 11:36	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		12/29/14 17:27	01/06/15 11:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*82*		*44 - 125*	*12/29/14 17:27*	*01/06/15 11:36*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/29/14 17:27*	*01/06/15 11:36*	*1*
2-Fluorophenol	*74*		*30 - 134*	*12/29/14 17:27*	*01/06/15 11:36*	*1*
Nitrobenzene-d5	*78*		*59 - 120*	*12/29/14 17:27*	*01/06/15 11:36*	*1*
Phenol-d5	*77*		*52 - 120*	*12/29/14 17:27*	*01/06/15 11:36*	*1*
Terphenyl-d14	*90*		*64 - 150*	*12/29/14 17:27*	*01/06/15 11:36*	*1*

Lab Sample ID: LCS 580-179106/2-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.58		ug/L		79	40 - 125
1,2-Dichlorobenzene	2.00	1.53		ug/L		76	44 - 125
1,3-Dichlorobenzene	2.00	1.36		ug/L		68	40 - 125
1,4-Dichlorobenzene	2.00	1.46		ug/L		73	40 - 125
1-Methylnaphthalene	2.00	1.69		ug/L		84	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.68		ug/L		84	44 - 130
2,4,5-Trichlorophenol	2.00	2.11		ug/L		105	66 - 130
2,4,6-Trichlorophenol	2.00	1.82		ug/L		91	55 - 140
2,4-Dichlorophenol	2.00	1.93		ug/L		97	50 - 140
2,4-Dimethylphenol	2.00	1.27	J	ug/L		64	30 - 135
2,4-Dinitrophenol	4.00	1.25	J	ug/L		31	24 - 146
2,4-Dinitrotoluene	2.00	1.95		ug/L		98	73 - 126
2,6-Dinitrotoluene	2.00	1.94		ug/L		97	67 - 134

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-179106/2-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	2.00	1.86		ug/L		93	55 - 125
2-Chlorophenol	2.00	1.79		ug/L		90	57 - 125
2-Methylnaphthalene	2.00	1.64		ug/L		82	56 - 125
2-Methylphenol	2.00	1.56		ug/L		78	60 - 130
2-Nitroaniline	2.00	2.07		ug/L		103	52 - 140
2-Nitrophenol	2.00	1.38		ug/L		69	55 - 140
3 & 4 Methylphenol	2.00	1.68		ug/L		84	60 - 130
3,3'-Dichlorobenzidine	4.00	ND	*	ug/L		0.3	20 - 175
3-Nitroaniline	2.00	0.534		ug/L		27	22 - 124
4,6-Dinitro-2-methylphenol	4.00	1.45	J *	ug/L		36	50 - 136
4-Bromophenyl phenyl ether	2.00	1.84		ug/L		92	62 - 132
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	65 - 145
4-Chloroaniline	2.00	ND	*	ug/L		0.8	20 - 150
4-Chlorophenyl phenyl ether	2.00	1.81		ug/L		91	59 - 125
4-Nitroaniline	2.00	1.09		ug/L		54	49 - 125
4-Nitrophenol	4.00	3.72		ug/L		93	35 - 153
Acenaphthene	2.00	1.81		ug/L		90	63 - 125
Acenaphthylene	2.00	1.27		ug/L		63	62 - 125
Anthracene	2.00	0.744	*	ug/L		37	50 - 125
Benzo[a]anthracene	2.00	1.38		ug/L		69	65 - 125
Benzo[a]pyrene	2.00	0.666	*	ug/L		33	45 - 125
Benzo[b]fluoranthene	2.00	2.13		ug/L		106	70 - 129
Benzo[g,h,i]perylene	2.00	2.24	^	ug/L		112	65 - 153
Benzo[k]fluoranthene	2.00	1.87		ug/L		93	70 - 123
Benzoic acid	4.00	3.24		ug/L		81	20 - 144
Benzyl alcohol	2.00	2.01		ug/L		101	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.68		ug/L		84	59 - 125
Bis(2-chloroethyl)ether	2.00	1.59		ug/L		79	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.94	J	ug/L		147	70 - 185
Butyl benzyl phthalate	2.00	2.06		ug/L		103	60 - 167
Carbazole	2.00	2.03		ug/L		102	75 - 142
Chrysene	2.00	1.71		ug/L		85	70 - 125
Dibenz(a,h)anthracene	2.00	2.20	^	ug/L		110	69 - 154
Dibenzofuran	2.00	1.82		ug/L		91	60 - 125
Diethyl phthalate	2.00	1.85		ug/L		93	60 - 150
Dimethyl phthalate	2.00	1.93		ug/L		96	65 - 155
Di-n-butyl phthalate	2.00	2.25		ug/L		112	55 - 167
Di-n-octyl phthalate	2.00	2.31		ug/L		115	55 - 150
Fluoranthene	2.00	1.81		ug/L		90	70 - 145
Fluorene	2.00	1.80		ug/L		90	69 - 125
Hexachlorobenzene	2.00	2.10		ug/L		105	61 - 125
Hexachlorobutadiene	2.00	1.38		ug/L		69	25 - 125
Hexachlorocyclopentadiene	2.00	0.735	J	ug/L		37	20 - 125
Hexachloroethane	2.00	1.18		ug/L		59	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.28		ug/L		114	70 - 136
Isophorone	2.00	1.92		ug/L		96	64 - 125
Naphthalene	2.00	1.62		ug/L		81	56 - 125
Nitrobenzene	2.00	1.90		ug/L		95	62 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-179106/2-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodimethylamine	2.00	1.78	J	ug/L		89	33 - 143
N-Nitrosodi-n-propylamine	2.00	1.90		ug/L		95	60 - 120
N-Nitrosodiphenylamine	2.00	1.49		ug/L		74	40 - 135
Pentachlorophenol	4.00	2.37		ug/L		59	20 - 145
Phenanthrene	2.00	1.86		ug/L		93	70 - 125
Phenol	2.00	1.65		ug/L		83	53 - 130
Pyrene	2.00	1.80		ug/L		90	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	1.86		ug/L		93	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*44 - 125*
2-Fluorobiphenyl	*84*		*50 - 120*
2-Fluorophenol	*83*		*30 - 134*
Nitrobenzene-d5	*91*		*59 - 120*
Phenol-d5	*85*		*52 - 120*
Terphenyl-d14	*90*		*64 - 150*

Lab Sample ID: LCSD 580-179106/3-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.58		ug/L		79	40 - 125	0	20
1,2-Dichlorobenzene	2.00	1.54		ug/L		77	44 - 125	1	20
1,3-Dichlorobenzene	2.00	1.28		ug/L		64	40 - 125	6	20
1,4-Dichlorobenzene	2.00	1.37		ug/L		69	40 - 125	6	20
1-Methylnaphthalene	2.00	1.60		ug/L		80	54 - 125	5	20
2,2'-oxybis[1-chloropropane]	2.00	1.67		ug/L		84	44 - 130	1	20
2,4,5-Trichlorophenol	2.00	2.02		ug/L		101	66 - 130	4	20
2,4,6-Trichlorophenol	2.00	1.84		ug/L		92	55 - 140	1	20
2,4-Dichlorophenol	2.00	1.86		ug/L		93	50 - 140	4	20
2,4-Dimethylphenol	2.00	1.32	J	ug/L		66	30 - 135	4	20
2,4-Dinitrophenol	4.00	1.57	J *	ug/L		39	24 - 146	23	20
2,4-Dinitrotoluene	2.00	1.92		ug/L		96	73 - 126	2	20
2,6-Dinitrotoluene	2.00	1.91		ug/L		95	67 - 134	2	20
2-Chloronaphthalene	2.00	1.76		ug/L		88	55 - 125	6	20
2-Chlorophenol	2.00	1.78		ug/L		89	57 - 125	1	20
2-Methylnaphthalene	2.00	1.60		ug/L		80	56 - 125	3	20
2-Methylphenol	2.00	1.57		ug/L		79	60 - 130	1	20
2-Nitroaniline	2.00	2.01		ug/L		101	52 - 140	3	20
2-Nitrophenol	2.00	1.53		ug/L		76	55 - 140	10	20
3 & 4 Methylphenol	2.00	1.66		ug/L		83	60 - 130	1	20
3,3'-Dichlorobenzidine	4.00	ND	*	ug/L		1	20 - 175	108	20
3-Nitroaniline	2.00	0.610		ug/L		30	22 - 124	13	20
4,6-Dinitro-2-methylphenol	4.00	2.04	J *	ug/L		51	50 - 136	34	20
4-Bromophenyl phenyl ether	2.00	1.94		ug/L		97	62 - 132	5	20
4-Chloro-3-methylphenol	2.00	1.90		ug/L		95	65 - 145	6	20
4-Chloroaniline	2.00	ND	*	ug/L		0.8	20 - 150	4	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-179106/3-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179106

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chlorophenyl phenyl ether			2.00	1.73		ug/L		87	59 - 125	4	20
4-Nitroaniline			2.00	1.17		ug/L		58	49 - 125	7	20
4-Nitrophenol			4.00	3.56		ug/L		89	35 - 153	4	20
Acenaphthene			2.00	1.71		ug/L		86	63 - 125	6	20
Acenaphthylene			2.00	1.26		ug/L		63	62 - 125	0	20
Anthracene			2.00	0.915	*	ug/L		46	50 - 125	21	20
Benzo[a]anthracene			2.00	1.48		ug/L		74	65 - 125	7	20
Benzo[a]pyrene			2.00	0.873	*	ug/L		44	45 - 125	27	20
Benzo[b]fluoranthene			2.00	2.00		ug/L		100	70 - 129	6	20
Benzo[g,h,i]perylene			2.00	2.16	^	ug/L		108	65 - 153	4	20
Benzo[k]fluoranthene			2.00	1.94		ug/L		97	70 - 123	4	20
Benzoic acid			4.00	3.82		ug/L		96	20 - 144	16	20
Benzyl alcohol			2.00	1.43	*	ug/L		71	41 - 144	34	20
Bis(2-chloroethoxy)methane			2.00	1.71		ug/L		85	59 - 125	2	20
Bis(2-chloroethyl)ether			2.00	1.57		ug/L		79	55 - 125	1	20
Bis(2-ethylhexyl) phthalate			2.00	2.44	J	ug/L		122	70 - 185	19	20
Butyl benzyl phthalate			2.00	2.01		ug/L		100	60 - 167	2	20
Carbazole			2.00	1.97		ug/L		98	75 - 142	3	20
Chrysene			2.00	1.58		ug/L		79	70 - 125	8	20
Dibenz(a,h)anthracene			2.00	2.11	^	ug/L		105	69 - 154	4	20
Dibenzofuran			2.00	1.77		ug/L		89	60 - 125	2	20
Diethyl phthalate			2.00	1.76		ug/L		88	60 - 150	5	20
Dimethyl phthalate			2.00	1.86		ug/L		93	65 - 155	3	20
Di-n-butyl phthalate			2.00	2.15		ug/L		107	55 - 167	4	20
Di-n-octyl phthalate			2.00	2.22		ug/L		111	55 - 150	4	20
Fluoranthene			2.00	1.82		ug/L		91	70 - 145	1	20
Fluorene			2.00	1.74		ug/L		87	69 - 125	4	20
Hexachlorobenzene			2.00	2.15		ug/L		107	61 - 125	2	20
Hexachlorobutadiene			2.00	1.29		ug/L		65	25 - 125	6	20
Hexachlorocyclopentadiene			2.00	0.658	J	ug/L		33	20 - 125	11	20
Hexachloroethane			2.00	1.19		ug/L		60	30 - 125	1	20
Indeno[1,2,3-cd]pyrene			2.00	2.13		ug/L		106	70 - 136	7	20
Isophorone			2.00	1.80		ug/L		90	64 - 125	7	20
Naphthalene			2.00	1.59		ug/L		80	56 - 125	2	20
Nitrobenzene			2.00	1.92		ug/L		96	62 - 125	1	20
N-Nitrosodimethylamine			2.00	1.86	J	ug/L		93	33 - 143	5	20
N-Nitrosodi-n-propylamine			2.00	1.85		ug/L		92	60 - 120	3	20
N-Nitrosodiphenylamine			2.00	1.56		ug/L		78	40 - 135	5	20
Pentachlorophenol			4.00	2.41		ug/L		60	20 - 145	2	20
Phenanthrene			2.00	1.88		ug/L		94	70 - 125	1	20
Phenol			2.00	1.63		ug/L		82	53 - 130	1	20
Pyrene			2.00	1.81		ug/L		90	70 - 133	0	20
2,3,4,6-Tetrachlorophenol			2.00	1.75		ug/L		87	60 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*44 - 125*
2-Fluorobiphenyl	*76*		*50 - 120*
2-Fluorophenol	*78*		*30 - 134*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-179106/3-A
Matrix: Water
Analysis Batch: 179536

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179106

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	85		59 - 120
Phenol-d5	81		52 - 120
Terphenyl-d14	87		64 - 150

Lab Sample ID: MB 580-180131/1-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Chlorophenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Methylphenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Nitroaniline	ND	^	0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
2-Nitrophenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
3-Nitroaniline	ND		0.40	0.12	ug/L		01/13/15 16:56	01/16/15 16:21	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Chloroaniline	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Nitroaniline	ND		0.60	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
4-Nitrophenol	ND		3.0	1.0	ug/L		01/13/15 16:56	01/16/15 16:21	1
Acenaphthene	ND		0.10	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Acenaphthylene	ND		0.080	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Anthracene	ND		0.040	0.010	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzoic acid	ND		3.0	0.60	ug/L		01/13/15 16:56	01/16/15 16:21	1
Benzyl alcohol	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-180131/1-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		01/13/15 16:56	01/16/15 16:21	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		01/13/15 16:56	01/16/15 16:21	1
Carbazole	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Chrysene	ND		0.040	0.013	ug/L		01/13/15 16:56	01/16/15 16:21	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Dibenzofuran	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Diethyl phthalate	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		01/13/15 16:56	01/16/15 16:21	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		01/13/15 16:56	01/16/15 16:21	1
Fluoranthene	ND		0.050	0.013	ug/L		01/13/15 16:56	01/16/15 16:21	1
Fluorene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Hexachloroethane	ND		0.60	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Isophorone	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Naphthalene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Nitrobenzene	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		01/13/15 16:56	01/16/15 16:21	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Pentachlorophenol	ND		0.70	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Phenanthrene	ND		0.080	0.020	ug/L		01/13/15 16:56	01/16/15 16:21	1
Phenol	ND		0.60	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1
Pyrene	ND		0.060	0.013	ug/L		01/13/15 16:56	01/16/15 16:21	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		01/13/15 16:56	01/16/15 16:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*95*		*44 - 125*	*01/13/15 16:56*	*01/16/15 16:21*	*1*
2-Fluorobiphenyl	*87*		*50 - 120*	*01/13/15 16:56*	*01/16/15 16:21*	*1*
2-Fluorophenol	*82*		*30 - 134*	*01/13/15 16:56*	*01/16/15 16:21*	*1*
Nitrobenzene-d5	*106*		*59 - 120*	*01/13/15 16:56*	*01/16/15 16:21*	*1*
Phenol-d5	*92*		*52 - 120*	*01/13/15 16:56*	*01/16/15 16:21*	*1*
Terphenyl-d14	*108*		*64 - 150*	*01/13/15 16:56*	*01/16/15 16:21*	*1*

Lab Sample ID: LCS 580-180131/2-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	2.15		ug/L		107	40 - 125
1,2-Dichlorobenzene	2.00	1.97		ug/L		98	44 - 125
1,3-Dichlorobenzene	2.00	1.92		ug/L		96	40 - 125
1,4-Dichlorobenzene	2.00	1.96		ug/L		98	40 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-180131/2-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	1.99		ug/L		99	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.73		ug/L		87	44 - 130
2,4,5-Trichlorophenol	2.00	2.48		ug/L		124	66 - 130
2,4,6-Trichlorophenol	2.00	2.12		ug/L		106	55 - 140
2,4-Dichlorophenol	2.00	1.98		ug/L		99	50 - 140
2,4-Dimethylphenol	2.00	1.88	J	ug/L		94	30 - 135
2,4-Dinitrophenol	4.00	3.56	J	ug/L		89	24 - 146
2,4-Dinitrotoluene	2.00	2.26		ug/L		113	73 - 126
2,6-Dinitrotoluene	2.00	2.33		ug/L		117	67 - 134
2-Chloronaphthalene	2.00	2.10		ug/L		105	55 - 125
2-Chlorophenol	2.00	2.04		ug/L		102	57 - 125
2-Methylnaphthalene	2.00	1.87		ug/L		94	56 - 125
2-Methylphenol	2.00	1.79		ug/L		90	60 - 130
2-Nitroaniline	2.00	2.50	^	ug/L		125	52 - 140
2-Nitrophenol	2.00	2.11		ug/L		106	55 - 140
3 & 4 Methylphenol	2.00	1.87		ug/L		93	60 - 130
3,3'-Dichlorobenzidine	4.00	3.68		ug/L		92	20 - 175
3-Nitroaniline	2.00	1.77		ug/L		88	22 - 124
4,6-Dinitro-2-methylphenol	4.00	4.17		ug/L		104	50 - 136
4-Bromophenyl phenyl ether	2.00	2.08		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	2.10		ug/L		105	65 - 145
4-Chloroaniline	2.00	1.50		ug/L		75	20 - 150
4-Chlorophenyl phenyl ether	2.00	2.06		ug/L		103	59 - 125
4-Nitroaniline	2.00	1.85		ug/L		93	49 - 125
4-Nitrophenol	4.00	4.11		ug/L		103	35 - 153
Acenaphthene	2.00	2.09		ug/L		105	63 - 125
Acenaphthylene	2.00	1.92		ug/L		96	62 - 125
Anthracene	2.00	2.01		ug/L		101	50 - 125
Benzo[a]anthracene	2.00	1.78		ug/L		89	65 - 125
Benzo[a]pyrene	2.00	2.01		ug/L		101	45 - 125
Benzo[b]fluoranthene	2.00	2.08		ug/L		104	70 - 129
Benzo[g,h,i]perylene	2.00	2.39		ug/L		120	65 - 153
Benzo[k]fluoranthene	2.00	1.89		ug/L		94	70 - 123
Benzoic acid	4.00	2.22	J	ug/L		55	20 - 144
Benzyl alcohol	2.00	1.88		ug/L		94	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.97		ug/L		99	59 - 125
Bis(2-chloroethyl)ether	2.00	1.94		ug/L		97	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	3.07		ug/L		154	70 - 185
Butyl benzyl phthalate	2.00	2.07		ug/L		104	60 - 167
Carbazole	2.00	2.12		ug/L		106	75 - 142
Chrysene	2.00	1.87		ug/L		93	70 - 125
Dibenz(a,h)anthracene	2.00	2.32		ug/L		116	69 - 154
Dibenzofuran	2.00	2.03		ug/L		101	60 - 125
Diethyl phthalate	2.00	1.96		ug/L		98	60 - 150
Dimethyl phthalate	2.00	2.09		ug/L		105	65 - 155
Di-n-butyl phthalate	2.00	2.29		ug/L		115	55 - 167
Di-n-octyl phthalate	2.00	1.89		ug/L		95	55 - 150
Fluoranthene	2.00	1.96		ug/L		98	70 - 145

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-180131/2-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	2.00	2.00		ug/L		100	69 - 125
Hexachlorobenzene	2.00	2.22		ug/L		111	61 - 125
Hexachlorobutadiene	2.00	2.15		ug/L		107	25 - 125
Hexachlorocyclopentadiene	2.00	2.11		ug/L		106	20 - 125
Hexachloroethane	2.00	2.02		ug/L		101	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.45		ug/L		122	70 - 136
Isophorone	2.00	2.19		ug/L		110	64 - 125
Naphthalene	2.00	1.91		ug/L		95	56 - 125
Nitrobenzene	2.00	2.31		ug/L		116	62 - 125
N-Nitrosodimethylamine	2.00	1.92	J	ug/L		96	33 - 143
N-Nitrosodi-n-propylamine	2.00	2.30		ug/L		115	60 - 120
N-Nitrosodiphenylamine	2.00	1.97		ug/L		98	40 - 135
Pentachlorophenol	4.00	3.20		ug/L		80	20 - 145
Phenanthrene	2.00	2.12		ug/L		106	70 - 125
Phenol	2.00	2.00		ug/L		100	53 - 130
Pyrene	2.00	2.03		ug/L		102	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	2.12		ug/L		106	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*105*		*44 - 125*
2-Fluorobiphenyl	*91*		*50 - 120*
2-Fluorophenol	*91*		*30 - 134*
Nitrobenzene-d5	*113*		*59 - 120*
Phenol-d5	*99*		*52 - 120*
Terphenyl-d14	*102*		*64 - 150*

Lab Sample ID: LCSD 580-180131/3-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 180131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	2.12		ug/L		106	40 - 125	1	20
1,2-Dichlorobenzene	2.00	1.85		ug/L		93	44 - 125	6	20
1,3-Dichlorobenzene	2.00	1.85		ug/L		93	40 - 125	4	20
1,4-Dichlorobenzene	2.00	1.86		ug/L		93	40 - 125	5	20
1-Methylnaphthalene	2.00	1.88		ug/L		94	54 - 125	5	20
2,2'-oxybis[1-chloropropane]	2.00	1.69		ug/L		85	44 - 130	2	20
2,4,5-Trichlorophenol	2.00	2.37		ug/L		119	66 - 130	4	20
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 140	8	20
2,4-Dichlorophenol	2.00	2.00		ug/L		100	50 - 140	1	20
2,4-Dimethylphenol	2.00	1.81	J	ug/L		91	30 - 135	4	20
2,4-Dinitrophenol	4.00	2.96	J	ug/L		74	24 - 146	18	20
2,4-Dinitrotoluene	2.00	2.16		ug/L		108	73 - 126	4	20
2,6-Dinitrotoluene	2.00	2.03		ug/L		102	67 - 134	14	20
2-Chloronaphthalene	2.00	2.06		ug/L		103	55 - 125	2	20
2-Chlorophenol	2.00	1.88		ug/L		94	57 - 125	9	20
2-Methylnaphthalene	2.00	1.87		ug/L		94	56 - 125	0	20
2-Methylphenol	2.00	1.79		ug/L		89	60 - 130	0	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-180131/3-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 180131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Nitroaniline	2.00	2.32	^	ug/L		116	52 - 140	8	20
2-Nitrophenol	2.00	2.10		ug/L		105	55 - 140	1	20
3 & 4 Methylphenol	2.00	1.80		ug/L		90	60 - 130	4	20
3,3'-Dichlorobenzidine	4.00	3.93		ug/L		98	20 - 175	7	20
3-Nitroaniline	2.00	1.66		ug/L		83	22 - 124	6	20
4,6-Dinitro-2-methylphenol	4.00	4.17		ug/L		104	50 - 136	0	20
4-Bromophenyl phenyl ether	2.00	2.00		ug/L		100	62 - 132	4	20
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	65 - 145	4	20
4-Chloroaniline	2.00	1.65		ug/L		83	20 - 150	10	20
4-Chlorophenyl phenyl ether	2.00	1.89		ug/L		95	59 - 125	8	20
4-Nitroaniline	2.00	1.75		ug/L		88	49 - 125	6	20
4-Nitrophenol	4.00	3.85		ug/L		96	35 - 153	6	20
Acenaphthene	2.00	1.95		ug/L		98	63 - 125	7	20
Acenaphthylene	2.00	1.74		ug/L		87	62 - 125	10	20
Anthracene	2.00	1.93		ug/L		97	50 - 125	4	20
Benzo[a]anthracene	2.00	1.84		ug/L		92	65 - 125	4	20
Benzo[a]pyrene	2.00	2.05		ug/L		103	45 - 125	2	20
Benzo[b]fluoranthene	2.00	2.02		ug/L		101	70 - 129	3	20
Benzo[g,h,i]perylene	2.00	2.29		ug/L		115	65 - 153	4	20
Benzo[k]fluoranthene	2.00	1.93		ug/L		97	70 - 123	2	20
Benzoic acid	4.00	2.39	J	ug/L		60	20 - 144	7	20
Benzyl alcohol	2.00	1.97		ug/L		99	41 - 144	5	20
Bis(2-chloroethoxy)methane	2.00	1.93		ug/L		97	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.86		ug/L		93	55 - 125	4	20
Bis(2-ethylhexyl) phthalate	2.00	2.53	J	ug/L		126	70 - 185	20	20
Butyl benzyl phthalate	2.00	2.17		ug/L		108	60 - 167	4	20
Carbazole	2.00	2.11		ug/L		105	75 - 142	1	20
Chrysene	2.00	1.89		ug/L		94	70 - 125	1	20
Dibenz(a,h)anthracene	2.00	2.25		ug/L		112	69 - 154	3	20
Dibenzofuran	2.00	1.89		ug/L		95	60 - 125	7	20
Diethyl phthalate	2.00	1.88		ug/L		94	60 - 150	4	20
Dimethyl phthalate	2.00	2.00		ug/L		100	65 - 155	4	20
Di-n-butyl phthalate	2.00	2.22		ug/L		111	55 - 167	3	20
Di-n-octyl phthalate	2.00	2.21		ug/L		111	55 - 150	16	20
Fluoranthene	2.00	1.97		ug/L		99	70 - 145	0	20
Fluorene	2.00	1.90		ug/L		95	69 - 125	5	20
Hexachlorobenzene	2.00	2.20		ug/L		110	61 - 125	1	20
Hexachlorobutadiene	2.00	2.09		ug/L		104	25 - 125	3	20
Hexachlorocyclopentadiene	2.00	1.78	J	ug/L		89	20 - 125	17	20
Hexachloroethane	2.00	1.83		ug/L		91	30 - 125	10	20
Indeno[1,2,3-cd]pyrene	2.00	2.23		ug/L		111	70 - 136	10	20
Isophorone	2.00	2.18		ug/L		109	64 - 125	1	20
Naphthalene	2.00	1.85		ug/L		92	56 - 125	3	20
Nitrobenzene	2.00	2.24		ug/L		112	62 - 125	3	20
N-Nitrosodimethylamine	2.00	2.03		ug/L		102	33 - 143	6	20
N-Nitrosodi-n-propylamine	2.00	2.15		ug/L		107	60 - 120	7	20
N-Nitrosodiphenylamine	2.00	1.99		ug/L		99	40 - 135	1	20
Pentachlorophenol	4.00	1.86	*	ug/L		47	20 - 145	53	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-180131/3-A
Matrix: Water
Analysis Batch: 180398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 180131

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenanthrene			2.00	2.01		ug/L		100	70 - 125	6	20
Phenol			2.00	1.85		ug/L		93	53 - 130	8	20
Pyrene			2.00	2.00		ug/L		100	70 - 133	2	20
2,3,4,6-Tetrachlorophenol			2.00	2.17		ug/L		108	60 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*44 - 125*
2-Fluorobiphenyl	*86*		*50 - 120*
2-Fluorophenol	*88*		*30 - 134*
Nitrobenzene-d5	*108*		*59 - 120*
Phenol-d5	*96*		*52 - 120*
Terphenyl-d14	*102*		*64 - 150*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-179093/1-A
Matrix: Water
Analysis Batch: 179161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.065	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1221	ND		0.50	0.068	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1232	ND		0.50	0.055	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1242	ND		0.50	0.078	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1248	ND		0.50	0.060	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1254	ND		0.50	0.079	ug/L		12/29/14 15:05	12/30/14 20:04	1
PCB-1260	ND		0.50	0.057	ug/L		12/29/14 15:05	12/30/14 20:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*26 - 124*	*12/29/14 15:05*	*12/30/14 20:04*	*1*
DCB Decachlorobiphenyl	*64*		*38 - 121*	*12/29/14 15:05*	*12/30/14 20:04*	*1*

Lab Sample ID: LCS 580-179093/2-A
Matrix: Water
Analysis Batch: 179161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179093

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			0.800	0.521		ug/L		65	25 - 145
PCB-1260			0.800	0.685		ug/L		86	30 - 145

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*66*		*26 - 124*
DCB Decachlorobiphenyl	*83*		*38 - 121*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 580-179093/3-A
Matrix: Water
Analysis Batch: 179161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179093

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			0.800	0.551		ug/L		69	25 - 145	6	27
PCB-1260			0.800	0.715		ug/L		89	30 - 145	4	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*67*		*26 - 124*
DCB Decachlorobiphenyl	*70*		*38 - 121*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-179076/9-A
Matrix: Water
Analysis Batch: 179119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179076

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			0.100	0.109		mg/L		109	85 - 115		
Antimony			0.100	0.109		mg/L		109	85 - 115		
Beryllium			0.100	0.106		mg/L		106	85 - 115		
Cadmium			0.100	0.108		mg/L		108	85 - 115		
Chromium			0.100	0.106		mg/L		106	85 - 115		
Copper			0.100	0.106		mg/L		106	85 - 115		
Lead			0.100	0.110		mg/L		110	85 - 115		
Nickel			0.100	0.107		mg/L		107	85 - 115		
Selenium			0.100	0.112		mg/L		112	85 - 115		
Silver			0.100	0.106		mg/L		106	85 - 115		
Thallium			0.100	0.104		mg/L		104	85 - 115		
Zinc			0.100	0.107		mg/L		107	85 - 115		

Lab Sample ID: LCSD 580-179076/10-A
Matrix: Water
Analysis Batch: 179119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179076

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			0.100	0.110		mg/L		110	85 - 115	1	20
Antimony			0.100	0.111		mg/L		111	85 - 115	1	20
Beryllium			0.100	0.109		mg/L		109	85 - 115	2	20
Cadmium			0.100	0.109		mg/L		109	85 - 115	1	20
Chromium			0.100	0.107		mg/L		107	85 - 115	1	20
Copper			0.100	0.107		mg/L		107	85 - 115	1	20
Lead			0.100	0.109		mg/L		109	85 - 115	0	20
Nickel			0.100	0.108		mg/L		108	85 - 115	1	20
Selenium			0.100	0.112		mg/L		112	85 - 115	0	20
Silver			0.100	0.107		mg/L		107	85 - 115	1	20
Thallium			0.100	0.108		mg/L		108	85 - 115	3	20
Zinc			0.100	0.108		mg/L		108	85 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-180407/26-A
Matrix: Water
Analysis Batch: 180562

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180407

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		01/16/15 11:25	01/19/15 09:35	1
Antimony	ND		0.00040	0.000080	mg/L		01/16/15 11:25	01/19/15 09:35	1
Beryllium	ND		0.00040	0.00010	mg/L		01/16/15 11:25	01/19/15 09:35	1
Cadmium	ND		0.00040	0.000028	mg/L		01/16/15 11:25	01/19/15 09:35	1
Chromium	ND		0.00040	0.00027	mg/L		01/16/15 11:25	01/19/15 09:35	1
Copper	ND		0.0010	0.00011	mg/L		01/16/15 11:25	01/19/15 09:35	1
Lead	ND		0.00040	0.000034	mg/L		01/16/15 11:25	01/19/15 09:35	1
Nickel	ND		0.0030	0.00040	mg/L		01/16/15 11:25	01/19/15 09:35	1
Selenium	ND		0.0010	0.00071	mg/L		01/16/15 11:25	01/19/15 09:35	1
Silver	ND		0.00040	0.000030	mg/L		01/16/15 11:25	01/19/15 09:35	1
Thallium	ND		0.0010	0.00028	mg/L		01/16/15 11:25	01/19/15 09:35	1
Zinc	ND		0.0040	0.0019	mg/L		01/16/15 11:25	01/19/15 09:35	1

Lab Sample ID: LCS 580-180407/27-A
Matrix: Water
Analysis Batch: 180562

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180407

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0993		mg/L		99	85 - 115
Antimony	0.100	0.0993		mg/L		99	85 - 115
Beryllium	0.100	0.0999		mg/L		100	85 - 115
Cadmium	0.100	0.0998		mg/L		100	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.0998		mg/L		100	85 - 115
Lead	0.100	0.0994		mg/L		99	85 - 115
Nickel	0.100	0.0994		mg/L		99	85 - 115
Selenium	0.100	0.100		mg/L		100	85 - 115
Silver	0.100	0.107		mg/L		107	85 - 115
Thallium	0.100	0.103		mg/L		103	85 - 115
Zinc	0.100	0.101		mg/L		101	85 - 115

Lab Sample ID: LCSD 580-180407/28-A
Matrix: Water
Analysis Batch: 180562

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 180407

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0993		mg/L		99	85 - 115	0	20
Antimony	0.100	0.0988		mg/L		99	85 - 115	1	20
Beryllium	0.100	0.0990		mg/L		99	85 - 115	1	20
Cadmium	0.100	0.0990		mg/L		99	85 - 115	1	20
Chromium	0.100	0.101		mg/L		101	85 - 115	0	20
Copper	0.100	0.0982		mg/L		98	85 - 115	2	20
Lead	0.100	0.0998		mg/L		100	85 - 115	0	20
Nickel	0.100	0.0986		mg/L		99	85 - 115	1	20
Selenium	0.100	0.100		mg/L		100	85 - 115	0	20
Silver	0.100	0.109		mg/L		109	85 - 115	2	20
Thallium	0.100	0.102		mg/L		102	85 - 115	1	20
Zinc	0.100	0.100		mg/L		100	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-178867/4-B
Matrix: Water
Analysis Batch: 179119

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 179076

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00075	mg/L		12/29/14 11:05	12/29/14 16:24	1
Antimony	ND		0.00040	0.000080	mg/L		12/29/14 11:05	12/29/14 16:24	1
Beryllium	ND		0.00040	0.00010	mg/L		12/29/14 11:05	12/29/14 16:24	1
Cadmium	ND		0.00040	0.000028	mg/L		12/29/14 11:05	12/29/14 16:24	1
Chromium	ND		0.00040	0.00027	mg/L		12/29/14 11:05	12/29/14 16:24	1
Copper	ND		0.0010	0.00011	mg/L		12/29/14 11:05	12/29/14 16:24	1
Lead	ND		0.00040	0.000034	mg/L		12/29/14 11:05	12/29/14 16:24	1
Nickel	ND		0.0030	0.00040	mg/L		12/29/14 11:05	12/29/14 16:24	1
Selenium	ND		0.0010	0.00071	mg/L		12/29/14 11:05	12/29/14 16:24	1
Silver	ND		0.00040	0.000030	mg/L		12/29/14 11:05	12/29/14 16:24	1
Thallium	ND		0.0010	0.00028	mg/L		12/29/14 11:05	12/29/14 16:24	1
Zinc	ND		0.0040	0.0019	mg/L		12/29/14 11:05	12/29/14 16:24	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: 580-46851-1 MS
Matrix: Water
Analysis Batch: 179922

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA
Prep Batch: 179880

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00189		mg/L		95	70 - 130

Lab Sample ID: 580-46851-1 MSD
Matrix: Water
Analysis Batch: 179922

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA
Prep Batch: 179880

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00197		mg/L		98	70 - 130	4	20

Lab Sample ID: 580-46851-1 DU
Matrix: Water
Analysis Batch: 179922

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA
Prep Batch: 179880

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-179880/15-A
Matrix: Water
Analysis Batch: 179922

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179880

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000475	J	0.00020	0.000041	mg/L		01/09/15 10:28	01/09/15 12:31	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-179880/16-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179922 — **Prep Batch: 179880**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00192		mg/L		96	80 - 120		

Lab Sample ID: LCSD 580-179880/17-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179922 — **Prep Batch: 179880**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00181		mg/L		91	80 - 120	6	20

Lab Sample ID: 580-46851-1 MS — **Client Sample ID: BD-OWS-14-20141222-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179922 — **Prep Batch: 179880**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00200	0.00189		mg/L		95	80 - 120		

Lab Sample ID: 580-46851-1 MSD — **Client Sample ID: BD-OWS-14-20141222-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179922 — **Prep Batch: 179880**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00197		mg/L		98	80 - 120	4	20

Lab Sample ID: 580-46851-1 DU — **Client Sample ID: BD-OWS-14-20141222-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179922 — **Prep Batch: 179880**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 7470A - Mercury (Dissolved)

Lab Sample ID: MB 580-179655/18-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179706 — **Prep Batch: 179655**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000463	J	0.00020	0.000041	mg/L		01/07/15 10:17	01/07/15 13:09	1

Lab Sample ID: LCS 580-179655/19-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179706 — **Prep Batch: 179655**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00184		mg/L		92	80 - 120		

Method: 7470A - Mercury (Dissolved) (Continued)

Lab Sample ID: LCSD 580-179655/20-A
Matrix: Water
Analysis Batch: 179706

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179655

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00180		mg/L		90	80 - 120	2	20

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 580-178994/1
Matrix: Water
Analysis Batch: 178994

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			12/24/14 14:43	1

Lab Sample ID: LCS 580-178994/2
Matrix: Water
Analysis Batch: 178994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			500	515		umhos/cm		103	90 - 110		

Lab Sample ID: 580-46851-1 DU
Matrix: Water
Analysis Batch: 178994

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	1000			1040		umhos/cm				0.3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-179295/1
Matrix: Water
Analysis Batch: 179295

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90	0.20	mg/L			12/23/14 18:40	1

Lab Sample ID: LCS 580-179295/2
Matrix: Water
Analysis Batch: 179295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			1.80	1.89		mg/L		105	90 - 110		

Lab Sample ID: LCSD 580-179295/3
Matrix: Water
Analysis Batch: 179295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			1.80	1.89		mg/L		105	90 - 110	0	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-46851-1 MS
Matrix: Water
Analysis Batch: 179295

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	0.42	J	1.80	2.32		mg/L		106	90 - 110		

Lab Sample ID: 580-46851-1 DU
Matrix: Water
Analysis Batch: 179295

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.42	J	0.420	J	mg/L		0	10

Lab Sample ID: MB 580-179783/22
Matrix: Water
Analysis Batch: 179783

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90	0.30	mg/L			01/07/15 17:11	1
Sulfate	ND		1.2	0.40	mg/L			01/07/15 17:11	1

Lab Sample ID: LCS 580-179783/23
Matrix: Water
Analysis Batch: 179783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.00	9.15		mg/L		102	90 - 110
Sulfate	12.0	12.4		mg/L		103	90 - 110

Lab Sample ID: LCSD 580-179783/24
Matrix: Water
Analysis Batch: 179783

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.00	9.19		mg/L		102	90 - 110	0	15
Sulfate	12.0	12.6		mg/L		105	90 - 110	2	15

Lab Sample ID: 580-46851-3 MS
Matrix: Water
Analysis Batch: 179783

Client Sample ID: BD-MH-1.32-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1.1		9.00	10.8		mg/L		108	90 - 110		
Sulfate	0.65	J	12.0	13.1		mg/L		104	90 - 110		

Lab Sample ID: 580-46851-3 MSD
Matrix: Water
Analysis Batch: 179783

Client Sample ID: BD-MH-1.32-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.1		9.00	11.0		mg/L		109	90 - 110	1	15
Sulfate	0.65	J	12.0	13.3		mg/L		105	90 - 110	1	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-46851-3 DU — **Client Sample ID: BD-MH-1.32-20141222-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179783

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	1.1		1.08		mg/L		4	10
Sulfate	0.65	J	0.620	J	mg/L		5	10

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 580-179034/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100	107		mg/L		107	85 - 115

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-179002/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179002

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			12/24/14 17:05	1

Lab Sample ID: LCS 580-179002/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	30.0	30.4		mg/L		101	70.6 - 120

Lab Sample ID: 580-46851-1 DU — **Client Sample ID: BD-OWS-14-20141222-W**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179002

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	20		ND		mg/L		NC	20

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-179363/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 179363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			01/02/15 15:11	1

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 580-179363/2
Matrix: Water
Analysis Batch: 179363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	14.0		mg/L		93	85 - 115

Lab Sample ID: 580-46851-1 MS
Matrix: Water
Analysis Batch: 179363

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.8		10.0	11.8		mg/L		89	85 - 115

Lab Sample ID: 580-46851-1 MSD
Matrix: Water
Analysis Batch: 179363

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.8		10.0	11.6		mg/L		87	85 - 115	2	20

Lab Sample ID: 580-46851-1 DU
Matrix: Water
Analysis Batch: 179363

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.8		2.51		mg/L		12	20

Lab Sample ID: MB 580-179607/1
Matrix: Water
Analysis Batch: 179607

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			01/06/15 15:43	1

Lab Sample ID: LCS 580-179607/2
Matrix: Water
Analysis Batch: 179607

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	15.0		mg/L		100	85 - 115

Lab Sample ID: 580-46851-1 MS
Matrix: Water
Analysis Batch: 179607

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.6		10.0	12.7		mg/L		101	85 - 115

Lab Sample ID: 580-46851-1 MSD
Matrix: Water
Analysis Batch: 179607

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.6		10.0	12.7		mg/L		101	85 - 115	0	20

QC Sample Results

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Lab Sample ID: 580-46851-1 DU
Matrix: Water
Analysis Batch: 179607

Client Sample ID: BD-OWS-14-20141222-W
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	2.6			2.85		mg/L				8	20

Lab Chronicle

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: BD-OWS-14-20141222-W

Lab Sample ID: 580-46851-1

Date Collected: 12/22/14 08:40
Matrix: Water
Date Received: 12/23/14 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			179106	12/29/14 17:27	ALC	TAL SEA
Total/NA	Analysis	8270D		1	179771	01/08/15 18:26	ERB	TAL SEA
Total/NA	Prep	3520C	RE		180131	01/13/15 16:56	ALC	TAL SEA
Total/NA	Analysis	8270D	RE	1	180653	01/20/15 16:52	AHP	TAL SEA
Total/NA	Prep	200.8			180407	01/16/15 11:25	PAB	TAL SEA
Total/NA	Analysis	200.8		1	180562	01/19/15 10:25	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	245.1		1	179922	01/09/15 12:38	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	7470A		1	179922	01/09/15 12:38	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178994	12/24/14 14:43	LKC	TAL SEA
Total/NA	Analysis	300.0		1	179783	01/07/15 19:21	RSB	TAL SEA
Total/NA	Analysis	300.0		10	179783	01/08/15 10:11	RSB	TAL SEA
Total/NA	Analysis	300.0		1	179295	12/23/14 19:24	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	179002	12/24/14 17:05	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	179140	12/23/14 19:00	LKC	TAL SEA
Dissolved	Analysis	SM 5310B		1	179607	01/06/15 15:43	RSB	TAL SEA
Total/NA	Analysis	SM 5310B		1	179363	01/02/15 15:11	RSB	TAL SEA

Client Sample ID: BD-MH-12.56-20141222-W

Lab Sample ID: 580-46851-2

Date Collected: 12/22/14 10:10
Matrix: Water
Date Received: 12/23/14 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			179106	12/29/14 17:27	ALC	TAL SEA
Total/NA	Analysis	8270D		1	179771	01/08/15 18:51	ERB	TAL SEA
Total/NA	Prep	3520C	RE		180131	01/13/15 16:56	ALC	TAL SEA
Total/NA	Analysis	8270D	RE	1	180653	01/20/15 17:17	AHP	TAL SEA
Total/NA	Prep	200.8			180407	01/16/15 11:25	PAB	TAL SEA
Total/NA	Analysis	200.8		1	180562	01/19/15 10:29	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	245.1		1	179922	01/09/15 13:09	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	7470A		1	179922	01/09/15 13:09	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178994	12/24/14 14:43	LKC	TAL SEA
Total/NA	Analysis	300.0		1	179783	01/07/15 19:35	RSB	TAL SEA
Total/NA	Analysis	300.0		10	179783	01/08/15 10:25	RSB	TAL SEA
Total/NA	Analysis	300.0		1	179295	12/23/14 20:07	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	179002	12/24/14 17:05	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	179140	12/23/14 19:01	LKC	TAL SEA

Client Sample ID: BD-MH-12.56-20141222-W

Lab Sample ID: 580-46851-2

Date Collected: 12/22/14 10:10

Matrix: Water

Date Received: 12/23/14 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	SM 5310B		1	179607	01/06/15 15:43	RSB	TAL SEA
Total/NA	Analysis	SM 5310B		1	179363	01/02/15 15:11	RSB	TAL SEA

Client Sample ID: BD-MH-1.32-20141222-W

Lab Sample ID: 580-46851-3

Date Collected: 12/22/14 11:40

Matrix: Water

Date Received: 12/23/14 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			179106	12/29/14 17:27	ALC	TAL SEA
Total/NA	Analysis	8270D		1	179771	01/08/15 19:16	ERB	TAL SEA
Total/NA	Prep	3520C	RE		180131	01/13/15 16:56	ALC	TAL SEA
Total/NA	Analysis	8270D	RE	1	180653	01/20/15 17:42	AHP	TAL SEA
Total/NA	Prep	200.8			180407	01/16/15 11:25	PAB	TAL SEA
Total/NA	Analysis	200.8		1	180562	01/19/15 10:32	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	245.1		1	179922	01/09/15 13:12	FCW	TAL SEA
Total/NA	Prep	245.1			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	7470A		1	179922	01/09/15 13:12	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178994	12/24/14 14:43	LKC	TAL SEA
Total/NA	Analysis	300.0		1	179783	01/07/15 19:50	RSB	TAL SEA
Total/NA	Analysis	300.0		1	179295	12/23/14 20:21	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	179002	12/24/14 17:05	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	179140	12/23/14 19:03	LKC	TAL SEA
Dissolved	Analysis	SM 5310B		1	179607	01/06/15 15:43	RSB	TAL SEA
Total/NA	Analysis	SM 5310B		1	179363	01/02/15 15:11	RSB	TAL SEA

Client Sample ID: QC-EB-02-20141222-W

Lab Sample ID: 580-46851-4

Date Collected: 12/22/14 14:50

Matrix: Water

Date Received: 12/23/14 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			179106	12/29/14 17:27	ALC	TAL SEA
Total/NA	Analysis	8270D		1	179771	01/08/15 19:41	ERB	TAL SEA
Total/NA	Prep	3520C	RE		180131	01/13/15 16:56	ALC	TAL SEA
Total/NA	Analysis	8270D	RE	1	180653	01/20/15 18:07	AHP	TAL SEA
Total/NA	Prep	3510C			179093	12/29/14 15:05	WJR	TAL SEA
Total/NA	Analysis	8082		1	179161	12/30/14 20:49	ALC	TAL SEA
Dissolved	Filtration	FILTRATION			178867	12/23/14 17:33	PAB	TAL SEA
Dissolved	Prep	200.8			179076	12/29/14 11:05	FCW	TAL SEA
Dissolved	Analysis	200.8		1	179119	12/29/14 16:01	FCW	TAL SEA
Total/NA	Prep	200.8			180407	01/16/15 11:25	PAB	TAL SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Client Sample ID: QC-EB-02-20141222-W
Date Collected: 12/22/14 14:50
Date Received: 12/23/14 10:40

Lab Sample ID: 580-46851-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	200.8		1	180562	01/19/15 10:36	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			178867	12/23/14 17:33	PAB	TAL SEA
Dissolved	Prep	7470A			179655	01/07/15 10:17	PAB	TAL SEA
Dissolved	Analysis	7470A		1	179706	01/07/15 13:58	FCW	TAL SEA
Total/NA	Prep	7470A			179880	01/09/15 10:28	PAB	TAL SEA
Total/NA	Analysis	7470A		1	179922	01/09/15 13:14	FCW	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

Sample Summary

Client: Leidos, Inc.
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-46851-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46851-1	BD-OWS-14-20141222-W	Water	12/22/14 08:40	12/23/14 10:40
580-46851-2	BD-MH-12.56-20141222-W	Water	12/22/14 10:10	12/23/14 10:40
580-46851-3	BD-MH-1.32-20141222-W	Water	12/22/14 11:40	12/23/14 10:40
580-46851-4	QC-EB-02-20141222-W	Water	12/22/14 14:50	12/23/14 10:40

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

46851

TESTAMERICA
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

1/23/2015

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/22/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	1 of 1 COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
425.398.2101 Phone	TAT if different from Below 3 Weeks			Walk-in Client:
425.485.5566 FAX	☐ 2 weeks			Lab Sampling:
Project Name: NPDES Sampling Support	☐ 1 week			Job / SDG No.:
Site: Lower Duwamish Waterway	☐ 2 days			
P O # P010163427	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	PCB Aroclors (8082)	Sample Specific Notes:
BD-DWS-14-20141222-W	12/22/14	0840	G	W	9	N		✓	✓		✓			✓	✓	✓		
BD-MH-12.56-20141222-W	12/22/14	1010	G	W	9	N		✓	✓		✓			✓	✓	✓		
BD-MH-1.32-20141222-W	12/22/14	1140	G	W	9	N		✓	✓		✓			✓	✓	✓		
QC-EB-02-20141222-W	12/22/14	1450	G	W	6	N		✓	✓								✓	

IR2
Cooler/TB Dig/IR cor 2.3°C unc 2.0°C
Cooler Dsc Lg Blue/White Lab 1430
Wet/Packs Packing Bubble
w/cs

IR2
Cooler/TB Dig/IR cor 2.1°C unc 1.8°C
Cooler Dsc Lg Blue/White Lab 1430
Wet/Packs Packing Bubble
w/cs

12/22/14

580-46851 Chain of Custody

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH — 4 — 3

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Corey Wilcox	Leidos	12/23/14 1040		TASEA	12/23/14 1040
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-46851-1

Login Number: 46851

List Source: TestAmerica Seattle

List Number: 1

Creator: Luna, Francisco J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

December 19, 2014

Vista Project I.D.: 1400915

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 04, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '1400647'. The work was authorized under your Purchase Order No. 10163569.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1400915
Case Narrative

Sample Condition on Receipt:

One aqueous sample and four sediment samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested, the sediment PCB analysis requests listed on the COC was cancelled.

Analytical Notes:

EPA Method 1613

These samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column. Because of the high concentration levels, samples "BD-OWS-15-20141203-S" and "BD-MH-13,43-20141202-S" required re-extraction using less mass.

Holding Times

These samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with each preparation batch. No analytes were detected above the sample quantitation limits in the Method Blanks. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

EPA Method 1668C

The aqueous sample was extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The

OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

Table of Contents

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400915-01	BD-OWS-02-20141203-W	03-Dec-14 13:56	04-Dec-14 09:03	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400915-02	BD-MH-9.66-20141203-S	03-Dec-14 09:02	04-Dec-14 09:03	Amber Glass, 250mL
1400915-03	BD-OWS-15-20141203-S	03-Dec-14 10:33	04-Dec-14 09:03	Amber Glass, 250mL
1400915-04	BD-MH-10.9-20141203-S	03-Dec-14 15:13	04-Dec-14 09:03	Glass Jar, 120mL
1400915-05	BD-MH-13.43-20141202-S	02-Dec-14 15:07	04-Dec-14 09:03	Amber Glass, 250mL

Vista Project: 1400915

Client Project: 1400647

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0090
Date Extracted: 16-Dec-2014 8:37

Lab Sample: B4L0090-BLK1
Date Analyzed : 17-Dec-14 18:51 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	1.13		0.943	
1,2,3,7,8-PeCDD	ND	25.0	0.445		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	1.25		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	1.26		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	1.34		2.02	
1,2,3,4,6,7,8-HpCDD	ND	25.0	1.49		2.98	
OCDD	ND	50.0	4.89		3.57	
2,3,7,8-TCDF	ND	5.00	0.895		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.703		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.740		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	0.787		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	1.03		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.640		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	0.992		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	1.13		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.627		1.75	
OCDF	ND	50.0	2.28		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	80.6	25 - 164	
	13C-1,2,3,7,8-PeCDD	79.5	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	73.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	73.0	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	73.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	76.6	23 - 140	
	13C-OCDD	49.5	17 - 157	
	13C-2,3,7,8-TCDF	80.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	79.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	80.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	89.8	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	75.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	73.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	75.1	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	67.0	26 - 138	
	13C-OCDF	57.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	93.9	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	1.13
Total PeCDD	ND	0.542
Total HxCDD	ND	2.27
Total HpCDD	ND	1.49
Total TCDF	ND	0.895
Total PeCDF	ND	1.48
Total HxCDF	ND	1.11
Total HpCDF	ND	1.13

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR **EPA Method 1613B**

Matrix:	Aqueous	QC Batch:	B4L0090	Lab Sample:	B4L0090-BS1
Sample Size:	1.00 L	Date Extracted:	16-Dec-2014 8:37	Date Analyzed:	17-Dec-14 17:13 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	182	200	90.9	67 - 158	IS	13C-2,3,7,8-TCDD	79.7	20 - 175
1,2,3,7,8-PeCDD	970	1000	97.0	70 - 142		13C-1,2,3,7,8-PeCDD	75.8	21 - 227
1,2,3,4,7,8-HxCDD	986	1000	98.6	70 - 164		13C-1,2,3,4,7,8-HxCDD	77.0	21 - 193
1,2,3,6,7,8-HxCDD	1030	1000	103	76 - 134		13C-1,2,3,6,7,8-HxCDD	76.6	25 - 163
1,2,3,7,8,9-HxCDD	982	1000	98.2	64 - 162		13C-1,2,3,7,8,9-HxCDD	78.2	21 - 193
1,2,3,4,6,7,8-HpCDD	943	1000	94.3	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	79.1	26 - 166
OCDD	1990	2000	99.6	78 - 144		13C-OCDD	53.4	13 - 199
2,3,7,8-TCDF	178	200	89.0	75 - 158		13C-2,3,7,8-TCDF	79.0	22 - 152
1,2,3,7,8-PeCDF	940	1000	94.0	80 - 134		13C-1,2,3,7,8-PeCDF	75.4	21 - 192
2,3,4,7,8-PeCDF	950	1000	95.0	68 - 160		13C-2,3,4,7,8-PeCDF	76.5	13 - 328
1,2,3,4,7,8-HxCDF	989	1000	98.9	72 - 134		13C-1,2,3,4,7,8-HxCDF	86.5	19 - 202
1,2,3,6,7,8-HxCDF	964	1000	96.4	84 - 130		13C-1,2,3,6,7,8-HxCDF	79.2	21 - 159
2,3,4,6,7,8-HxCDF	997	1000	99.7	70 - 156		13C-2,3,4,6,7,8-HxCDF	73.0	22 - 176
1,2,3,7,8,9-HxCDF	953	1000	95.3	78 - 130		13C-1,2,3,7,8,9-HxCDF	79.7	17 - 205
1,2,3,4,6,7,8-HpCDF	983	1000	98.3	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	73.5	21 - 158
1,2,3,4,7,8,9-HpCDF	977	1000	97.7	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	71.4	20 - 186
OCDF	1970	2000	98.3	63 - 170		13C-OCDF	60.2	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	98.7	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-OWS-02-20141203-W

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 13:56

Sample Data
Matrix: Aqueous
Sample Size: 1.01 L

Laboratory Data
Lab Sample: 1400915-01 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0090 Date Extracted: 16-Dec-2014 8:37
Date Analyzed : 18-Dec-14 02:08 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.97	0.895		0.943	
1,2,3,7,8-PeCDD	ND	24.8	0.907		4.51	
1,2,3,4,7,8-HxCDD	ND	24.8	1.75		2.21	
1,2,3,6,7,8-HxCDD	ND	24.8	1.87		1.93	
1,2,3,7,8,9-HxCDD	ND	24.8	2.10		2.02	
1,2,3,4,6,7,8-HpCDD	ND	24.8		2.30	2.98	
OCDD	16.6	49.7			3.57	J
2,3,7,8-TCDF	ND	4.97	0.751		0.984	
1,2,3,7,8-PeCDF	ND	24.8	1.01		2.50	
2,3,4,7,8-PeCDF	ND	24.8	0.994		1.73	
1,2,3,4,7,8-HxCDF	ND	24.8	0.747		1.36	
1,2,3,6,7,8-HxCDF	ND	24.8	0.873		1.56	
2,3,4,6,7,8-HxCDF	ND	24.8	0.528		2.05	
1,2,3,7,8,9-HxCDF	ND	24.8	0.864		1.34	
1,2,3,4,6,7,8-HpCDF	ND	24.8	1.74		1.46	
1,2,3,4,7,8,9-HpCDF	ND	24.8	1.61		1.75	
OCDF	ND	49.7	2.28		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	70.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	67.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	56.5	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	59.3	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	58.6	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	58.2	23 - 140	
	13C-OCDD	39.7	17 - 157	
	13C-2,3,7,8-TCDF	74.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	66.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	68.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	62.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	57.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	59.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	59.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	59.2	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	55.9	26 - 138	
	13C-OCDF	46.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	94.4	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00498

TOTALS

Total TCDD	ND	0.895		
Total PeCDD	ND	1.71		
Total HxCDD	ND	2.85		
Total HpCDD	ND		4.94	
Total TCDF	ND	1.45		
Total PeCDF	ND	1.38		
Total HxCDF	ND	0.966		
Total HpCDF	ND	2.24		

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank

EPA Method 1613B

Matrix: Solid
Sample Size: 10.0 g

QC Batch: B4L0068
Date Extracted: 11-Dec-2014 10:24

Lab Sample: B4L0068-BLK1
Date Analyzed : 12-Dec-14 17:10 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	0.500	0.0668		0.0778	
1,2,3,7,8-PeCDD	ND	2.50	0.0624		0.230	
1,2,3,4,7,8-HxCDD	ND	2.50	0.110		0.231	
1,2,3,6,7,8-HxCDD	ND	2.50	0.116		0.126	
1,2,3,7,8,9-HxCDD	ND	2.50	0.126		0.173	
1,2,3,4,6,7,8-HpCDD	ND	2.50	0.200		0.263	
OCDD	ND	5.00	0.766		0.167	
2,3,7,8-TCDF	ND	0.500	0.0638		0.0289	
1,2,3,7,8-PeCDF	ND	2.50	0.0697		0.254	
2,3,4,7,8-PeCDF	ND	2.50	0.0773		0.211	
1,2,3,4,7,8-HxCDF	ND	2.50	0.0327		0.154	
1,2,3,6,7,8-HxCDF	ND	2.50	0.0354		0.195	
2,3,4,6,7,8-HxCDF	ND	2.50	0.0380		0.0805	
1,2,3,7,8,9-HxCDF	ND	2.50	0.0538		0.195	
1,2,3,4,6,7,8-HpCDF	0.297	2.50			0.230	J
1,2,3,4,7,8,9-HpCDF	ND	2.50	0.0783		0.211	
OCDF	ND	5.00	0.210		0.470	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	94.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	87.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	87.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	83.3	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	84.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	91.1	23 - 140	
	13C-OCDD	59.6	17 - 157	
	13C-2,3,7,8-TCDF	99.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	88.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	83.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	89.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	87.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	85.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	91.0	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	89.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	83.3	26 - 138	
	13C-OCDF	67.1	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	102	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00297

TOTALS

Total TCDD	ND	0.0668
Total PeCDD	ND	0.141
Total HxCDD	ND	0.213
Total HpCDD	ND	0.200
Total TCDF	ND	0.0638
Total PeCDF	ND	0.106
Total HxCDF	ND	0.154
Total HpCDF	0.297	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank

EPA Method 1613B

Matrix: Solid
Sample Size: 5.00 g

QC Batch: B4L0086
Date Extracted: 15-Dec-2014 15:46

Lab Sample: B4L0086-BLK1
Date Analyzed : 16-Dec-14 19:33 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	1.00	0.191		0.0778	
1,2,3,7,8-PeCDD	ND	5.00	0.139		0.230	
1,2,3,4,7,8-HxCDD	ND	5.00	0.180		0.231	
1,2,3,6,7,8-HxCDD	ND	5.00	0.175		0.126	
1,2,3,7,8,9-HxCDD	ND	5.00	0.182		0.173	
1,2,3,4,6,7,8-HpCDD	ND	5.00	0.227		0.263	
OCDD	ND	10.0	0.551		0.167	
2,3,7,8-TCDF	ND	1.00	0.0995		0.0289	
1,2,3,7,8-PeCDF	ND	5.00	0.245		0.254	
2,3,4,7,8-PeCDF	ND	5.00	0.125		0.211	
1,2,3,4,7,8-HxCDF	ND	5.00	0.0769		0.154	
1,2,3,6,7,8-HxCDF	ND	5.00	0.100		0.195	
2,3,4,6,7,8-HxCDF	ND	5.00	0.0692		0.0805	
1,2,3,7,8,9-HxCDF	ND	5.00	0.0999		0.195	
1,2,3,4,6,7,8-HpCDF	ND	5.00	0.141		0.230	
1,2,3,4,7,8,9-HpCDF	ND	5.00	0.127		0.211	
OCDF	ND	10.0	0.483		0.470	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	78.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	82.9	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	80.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	80.8	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	84.9	23 - 140	
	13C-OCDD	62.5	17 - 157	
	13C-2,3,7,8-TCDF	75.9	24 - 169	
	13C-1,2,3,7,8-PeCDF	82.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	78.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	93.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	81.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	78.6	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	83.4	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	84.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	81.7	26 - 138	
	13C-OCDF	68.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	83.8	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	0.191
Total PeCDD	ND	0.139
Total HxCDD	ND	0.386
Total HpCDD	ND	0.227
Total TCDF	ND	0.0995
Total PeCDF	ND	0.252
Total HxCDF	ND	0.109
Total HpCDF	ND	0.196

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR **EPA Method 1613B**

Matrix:	Solid	QC Batch:	B4L0068	Lab Sample:	B4L0068-BS1
Sample Size:	10.0 g	Date Extracted:	11-Dec-2014 10:24	Date Analyzed:	12-Dec-14 15:33 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	18.3	20.0	91.6	67 - 158	IS	13C-2,3,7,8-TCDD	84.5	20 - 175
1,2,3,7,8-PeCDD	95.8	100	95.8	70 - 142		13C-1,2,3,7,8-PeCDD	74.4	21 - 227
1,2,3,4,7,8-HxCDD	100	100	100	70 - 164		13C-1,2,3,4,7,8-HxCDD	76.7	21 - 193
1,2,3,6,7,8-HxCDD	102	100	102	76 - 134		13C-1,2,3,6,7,8-HxCDD	81.6	25 - 163
1,2,3,7,8,9-HxCDD	100	100	100	64 - 162		13C-1,2,3,7,8,9-HxCDD	79.1	21 - 193
1,2,3,4,6,7,8-HpCDD	96.0	100	96.0	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	85.1	26 - 166
OCDD	197	200	98.4	78 - 144		13C-OCDD	58.1	13 - 199
2,3,7,8-TCDF	17.8	20.0	89.2	75 - 158		13C-2,3,7,8-TCDF	82.8	22 - 152
1,2,3,7,8-PeCDF	96.0	100	96.0	80 - 134		13C-1,2,3,7,8-PeCDF	72.6	21 - 192
2,3,4,7,8-PeCDF	98.5	100	98.5	68 - 160		13C-2,3,4,7,8-PeCDF	74.1	13 - 328
1,2,3,4,7,8-HxCDF	96.6	100	96.6	72 - 134		13C-1,2,3,4,7,8-HxCDF	85.1	19 - 202
1,2,3,6,7,8-HxCDF	97.9	100	97.9	84 - 130		13C-1,2,3,6,7,8-HxCDF	82.5	21 - 159
2,3,4,6,7,8-HxCDF	96.8	100	96.8	70 - 156		13C-2,3,4,6,7,8-HxCDF	79.4	22 - 176
1,2,3,7,8,9-HxCDF	97.1	100	97.1	78 - 130		13C-1,2,3,7,8,9-HxCDF	85.4	17 - 205
1,2,3,4,6,7,8-HpCDF	96.9	100	96.9	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	83.5	21 - 158
1,2,3,4,7,8,9-HpCDF	97.4	100	97.4	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	80.0	20 - 186
OCDF	195	200	97.4	63 - 170		13C-OCDF	63.1	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	90.0	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR **EPA Method 1613B**

Matrix:	Solid	QC Batch:	B4L0086	Lab Sample:	B4L0086-BS1
Sample Size:	5.00 g	Date Extracted:	15-Dec-2014 15:46	Date Analyzed:	16-Dec-14 17:07 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	35.6	40.0	89.0	67 - 158	IS	13C-2,3,7,8-TCDD	81.5	20 - 175
1,2,3,7,8-PeCDD	193	200	96.5	70 - 142		13C-1,2,3,7,8-PeCDD	93.8	21 - 227
1,2,3,4,7,8-HxCDD	198	200	99.0	70 - 164		13C-1,2,3,4,7,8-HxCDD	81.8	21 - 193
1,2,3,6,7,8-HxCDD	198	200	99.2	76 - 134		13C-1,2,3,6,7,8-HxCDD	84.1	25 - 163
1,2,3,7,8,9-HxCDD	197	200	98.6	64 - 162		13C-1,2,3,7,8,9-HxCDD	83.0	21 - 193
1,2,3,4,6,7,8-HpCDD	195	200	97.6	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	81.0	26 - 166
OCDD	397	400	99.3	78 - 144		13C-OCDD	60.1	13 - 199
2,3,7,8-TCDF	36.0	40.0	90.0	75 - 158		13C-2,3,7,8-TCDF	78.5	22 - 152
1,2,3,7,8-PeCDF	182	200	91.0	80 - 134		13C-1,2,3,7,8-PeCDF	80.9	21 - 192
2,3,4,7,8-PeCDF	185	200	92.3	68 - 160		13C-2,3,4,7,8-PeCDF	85.0	13 - 328
1,2,3,4,7,8-HxCDF	196	200	97.8	72 - 134		13C-1,2,3,4,7,8-HxCDF	91.4	19 - 202
1,2,3,6,7,8-HxCDF	199	200	99.3	84 - 130		13C-1,2,3,6,7,8-HxCDF	85.3	21 - 159
2,3,4,6,7,8-HxCDF	199	200	99.5	70 - 156		13C-2,3,4,6,7,8-HxCDF	81.6	22 - 176
1,2,3,7,8,9-HxCDF	202	200	101	78 - 130		13C-1,2,3,7,8,9-HxCDF	84.9	17 - 205
1,2,3,4,6,7,8-HpCDF	199	200	99.4	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	82.3	21 - 158
1,2,3,4,7,8,9-HpCDF	206	200	103	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	77.8	20 - 186
OCDF	396	400	99.0	63 - 170		13C-OCDF	65.0	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	86.8	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-MH-9.66-20141203-S

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 9:02

Sample Data
Matrix: Sediment
Sample Size: 14.7 g
% Solids: 69.6

Laboratory Data
Lab Sample: 1400915-02 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0068 Date Extracted: 11-Dec-2014 10:24
Date Analyzed : 12-Dec-14 22:02 Column: ZB-5MS Analyst: MAS
17-Dec-14 17:26 Column: DB-225 Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	0.491		0.776	0.0778	
1,2,3,7,8-PeCDD	2.44	2.45			0.230	J
1,2,3,4,7,8-HxCDD	3.50	2.45			0.231	
1,2,3,6,7,8-HxCDD	11.8	2.45			0.126	
1,2,3,7,8,9-HxCDD	7.05	2.45			0.173	
1,2,3,4,6,7,8-HpCDD	349	2.45			0.263	
OCDD	3710	4.91			0.167	
2,3,7,8-TCDF	7.65	0.491			0.0289	
1,2,3,7,8-PeCDF	2.78	2.45			0.254	
2,3,4,7,8-PeCDF	5.69	2.45			0.211	
1,2,3,4,7,8-HxCDF	14.2	2.45			0.154	
1,2,3,6,7,8-HxCDF	5.04	2.45			0.195	
2,3,4,6,7,8-HxCDF	4.97	2.45			0.0805	
1,2,3,7,8,9-HxCDF	1.06	2.45			0.195	J
1,2,3,4,6,7,8-HpCDF	49.5	2.45			0.230	B
1,2,3,4,7,8,9-HpCDF	6.78	2.45			0.211	
OCDF	134	4.91			0.470	
TOTALS						
Total TCDD	8.69			10.8		
Total PeCDD	19.9					
Total HxCDD	94.0					
Total HpCDD	692					
Total TCDF	66.8			67.9		
Total PeCDF	67.1					
Total HxCDF	91.6					
Total HpCDF	161					B

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	114	25 - 164	
	13C-1,2,3,7,8-PeCDD	116	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	101	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	98.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	96.9	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	105	23 - 140	
	13C-OCDD	72.9	17 - 157	
	13C-2,3,7,8-TCDF	109	24 - 169	
	13C-1,2,3,7,8-PeCDF	93.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	99.7	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	104	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	101	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	97.5	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	101	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	98.5	26 - 138	
	13C-OCDF	76.5	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	125	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	15.0

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-OWS-15-20141203-S

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 10:33

Sample Data
Matrix: Sediment
Sample Size: 5.54 g
% Solids: 18.1

Laboratory Data
Lab Sample: 1400915-03 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0086 Date Extracted: 15-Dec-2014 15:46
Date Analyzed : 17-Dec-14 02:03 Column: ZB-5MS Analyst: MAS
17-Dec-14 18:31 Column: DB-225 Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	7.74	5.00			0.0778	
1,2,3,7,8-PeCDD	48.5	25.0			0.230	
1,2,3,4,7,8-HxCDD	49.2	25.0			0.231	
1,2,3,6,7,8-HxCDD	103	25.0			0.126	
1,2,3,7,8,9-HxCDD	204	25.0			0.173	
1,2,3,4,6,7,8-HpCDD	2040	25.0			0.263	
OCDD	17300	50.0			0.167	
2,3,7,8-TCDF	7.79	5.00			0.0289	
1,2,3,7,8-PeCDF	6.20	25.0			0.254	J
2,3,4,7,8-PeCDF	9.22	25.0			0.211	J
1,2,3,4,7,8-HxCDF	18.4	25.0			0.154	J
1,2,3,6,7,8-HxCDF	16.2	25.0			0.195	J
2,3,4,6,7,8-HxCDF	22.3	25.0			0.0805	J
1,2,3,7,8,9-HxCDF	3.53	25.0			0.195	J
1,2,3,4,6,7,8-HpCDF	277	25.0			0.230	
1,2,3,4,7,8,9-HpCDF	17.4	25.0			0.211	J
OCDF	609	50.0			0.470	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	90.1	25 - 164	
	13C-1,2,3,7,8-PeCDD	103	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	82.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	82.3	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	83.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	89.1	23 - 140	
	13C-OCDD	67.1	17 - 157	
	13C-2,3,7,8-TCDF	94.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	100	24 - 185	
	13C-2,3,4,7,8-PeCDF	103	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	87.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	82.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	77.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	88.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	85.3	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	84.9	26 - 138	
	13C-OCDF	68.1	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.2	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	130

TOTALS

Total TCDD	90.5			115		
Total PeCDD	319					
Total HxCDD	1280					
Total HpCDD	4460					
Total TCDF	122			135		
Total PeCDF	175			177		
Total HxCDF	345					
Total HpCDF	655					

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-MH-10.9-20141203-S

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 15:13

Sample Data
Matrix: Sediment
Sample Size: 30.8 g
% Solids: 32.9

Laboratory Data
Lab Sample: 1400915-04 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0068 Date Extracted: 11-Dec-2014 10:24
Date Analyzed : 12-Dec-14 23:40 Column: ZB-5MS Analyst: MAS
17-Dec-14 17:59 Column: DB-225 Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	3.94	0.494			0.0778	
1,2,3,7,8-PeCDD	15.7	2.47			0.230	
1,2,3,4,7,8-HxCDD	27.4	2.47			0.231	
1,2,3,6,7,8-HxCDD	84.8	2.47			0.126	
1,2,3,7,8,9-HxCDD	57.7	2.47			0.173	
1,2,3,4,6,7,8-HpCDD	1680	2.47			0.263	
OCDD	16900	4.94			0.167	E
2,3,7,8-TCDF	74.8	0.494			0.0289	
1,2,3,7,8-PeCDF	17.2	2.47			0.254	
2,3,4,7,8-PeCDF	34.3	2.47			0.211	
1,2,3,4,7,8-HxCDF	48.3	2.47			0.154	
1,2,3,6,7,8-HxCDF	30.7	2.47			0.195	
2,3,4,6,7,8-HxCDF	31.3	2.47			0.0805	
1,2,3,7,8,9-HxCDF	3.33	2.47			0.195	
1,2,3,4,6,7,8-HpCDF	277	2.47			0.230	B
1,2,3,4,7,8,9-HpCDF	29.3	2.47			0.211	
OCDF	648	4.94			0.470	
TOTALS						
Total TCDD	66.7					
Total PeCDD	138					
Total HxCDD	766					
Total HpCDD	3350					
Total TCDF	557			562		
Total PeCDF	457					
Total HxCDF	505					
Total HpCDF	770					B

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	82.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	84.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	80.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	86.5	23 - 140	
	13C-OCDD	56.5	17 - 157	
	13C-2,3,7,8-TCDF	90.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	79.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	72.6	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	76.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	76.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	74.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	81.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	80.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	78.7	26 - 138	
	13C-OCDF	58.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	89.8	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

	TEQMinWHO2005Dioxin	91.4

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-MH-13.43-20141202-S

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 02-Dec-2014 15:07

Sample Data
Matrix: Sediment
Sample Size: 2.83 g
% Solids: 36.6

Laboratory Data
Lab Sample: 1400915-05 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0086 Date Extracted: 15-Dec-2014 15:46
Date Analyzed : 17-Dec-14 02:52 Column: ZB-5MS Analyst: MAS
17-Dec-14 19:03 Column: DB-225 Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.83		5.39	0.0778	
1,2,3,7,8-PeCDD	40.4	24.1			0.230	
1,2,3,4,7,8-HxCDD	45.0	24.1			0.231	
1,2,3,6,7,8-HxCDD	91.6	24.1			0.126	
1,2,3,7,8,9-HxCDD	164	24.1			0.173	
1,2,3,4,6,7,8-HpCDD	1770	24.1			0.263	
OCDD	17200	48.3			0.167	
2,3,7,8-TCDF	6.98	4.83			0.0289	
1,2,3,7,8-PeCDF	5.32	24.1			0.254	J
2,3,4,7,8-PeCDF	7.40	24.1			0.211	J
1,2,3,4,7,8-HxCDF	15.8	24.1			0.154	J
1,2,3,6,7,8-HxCDF	14.1	24.1			0.195	J
2,3,4,6,7,8-HxCDF	18.9	24.1			0.0805	J
1,2,3,7,8,9-HxCDF	ND	24.1	2.11		0.195	
1,2,3,4,6,7,8-HpCDF	200	24.1			0.230	
1,2,3,4,7,8,9-HpCDF	16.6	24.1			0.211	J
OCDF	543	48.3			0.470	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	85.8	25 - 164	
	13C-1,2,3,7,8-PeCDD	89.7	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	84.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	84.8	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	84.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	91.3	23 - 140	
	13C-OCDD	70.0	17 - 157	
	13C-2,3,7,8-TCDF	88.7	24 - 169	
	13C-1,2,3,7,8-PeCDF	91.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	92.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	86.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	82.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	81.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	87.7	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	87.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	83.8	26 - 138	
	13C-OCDF	73.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	93.9	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	104

TOTALS			
Total TCDD	118	142	
Total PeCDD	350		
Total HxCDD	1220		
Total HpCDD	3640		
Total TCDF	129	133	
Total PeCDF	170		
Total HxCDF	299		
Total HpCDF	551		

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B4L0058
Date Extracted: 09-Dec-2014 8:20
Lab Sample: B4L0058-BLK1
Date Analyzed: 10-Dec-14 06:15 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	5.00	1.76		1.21	
PCB-2	ND	5.00	2.05		1.75	
PCB-3	ND	5.00	1.99		1.49	
PCB-4/10	ND	20.0	9.24		5.64	
PCB-5/8	ND	20.0	7.62		3.59	
PCB-6	ND	10.0	7.46		3.10	
PCB-7/9	ND	20.0	7.41		6.22	
PCB-11	ND	10.0	7.22		3.86	
PCB-12/13	ND	20.0	7.61		5.01	
PCB-14	ND	10.0	6.79		3.98	
PCB-15	ND	10.0	6.92		2.53	
PCB-16/32	ND	10.0	0.981		2.87	
PCB-17	ND	5.00	1.12		1.37	
PCB-18	ND	5.00	1.18		2.57	
PCB-19	ND	5.00	1.17		2.38	
PCB-20/21/33	ND	15.0	0.912		10.3	
PCB-22	ND	5.00	0.904		3.17	
PCB-23	ND	5.00	0.912		1.35	
PCB-24/27	ND	10.0	0.858		3.16	
PCB-25	ND	5.00	0.890		3.34	
PCB-26	ND	5.00	0.926		2.19	
PCB-28	ND	5.00	0.868		2.90	
PCB-29	ND	5.00	0.900		1.60	
PCB-30	ND	5.00	0.825		2.09	
PCB-31	ND	5.00	0.842		4.29	
PCB-34	ND	5.00	0.947		2.34	
PCB-35	ND	5.00	0.806		1.65	
PCB-36	ND	5.00	0.806		2.69	
PCB-37	ND	5.00	0.797		1.92	
PCB-38	ND	5.00	0.819		1.56	
PCB-39	ND	5.00	0.781		2.60	
PCB-40	ND	5.00	2.35		3.08	
PCB-41/64/71/72	ND	20.0	1.47		5.57	
PCB-42/59	ND	10.0	1.58		2.84	
PCB-43/49	ND	10.0	1.86		3.38	
PCB-44	ND	5.00	2.05		2.48	
PCB-45	ND	5.00	2.15		1.96	
PCB-46	ND	5.00	2.18		2.49	
PCB-47	ND	5.00	1.70		4.42	
PCB-48/75	ND	10.0	1.48		2.09	
PCB-50	ND	5.00	2.00		1.40	
PCB-51	ND	5.00	1.80		1.42	
PCB-52/69	ND	10.0	1.62		3.64	
PCB-53	ND	5.00	1.74		1.12	
PCB-54	ND	5.00	1.61		1.51	
PCB-55	ND	5.00	1.38		1.19	
PCB-56/60	ND	10.0	1.41		2.19	
PCB-57	ND	5.00	1.36		0.857	
PCB-58	ND	5.00	1.38		1.81	
PCB-61/70	ND	10.0	1.40		2.40	
PCB-62	ND	5.00	1.49		1.46	
PCB-63	ND	5.00	1.36		0.696	
PCB-65	ND	5.00	1.44		0.953	
PCB-66/76	ND	10.0	1.33		2.82	
PCB-67	ND	5.00	1.41		1.22	
PCB-68	ND	5.00	1.30		1.24	
PCB-73	ND	5.00	1.51		1.56	
PCB-74	ND	5.00	1.26		1.53	
PCB-77	ND	5.00	1.32		1.34	
PCB-78	ND	5.00	1.32		0.990	
PCB-79	ND	5.00	1.36		1.60	
PCB-80	ND	5.00	1.20		1.98	
PCB-81	ND	5.00	1.18		2.34	
PCB-82	ND	5.00	3.38		1.69	
PCB-83	ND	5.00	2.37		1.32	
PCB-84/92	ND	10.0	3.14		3.38	
PCB-85/116	ND	10.0	2.76		2.83	
PCB-86	ND	5.00	3.52		2.34	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B4L0058
Date Extracted: 09-Dec-2014 8:20
Lab Sample: B4L0058-BLK1
Date Analyzed: 10-Dec-14 06:15 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	15.0	2.31		3.79	
PCB-88/91	ND	5.00	3.47		3.25	
PCB-89	ND	5.00	3.25		1.84	
PCB-90/101	ND	10.0	2.77		1.92	
PCB-93	ND	5.00	3.13		1.47	
PCB-94	ND	5.00	3.20		1.91	
PCB-95/98/102	ND	15.0	2.92		6.58	
PCB-96	ND	5.00	2.42		2.16	
PCB-97	ND	5.00	2.88		1.24	
PCB-99	ND	5.00	2.56		1.94	
PCB-100	ND	5.00	2.64		2.03	
PCB-103	ND	5.00	2.84		2.28	
PCB-104	ND	5.00	2.10		0.931	
PCB-105	ND	5.00	1.39		2.21	
PCB-106/118	ND	10.0	2.05		2.44	
PCB-107/109	ND	10.0	2.04		1.98	
PCB-108/112	ND	10.0	2.79		1.86	
PCB-110	ND	5.00	2.14		1.94	
PCB-111/115	ND	10.0	2.05		0.768	
PCB-113	ND	5.00	2.44		1.31	
PCB-114	ND	5.00	1.38		1.81	
PCB-119	ND	5.00	2.09		0.949	
PCB-120	ND	5.00	2.02		1.01	
PCB-121	ND	5.00	1.86		1.94	
PCB-122	ND	5.00	1.52		1.84	
PCB-123	ND	5.00	2.05		1.35	
PCB-124	ND	5.00	1.89		1.79	
PCB-126	ND	5.00	1.39		2.05	
PCB-127	ND	5.00	1.38		0.808	
PCB-128/162	ND	10.0	1.58		1.68	
PCB-129	ND	5.00	2.11		1.11	
PCB-130	ND	5.00	2.27		2.21	
PCB-131	ND	5.00	2.05		1.46	
PCB-132/161	ND	10.0	1.69		2.34	
PCB-133/142	ND	10.0	1.98		2.19	
PCB-134/143	ND	10.0	1.55		2.40	
PCB-135	ND	5.00	3.71		2.90	
PCB-136	ND	5.00	2.66		2.89	
PCB-137	ND	5.00	1.80		2.08	
PCB-138/163/164	ND	15.0		1.28	2.68	
PCB-139/149	ND	10.0	3.42		7.87	
PCB-140	ND	5.00	3.68		3.52	
PCB-141	ND	5.00	1.98		1.15	
PCB-144	ND	5.00	3.52		3.22	
PCB-145	ND	5.00	2.64		1.73	
PCB-146/165	ND	10.0	1.62		1.91	
PCB-147	ND	5.00	3.49		3.62	
PCB-148	ND	5.00	3.90		1.68	
PCB-150	ND	5.00	2.72		1.14	
PCB-151	ND	5.00	3.57		3.59	
PCB-152	ND	5.00	2.63		1.82	
PCB-153	ND	5.00		1.18	1.83	
PCB-154	ND	5.00	3.27		2.78	
PCB-155	ND	5.00	2.54		1.45	
PCB-156	ND	5.00	1.38		1.74	
PCB-157	ND	5.00	1.52		1.17	
PCB-158/160	ND	10.0	1.51		1.99	
PCB-159	ND	5.00	1.38		1.20	
PCB-166	ND	5.00	1.44		0.920	
PCB-167	ND	5.00	1.46		1.65	
PCB-168	ND	5.00	1.37		0.933	
PCB-169	ND	5.00	1.45		1.12	
PCB-170	ND	5.00	1.46		1.38	
PCB-171	ND	5.00	1.50		1.61	
PCB-172	ND	5.00	1.61		1.46	
PCB-173	ND	5.00	1.70		1.49	
PCB-174	ND	5.00	1.47		1.42	
PCB-175	ND	5.00	1.50		3.15	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix:	Aqueous	QC Batch:	B4L0058	Lab Sample:	B4L0058-BLK1
Sample Size:	1.00 L	Date Extracted:	09-Dec-2014 8:20	Date Analyzed:	10-Dec-14 06:15 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	5.00	1.07		2.17	
PCB-177	ND	5.00	1.59		1.34	
PCB-178	ND	5.00	1.56		2.25	
PCB-179	ND	5.00	1.12		1.57	
PCB-180	ND	5.00	1.38		0.610	
PCB-181	ND	5.00	1.45		1.01	
PCB-182/187	ND	10.0	1.44		6.20	
PCB-183	ND	5.00	1.35		3.29	
PCB-184	ND	5.00	1.18		1.25	
PCB-185	ND	5.00	1.47		1.47	
PCB-186	ND	5.00	1.14		2.43	
PCB-188	ND	5.00	1.04		1.08	
PCB-189	ND	5.00	1.07		1.49	
PCB-190	ND	5.00	1.08		1.70	
PCB-191	ND	5.00	1.18		1.96	
PCB-192	ND	5.00	1.29		1.69	
PCB-193	ND	5.00	1.19		1.46	
PCB-194	ND	5.00	1.28		1.71	
PCB-195	ND	5.00	1.33		1.47	
PCB-196/203	ND	10.0	2.56		6.35	
PCB-197	ND	5.00	1.85		1.80	
PCB-198	ND	5.00	2.66		3.78	
PCB-199	ND	5.00	2.72		4.05	
PCB-200	ND	5.00	1.95		1.75	
PCB-201	ND	5.00	1.80		1.02	
PCB-202	ND	5.00	1.90		1.55	
PCB-204	ND	5.00	1.99		1.48	
PCB-205	ND	5.00	1.13		1.53	
PCB-206	ND	5.00	2.16		1.32	
PCB-207	ND	5.00	0.973		1.51	
PCB-208	ND	5.00	0.929		1.34	
PCB-209	ND	5.00	2.91		1.86	
Total monoCB	ND	5.00	2.05			
Total diCB	ND	10.0	9.24			
Total triCB	ND	5.00	1.18			
Total tetraCB	ND	5.00	2.35			
Total pentaCB	ND	5.00	3.52			
Total hexaCB	ND	5.00		2.45		
Total heptaCB	ND	5.00	1.70			
Total octaCB	ND	5.00	2.72			
Total nonaCB	ND	5.00	2.16			
DecaCB	ND	5.00	2.91			
Total PCB	ND	10.0				

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0058
Date Extracted: 09-Dec-2014 8:20

Lab Sample: B4L0058-BLK1
Date Analyzed: 10-Dec-14 06:15 Column: ZB-1 Analyst: WJL

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	78.6	5 - 145	
	13C-PCB-3	75.7	5 - 145	
	13C-PCB-4	81.1	5 - 145	
	13C-PCB-11	88.4	5 - 145	
	13C-PCB-9	83.7	5 - 145	
	13C-PCB-19	76.2	5 - 145	
	13C-PCB-28	91.8	5 - 145	
	13C-PCB-32	77.1	5 - 145	
	13C-PCB-37	108	5 - 145	
	13C-PCB-47	89.6	5 - 145	
	13C-PCB-52	89.7	5 - 145	
	13C-PCB-54	78.6	5 - 145	
	13C-PCB-70	94.8	5 - 145	
	13C-PCB-77	97.4	10 - 145	
	13C-PCB-80	93.0	10 - 145	
	13C-PCB-81	99.1	10 - 145	
	13C-PCB-95	88.0	10 - 145	
	13C-PCB-97	96.7	10 - 145	
	13C-PCB-101	93.5	10 - 145	
	13C-PCB-104	87.3	10 - 145	
	13C-PCB-105	102	10 - 145	
	13C-PCB-114	98.4	10 - 145	
	13C-PCB-118	95.5	10 - 145	
	13C-PCB-123	96.5	10 - 145	
	13C-PCB-126	109	10 - 145	
	13C-PCB-127	107	10 - 145	
	13C-PCB-138	97.9	10 - 145	
	13C-PCB-141	96.2	10 - 145	
	13C-PCB-153	94.2	10 - 145	
	13C-PCB-155	69.0	10 - 145	
	13C-PCB-156	101	10 - 145	
	13C-PCB-157	98.9	10 - 145	
	13C-PCB-159	101	10 - 145	
	13C-PCB-167	99.3	10 - 145	
	13C-PCB-169	104	10 - 145	
	13C-PCB-170	91.9	10 - 145	
	13C-PCB-180	87.5	10 - 145	
	13C-PCB-188	80.8	10 - 145	
	13C-PCB-189	95.5	10 - 145	
	13C-PCB-194	99.6	10 - 145	
	13C-PCB-202	73.3	10 - 145	
	13C-PCB-206	86.1	10 - 145	
	13C-PCB-208	88.3	10 - 145	
	13C-PCB-209	78.2	10 - 145	
CRS	13C-PCB-79	95.9	10 - 145	
	13C-PCB-178	87.1	10 - 145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0058
Date Extracted: 09-Dec-2014 8:20

Lab Sample: B4L0058-BS1
Date Analyzed: 10-Dec-14 04:06 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
PCB-1	868	1000	86.8	60 - 135
PCB-3	955	1000	95.5	60 - 135
PCB-4/10	4230	4000	106	60 - 135
PCB-15	1980	2000	99.2	60 - 135
PCB-19	1050	1000	105	60 - 135
PCB-37	1030	1000	103	60 - 135
PCB-54	1030	1000	103	60 - 135
PCB-77	1090	1000	109	60 - 135
PCB-81	1060	1000	106	60 - 135
PCB-104	1120	1000	112	60 - 135
PCB-105	1120	1000	112	60 - 135
PCB-106/118	2290	2000	115	60 - 135
PCB-114	1120	1000	112	60 - 135
PCB-123	1180	1000	118	60 - 135
PCB-126	1100	1000	110	60 - 135
PCB-155	1160	1000	116	60 - 135
PCB-156	1080	1000	108	60 - 135
PCB-157	1110	1000	111	60 - 135
PCB-167	1120	1000	112	60 - 135
PCB-169	1140	1000	114	60 - 135
PCB-188	1100	1000	110	60 - 135
PCB-189	1170	1000	117	60 - 135
PCB-202	1090	1000	109	60 - 135
PCB-205	1110	1000	111	60 - 135
PCB-206	1080	1000	108	60 - 135
PCB-208	1090	1000	109	60 - 135
PCB-209	1150	1000	115	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	85.8	15 - 145
IS	13C-PCB-3	77.8	15 - 145
IS	13C-PCB-4	81.6	15 - 145
IS	13C-PCB-11	91.9	15 - 145
IS	13C-PCB-9	87.5	15 - 145
IS	13C-PCB-19	76.8	15 - 145
IS	13C-PCB-28	108	15 - 145
IS	13C-PCB-32	81.8	15 - 145
IS	13C-PCB-37	108	15 - 145
IS	13C-PCB-47	92.0	15 - 145
IS	13C-PCB-52	90.8	15 - 145
IS	13C-PCB-54	85.5	15 - 145
IS	13C-PCB-70	99.1	15 - 145
IS	13C-PCB-77	107	40 - 145
IS	13C-PCB-80	99.8	40 - 145
IS	13C-PCB-81	104	40 - 145
IS	13C-PCB-95	95.4	40 - 145
IS	13C-PCB-97	103	40 - 145
IS	13C-PCB-101	101	40 - 145
IS	13C-PCB-104	88.8	40 - 145
IS	13C-PCB-105	112	40 - 145
IS	13C-PCB-114	109	40 - 145
IS	13C-PCB-118	102	40 - 145
IS	13C-PCB-123	102	40 - 145
IS	13C-PCB-126	118	40 - 145
IS	13C-PCB-127	116	40 - 145
IS	13C-PCB-138	105	40 - 145
IS	13C-PCB-141	104	40 - 145
IS	13C-PCB-153	101	40 - 145
IS	13C-PCB-155	74.3	40 - 145
IS	13C-PCB-156	111	40 - 145
IS	13C-PCB-157	111	40 - 145
IS	13C-PCB-159	108	40 - 145
IS	13C-PCB-167	108	40 - 145
IS	13C-PCB-169	115	40 - 145
IS	13C-PCB-170	101	40 - 145
IS	13C-PCB-180	101	40 - 145
IS	13C-PCB-188	84.3	40 - 145
IS	13C-PCB-189	105	40 - 145
IS	13C-PCB-194	112	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0058
Date Extracted: 09-Dec-2014 8:20

Lab Sample: B4L0058-BS1
Date Analyzed: 10-Dec-14 04:06 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	79.3	40 - 145
IS	13C-PCB-206	95.9	40 - 145
IS	13C-PCB-208	101	40 - 145
IS	13C-PCB-209	87.4	40 - 145
CRS	13C-PCB-79	107	40 - 145
CRS	13C-PCB-178	92.1	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-OWS-02-20141203-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 13:56

Sample Data
Matrix: Aqueous
Sample Size: 1.04 L

Laboratory Data
Lab Sample: 1400915-01 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0058 Date Extracted: 09-Dec-2014 8:20
Date Analyzed : 10-Dec-14 07:19 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	13.8	4.83			1.21	
PCB-2	ND	4.83		2.01	1.75	
PCB-3	ND	4.83		3.00	1.49	
PCB-4/10	251	19.3			5.64	
PCB-5/8	131	19.3			3.59	
PCB-6	93.5	9.66			3.10	
PCB-7/9	15.4	19.3			6.22	J
PCB-11	ND	9.66		29.4	3.86	
PCB-12/13	ND	19.3		15.0	5.01	
PCB-14	ND	9.66	10.6		3.98	
PCB-15	134	9.66			2.53	
PCB-16/32	643	9.66			2.87	
PCB-17	371	4.83			1.37	
PCB-18	1040	4.83			2.57	
PCB-19	147	4.83			2.38	
PCB-20/21/33	142	14.5			10.3	
PCB-22	313	4.83			3.17	
PCB-23	ND	4.83	1.22		1.35	
PCB-24/27	93.0	9.66			3.16	
PCB-25	63.0	4.83			3.34	
PCB-26	139	4.83			2.19	
PCB-28	1120	4.83			2.90	
PCB-29	ND	4.83		2.86	1.60	
PCB-30	ND	4.83	0.901		2.09	
PCB-31	654	4.83			4.29	
PCB-34	ND	4.83		4.28	2.34	
PCB-35	5.66	4.83			1.65	
PCB-36	ND	4.83	1.24		2.69	
PCB-37	417	4.83			1.92	
PCB-38	15.6	4.83			1.56	
PCB-39	ND	4.83	1.20		2.60	
PCB-40	545	4.83			3.08	
PCB-41/64/71/72	2570	19.3			5.57	
PCB-42/59	989	9.66			2.84	
PCB-43/49	2140	9.66			3.38	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-44	2750	4.83			2.48	
PCB-45	421	4.83			1.96	
PCB-46	172	4.83			2.49	
PCB-47	776	4.83			4.42	
PCB-48/75	497	9.66			2.09	
PCB-50	6.18	4.83			1.40	
PCB-51	105	4.83			1.42	
PCB-52/69	2720	9.66			3.64	
PCB-53	343	4.83			1.12	
PCB-54	ND	4.83		4.93	1.51	
PCB-55	40.4	4.83			1.19	
PCB-56/60	2150	9.66			2.19	
PCB-57	15.3	4.83			0.857	
PCB-58	ND	4.83		5.65	1.81	
PCB-61/70	2280	9.66			2.40	
PCB-62	ND	4.83	1.06		1.46	
PCB-63	95.6	4.83			0.696	
PCB-65	ND	4.83	1.03		0.953	
PCB-66/76	3400	9.66			2.82	
PCB-67	70.5	4.83			1.22	
PCB-68	13.1	4.83			1.24	
PCB-73	ND	4.83	1.06		1.56	
PCB-74	1380	4.83			1.53	
PCB-77	273	4.83			1.34	
PCB-78	7.07	4.83			0.990	
PCB-79	ND	4.83		29.8	1.60	
PCB-80	ND	4.83	0.800		1.98	
PCB-81	18.8	4.83			2.34	
PCB-82	515	4.83			1.69	
PCB-83	ND	4.83		2.90	1.32	
PCB-84/92	1240	9.66			3.38	
PCB-85/116	726	9.66			2.83	
PCB-86	ND	4.83	5.09		2.34	
PCB-87/117/125	1130	14.5			3.79	
PCB-88/91	610	4.83			3.25	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-OWS-02-20141203-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 13:56

Sample Data
Matrix: Aqueous
Sample Size: 1.04 L

Laboratory Data
Lab Sample: 1400915-01 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0058 Date Extracted: 09-Dec-2014 8:20
Date Analyzed : 10-Dec-14 07:19 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	71.5	4.83			1.84	
PCB-90/101	2610	9.66			1.92	
PCB-93	ND	4.83	2.27		1.47	
PCB-94	22.4	4.83			1.91	
PCB-95/98/102	1990	14.5			6.58	
PCB-96	36.4	4.83			2.16	
PCB-97	975	4.83			1.24	
PCB-99	1390	4.83			1.94	
PCB-100	10.9	4.83			2.03	
PCB-103	21.6	4.83			2.28	
PCB-104	ND	4.83	1.55		0.931	
PCB-105	837	4.83			2.21	
PCB-106/118	2100	9.66			2.44	
PCB-107/109	178	9.66			1.98	
PCB-108/112	178	9.66			1.86	
PCB-110	2760	4.83			1.94	
PCB-111/115	67.6	9.66			0.768	
PCB-113	ND	4.83	3.41		1.31	
PCB-114	66.5	4.83			1.81	
PCB-119	72.5	4.83			0.949	
PCB-120	ND	4.83		4.83	1.01	
PCB-121	ND	4.83	1.35		1.94	
PCB-122	39.6	4.83			1.84	
PCB-123	ND	4.83		48.2	1.35	
PCB-124	88.0	4.83			1.79	
PCB-126	9.88	4.83			2.05	
PCB-127	ND	4.83	1.66		0.808	
PCB-128/162	160	9.66			1.68	
PCB-129	65.8	4.83			1.11	
PCB-130	78.6	4.83			2.21	
PCB-131	ND	4.83		0.356	1.46	
PCB-132/161	335	9.66			2.34	
PCB-133/142	37.9	9.66			2.19	
PCB-134/143	76.5	9.66			2.40	
PCB-135	173	4.83			2.90	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	170	4.83			2.89	
PCB-137	70.2	4.83			2.08	
PCB-138/163/164	1010	14.5			2.68	
PCB-139/149	1000	9.66			7.87	
PCB-140	ND	4.83		9.45	3.52	
PCB-141	196	4.83			1.15	
PCB-144	69.1	4.83			3.22	
PCB-145	ND	4.83	2.42		1.73	
PCB-146/165	138	9.66			1.91	
PCB-147	47.3	4.83			3.62	
PCB-148	ND	4.83	3.59		1.68	
PCB-150	ND	4.83	2.49		1.14	
PCB-151	236	4.83			3.59	
PCB-152	ND	4.83		2.16	1.82	
PCB-153	823	4.83			1.83	
PCB-154	14.4	4.83			2.78	
PCB-155	ND	4.83	2.34		1.45	
PCB-156	95.4	4.83			1.74	
PCB-157	23.5	4.83			1.17	
PCB-158/160	127	9.66			1.99	
PCB-159	5.56	4.83			1.20	
PCB-166	4.86	4.83			0.920	
PCB-167	42.8	4.83			1.65	
PCB-168	ND	4.83		1.13	0.933	
PCB-169	ND	4.83	2.00		1.12	
PCB-170	122	4.83			1.38	
PCB-171	35.9	4.83			1.61	
PCB-172	19.7	4.83			1.46	
PCB-173	ND	4.83		3.86	1.49	
PCB-174	116	4.83			1.42	
PCB-175	ND	4.83		4.97	3.15	
PCB-176	17.4	4.83			2.17	
PCB-177	68.9	4.83			1.34	
PCB-178	27.5	4.83			2.25	
PCB-179	57.1	4.83			1.57	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-OWS-02-20141203-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 13:56

Sample Data
Matrix: Aqueous
Sample Size: 1.04 L

Laboratory Data
Lab Sample: 1400915-01 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0058 Date Extracted: 09-Dec-2014 8:20
Date Analyzed : 10-Dec-14 07:19 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	242	4.83			0.610	
PCB-181	ND	4.83		1.46	1.01	
PCB-182/187	161	9.66			6.20	
PCB-183	77.5	4.83			3.29	
PCB-184	ND	4.83	1.42		1.25	
PCB-185	13.2	4.83			1.47	
PCB-186	ND	4.83	1.38		2.43	
PCB-188	ND	4.83	1.25		1.08	
PCB-189	4.50	4.83			1.49	J
PCB-190	24.5	4.83			1.70	
PCB-191	4.08	4.83			1.96	J
PCB-192	ND	4.83	1.43		1.69	
PCB-193	11.0	4.83			1.46	
PCB-194	44.6	4.83			1.71	
PCB-195	16.9	4.83			1.47	
PCB-196/203	63.6	9.66			6.35	
PCB-197	ND	4.83		2.21	1.80	
PCB-198	3.41	4.83			3.78	J
PCB-199	59.8	4.83			4.05	
PCB-200	7.58	4.83			1.75	
PCB-201	ND	4.83		6.25	1.02	
PCB-202	11.2	4.83			1.55	
PCB-204	ND	4.83	2.56		1.48	
PCB-205	39.3	4.83			1.53	
PCB-206	ND	4.83		11.9	1.32	
PCB-207	2.05	4.83			1.51	J
PCB-208	ND	4.83		3.94	1.34	
PCB-209	ND	4.83	2.52		1.86	
Total monoCB	13.8	4.83		18.8		
Total diCB	625	9.66		670		
Total triCB	5160	4.83		5170		
Total tetraCB	23800	4.83				
Total pentaCB	17800	4.83				
Total hexaCB	5010	4.83		5020		
Total heptaCB	1000	4.83		1010		
Total octaCB	246	4.83		255		
Total nonaCB	2.05	4.83		17.9		
DecaCB	ND	4.83	2.52			
Total PCB	53600	9.66				

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-OWS-02-20141203-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 13:56

Sample Data
Matrix: Aqueous
Sample Size: 1.04 L

Laboratory Data
Lab Sample: 1400915-01 Date Received: 04-Dec-2014 9:03
QC Batch: B4L0058 Date Extracted: 09-Dec-2014 8:20
Date Analyzed : 10-Dec-14 07:19 Column: ZB-1 Analyst: WJL

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	67.1	5 -145	
	13C-PCB-3	69.9	5 -145	
	13C-PCB-4	74.5	5 -145	
	13C-PCB-11	88.4	5 -145	
	13C-PCB-9	80.5	5 -145	
	13C-PCB-19	74.7	5 -145	
	13C-PCB-28	93.8	5 -145	
	13C-PCB-32	80.5	5 -145	
	13C-PCB-37	97.6	5 -145	
	13C-PCB-47	85.3	5 -145	
	13C-PCB-52	83.9	5 -145	
	13C-PCB-54	77.1	5 -145	
	13C-PCB-70	90.3	5 -145	
	13C-PCB-77	101	10 -145	
	13C-PCB-80	92.9	10 -145	
	13C-PCB-81	99.4	10 -145	
	13C-PCB-95	81.7	10 -145	
	13C-PCB-97	94.0	10 -145	
	13C-PCB-101	91.2	10 -145	
	13C-PCB-104	77.9	10 -145	
	13C-PCB-105	99.6	10 -145	
	13C-PCB-114	96.6	10 -145	
	13C-PCB-118	96.8	10 -145	
	13C-PCB-123	97.0	10 -145	
	13C-PCB-126	106	10 -145	
	13C-PCB-127	101	10 -145	
	13C-PCB-138	98.0	10 -145	
	13C-PCB-141	96.1	10 -145	
	13C-PCB-153	93.2	10 -145	
	13C-PCB-155	68.0	10 -145	
	13C-PCB-156	101	10 -145	
	13C-PCB-157	101	10 -145	
	13C-PCB-159	100	10 -145	
	13C-PCB-167	101	10 -145	
	13C-PCB-169	103	10 -145	
	13C-PCB-170	97.7	10 -145	
	13C-PCB-180	95.3	10 -145	
	13C-PCB-188	83.5	10 -145	
	13C-PCB-189	100	10 -145	
	13C-PCB-194	100	10 -145	
	13C-PCB-202	80.1	10 -145	
	13C-PCB-206	89.6	10 -145	
	13C-PCB-208	93.6	10 -145	
	13C-PCB-209	81.6	10 -145	
CRS	13C-PCB-79	101	10 -145	
	13C-PCB-178	94.3	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Laboratory Project ID: 1400915

Storage Secured: Yes ☑ No ☐

Storage ID: WR-2 Temp: 0.7 °C

TAT: (Check One):
Standard: ○ 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.: 1400647 P.O.#: PO10163569 Sampler: Melissa Ivankevich (Name)

CW 12/3/14 Christine

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N Creek Pkwy City: Bothell State: WA Zip: 98011 Ph#: 206.300.2144 Fax#:

Relinquished by: (Signature and Printed Name) Corey Wilson Date: 12/3/14 Time: 1752

Received by: (Signature and Printed Name) Bethany B. Benedict Date: 12/04/14 Time: 0906

Relinquished by: (Signature and Printed Name) Date: Time:

Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: Sample Receiving

Method of Shipment: Overnight

Tracking No.: 8064 5979 2497

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29
BD-OWS-02-20141203-W	12/3/14	1356	0:1 Water Separator	4	A	AQ		✓								✓	✓				
BD-MH-9.66-20141203-S	12/3/14	0902	Manhole	1	G	SD		✓								✓	✓				
BD-OWS-15-20141203-S	12/3/14	1033	0:1 Water Separator	1	G	SD		✓								✓	✓				
BD-MH-10.9-20141203-S	12/3/14	1513	Manhole	1	G	SD		✓								✓	✓				
BD-MH-13.43-20141202-S	12/2/14	1507	Manhole	1	G	SD		✓								✓	✓				

12/3/14

Special Instructions/Comments: For Sample MH-10.9 Analyze Congeners 1st.

SEND DOCUMENTATION AND RESULTS TO:

Name: Christine Nancarrow
Company: SAME AS ABOVE
Address:
City: State: Zip:
Phone: Fax:
Email:

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other

*Bottle Preservative Type: T = Thiosulfate,
O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum AQ = Aqueous, O = Other

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400915 **TAT** Std

Samples Arrival:	**Date/Time** 12/04/14 0903	**Initials:** VBLB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/04/14 1610	**Initials:** VBLB	**Location:** WR-2 **Shelf/Rack:** A3

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 0.7 (uncorrected)	**Time:** 0905	**Thermometer ID:** IR-1
Temp °C: 0.7 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 8064 5979 2437	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	(Vista)	Client	Retain	Return	Dispose

Comments:

BD-OWS-02-20141203-W AQ A, B, C, D Containers

Soil container for BD-MH-10.9-20141203-S in 120ml jar ~~covered~~ Covered VBLB 12/5/14 in foil.

Sample Login 11/2013 ckt

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400915

Prep Expiration: 12/03/2015
Client: Leidos

Workorder Due: 25-Dec-14 00:00

TAT: 21

Method: **1613 Full List**
Matrix: **Aqueous**
Client Matrix: Aqueous
Also run: **Percent Solids**

Prep Batch: B4L0090

Prep Data Entered: 12/17/14 BMS
Date and Initials

Initial Sequence: 54L0034

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400915-01 A	☒	BD-OWS-02-20141203-W	04-Dec-14 09:03	WR-2 A-3	

Vista PM: Martha Maier

Vial Box ID: Malena

Sample Reconciled By: B. Smith 12/16/14

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0089

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4 ~~HRMS-2~~

Date/Time IN: 12/16/14 0940 Date/Time OUT 12/17/14 1515

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 12/16/14	BMS 12/17/14			BMS 12/16/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-01RE1		Sample	1.31	15.08	1.31			5	N/A	N/A	0
	1400925-01 (A)		Sample	1.32	15.97	1.85			7			
	1400925-02 (A)		Sample	1.32	21.07	2.03			7			
	1400925-03 (A)		Sample	1.32	11.20	1.68			7			
	1400925-04 (A)		Sample	1.32	16.92	1.89			7			
	1400926-01		Sample	1.32	12.71	1.40			7			
	1400926-02		Sample	1.34	11.51	1.48			7			
	1400927-01		Sample	1.32	11.28	1.41			7			
	1400927-02		Sample	1.33	13.21	1.50			7			
	1400928-01		Sample	1.32	15.38	1.42			7			
	1400930-01		Sample	1.30	16.82	1.33			7			
	1400931-01		Sample	1.32	19.55 BMS 12/16/14	1.36			7			
	1400932-01		Sample	1.32	~~14.15~~ 14.15	12.36 1.33			7			
	1400933-01		Sample	1.33	18.26	1.37			7			
	1400936-01		Sample	1.31	13.42	1.39			7			
	1400936-02		Sample	1.32	13.28	1.43			7			
	1400937-01		Sample	1.32	16.09	1.38			7			
	1400937-02		Sample	1.31	16.90	1.37			7			

(A) Sample contained crystals after being in oven overnight. BMS 12/17/14

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0089

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN:	Date/Time OUT
12/16/14 0940	12/17/14 1515

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 12/16/14	BMS 12/17/14			BMS 12/16/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-01RE1		Sample	1.3100	15.0800	1.3100	0.0000	0.00	5	N/A	N/A	0
	1400925-01		Sample	1.3200	15.9700	1.8500	0.5300	3.62	7	N/A	N/A	0
	1400925-02		Sample	1.3200	21.0700	2.0300	0.7100	3.59	7	N/A	N/A	0
	1400925-03		Sample	1.3200	11.2000	1.6800	0.3600	3.64	7	N/A	N/A	0
	1400925-04		Sample	1.3200	16.9200	1.8900	0.5700	3.65	7	N/A	N/A	0
	1400926-01		Sample	1.3200	12.7100	1.4000	0.0800	0.70	7	N/A	N/A	0
	1400926-02		Sample	1.3400	11.5100	1.4800	0.1400	1.38	7	N/A	N/A	0
	1400927-01		Sample	1.3200	11.2800	1.4100	0.0900	0.90	7	N/A	N/A	0
	1400927-02		Sample	1.3300	13.2100	1.5000	0.1700	1.43	7	N/A	N/A	0
	1400928-01		Sample	1.3200	15.3800	1.4200	0.1000	0.71	7	N/A	N/A	0
	1400930-01		Sample	1.3000	16.8200	1.3300	0.0300	0.19	7	N/A	N/A	0
	1400931-01		Sample	1.3200	19.5500	1.3600	0.0400	0.22	7	N/A	N/A	0
	1400932-01		Sample	1.3200	12.3600	1.3300	0.0100	0.09	7	N/A	N/A	0
	1400933-01		Sample	1.3300	18.2600	1.3700	0.0400	0.24	7	N/A	N/A	0
	1400936-01		Sample	1.3100	13.4200	1.3900	0.0800	0.66	7	N/A	N/A	0
	1400936-02		Sample	1.3200	13.2800	1.4300	0.1100	0.92	7	N/A	N/A	0
	1400937-01		Sample	1.3200	16.0900	1.3800	0.0600	0.41	7	N/A	N/A	0
	1400937-02		Sample	1.3100	16.9000	1.3700	0.0600	0.38	7	N/A	N/A	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1613 Full List

B4L0090

Chemist: B. Smith

Prep Date/Time: 16-Dec-14 08:37

Prepared using: HRMS - SPE Extraction

							NA	C4L0068	C4L0068	C4L0069	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	1400948-04	1463.53	498.84	0.96469	BMS 12/16/14	M.T SR 12/17/14	NA	M.T 12/17/14	M.T 12/17/14	M.T 12/17/14	M.T V6 12/17/14

IS Name (V9)	NS Name (V13)	CRS Name (V9)	RS Name (V9)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: BMS 12/16/14
PCDD/F 14H2704, 10uL	PCDD/F 13L1101, 10uL	PCDD/F 14H2705, 10uL	PCDD/F 14H2706, 10uL	Start Date/Time 12/16/14 1652	SOLV: Tol	Check In: Chemist/Date: empty ✓
PCB	PCB	PCB	PCB	Other SPE		
PAH	PAH	PAH	PAH	Stop Date/Time 12/17/14 9:00	Final Volume(s) 20uL G4	Balance ID: HE MS-4

Comments:

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1613 Full List

B4L0090

Chemist: B. Smith

Prep Date/Time: 16-Dec-14 08:37

Prepared using: HRMS - SPE Extraction

							NA	C4L0068	C4L0068	C4L0069	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B4L0090-BLK1	MA	MA	(1.000)	BMS BR 12/16/14	M.T 12/17/14	NA	M.T 12/17/14	M.T 12/17/14	M.T 12/17/14	M.T VG 12/17/14
☐	B4L0090-BS1	↓	↓	↓							
☐	1400915-01	1509.84	503.26	1.00658							
☐	1400925-01	1550.86	505.62	1.04524							
☐	1400925-02	1548.53	506.28	1.04225							
☐	1400925-03	1555.63	503.48	1.05215							
☐	1400925-04	1550.76	503.00	1.04776							
☐	1400928-01	1535.60	499.65	1.03595							
☐	1400930-01	1542.17	500.64	1.04153							
☐	1400931-01	1529.92	500.02	1.0299							
☐	1400932-01	1495.67	500.57	0.9951							
☐	1400933-01	1521.98	500.71	1.02127							
☐	1400934-01	1504.91	496.26	1.00865							
☐	1400934-02 BMS 12/16/14	~~1515~~ 1516.60	499.93	1.01607							
☐	1400945-01	1528.51	501.15	1.02736							
☐	1400946-01	1524.87	499.84	1.02503							

IS Name (V9)	NS Name (V3)	CRS Name (V9)	RS Name (V9)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: BMS 12/16/14
PCDD/F 14H2704, 10µL	PCDD/F 13L1101, 10µL	PCDD/F 14H2705, 10 µL	PCDD/F 14H2706, 10µL	Start Date/Time 12/16/14 1652	SOLV: Tol	Check In: Chemist/Date: empty J
PCB	PCB	PCB	PCB	Other SPE		
PAH	PAH	PAH	PAH	Stop Date/Time 12/17/14 9:00	Final Volume(s) 20µL G4	Balance ID: HRMS-4

Comments:

Process Sheet

Workorder: 1400915

Prep Expiration: 12/03/2015
Client: Leidos

Workorder Due: 25-Dec-14 00:00

TAT: 21

Method: **1668C Full List**
Matrix: **Aqueous**
Client Matrix: Aqueous
Also run: **Percent Solids**

Prep Batch: B4L0058

Prep Data Entered: 12/12/14 SR
Date and Initials

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400915-01	"B" ☒	BD-OWS-02-20141203-W	04-Dec-14 09:03	WR-2 A-3	

Vista PM:Martha Maier

Vial Box ID: _____

Sample Reconciled By: S. Rongston 12/9/2014

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0057

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 12/9/14 0940 Date/Time OUT 12/12/14 0951

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 12/9/14	SR 12/12/14			SR 12/9/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-01		Sample	1.31	21.59	1.31			5	2	Ⓐ 10	0
	1400916-01		Sample	1.31	26.31	1.33			6	3	15	0
	1400917-01		Sample	1.31	21.24	1.33			6	3	10	0
	1400918-01		Sample	1.31	15.39	1.64			6	3	60	0
	MB B4L0058								5	2	10	0
	OPR B4L0058								5	2	10	0

Ⓐ Acid added in drops SR 12/9/14

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0057

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN:	Date/Time OUT
12/9/14 0848	12/12/14 0951

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 12/9/14	SR 12/12/14			SR 12/9/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-01		Sample	1.3100	21.5900	1.3100	0.0000	0.00	5	2	10	0
	1400916-01		Sample	1.3100	26.3100	1.3300	0.0200	0.08	6	3	15	0
	1400917-01		Sample	1.3100	21.2400	1.3300	0.0200	0.10	6	3	10	0
	1400918-01		Sample	1.3100	15.3900	1.6400	0.3300	2.34	6	3	60	0
	MB B4L0058								5	2	10	0
	OPR B4L0058								5	2	10	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668A Full List
Method: 1668C 40 PCB CA
Method: 1668C Full List

B4L0058

Chemist: S. Roughton
Prep Date/Time: 09-Dec-14 08:20

Prepared using: HRMS - Separatory Funnel

							N/A	CAL0037	N/A	N/A	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B4L0058-BLK1										
☐	B4L0058-BS1										
☐	B4L0058-BS2	N/A	N/A	(1.00)	SR 12/9/14	SR 12/9/14 12/9/14	N/A	SR 12/9/14	N/A	N/A	SR 12/9/14
☐	1400915-01										
☐	1400916-01										
☐	1400917-01										
☐	1400918-01										

(A) BS1 lost in centrifuge. BS2 spiked and extracted immediately SR 12/14/14

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: (SEFUN) SOX SDS	Check Out: Chemist/Date: N/A
PCDD/F (V2)	PCDD/F (V4)	PCDD/F (V2)	PCDD/F (V2)	Start Date/Time	SOLV: DCM	
PCB 14A3001, 10ml	PCB 13I2503, 10ml	PCB 14A3002, 10ml	PCB 14A3003, 10ml	N/A	Other N/A	Check In: Chemist/Date:
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) 20ml	Balance ID:
				N/A	C4	

Comments:

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668A Full List
Method: 1668C 40 PCB CA
Method: 1668C Full List

B4L0058

Chemist: S. Roughton

Prep Date/Time: 09-Dec-14 08:20

Prepared using: HRMS - Separatory Funnel

							N/A	CAL0037	N/A	N/A	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B4L0058-BLK1	N/A	N/A	(1.00)	SR SR 12/9/14	SR SR 12/9/14	N/A	SR 12/9/14	N/A	N/A	SR (NA) 12/9/14
☐	B4L0058-BS1 (A)	↓	↓	↓	↓	↓	↓	↓	↓	↓	SR 12/9/14
☐	1400915-01	1536.19	501.19	1.03500							SR (NA) 12/9/14
☐	1400916-01	1522.82	499.19	1.02363							↓
☐	1400917-01	1323.93	400.35	0.92358							
☐	1400918-01	799.80	285.25	0.51455	↓	↓	↓	↓	↓	↓	

(A) BS1 lost in centrifuge. New BS2 spiked and extracted immediately SR 12/9/14

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP SEFUN SOX SDS	Check Out: Chemist/Date: SR 12/9/14
PCDD/F _____ (V2)	PCDD/F _____ (V4)	PCDD/F _____ (V2)	PCDD/F _____ (V2)	Start Date/Time N/A	SOLV: DCM	Check In: Chemist/Date: Empty ↓
PCB 14A3001, 10ul	PCB 13I2503, 10ul	PCB 14A3002, 10ul	PCB 14A3003, 10ul		Other N/A	
PAH _____	PAH _____	PAH _____	PAH _____	Stop Date/Time N/A	Final Volume(s) 20ul Cg	Balance ID: HRMS-4

Comments:

Process Sheet

Workorder: 1400915

Prep Expiration: 12/02/2015
Client: Leidos

Workorder Due: 25-Dec-14 00:00

TAT: 21

Method: **1613 Full List**
Matrix: **Solid**
Client Matrix: Sediment
Also run: **Percent Solids**

Prep Batch: B4L0068

Prep Data Entered: 12/12/14 ed
Date and Initials

Initial Sequence: S4L0023

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400915-02	☑	BD-MH-9.66-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-03	☑	BD-OWS-15-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-04	☑	BD-MH-10.9-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-05	☑	BD-MH-13.43-20141202-S	04-Dec-14 09:03	WR-2 A-3	

Vista PM:Martha Maier

Vial Box ID: levitation

Sample Reconciled By: [signature] 12/11/14 for 12/8/14

Page 3 of 3

Solids estimate

Batch: B4L0054

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1400915-02	Percent Solids	69.57		10.00	14.37
1400915-03	Percent Solids	18.06		10.00	55.38
1400915-04	Percent Solids	32.89		10.00	30.40
1400915-05	Percent Solids	36.59		10.00	27.33

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0054

Analyst: CVG **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN: 12/8/14 12:55 Date/Time OUT 12/10/14 08:15

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	CVG 12/8/14	CB 12/10/14			N/A			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-02		Sample	1.28	12.75	9.26			N/A	N/A	N/A	N/A
	1400915-03		Sample	1.31	11.39	3.13						
	1400915-04		Sample	1.30	14.13	5.52						
	1400915-05		Sample	1.32	22.64	9.12						

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0054

Analyst: CVG **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN:	Date/Time OUT
12/8/14 12:55	12/10/14 8:15

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	CG 12/8/14	CB 12/10/14			N/A			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-02		Sample	1.2800	12.7500	9.2600	7.9800	69.57	N/A	N/A	N/A	N/A
	1400915-03		Sample	1.3100	11.3900	3.1300	1.8200	18.06	N/A	N/A	N/A	N/A
	1400915-04		Sample	1.3000	14.1300	5.5200	4.2200	32.89	N/A	N/A	N/A	N/A
	1400915-05		Sample	1.3200	22.6400	9.1200	7.8000	36.59	N/A	N/A	N/A	N/A

PREPARATION BENCH SHEET

Matrix: Solid

B4L0068

Chemist: V. Ordsmith

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 11-Dec-14 10:24

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	C4L0047 AP CHEM/ DATE	C4L0048 ABSG CHEM/ DATE	C4L0048 AA CHEM/ DATE	C4L0049 Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B4L0068-BLK1 (A)	10	(10.00)	BR 12/11/14	ES (V.S.) 12/12/14	ES 12/12/14	ES 12/12/14	ES 12/12/14	ES 12/12/14	ES QJ 12/12/14
☐	B4L0068-BS1 (A)	10	↓							
☐	1400915-02 (C) ES 12/11/14 +0		14.65							
☐	1400915-03 (A)(B) ES 12/11/14 +0		55.28							
☐	1400915-04 (B)(C) ES 12/11/14 +0		30.76							
☐	1400915-05 (A)(B)(C) ES 12/12/14 +0		27.24							
☐	1400918-02 ES 12/11/14 +0		11.35							

(A) Second acid partition performed on sample ES 12/12/14.
(B) 1:10 Dilutions made per request ES 12/12/14
(C) Cloudy at FV. ES 12/12/14

IS Name (V9)	NS Name (V13)	CRS Name (V9)	RS Name (V9)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: V6 12/11/14
PCDD/F 14H2704, 10 mL	PCDD/F 13L1101, 10 mL	PCDD/F 14H2706, 10 mL	PCDD/F 14H2706, 10 mL	Start Date/Time 12/11/14 16:40	SOLV: TOL	Check In: Chemist/Date: V6 12/11/14
PCB BR 12/11/14	PCB	PCB	PCB	Other N/A		
PAH	PAH	PAH	PAH	Stop Date/Time 12/12/14 8:43	Final Volume(s) 20 mL 014	Balance ID: HRMS-2

Comments:

RX

Process Sheet

Workorder: 1400915

Prep Expiration: 12/02/2015
Client: Leidos

Workorder Due: 25-Dec-14 00:00

TAT: 21

Method: **1613 Full List**
Matrix: **Solid**
Client Matrix: Sediment
Also run: **Percent Solids**

Prep Batch: B4L0086

Prep Data Entered: 12/16/14 BS
Date and Initials

Initial Sequence: S4L0031

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
~~1400915-02~~	☐	BD-MH-9.66-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-03 "A"	☒	BD-OWS-15-20141203-S	04-Dec-14 09:03	WR-2 A-3	
~~1400915-04~~	☐	BD-MH-10.9-20141203-S	04-Dec-14 09:03	WR-2 A-3	
~~1400915-05~~ "A"	☒	BD-MH-13.43-20141202-S	04-Dec-14 09:03	WR-2 A-3	

1g - full cleanup - high level glassware

Vista PM:Martha Maier

Vial Box ID: Mukena

Sample Reconciled By: B. Smith 12/15/14

Solids estimate

Batch: B4L0054

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1400915-02	Percent Solids	69.57		1.00	1.44
1400915-03	Percent Solids	18.06		1.00	5.54
1400915-04	Percent Solids	32.89		1.00	3.04
1400915-05	Percent Solids	36.59		1.00	2.73

PREPARATION BENCH SHEET

Matrix: Solid

B4L0086

Chemist: B.Smith

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 15-Dec-14 15:46

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE (C4L0060)	ABSG CHEM/ DATE (C4L0059)	AA CHEM/ DATE (C4L0059)	Florisil CHEM/ DATE (C4L0061)	RS CHEM/WIT DATE
☐	B4L0086-BLK1	5.00	5.00	BMS SR 12/15/14	ES 12/16/14	ES 12/14/14	ES 12/14/14	ES 12/16/14	ES 12/16/14	ES (M.T) 12/14/14
☐	B4L0086-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	1400913-01 (A) ES 12/16/14	7.08	7.07	↓	↓	↓	↓	↓	↓	↓
☐	1400913-02	9.12	9.12	↓	↓	↓	↓	↓	↓	↓
☐	1400915-03RE1	5.54	5.54	↓	↓	↓	↓	↓	↓	↓
☐	1400915-05RE1	2.73	2.83	↓	↓	↓	↓	↓	↓	↓

(A) ~~Crystals at F.V. ES 12/16/14~~ ES 12/16/14

IS Name (V9)	NS Name (V13)	CRS Name (V9)	RS Name (V9)	Cycle Time	APP: SEFUN SOX (SDS)
PCDD/F 14H2704, 10µL	PCDD/F 13L401, 10µL	PCDD/F 14H2705, 10µL	PCDD/F 14H2706, 10µL	Start Date/Time 12/15/14 1700	SOLV: To I
PCB	PCB	PCB	PCB		Other N/A
PAH	PAH	PAH	PAH	Stop Date/Time 12/16/14 9:01	Final Volume(s) 20µL C14

Check Out: Chemist/Date: BMS 12/15/14

Check In: Chemist/Date:

Balance ID: NRMS-2

Comments:

SAMPLE DATA

EPA Method 1613

Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	1.18	NotF	*	*		696	2.5	1.13
1,2,3,7,8-PeCDD	*	*	n	0.92	NotF	*	*		361	2.5	0.445
1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotF	*	*		459	2.5	1.25
1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotF	*	*		459	2.5	1.26
1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		459	2.5	1.34
1,2,3,4,6,7,8-HpCDD	*	*	n	1.12	NotF	*	*		536	2.5	1.49
OCDD	*	*	n	0.95	NotF	*	*		1050	2.5	4.89
2,3,7,8-TCDF	*	*	n	1.08	NotF	*	*		736	2.5	0.895
1,2,3,7,8-PeCDF	*	*	n	1.09	NotF	*	*		528	2.5	0.703
2,3,4,7,8-PeCDF	*	*	n	1.04	NotF	*	*		528	2.5	0.740
1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotF	*	*		1040	2.5	0.787
1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		1040	2.5	1.03
2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotF	*	*		599	2.5	0.640
1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		599	2.5	0.992
1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotF	*	*		723	2.5	1.13
1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		401	2.5	0.627
OCDF	*	*	n	1.10	NotF	*	*		701	2.5	2.28

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		696	1.13
Total Penta-Dioxins	*	*		439	0.542
Total Hexa-Dioxins	*	*		809	2.27
Total Hepta-Dioxins	*	*		536	1.49
Total Tetra-Furans	*	*		736	0.895
Total Penta-Furans	0.0000	0.0000		1080	1.48
Total Hexa-Furans	*	*		1040	1.11
Total Hepta-Furans	*	*		723	1.13

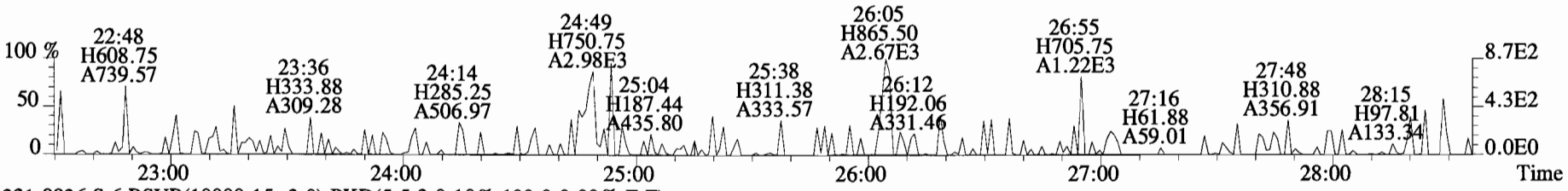
									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.84e+07	0.78	y	1.07	26:54	1.022	1611.6	80.6	
IS	13C-1,2,3,7,8-PeCDD	2.10e+07	0.63	y	1.24	31:32	1.198	1589.9	79.5	
IS	13C-1,2,3,4,7,8-HxCDD	1.40e+07	1.22	y	0.72	34:50	1.014	1463.2	73.2	
IS	13C-1,2,3,6,7,8-HxCDD	1.42e+07	1.24	y	0.74	34:57	1.017	1459.2	73.0	
IS	13C-1,2,3,7,8,9-HxCDD	1.65e+07	1.25	y	0.86	35:14	1.025	1460.5	73.0	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.30e+07	1.06	y	0.64	38:44	1.127	1531.3	76.6	
IS	13C-OCDD	2.05e+07	0.89	y	0.78	41:60	1.222	1980.2	49.5	
IS	13C-2,3,7,8-TCDF	2.71e+07	0.77	y	0.92	26:06	0.992	1616.3	80.8	
IS	13C-1,2,3,7,8-PeCDF	2.72e+07	1.59	y	0.95	30:20	1.153	1579.4	79.0	
IS	13C-2,3,4,7,8-PeCDF	2.84e+07	1.60	y	0.97	31:14	1.187	1615.3	80.8	
IS	13C-1,2,3,4,7,8-HxCDF	2.35e+07	0.51	y	0.99	33:57	0.988	1795.3	89.8	
IS	13C-1,2,3,6,7,8-HxCDF	2.20e+07	0.52	y	1.10	34:05	0.992	1518.0	75.9	
IS	13C-2,3,4,6,7,8-HxCDF	2.00e+07	0.52	y	1.03	34:40	1.009	1466.8	73.3	
IS	13C-1,2,3,7,8,9-HxCDF	1.74e+07	0.51	y	0.86	35:38	1.037	1529.0	76.5	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.42e+07	0.44	y	0.71	37:26	1.090	1501.1	75.1	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.26e+07	0.44	y	0.71	39:17	1.143	1340.6	67.0	
IS	13C-OCDF	2.67e+07	0.88	y	0.87	42:13	1.229	2310.6	57.8	
C/Up	37Cl-2,3,7,8-TCDD	9.68e+06			1.21	26:55	1.023	751.35	93.9	
RS/RT	13C-1,2,3,4-TCDD	2.13e+07	0.81	y	1.00	26:19	*	2000.0		
RS	13C-1,2,3,4-TCDF	3.63e+07	0.77	y	1.00	24:48	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.65e+07	0.52	y	1.00	34:22	*	2000.0		

Integrations by Analyst: M Date: 12/18/14

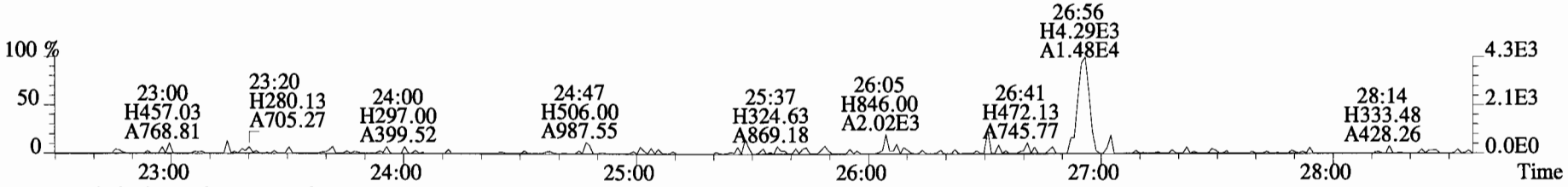
Reviewed by Analyst: Date: 12/19/14

File:141217D1 #1-552 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5

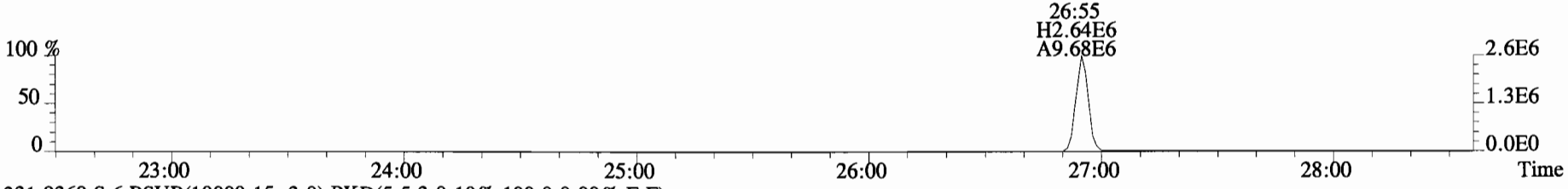
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



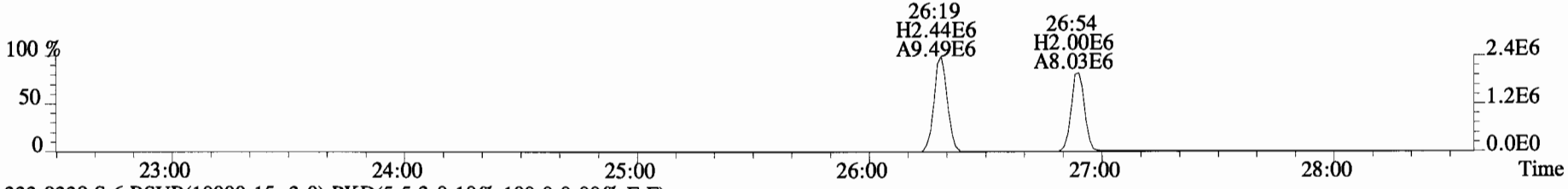
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



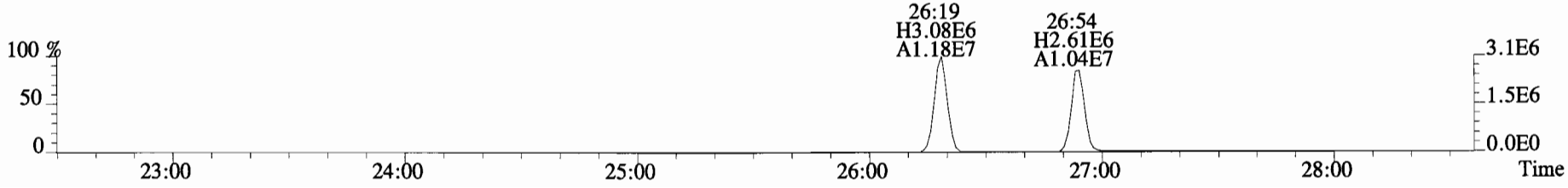
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

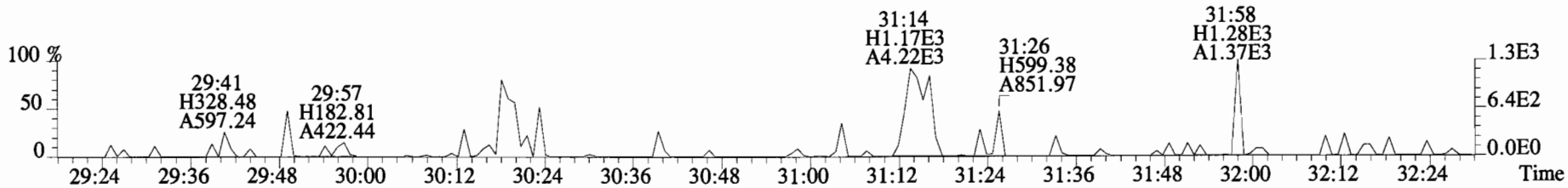


333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

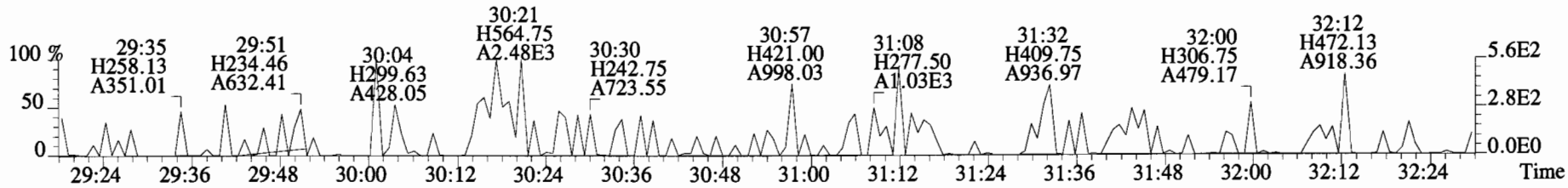


File:141217D1 #1-256 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5

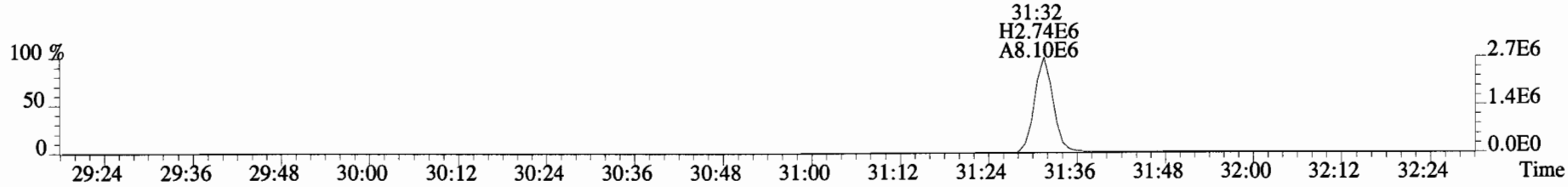
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



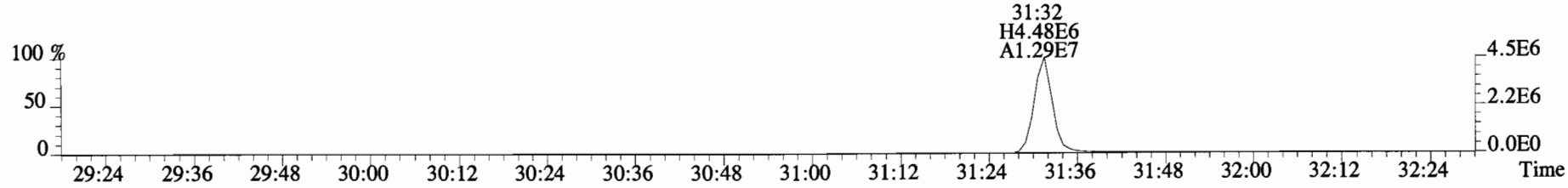
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



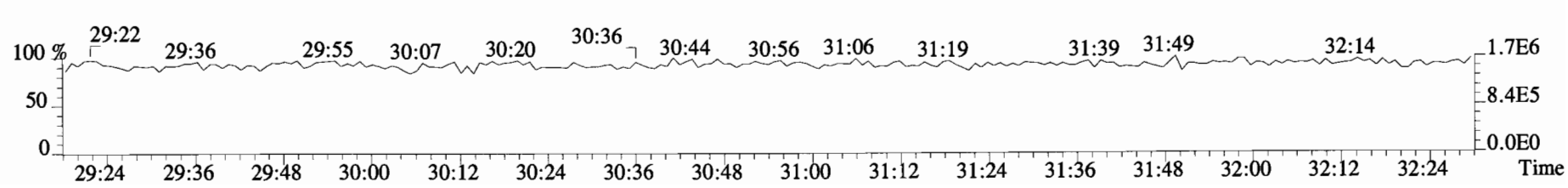
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



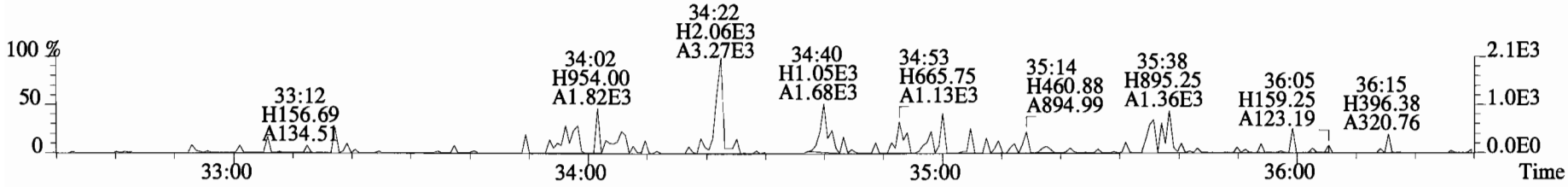
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



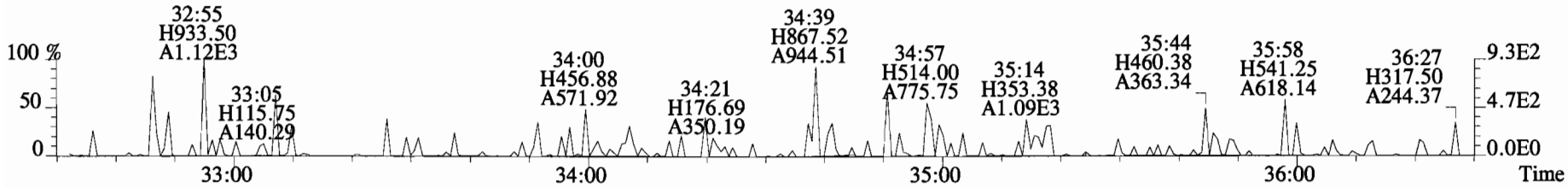
366.9792 S:6 F:2



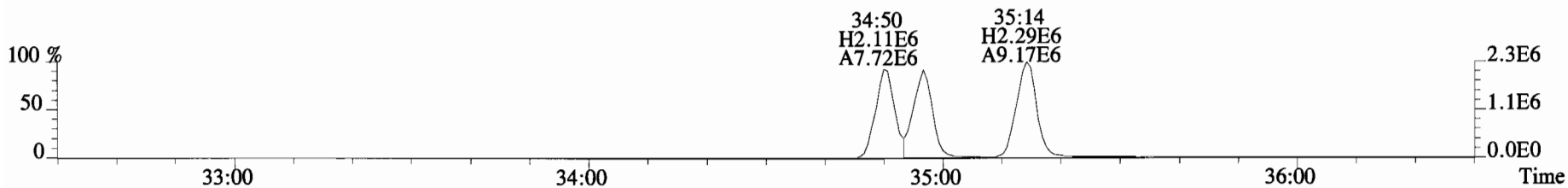
File:141217D1 #1-385 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



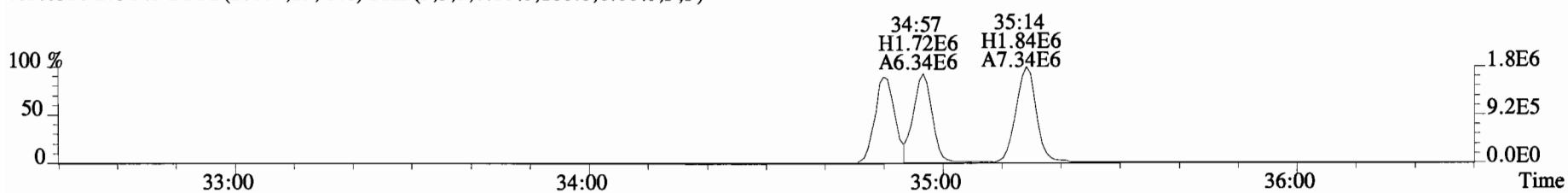
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



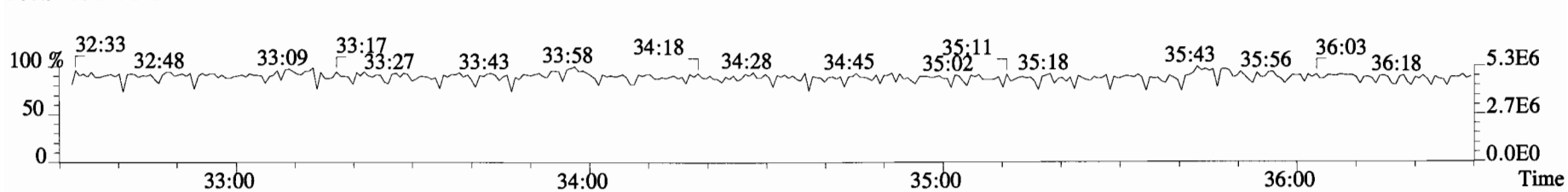
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



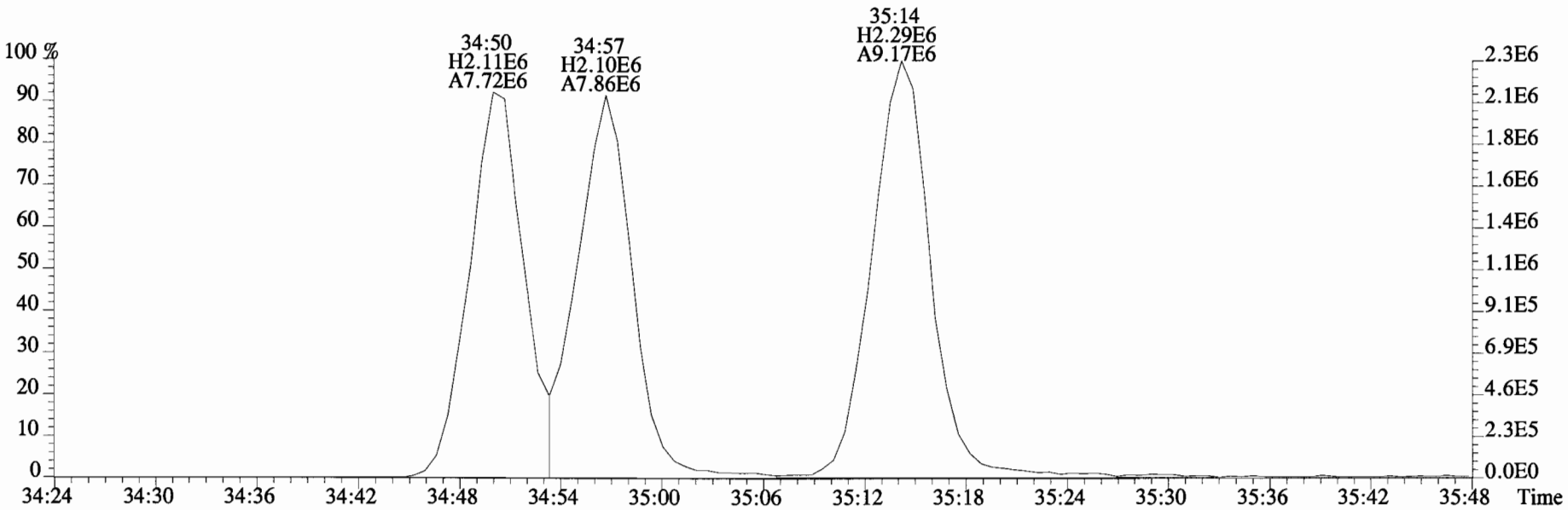
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



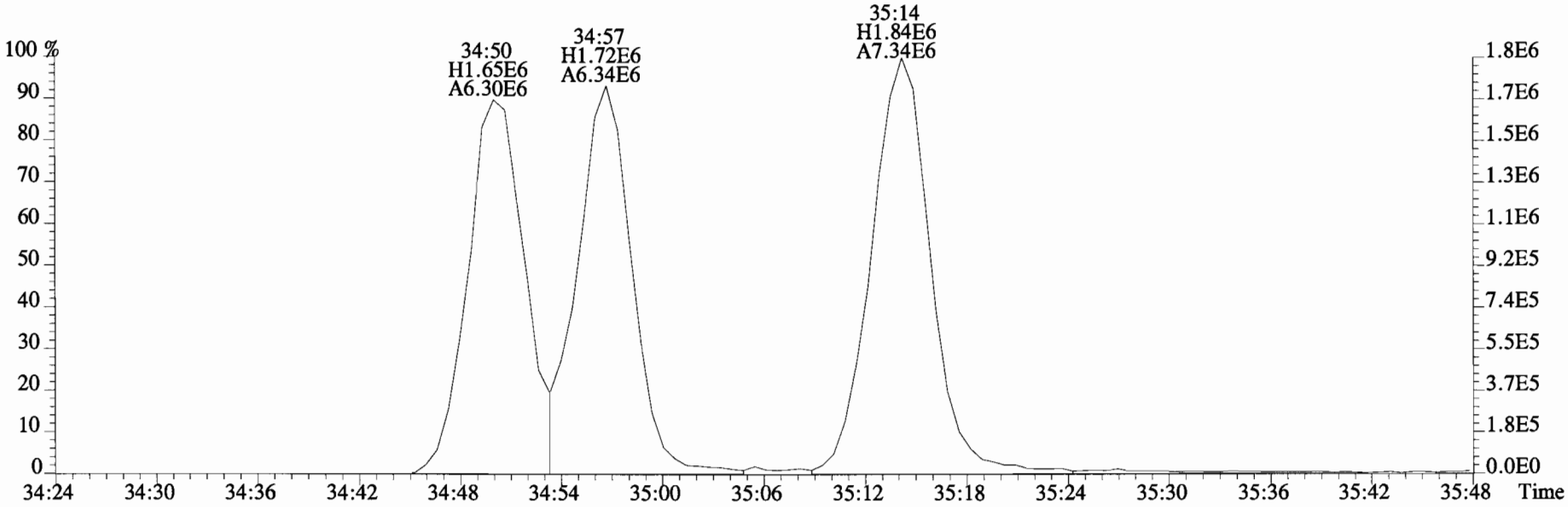
380.9760 S:6 F:3



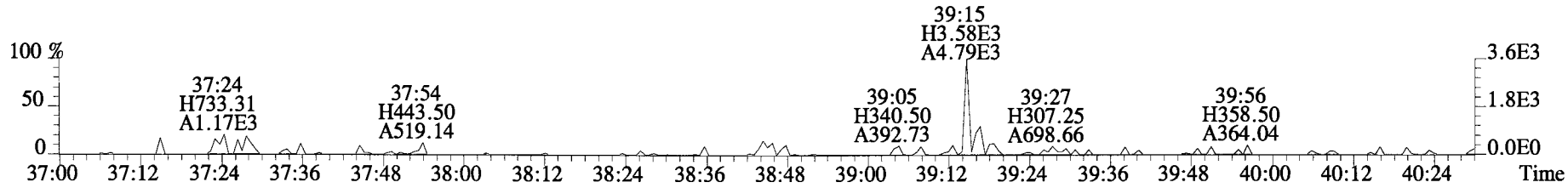
File:141217D1 #1-385 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



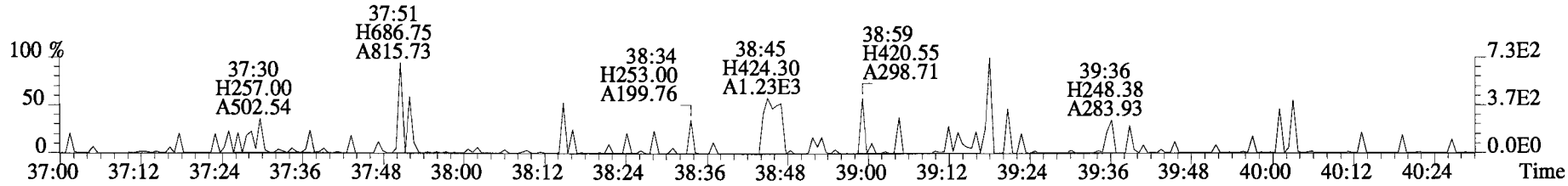
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



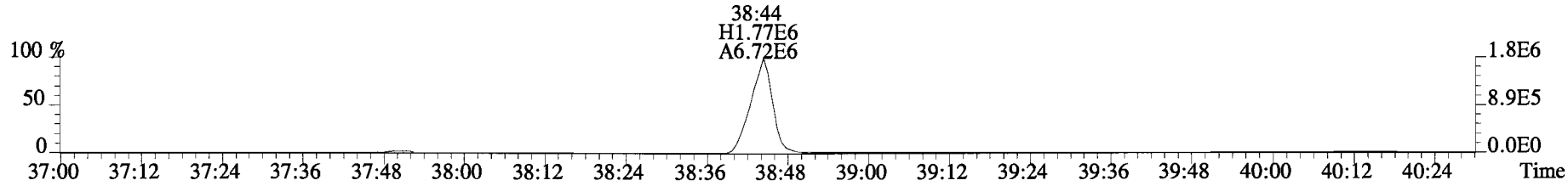
File:141217D1 #1-326 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



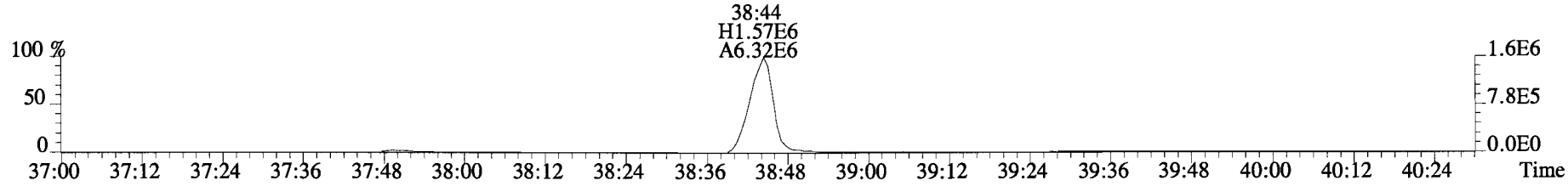
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



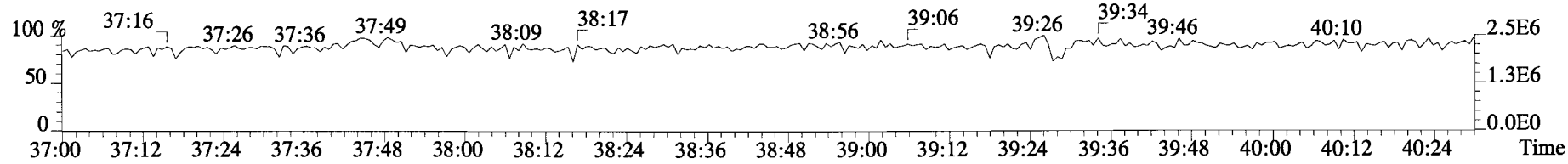
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



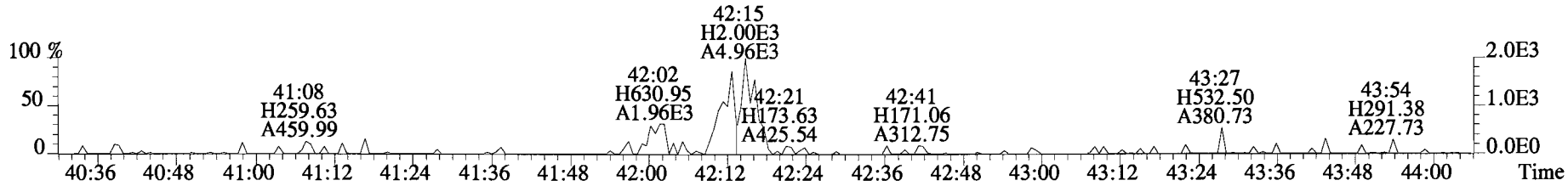
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



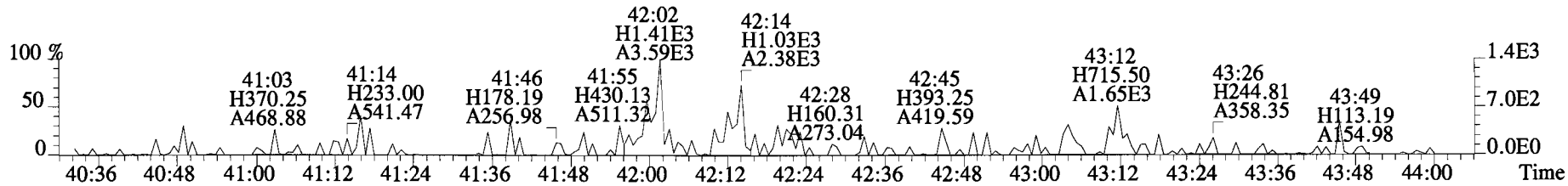
430.9728 S:6 F:4



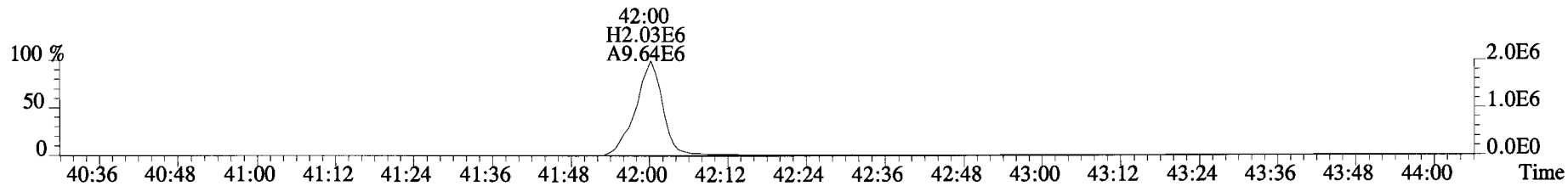
File:141217D1 #1-388 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



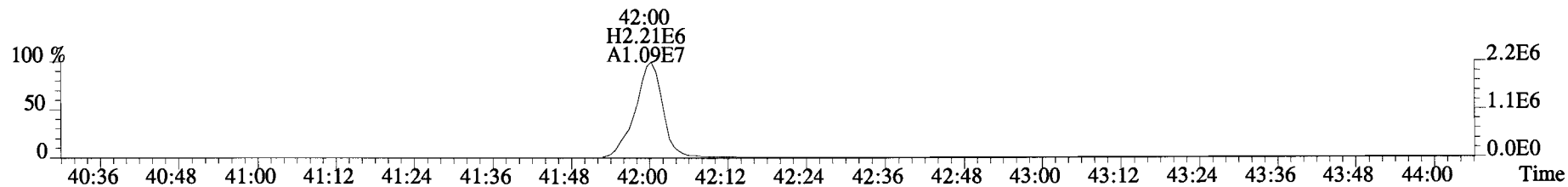
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



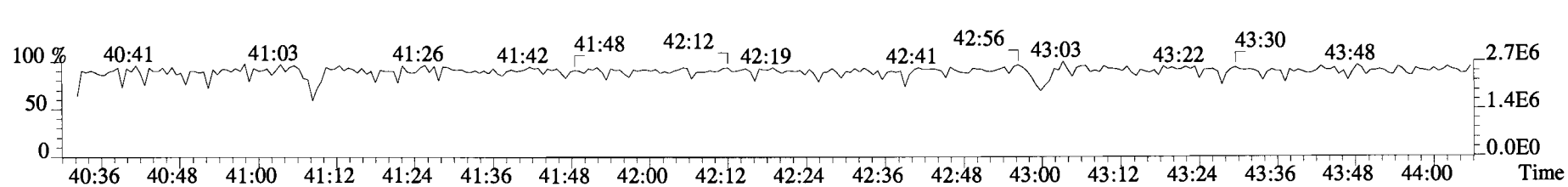
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



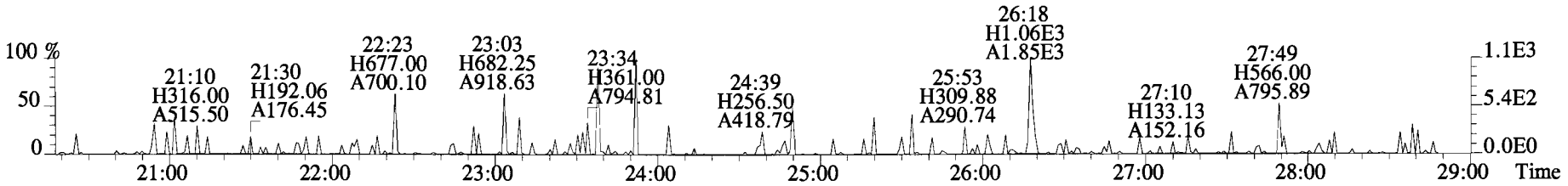
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



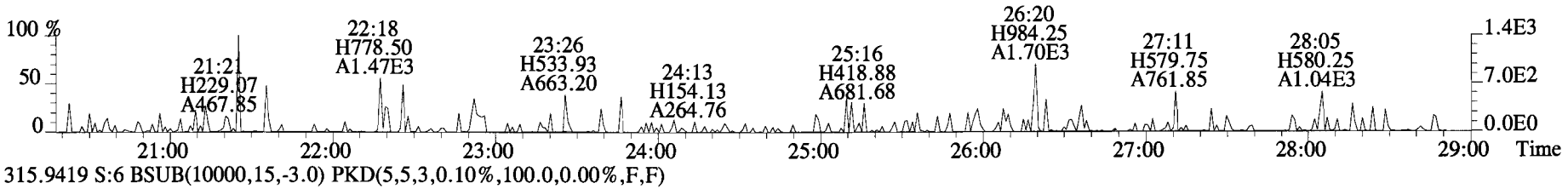
454.9728 S:6 F:5



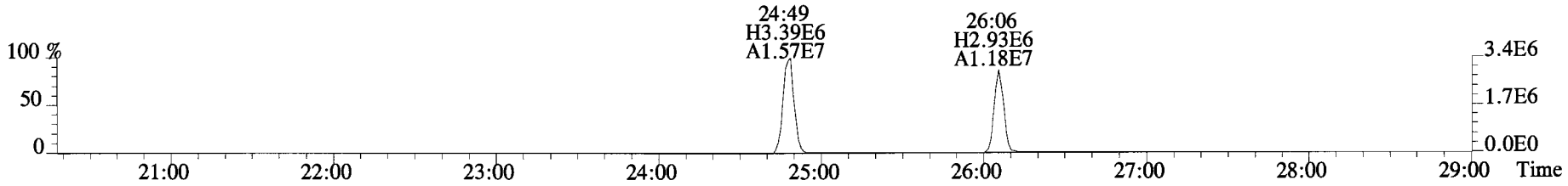
File:141217D1 #1-552 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



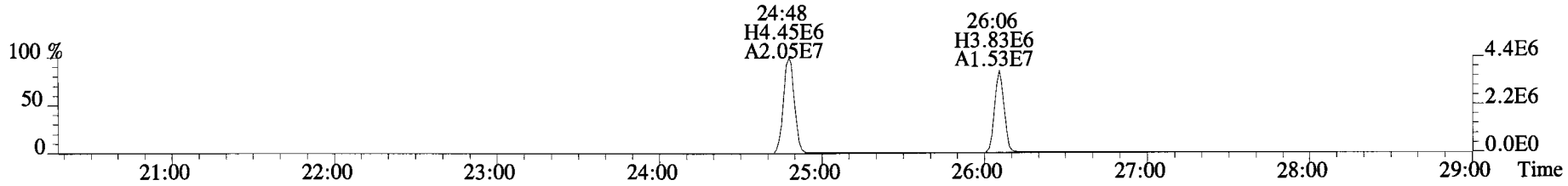
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



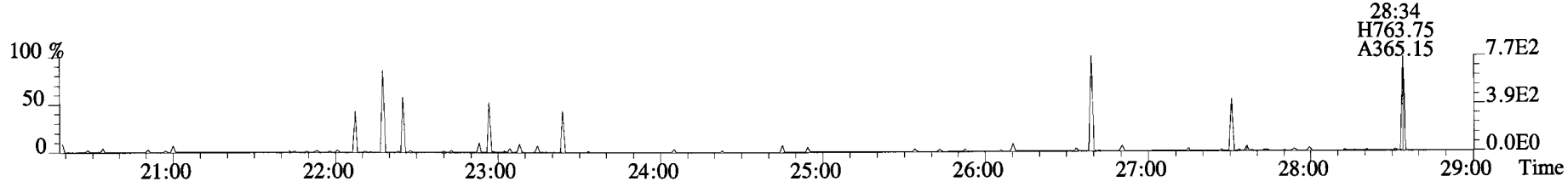
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



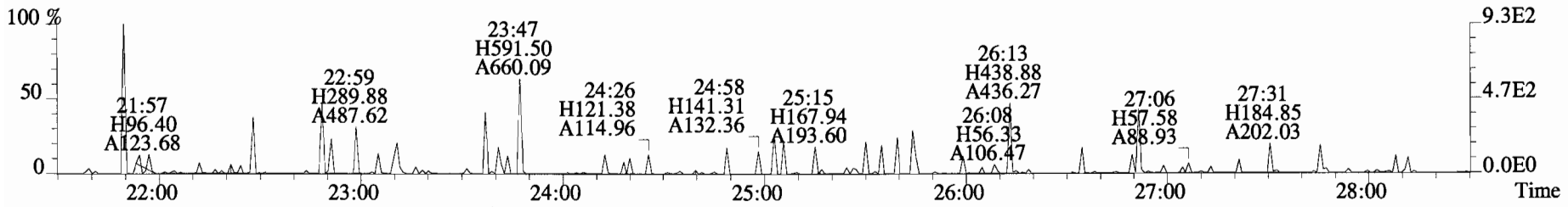
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



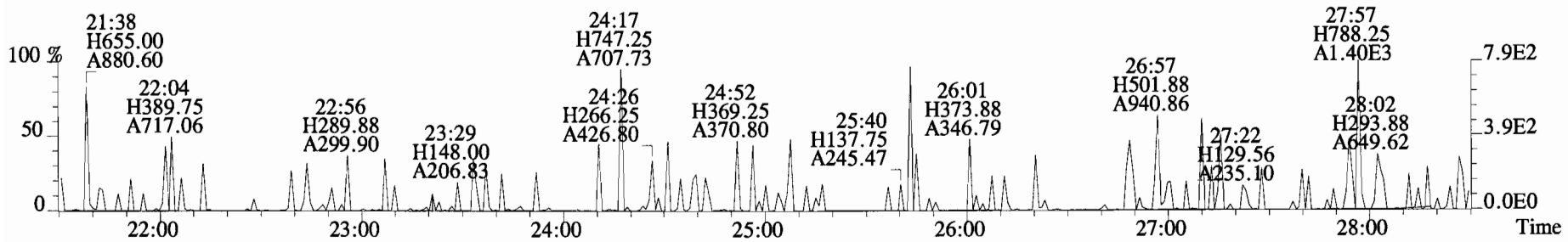
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



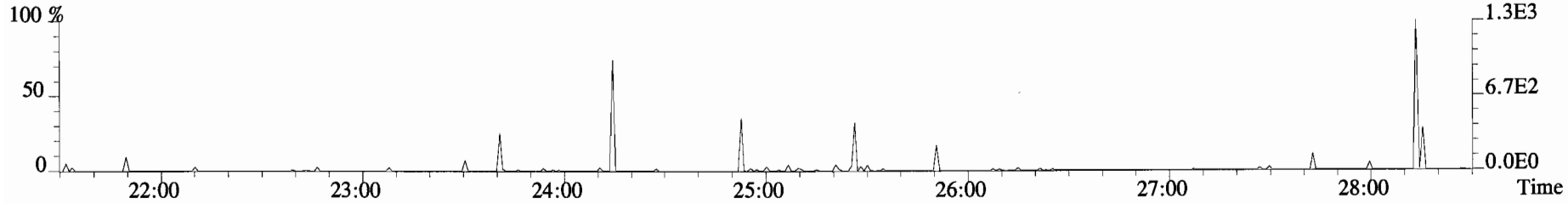
File:141217D1 #1-552 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



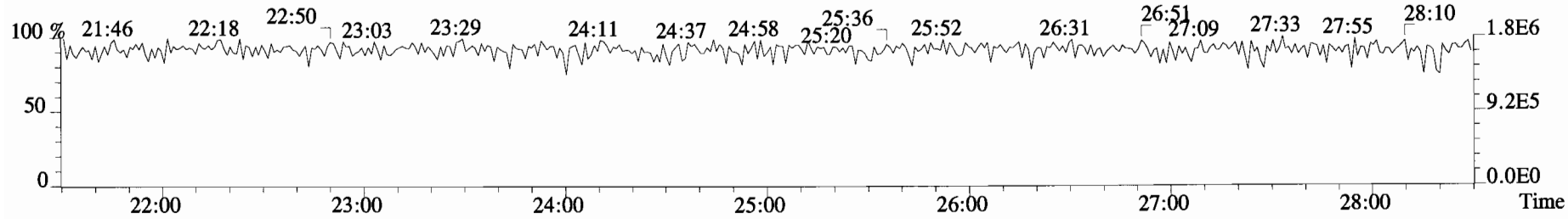
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



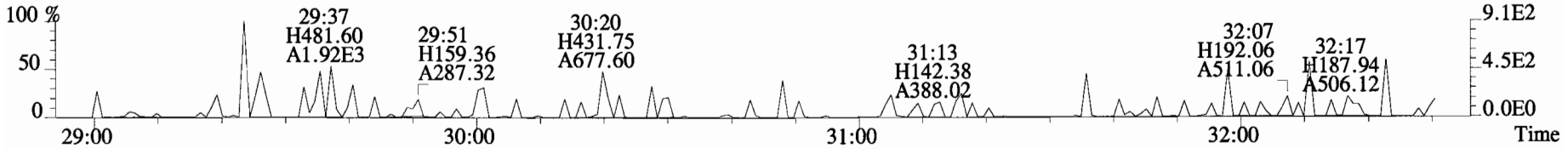
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



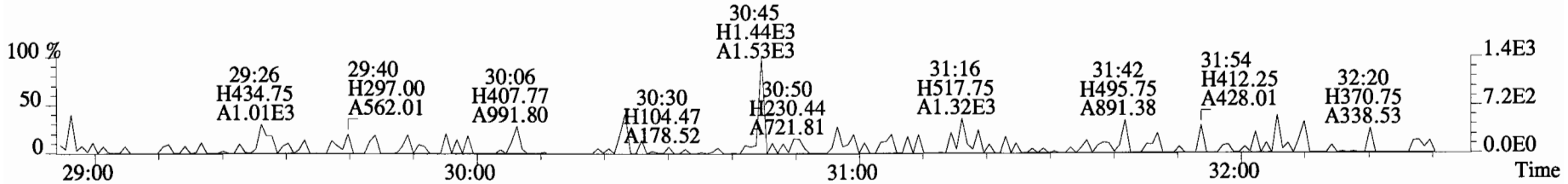
316.9824 S:6



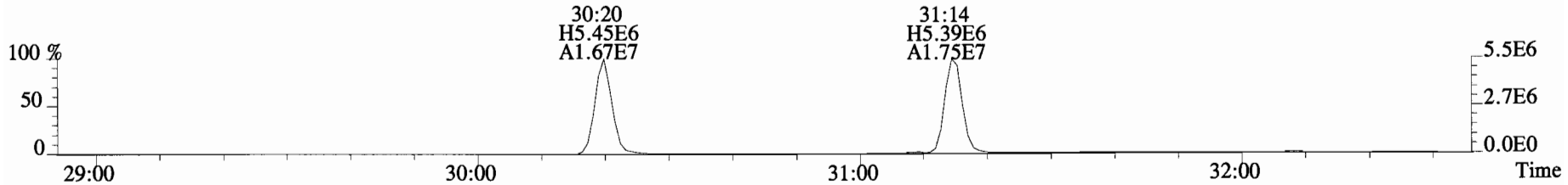
File:141217D1 #1-256 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



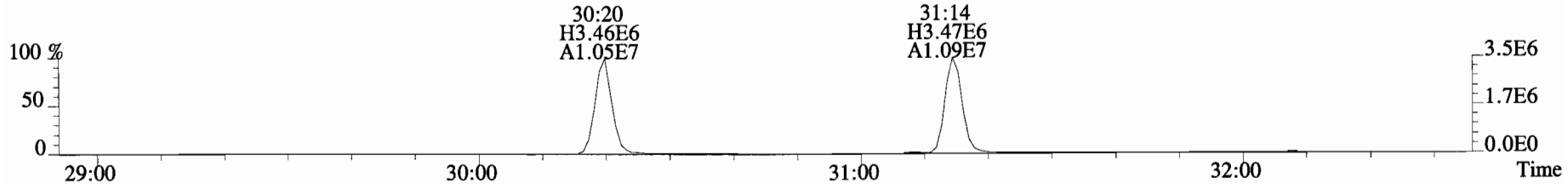
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



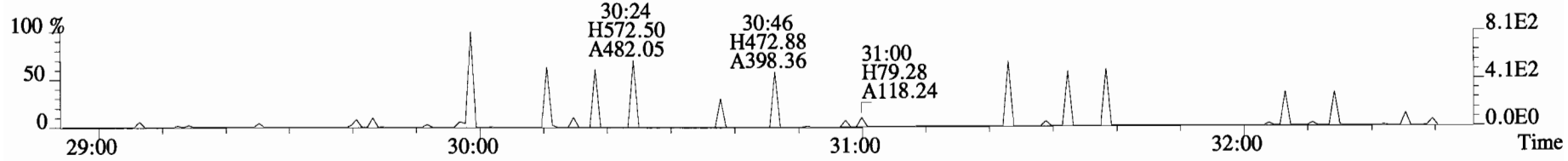
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

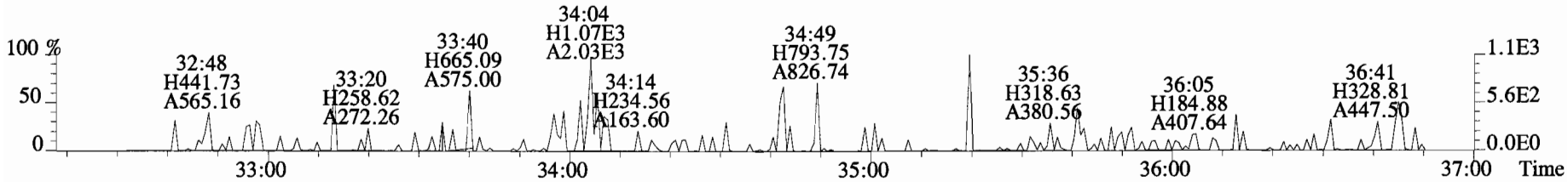


409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

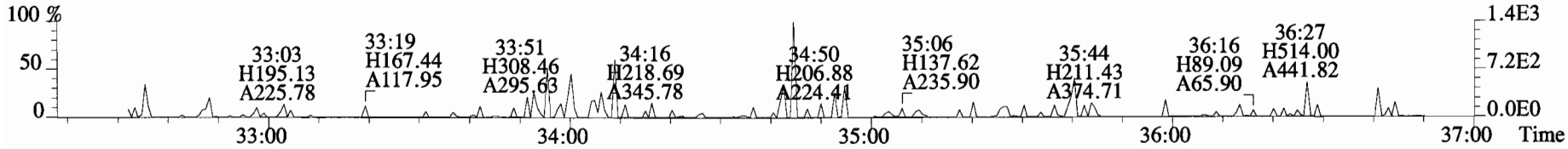


File:141217D1 #1-385 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5

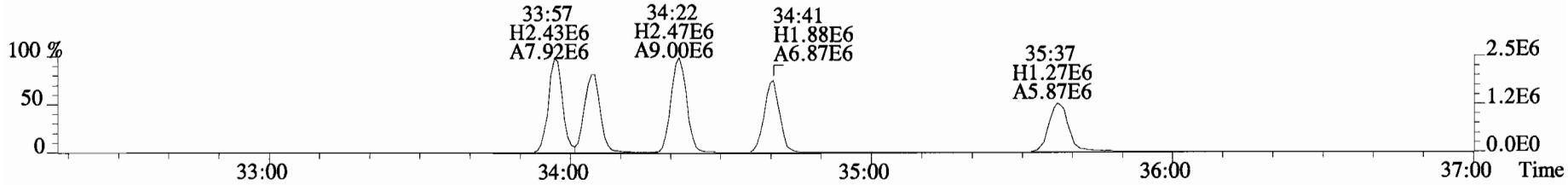
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



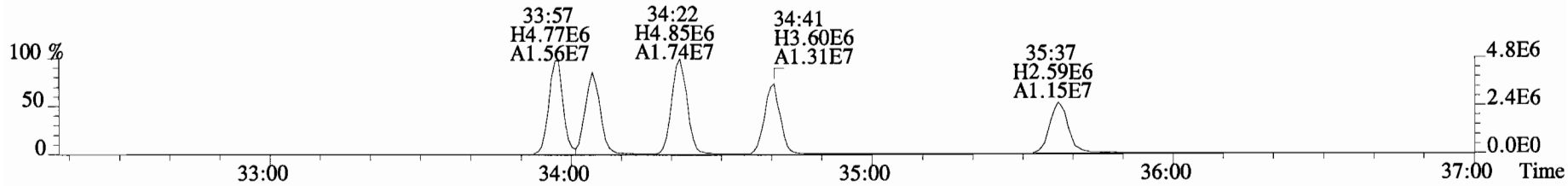
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



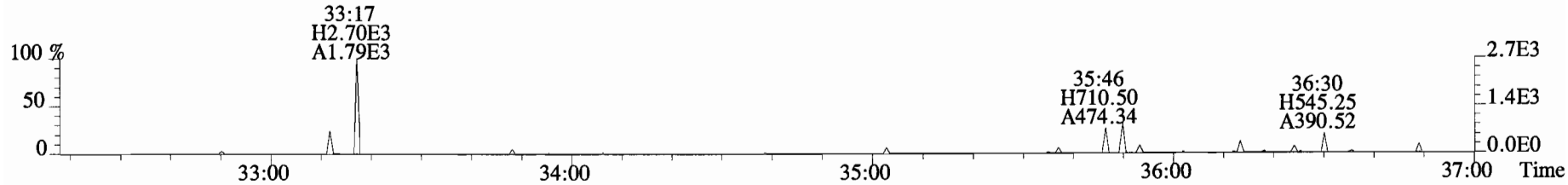
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



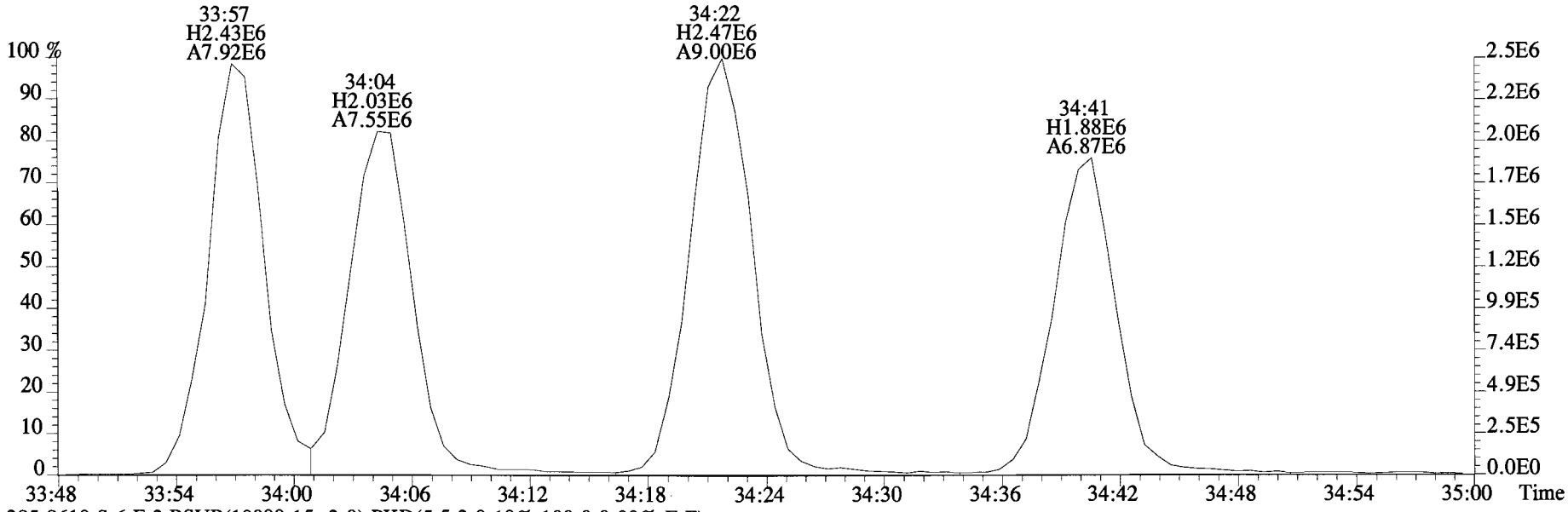
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



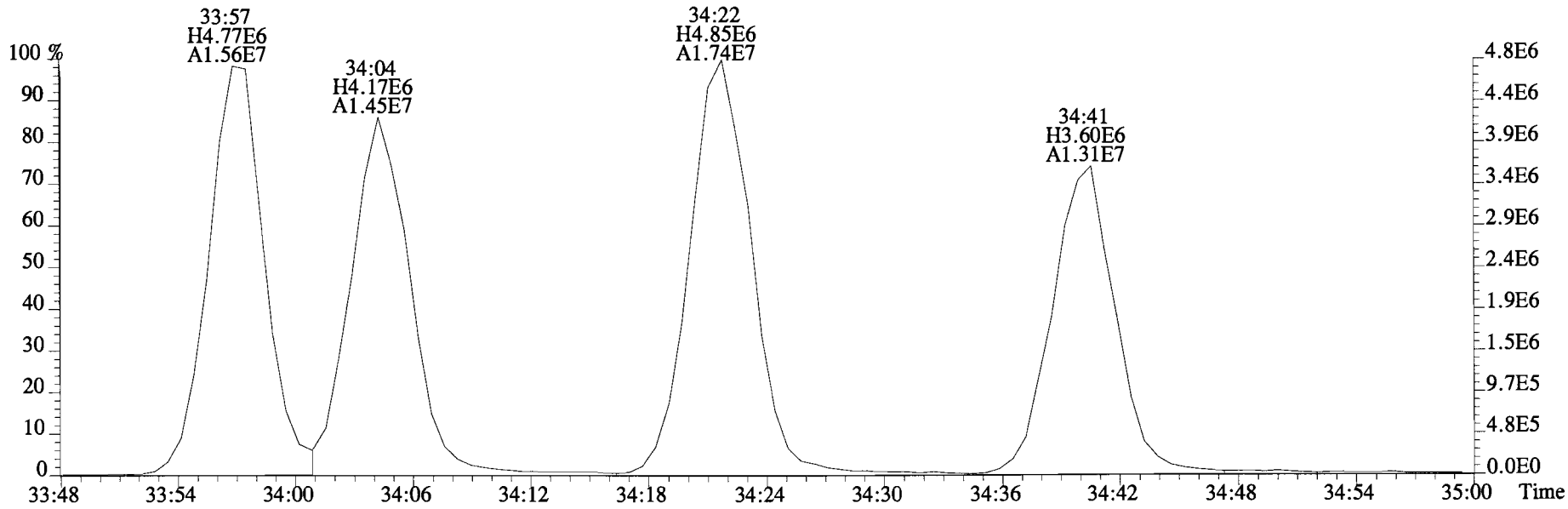
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



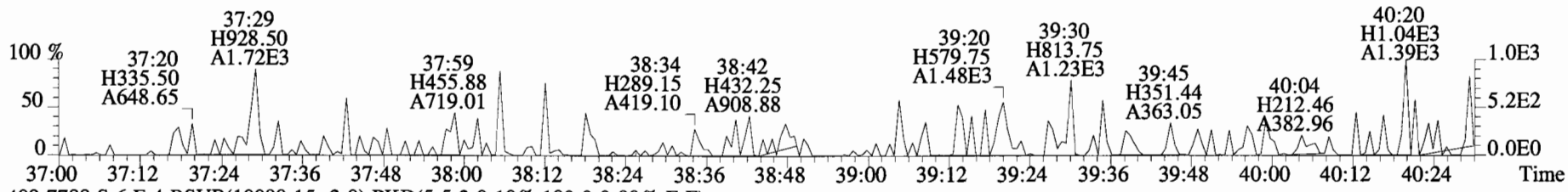
File:141217D1 #1-385 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



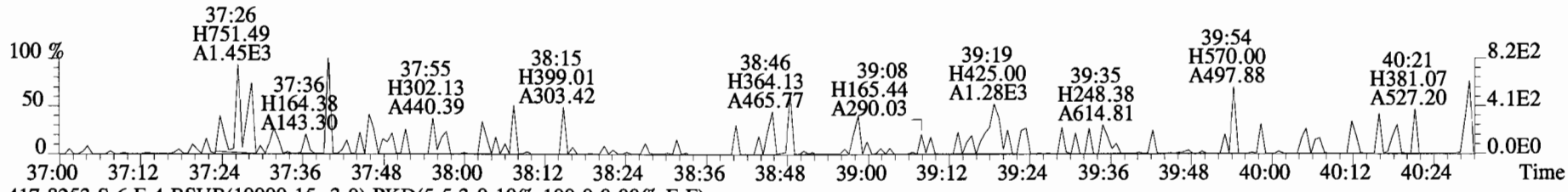
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



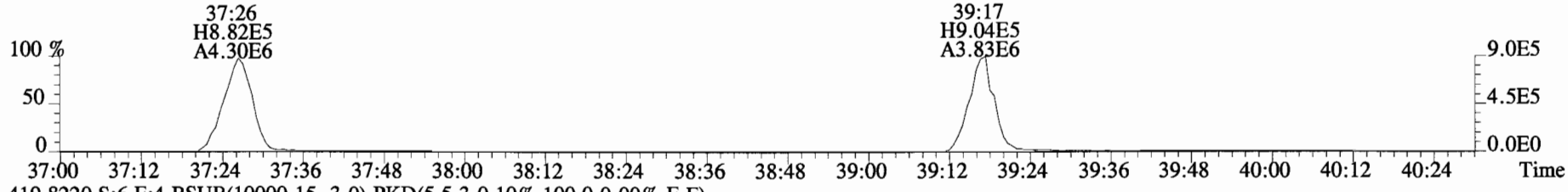
File:141217D1 #1-326 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



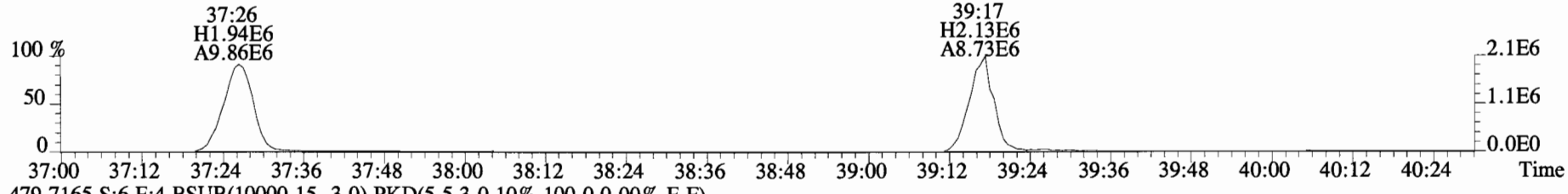
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



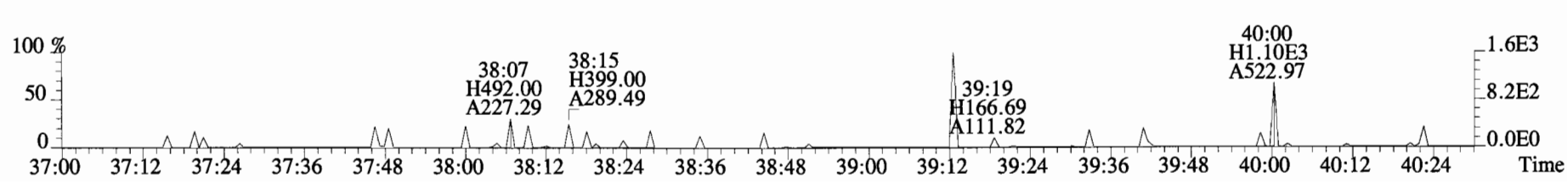
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

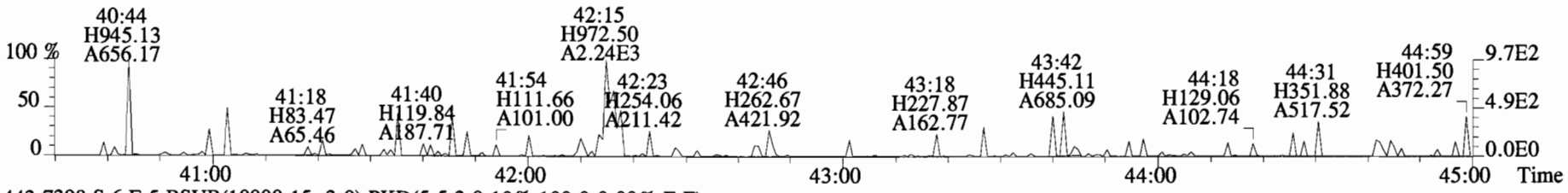


479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

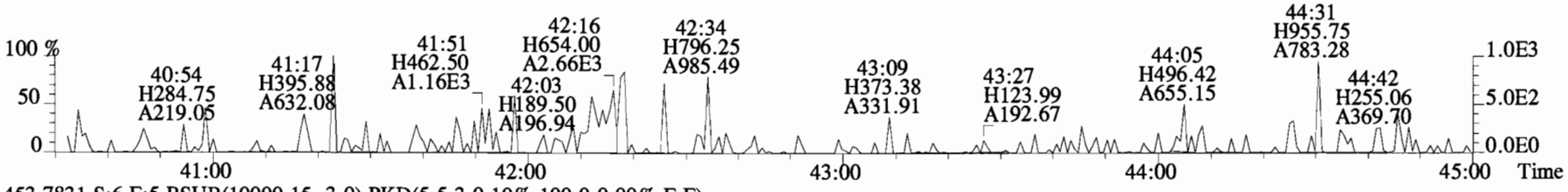


File:141217D1 #1-388 Acq:17-DEC-2014 18:51:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BLK1 Method Blank 1 Exp:OCDD_DB5

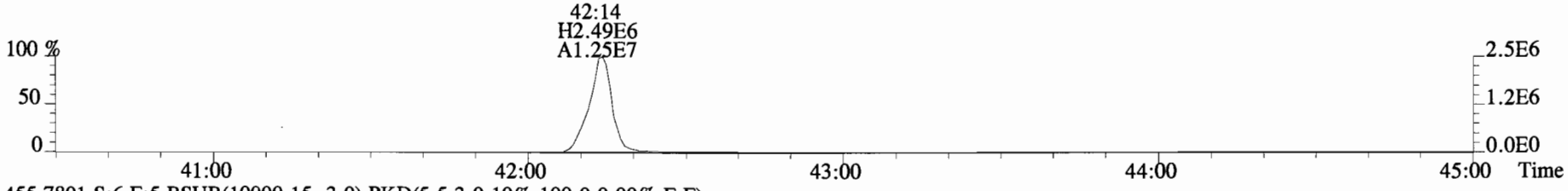
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



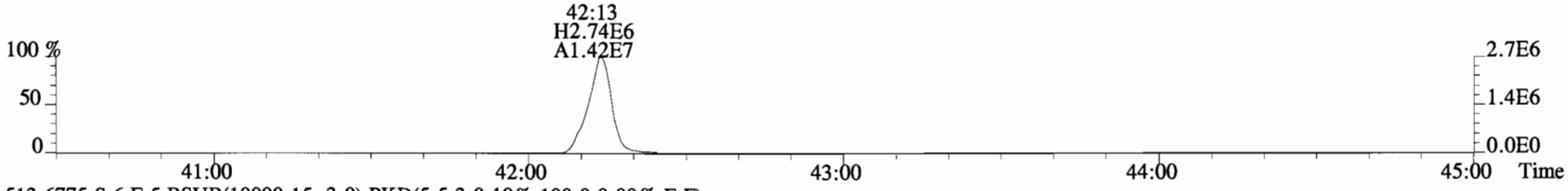
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



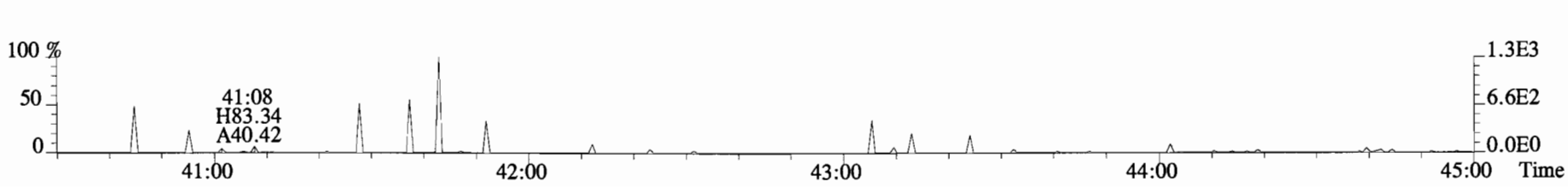
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0090-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 141217D1-4

Ext. Date: 12-16-14 Shift: Day Analysis Date: 17-DEC-14 Time: 17:13:51

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	9.09	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	48.5	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	49.3	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	51.4	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.1	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	47.1	35.0 - 70.0
OCDD	100	99.6	78.0 - 144.0
2,3,7,8-TCDF	10	8.90	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	47.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	47.5	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	49.5	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.2	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.8	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	47.7	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.2	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	48.9	39.0 - 69.0
OCDF	100	98.3	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: [signature]

Date: 12/18/14

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0090-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 141217D1-4

Ext. Date: 12-16-14 Shift: Day Analysis Date: 17-DEC-14 Time: 17:13:51

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	79.7	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	75.8	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	77.0	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	76.6	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	78.2	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	79.1	26.0 - 166.0
13C-OCDD	200	107	26.0 - 397.0
13C-2,3,7,8-TCDF	100	79.0	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	75.4	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	76.5	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	86.5	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	79.2	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	73.0	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	79.7	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	73.5	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	71.4	20.0 - 186.0
13C-OCDF	200	120	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	39.5	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MJ

Date: 12/16/14

Client ID: OPR Filename: 141217D1 S:4 Acq:17-DEC-14 17:13:51 ConCal: ST141217D1-1
Lab ID: B4L0090-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.09e+06	0.76 y	1.18	26:55	1.001	9.0908		*	2.5	*
	1,2,3,7,8-PeCDD	9.50e+06	0.62 y	0.92	31:33	1.001	48.507		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.05e+06	1.24 y	1.09	34:51	1.000	49.290		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.31e+06	1.25 y	1.07	34:58	1.000	51.362		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.22e+06	1.26 y	0.93	35:15	1.000	49.087		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.21e+06	1.05 y	1.12	38:45	1.000	47.148		*	2.5	*
	OCDD	1.07e+07	0.88 y	0.95	42:01	1.000	99.560		*	2.5	*
	2,3,7,8-TCDF	2.72e+06	0.79 y	1.08	26:07	1.001	8.8993		*	2.5	*
	1,2,3,7,8-PeCDF	1.43e+07	1.64 y	1.09	30:21	1.000	46.994		*	2.5	*
	2,3,4,7,8-PeCDF	1.43e+07	1.61 y	1.04	31:16	1.000	47.510		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.59e+07	1.29 y	1.39	33:58	1.000	49.473		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.42e+07	1.29 y	1.26	34:06	1.001	48.179		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.31e+07	1.29 y	1.30	34:42	1.001	49.848		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.04e+07	1.23 y	1.19	35:39	1.001	47.650		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.12e+07	1.08 y	1.62	37:28	1.001	49.165		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.01e+07	1.11 y	1.53	39:18	1.000	48.863		*	2.5	*
	OCDF	1.53e+07	0.93 y	1.10	42:15	1.000	98.315		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.94e+07	0.81 y	1.07	26:54	1.022	79.695				
IS	13C-1,2,3,7,8-PeCDD	2.13e+07	0.63 y	1.24	31:32	1.199	75.830				
IS	13C-1,2,3,4,7,8-HxCDD	1.50e+07	1.24 y	0.72	34:51	1.014	76.973				
IS	13C-1,2,3,6,7,8-HxCDD	1.52e+07	1.23 y	0.74	34:57	1.017	76.578				
IS	13C-1,2,3,7,8,9-HxCDD	1.80e+07	1.25 y	0.86	35:15	1.025	78.152				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.37e+07	1.06 y	0.64	38:44	1.127	79.095				
IS	13C-OCDD	2.25e+07	0.87 y	0.78	41:60	1.222	106.84				
IS	13C-2,3,7,8-TCDF	2.84e+07	0.79 y	0.92	26:06	0.992	79.017				
IS	13C-1,2,3,7,8-PeCDF	2.79e+07	1.59 y	0.95	30:20	1.153	75.366				
IS	13C-2,3,4,7,8-PeCDF	2.89e+07	1.61 y	0.97	31:15	1.188	76.455				
IS	13C-1,2,3,4,7,8-HxCDF	2.31e+07	0.51 y	0.99	33:57	0.988	86.537				
IS	13C-1,2,3,6,7,8-HxCDF	2.34e+07	0.51 y	1.10	34:05	0.992	79.214				
IS	13C-2,3,4,6,7,8-HxCDF	2.03e+07	0.51 y	1.03	34:40	1.009	73.036				
IS	13C-1,2,3,7,8,9-HxCDF	1.84e+07	0.50 y	0.86	35:38	1.037	79.713				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.43 y	0.71	37:26	1.089	73.454				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.36e+07	0.44 y	0.71	39:17	1.143	71.410				
IS	13C-OCDF	2.83e+07	0.91 y	0.87	42:14	1.229	120.34				
C/Up	37Cl-2,3,7,8-TCDD	1.09e+07		1.21	26:56	1.023	39.486				
RS/RT	13C-1,2,3,4-TCDD	2.27e+07	0.81 y	1.00	26:19	*	100.00				
RS	13C-1,2,3,4-TCDF	3.89e+07	0.78 y	1.00	24:48	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.69e+07	0.52 y	1.00	34:22	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	9.40	9.52		*	*
Total Penta-Dioxins	48.5	49.1		*	*
Total Hexa-Dioxins	150	151		*	*
Total Hepta-Dioxins	47.7	48.6		*	*
Total Tetra-Furans	9.05	9.31		*	*
Total Penta-Furans	95.840	96.660		*	*
Total Hexa-Furans	196	196		*	*
Total Hepta-Furans	98.2	100		*	*

	Rec	Qual
IS	79.7	
IS	75.8	
IS	77.0	
IS	76.6	
IS	78.2	
IS	79.1	
IS	53.4	
IS	79.0	
IS	75.4	
IS	76.5	
IS	86.5	
IS	79.2	
IS	73.0	
IS	79.7	
IS	73.5	
IS	71.4	
IS	60.2	
C/Up	98.7	

Integrations by Analyst: MM Date: 12/16/14

Reviewed by Analyst: Date: 12/19/14

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.09e+06	0.76 y	1.18	26:55	1.001	181.82		*	2.5	*
	1,2,3,7,8-PeCDD	9.50e+06	0.62 y	0.92	31:33	1.001	970.15		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.05e+06	1.24 y	1.09	34:51	1.000	985.80		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.31e+06	1.25 y	1.07	34:58	1.000	1027.2		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.22e+06	1.26 y	0.93	35:15	1.000	981.74		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.21e+06	1.05 y	1.12	38:45	1.000	942.96		*	2.5	*
	OCDD	1.07e+07	0.88 y	0.95	42:01	1.000	1991.2		*	2.5	*
	2,3,7,8-TCDF	2.72e+06	0.79 y	1.08	26:07	1.001	177.99		*	2.5	*
	1,2,3,7,8-PeCDF	1.43e+07	1.64 y	1.09	30:21	1.000	939.88		*	2.5	*
	2,3,4,7,8-PeCDF	1.43e+07	1.61 y	1.04	31:16	1.000	950.20		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.59e+07	1.29 y	1.39	33:58	1.000	989.46		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.42e+07	1.29 y	1.26	34:06	1.001	963.59		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.31e+07	1.29 y	1.30	34:42	1.001	996.95		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.04e+07	1.23 y	1.19	35:39	1.001	953.01		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.12e+07	1.08 y	1.62	37:28	1.001	983.31		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.01e+07	1.11 y	1.53	39:18	1.000	977.25		*	2.5	*
	OCDF	1.53e+07	0.93 y	1.10	42:15	1.000	1966.3		*	2.5	*

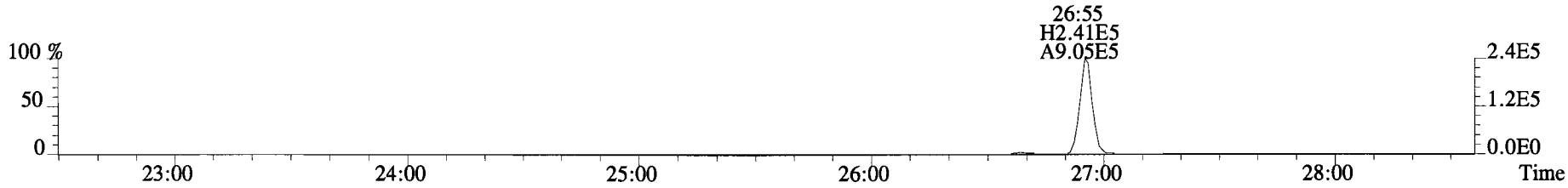
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	188	190		*	*
Total Penta-Dioxins	970	982		*	*
Total Hexa-Dioxins	3000	3010		*	*
Total Hepta-Dioxins	955	971		*	*
Total Tetra-Furans	181	186		*	*
Total Penta-Furans	1916.8	1933.2		*	*
Total Hexa-Furans	3910	3920		*	*
Total Hepta-Furans	1960	2010		*	*

	Name	Resp	RA	RRF	RT	RRT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	1.94e+07	0.81 y	1.07	26:54	1.022	1593.9	79.7	
IS	13C-1,2,3,7,8-PeCDD	2.13e+07	0.63 y	1.24	31:32	1.199	1516.6	75.8	
IS	13C-1,2,3,4,7,8-HxCDD	1.50e+07	1.24 y	0.72	34:51	1.014	1539.5	77.0	
IS	13C-1,2,3,6,7,8-HxCDD	1.52e+07	1.23 y	0.74	34:57	1.017	1531.6	76.6	
IS	13C-1,2,3,7,8,9-HxCDD	1.80e+07	1.25 y	0.86	35:15	1.025	1563.0	78.2	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.37e+07	1.06 y	0.64	38:44	1.127	1581.9	79.1	
IS	13C-OCDD	2.25e+07	0.87 y	0.78	41:60	1.222	2136.8	53.4	
IS	13C-2,3,7,8-TCDF	2.84e+07	0.79 y	0.92	26:06	0.992	1580.3	79.0	
IS	13C-1,2,3,7,8-PeCDF	2.79e+07	1.59 y	0.95	30:20	1.153	1507.3	75.4	
IS	13C-2,3,4,7,8-PeCDF	2.89e+07	1.61 y	0.97	31:15	1.188	1529.1	76.5	
IS	13C-1,2,3,4,7,8-HxCDF	2.31e+07	0.51 y	0.99	33:57	0.988	1730.7	86.5	
IS	13C-1,2,3,6,7,8-HxCDF	2.34e+07	0.51 y	1.10	34:05	0.992	1584.3	79.2	
IS	13C-2,3,4,6,7,8-HxCDF	2.03e+07	0.51 y	1.03	34:40	1.009	1460.7	73.0	
IS	13C-1,2,3,7,8,9-HxCDF	1.84e+07	0.50 y	0.86	35:38	1.037	1594.3	79.7	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.43 y	0.71	37:26	1.089	1469.1	73.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.36e+07	0.44 y	0.71	39:17	1.143	1428.2	71.4	
IS	13C-OCDF	2.83e+07	0.91 y	0.87	42:14	1.229	2406.8	60.2	
C/Up	37Cl-2,3,7,8-TCDD	1.09e+07		1.21	26:56	1.023	789.72	98.7	
RS/RT	13C-1,2,3,4-TCDD	2.27e+07	0.81 y	1.00	26:19	*	2000.0		
RS	13C-1,2,3,4-TCDF	3.89e+07	0.78 y	1.00	24:48	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.69e+07	0.52 y	1.00	34:22	*	2000.0		

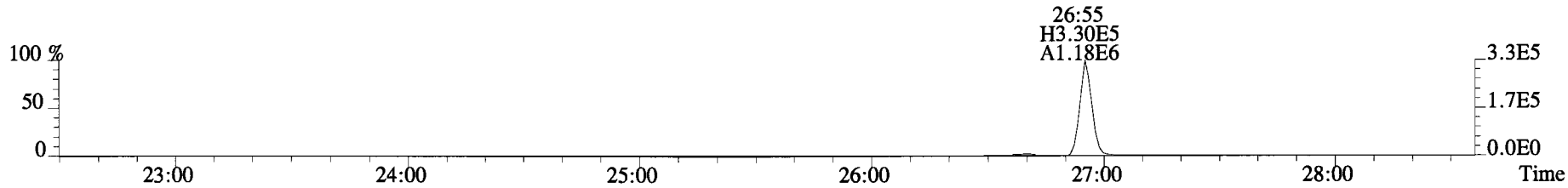
Integrations by Analyst: MM Date: 12/19/14

Reviewed by Analyst: _____ Date: _____

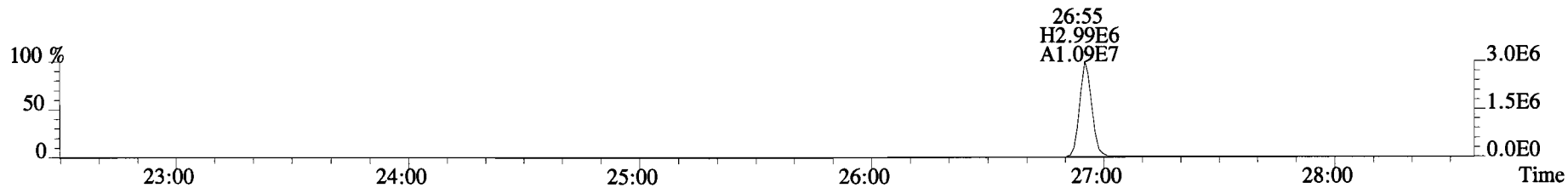
File:141217D1 #1-551 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



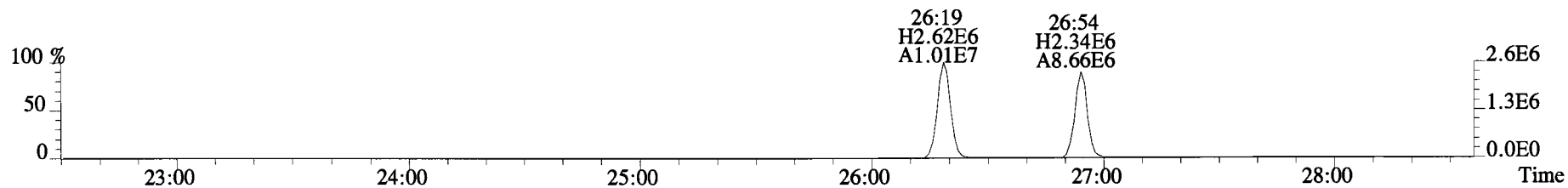
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



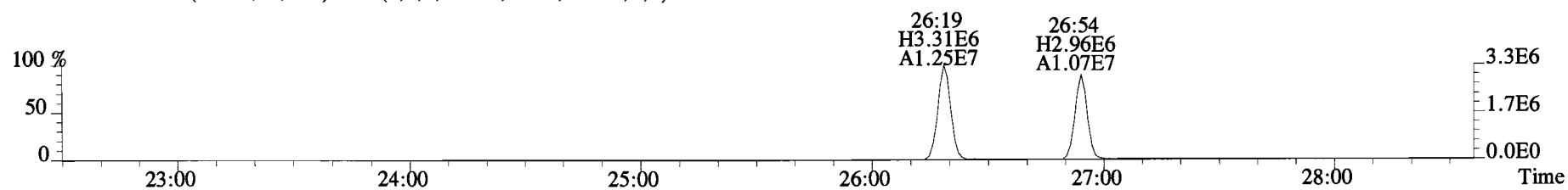
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



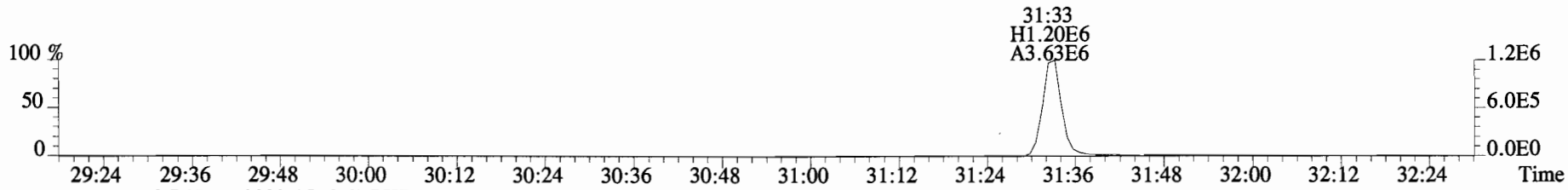
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



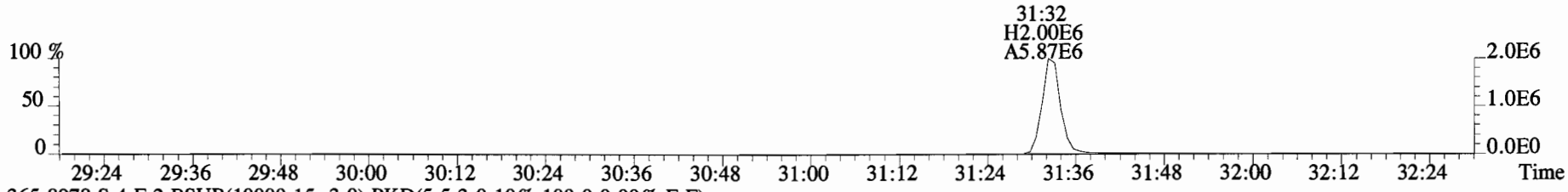
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



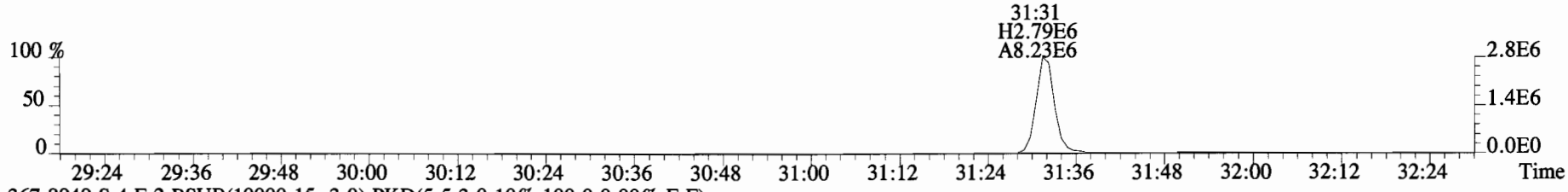
File:141217D1 #1-257 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



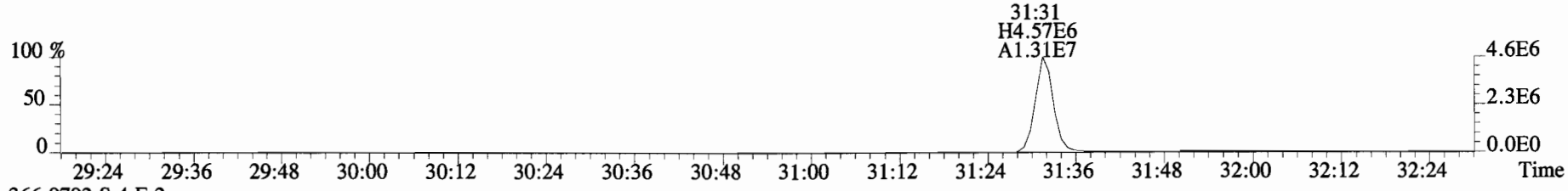
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



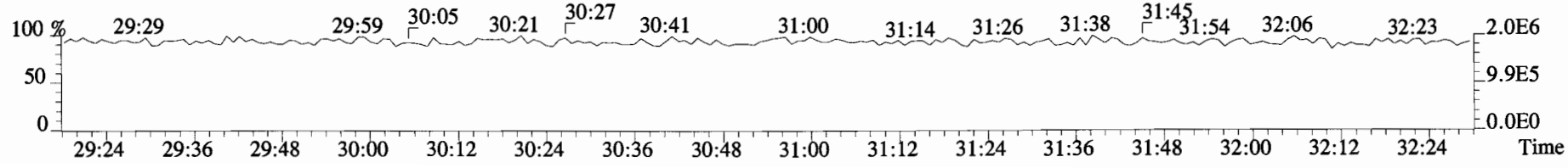
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

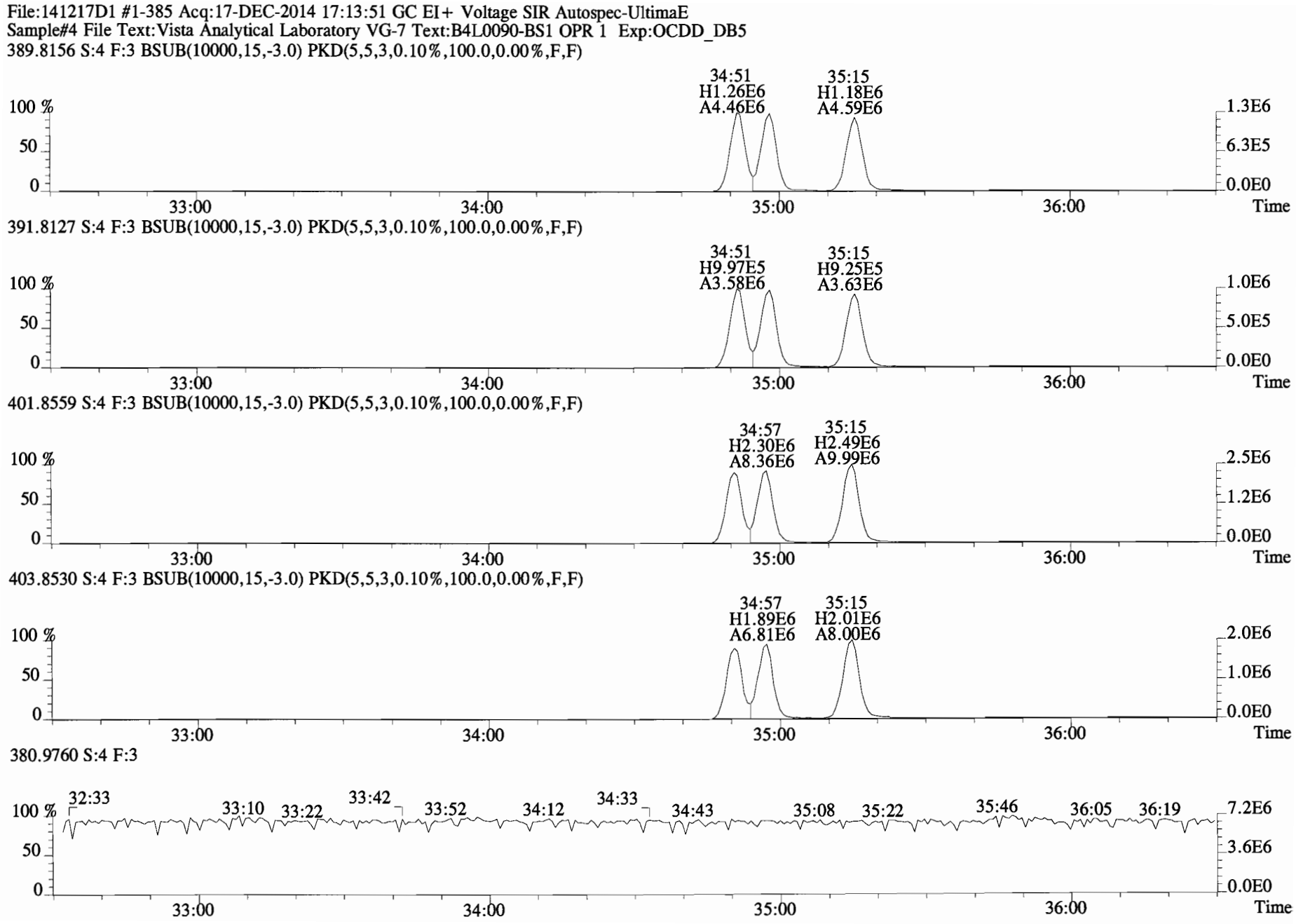


367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

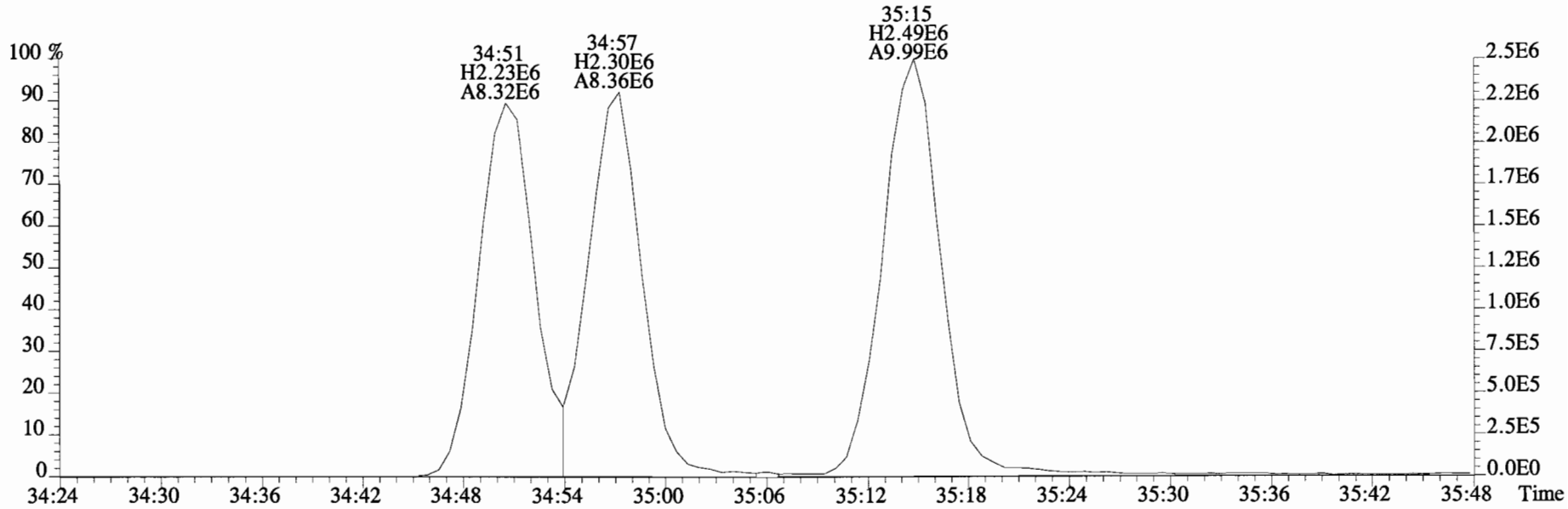


366.9792 S:4 F:2

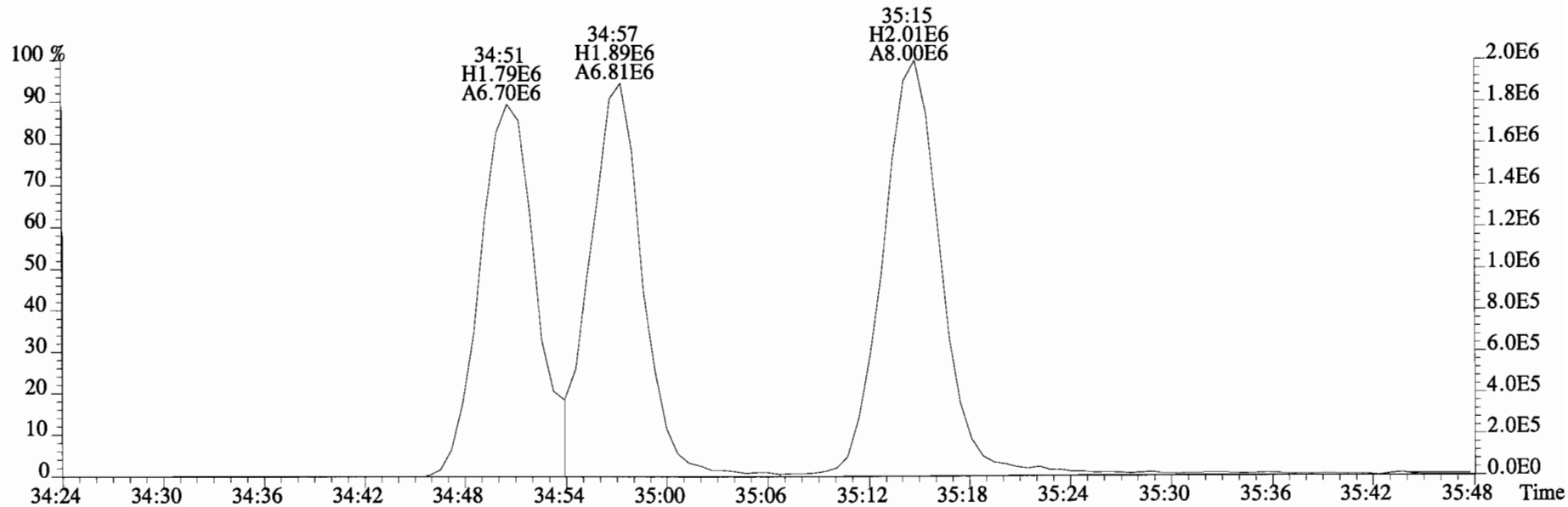



File:141217D1 #1-385 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:51 H1.26E6 A4.46E6
35:15 H1.18E6 A4.59E6
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:51 H9.97E5 A3.58E6
35:15 H9.25E5 A3.63E6
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:57 H2.30E6 A8.36E6
35:15 H2.49E6 A9.99E6
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:57 H1.89E6 A6.81E6
35:15 H2.01E6 A8.00E6
380.9760 S:4 F:3
32:33
33:10
33:22
33:42
33:52
34:12
34:33
34:43
35:08
35:22
35:46
36:05
36:19
100 %
50
0
33:00
34:00
35:00
36:00
Time
1.3E6
6.3E5
0.0E0
1.0E6
5.0E5
2.5E6
1.2E6
2.0E6
1.0E6
7.2E6
3.6E6

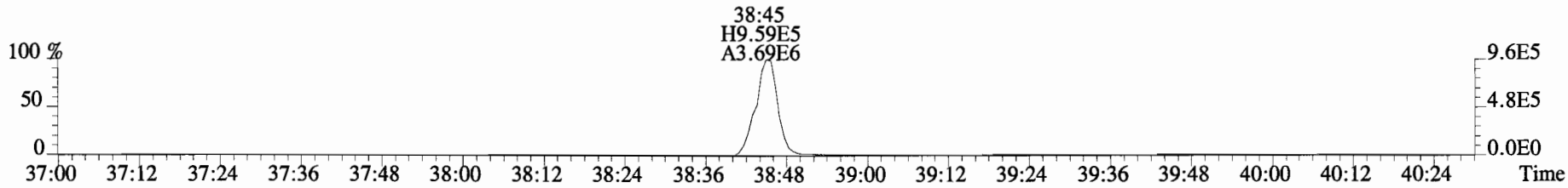
File:141217D1 #1-385 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



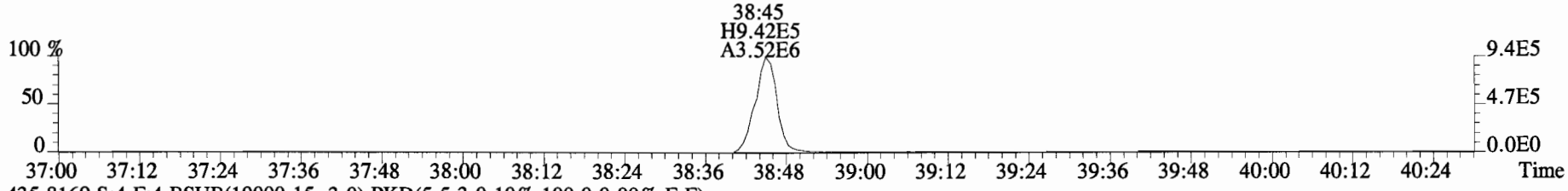
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



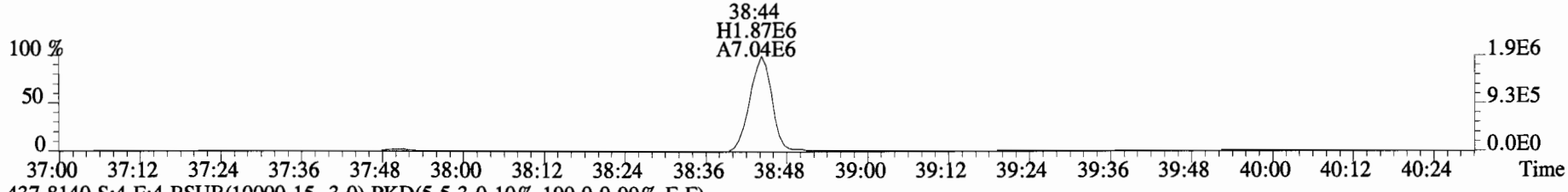
File:141217D1 #1-326 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



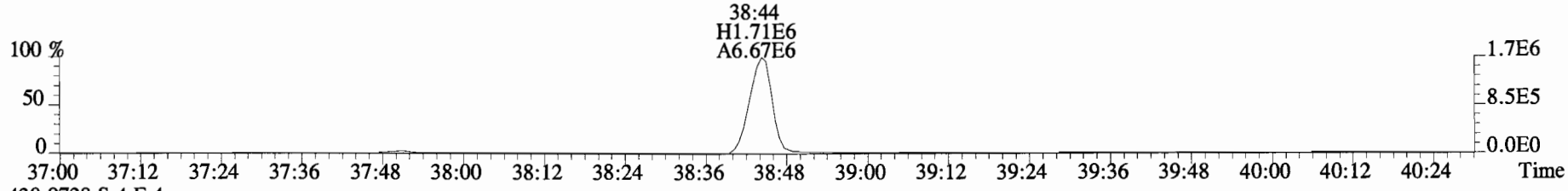
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



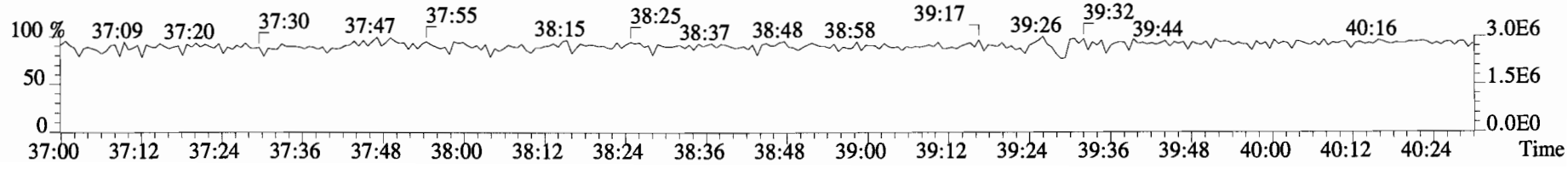
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



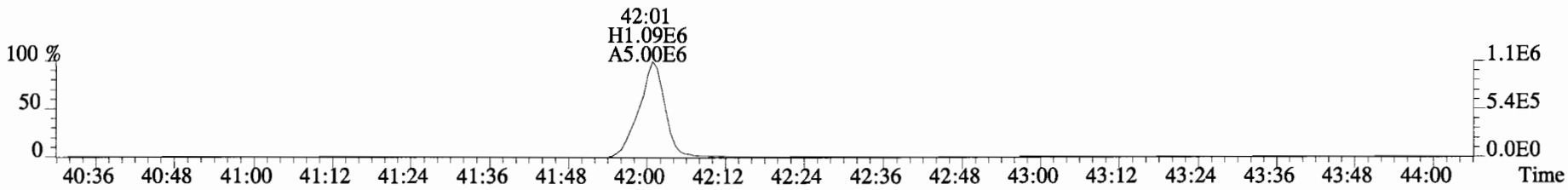
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



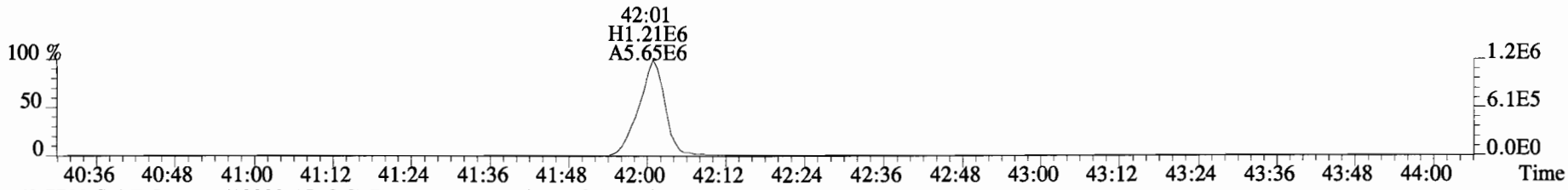
430.9728 S:4 F:4



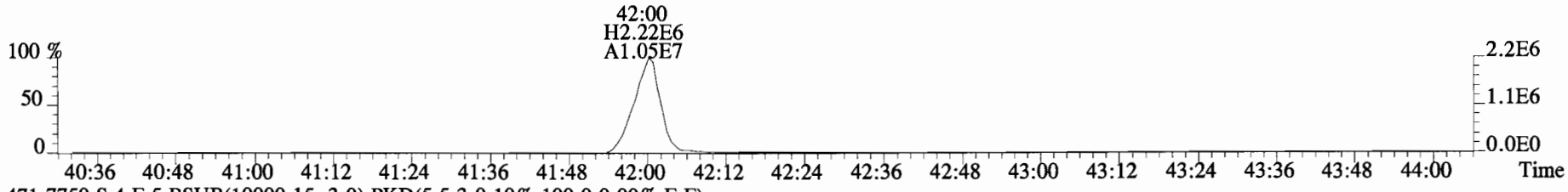
File:141217D1 #1-388 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



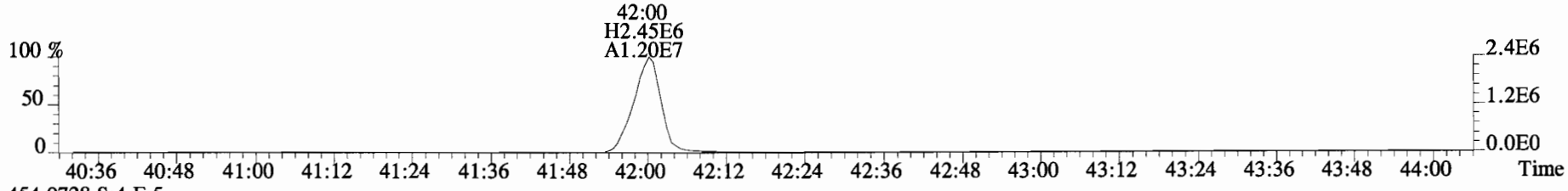
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



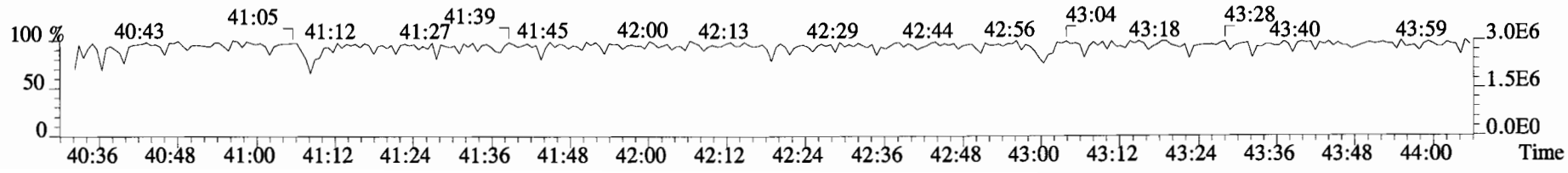
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



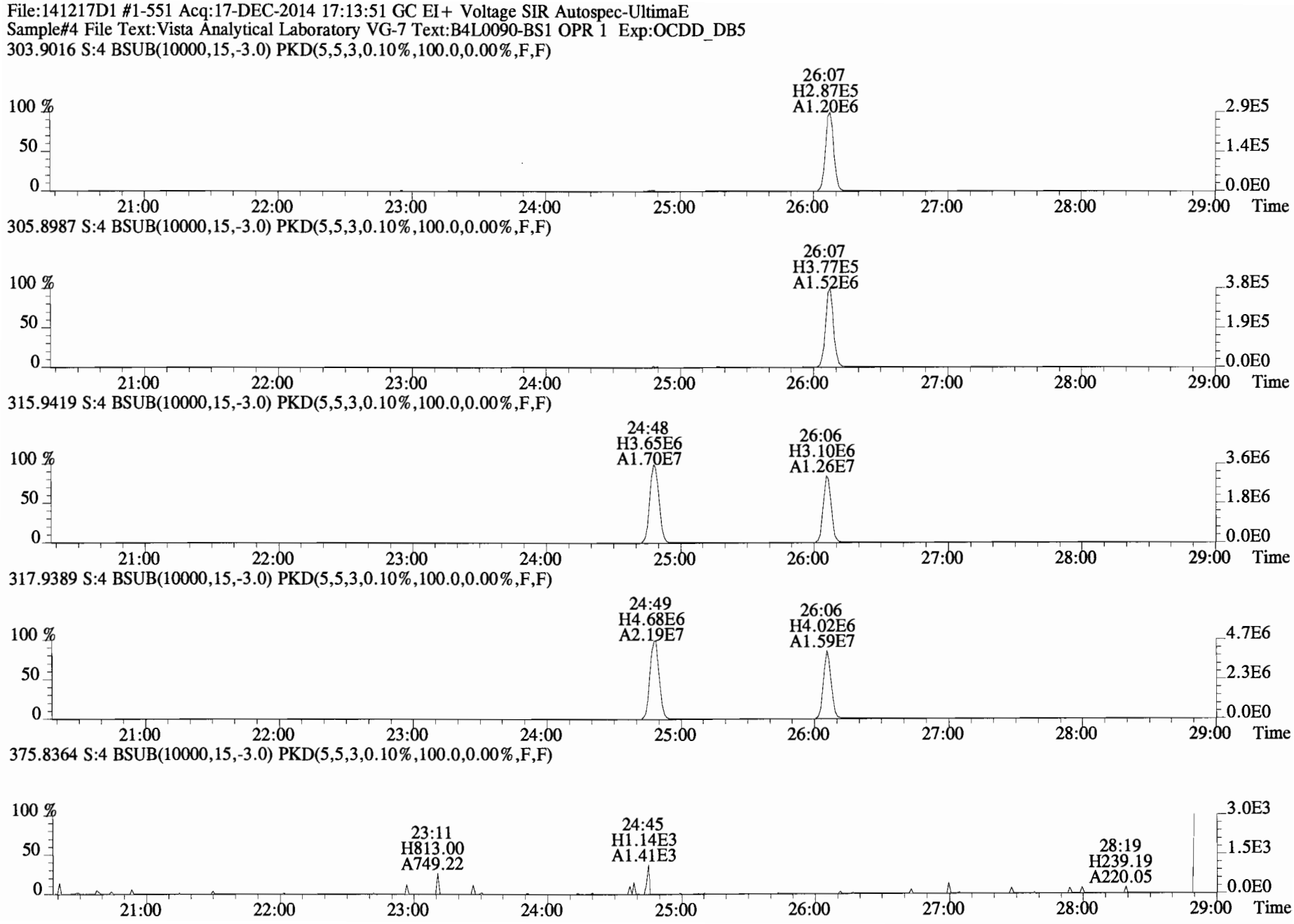
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



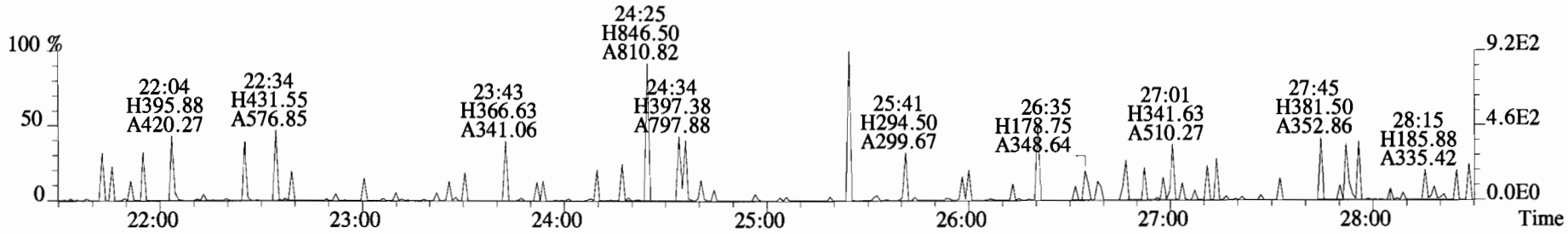
454.9728 S:4 F:5



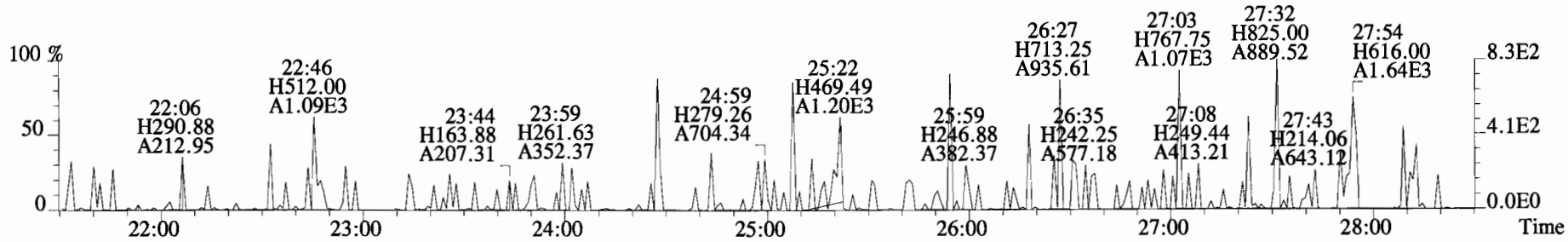
File:141217D1 #1-551 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5



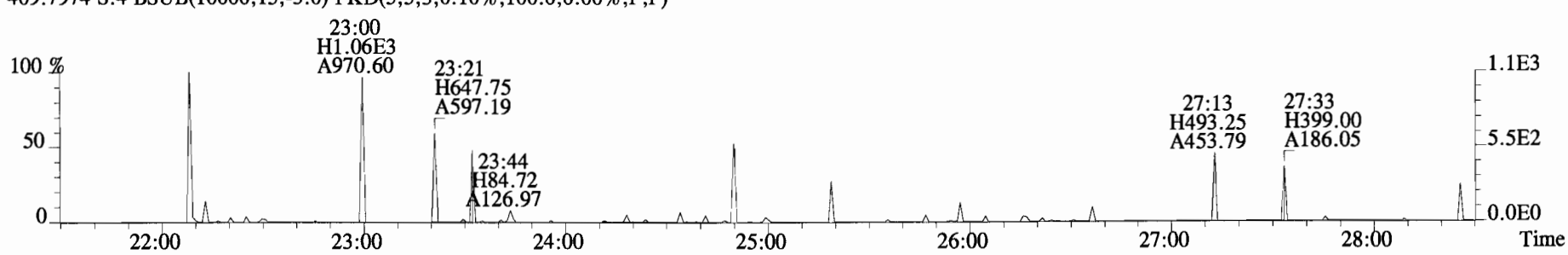
File:141217D1 #1-551 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



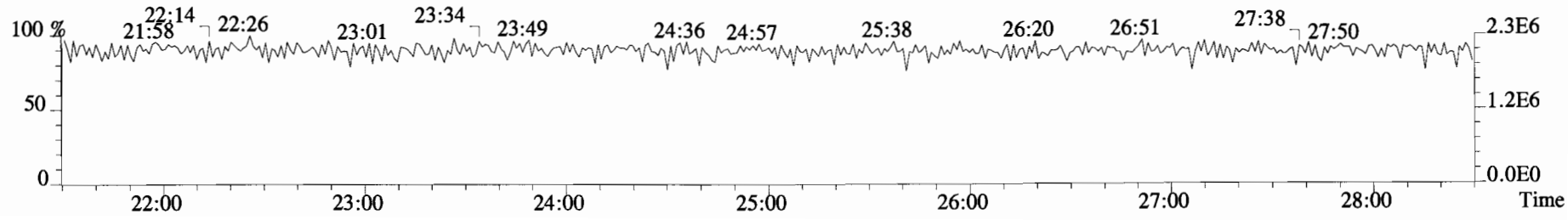
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



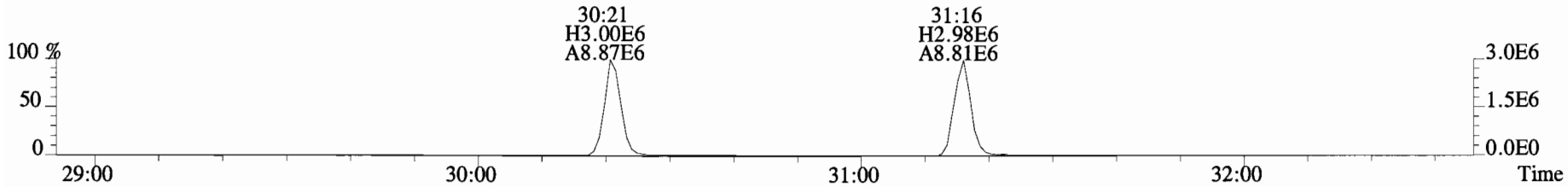
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



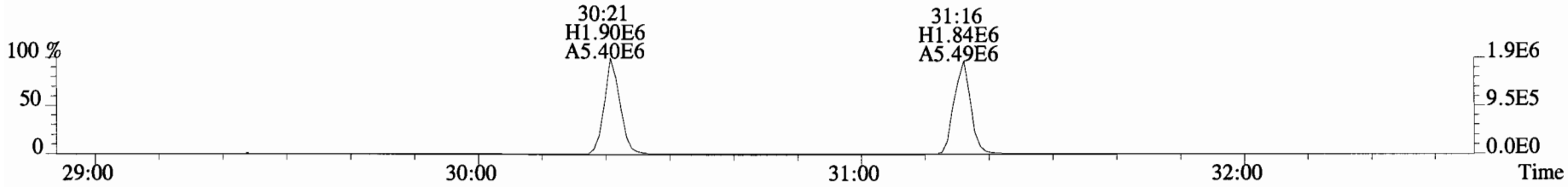
316.9824 S:4



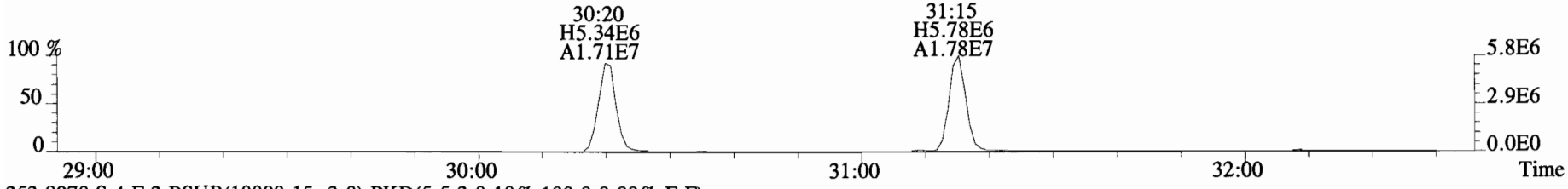
File:141217D1 #1-257 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



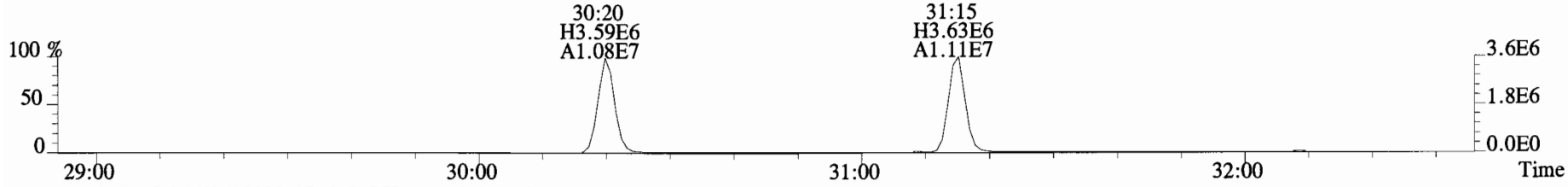
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



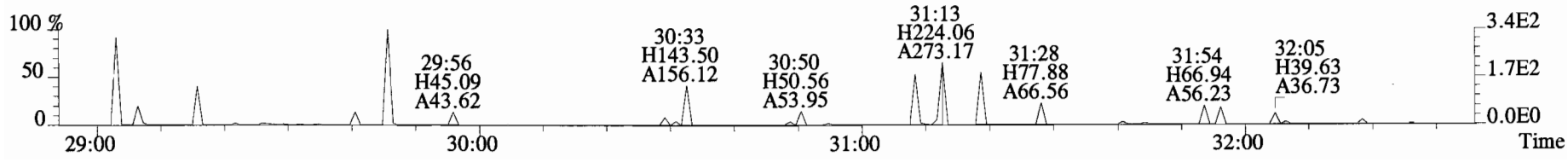
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

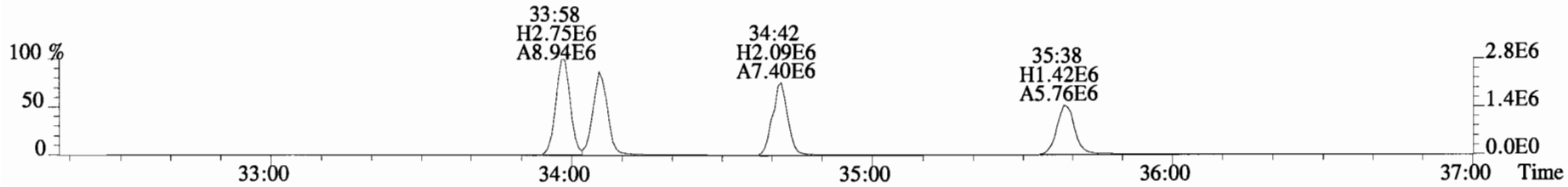


409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

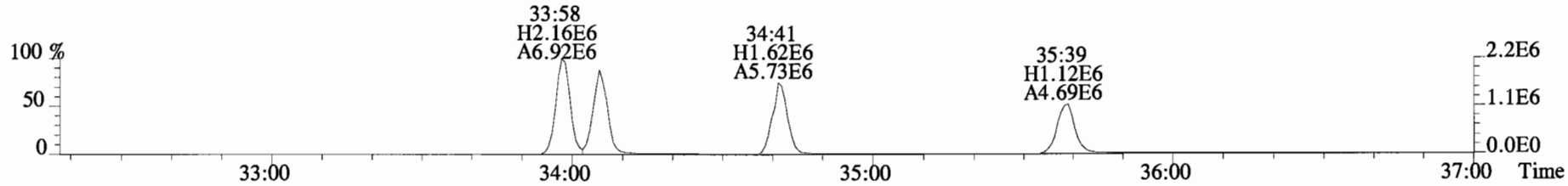


File:141217D1 #1-385 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5

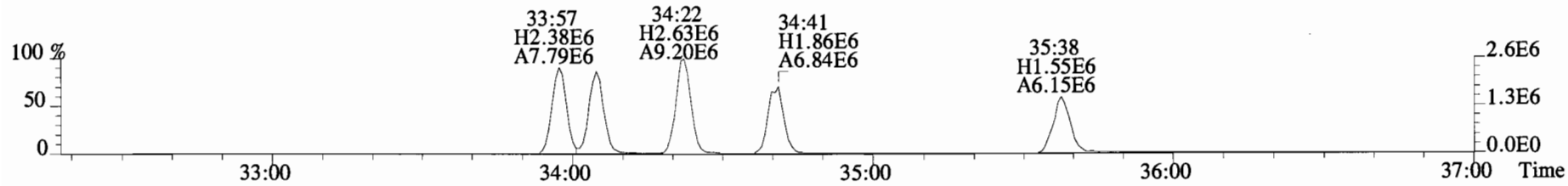
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



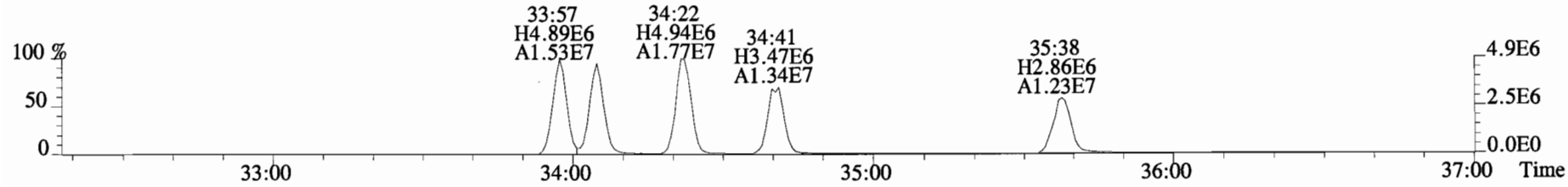
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



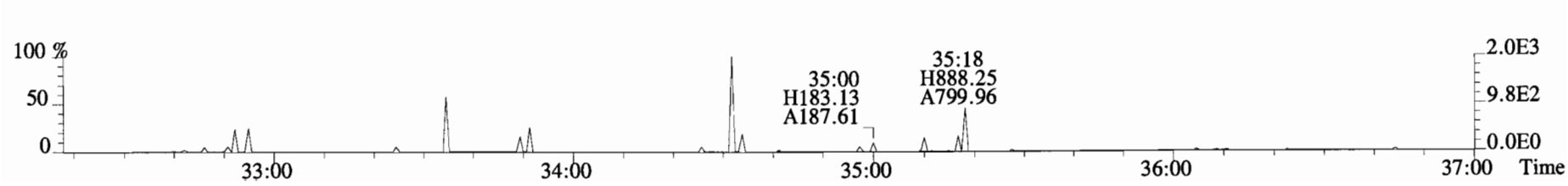
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

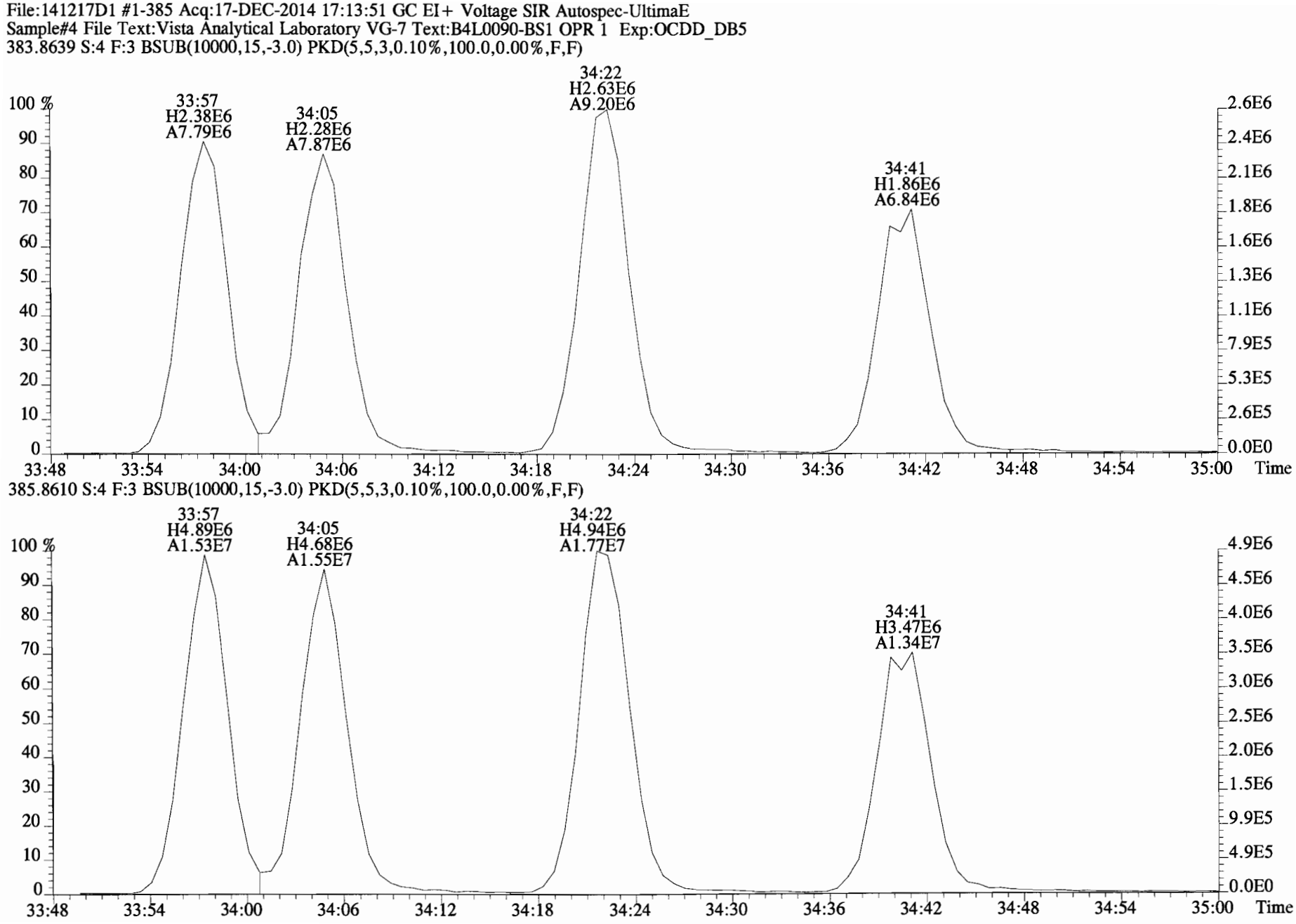


385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

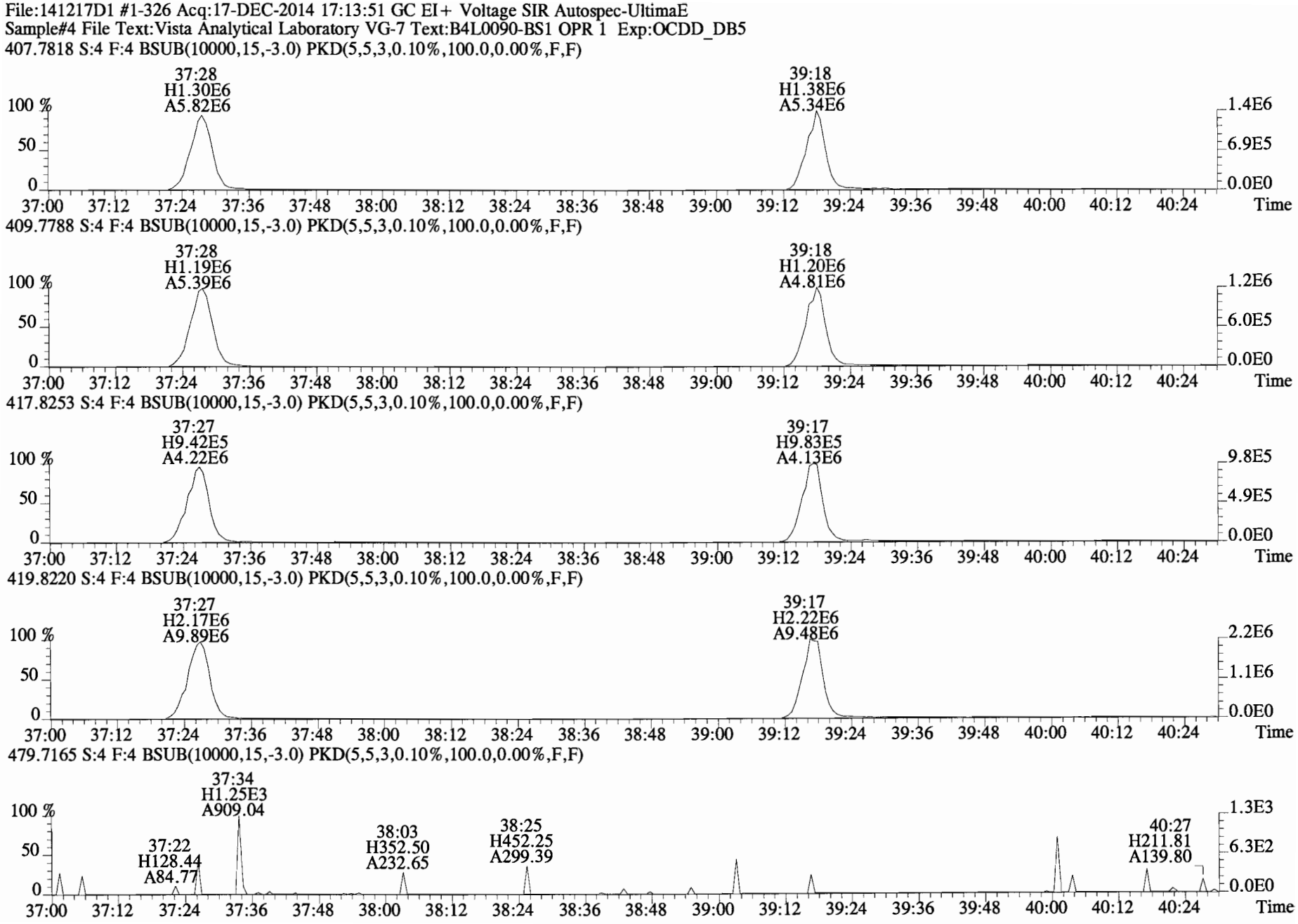


445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

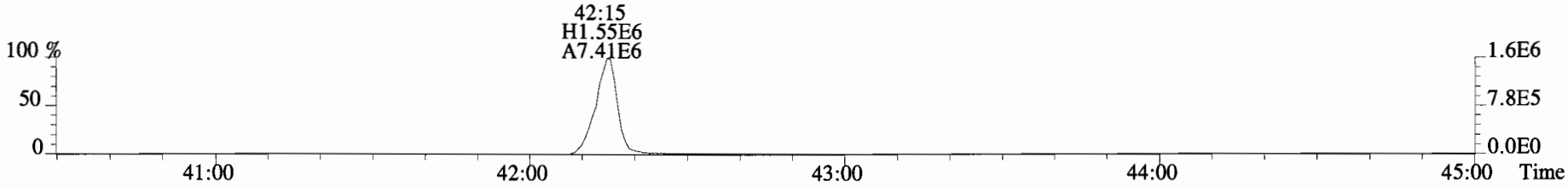



File:141217D1 #1-385 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:57
H2.38E6
A7.79E6
34:05
H2.28E6
A7.87E6
34:22
H2.63E6
A9.20E6
34:41
H1.86E6
A6.84E6
100 %
90
80
70
60
50
40
30
20
10
0
2.6E6
2.4E6
2.1E6
1.8E6
1.6E6
1.3E6
1.1E6
7.9E5
5.3E5
2.6E5
0.0E0
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
Time
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:57
H4.89E6
A1.53E7
34:05
H4.68E6
A1.55E7
34:22
H4.94E6
A1.77E7
34:41
H3.47E6
A1.34E7
100 %
90
80
70
60
50
40
30
20
10
0
4.9E6
4.5E6
4.0E6
3.5E6
3.0E6
2.5E6
2.0E6
1.5E6
9.9E5
4.9E5
0.0E0
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
Time

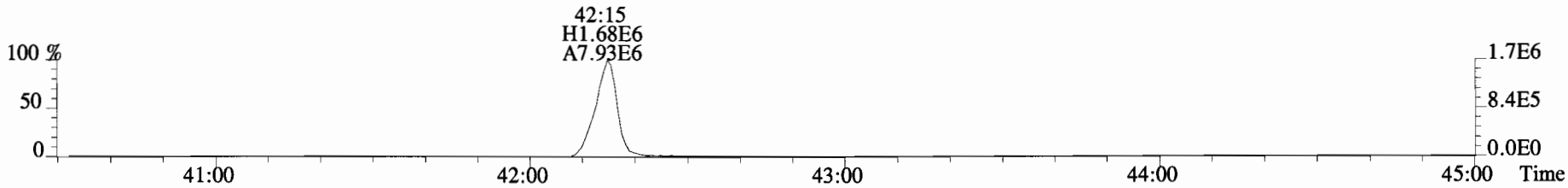
File:141217D1 #1-326 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5



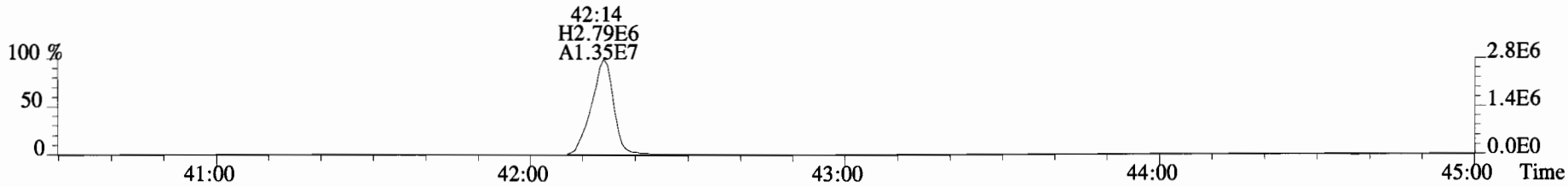
File:141217D1 #1-388 Acq:17-DEC-2014 17:13:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0090-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



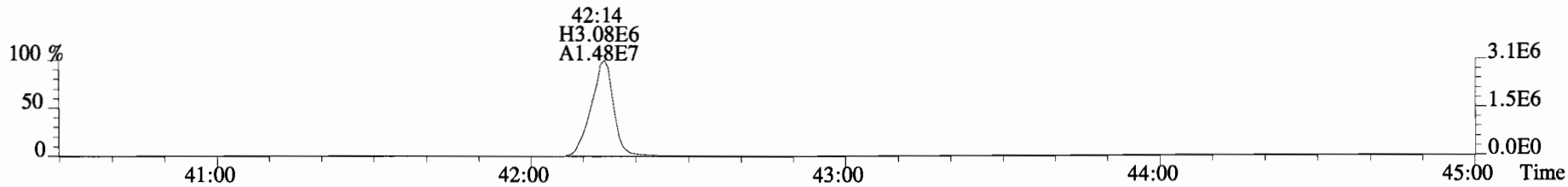
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



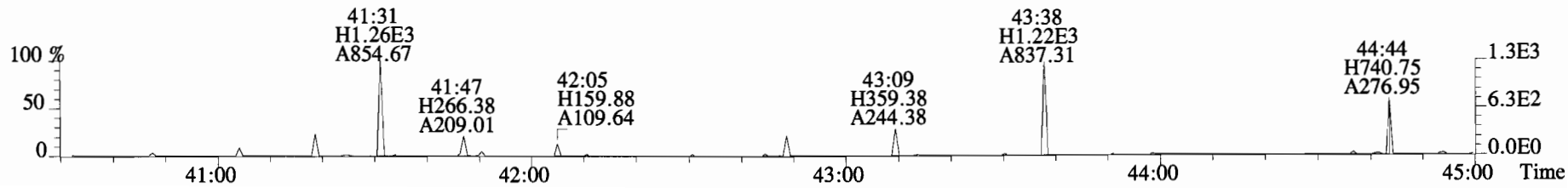
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-OWS-02-20141203-W Filename: 141217D1 S:15 Acq:18-DEC-14 02:08:52 ConCal: ST141217D1-1
Lab ID: 1400915-01 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.007 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.18	NotFnd	*	*		475	2.5	0.895
	1,2,3,7,8-PeCDD	*	*	n	0.92	NotFnd	*	*		581	2.5	0.907
	1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotFnd	*	*		563	2.5	1.75
	1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotFnd	*	*		563	2.5	1.87
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotFnd	*	*		563	2.5	2.10
	1,2,3,4,6,7,8-HpCDD	1.34e+04	0.75	n	1.12	38:44	1.000	2.2958		*	2.5	*
	OCDD	6.87e+04	0.95	y	0.95	41:60	1.000	16.602		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.08	NotFnd	*	*		574	2.5	0.751
	1,2,3,7,8-PeCDF	*	*	n	1.09	NotFnd	*	*		597	2.5	1.01
	2,3,4,7,8-PeCDF	*	*	n	1.04	NotFnd	*	*		597	2.5	0.994
	1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotFnd	*	*		722	2.5	0.747
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotFnd	*	*		722	2.5	0.873
	2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotFnd	*	*		423	2.5	0.528
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotFnd	*	*		423	2.5	0.864
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotFnd	*	*		894	2.5	1.74
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotFnd	*	*		894	2.5	1.61
	OCDF	*	*	n	1.10	NotFnd	*	*		1460	1.0	2.28
IS	13C-2,3,7,8-TCDD	1.53e+07	0.81	y	1.07	26:53	1.022	1408.7				
IS	13C-1,2,3,7,8-PeCDD	1.68e+07	0.62	y	1.24	31:31	1.198	1333.0				
IS	13C-1,2,3,4,7,8-HxCDD	1.14e+07	1.26	y	0.72	34:50	1.014	1122.0				
IS	13C-1,2,3,6,7,8-HxCDD	1.21e+07	1.24	y	0.74	34:56	1.017	1177.9				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.29	y	0.86	35:14	1.025	1164.4				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.04e+07	1.06	y	0.64	38:44	1.127	1155.5				
IS	13C-OCDD	1.73e+07	0.89	y	0.78	41:60	1.222	1577.9				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.78	y	0.92	26:05	0.992	1481.3				
IS	13C-1,2,3,7,8-PeCDF	2.22e+07	1.59	y	0.95	30:19	1.153	1316.2				
IS	13C-2,3,4,7,8-PeCDF	2.34e+07	1.61	y	0.97	31:14	1.188	1357.8				
IS	13C-1,2,3,4,7,8-HxCDF	1.73e+07	0.52	y	0.99	33:56	0.988	1243.4				
IS	13C-1,2,3,6,7,8-HxCDF	1.76e+07	0.52	y	1.10	34:04	0.992	1142.0				
IS	13C-2,3,4,6,7,8-HxCDF	1.71e+07	0.51	y	1.03	34:40	1.009	1186.5				
IS	13C-1,2,3,7,8,9-HxCDF	1.42e+07	0.52	y	0.86	35:37	1.037	1181.5				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.18e+07	0.45	y	0.71	37:26	1.090	1176.5				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.10e+07	0.42	y	0.71	39:17	1.143	1111.5				
IS	13C-OCDF	2.24e+07	0.89	y	0.87	42:13	1.229	1829.0				
C/Up	37Cl-2,3,7,8-TCDD	9.23e+06			1.21	26:55	1.023	750.22				
RS/RT	13C-1,2,3,4-TCDD	2.02e+07	0.82	y	1.00	26:18	*	1986.9				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.77	y	1.00	24:48	*	1986.9				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.78e+07	0.52	y	1.00	34:21	*	1986.9				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		475	0.895
Total Penta-Dioxins	*	*		1100	1.71
Total Hexa-Dioxins	*	*		840	2.85
Total Hepta-Dioxins	*	4.94		*	*
Total Tetra-Furans	*	*		1100	1.45
Total Penta-Furans	0.0000	0.0000		825	1.38
Total Hexa-Furans	*	*		722	0.966
Total Hepta-Furans	*	*		1190	2.24

	Name	Rec	Qual
IS	13C-2,3,7,8-TCDD	70.9	
IS	13C-1,2,3,7,8-PeCDD	67.1	
IS	13C-1,2,3,4,7,8-HxCDD	56.5	
IS	13C-1,2,3,6,7,8-HxCDD	59.3	
IS	13C-1,2,3,7,8,9-HxCDD	58.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	58.2	
IS	13C-OCDD	39.7	
IS	13C-2,3,7,8-TCDF	74.6	
IS	13C-1,2,3,7,8-PeCDF	66.2	
IS	13C-2,3,4,7,8-PeCDF	68.3	
IS	13C-1,2,3,4,7,8-HxCDF	62.6	
IS	13C-1,2,3,6,7,8-HxCDF	57.5	
IS	13C-2,3,4,6,7,8-HxCDF	59.7	
IS	13C-1,2,3,7,8,9-HxCDF	59.5	
IS	13C-1,2,3,4,6,7,8-HpCDF	59.2	
IS	13C-1,2,3,4,7,8,9-HpCDF	55.9	
IS	13C-OCDF	46.0	
C/Up	37Cl-2,3,7,8-TCDD	94.4	

Integrations by Analyst: [signature] Date: 12/19/14

Reviewed by Analyst: [signature] Date: 12/19/14

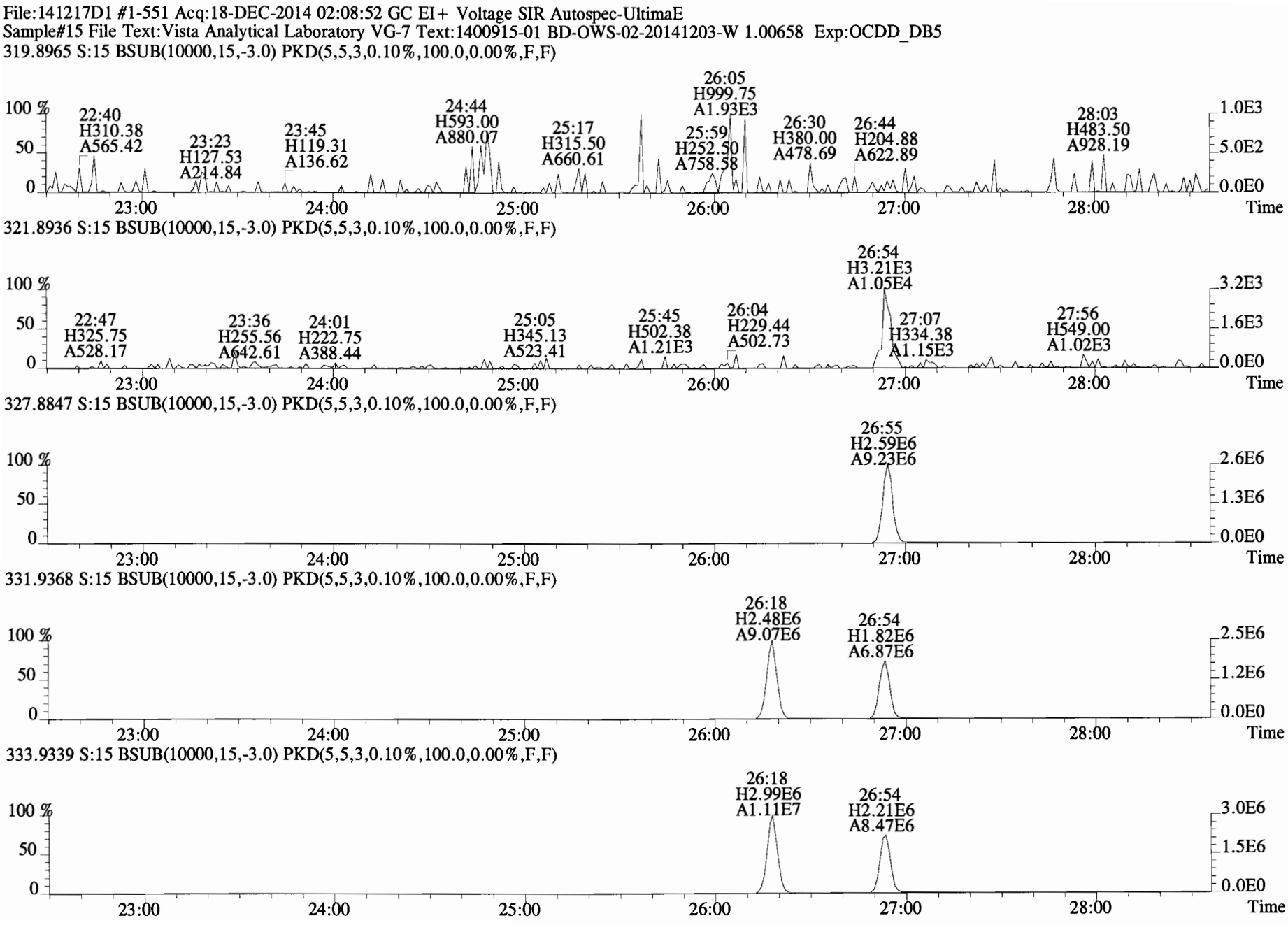
Totals class: HpCDD EMPC Entry #: 25

Run: 18 File: 141217D1 S: 15 I: 1 F: 4
Acquired: 18-DEC-14 02:08:52 Processed: 18-DEC-14 08:29:59

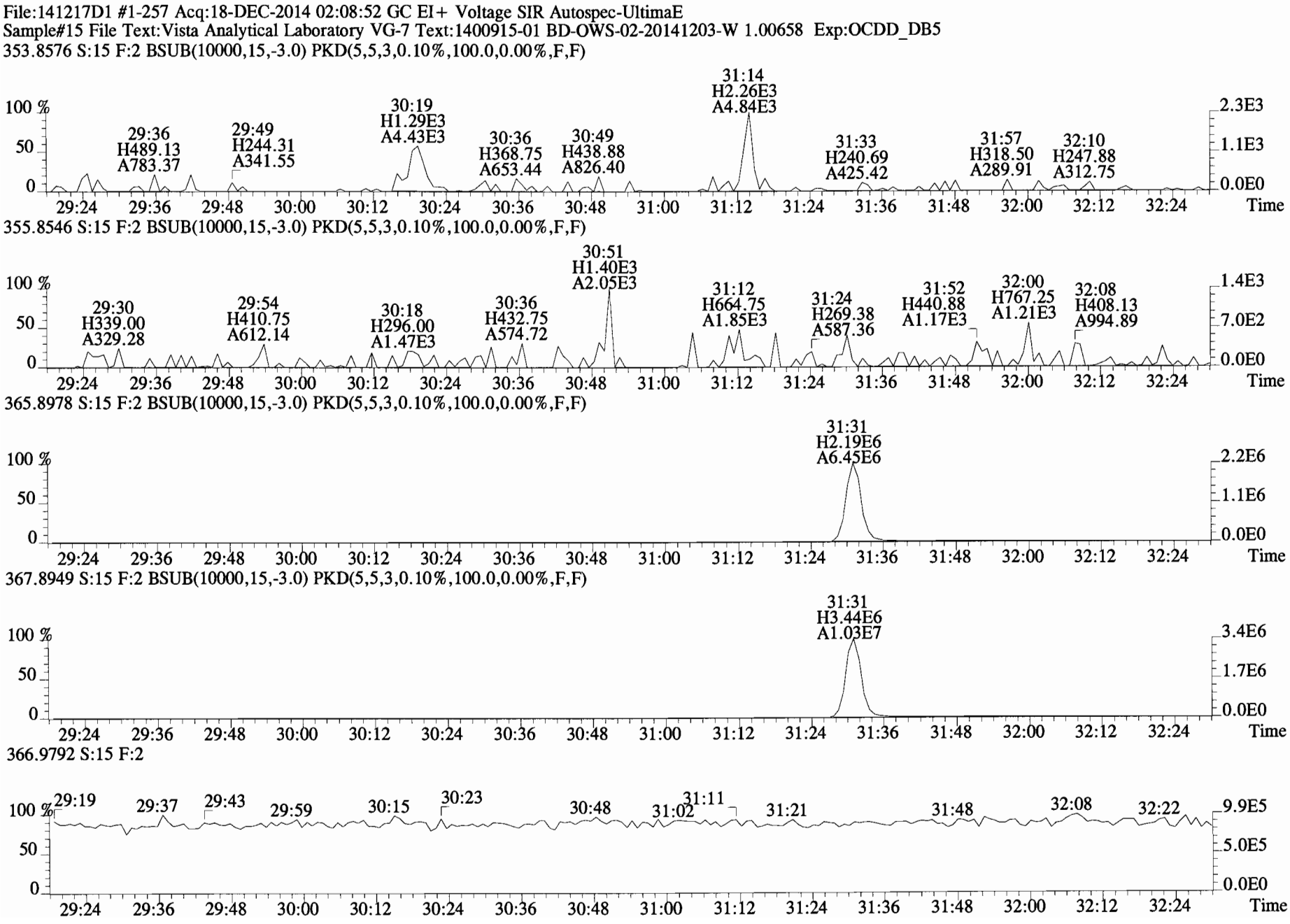
Total Concentration: 4.9428 Unnamed Concentration: 2.647

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:50	9.721e+03	7.588e+03	1.28	n	1.548e+04	2.6469	
38:44	6.845e+03	9.116e+03	0.75	n	1.343e+04	2.2958	1,2,3,4,6,7,8-HpCDD

File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

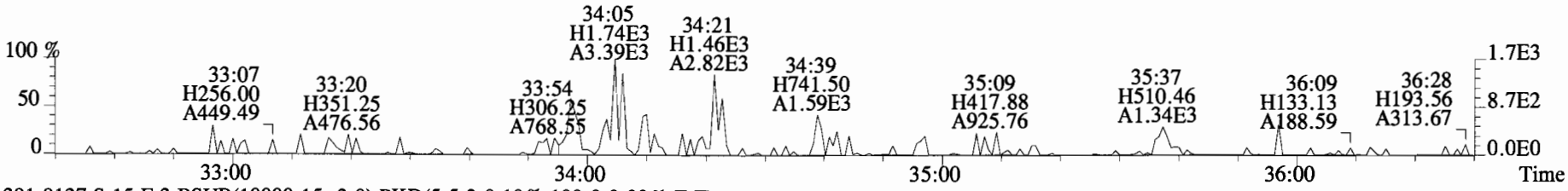


File:141217D1 #1-257 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

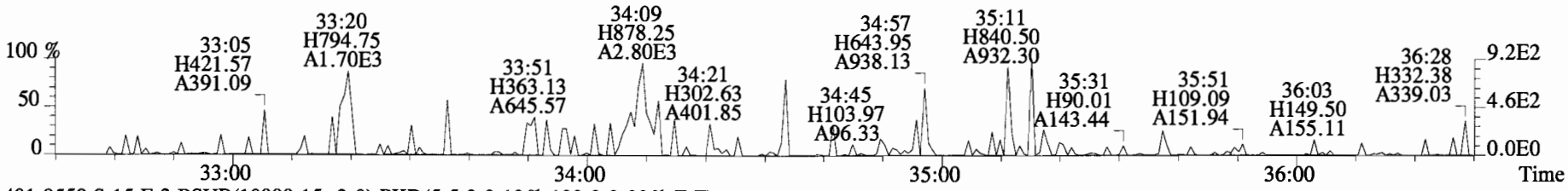


File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

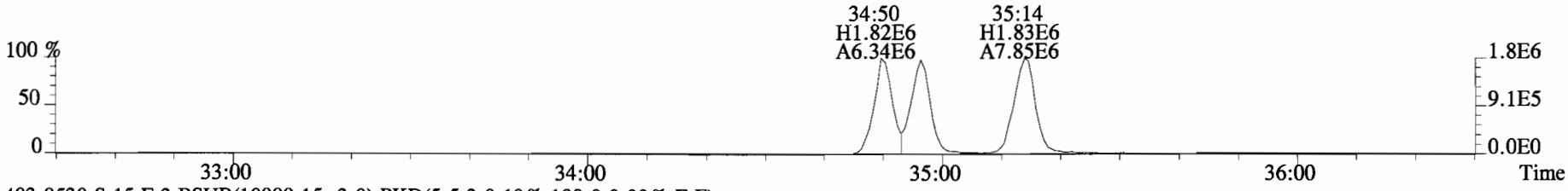
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



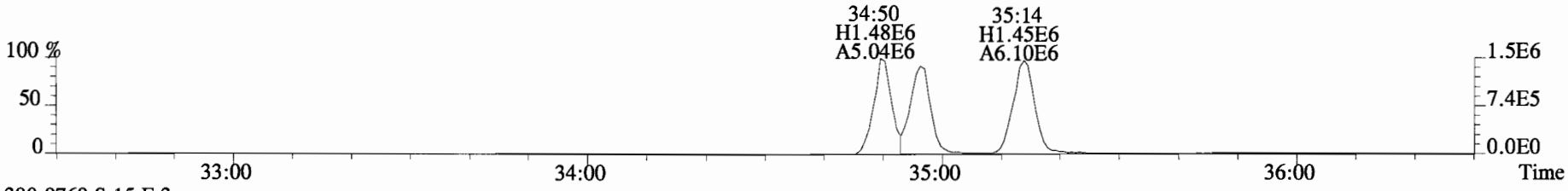
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



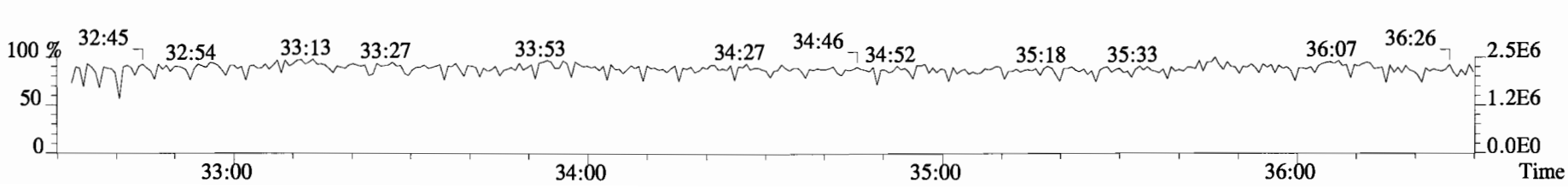
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



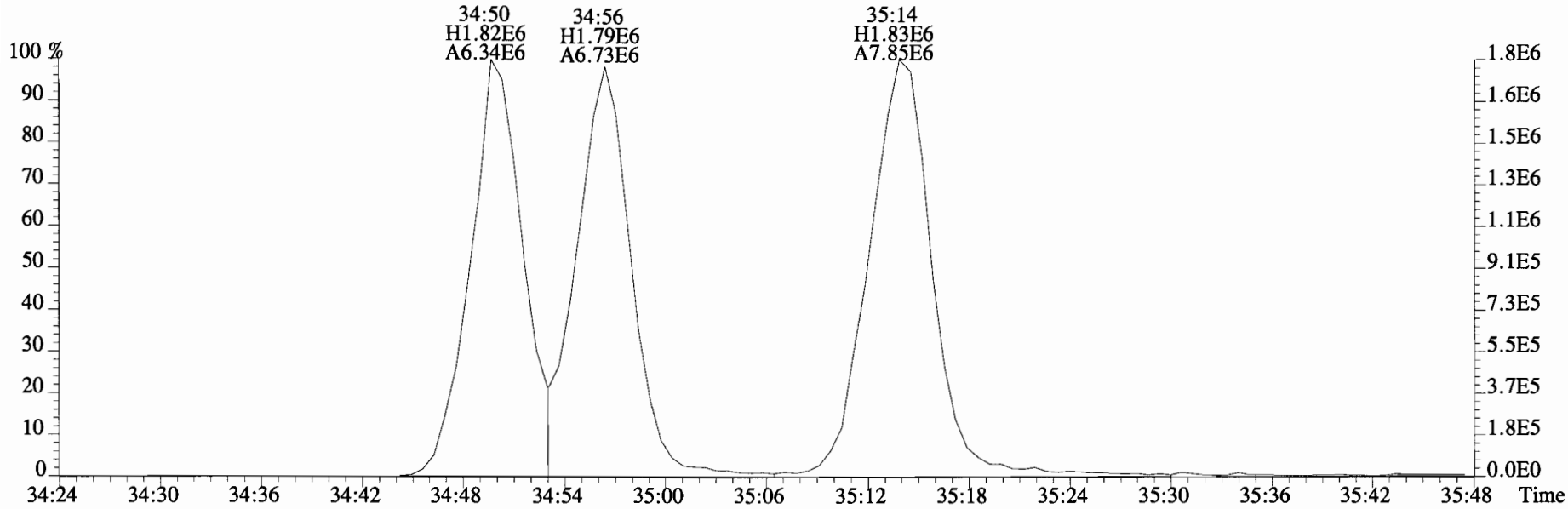
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



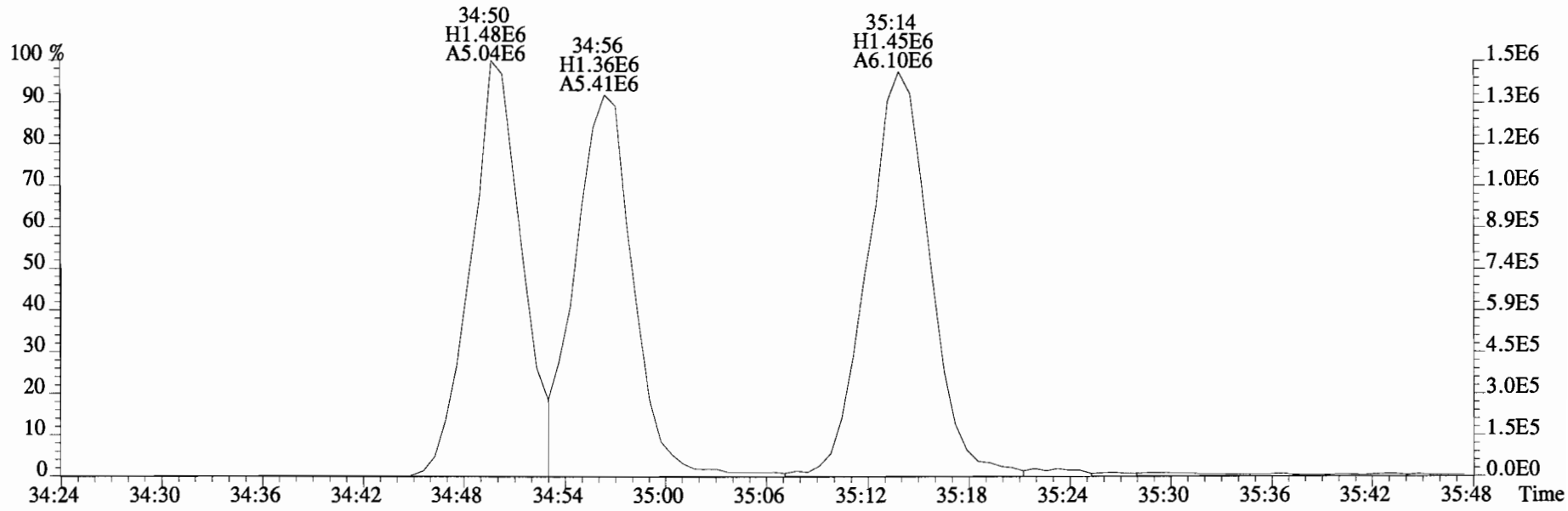
380.9760 S:15 F:3



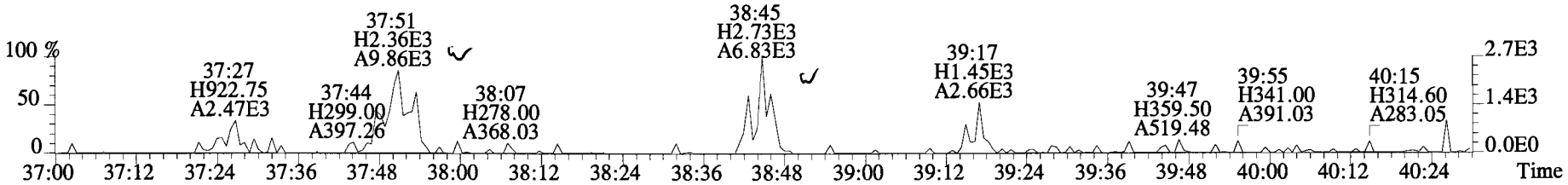
File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



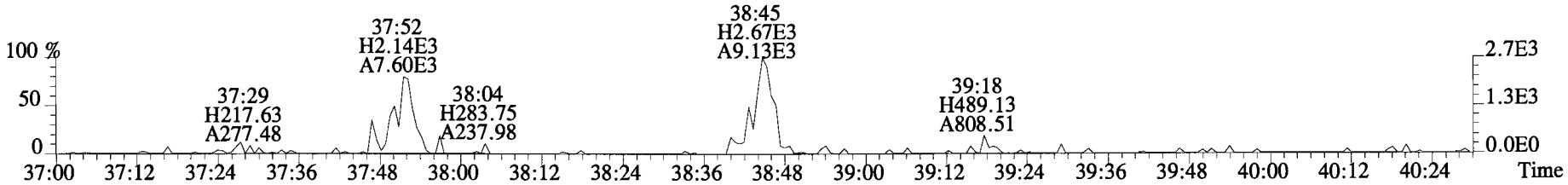
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



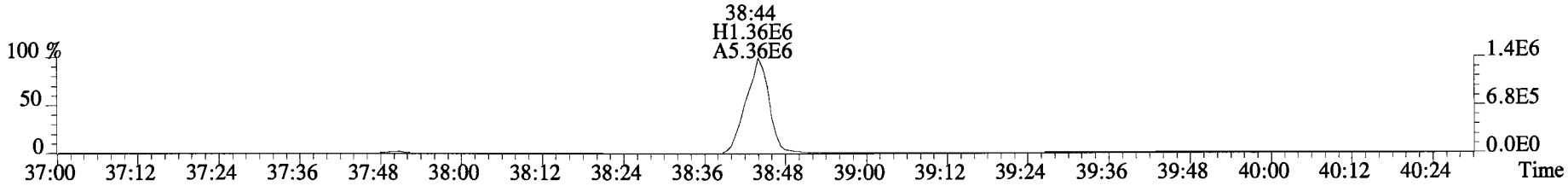
File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



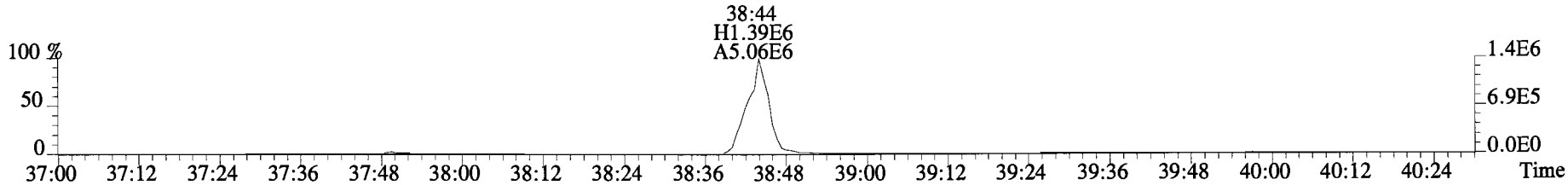
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



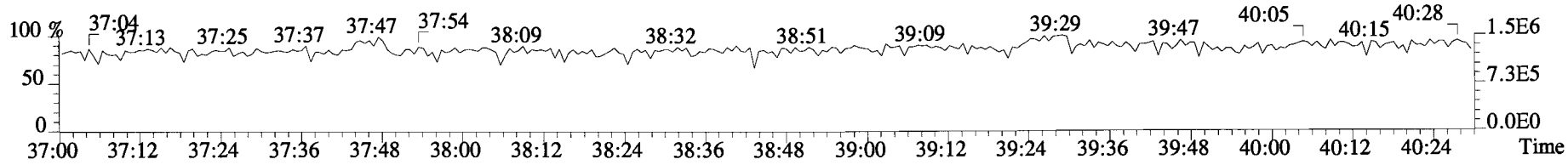
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



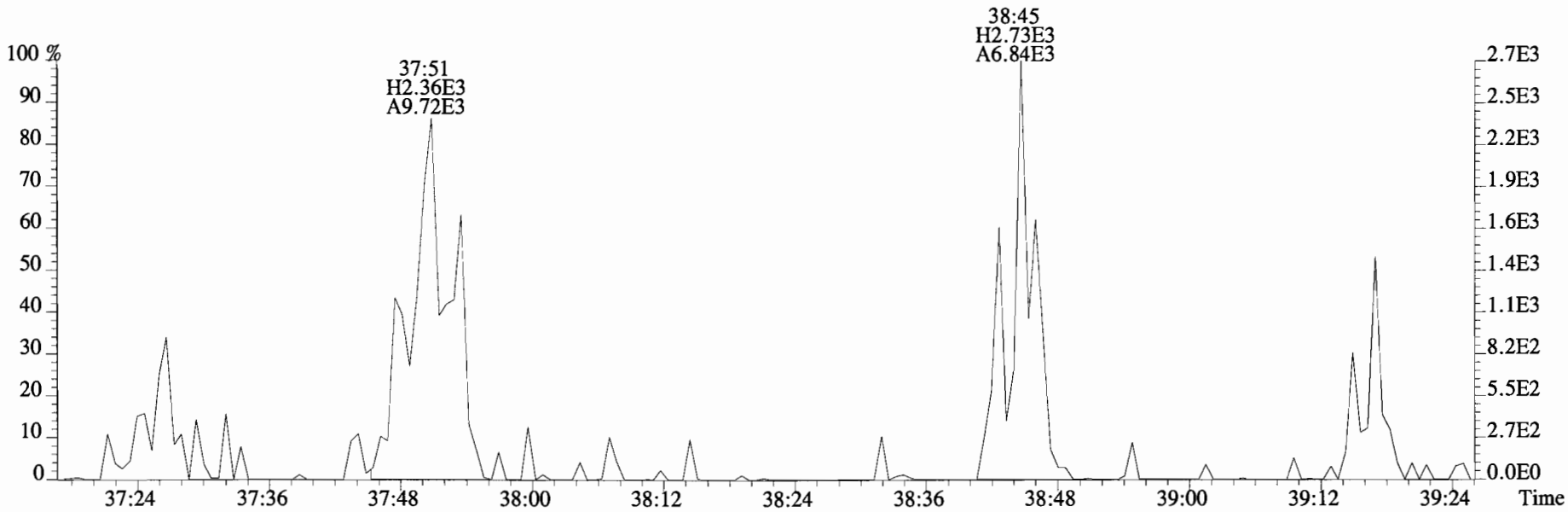
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



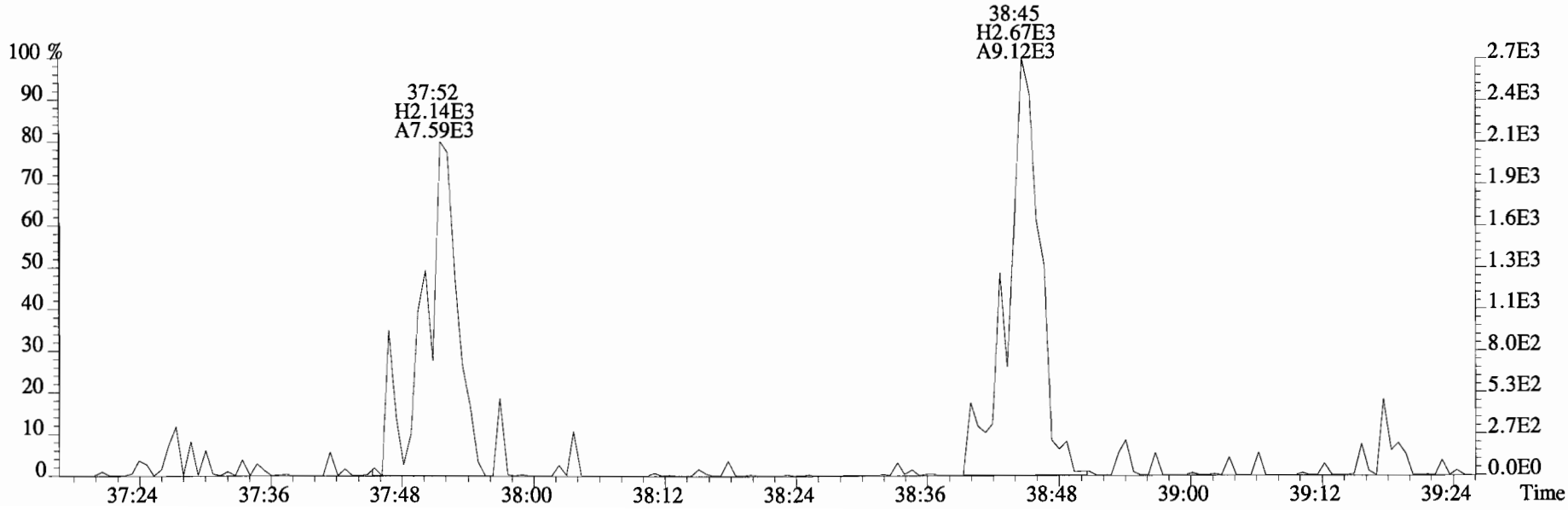
430.9728 S:15 F:4



File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

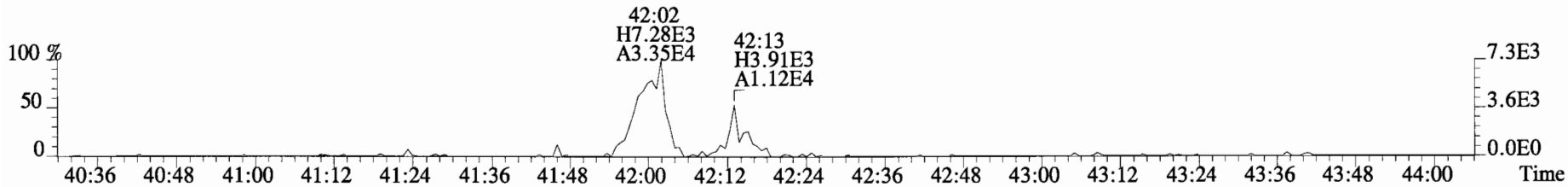


425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

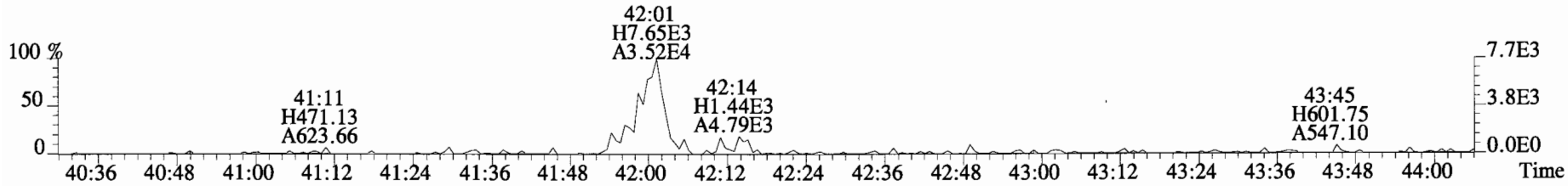


File:141217D1 #1-389 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

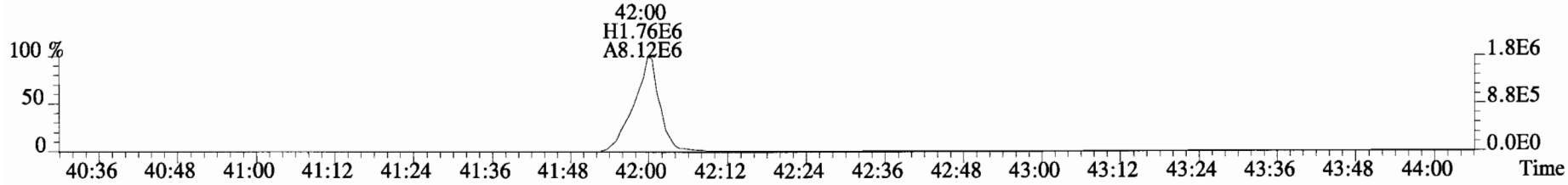
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



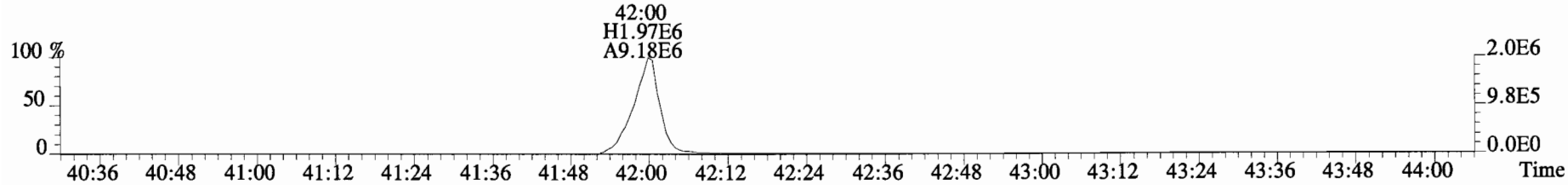
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



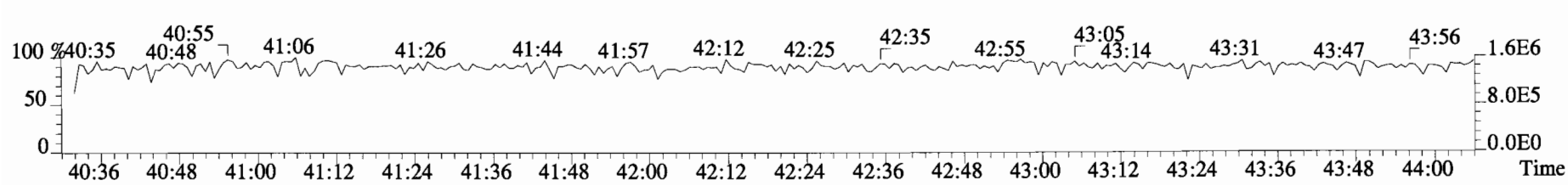
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

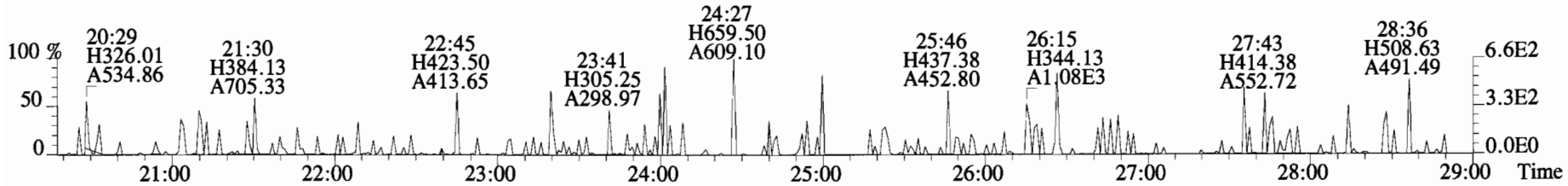


454.9728 S:15 F:5

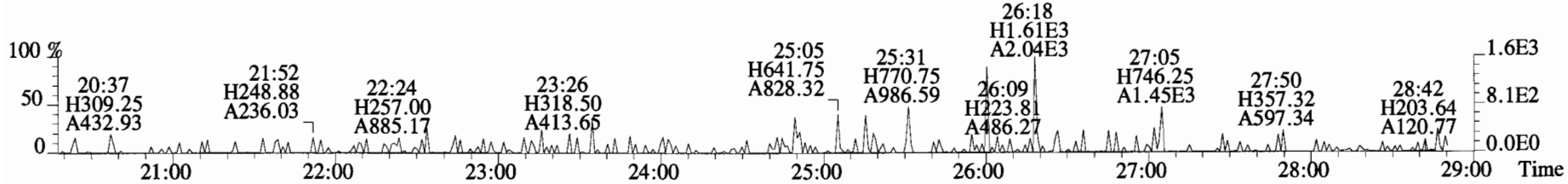


File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

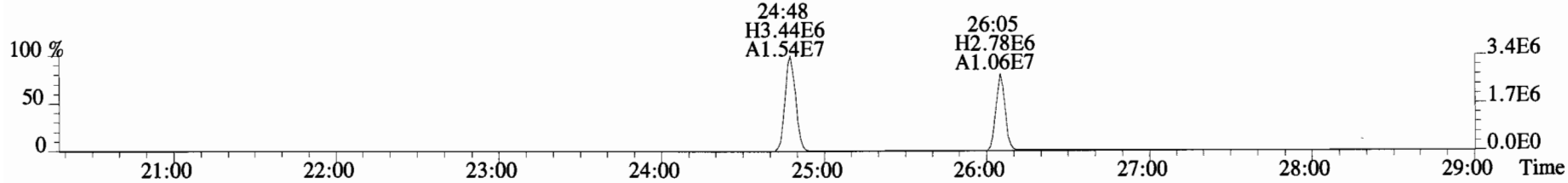
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



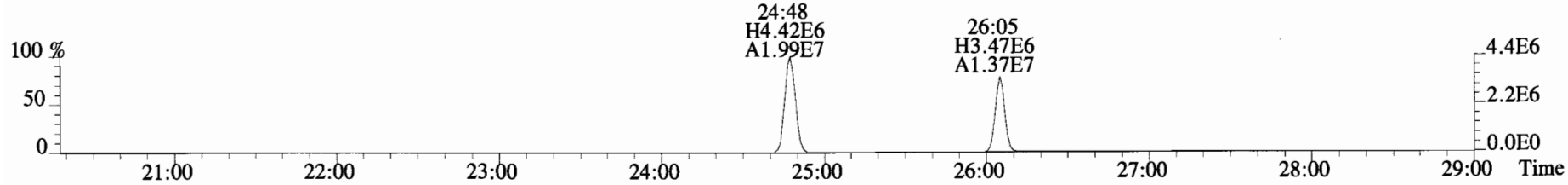
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



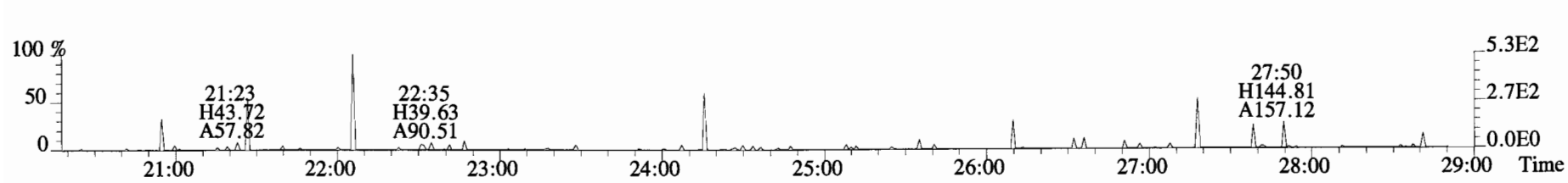
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

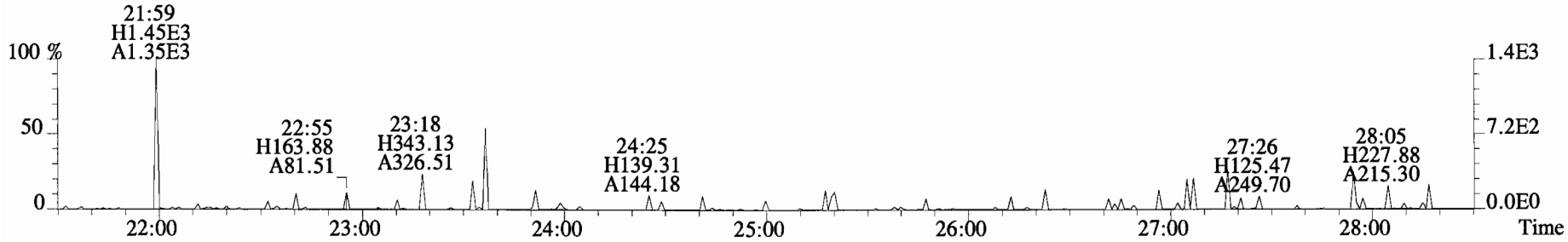


375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

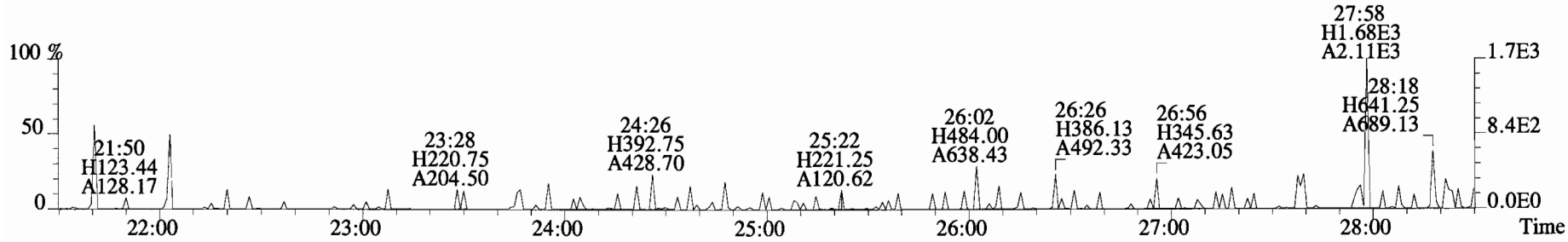


File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

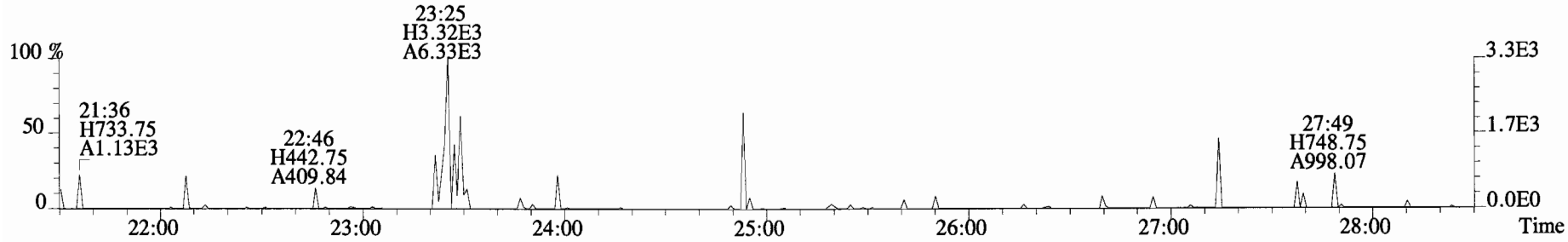
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



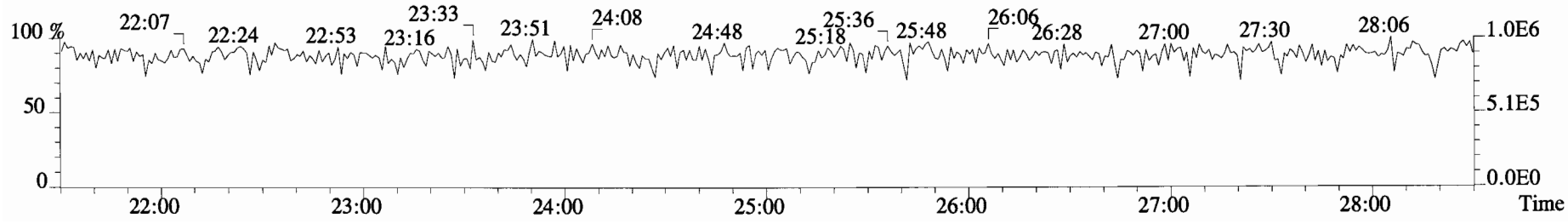
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

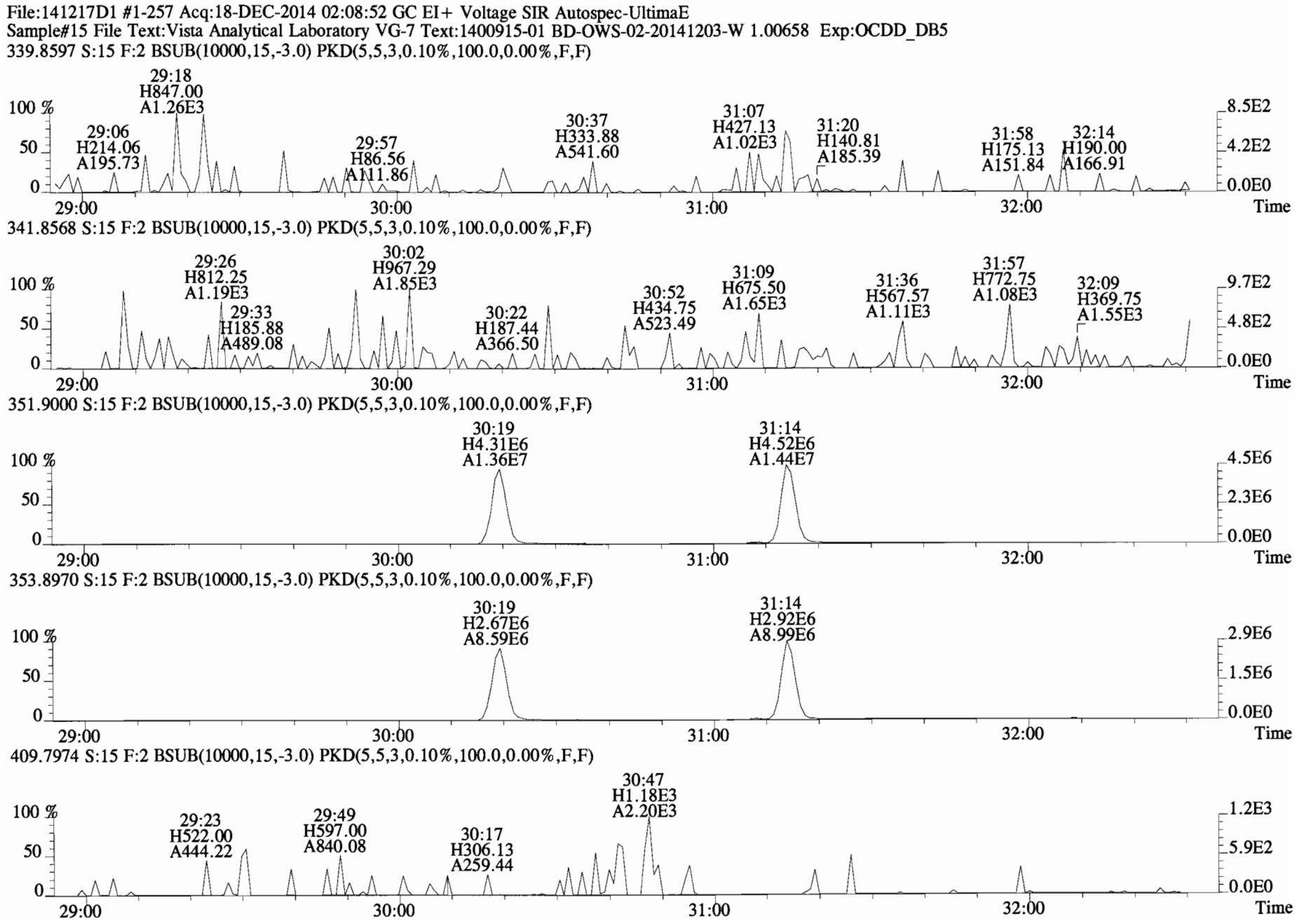


409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



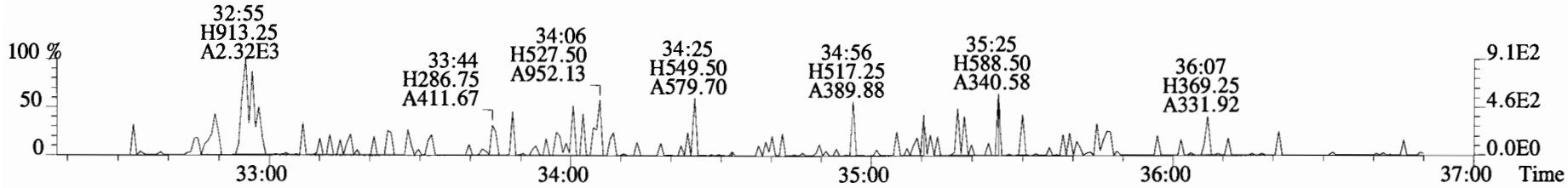
316.9824 S:15



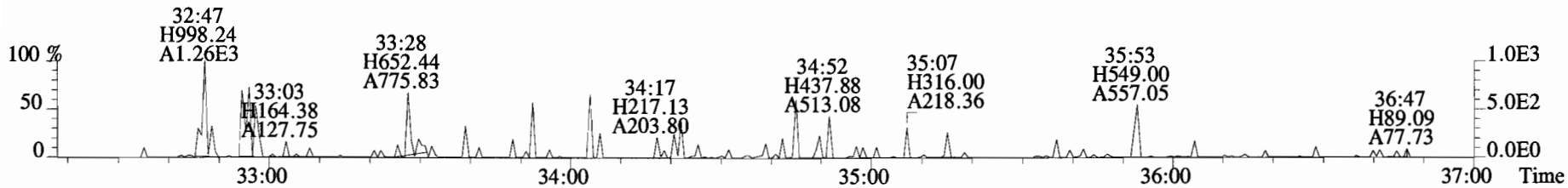

File:141217D1 #1-257 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:18 H847.00 A1.26E3
29:06 H214.06 A195.73
29:57 H86.56 A11.86
30:37 H333.88 A541.60
31:07 H427.13 A1.02E3
31:20 H140.81 A185.39
31:58 H175.13 A151.84
32:14 H190.00 A166.91
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:26 H812.25 A1.19E3
29:33 H185.88 A489.08
30:02 H967.29 A1.85E3
30:22 H187.44 A366.50
30:52 H434.75 A523.49
31:09 H675.50 A1.65E3
31:36 H567.57 A1.11E3
31:57 H772.75 A1.08E3
32:09 H369.75 A1.55E3
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:19 H4.31E6 A1.36E7
31:14 H4.52E6 A1.44E7
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:19 H2.67E6 A8.59E6
31:14 H2.92E6 A8.99E6
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:23 H522.00 A444.22
29:49 H597.00 A840.08
30:17 H306.13 A259.44
30:47 H1.18E3 A2.20E3
100 %
50
0
29:00
30:00
31:00
32:00
Time
8.5E2
4.2E2
0.0E0
9.7E2
4.8E2
4.5E6
2.3E6
2.9E6
1.5E6
1.2E3
5.9E2

File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

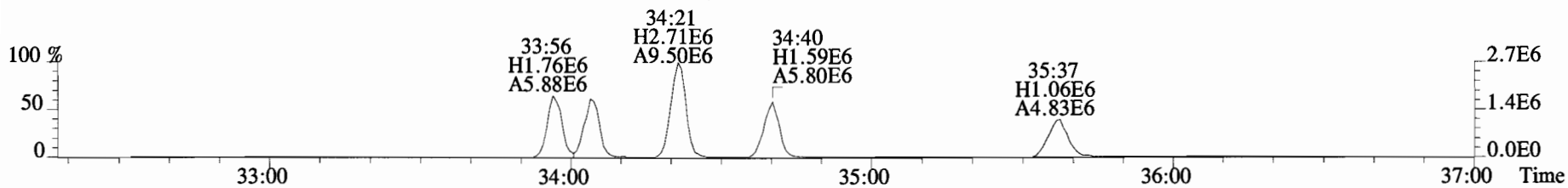
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



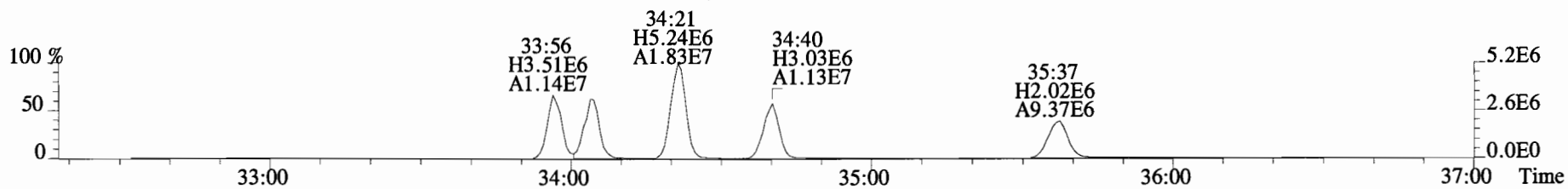
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



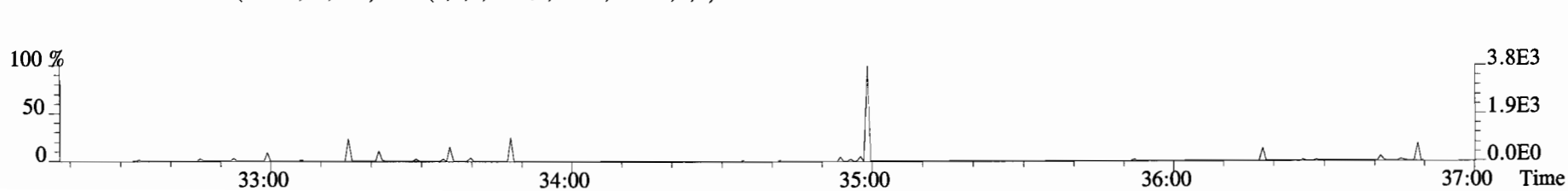
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



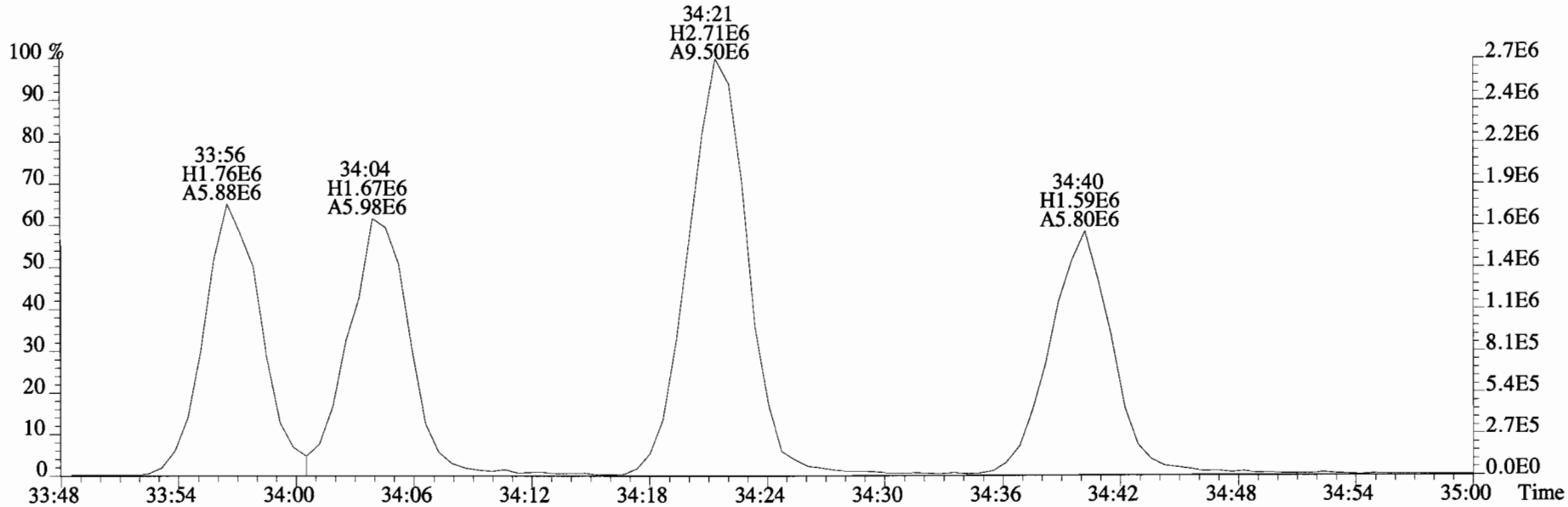
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



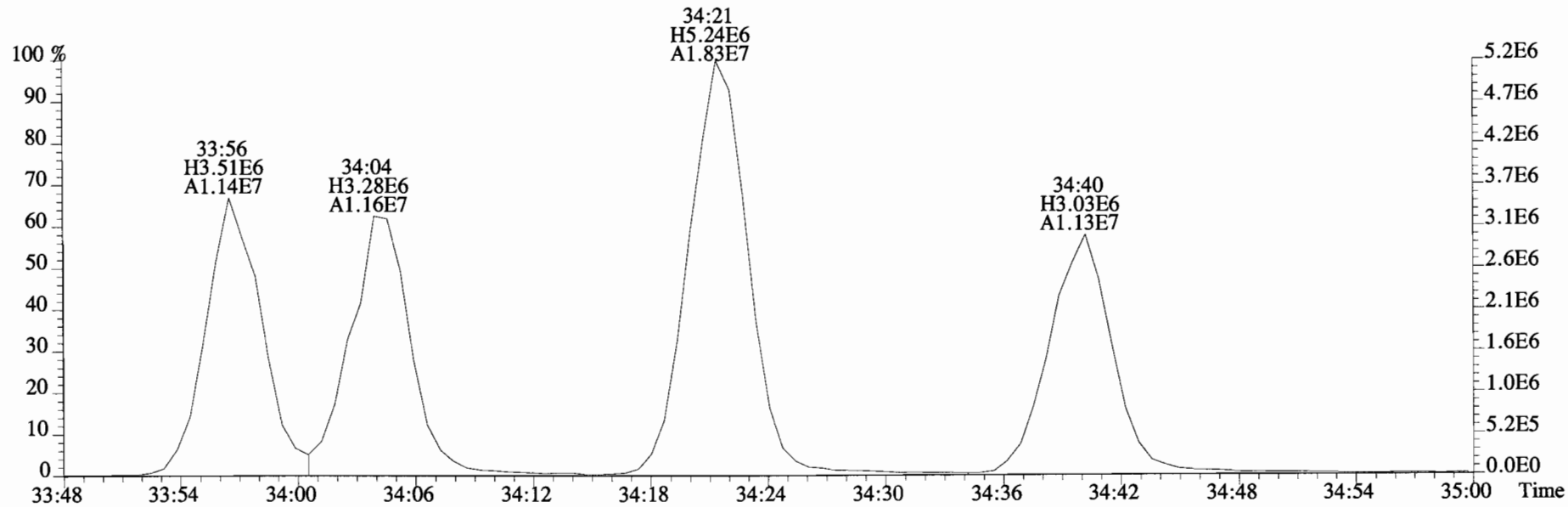
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

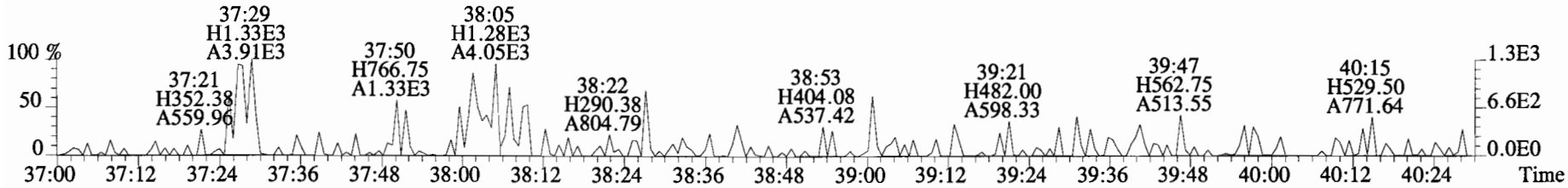


385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

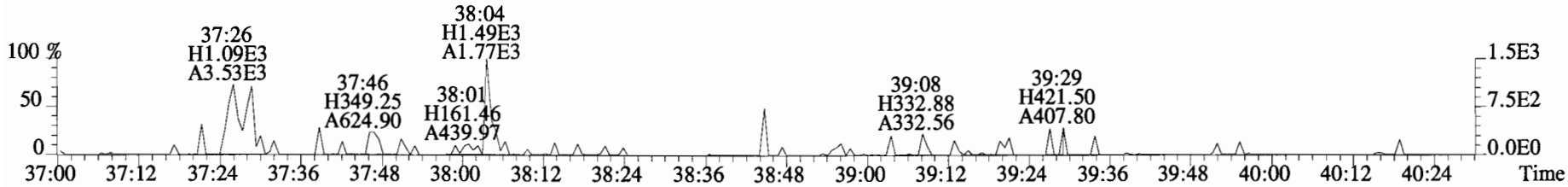


File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

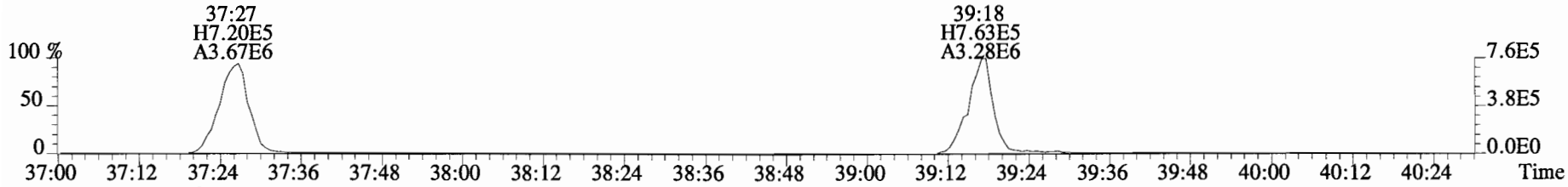
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



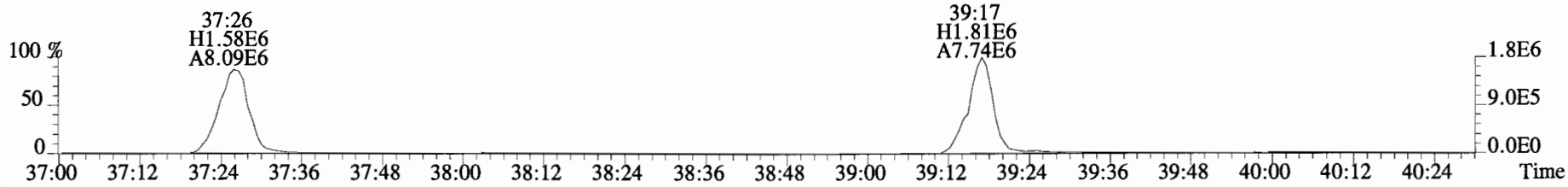
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



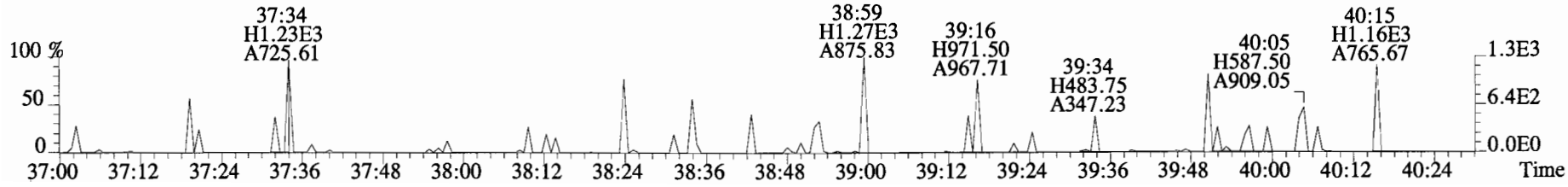
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

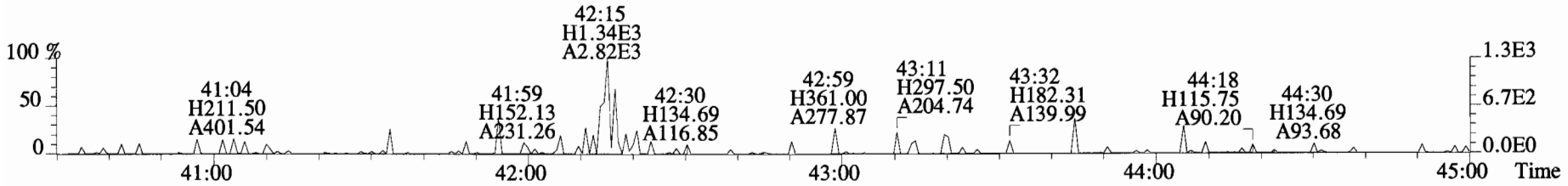


479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

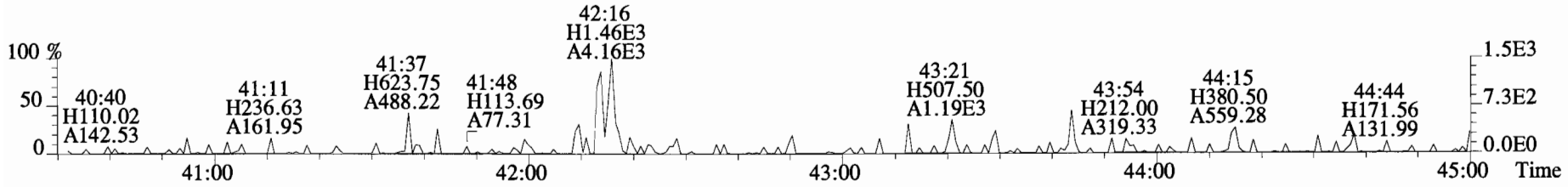


File:141217D1 #1-389 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

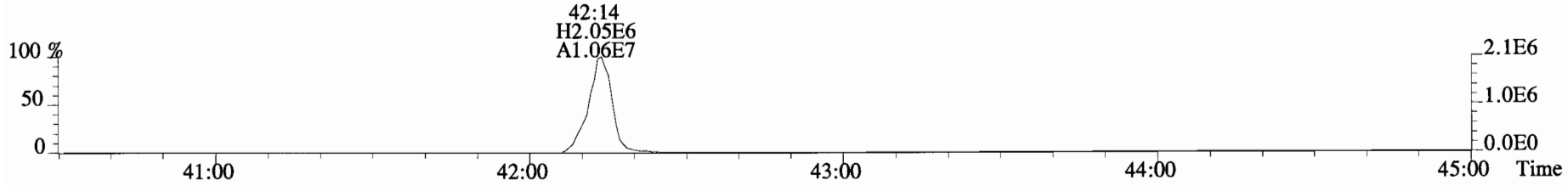
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



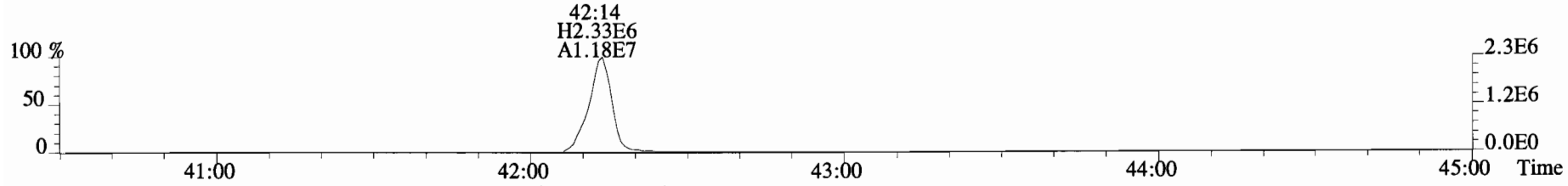
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



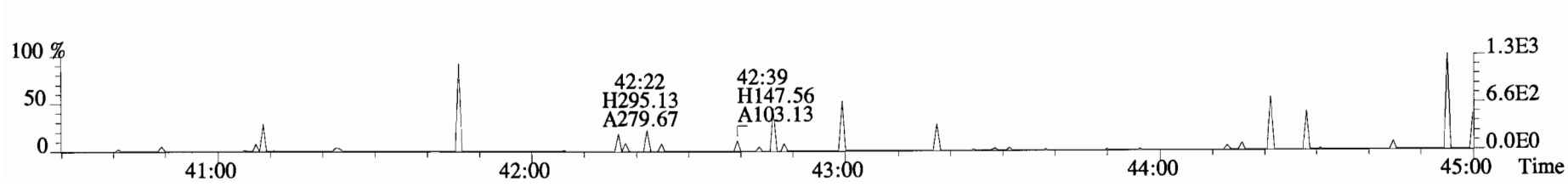
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.18	NotF╗	*	*		457	2.5	0.0668
	1,2,3,7,8-PeCDD	*	*	n	0.92	NotF╗	*	*		470	2.5	0.0624
	1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotF╗	*	*		434	2.5	0.110
	1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotF╗	*	*		434	2.5	0.116
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF╗	*	*		434	2.5	0.126
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.12	NotF╗	*	*		781	2.5	0.200
	OCDD	*	*	n	0.95	NotF╗	*	*		1730	2.5	0.766
	2,3,7,8-TCDF	*	*	n	1.08	NotF╗	*	*		587	2.5	0.0638
	1,2,3,7,8-PeCDF	*	*	n	1.09	NotF╗	*	*		517	2.5	0.0697
	2,3,4,7,8-PeCDF	*	*	n	1.04	NotF╗	*	*		517	2.5	0.0773
	1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotF╗	*	*		374	2.5	0.0327
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF╗	*	*		374	2.5	0.0354
	2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotF╗	*	*		374	2.5	0.0380
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF╗	*	*		374	2.5	0.0538
	1,2,3,4,6,7,8-HpCDF	3.74e+04	1.08	y	1.62	37:27	1.000	0.29713		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF╗	*	*		519	2.5	0.0783
	OCDF	*	*	n	1.10	NotF╗	*	*		700	2.5	0.210

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		457	0.0668
Total Penta-Dioxins	*	*		1060	0.141
Total Hexa-Dioxins	*	*		790	0.213
Total Hepta-Dioxins	*	*		781	0.200
Total Tetra-Furans	*	*		587	0.0638
Total Penta-Furans	0.0000	0.0000		745	0.106
Total Hexa-Furans	*	*		1470	0.154
Total Hepta-Furans	0.297	0.297		*	*

									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.96e+07	0.79	y	1.07	26:56	1.022	188.49	94.2	
IS	13C-1,2,3,7,8-PeCDD	2.09e+07	0.62	y	1.24	31:33	1.198	174.13	87.1	
IS	13C-1,2,3,4,7,8-HxCDD	1.55e+07	1.25	y	0.72	34:52	1.014	175.44	87.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.49e+07	1.22	y	0.74	34:58	1.017	166.68	83.3	
IS	13C-1,2,3,7,8,9-HxCDD	1.75e+07	1.24	y	0.86	35:16	1.025	167.92	84.0	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.43e+07	1.06	y	0.64	38:45	1.127	182.17	91.1	
IS	13C-OCDD	2.27e+07	0.90	y	0.78	42:01	1.222	238.37	59.6	
IS	13C-2,3,7,8-TCDF	3.05e+07	0.76	y	0.92	26:08	0.992	198.68	99.3	
IS	13C-1,2,3,7,8-PeCDF	2.79e+07	1.58	y	0.95	30:21	1.153	176.75	88.4	
IS	13C-2,3,4,7,8-PeCDF	2.69e+07	1.55	y	0.97	31:16	1.187	166.74	83.4	
IS	13C-1,2,3,4,7,8-HxCDF	2.16e+07	0.51	y	0.99	33:58	0.988	179.37	89.7	
IS	13C-1,2,3,6,7,8-HxCDF	2.33e+07	0.53	y	1.10	34:06	0.992	174.03	87.0	
IS	13C-2,3,4,6,7,8-HxCDF	2.15e+07	0.50	y	1.03	34:42	1.009	171.36	85.7	
IS	13C-1,2,3,7,8,9-HxCDF	1.90e+07	0.51	y	0.86	35:39	1.037	182.04	91.0	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.56e+07	0.45	y	0.71	37:28	1.090	179.29	89.6	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.44e+07	0.45	y	0.71	39:18	1.143	166.53	83.3	
IS	13C-OCDF	2.85e+07	0.91	y	0.87	42:15	1.229	268.24	67.1	
C/Up	37Cl-2,3,7,8-TCDD	9.58e+06			1.21	26:56	1.023	81.482	102	
RS/RT	13C-1,2,3,4-TCDD	1.94e+07	0.83	y	1.00	26:20	*	200.00		
RS	13C-1,2,3,4-TCDF	3.32e+07	0.76	y	1.00	24:50	*	200.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.43e+07	0.51	y	1.00	34:23	*	200.00		

Integrations by Analyst: MJ Date: 12/16/14

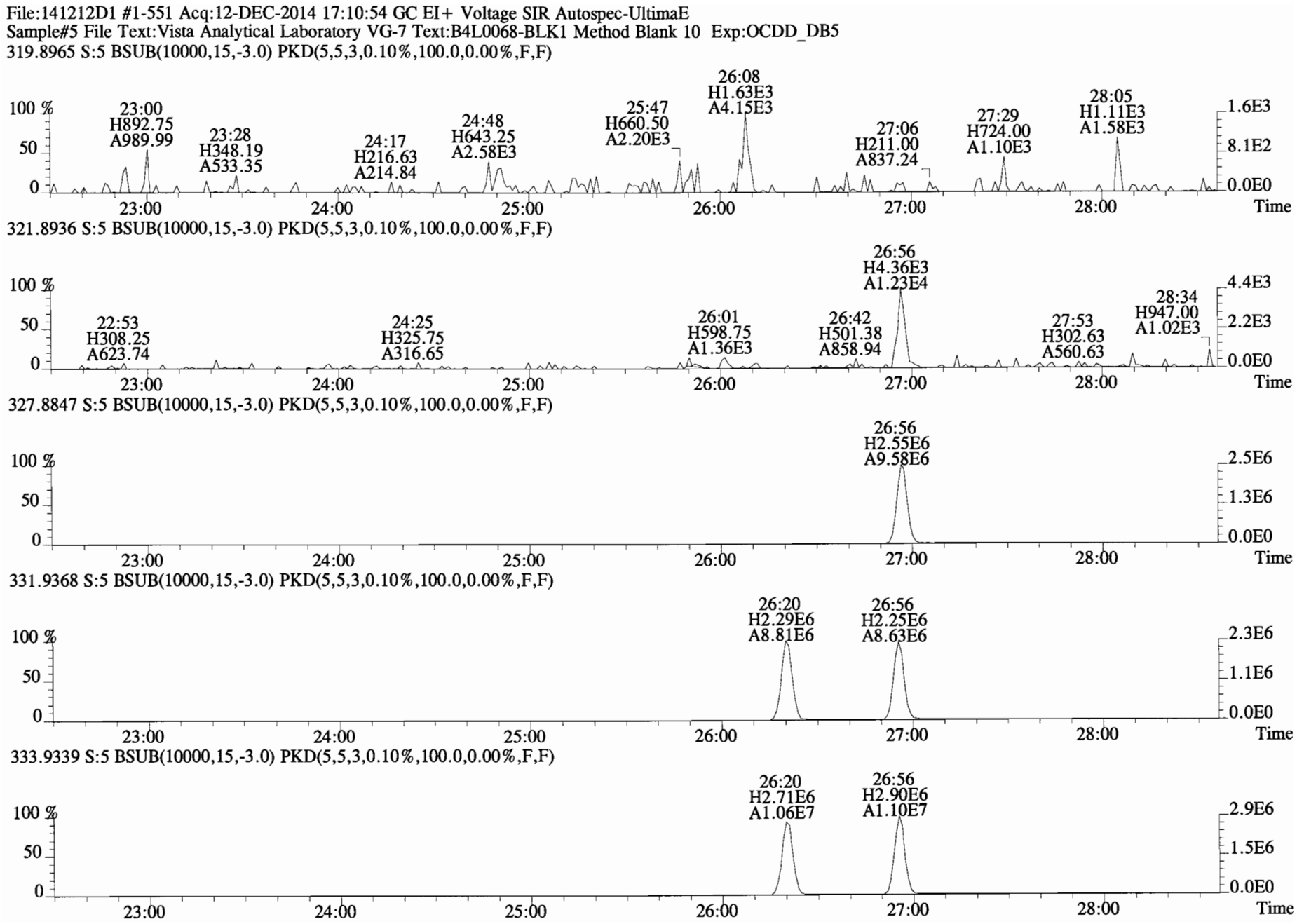
Reviewed by Analyst: Date: 12/17/14

Totals class: HpCDF EMPC Entry #: 35

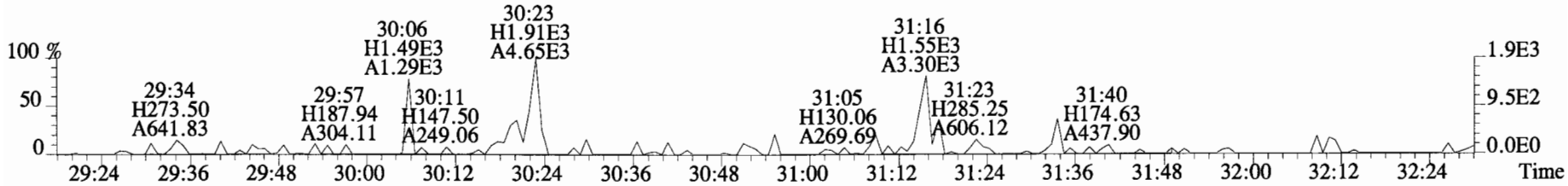
Run: 9 File: 141212D1 S: 5 I: 1 F: 4
Acquired: 12-DEC-14 17:10:54 Processed: 15-DEC-14 08:55:05

Total Concentration: 0.29713 Unnamed Concentration: *

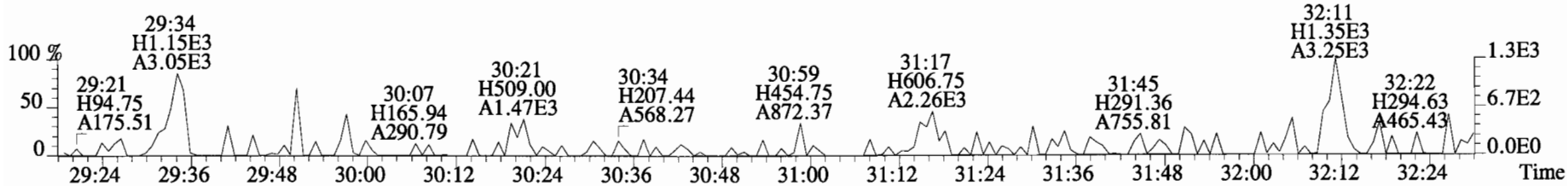
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:27	1.943e+04	1.795e+04	1.08 y	3.738e+04	0.29713	1,2,3,4,6,7,8-HpCDF


File:141212D1 #1-551 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:00 H892.75 A989.99
23:28 H348.19 A533.35
24:17 H216.63 A214.84
24:48 H643.25 A2.58E3
25:47 H660.50 A2.20E3
26:08 H1.63E3 A4.15E3
27:06 H211.00 A837.24
27:29 H724.00 A1.10E3
28:05 H1.11E3 A1.58E3
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:53 H308.25 A623.74
24:25 H325.75 A316.65
26:01 H598.75 A1.36E3
26:42 H501.38 A858.94
26:56 H4.36E3 A1.23E4
27:53 H302.63 A560.63
28:34 H947.00 A1.02E3
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:56 H2.55E6 A9.58E6
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:20 H2.29E6 A8.81E6
26:56 H2.25E6 A8.63E6
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:20 H2.71E6 A1.06E7
26:56 H2.90E6 A1.10E7
100 %
50
0
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.6E3
8.1E2
0.0E0
4.4E3
2.2E3
2.5E6
1.3E6
2.3E6
1.1E6
2.9E6
1.5E6

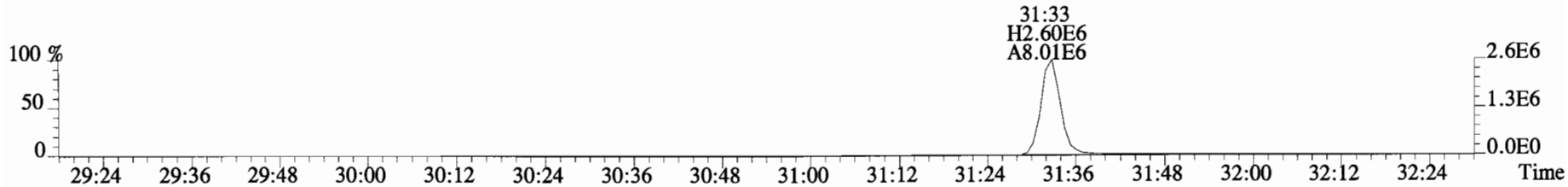
File:141212D1 #1-257 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



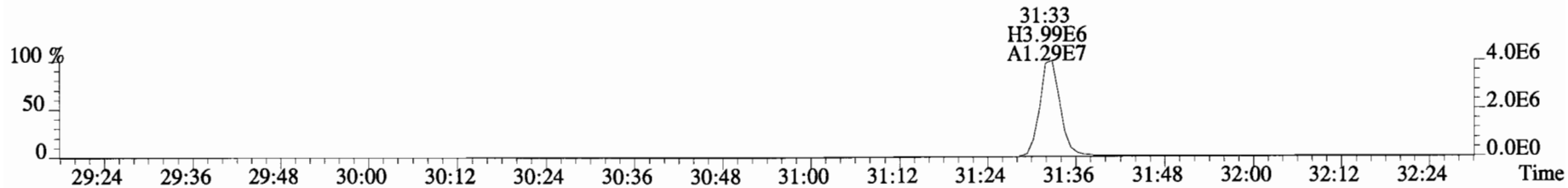
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



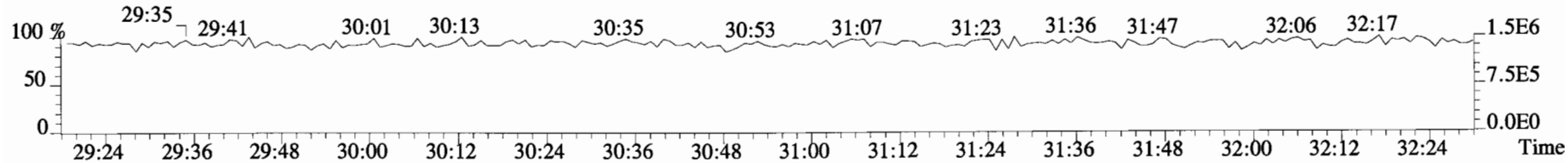
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

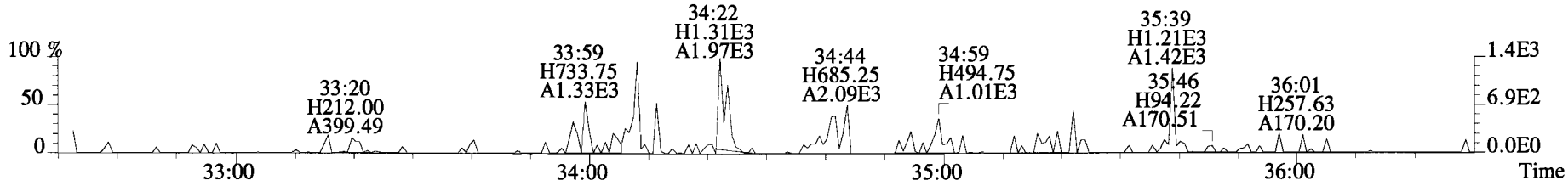


366.9792 S:5 F:2

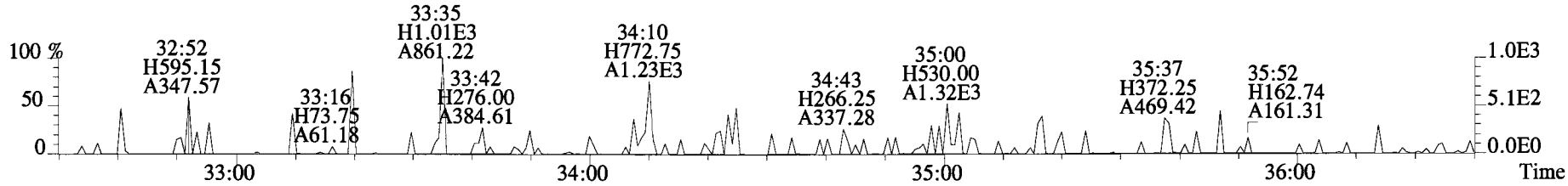


File:141212D1 #1-384 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5

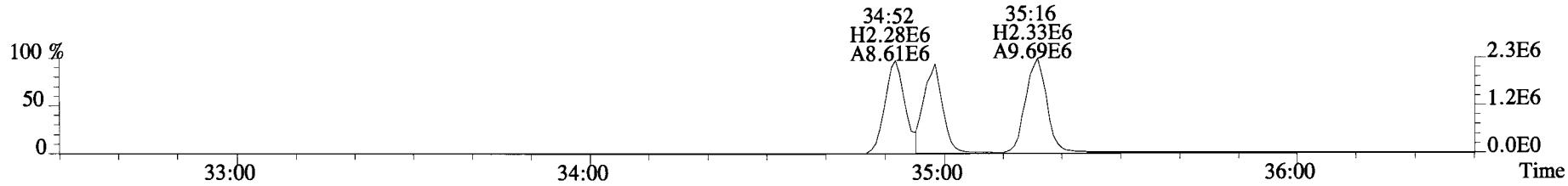
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



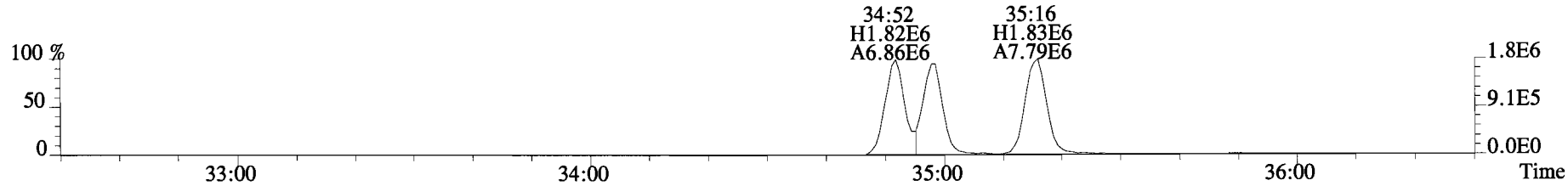
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



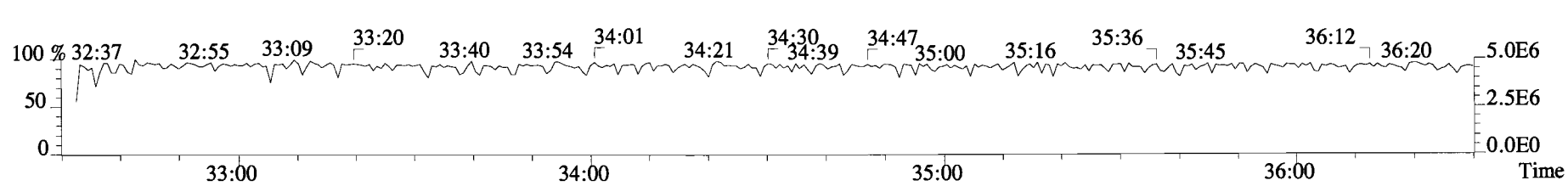
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



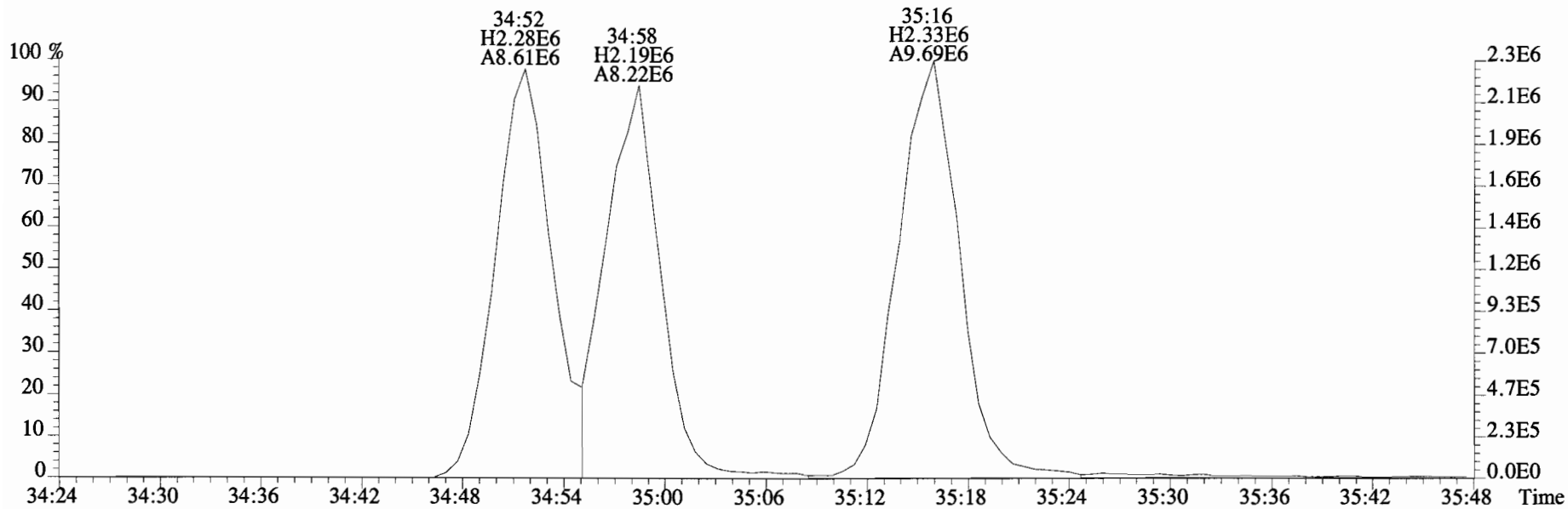
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



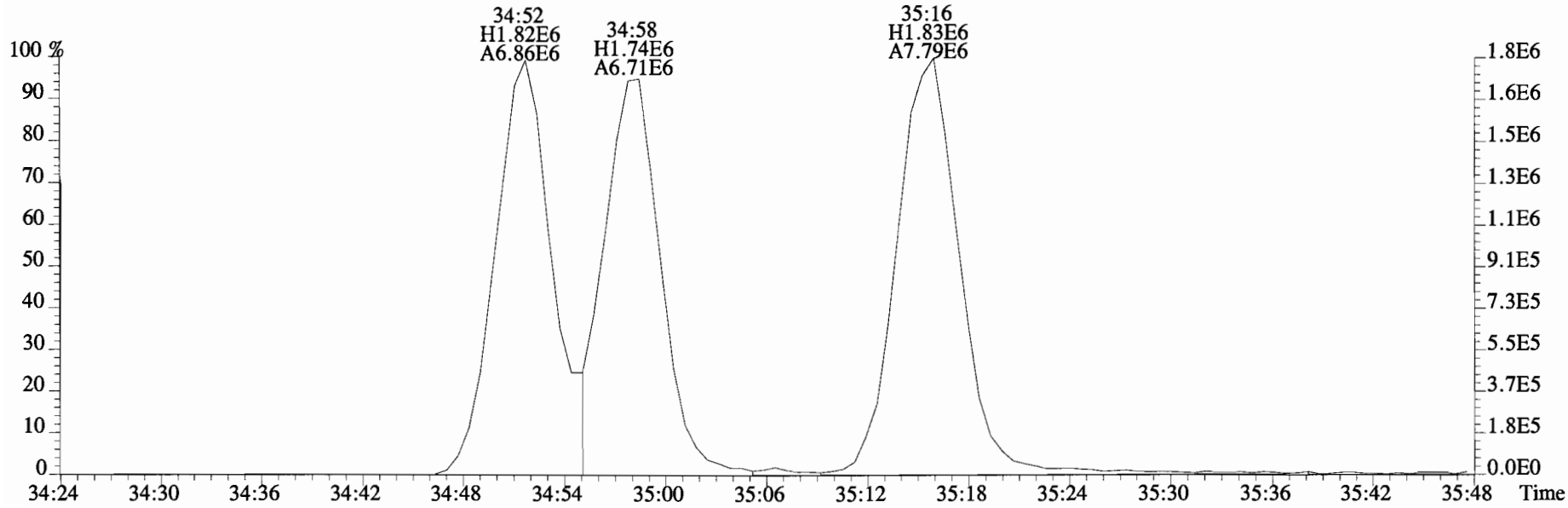
380.9760 S:5 F:3



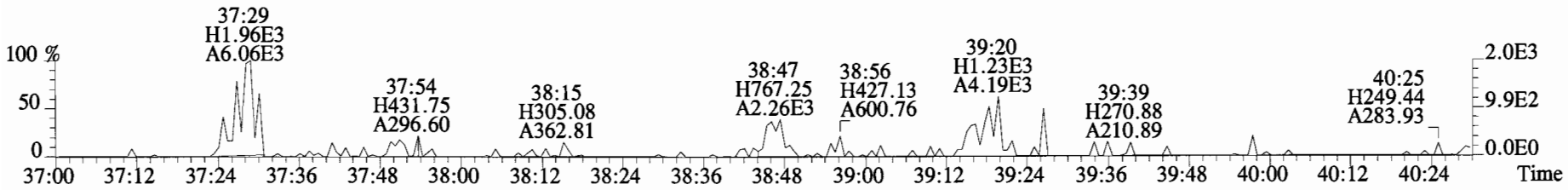
File:141212D1 #1-384 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



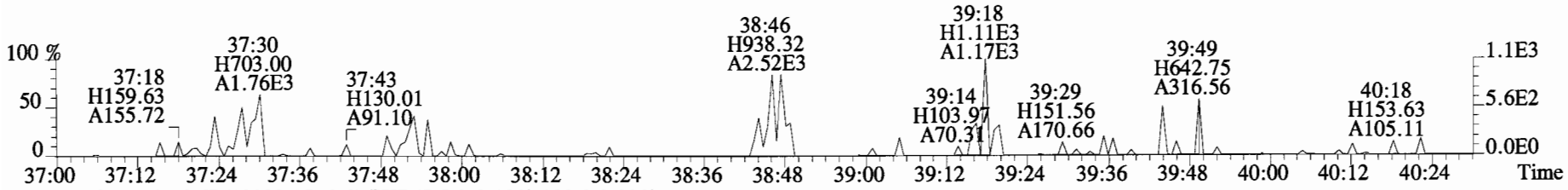
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



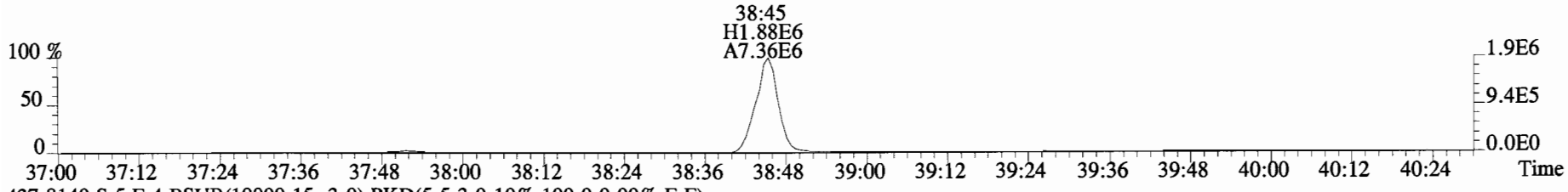
File:141212D1 #1-326 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



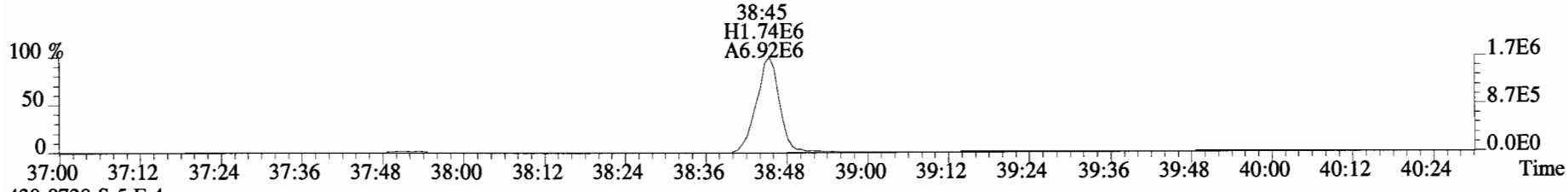
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



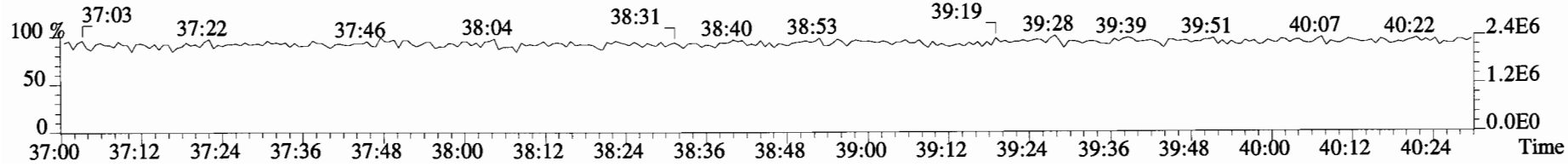
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

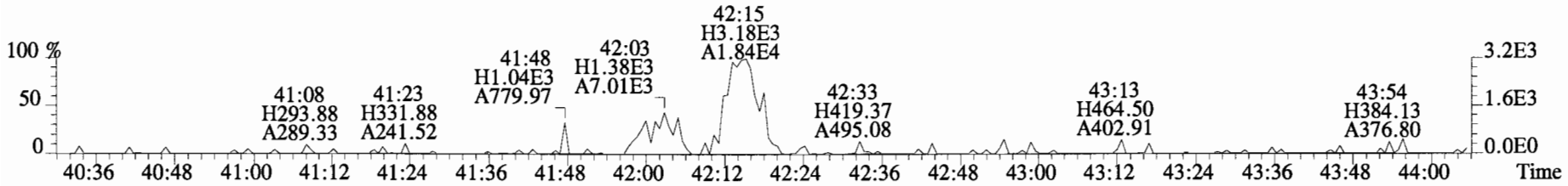


430.9728 S:5 F:4

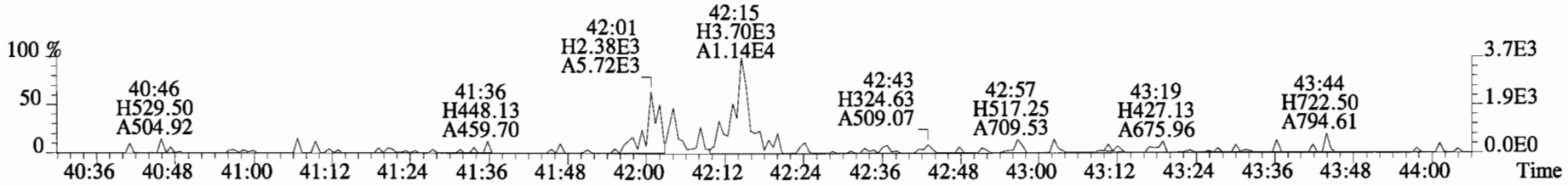


File:141212D1 #1-388 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5

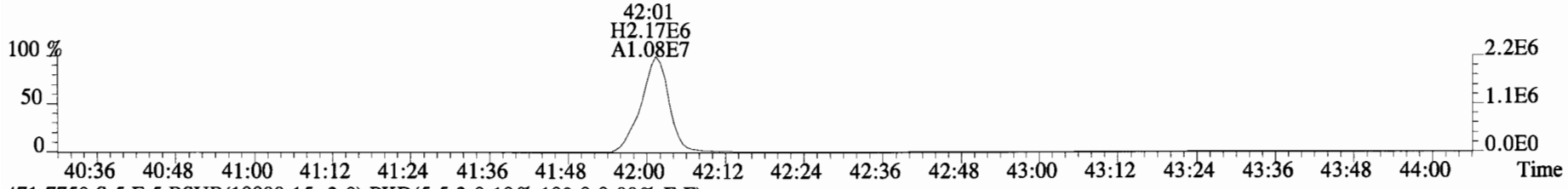
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



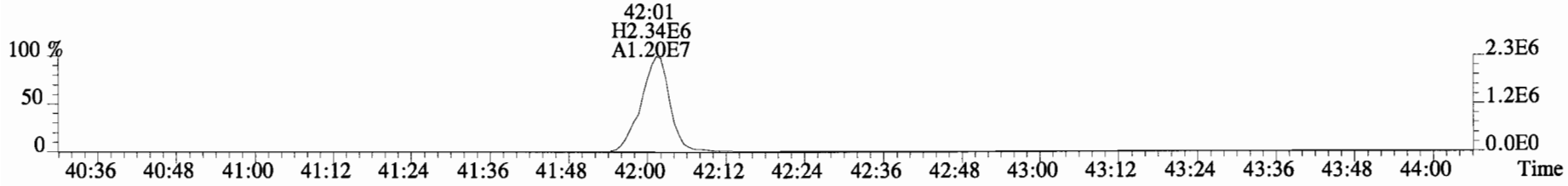
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



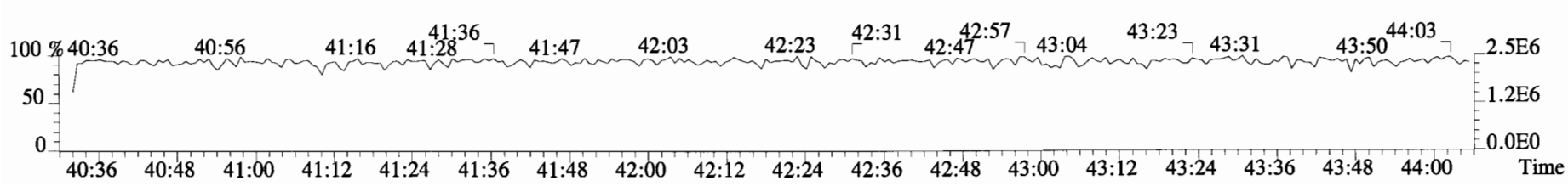
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



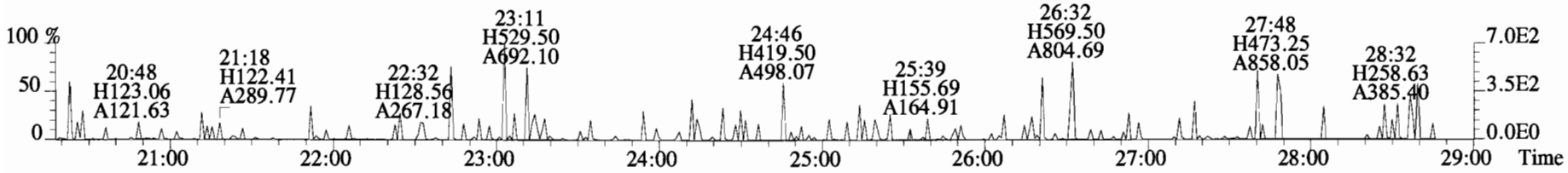
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



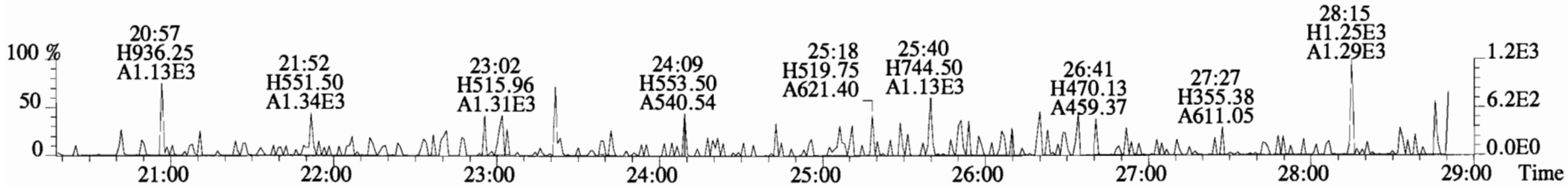
454.9728 S:5 F:5



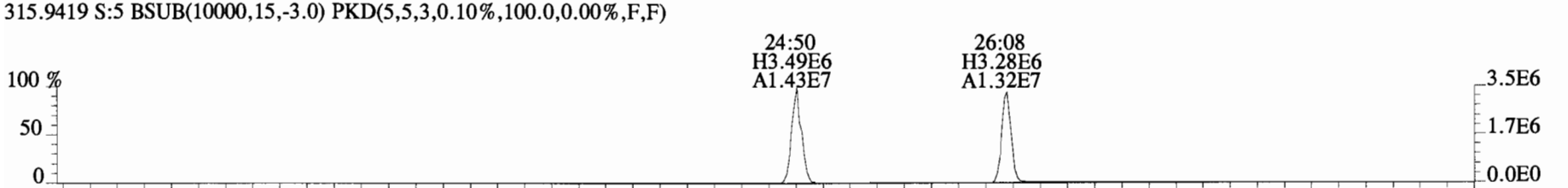
File:141212D1 #1-551 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



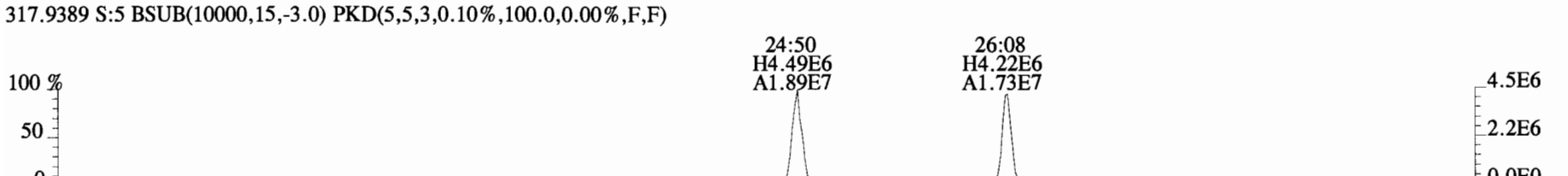
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



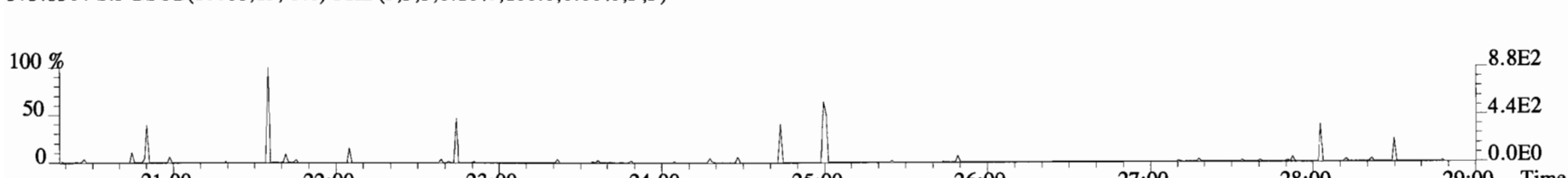
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



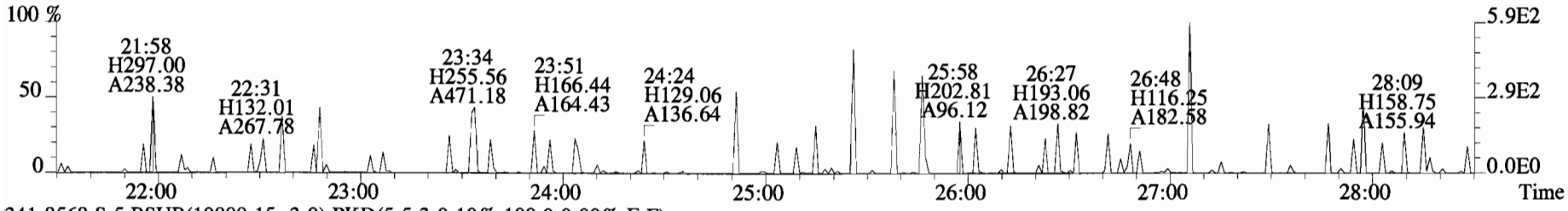
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



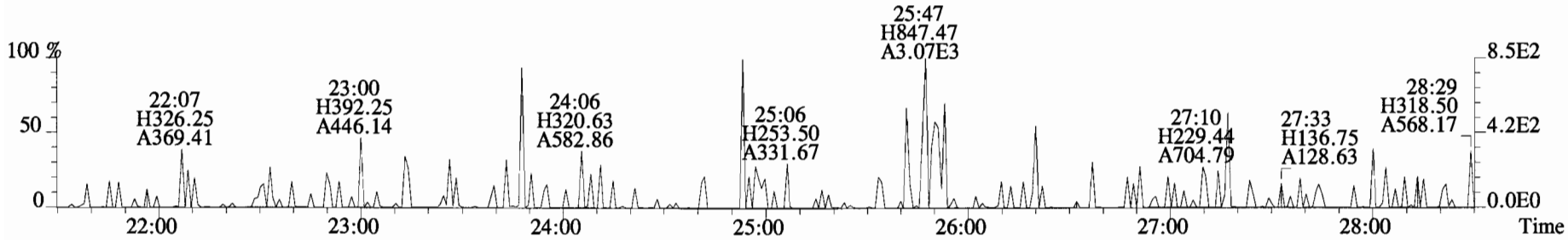
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



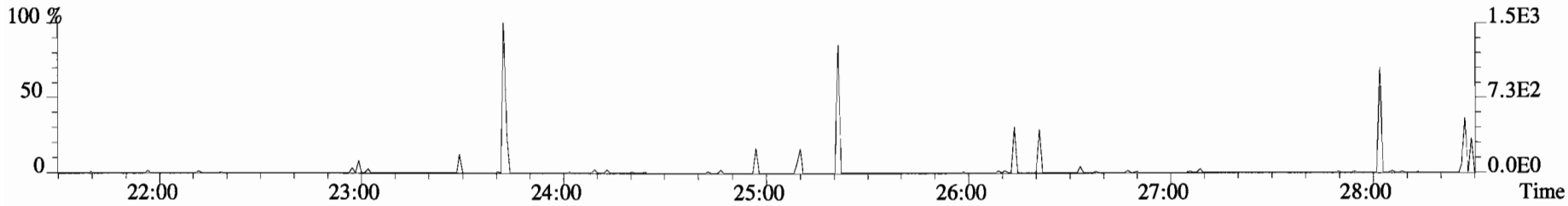
File:141212D1 #1-551 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



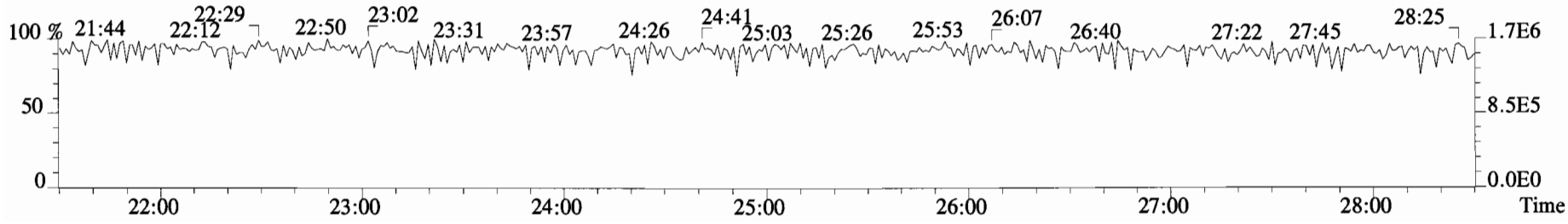
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



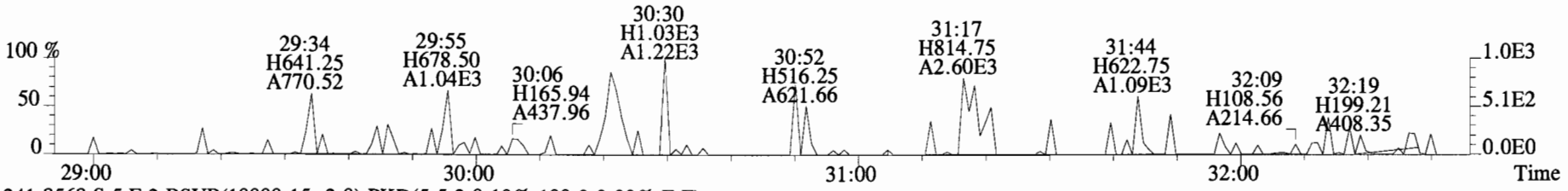
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



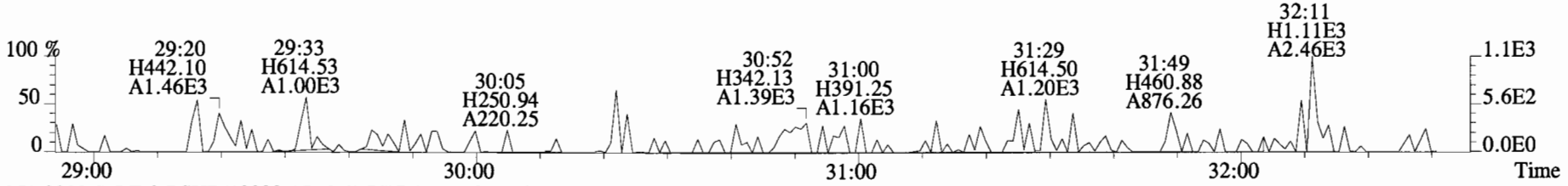
316.9824 S:5



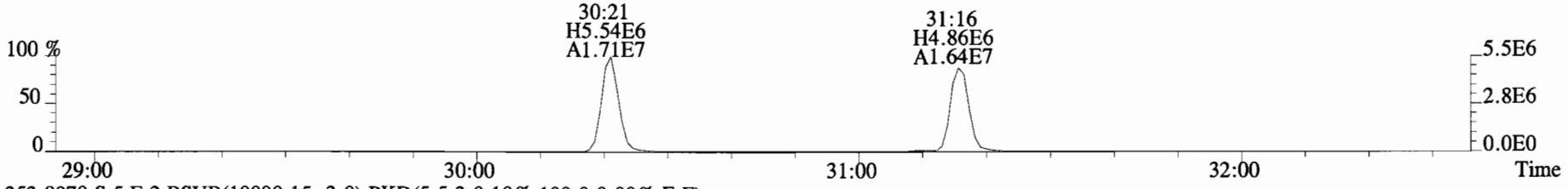
File:141212D1 #1-257 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



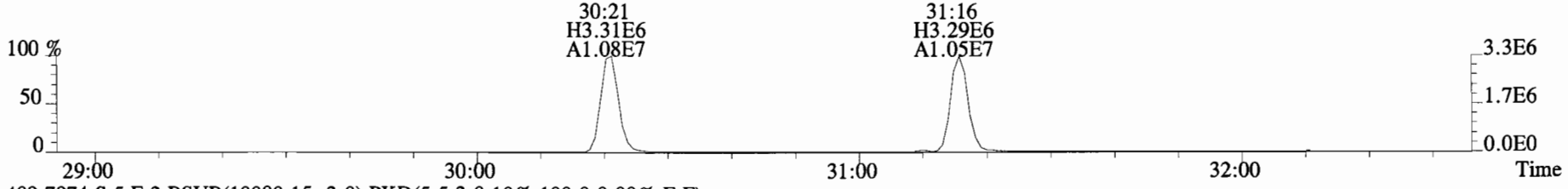
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



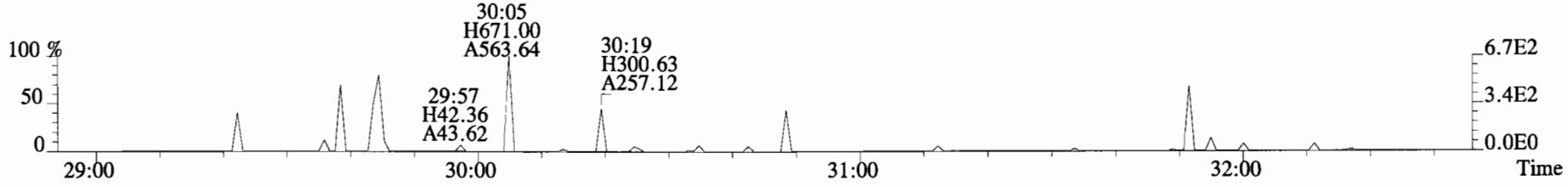
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

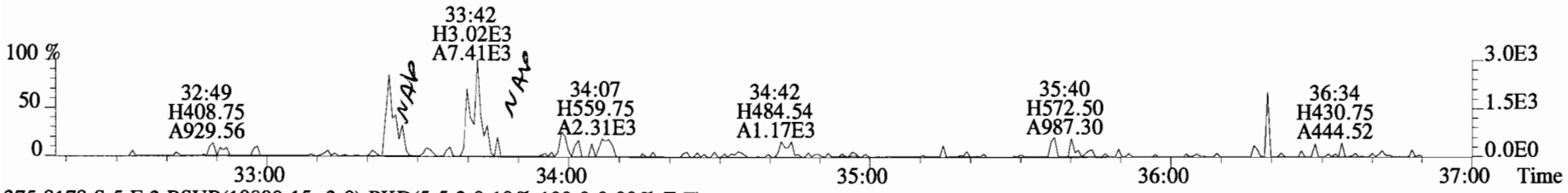


409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

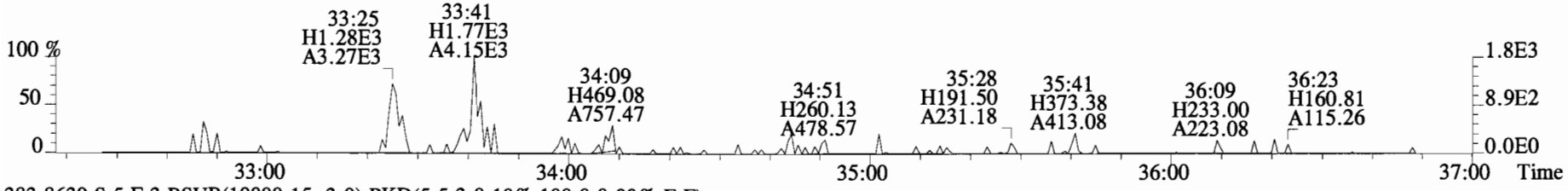


File:141212D1 #1-384 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5

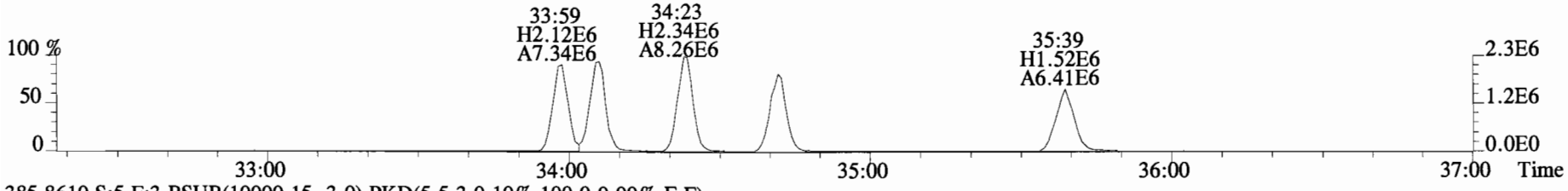
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



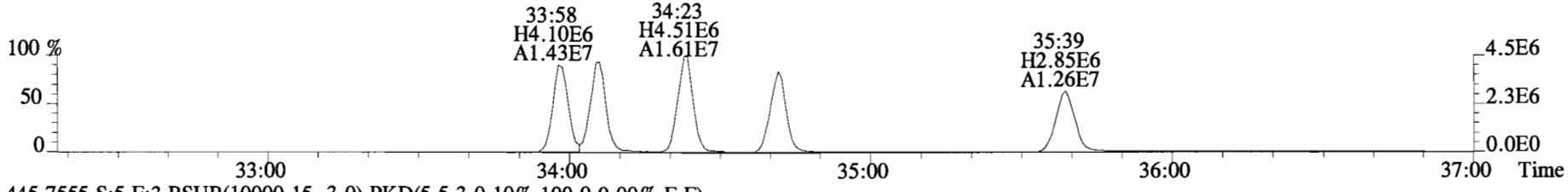
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



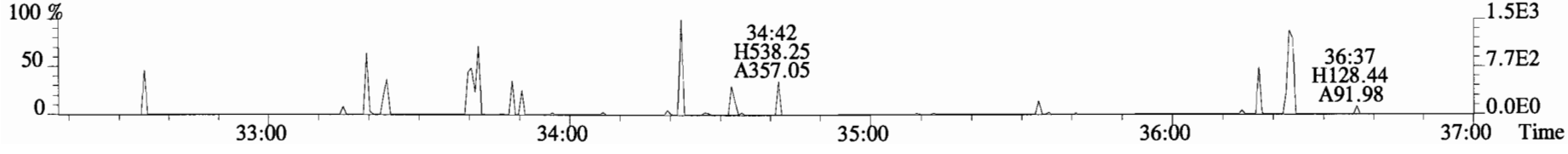
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



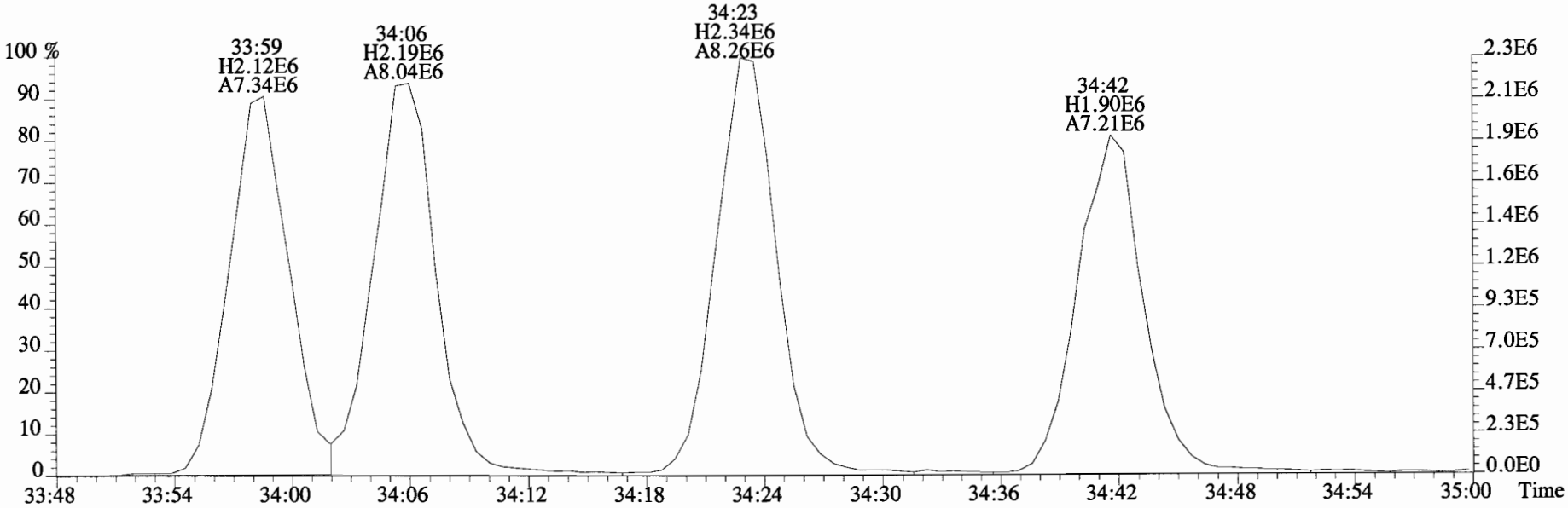
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



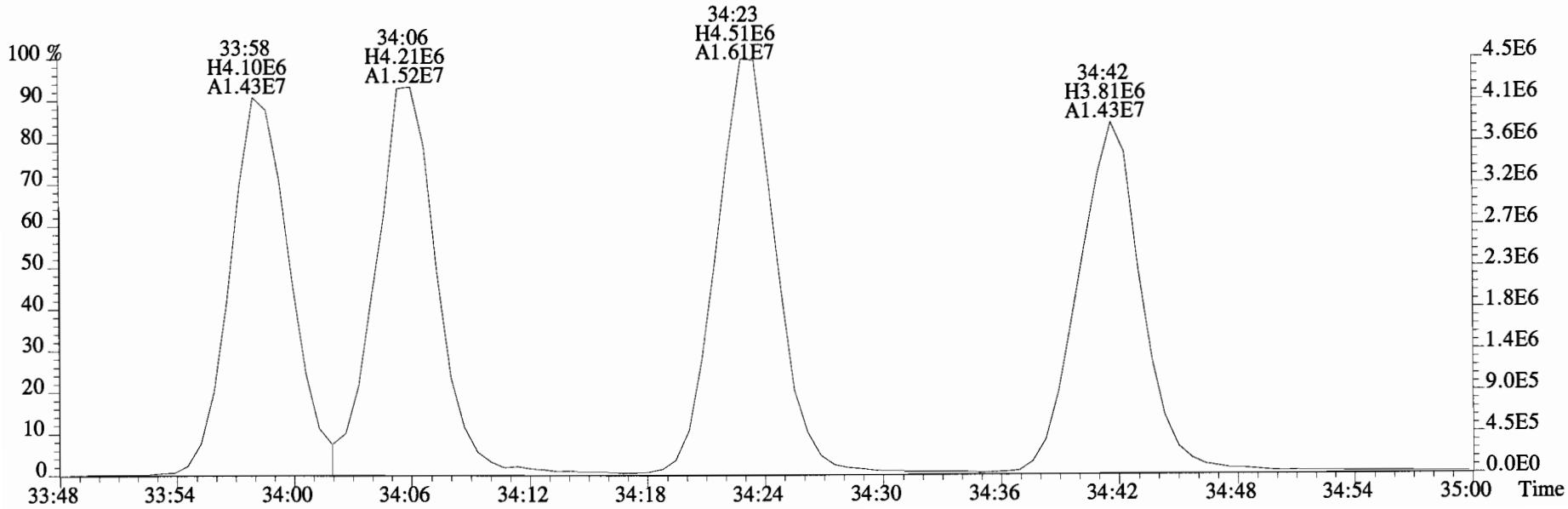
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141212D1 #1-384 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

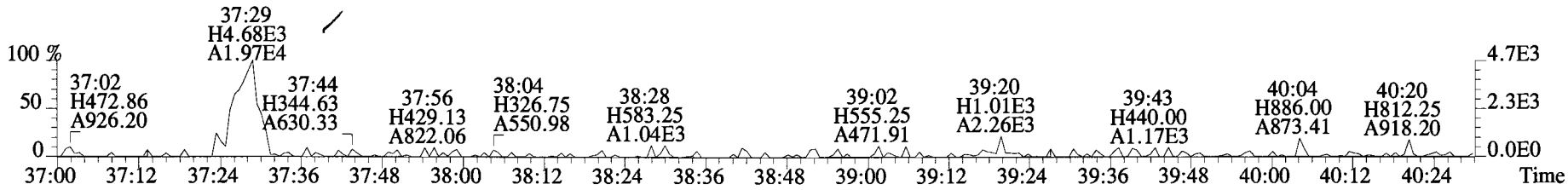


385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

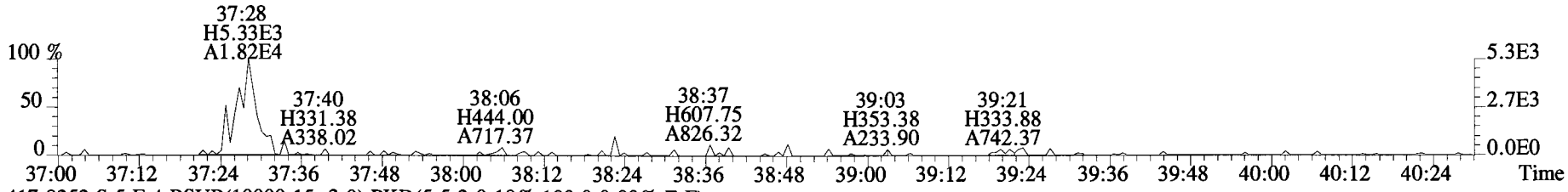


File:141212D1 #1-326 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5

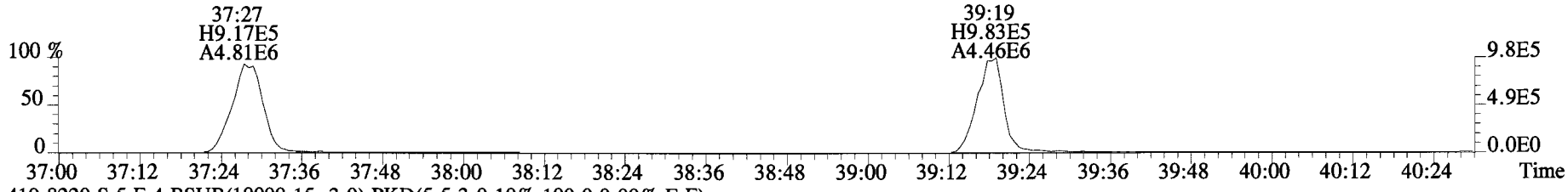
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



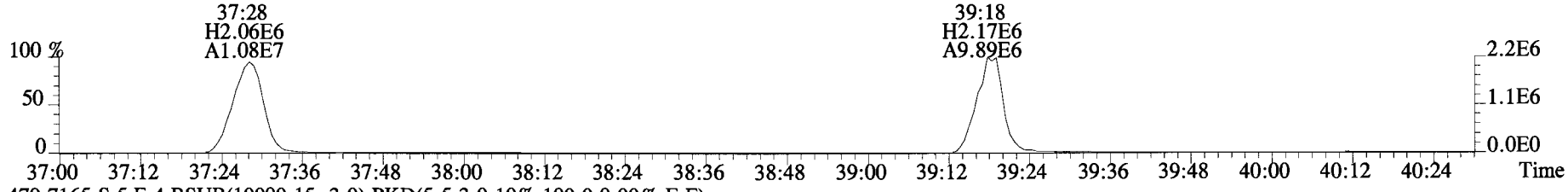
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



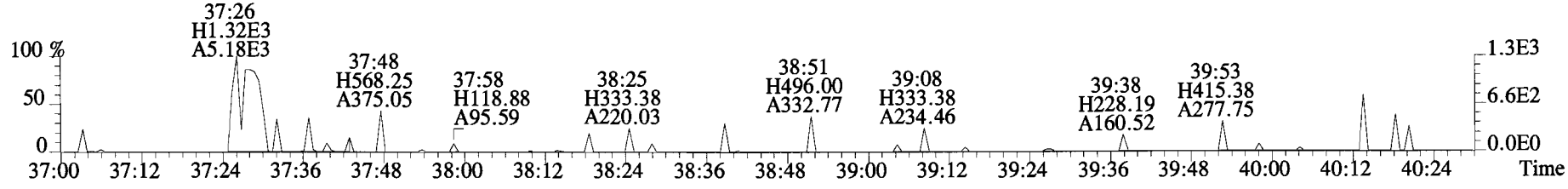
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



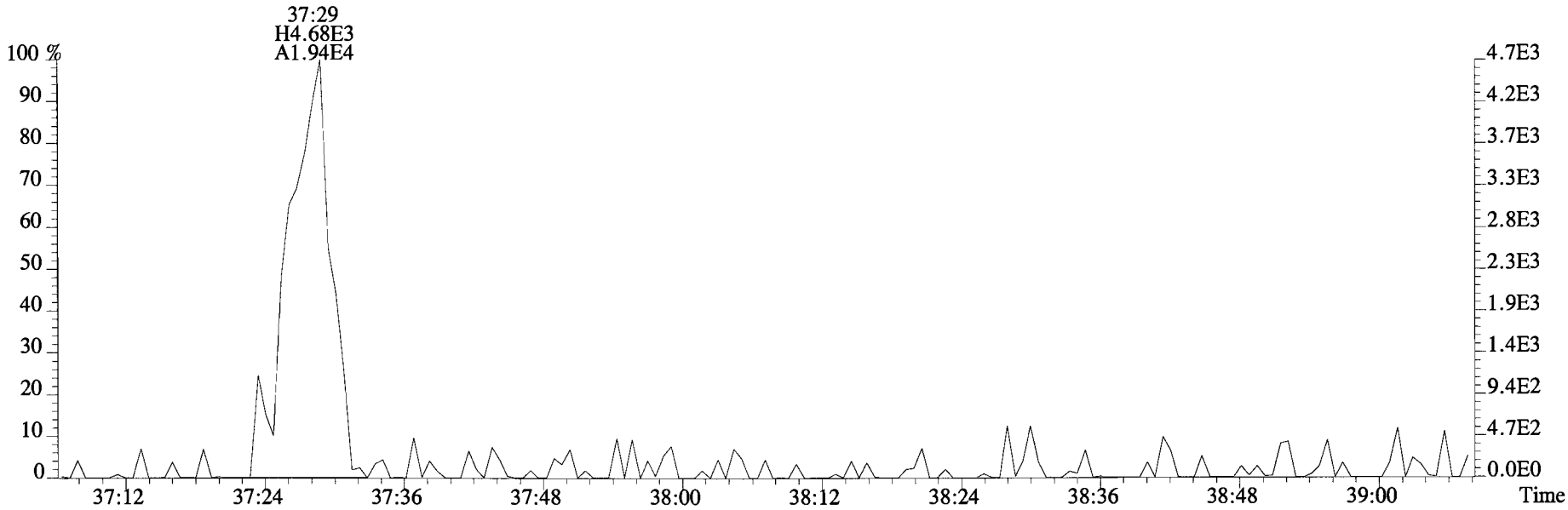
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



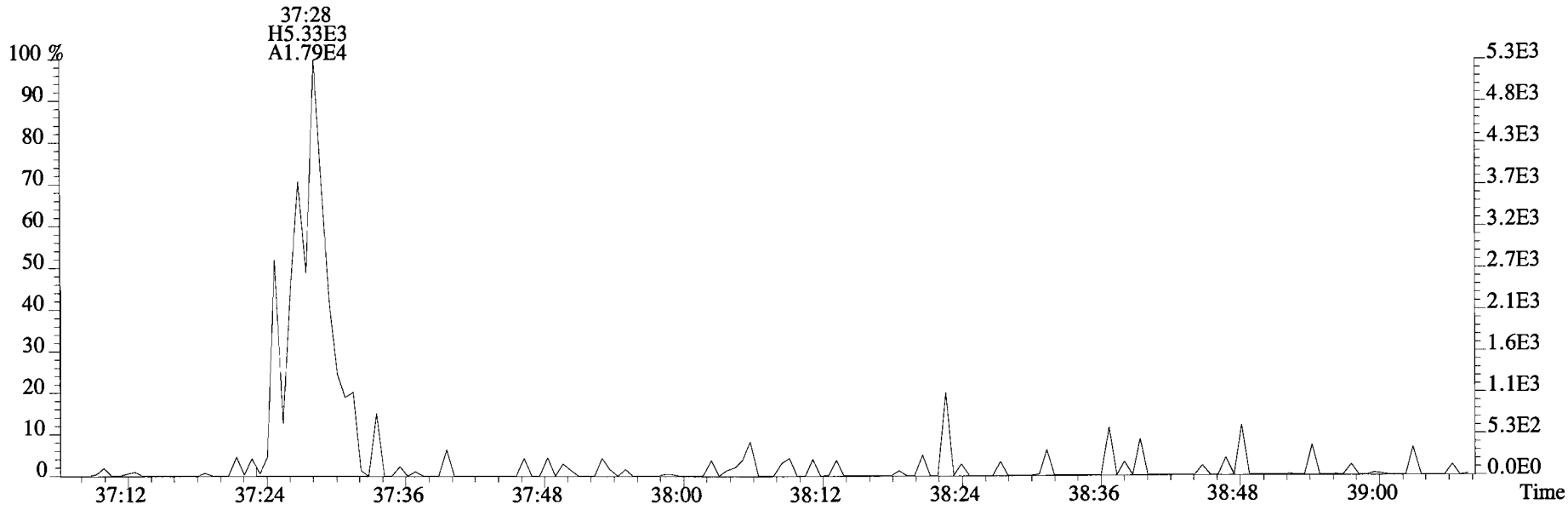
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141212D1 #1-326 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

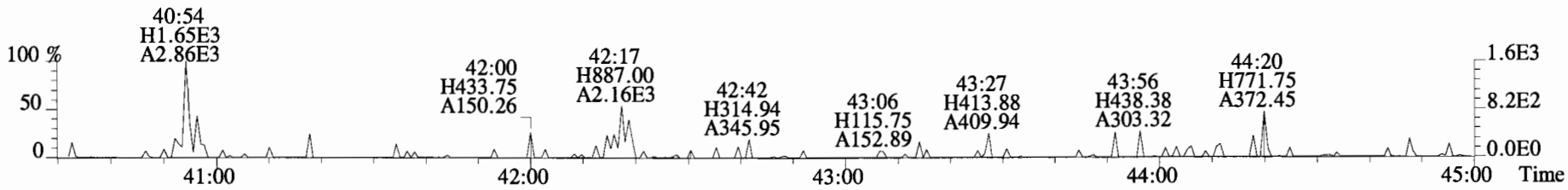


409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

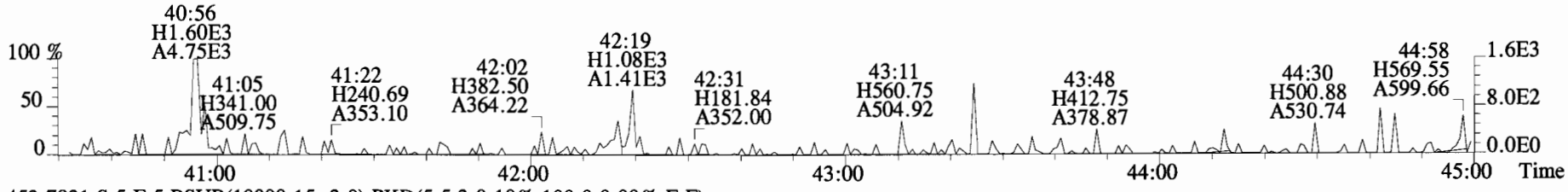


File:141212D1 #1-388 Acq:12-DEC-2014 17:10:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BLK1 Method Blank 10 Exp:OCDD_DB5

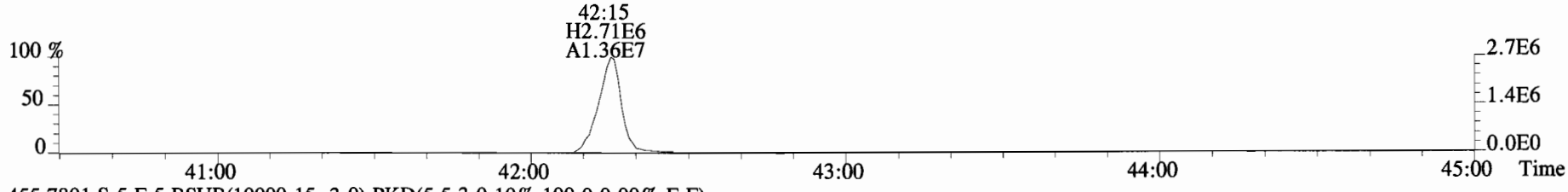
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



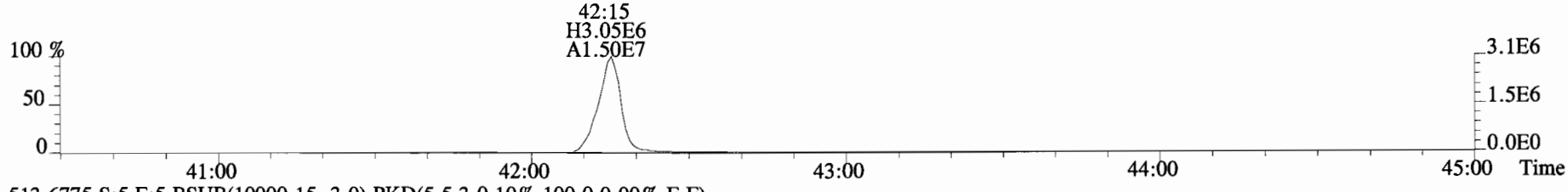
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



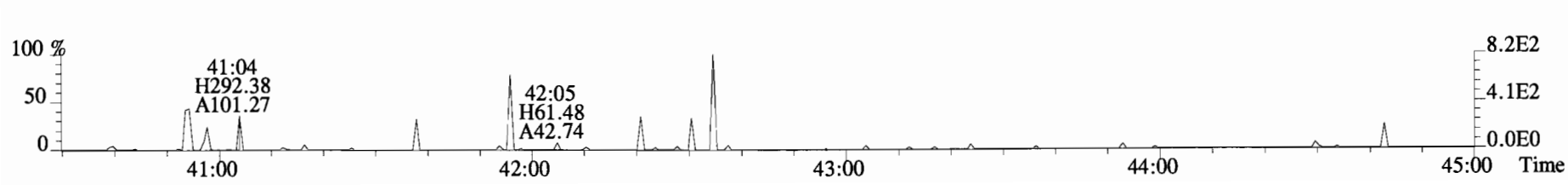
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0068-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 141212D1-3

Ext. Date: 12-11-14 Shift: Day Analysis Date: 12-DEC-14 Time: 15:33:28

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	9.16	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	47.9	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.0	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	51.2	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	50.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	48.0	35.0 - 70.0
OCDD	100	98.4	78.0 - 144.0
2,3,7,8-TCDF	10	8.92	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	48.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	49.2	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.3	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.9	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	48.4	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	48.6	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	48.4	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	48.7	39.0 - 69.0
OCDF	100	97.4	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MN

Date: 12/16/14

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0068-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 141212D1-3

Ext. Date: 12-11-14 Shift: Day Analysis Date: 12-DEC-14 Time: 15:33:28

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	84.5	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	74.4	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	76.7	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	81.6	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	79.1	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	85.1	26.0 - 166.0
13C-OCDD	200	116	26.0 - 397.0
13C-2,3,7,8-TCDF	100	82.8	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	72.6	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	74.1	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	85.1	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	82.5	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	79.4	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	85.4	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	83.5	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	80.0	20.0 - 186.0
13C-OCDF	200	126	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	36.0	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MN

Date: 12/16/14

Client ID: OPR Filename: 141212D1 S:3 Acq:12-DEC-14 15:33:28 ConCal: ST141212D1-1

Lab ID: B4L0068-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.35e+06	0.75 y	1.18	26:57	1.001	9.1592		*	2.5	*
	1,2,3,7,8-PeCDD	9.68e+06	0.61 y	0.92	31:34	1.001	47.887		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.37e+06	1.28 y	1.09	34:53	1.001	49.982		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.07e+06	1.28 y	1.07	34:59	1.000	51.165		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.75e+06	1.27 y	0.93	35:17	1.000	50.180		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	8.12e+06	1.06 y	1.12	38:47	1.000	47.986		*	2.5	*
	OCDD	1.18e+07	0.88 y	0.95	42:02	1.000	98.392		*	2.5	*
	2,3,7,8-TCDF	3.12e+06	0.78 y	1.08	26:09	1.001	8.9208		*	2.5	*
	1,2,3,7,8-PeCDF	1.53e+07	1.60 y	1.09	30:22	1.000	48.021		*	2.5	*
	2,3,4,7,8-PeCDF	1.57e+07	1.63 y	1.04	31:17	1.000	49.241		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.57e+07	1.29 y	1.39	33:60	1.001	48.282		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.55e+07	1.32 y	1.26	34:07	1.000	48.933		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.43e+07	1.28 y	1.30	34:43	1.000	48.419		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.17e+07	1.30 y	1.19	35:40	1.000	48.555		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.29e+07	1.10 y	1.62	37:29	1.001	48.428		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.17e+07	1.12 y	1.53	39:20	1.001	48.699		*	2.5	*
	OCDF	1.64e+07	0.91 y	1.10	42:16	1.000	97.351		*	2.5	*
IS	13C-2,3,7,8-TCDD	2.16e+07	0.78 y	1.07	26:56	1.022	84.519				
IS	13C-1,2,3,7,8-PeCDD	2.20e+07	0.64 y	1.24	31:33	1.198	74.416				
IS	13C-1,2,3,4,7,8-HxCDD	1.54e+07	1.26 y	0.72	34:52	1.014	76.734				
IS	13C-1,2,3,6,7,8-HxCDD	1.66e+07	1.23 y	0.74	34:58	1.017	81.583				
IS	13C-1,2,3,7,8,9-HxCDD	1.87e+07	1.22 y	0.86	35:16	1.026	79.105				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.52e+07	1.08 y	0.64	38:46	1.127	85.092				
IS	13C-OCDD	2.52e+07	0.88 y	0.78	42:01	1.222	116.11				
IS	13C-2,3,7,8-TCDF	3.25e+07	0.77 y	0.92	26:08	0.992	82.845				
IS	13C-1,2,3,7,8-PeCDF	2.93e+07	1.57 y	0.95	30:21	1.152	72.594				
IS	13C-2,3,4,7,8-PeCDF	3.05e+07	1.55 y	0.97	31:16	1.187	74.079				
IS	13C-1,2,3,4,7,8-HxCDF	2.34e+07	0.51 y	0.99	33:58	0.988	85.132				
IS	13C-1,2,3,6,7,8-HxCDF	2.51e+07	0.51 y	1.10	34:06	0.992	82.495				
IS	13C-2,3,4,6,7,8-HxCDF	2.27e+07	0.51 y	1.03	34:42	1.009	79.360				
IS	13C-1,2,3,7,8,9-HxCDF	2.03e+07	0.51 y	0.86	35:39	1.037	85.412				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.65e+07	0.45 y	0.71	37:28	1.089	83.503				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.57e+07	0.44 y	0.71	39:18	1.143	79.994				
IS	13C-OCDF	3.06e+07	0.90 y	0.87	42:15	1.229	126.30				
C/Up	37Cl-2,3,7,8-TCDD	1.04e+07		1.21	26:57	1.023	35.981				
RS/RT	13C-1,2,3,4-TCDD	2.39e+07	0.81 y	1.00	26:21	*	100.00				
RS	13C-1,2,3,4-TCDF	4.24e+07	0.78 y	1.00	24:50	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.77e+07	0.52 y	1.00	34:23	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	9.27	9.59		*	*
Total Penta-Dioxins	48.2	48.5		*	*
Total Hexa-Dioxins	151	152		*	*
Total Hepta-Dioxins	48.8	49.3		*	*
Total Tetra-Furans	8.99	9.25		*	*
Total Penta-Furans	97.825	99.638		*	*
Total Hexa-Furans	194	196		*	*
Total Hepta-Furans	97.2	98.1		*	*

	Name	Rec	Qual
IS	13C-2,3,7,8-TCDD	84.5	
IS	13C-1,2,3,7,8-PeCDD	74.4	
IS	13C-1,2,3,4,7,8-HxCDD	76.7	
IS	13C-1,2,3,6,7,8-HxCDD	81.6	
IS	13C-1,2,3,7,8,9-HxCDD	79.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	85.1	
IS	13C-OCDD	58.1	
IS	13C-2,3,7,8-TCDF	82.8	
IS	13C-1,2,3,7,8-PeCDF	72.6	
IS	13C-2,3,4,7,8-PeCDF	74.1	
IS	13C-1,2,3,4,7,8-HxCDF	85.1	
IS	13C-1,2,3,6,7,8-HxCDF	82.5	
IS	13C-2,3,4,6,7,8-HxCDF	79.4	
IS	13C-1,2,3,7,8,9-HxCDF	85.4	
IS	13C-1,2,3,4,6,7,8-HpCDF	83.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	80.0	
IS	13C-OCDF	63.1	
C/Up	37Cl-2,3,7,8-TCDD	90.0	

Integrations by Analyst: MJ Date: 12/16/14

Reviewed by Analyst: [signature] Date: 12/17/14

Client ID: OPR Filename: 141212D1 S:3 Acq:12-DEC-14 15:33:28 ConCal: ST141212D1-1

Lab ID: B4L0068-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol:10.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.35e+06	0.75 y	1.18	26:57	1.001	18.318		*	2.5	*
	1,2,3,7,8-PeCDD	9.68e+06	0.61 y	0.92	31:34	1.001	95.773		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.37e+06	1.28 y	1.09	34:53	1.001	99.963		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.07e+06	1.28 y	1.07	34:59	1.000	102.33		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.75e+06	1.27 y	0.93	35:17	1.000	100.36		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	8.12e+06	1.06 y	1.12	38:47	1.000	95.972		*	2.5	*
	OCDD	1.18e+07	0.88 y	0.95	42:02	1.000	196.78		*	2.5	*
	2,3,7,8-TCDF	3.12e+06	0.78 y	1.08	26:09	1.001	17.842		*	2.5	*
	1,2,3,7,8-PeCDF	1.53e+07	1.60 y	1.09	30:22	1.000	96.043		*	2.5	*
	2,3,4,7,8-PeCDF	1.57e+07	1.63 y	1.04	31:17	1.000	98.481		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.57e+07	1.29 y	1.39	33:60	1.001	96.564		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.55e+07	1.32 y	1.26	34:07	1.000	97.865		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.43e+07	1.28 y	1.30	34:43	1.000	96.839		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.17e+07	1.30 y	1.19	35:40	1.000	97.109		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.29e+07	1.10 y	1.62	37:29	1.001	96.855		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.17e+07	1.12 y	1.53	39:20	1.001	97.397		*	2.5	*
	OCDF	1.64e+07	0.91 y	1.10	42:16	1.000	194.70		*	2.5	*

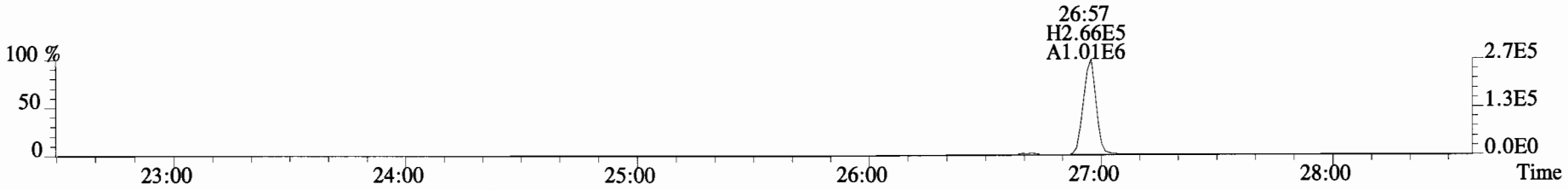
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	18.5	19.2		*	*
Total Penta-Dioxins	96.3	97.0		*	*
Total Hexa-Dioxins	303	305		*	*
Total Hepta-Dioxins	97.6	98.6		*	*
Total Tetra-Furans	18.0	18.5		*	*
Total Penta-Furans	195.65	199.28		*	*
Total Hexa-Furans	389	391		*	*
Total Hepta-Furans	194	196		*	*

								Rec	Qual
IS	13C-2,3,7,8-TCDD	2.16e+07	0.78 y	1.07	26:56	1.022	169.04	84.5	
IS	13C-1,2,3,7,8-PeCDD	2.20e+07	0.64 y	1.24	31:33	1.198	148.83	74.4	
IS	13C-1,2,3,4,7,8-HxCDD	1.54e+07	1.26 y	0.72	34:52	1.014	153.47	76.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.66e+07	1.23 y	0.74	34:58	1.017	163.17	81.6	
IS	13C-1,2,3,7,8,9-HxCDD	1.87e+07	1.22 y	0.86	35:16	1.026	158.21	79.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.52e+07	1.08 y	0.64	38:46	1.127	170.18	85.1	
IS	13C-OCDD	2.52e+07	0.88 y	0.78	42:01	1.222	232.22	58.1	
IS	13C-2,3,7,8-TCDF	3.25e+07	0.77 y	0.92	26:08	0.992	165.69	82.8	
IS	13C-1,2,3,7,8-PeCDF	2.93e+07	1.57 y	0.95	30:21	1.152	145.19	72.6	
IS	13C-2,3,4,7,8-PeCDF	3.05e+07	1.55 y	0.97	31:16	1.187	148.16	74.1	
IS	13C-1,2,3,4,7,8-HxCDF	2.34e+07	0.51 y	0.99	33:58	0.988	170.26	85.1	
IS	13C-1,2,3,6,7,8-HxCDF	2.51e+07	0.51 y	1.10	34:06	0.992	164.99	82.5	
IS	13C-2,3,4,6,7,8-HxCDF	2.27e+07	0.51 y	1.03	34:42	1.009	158.72	79.4	
IS	13C-1,2,3,7,8,9-HxCDF	2.03e+07	0.51 y	0.86	35:39	1.037	170.82	85.4	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.65e+07	0.45 y	0.71	37:28	1.089	167.01	83.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.57e+07	0.44 y	0.71	39:18	1.143	159.99	80.0	
IS	13C-OCDF	3.06e+07	0.90 y	0.87	42:15	1.229	252.59	63.1	
C/Up	37Cl-2,3,7,8-TCDD	1.04e+07		1.21	26:57	1.023	71.963	90.0	
RS/RT	13C-1,2,3,4-TCDD	2.39e+07	0.81 y	1.00	26:21	*	200.00		
RS	13C-1,2,3,4-TCDF	4.24e+07	0.78 y	1.00	24:50	*	200.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.77e+07	0.52 y	1.00	34:23	*	200.00		

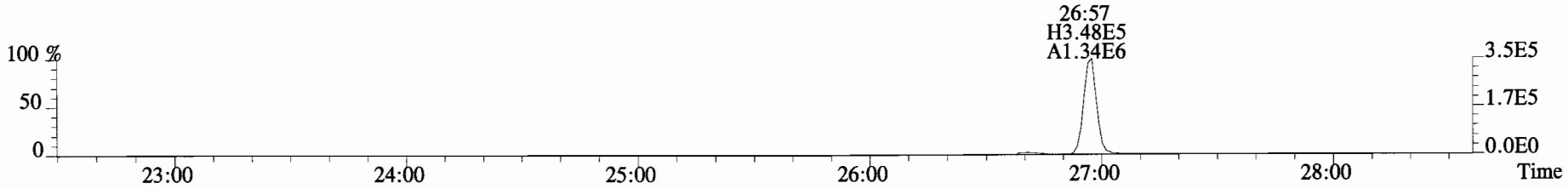
Integrations by Analyst: MJ Date: 12/16/14

Reviewed by Analyst: Date: 12/17/14

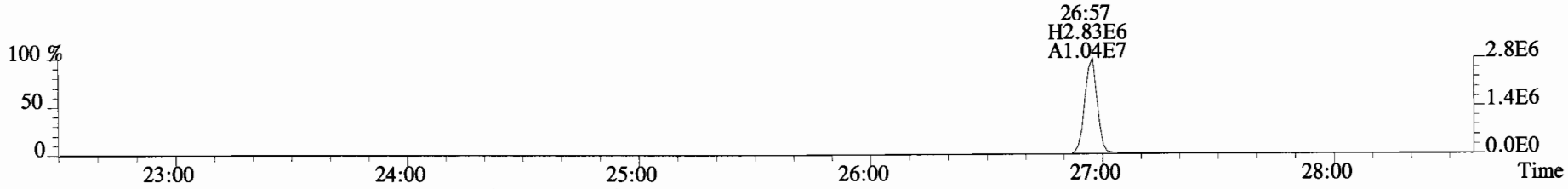
File:141212D1 #1-551 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



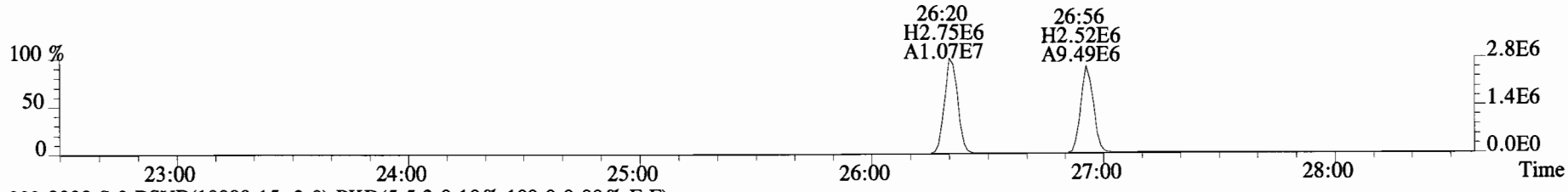
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



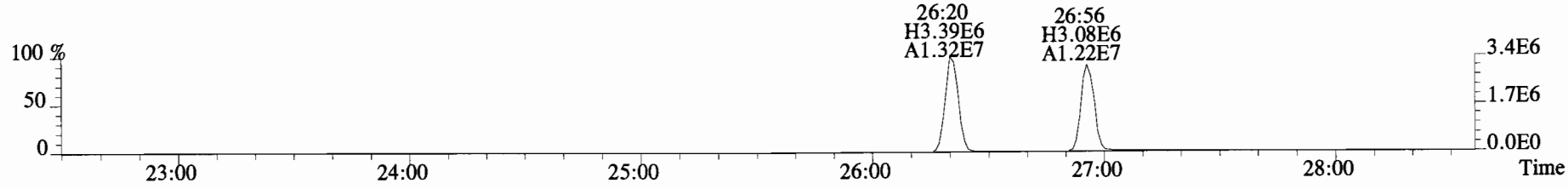
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

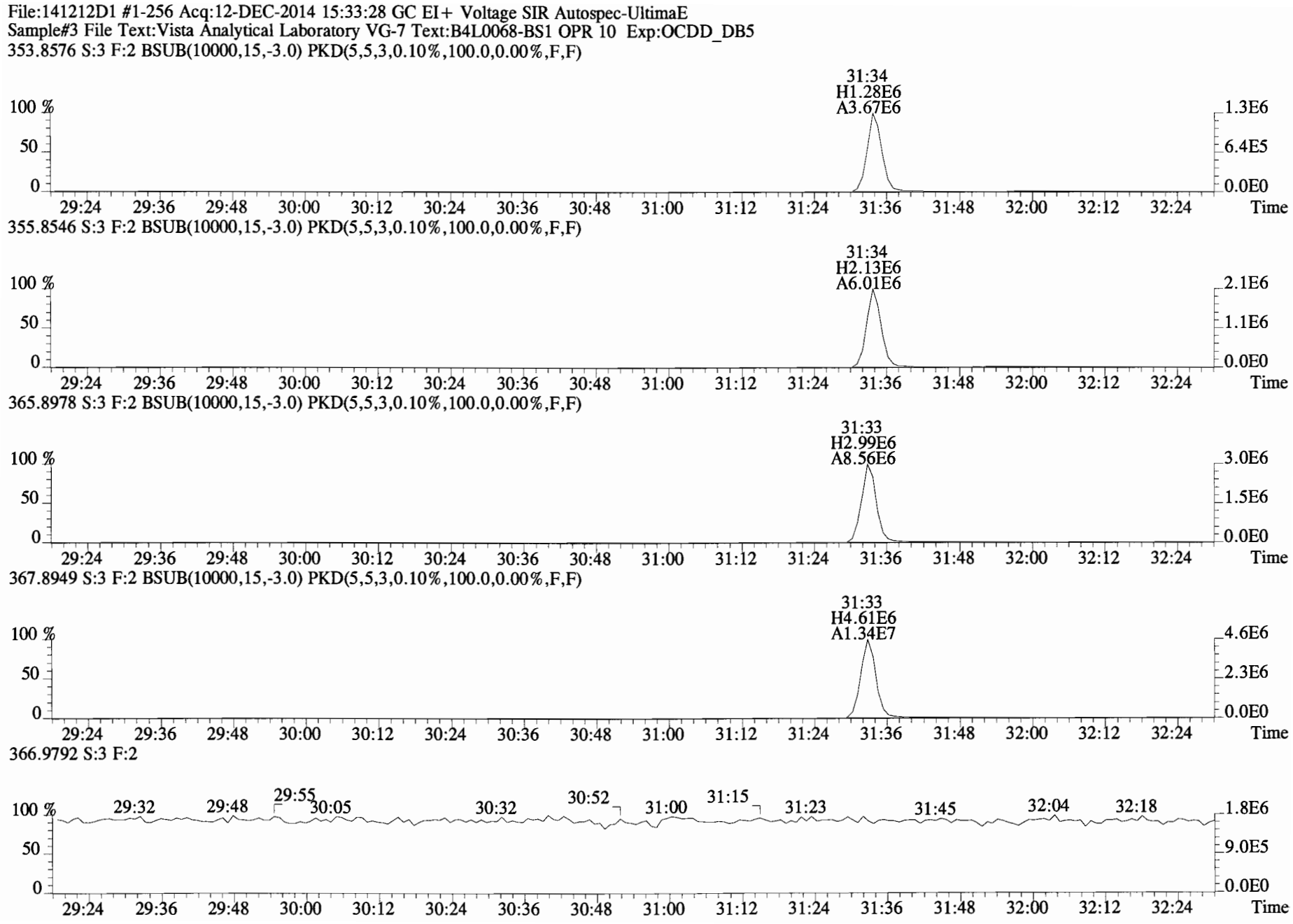


331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

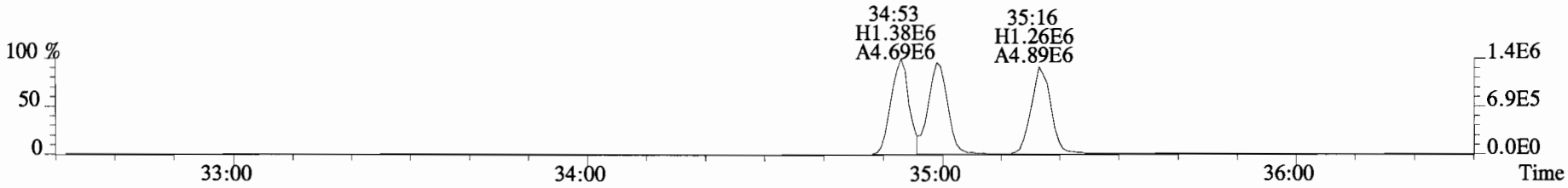


333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

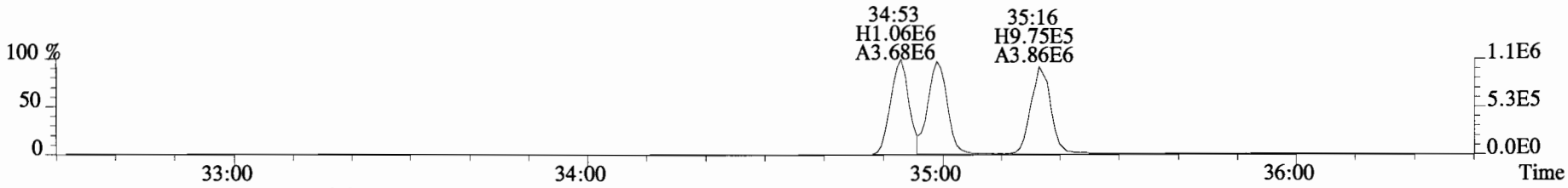



File:141212D1 #1-256 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:34
H1.28E6
A3.67E6
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:34
H2.13E6
A6.01E6
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:33
H2.99E6
A8.56E6
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:33
H4.61E6
A1.34E7
366.9792 S:3 F:2
29:32
29:48
29:55
30:05
30:32
30:52
31:00
31:15
31:23
31:45
32:04
32:18
100 %
50
0
29:24
29:36
29:48
30:00
30:12
30:24
30:36
30:48
31:00
31:12
31:24
31:36
31:48
32:00
32:12
32:24
Time
1.3E6
6.4E5
0.0E0
2.1E6
1.1E6
3.0E6
1.5E6
4.6E6
2.3E6
1.8E6
9.0E5

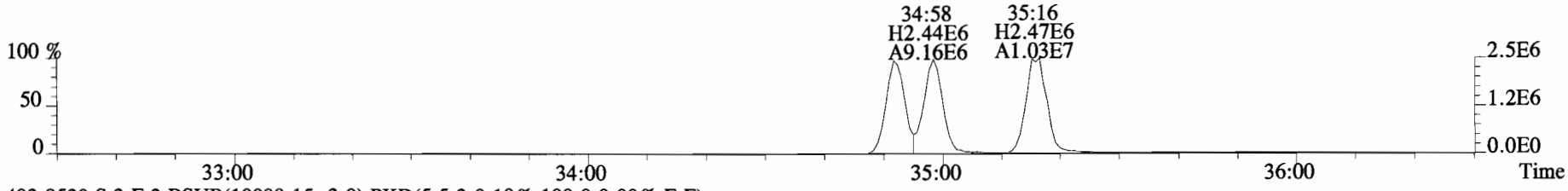
File:141212D1 #1-386 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



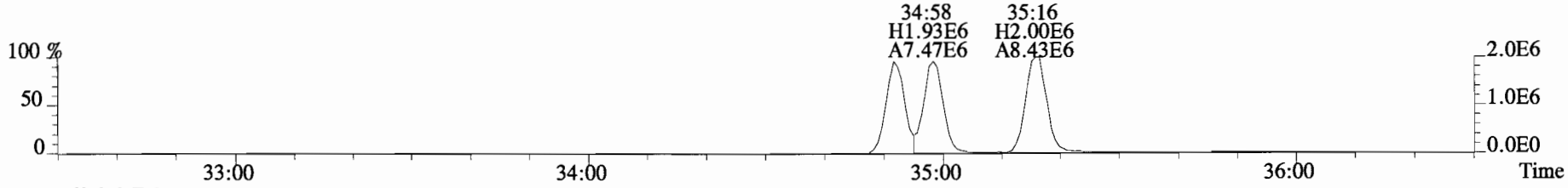
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



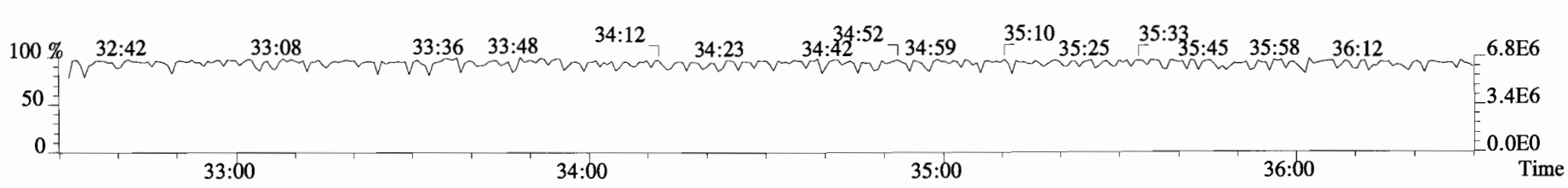
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



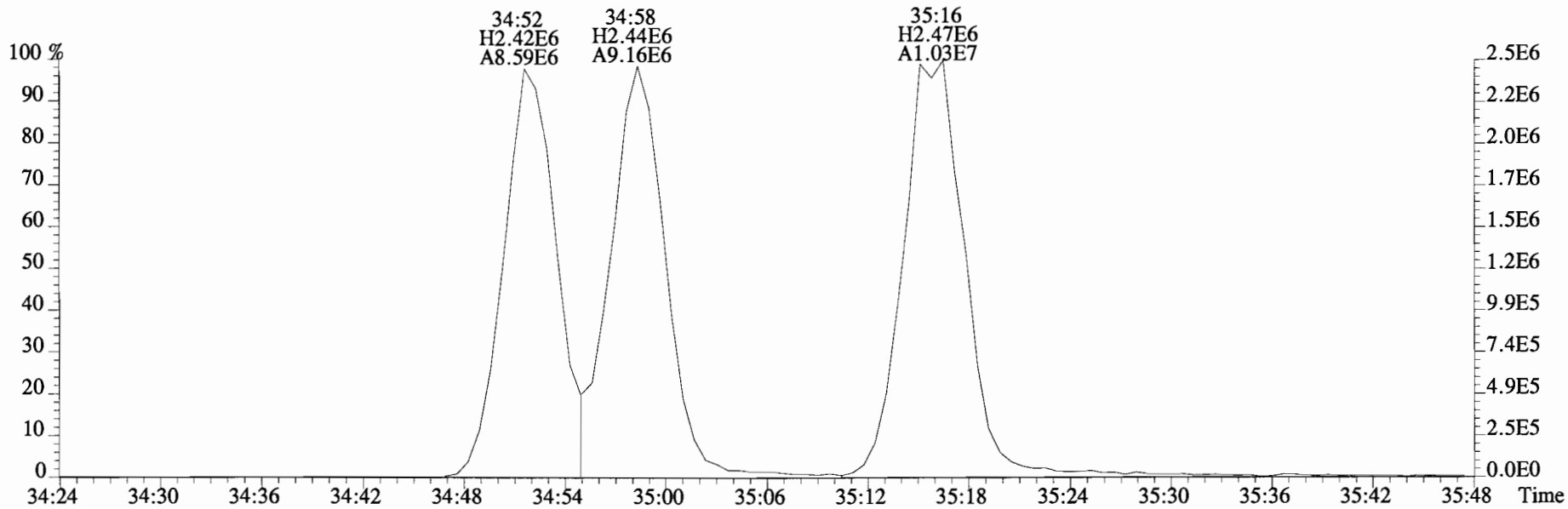
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



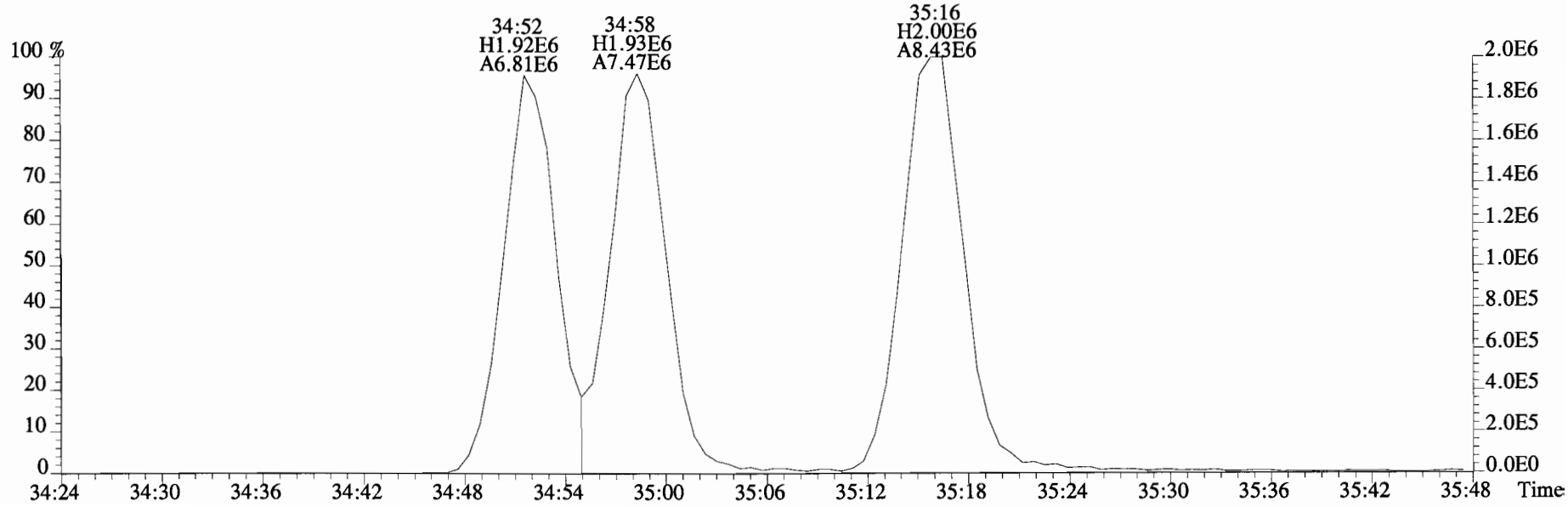
380.9760 S:3 F:3



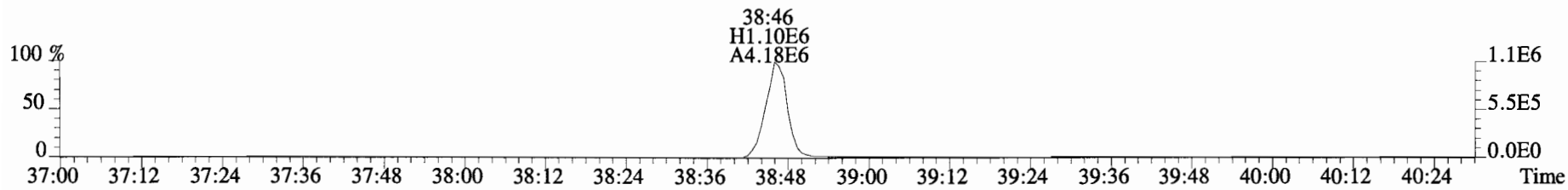
File:141212D1 #1-386 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



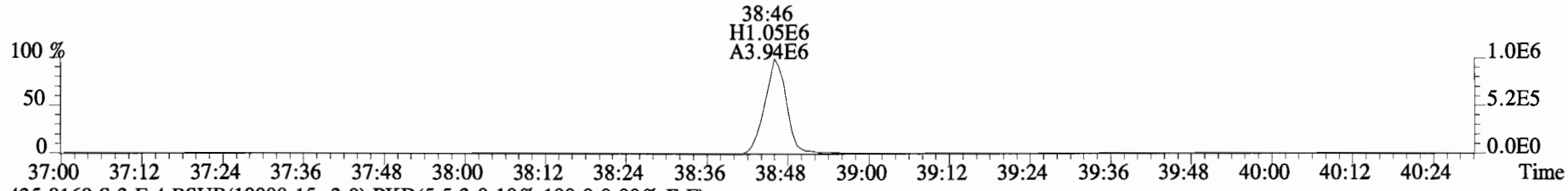
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



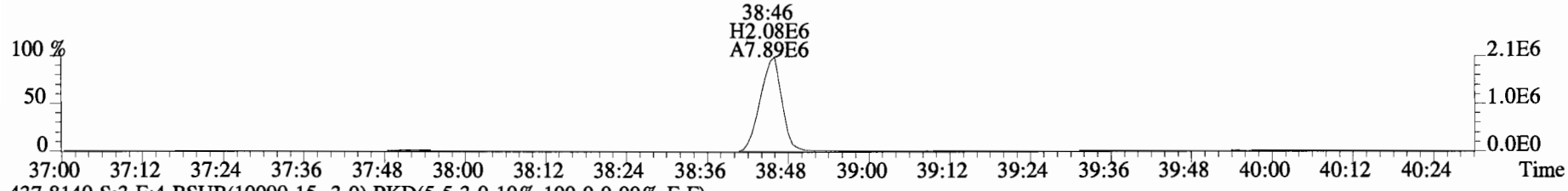
File:141212D1 #1-325 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



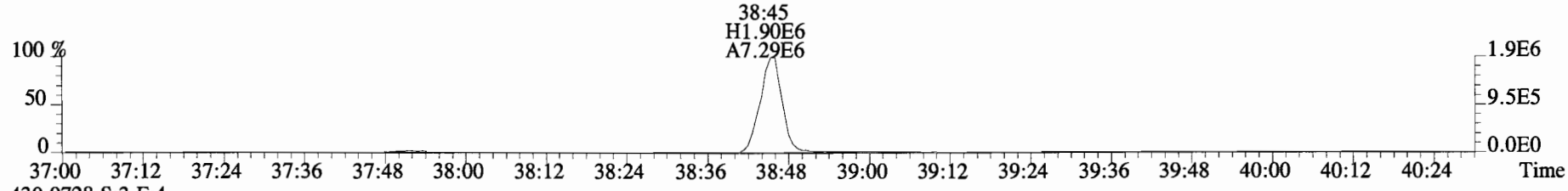
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



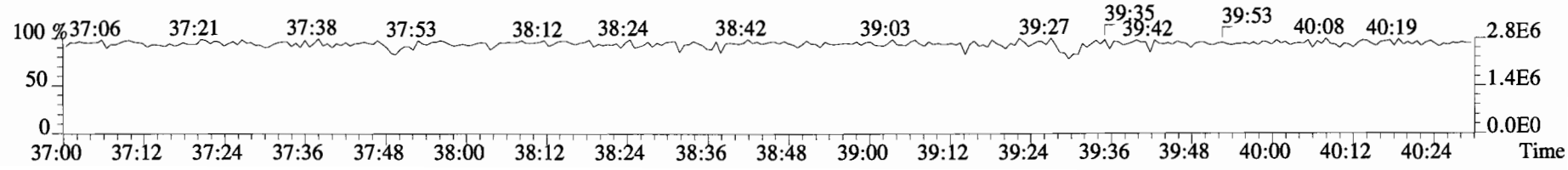
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



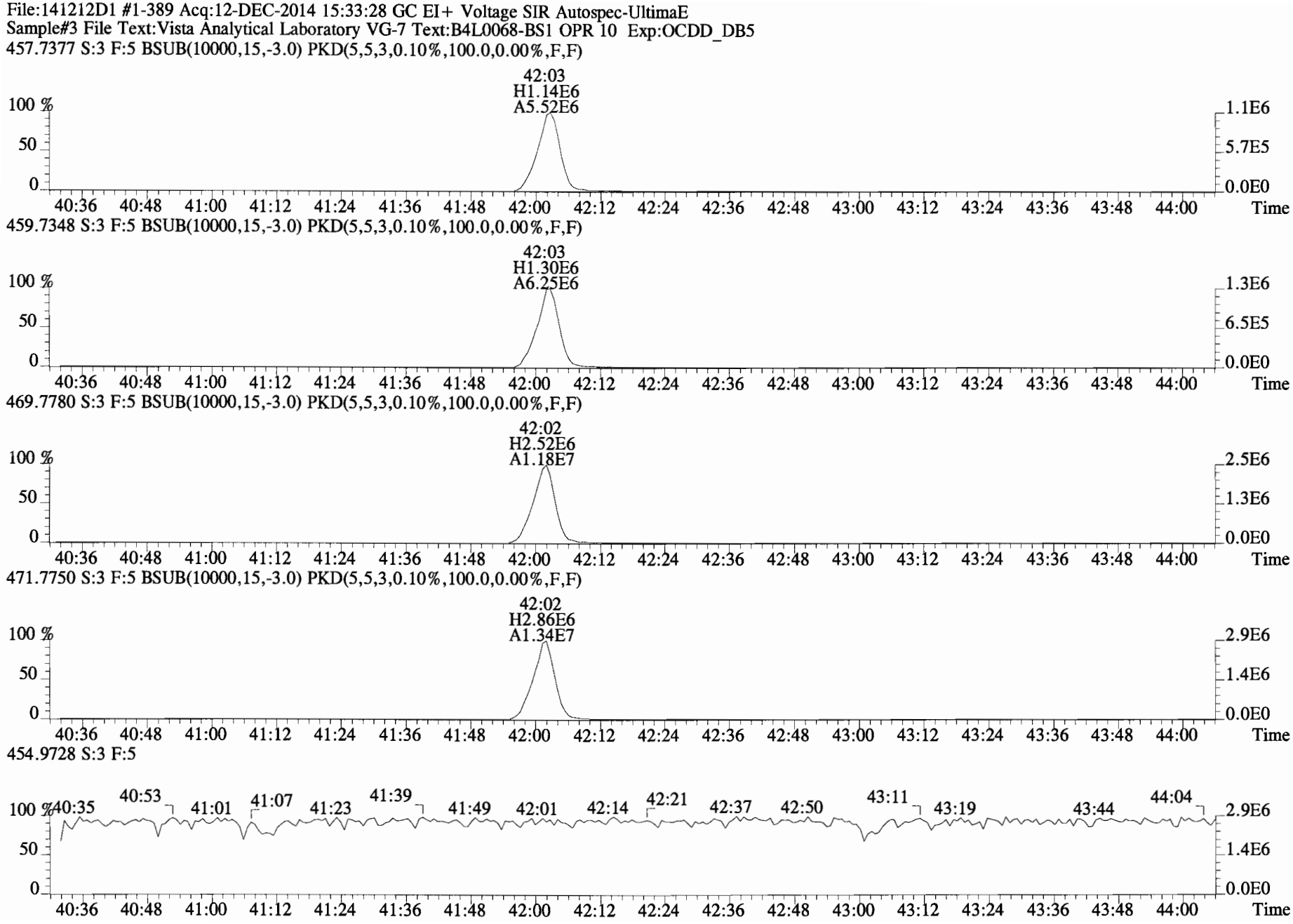
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



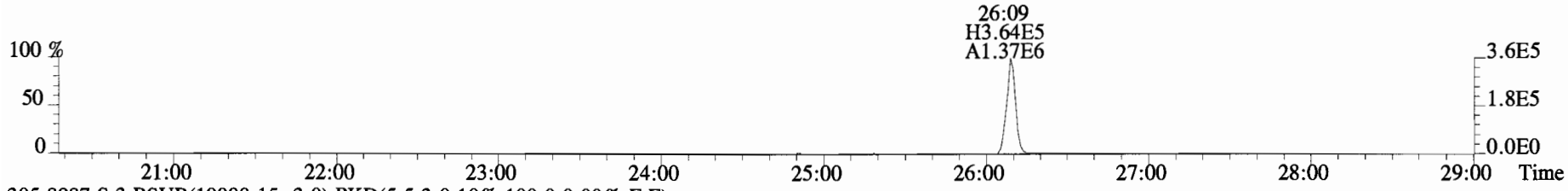
430.9728 S:3 F:4



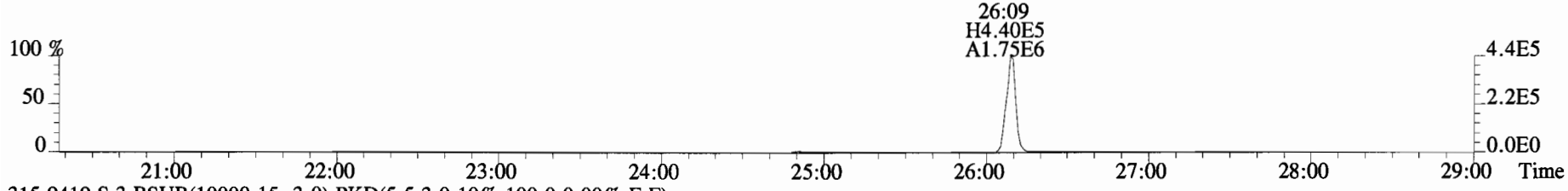
File:141212D1 #1-389 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5



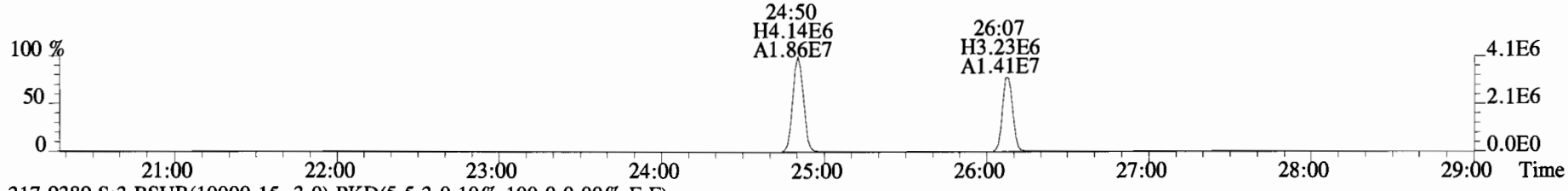
File:141212D1 #1-551 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



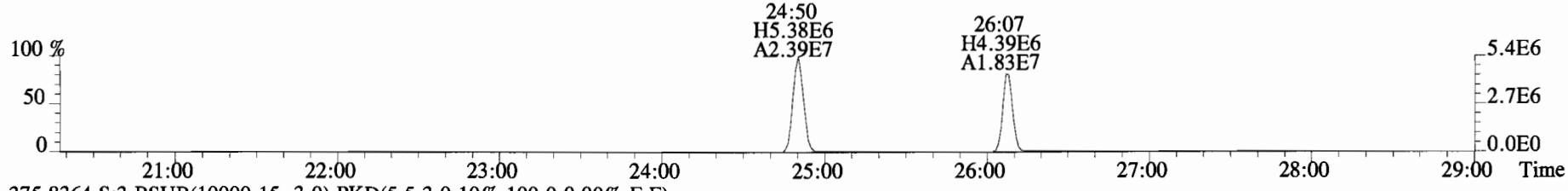
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



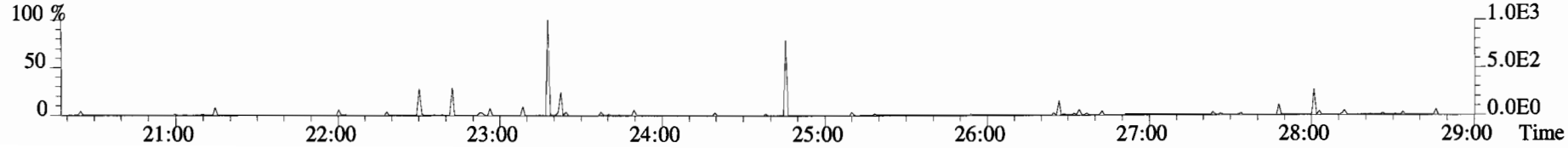
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



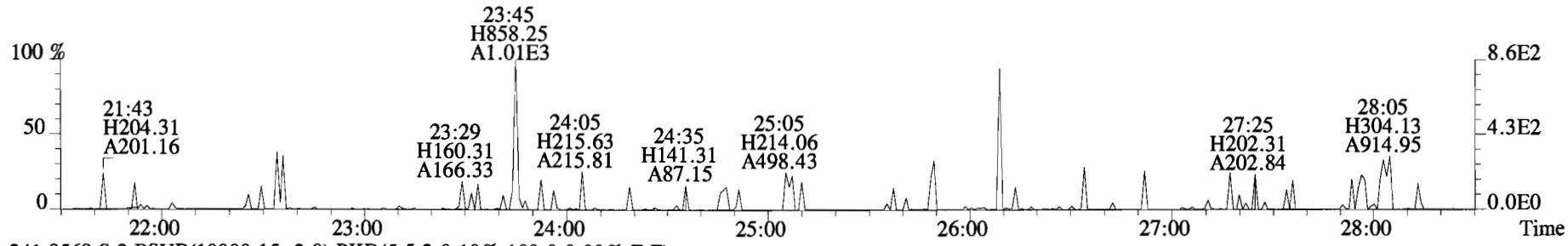
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



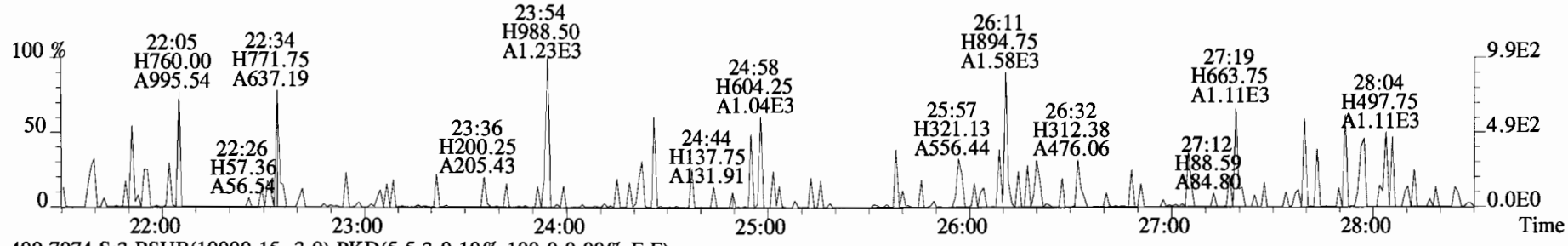
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



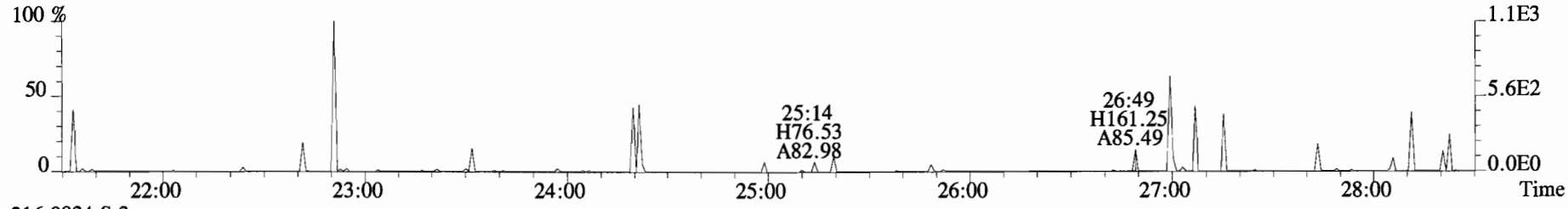
File:141212D1 #1-551 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



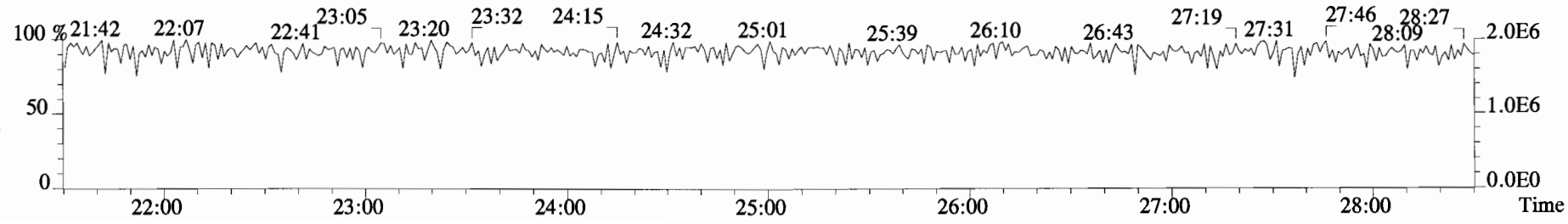
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

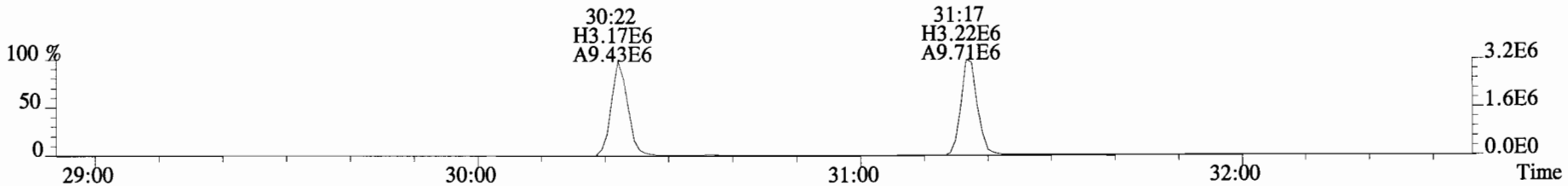


316.9824 S:3

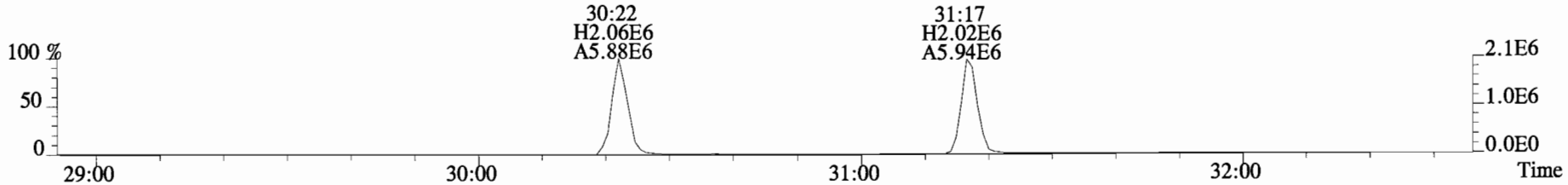


File:141212D1 #1-256 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5

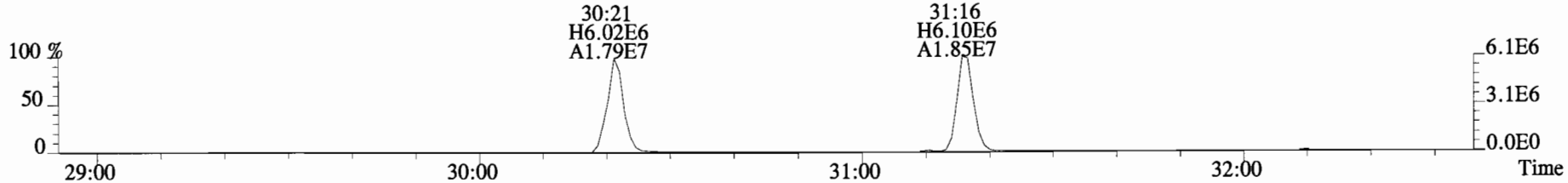
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



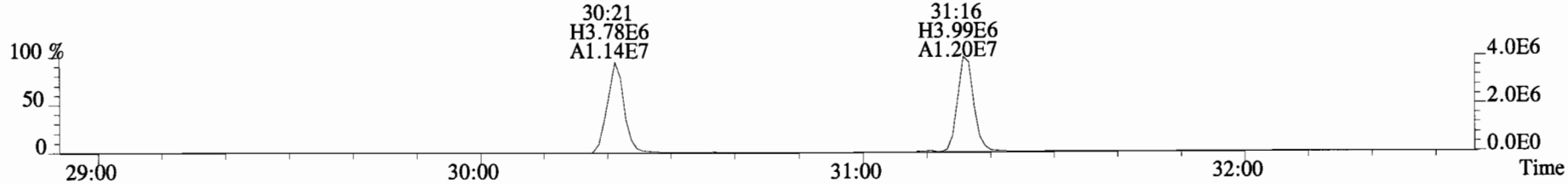
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



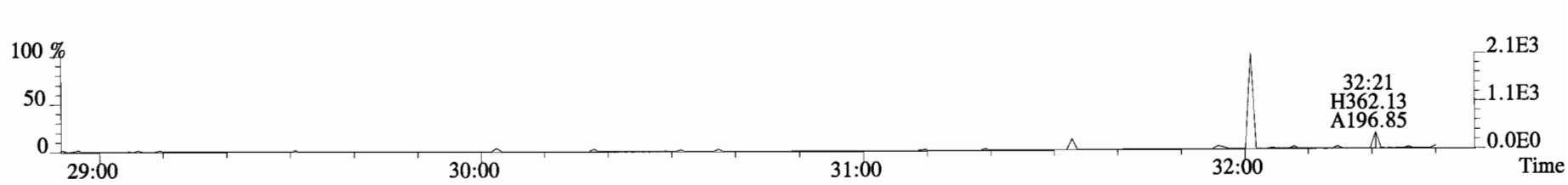
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

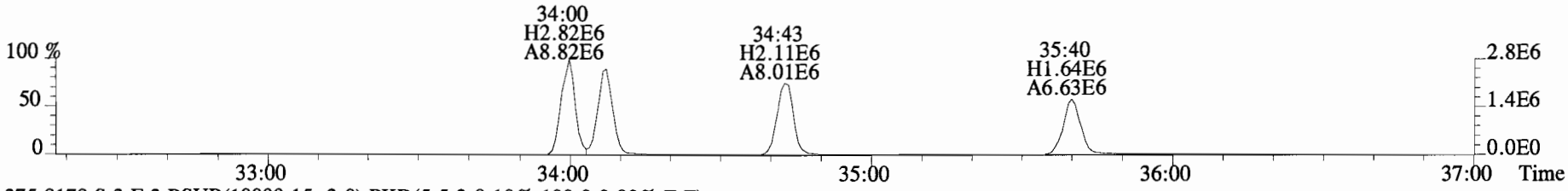


409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

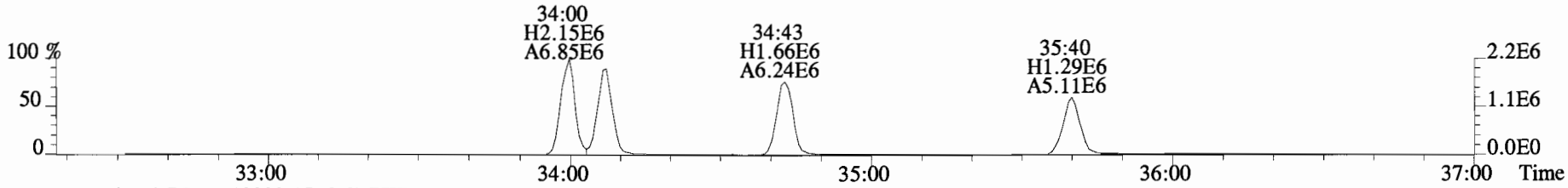


File:141212D1 #1-386 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5

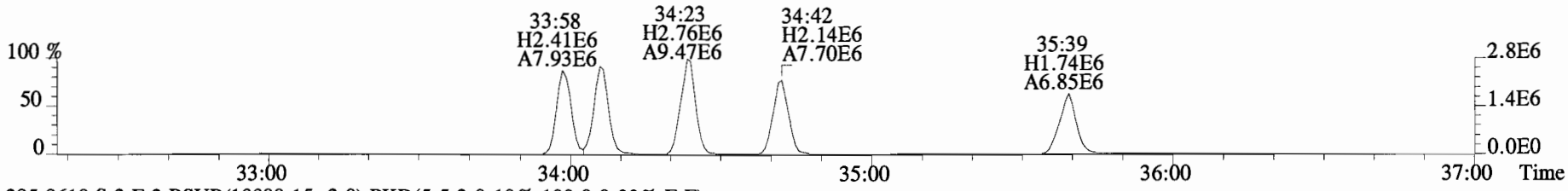
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



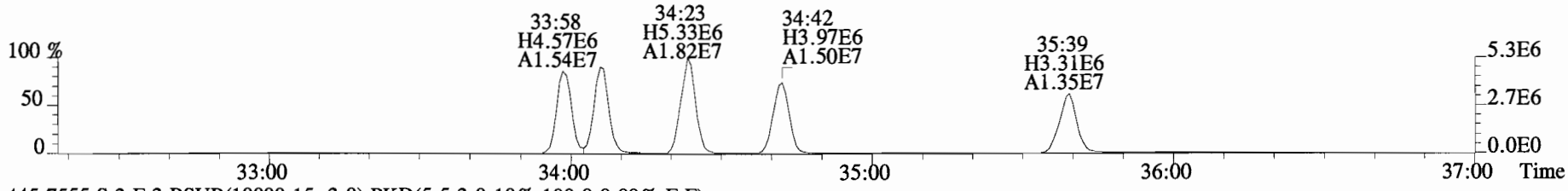
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



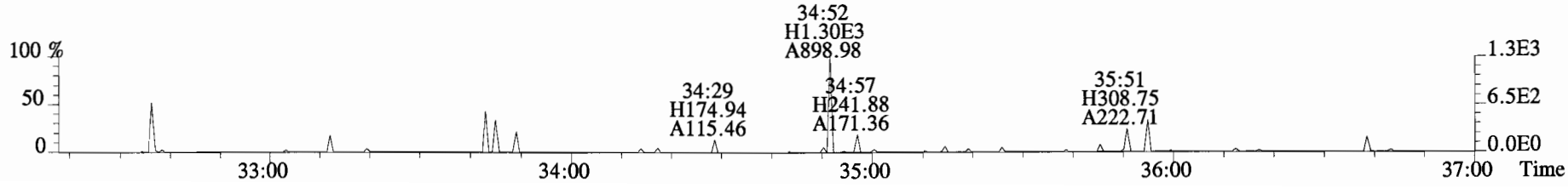
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



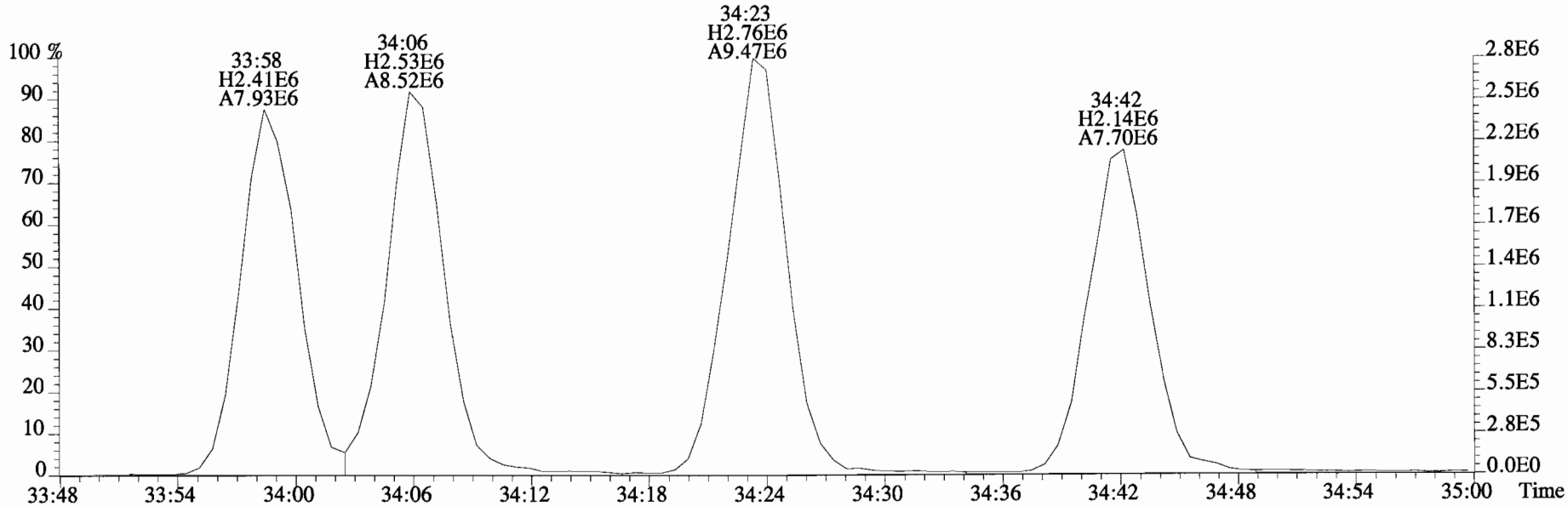
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



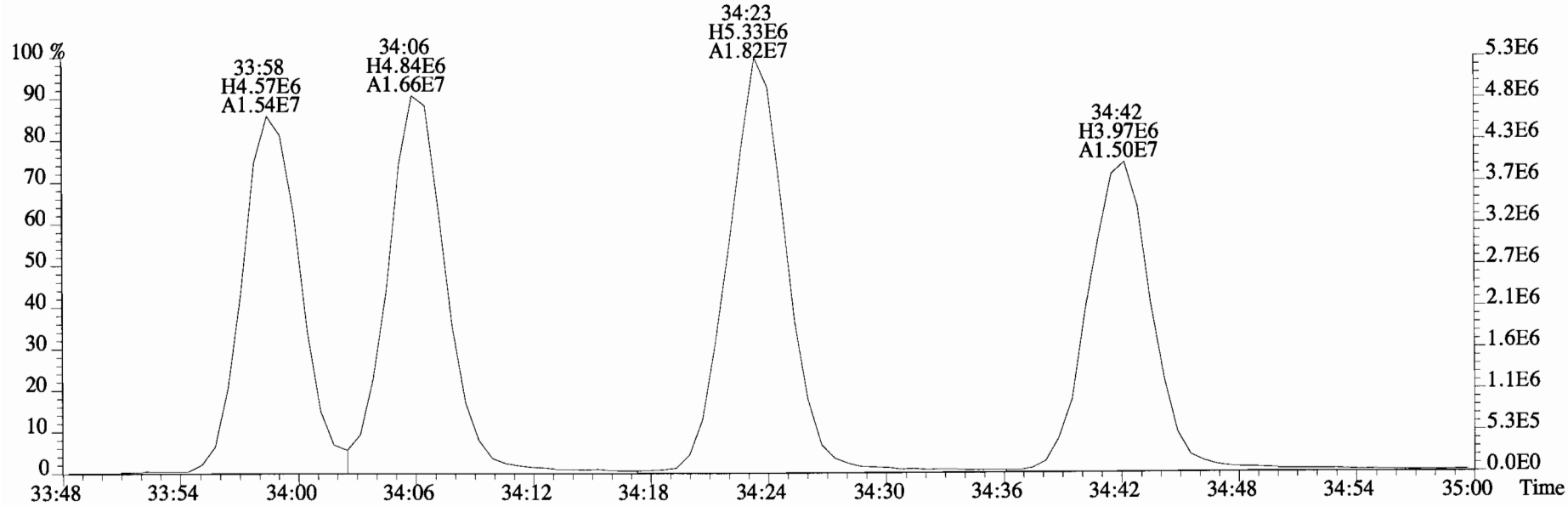
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141212D1 #1-386 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

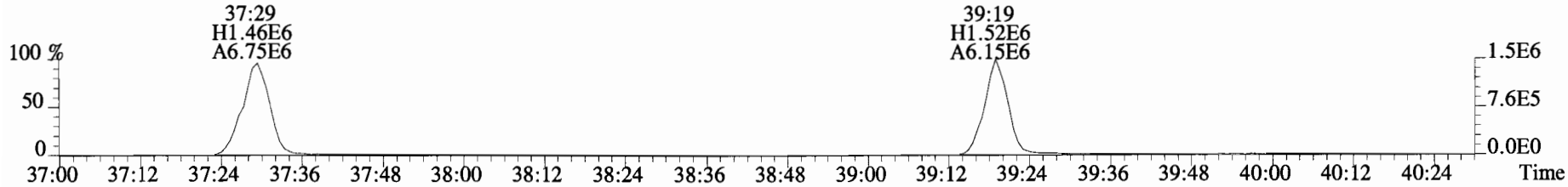


385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

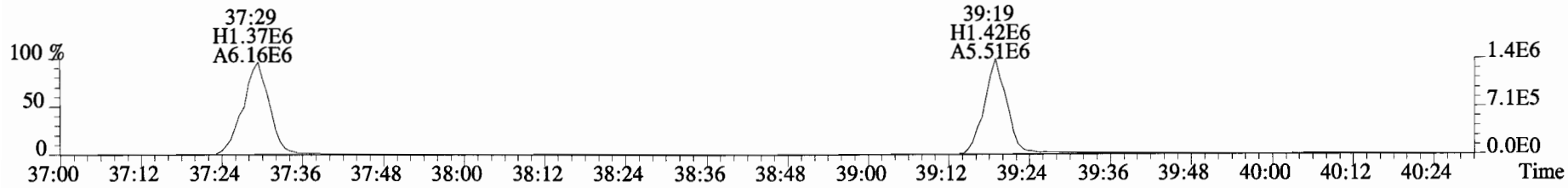


File:141212D1 #1-325 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5

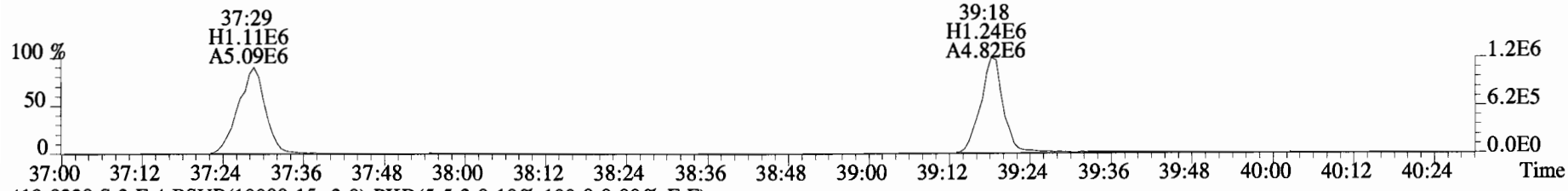
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



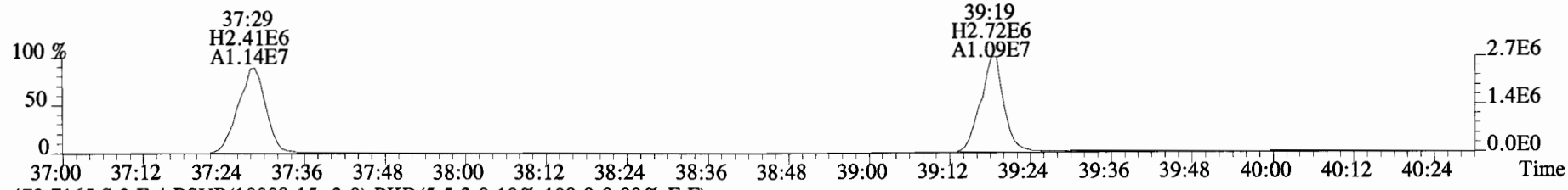
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



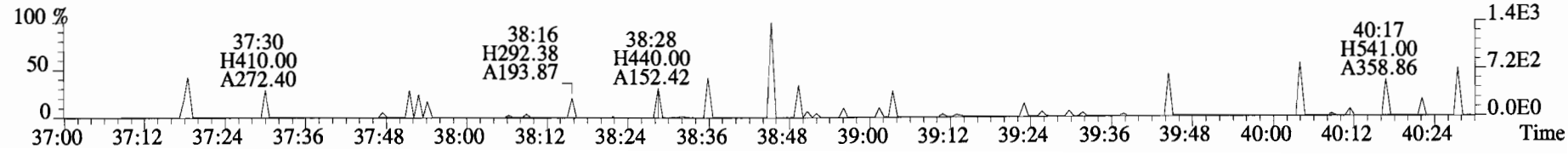
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



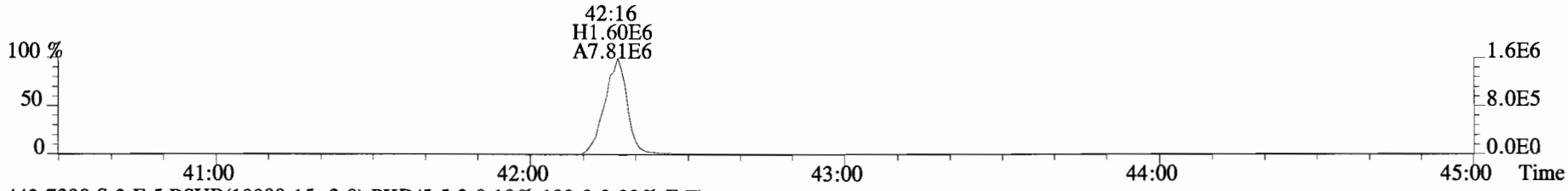
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



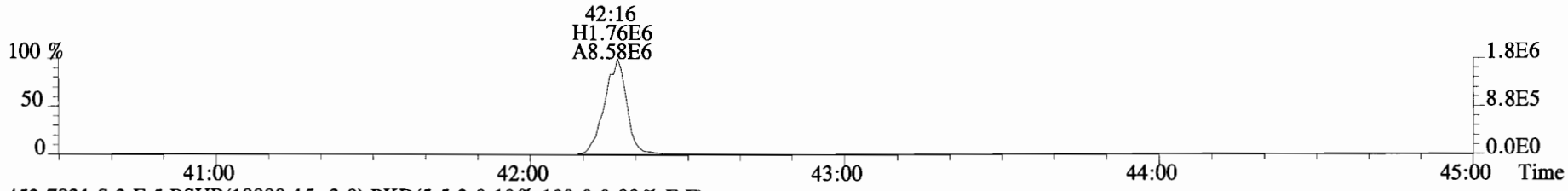
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



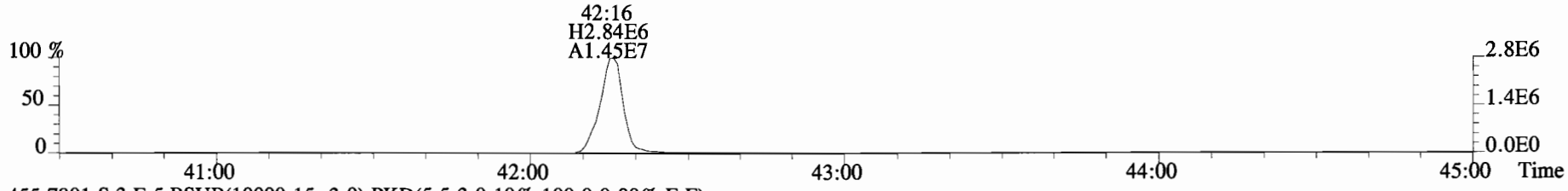
File:141212D1 #1-389 Acq:12-DEC-2014 15:33:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:B4L0068-BS1 OPR 10 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



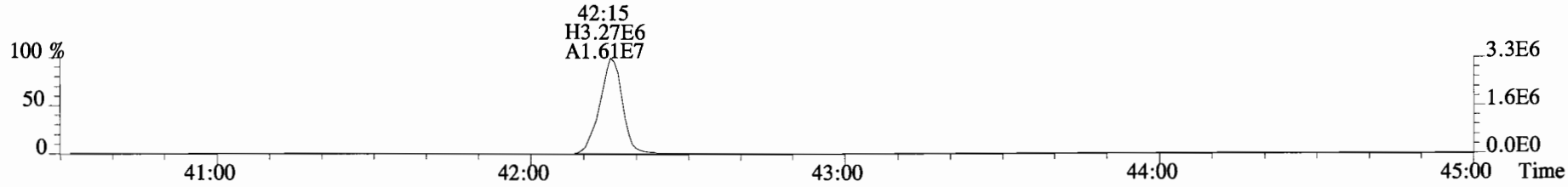
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



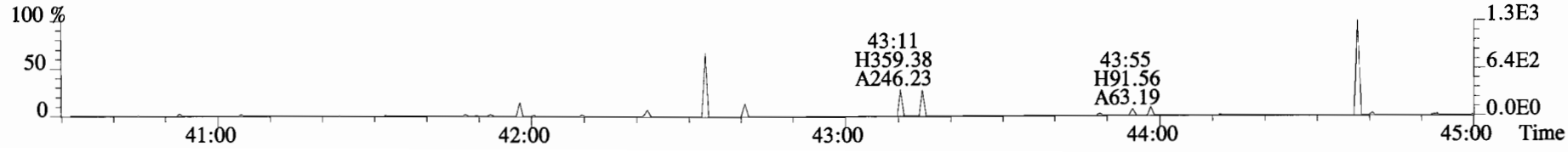
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Method Blank Filename: 141216D1 S:7 Acq:16-DEC-14 19:33:52 ConCal: ST141216D1-2
Lab ID: B4L0086-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 5.000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.18	NotF¶	*	*		560	2.5	0.191
	1,2,3,7,8-PeCDD	*	*	n	0.92	NotF¶	*	*		508	2.5	0.139
	1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotF¶	*	*		303	2.5	0.180
	1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotF¶	*	*		303	2.5	0.175
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF¶	*	*		303	2.5	0.182
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.12	NotF¶	*	*		383	2.5	0.227
	OCDD	*	*	n	0.95	NotF¶	*	*		1630	1.0	0.551
	2,3,7,8-TCDF	*	*	n	1.08	NotF¶	*	*		359	2.5	0.0995
	1,2,3,7,8-PeCDF	*	*	n	1.09	NotF¶	*	*		876	2.5	0.245
	2,3,4,7,8-PeCDF	*	*	n	1.04	NotF¶	*	*		424	2.5	0.125
	1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotF¶	*	*		469	2.5	0.0769
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF¶	*	*		469	2.5	0.100
	2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotF¶	*	*		289	2.5	0.0692
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF¶	*	*		289	2.5	0.0999
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotF¶	*	*		400	2.5	0.141
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF¶	*	*		400	2.5	0.127
	OCDF	*	*	n	1.10	NotF¶	*	*		802	2.5	0.483

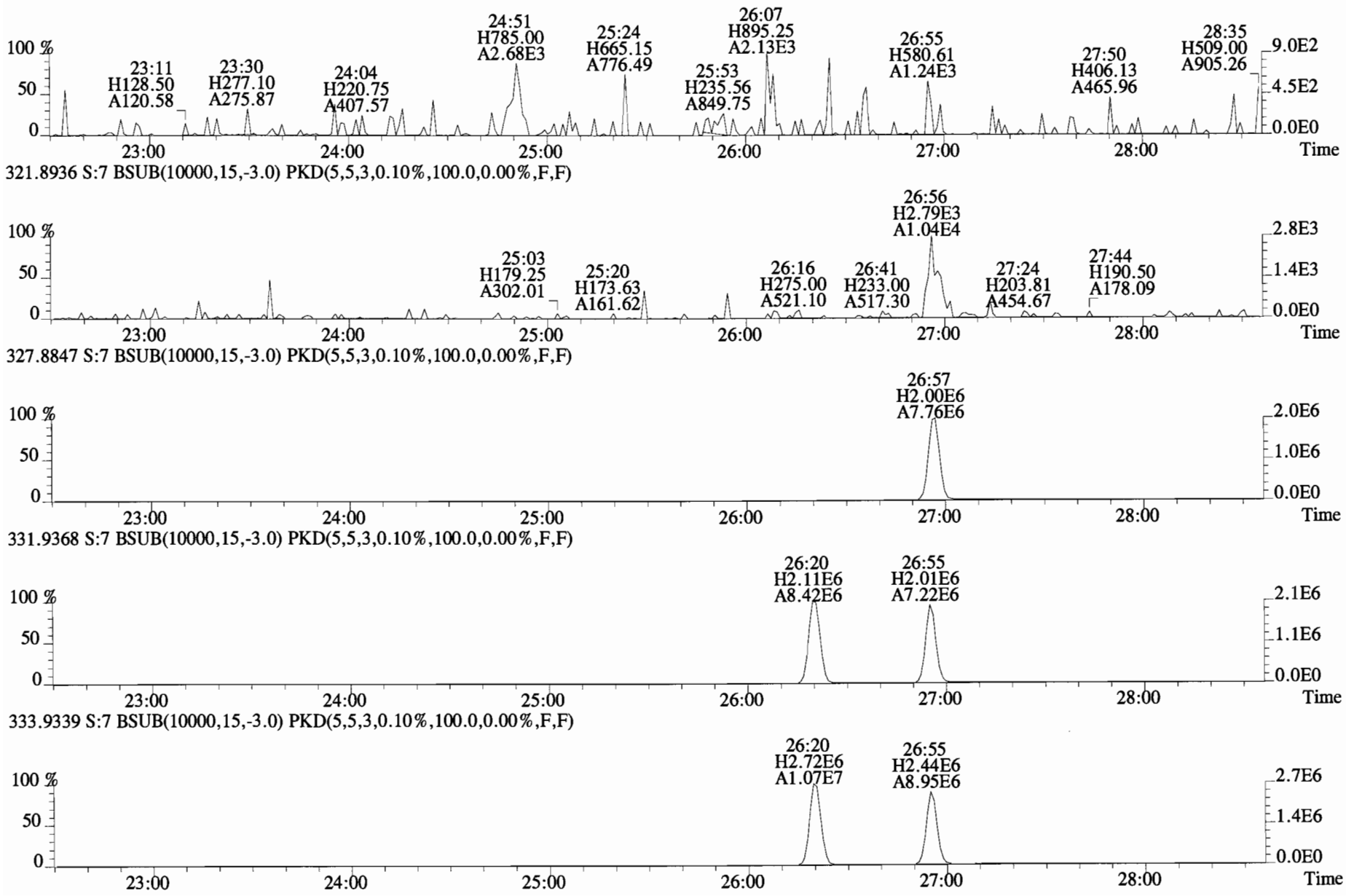
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		560	0.191
Total Penta-Dioxins	*	*		508	0.139
Total Hexa-Dioxins	*	*		653	0.386
Total Hepta-Dioxins	*	*		383	0.227
Total Tetra-Furans	*	*		359	0.0995
Total Penta-Furans	0.0000	0.0000		876	0.252
Total Hexa-Furans	*	*		469	0.109
Total Hepta-Furans	*	*		583	0.196

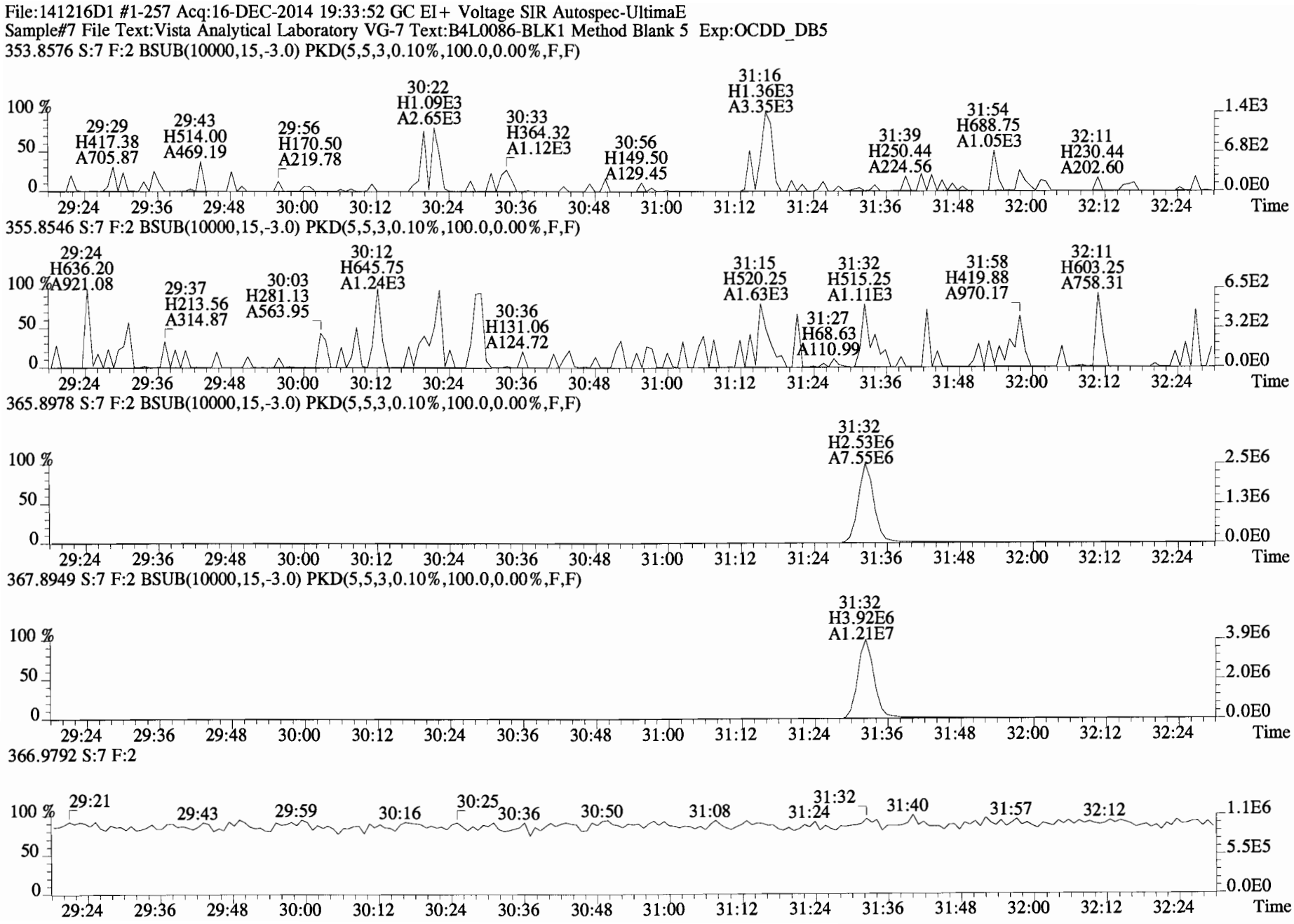
								Rec	Qual
IS	13C-2,3,7,8-TCDD	1.62e+07	0.81 y	1.07	26:55	1.022	315.63	78.9	
IS	13C-1,2,3,7,8-PeCDD	1.96e+07	0.63 y	1.24	31:32	1.198	331.45	82.9	
IS	13C-1,2,3,4,7,8-HxCDD	1.37e+07	1.27 y	0.72	34:51	1.014	323.01	80.8	
IS	13C-1,2,3,6,7,8-HxCDD	1.39e+07	1.27 y	0.74	34:58	1.017	322.89	80.7	
IS	13C-1,2,3,7,8,9-HxCDD	1.62e+07	1.23 y	0.86	35:15	1.025	323.02	80.8	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.28e+07	1.08 y	0.64	38:45	1.127	339.55	84.9	
IS	13C-OCDD	2.29e+07	0.88 y	0.78	42:01	1.222	500.16	62.5	
IS	13C-2,3,7,8-TCDF	2.28e+07	0.78 y	0.92	26:07	0.992	303.52	75.9	
IS	13C-1,2,3,7,8-PeCDF	2.54e+07	1.60 y	0.95	30:21	1.152	328.12	82.0	
IS	13C-2,3,4,7,8-PeCDF	2.49e+07	1.55 y	0.97	31:16	1.187	315.14	78.8	
IS	13C-1,2,3,4,7,8-HxCDF	2.17e+07	0.52 y	0.99	33:58	0.988	374.39	93.6	
IS	13C-1,2,3,6,7,8-HxCDF	2.08e+07	0.52 y	1.10	34:06	0.992	323.91	81.0	
IS	13C-2,3,4,6,7,8-HxCDF	1.90e+07	0.51 y	1.03	34:42	1.009	314.50	78.6	
IS	13C-1,2,3,7,8,9-HxCDF	1.67e+07	0.52 y	0.86	35:39	1.037	333.52	83.4	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.45 y	0.71	37:28	1.089	338.09	84.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.44 y	0.71	39:18	1.143	326.62	81.7	
IS	13C-OCDF	2.81e+07	0.91 y	0.87	42:15	1.229	550.39	68.8	
C/Up	37Cl-2,3,7,8-TCDD	7.76e+06		1.21	26:57	1.023	134.12	83.8	
RS/RT	13C-1,2,3,4-TCDD	1.91e+07	0.79 y	1.00	26:20	*	400.00		
RS	13C-1,2,3,4-TCDF	3.25e+07	0.79 y	1.00	24:50	*	400.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.34e+07	0.51 y	1.00	34:23	*	400.00		

Integrations by Analyst: M Date: 12/17/14

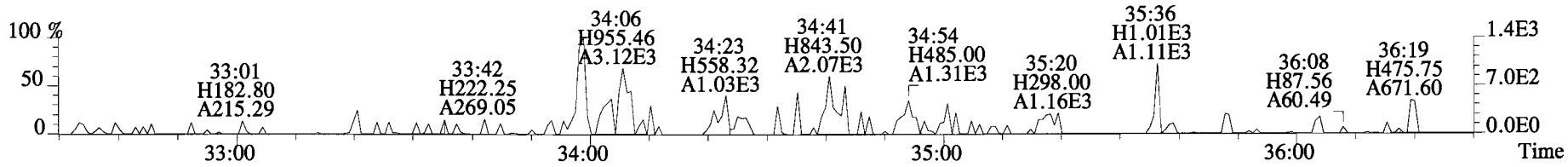
Reviewed by Analyst: [signature] Date: 12/18/14

File:141216D1 #1-551 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5

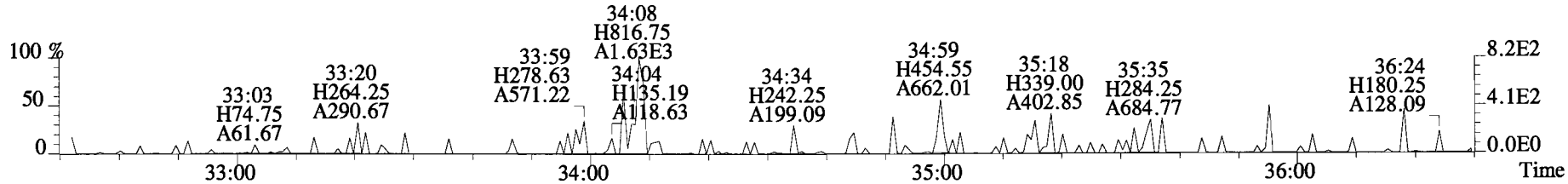



File:141216D1 #1-257 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:29 H417.38 A705.87
29:43 H514.00 A469.19
29:56 H170.50 A219.78
30:22 H1.09E3 A2.65E3
30:33 H364.32 A1.12E3
30:56 H149.50 A129.45
31:16 H1.36E3 A3.35E3
31:39 H250.44 A224.56
31:54 H688.75 A1.05E3
32:11 H230.44 A202.60
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:24 H636.20 A921.08
29:37 H213.56 A314.87
30:03 H281.13 A563.95
30:12 H645.75 A1.24E3
30:36 H131.06 A124.72
31:15 H520.25 A1.63E3
31:27 H68.63 A110.99
31:32 H515.25 A1.11E3
31:58 H419.88 A970.17
32:11 H603.25 A758.31
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:32 H2.53E6 A7.55E6
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:32 H3.92E6 A1.21E7
366.9792 S:7 F:2
29:21
29:43
29:59
30:16
30:25
30:36
30:50
31:08
31:24
31:32
31:40
31:57
32:12
100 %
50
0
1.4E3
6.8E2
0.0E0
6.5E2
3.2E2
2.5E6
1.3E6
3.9E6
2.0E6
1.1E6
5.5E5
29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 32:00 32:12 32:24
Time

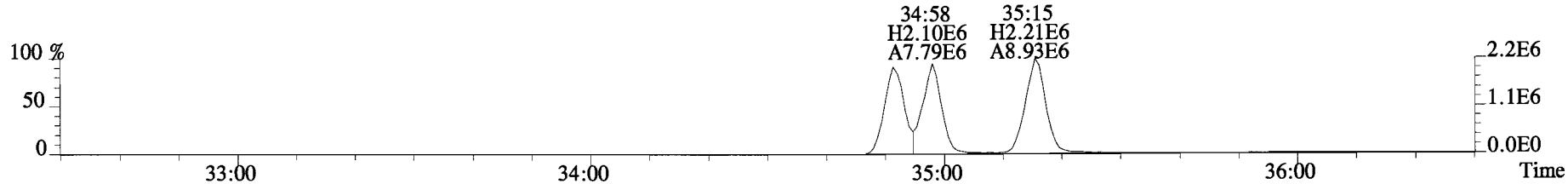
File:141216D1 #1-385 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



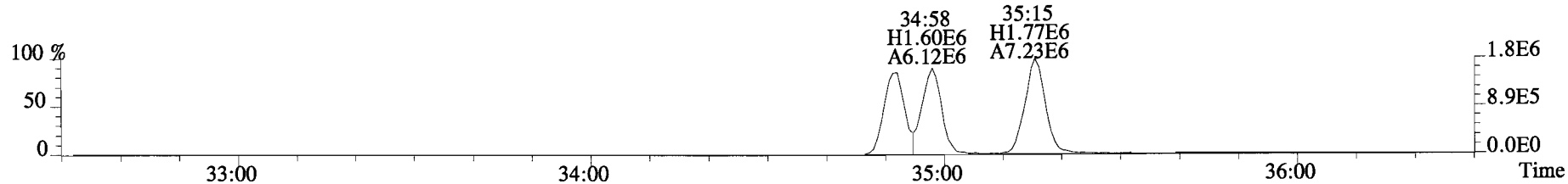
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



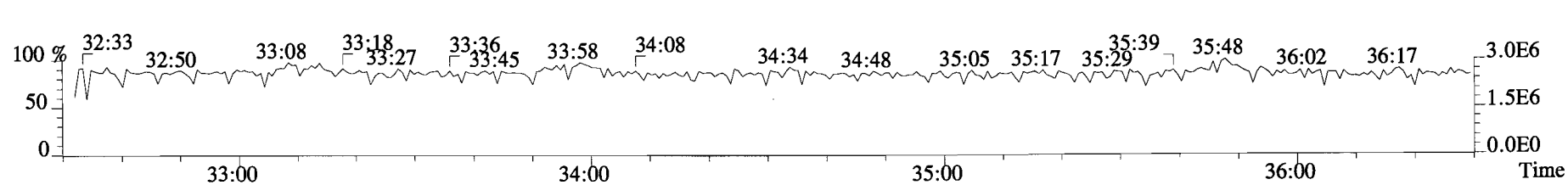
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



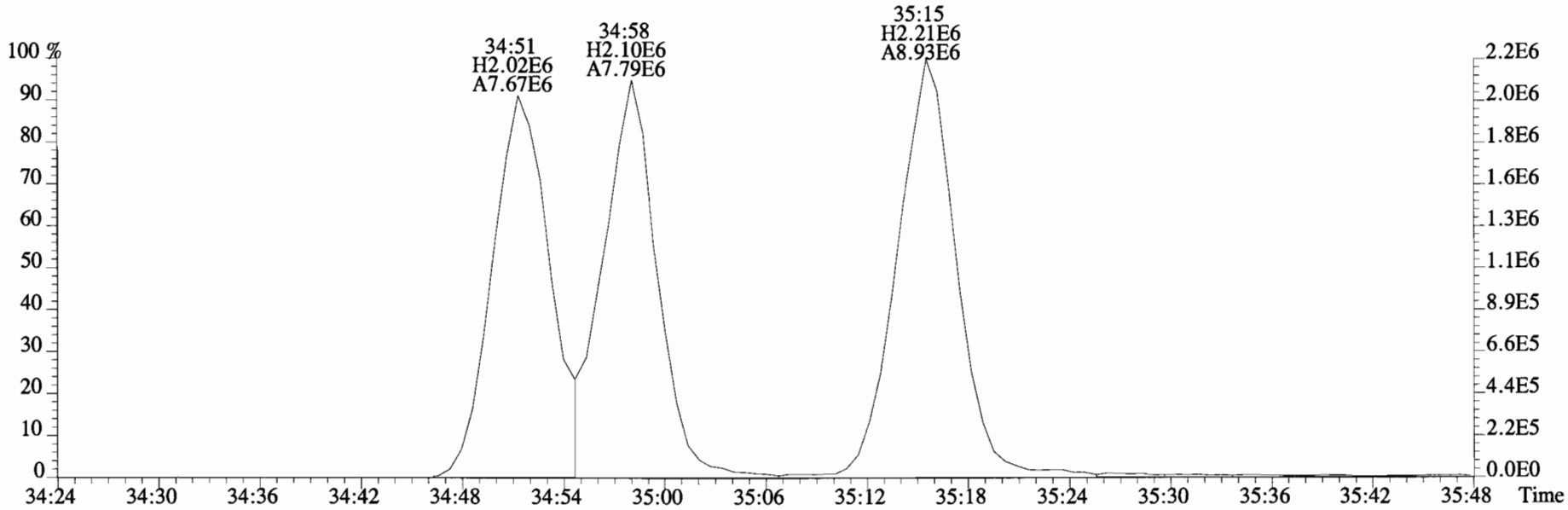
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



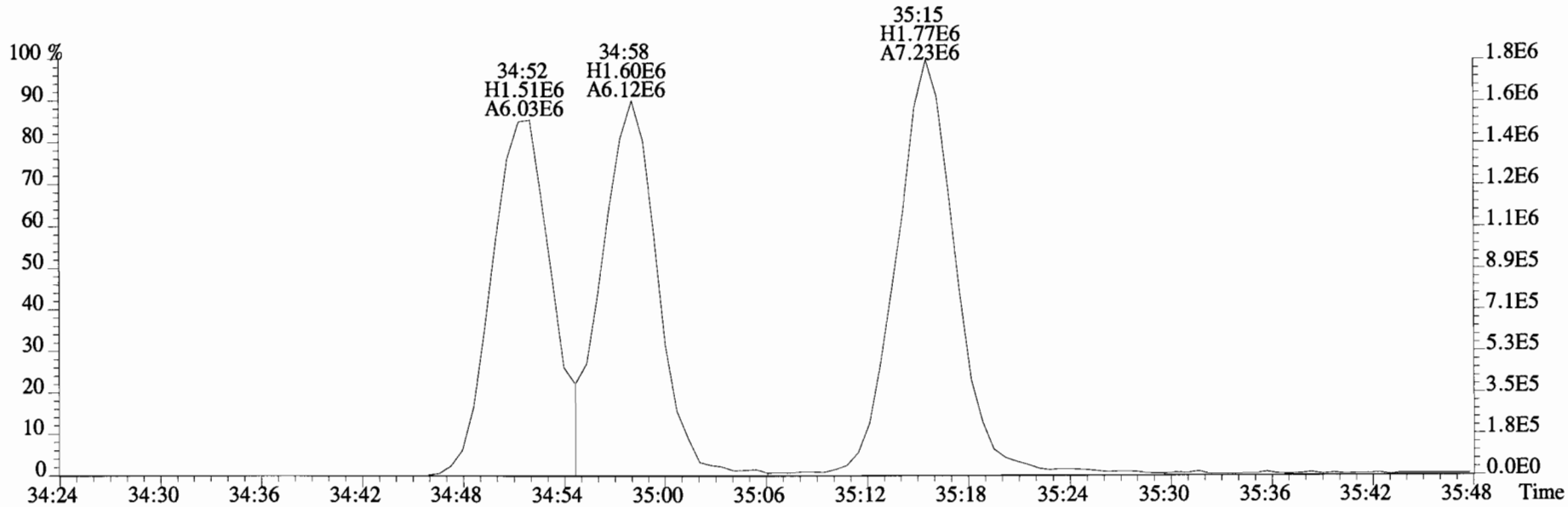
380.9760 S:7 F:3



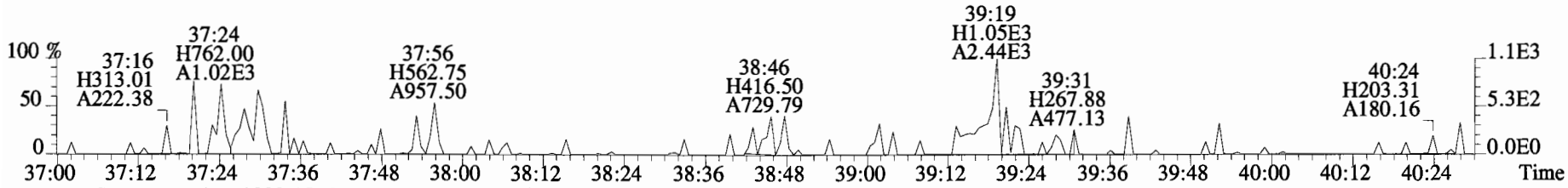
File:141216D1 #1-385 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



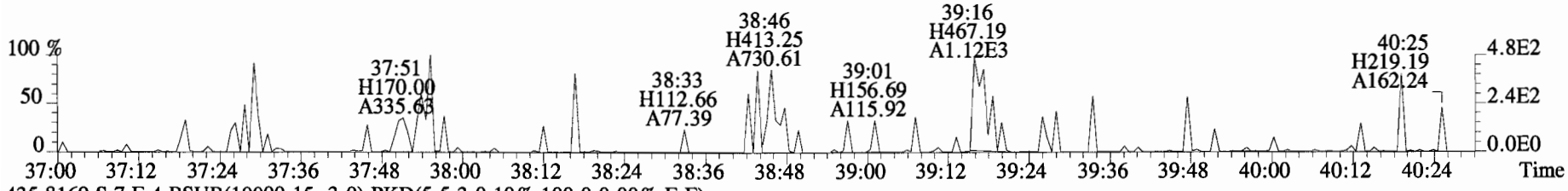
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



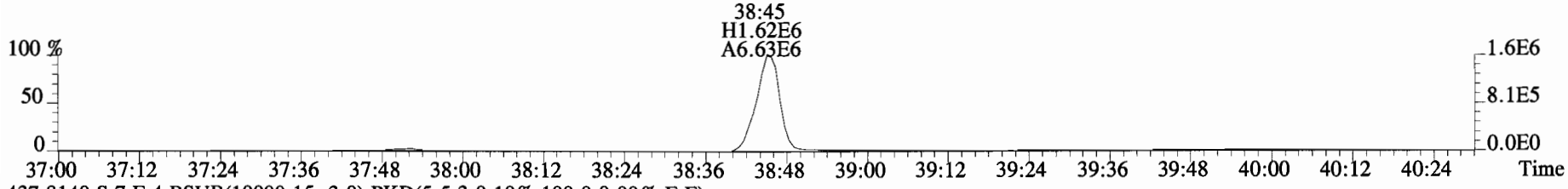
File:141216D1 #1-326 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



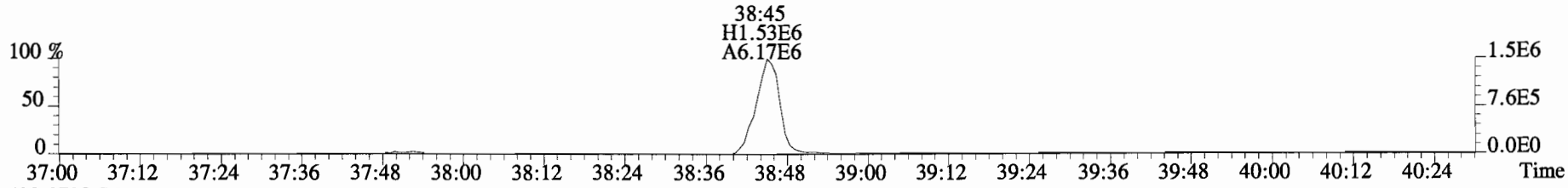
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



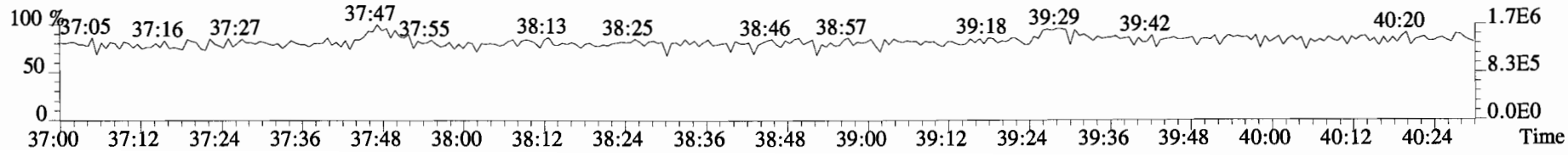
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

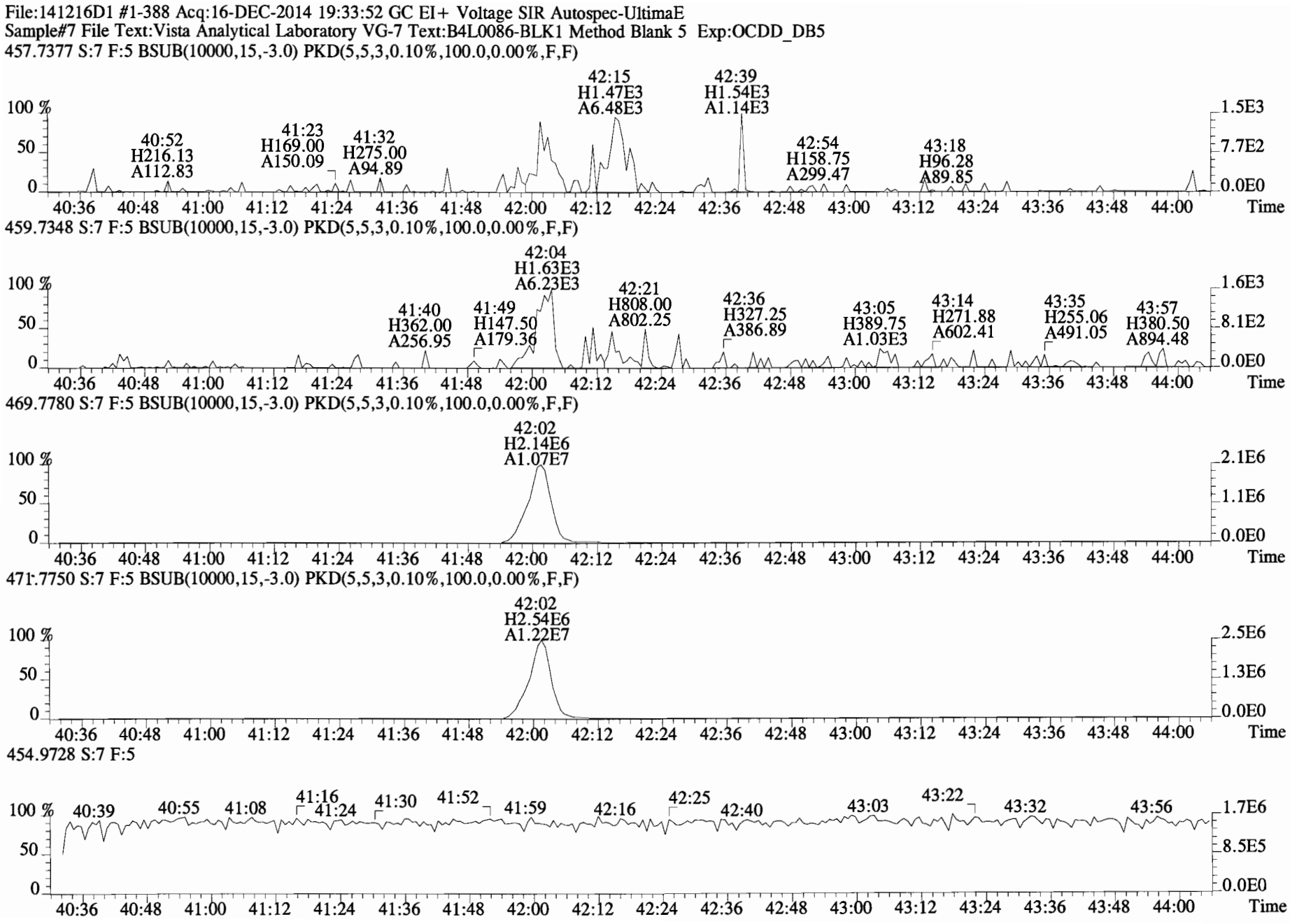


437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

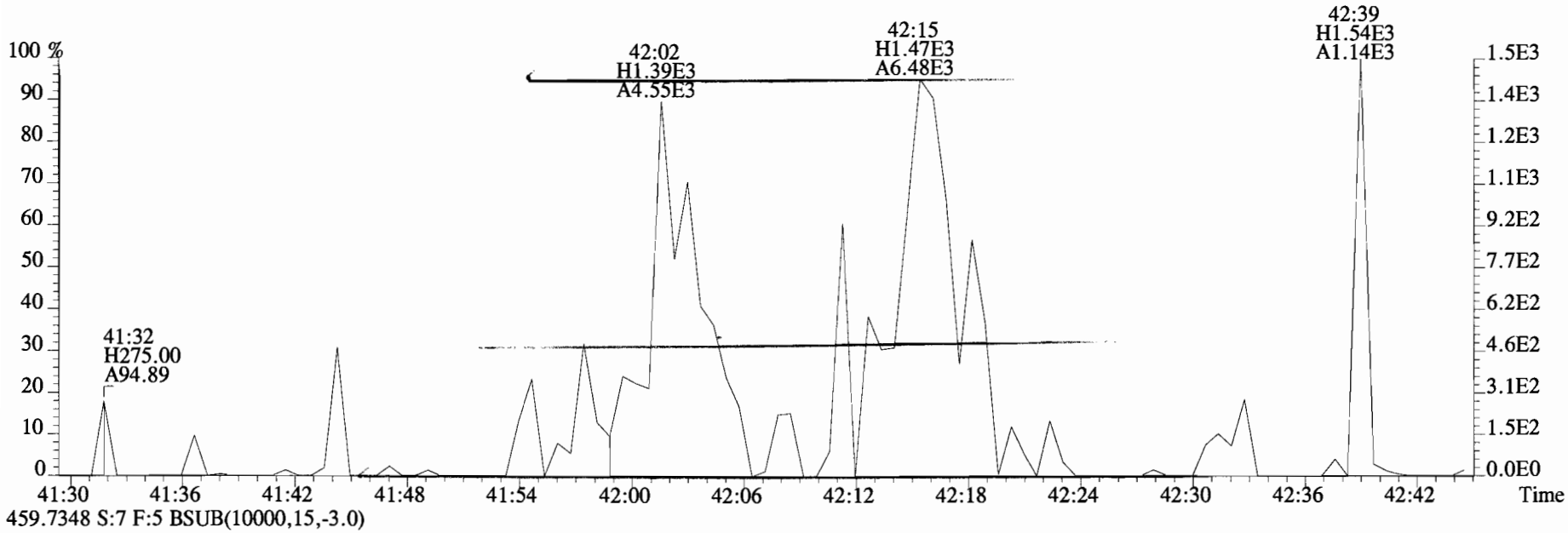


430.9728 S:7 F:4

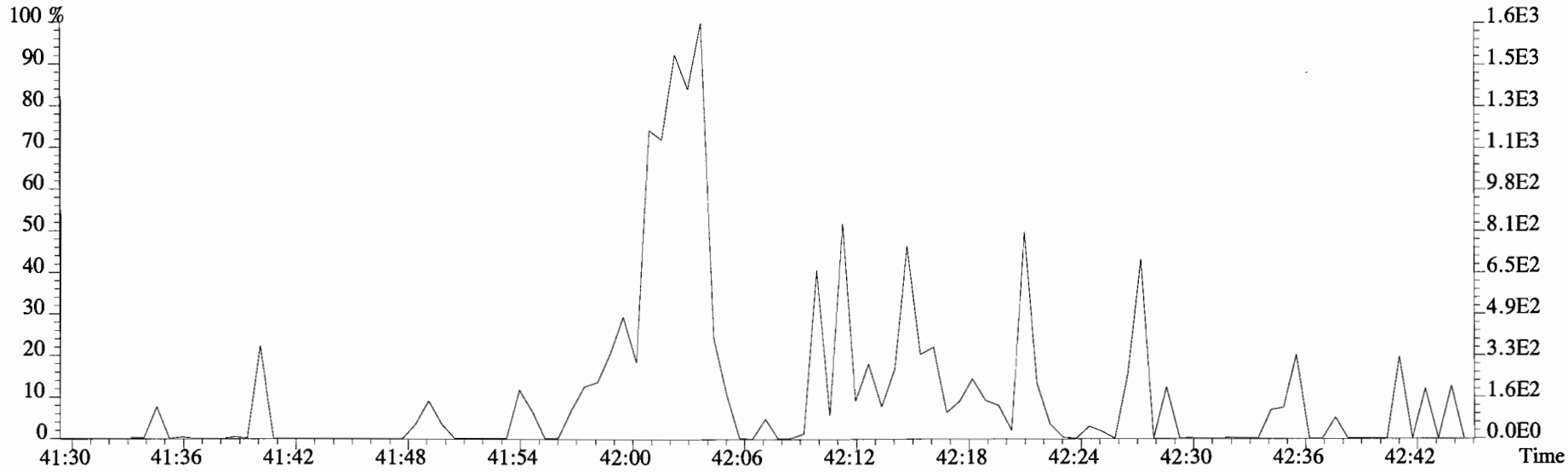



File:141216D1 #1-388 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
42:15 H1.47E3 A6.48E3
42:39 H1.54E3 A1.14E3
40:52 H216.13 A112.83
41:23 H169.00 A150.09
41:32 H275.00 A94.89
42:54 H158.75 A299.47
43:18 H96.28 A89.85
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
42:04 H1.63E3 A6.23E3
41:40 H362.00 A256.95
41:49 H147.50 A179.36
42:21 H808.00 A802.25
42:36 H327.25 A386.89
43:05 H389.75 A1.03E3
43:14 H271.88 A602.41
43:35 H255.06 A491.05
43:57 H380.50 A894.48
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
42:02 H2.14E6 A1.07E7
471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
42:02 H2.54E6 A1.22E7
454.9728 S:7 F:5
40:39
40:55
41:08
41:16
41:24
41:30
41:52
41:59
42:16
42:25
42:40
43:03
43:22
43:32
43:56
100 %
50
0
1.5E3
7.7E2
0.0E0
1.6E3
8.1E2
2.1E6
1.1E6
2.5E6
1.3E6
1.7E6
8.5E5
40:36 40:48 41:00 41:12 41:24 41:36 41:48 42:00 42:12 42:24 42:36 42:48 43:00 43:12 43:24 43:36 43:48 44:00
Time

File:141216D1 #1-388 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

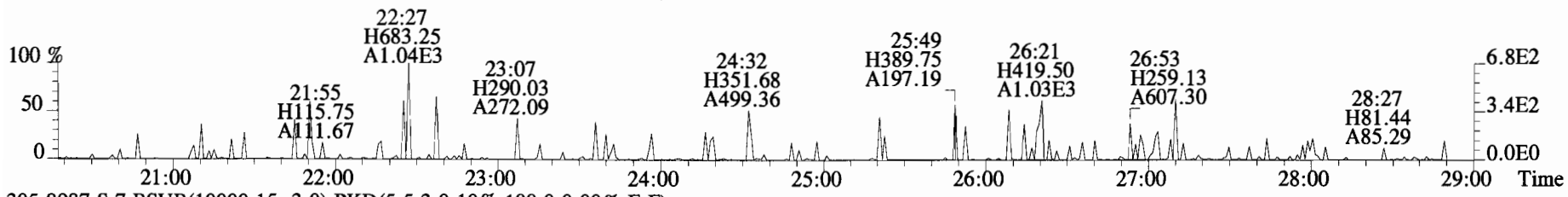


459.7348 S:7 F:5 BSUB(10000,15,-3.0)

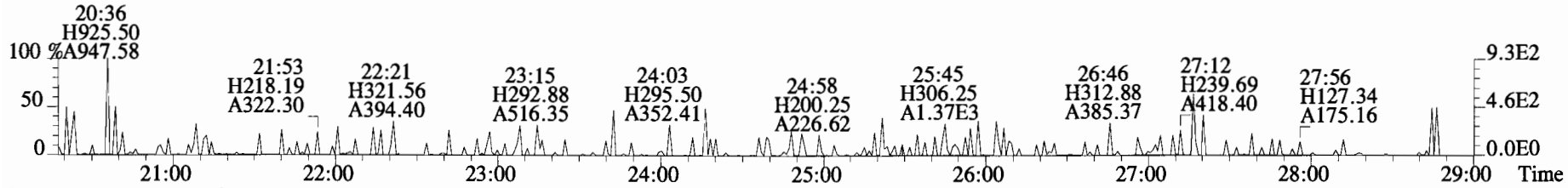


File:141216D1 #1-551 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5

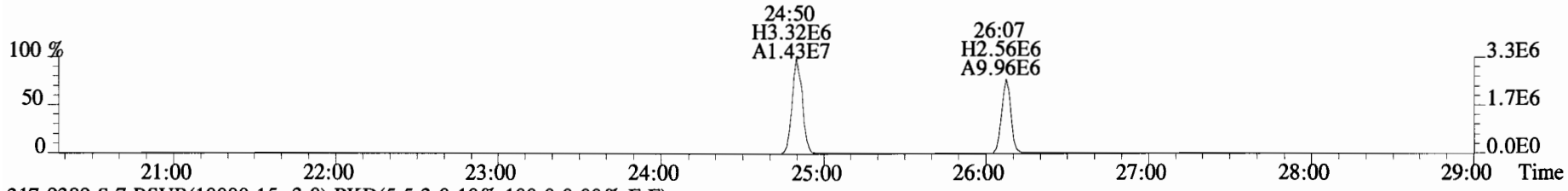
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



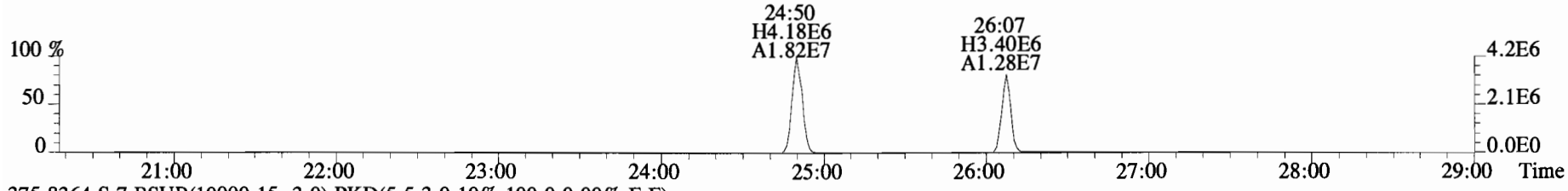
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



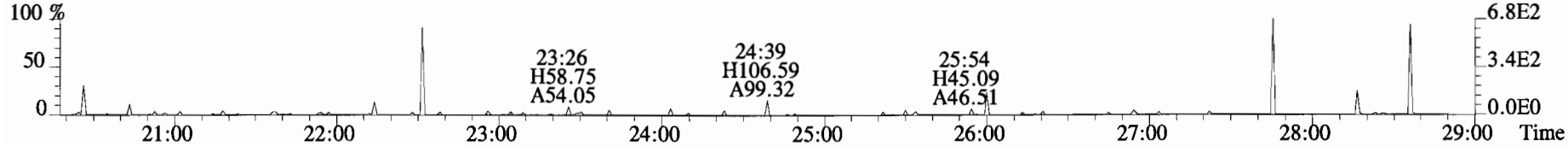
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



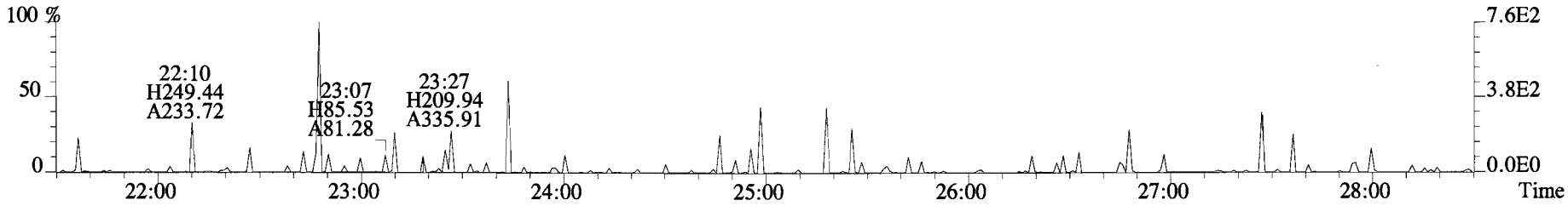
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



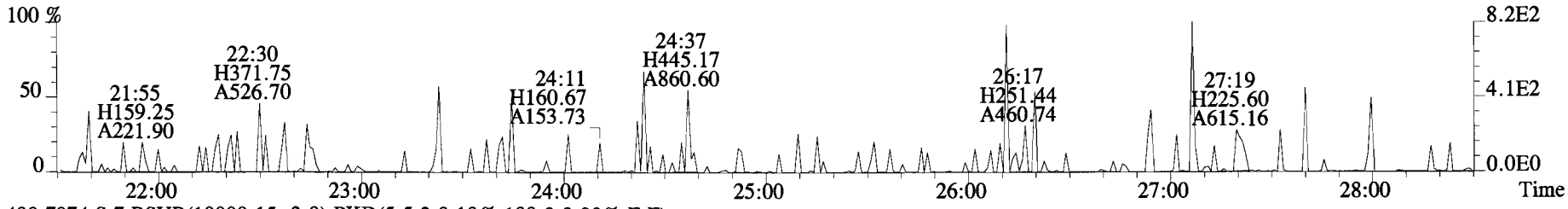
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



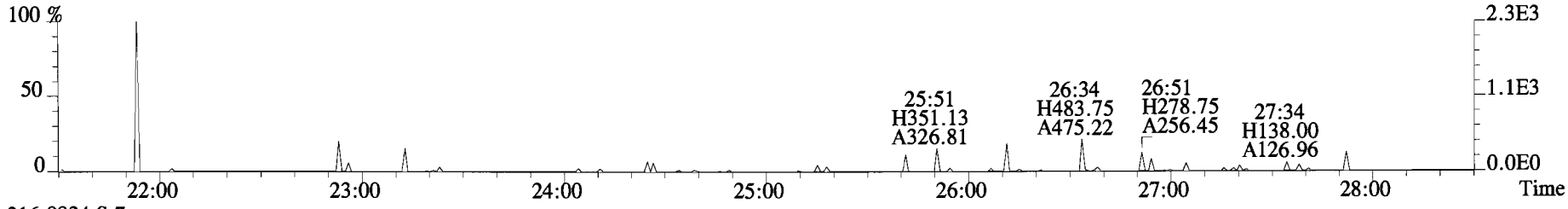
File:141216D1 #1-551 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



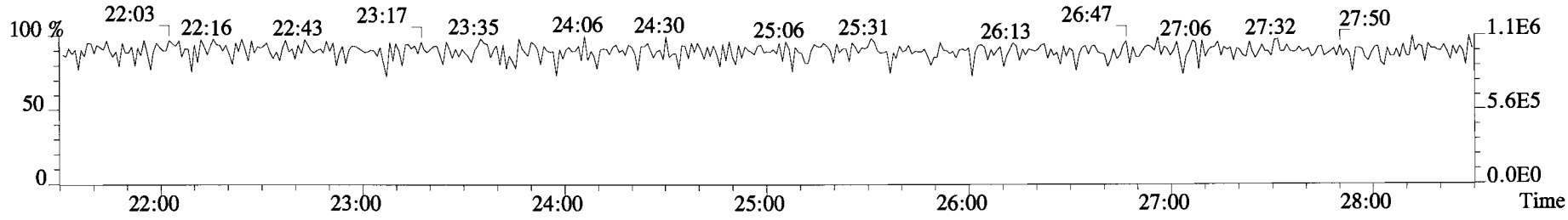
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



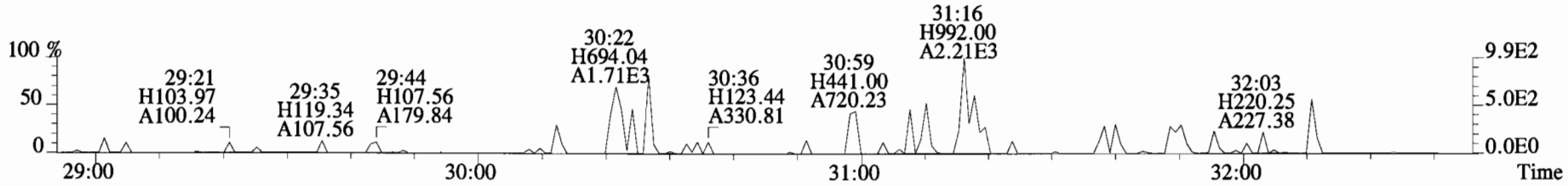
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



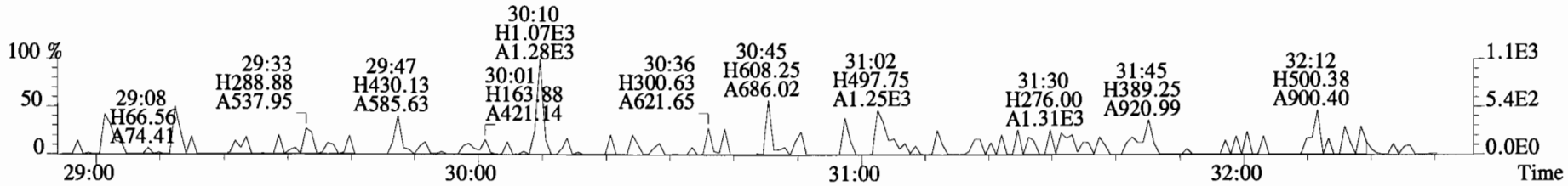
316.9824 S:7



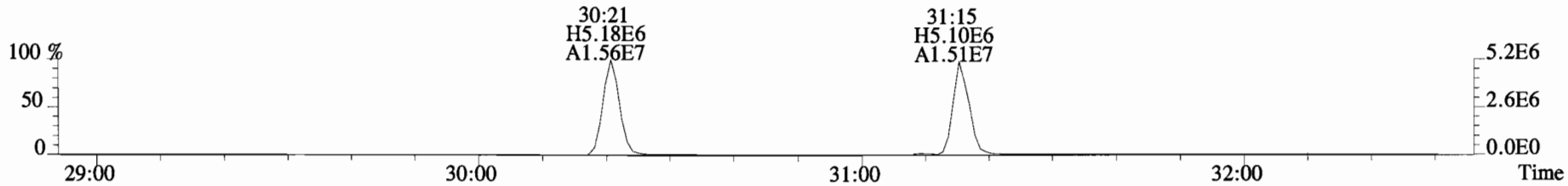
File:141216D1 #1-257 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



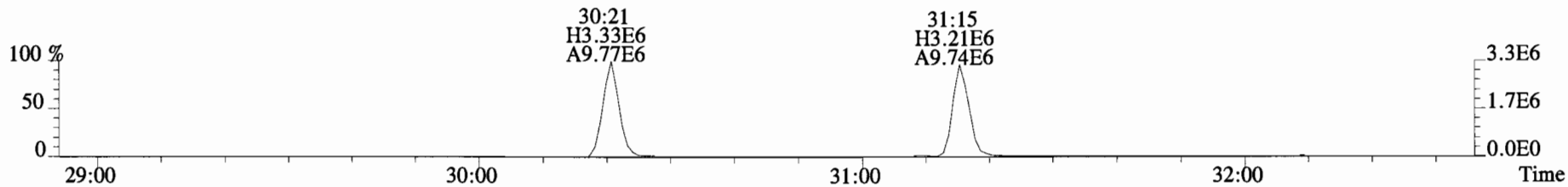
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



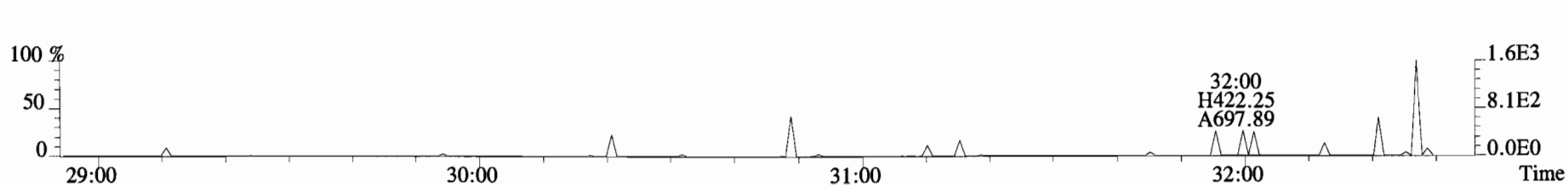
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

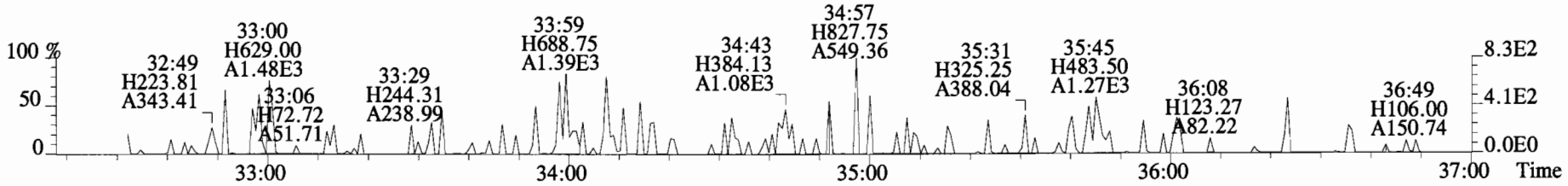


409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

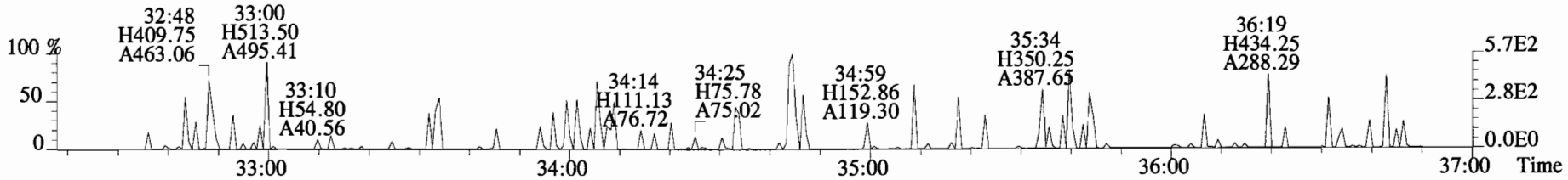


File:141216D1 #1-385 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5

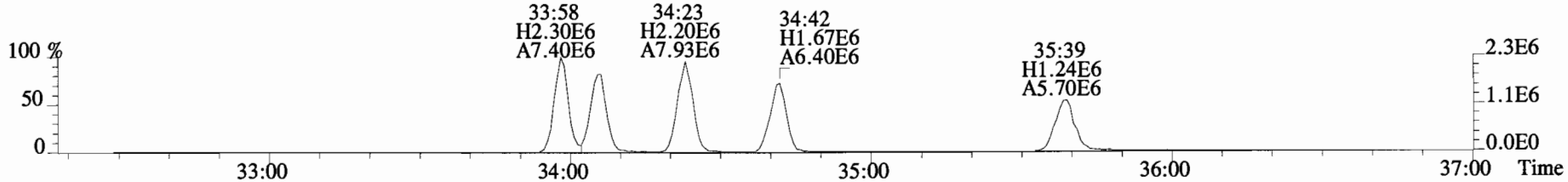
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



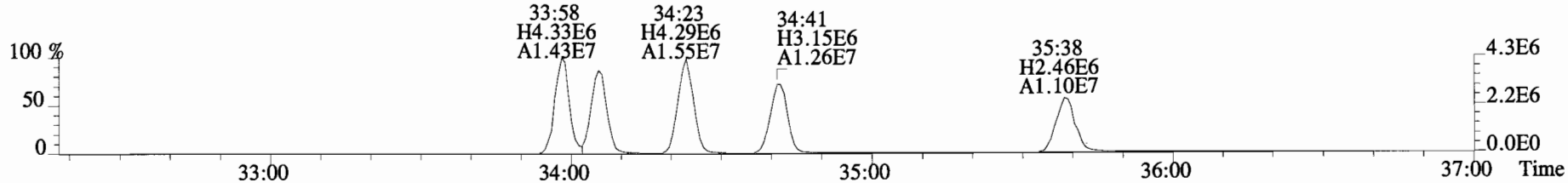
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



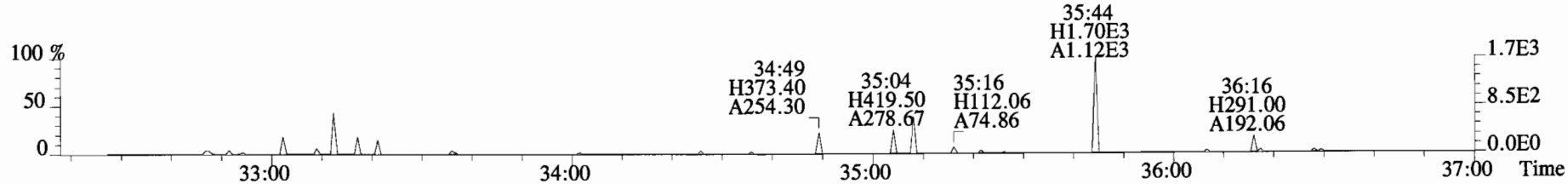
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



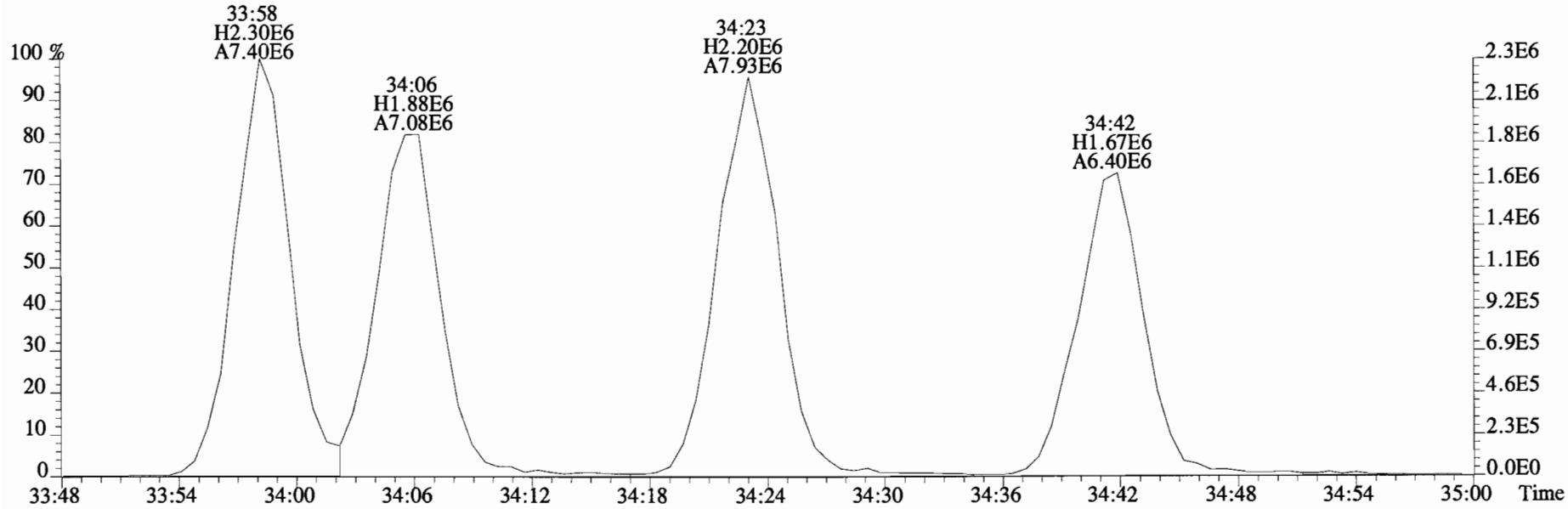
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



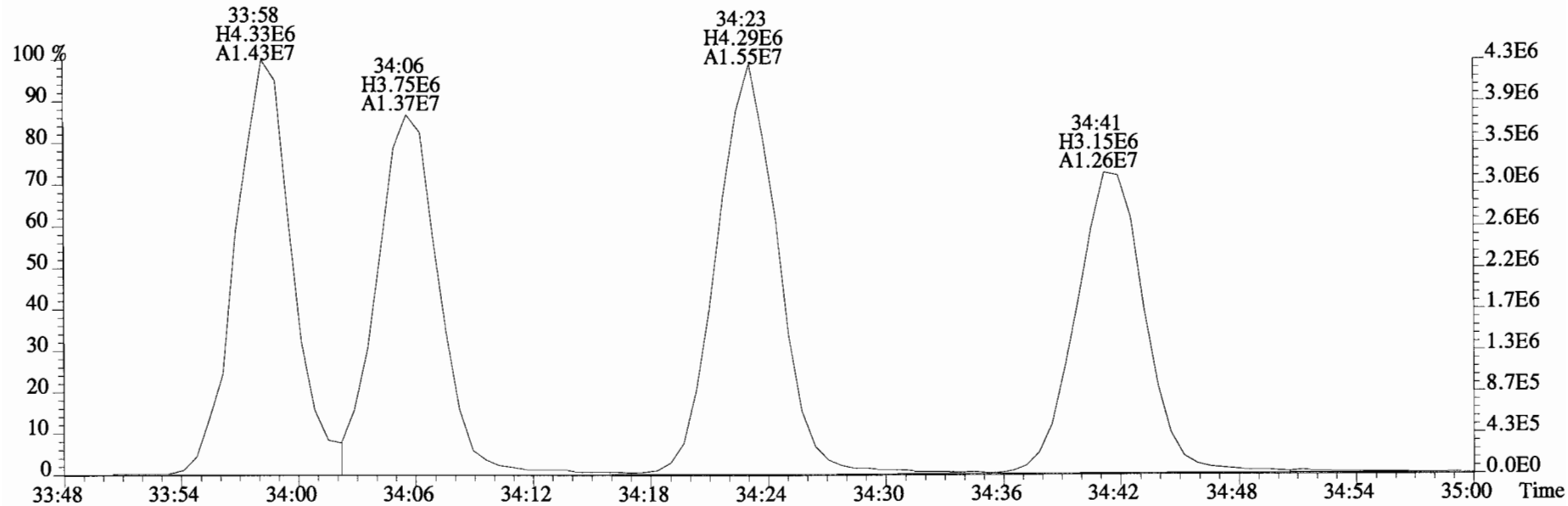
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141216D1 #1-385 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

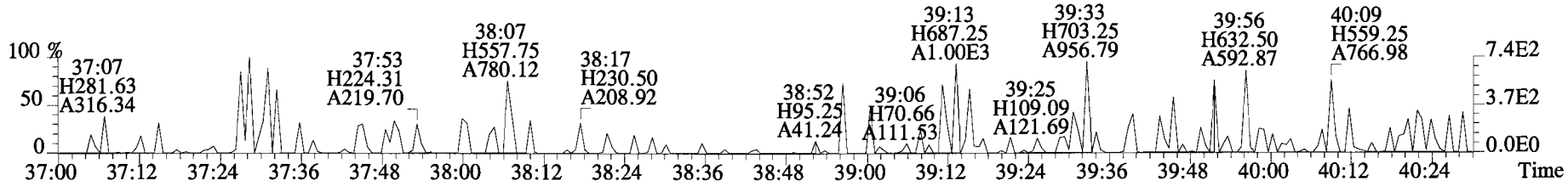


385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

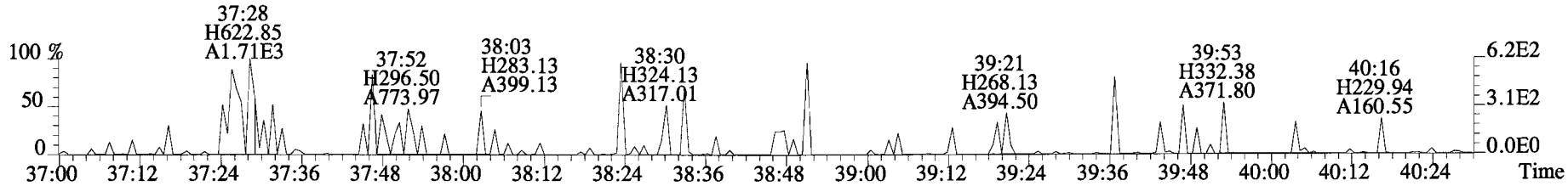


File:141216D1 #1-326 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5

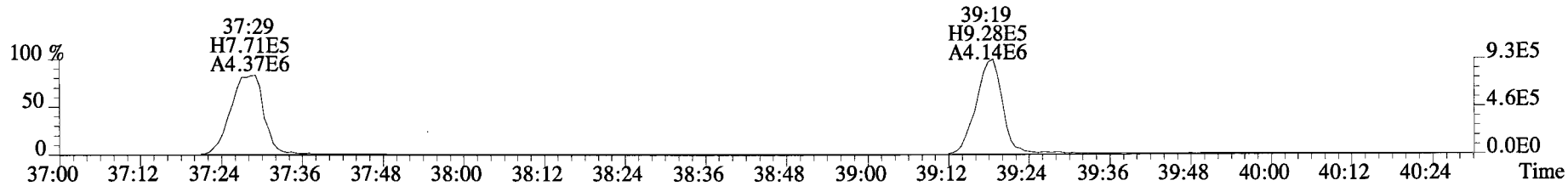
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



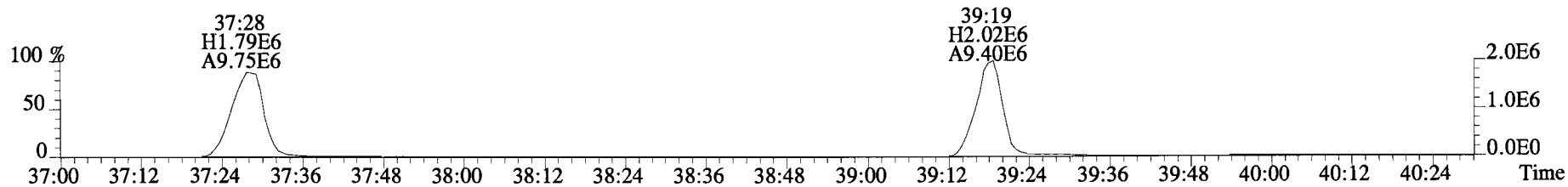
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



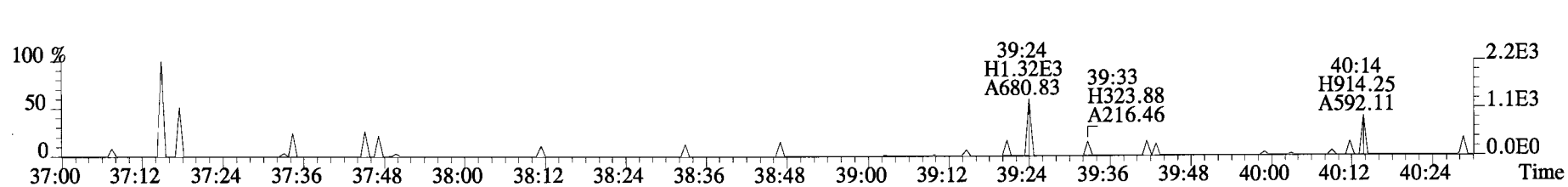
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

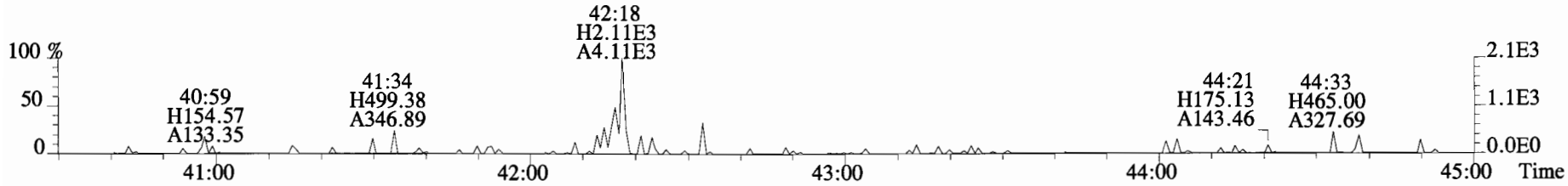


479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

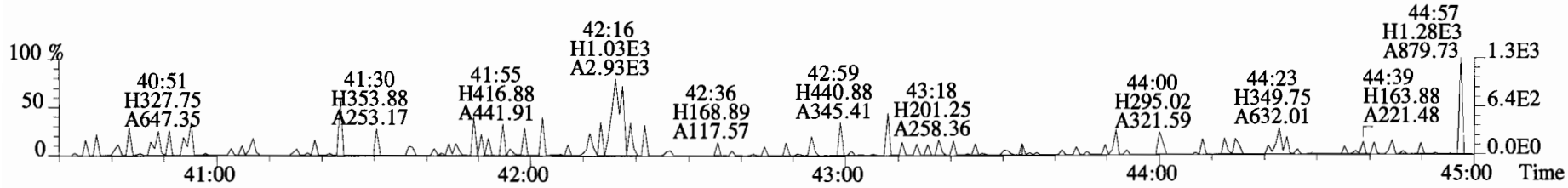


File:141216D1 #1-388 Acq:16-DEC-2014 19:33:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BLK1 Method Blank 5 Exp:OCDD_DB5

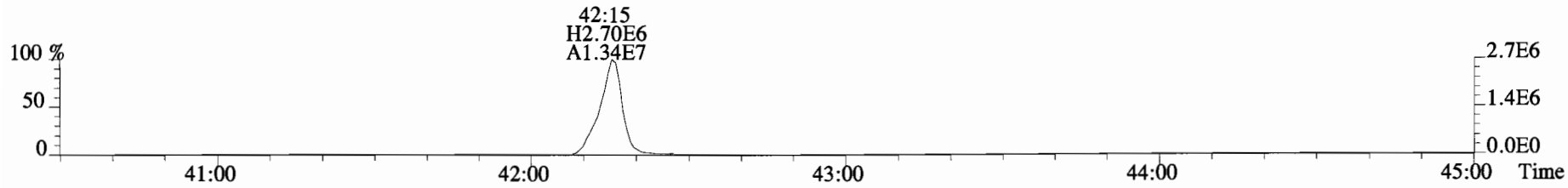
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



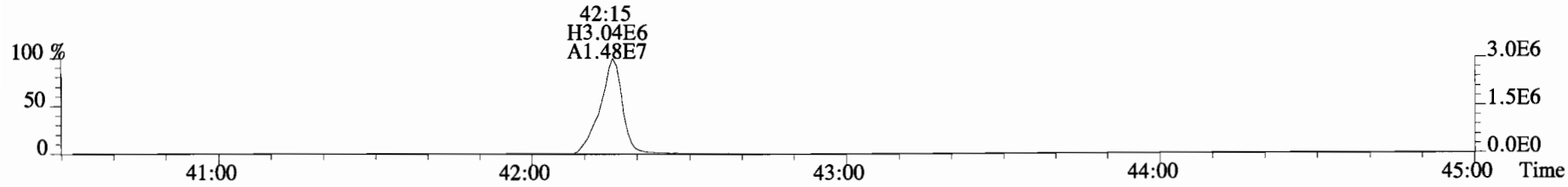
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



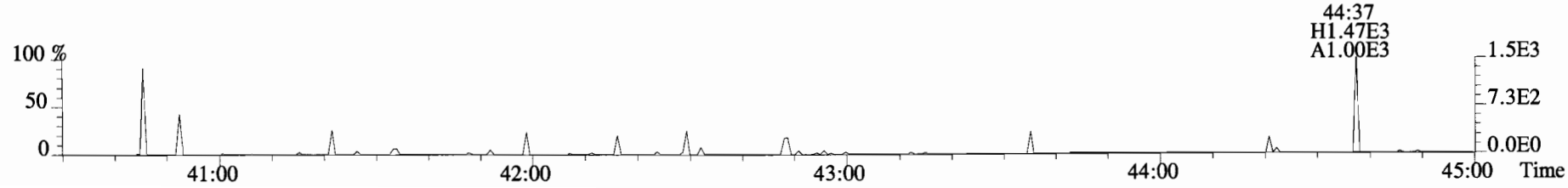
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0086-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 141216D1-4

Ext. Date: 12-15-14 Shift: Day Analysis Date: 16-DEC-14 Time: 17:07:51

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	8.90	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	48.3	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	49.5	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	49.6	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.3	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	48.8	35.0 - 70.0
OCDD	100	99.3	78.0 - 144.0
2,3,7,8-TCDF	10	9.00	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	45.5	40.0 - 67.0
2,3,4,7,8-PeCDF	50	46.1	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.9	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	49.6	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.7	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.6	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.7	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	51.6	39.0 - 69.0
OCDF	100	99.0	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MJ

Date: 12/17/14

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0086-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 141216D1-4

Ext. Date: 12-15-14 Shift: Day Analysis Date: 16-DEC-14 Time: 17:07:51

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	81.5	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	93.8	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	81.8	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	84.1	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	83.0	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	81.0	26.0 - 166.0
13C-OCDD	200	120	26.0 - 397.0
13C-2,3,7,8-TCDF	100	78.5	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	80.9	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	85.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	91.4	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	85.3	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	81.6	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	84.9	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	82.3	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	77.8	20.0 - 186.0
13C-OCDF	200	130	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	34.7	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MI

Date: 12/17/14

Client ID: OPR Filename: 141216D1 S:4 Acq:16-DEC-14 17:07:51 ConCal: ST141216D1-2
Lab ID: B4L0086-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.01e+06	0.73 y	1.18	26:58	1.001	8.8958		*	2.5	*
	1,2,3,7,8-PeCDD	1.12e+07	0.62 y	0.92	31:35	1.001	48.261		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.47e+06	1.30 y	1.09	34:53	1.000	49.513		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.69e+06	1.21 y	1.07	34:60	1.001	49.605		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.65e+06	1.25 y	0.93	35:17	1.000	49.299		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.53e+06	1.02 y	1.12	38:47	1.000	48.775		*	2.5	*
	OCDD	1.18e+07	0.88 y	0.95	42:03	1.000	99.345		*	2.5	*
	2,3,7,8-TCDF	2.65e+06	0.80 y	1.08	26:09	1.001	9.0004		*	2.5	*
	1,2,3,7,8-PeCDF	1.44e+07	1.60 y	1.09	30:23	1.001	45.485		*	2.5	*
	2,3,4,7,8-PeCDF	1.50e+07	1.59 y	1.04	31:18	1.000	46.129		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.63e+07	1.29 y	1.39	33:60	1.001	48.921		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.56e+07	1.29 y	1.26	34:08	1.000	49.628		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.44e+07	1.28 y	1.30	34:43	1.000	49.738		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.16e+07	1.30 y	1.19	35:41	1.001	50.552		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.25e+07	1.09 y	1.62	37:30	1.000	49.710		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.15e+07	1.03 y	1.53	39:19	1.000	51.603		*	2.5	*
	OCDF	1.64e+07	0.93 y	1.10	42:17	1.000	98.953		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.91e+07	0.79 y	1.07	26:56	1.022	81.531				
IS	13C-1,2,3,7,8-PeCDD	2.54e+07	0.61 y	1.24	31:34	1.198	93.844				
IS	13C-1,2,3,4,7,8-HxCDD	1.57e+07	1.28 y	0.72	34:52	1.014	81.815				
IS	13C-1,2,3,6,7,8-HxCDD	1.64e+07	1.24 y	0.74	34:59	1.017	84.085				
IS	13C-1,2,3,7,8,9-HxCDD	1.88e+07	1.25 y	0.86	35:17	1.025	82.996				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.39e+07	1.03 y	0.64	38:46	1.127	81.033				
IS	13C-OCDD	2.50e+07	0.86 y	0.78	42:02	1.222	120.22				
IS	13C-2,3,7,8-TCDF	2.74e+07	0.77 y	0.92	26:08	0.992	78.491				
IS	13C-1,2,3,7,8-PeCDF	2.91e+07	1.56 y	0.95	30:22	1.152	80.923				
IS	13C-2,3,4,7,8-PeCDF	3.12e+07	1.59 y	0.97	31:17	1.187	84.974				
IS	13C-1,2,3,4,7,8-HxCDF	2.40e+07	0.53 y	0.99	33:59	0.988	91.374				
IS	13C-1,2,3,6,7,8-HxCDF	2.49e+07	0.52 y	1.10	34:07	0.992	85.292				
IS	13C-2,3,4,6,7,8-HxCDF	2.23e+07	0.51 y	1.03	34:43	1.009	81.559				
IS	13C-1,2,3,7,8,9-HxCDF	1.93e+07	0.51 y	0.86	35:40	1.037	84.891				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.56e+07	0.44 y	0.71	37:29	1.089	82.321				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.46e+07	0.45 y	0.71	39:19	1.143	77.773				
IS	13C-OCDF	3.02e+07	0.89 y	0.87	42:16	1.229	129.98				
C/Up	37Cl-2,3,7,8-TCDD	9.17e+06		1.21	26:58	1.023	34.724				
RS/RT	13C-1,2,3,4-TCDD	2.18e+07	0.80 y	1.00	26:21	*	100.00				
RS	13C-1,2,3,4-TCDF	3.78e+07	0.76 y	1.00	24:51	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.65e+07	0.52 y	1.00	34:24	*	100.00				

	Rec	Qual
IS	81.5	
IS	93.8	
IS	81.8	
IS	84.1	
IS	83.0	
IS	81.0	
IS	60.1	
IS	78.5	
IS	80.9	
IS	85.0	
IS	91.4	
IS	85.3	
IS	81.6	
IS	84.9	
IS	82.3	
IS	77.8	
IS	65.0	
C/Up	86.8	

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	8.90	9.26		*	*
Total Penta-Dioxins	48.3	48.5		*	*
Total Hexa-Dioxins	149	149		*	*
Total Hepta-Dioxins	48.8	49.8		*	*
Total Tetra-Furans	9.31	9.44		*	*
Total Penta-Furans	92.669	93.946		*	*
Total Hexa-Furans	200	201		*	*
Total Hepta-Furans	102	104		*	*

Integrations by Analyst: M Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/18/14

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.01e+06	0.73 y	1.18	26:58	1.001	35.583		*	2.5	*
	1,2,3,7,8-PeCDD	1.12e+07	0.62 y	0.92	31:35	1.001	193.04		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.47e+06	1.30 y	1.09	34:53	1.000	198.05		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.69e+06	1.21 y	1.07	34:60	1.001	198.42		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.65e+06	1.25 y	0.93	35:17	1.000	197.20		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.53e+06	1.02 y	1.12	38:47	1.000	195.10		*	2.5	*
	OCDD	1.18e+07	0.88 y	0.95	42:03	1.000	397.38		*	2.5	*
	2,3,7,8-TCDF	2.65e+06	0.80 y	1.08	26:09	1.001	36.002		*	2.5	*
	1,2,3,7,8-PeCDF	1.44e+07	1.60 y	1.09	30:23	1.001	181.94		*	2.5	*
	2,3,4,7,8-PeCDF	1.50e+07	1.59 y	1.04	31:18	1.000	184.52		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.63e+07	1.29 y	1.39	33:60	1.001	195.68		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.56e+07	1.29 y	1.26	34:08	1.000	198.51		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.44e+07	1.28 y	1.30	34:43	1.000	198.95		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.16e+07	1.30 y	1.19	35:41	1.001	202.21		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.25e+07	1.09 y	1.62	37:30	1.000	198.84		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.15e+07	1.03 y	1.53	39:19	1.000	206.41		*	2.5	*
	OCDF	1.64e+07	0.93 y	1.10	42:17	1.000	395.81		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.91e+07	0.79 y	1.07	26:56	1.022	326.12				
IS	13C-1,2,3,7,8-PeCDD	2.54e+07	0.61 y	1.24	31:34	1.198	375.38				
IS	13C-1,2,3,4,7,8-HxCDD	1.57e+07	1.28 y	0.72	34:52	1.014	327.26				
IS	13C-1,2,3,6,7,8-HxCDD	1.64e+07	1.24 y	0.74	34:59	1.017	336.34				
IS	13C-1,2,3,7,8,9-HxCDD	1.88e+07	1.25 y	0.86	35:17	1.025	331.98				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.39e+07	1.03 y	0.64	38:46	1.127	324.13				
IS	13C-OCDD	2.50e+07	0.86 y	0.78	42:02	1.222	480.90				
IS	13C-2,3,7,8-TCDF	2.74e+07	0.77 y	0.92	26:08	0.992	313.96				
IS	13C-1,2,3,7,8-PeCDF	2.91e+07	1.56 y	0.95	30:22	1.152	323.69				
IS	13C-2,3,4,7,8-PeCDF	3.12e+07	1.59 y	0.97	31:17	1.187	339.90				
IS	13C-1,2,3,4,7,8-HxCDF	2.40e+07	0.53 y	0.99	33:59	0.988	365.49				
IS	13C-1,2,3,6,7,8-HxCDF	2.49e+07	0.52 y	1.10	34:07	0.992	341.17				
IS	13C-2,3,4,6,7,8-HxCDF	2.23e+07	0.51 y	1.03	34:43	1.009	326.24				
IS	13C-1,2,3,7,8,9-HxCDF	1.93e+07	0.51 y	0.86	35:40	1.037	339.56				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.56e+07	0.44 y	0.71	37:29	1.089	329.28				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.46e+07	0.45 y	0.71	39:19	1.143	311.09				
IS	13C-OCDF	3.02e+07	0.89 y	0.87	42:16	1.229	519.93				
C/Up	37Cl-2,3,7,8-TCDD	9.17e+06		1.21	26:58	1.023	138.89				
RS/RT	13C-1,2,3,4-TCDD	2.18e+07	0.80 y	1.00	26:21	*	400.00				
RS	13C-1,2,3,4-TCDF	3.78e+07	0.76 y	1.00	24:51	*	400.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.65e+07	0.52 y	1.00	34:24	*	400.00				

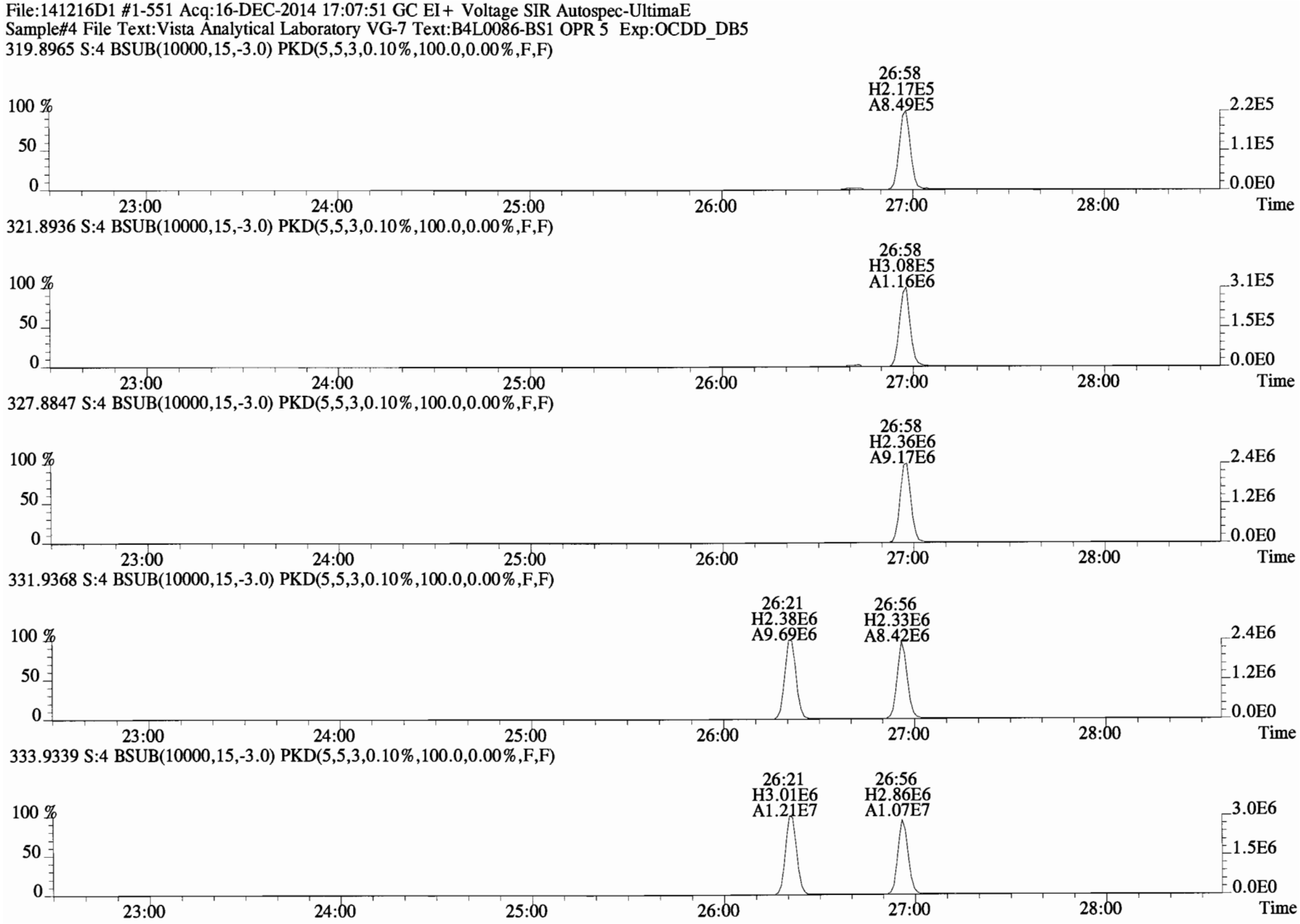
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	35.6	37.0		*	*
Total Penta-Dioxins	193	194		*	*
Total Hexa-Dioxins	594	596		*	*
Total Hepta-Dioxins	195	199		*	*
Total Tetra-Furans	37.2	37.7		*	*
Total Penta-Furans	370.67	375.79		*	*
Total Hexa-Furans	799	802		*	*
Total Hepta-Furans	408	416		*	*

		Rec	Qual
IS	13C-2,3,7,8-TCDD	81.5	
IS	13C-1,2,3,7,8-PeCDD	93.8	
IS	13C-1,2,3,4,7,8-HxCDD	81.8	
IS	13C-1,2,3,6,7,8-HxCDD	84.1	
IS	13C-1,2,3,7,8,9-HxCDD	83.0	
IS	13C-1,2,3,4,6,7,8-HpCDD	81.0	
IS	13C-OCDD	60.1	
IS	13C-2,3,7,8-TCDF	78.5	
IS	13C-1,2,3,7,8-PeCDF	80.9	
IS	13C-2,3,4,7,8-PeCDF	85.0	
IS	13C-1,2,3,4,7,8-HxCDF	91.4	
IS	13C-1,2,3,6,7,8-HxCDF	85.3	
IS	13C-2,3,4,6,7,8-HxCDF	81.6	
IS	13C-1,2,3,7,8,9-HxCDF	84.9	
IS	13C-1,2,3,4,6,7,8-HpCDF	82.3	
IS	13C-1,2,3,4,7,8,9-HpCDF	77.8	
IS	13C-OCDF	65.0	
C/Up	37Cl-2,3,7,8-TCDD	86.8	

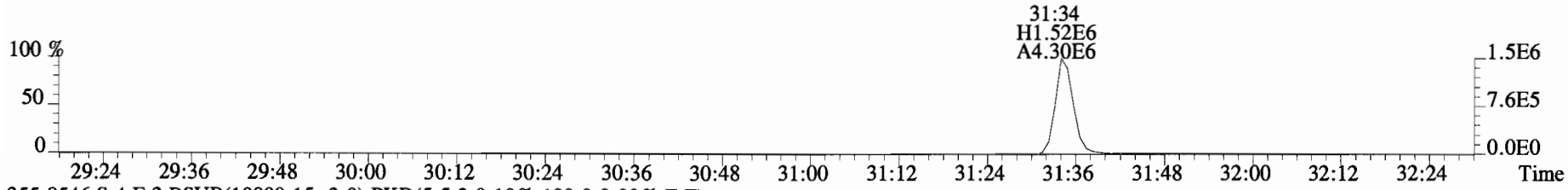
Integrations by Analyst: MM Date: 12/17/14

Reviewed by Analyst: _____ Date: _____

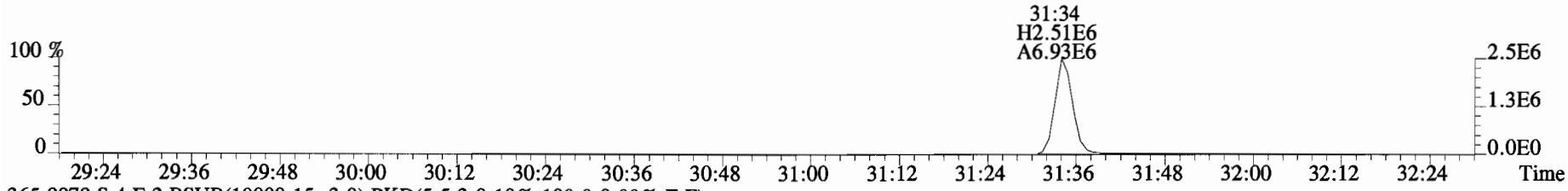
File:141216D1 #1-551 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5



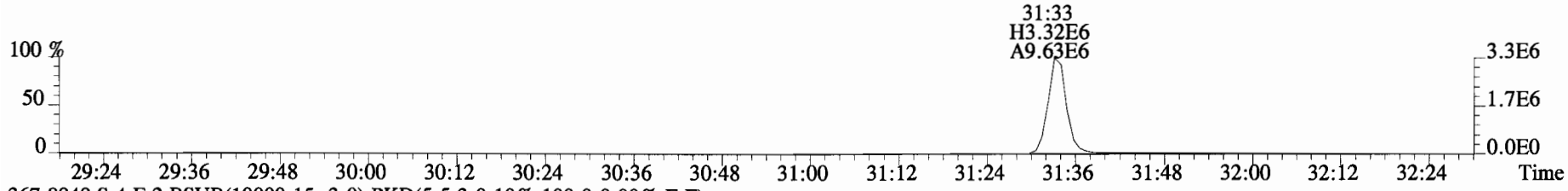
File:141216D1 #1-257 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



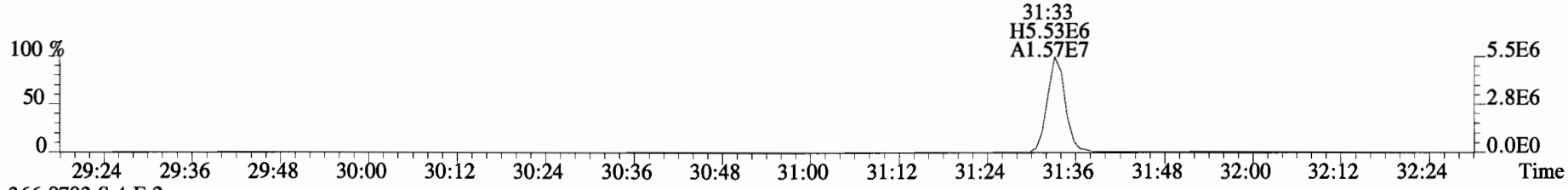
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



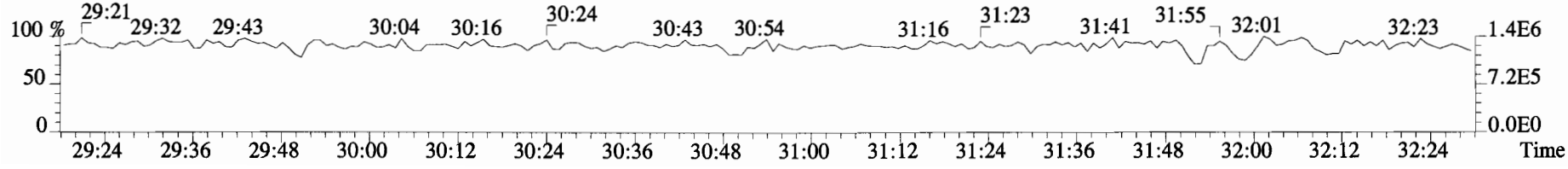
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



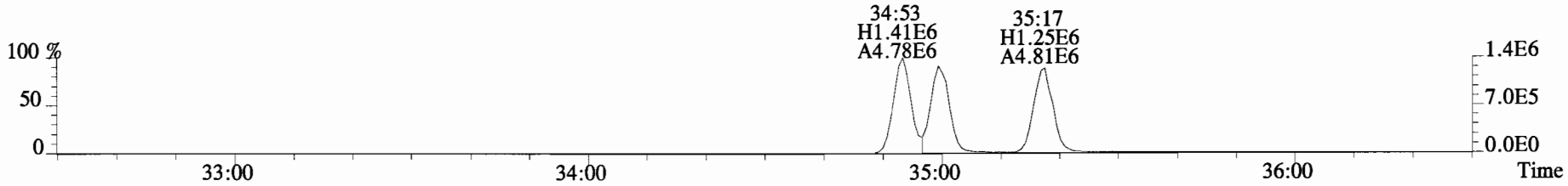
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



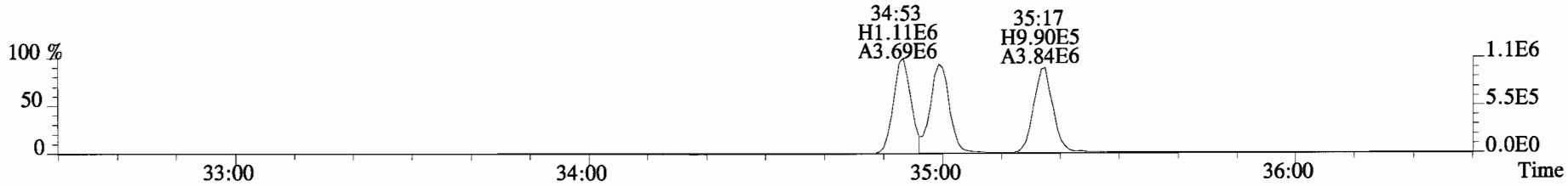
366.9792 S:4 F:2



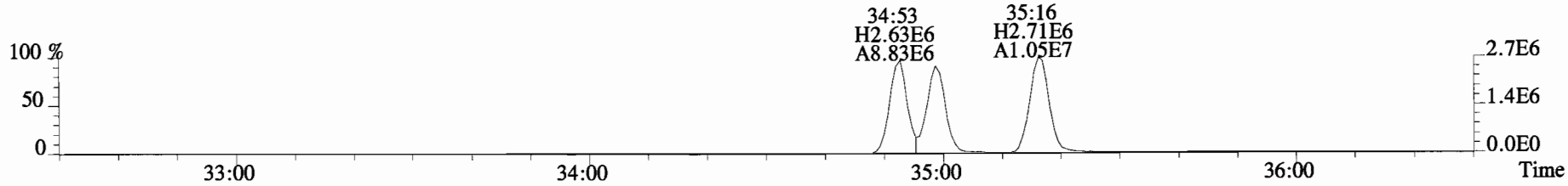
File:141216D1 #1-385 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



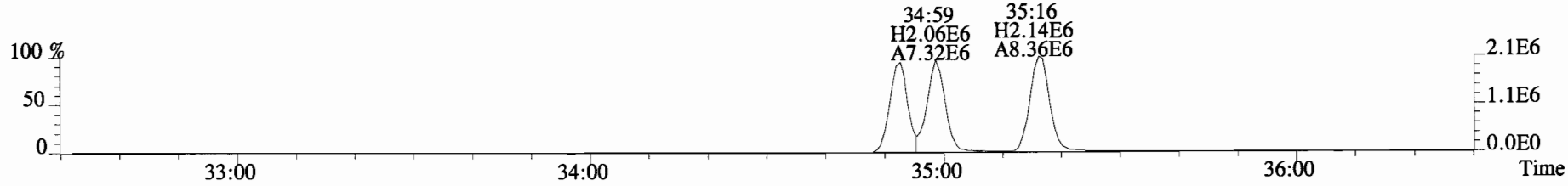
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



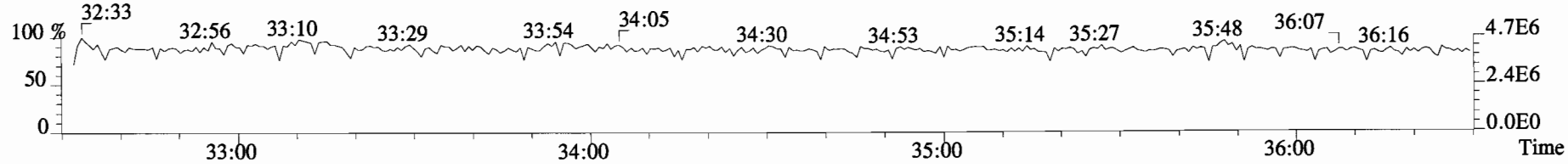
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



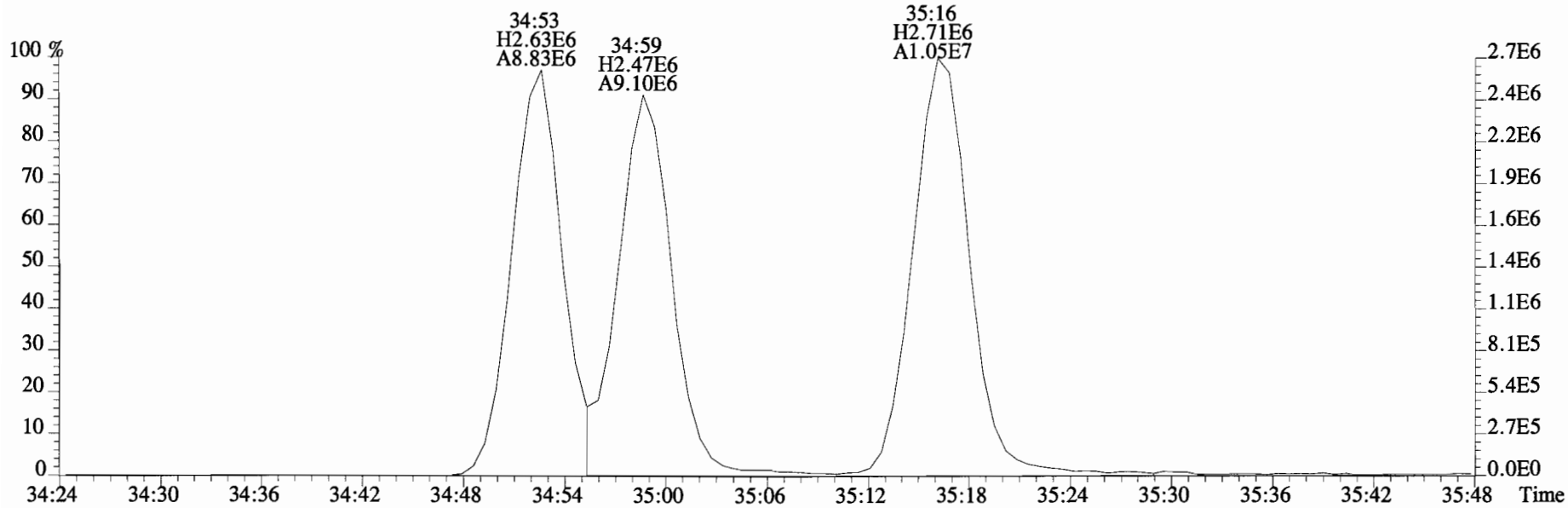
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



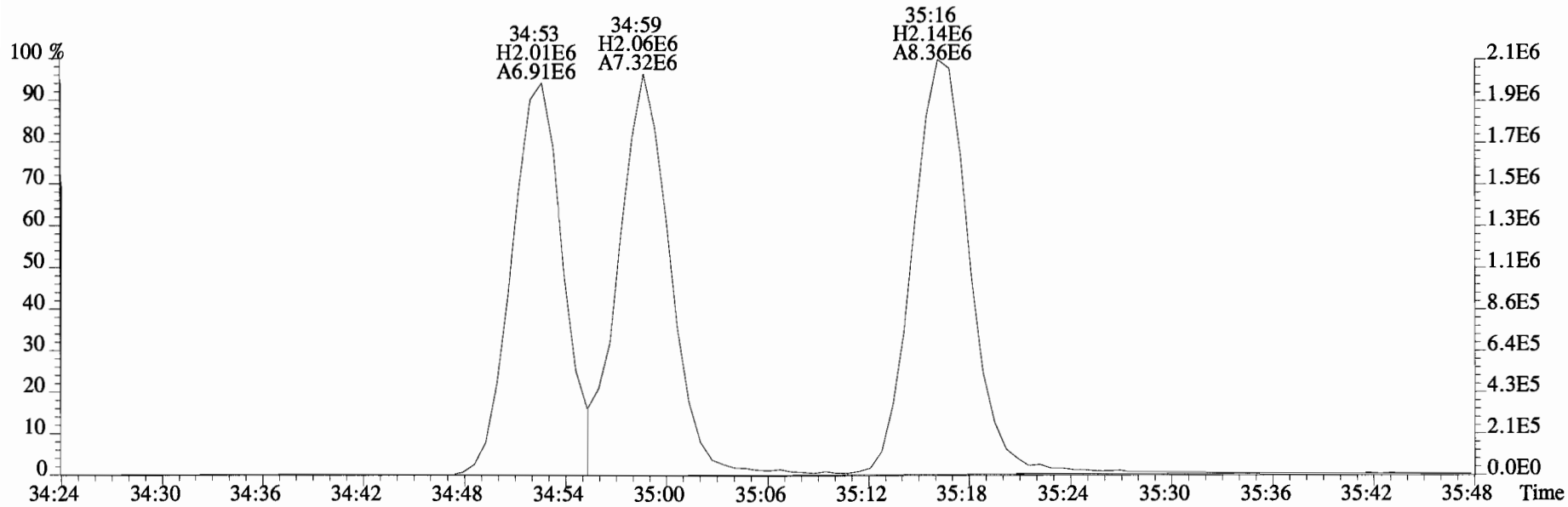
380.9760 S:4 F:3



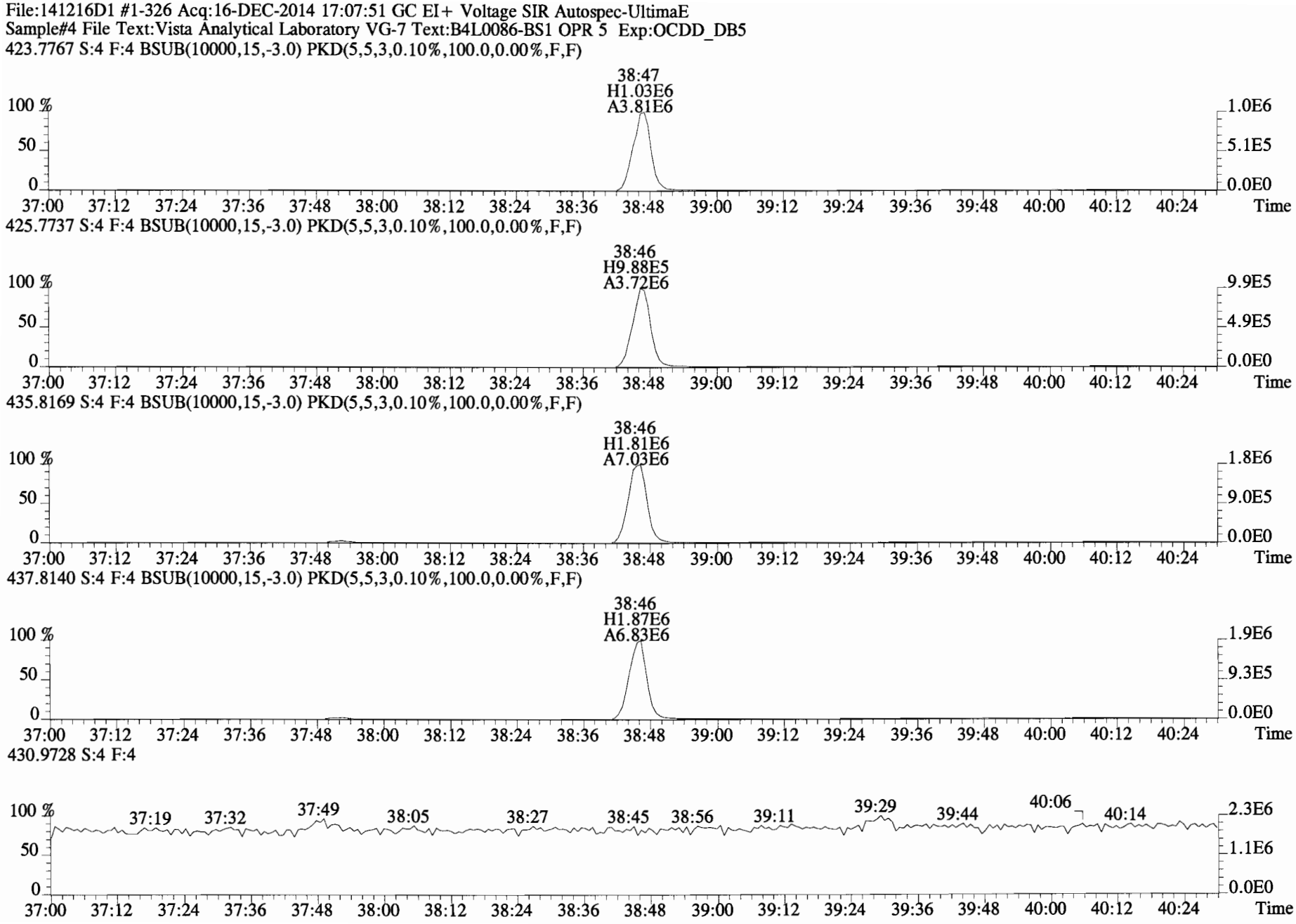
File:141216D1 #1-385 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

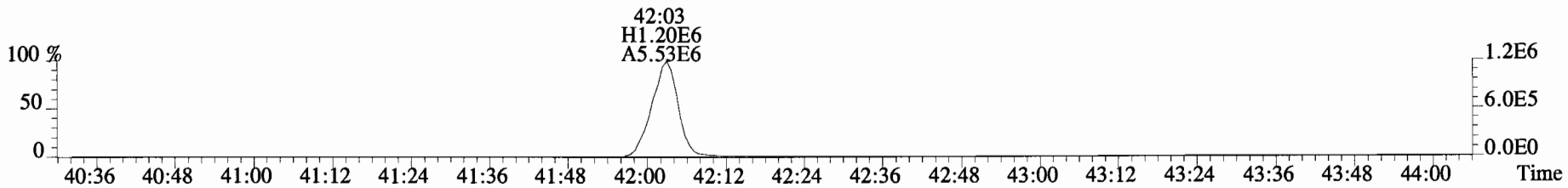


File:141216D1 #1-326 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5

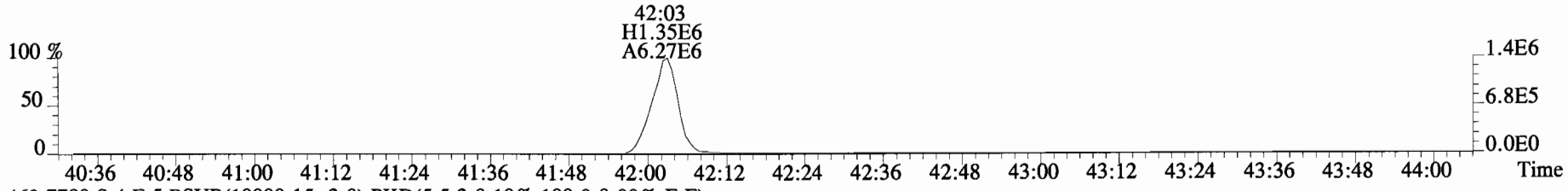


File:141216D1 #1-388 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5

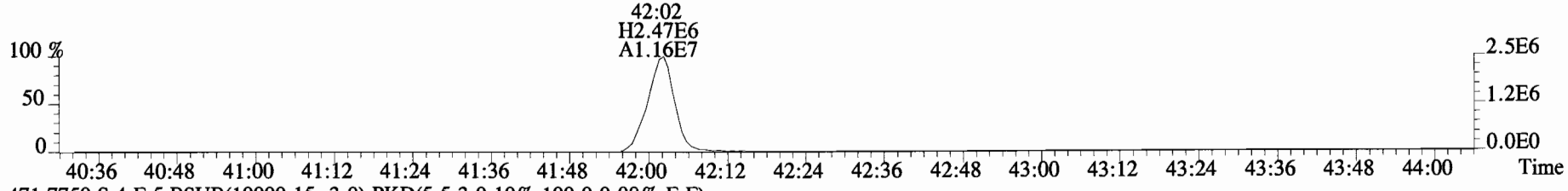
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



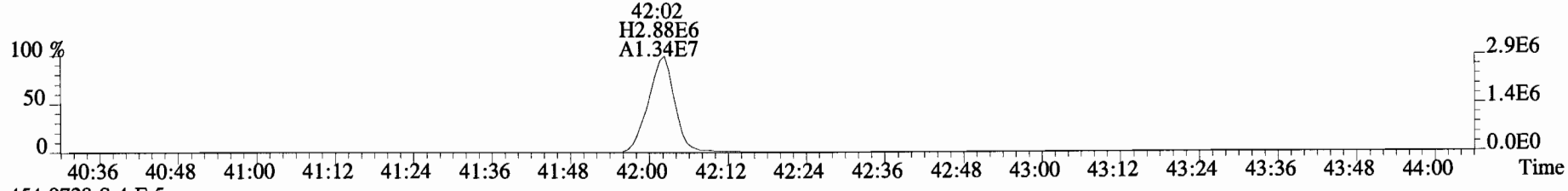
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



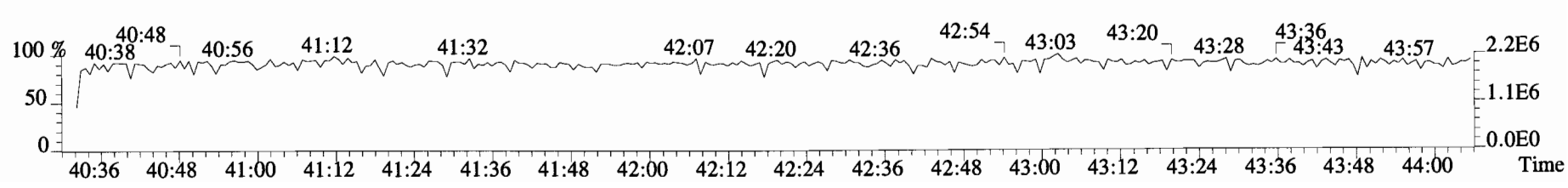
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



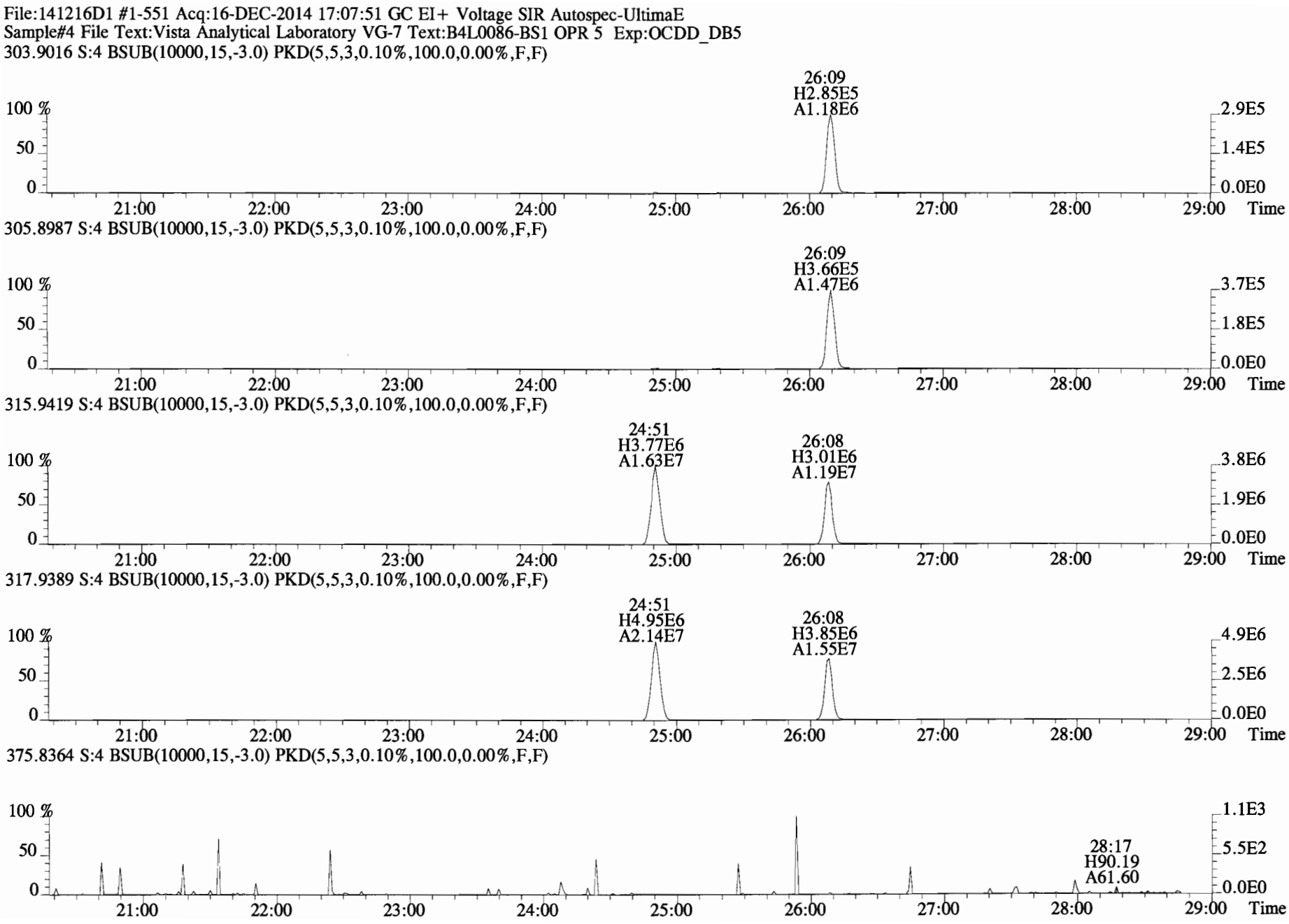
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



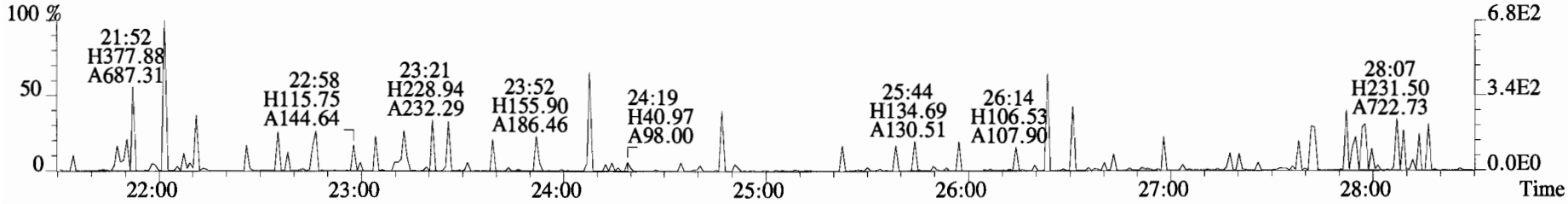
454.9728 S:4 F:5



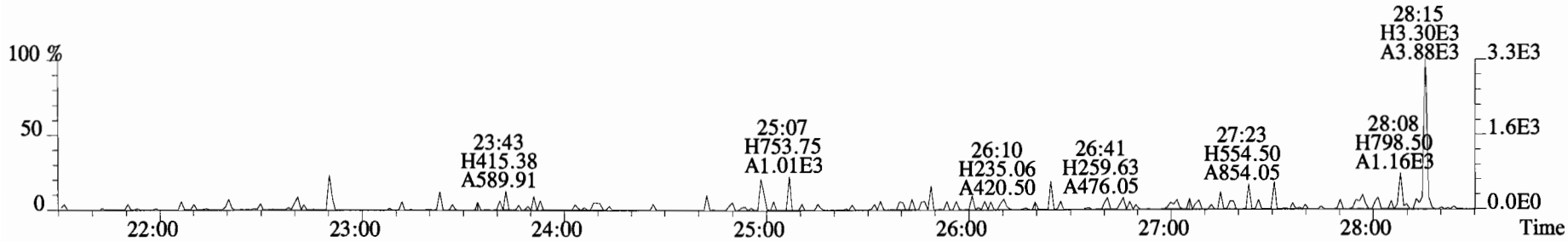
File:141216D1 #1-551 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5



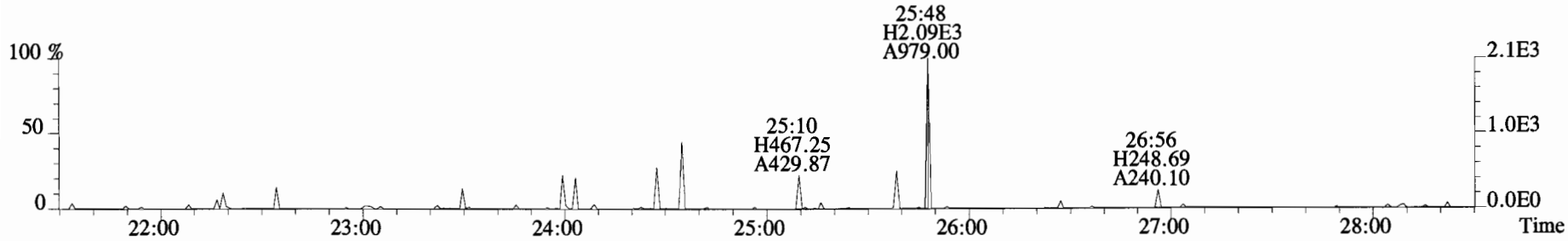
File:141216D1 #1-551 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



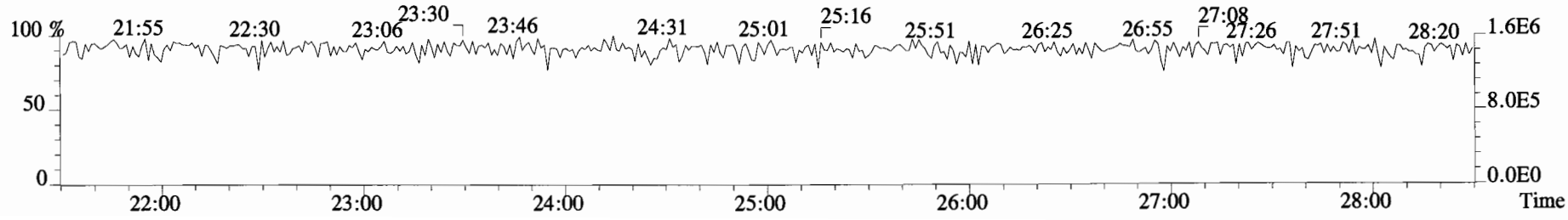
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

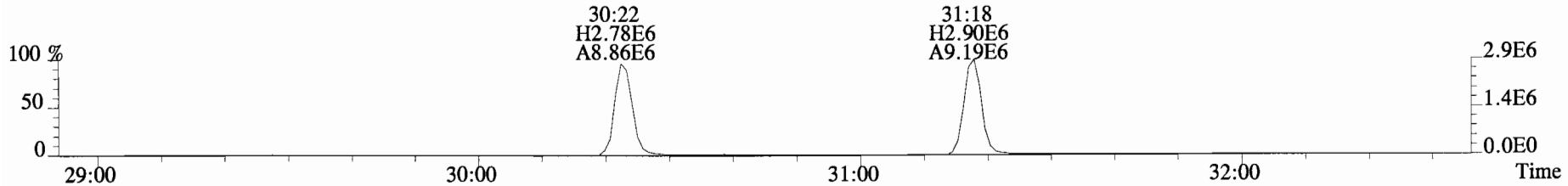


316.9824 S:4

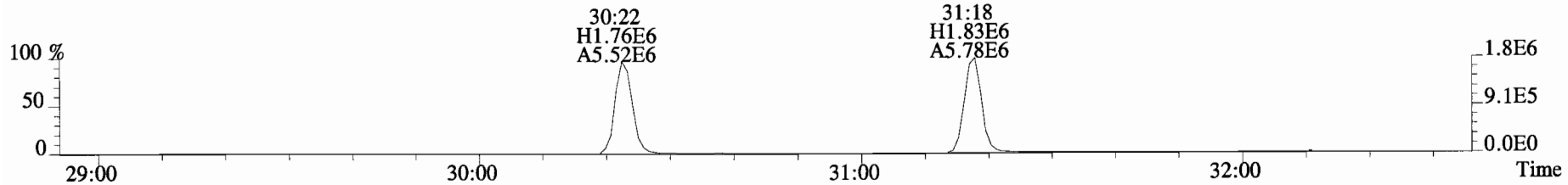


File:141216D1 #1-257 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5

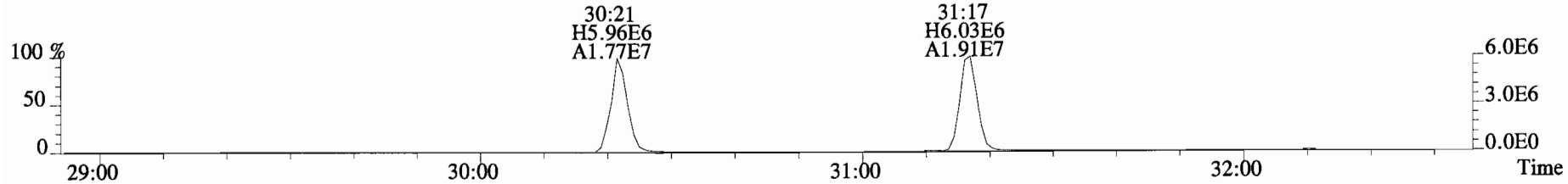
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



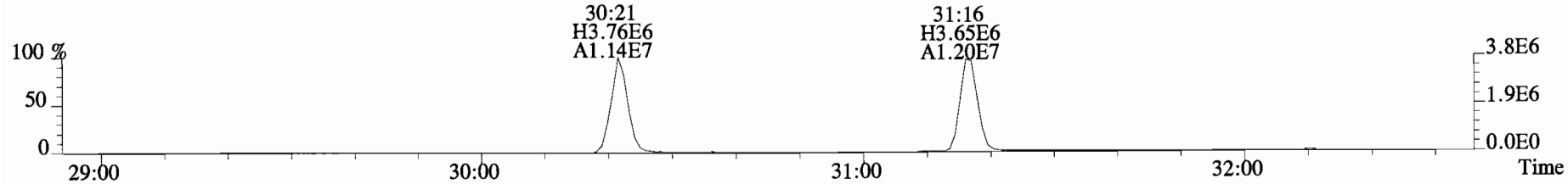
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



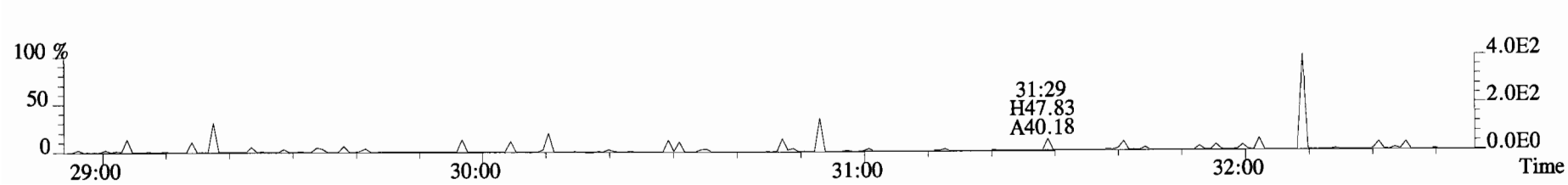
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

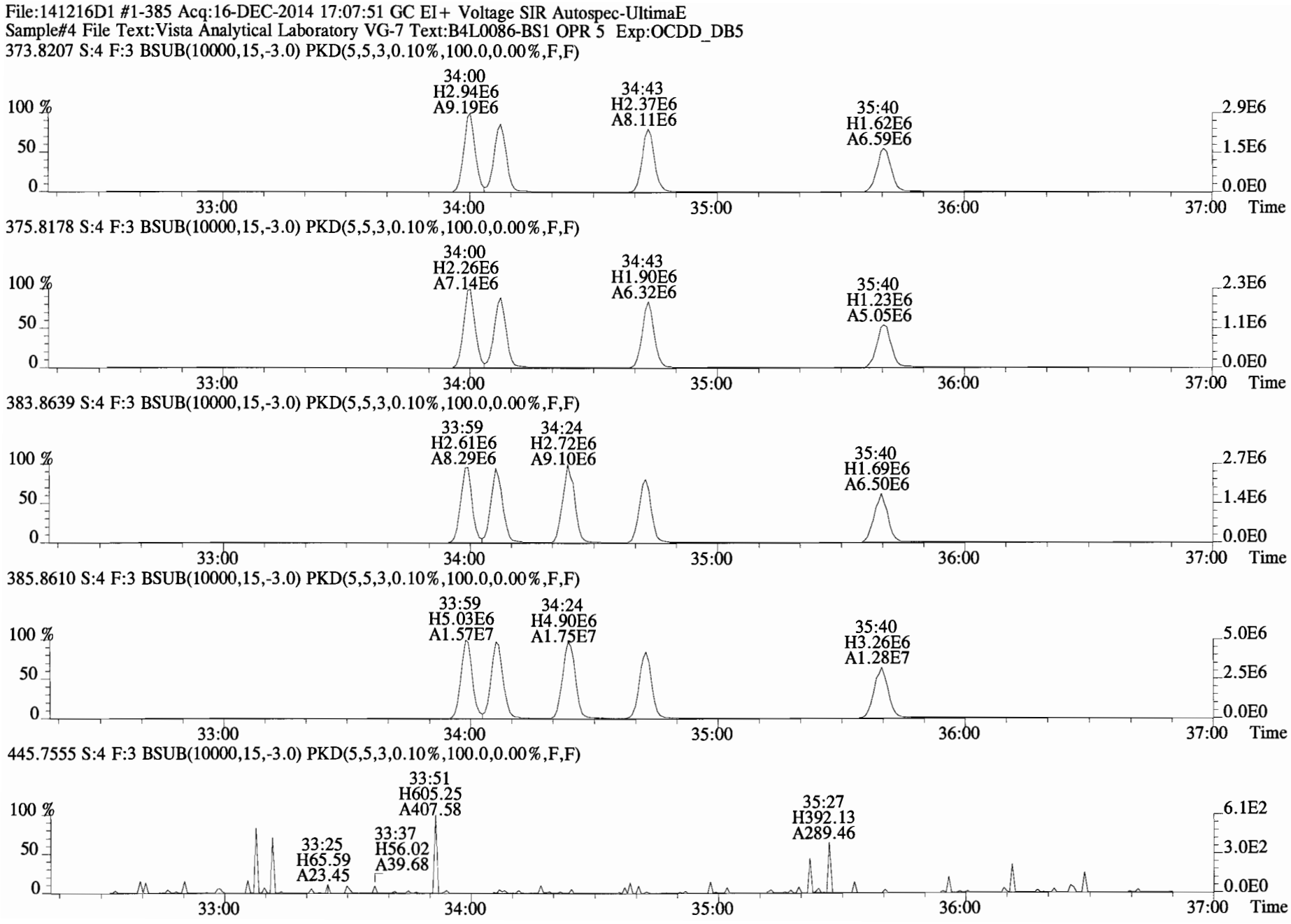


353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

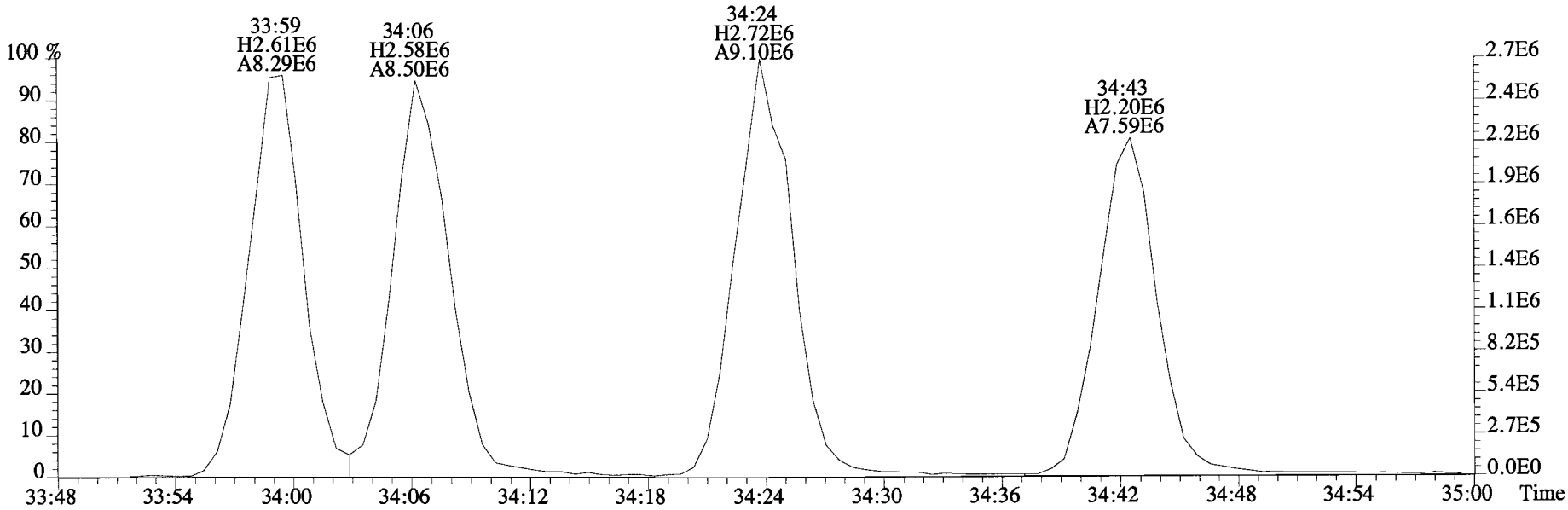


409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

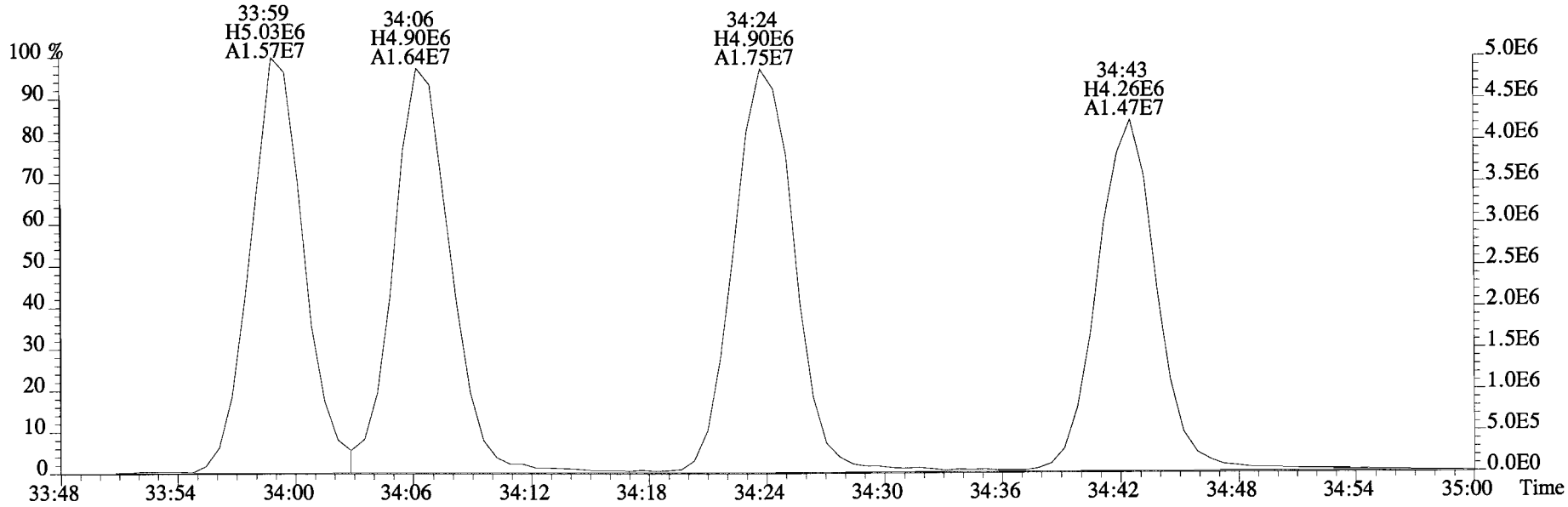



File:141216D1 #1-385 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H2.94E6 A9.19E6
34:43 H2.37E6 A8.11E6
35:40 H1.62E6 A6.59E6
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H2.26E6 A7.14E6
34:43 H1.90E6 A6.32E6
35:40 H1.23E6 A5.05E6
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:59 H2.61E6 A8.29E6
34:24 H2.72E6 A9.10E6
35:40 H1.69E6 A6.50E6
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:59 H5.03E6 A1.57E7
34:24 H4.90E6 A1.75E7
35:40 H3.26E6 A1.28E7
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:51 H605.25 A407.58
33:25 H65.59 A23.45
33:37 H56.02 A39.68
35:27 H392.13 A289.46
100 %
50
0
33:00
34:00
35:00
36:00
37:00
Time
2.9E6
1.5E6
0.0E0
2.3E6
1.1E6
2.7E6
1.4E6
5.0E6
2.5E6
6.1E2
3.0E2

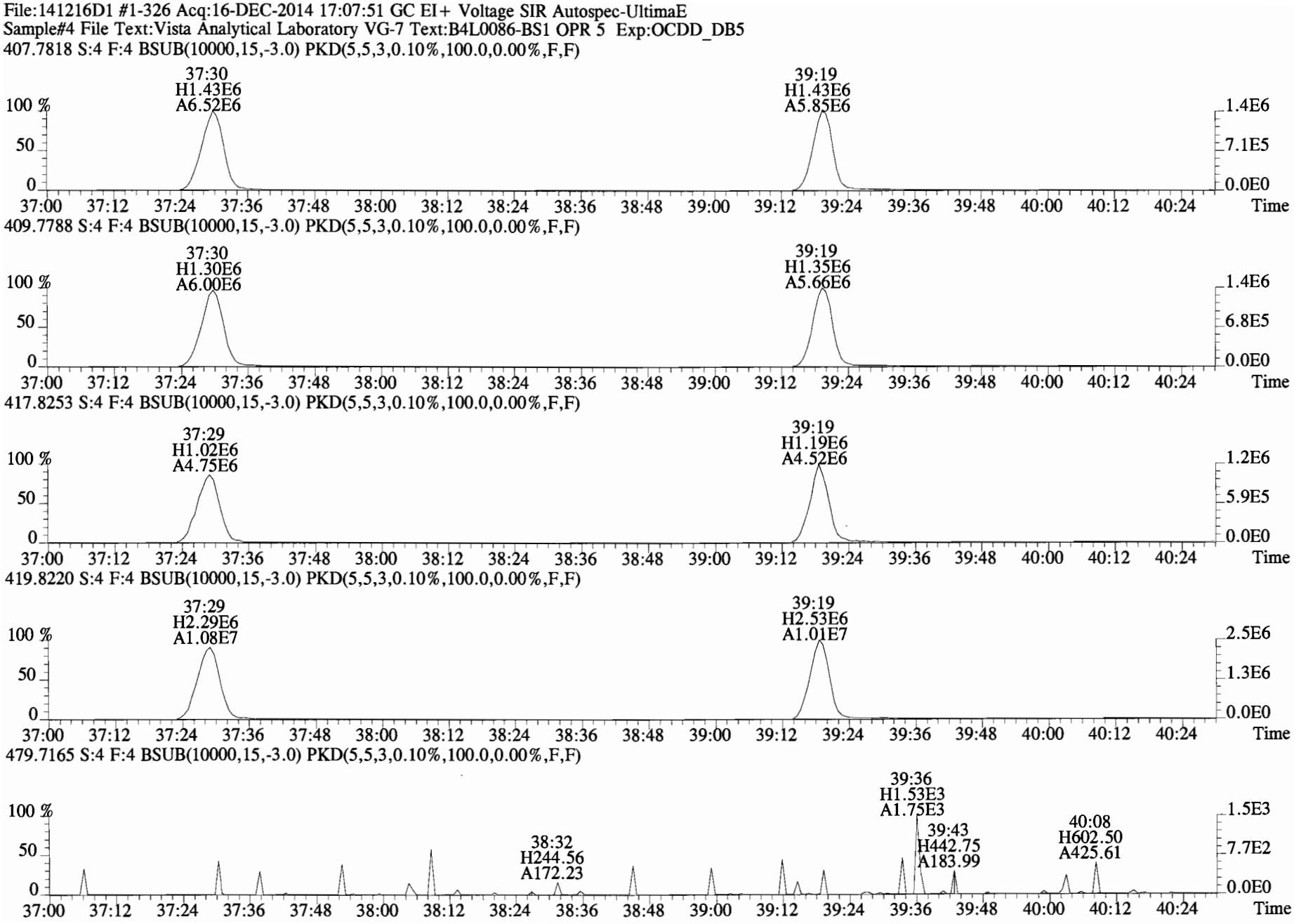
File:141216D1 #1-385 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



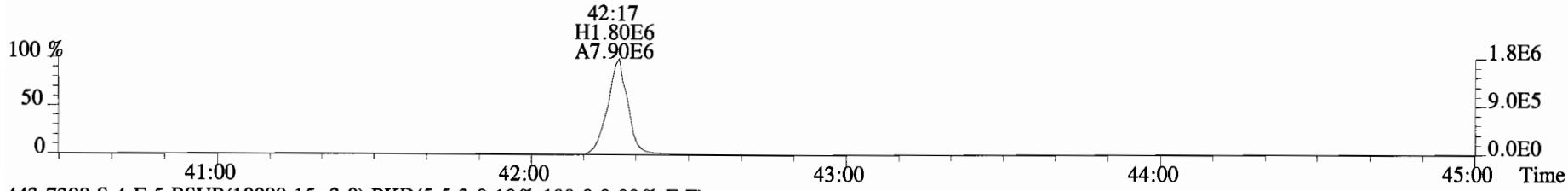
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



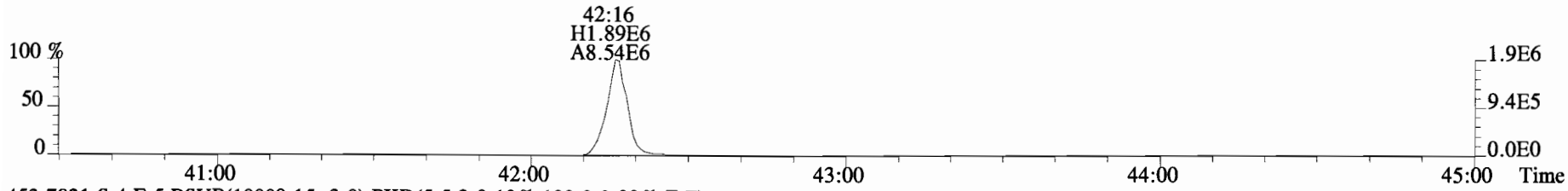
File:141216D1 #1-326 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5



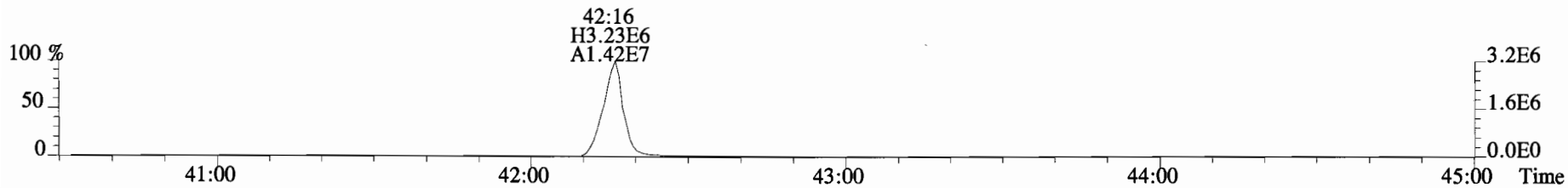
File:141216D1 #1-388 Acq:16-DEC-2014 17:07:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B4L0086-BS1 OPR 5 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



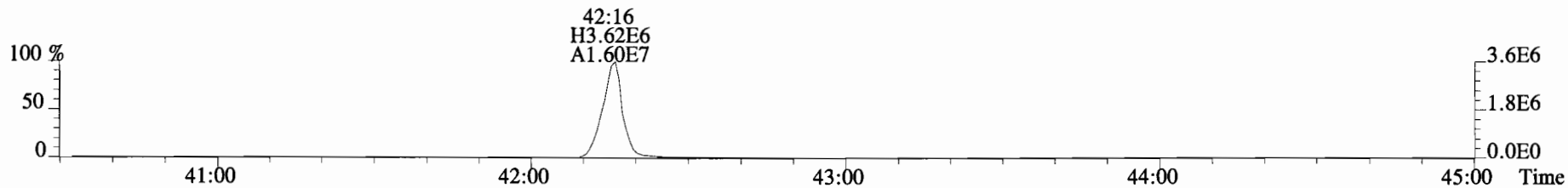
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



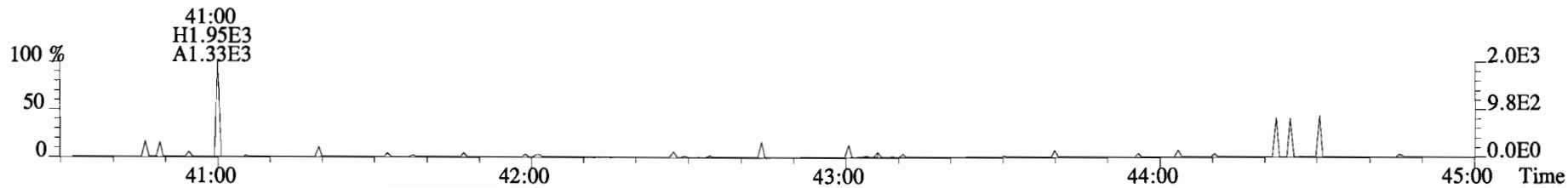
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-MH-9.66-20141203-S Filename: 141212D1 S:11 Acq:12-DEC-14 22:02:45 ConCal: ST141212D1-1
Lab ID: 1400915-02 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol:10.190 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	8.88e+04	0.63	n	1.18	26:56	1.001	0.77628		*	2.5	*
	1,2,3,7,8-PeCDD	2.54e+05	0.62	y	0.92	31:33	1.000	2.4381		*	2.5	*
	1,2,3,4,7,8-HxCDD	3.21e+05	1.19	y	1.09	34:52	1.000	3.4999		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.05e+06	1.21	y	1.07	34:58	1.000	11.801		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.24e+05	1.21	y	0.93	35:16	1.000	7.0451		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	3.03e+07	1.05	y	1.12	38:45	1.000	348.91		*	2.5	*
	OCDD	2.31e+08	0.90	y	0.95	42:02	1.000	3706.5		*	2.5	*
	2,3,7,8-TCDF	1.45e+06	0.75	y	1.08	26:08	1.000	8.6230	7.65	*	2.5	*
	1,2,3,7,8-PeCDF	4.17e+05	1.65	y	1.09	30:21	1.000	2.7824		*	2.5	*
	2,3,4,7,8-PeCDF	8.93e+05	1.65	y	1.04	31:16	1.000	5.6860		*	2.5	*
	1,2,3,4,7,8-HxCDF	2.33e+06	1.29	y	1.39	33:59	1.000	14.183		*	2.5	*
	1,2,3,6,7,8-HxCDF	8.11e+05	1.25	y	1.26	34:06	1.000	5.0408		*	2.5	*
	2,3,4,6,7,8-HxCDF	7.46e+05	1.29	y	1.30	34:42	1.000	4.9717		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.28e+05	1.40	y	1.19	35:39	1.000	1.0584		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	6.62e+06	1.08	y	1.62	37:28	1.000	49.458		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	8.29e+05	1.17	y	1.53	39:18	1.000	6.7799		*	2.5	*
	OCDF	1.14e+07	0.89	y	1.10	42:15	1.000	134.20		*	2.5	*

	Name	Resp	RA		RRF	RT	RRT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	1.90e+07	0.82	y	1.07	26:55	1.022	223.37	114	
IS	13C-1,2,3,7,8-PeCDD	2.22e+07	0.63	y	1.24	31:33	1.198	226.97	116	
IS	13C-1,2,3,4,7,8-HxCDD	1.66e+07	1.27	y	0.72	34:51	1.014	198.86	101	
IS	13C-1,2,3,6,7,8-HxCDD	1.64e+07	1.25	y	0.74	34:58	1.017	193.75	98.7	
IS	13C-1,2,3,7,8,9-HxCDD	1.87e+07	1.23	y	0.86	35:15	1.025	190.10	96.9	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.53e+07	1.05	y	0.64	38:45	1.127	206.30	105	
IS	13C-OCDD	2.58e+07	0.88	y	0.78	42:01	1.222	286.24	72.9	
IS	13C-2,3,7,8-TCDF	3.07e+07	0.76	y	0.92	26:08	0.992	213.80	109	
IS	13C-1,2,3,7,8-PeCDF	2.70e+07	1.58	y	0.95	30:21	1.153	182.60	93.0	
IS	13C-2,3,4,7,8-PeCDF	2.96e+07	1.58	y	0.97	31:16	1.187	195.74	99.7	
IS	13C-1,2,3,4,7,8-HxCDF	2.32e+07	0.52	y	0.99	33:58	0.988	204.06	104	
IS	13C-1,2,3,6,7,8-HxCDF	2.50e+07	0.52	y	1.10	34:05	0.991	198.17	101	
IS	13C-2,3,4,6,7,8-HxCDF	2.27e+07	0.52	y	1.03	34:41	1.009	191.30	97.5	
IS	13C-1,2,3,7,8,9-HxCDF	1.99e+07	0.50	y	0.86	35:38	1.036	202.05	103	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.63e+07	0.45	y	0.71	37:27	1.089	198.26	101	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.57e+07	0.44	y	0.71	39:18	1.143	193.33	98.5	
IS	13C-OCDF	3.02e+07	0.90	y	0.87	42:14	1.228	300.38	76.5	
C/Up	37Cl-2,3,7,8-TCDD	9.38e+06			1.21	26:56	1.023	97.929	125	
RS/RT	13C-1,2,3,4-TCDD	1.55e+07	0.82	y	1.00	26:20	*	196.27		
RS	13C-1,2,3,4-TCDF	3.06e+07	0.78	y	1.00	24:50	*	196.27		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.26e+07	0.53	y	1.00	34:23	*	196.27		

	Name	Conc	EMPC	Qual	noise	DL
	Total Tetra-Dioxins	8.69	10.8		*	*
	Total Penta-Dioxins	19.9	19.9		*	*
	Total Hexa-Dioxins	94.0	94.0		*	*
	Total Hepta-Dioxins	692	692		*	*
	Total Tetra-Furans	66.8	67.9		*	*
	Total Penta-Furans	67.137	67.137		*	*
	Total Hexa-Furans	91.6	91.6		*	*
	Total Hepta-Furans	161	161		*	*

Integrations by Analyst: [signature] Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/18/14

Totals class: TCDD EMPC Entry #: 19

Run: 15 File: 141212D1 S: 11 I: 1 F: 1
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 10.789 Unnamed Concentration: 10.012

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:23	1.299e+05	1.613e+05	0.81	y	2.912e+05	2.5455	
23:45	7.698e+04	9.752e+04	0.79	y	1.745e+05	1.5255	
24:12	2.057e+04	3.152e+04	0.65	n	4.728e+04	0.41332	
25:00	1.136e+04	1.489e+04	0.76	y	2.625e+04	0.22951	
25:13	4.700e+04	6.328e+04	0.74	y	1.103e+05	0.96412	
25:23	5.456e+04	6.203e+04	0.88	y	1.166e+05	1.0193	
25:35	1.840e+04	2.133e+04	0.86	y	3.973e+04	0.34735	
25:49	1.402e+04	1.318e+04	1.06	n	2.332e+04	0.20391	
25:59	2.204e+04	3.285e+04	0.67	y	5.489e+04	0.47986	
26:21	3.425e+04	4.003e+04	0.86	y	7.428e+04	0.64937	
26:41	3.078e+04	4.073e+04	0.76	y	7.151e+04	0.62513	
26:48	8.830e+03	9.991e+03	0.88	y	1.882e+04	0.16454	
26:56	3.863e+04	6.100e+04	0.63	n	8.880e+04	0.77628	2,3,7,8-TCDD
27:14	2.969e+04	3.284e+04	0.90	n	5.813e+04	0.50822	
27:22	7.410e+03	8.741e+03	0.85	y	1.615e+04	0.14119	
27:49	1.277e+04	1.263e+04	1.01	n	2.235e+04	0.19542	

Totals class: PeCDD EMPC Entry #: 21

Run: 15 File: 141212D1 S: 11 I: 1 F: 2
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 19.921 Unnamed Concentration: 17.483

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:27	1.905e+05	3.112e+05	0.61 y	5.017e+05	4.8199	
29:55	5.034e+04	8.562e+04	0.59 y	1.360e+05	1.3062	
30:23	1.010e+05	1.400e+05	0.72 y	2.409e+05	2.3146	
30:32	8.026e+04	1.330e+05	0.60 y	2.132e+05	2.0484	
30:37	6.860e+04	1.124e+05	0.61 y	1.810e+05	1.7391	
30:50	1.117e+05	1.769e+05	0.63 y	2.886e+05	2.7726	
31:09	3.837e+04	5.395e+04	0.71 y	9.233e+04	0.88703	
31:33	9.695e+04	1.568e+05	0.62 y	2.538e+05	2.4381	1,2,3,7,8-PeCDD
31:38	2.325e+04	3.698e+04	0.63 y	6.024e+04	0.57871	
31:55	4.043e+04	6.536e+04	0.62 y	1.058e+05	1.0163	

Totals class: HxCDD EMPC Entry #: 23

Run: 15 File: 141212D1 S: 11 I: 1 F: 3
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 94.024 Unnamed Concentration: 71.677

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:20	1.123e+06	9.065e+05	1.24 y	2.030e+06	22.629	
33:54	4.230e+05	3.299e+05	1.28 y	7.529e+05	8.3942	
34:09	1.822e+06	1.422e+06	1.28 y	3.244e+06	36.169	
34:17	1.020e+05	7.880e+04	1.29 y	1.808e+05	2.0161	
34:52	1.746e+05	1.465e+05	1.19 y	3.211e+05	3.4999	1,2,3,4,7,8-HxCDD
34:58	5.760e+05	4.748e+05	1.21 y	1.051e+06	11.801	1,2,3,6,7,8-HxCDD
35:09	1.205e+05	1.010e+05	1.19 y	2.215e+05	2.4698	
35:16	3.424e+05	2.819e+05	1.21 y	6.243e+05	7.0451	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 15 File: 141212D1 S: 11 I: 1 F: 4
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 692.04 Unnamed Concentration: 343.133

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:52	1.527e+07	1.449e+07	1.05	y	2.976e+07	343.13	
38:45	1.553e+07	1.474e+07	1.05	y	3.026e+07	348.91	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 15 File: 141212D1 S: 11 I: 1 F: 1
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 67.868 Unnamed Concentration: 59.245

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
21:11	6.004e+04	7.580e+04	0.79	y	1.358e+05	0.80508	
21:44	1.209e+05	1.604e+05	0.75	y	2.812e+05	1.6668	
22:23	2.459e+05	3.243e+05	0.76	y	5.703e+05	3.3799	
22:55	4.096e+05	5.649e+05	0.73	y	9.745e+05	5.7757	
23:20	4.215e+05	5.726e+05	0.74	y	9.941e+05	5.8921	
23:48	1.996e+05	2.486e+05	0.80	y	4.482e+05	2.6566	
23:56	2.327e+05	3.091e+05	0.75	y	5.418e+05	3.2112	
24:06	3.695e+05	4.894e+05	0.75	y	8.590e+05	5.0910	
24:29	6.361e+04	9.407e+04	0.68	y	1.577e+05	0.93454	
24:36	1.097e+05	1.323e+05	0.83	y	2.421e+05	1.4347	
24:45	2.903e+05	3.809e+05	0.76	y	6.712e+05	3.9785	
24:52	2.461e+05	3.133e+05	0.79	y	5.594e+05	3.3155	
25:18	3.014e+05	3.971e+05	0.76	y	6.985e+05	4.1399	
25:33	1.600e+05	2.084e+05	0.77	y	3.684e+05	2.1833	
25:45	6.249e+04	7.194e+04	0.87	y	1.344e+05	0.79680	
25:56	8.828e+04	1.109e+05	0.80	y	1.991e+05	1.1804	
26:02	1.214e+05	1.444e+05	0.84	y	2.658e+05	1.5754	
26:08	6.236e+05	8.313e+05	0.75	y	1.455e+06	8.6230	2,3,7,8-TCDF
26:28	7.047e+05	8.923e+05	0.79	y	1.597e+06	9.4658	
26:43	4.057e+04	5.451e+04	0.74	y	9.507e+04	0.56349	
27:39	1.093e+04	1.345e+04	0.81	y	2.438e+04	0.14452	
27:56	1.456e+05	1.004e+05	1.45	n	1.778e+05	1.0538	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 15 File: 141212D1 S: 11 I: 1 F: 1
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 14.456 Unnamed Concentration: 14.456

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:56	1.321e+06	8.995e+05	1.47 y	2.220e+06	14.456	

Totals class: PeCDF EMPC Entry #: 31

Run: 15 File: 141212D1 S: 11 I: 1 F: 2
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 52.681 Unnamed Concentration: 44.212

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:17	5.413e+05	3.497e+05	1.55	y	8.910e+05	5.8020	
29:26	1.878e+06	1.196e+06	1.57	y	3.074e+06	20.016	
29:47	8.573e+04	5.677e+04	1.51	y	1.425e+05	0.92797	
29:59	5.099e+05	3.247e+05	1.57	y	8.346e+05	5.4344	
30:11	2.585e+05	1.591e+05	1.63	y	4.176e+05	2.7192	
30:21	2.597e+05	1.574e+05	1.65	y	4.171e+05	2.7824	1,2,3,7,8-PeCDF
30:36	4.184e+05	2.719e+05	1.54	y	6.904e+05	4.4955	
31:04	2.842e+04	1.621e+04	1.75	y	4.463e+04	0.29062	
31:10	2.031e+05	1.192e+05	1.70	y	3.223e+05	2.0988	
31:16	5.561e+05	3.367e+05	1.65	y	8.928e+05	5.6860	2,3,4,7,8-PeCDF
31:19	1.816e+05	1.117e+05	1.63	y	2.933e+05	1.9096	
31:33	2.065e+04	1.337e+04	1.54	y	3.401e+04	0.22149	
32:10	2.603e+04	1.955e+04	1.33	y	4.558e+04	0.29678	

Totals class: HxCDF EMPC Entry #: 33

Run: 15 File: 141212D1 S: 11 I: 1 F: 3
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

Total Concentration: 91.585 Unnamed Concentration: 66.331

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:48	6.476e+05	4.925e+05	1.31 y	1.140e+06	7.6505	
32:57	2.424e+06	1.932e+06	1.25 y	4.356e+06	29.233	
33:19	1.164e+05	9.644e+04	1.21 y	2.128e+05	1.4282	
33:30	1.912e+06	1.504e+06	1.27 y	3.416e+06	22.920	
33:53	2.811e+05	2.254e+05	1.25 y	5.065e+05	3.3991	
33:59	1.314e+06	1.019e+06	1.29 y	2.333e+06	14.183	1,2,3,4,7,8-HxCDF
34:06	4.508e+05	3.598e+05	1.25 y	8.106e+05	5.0408	1,2,3,6,7,8-HxCDF
34:23	6.041e+04	4.519e+04	1.34 y	1.056e+05	0.70859	
34:42	4.201e+05	3.260e+05	1.29 y	7.461e+05	4.9717	2,3,4,6,7,8-HxCDF
35:39	7.455e+04	5.344e+04	1.40 y	1.280e+05	1.0584	1,2,3,7,8,9-HxCDF
35:43	8.523e+04	6.240e+04	1.37 y	1.476e+05	0.99065	

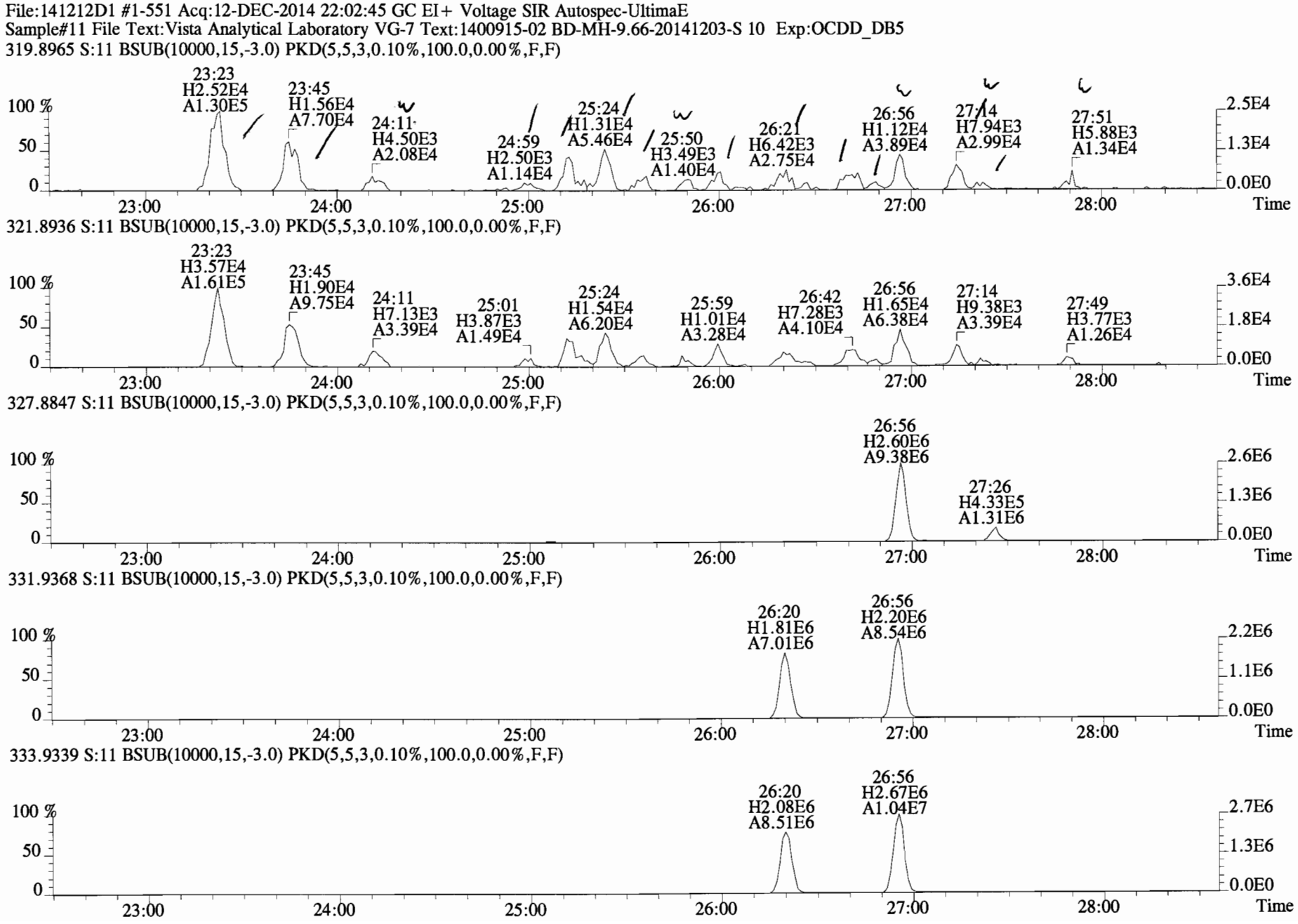
Totals class: HpCDF EMPC Entry #: 35

Run: 15 File: 141212D1 S: 11 I: 1 F: 4
Acquired: 12-DEC-14 22:02:45 Processed: 15-DEC-14 08:55:30

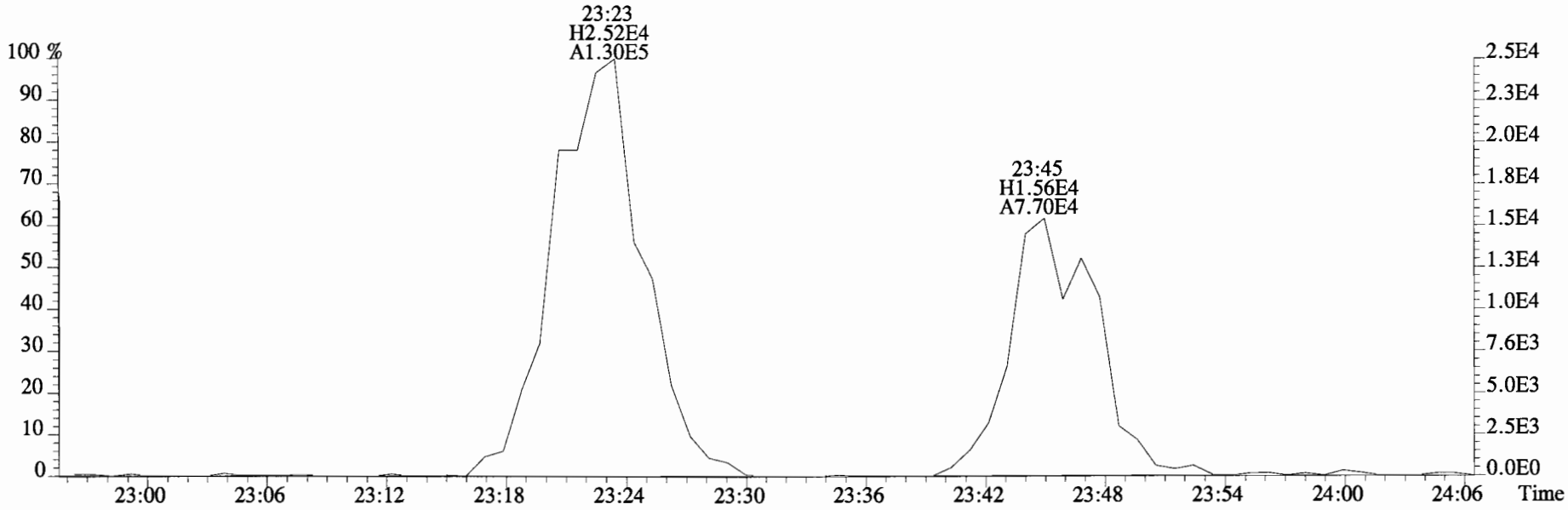
Total Concentration: 160.73 Unnamed Concentration: 104.494

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:28	3.433e+06	3.187e+06	1.08 y	6.620e+06	49.458	1,2,3,4,6,7,8-HpCDF
37:52	1.600e+05	1.420e+05	1.13 y	3.020e+05	2.3590	
38:05	6.816e+06	6.261e+06	1.09 y	1.308e+07	102.13	
39:18	4.465e+05	3.828e+05	1.17 y	8.293e+05	6.7799	1,2,3,4,7,8,9-HpCDF

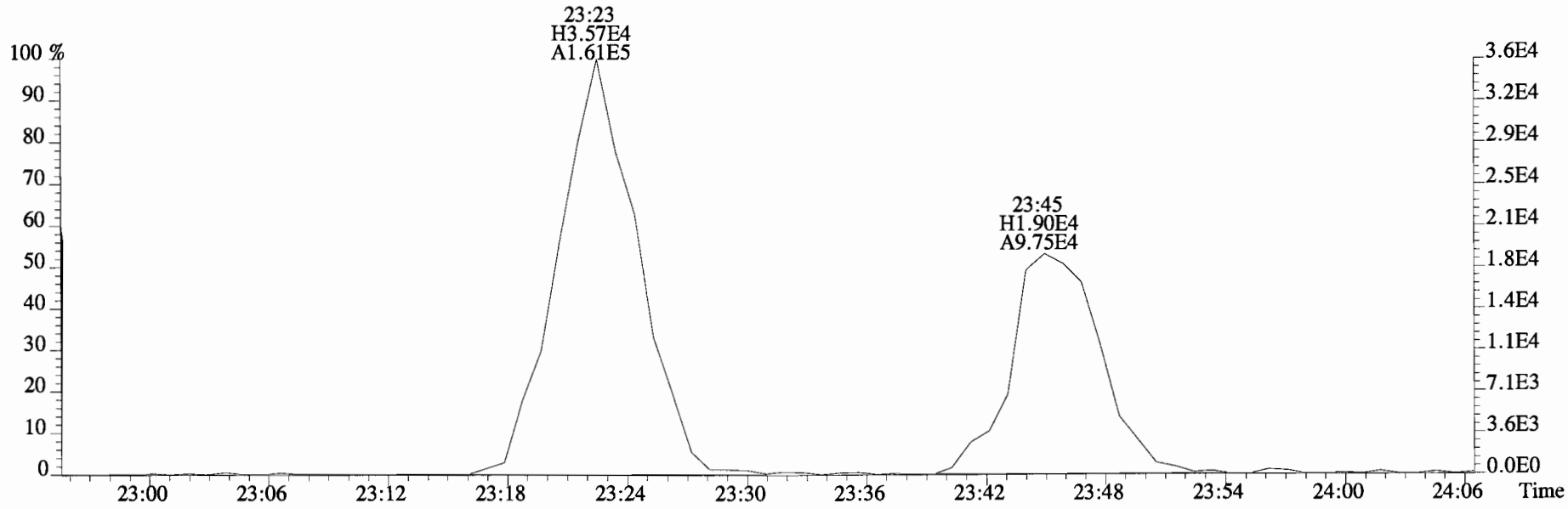
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5



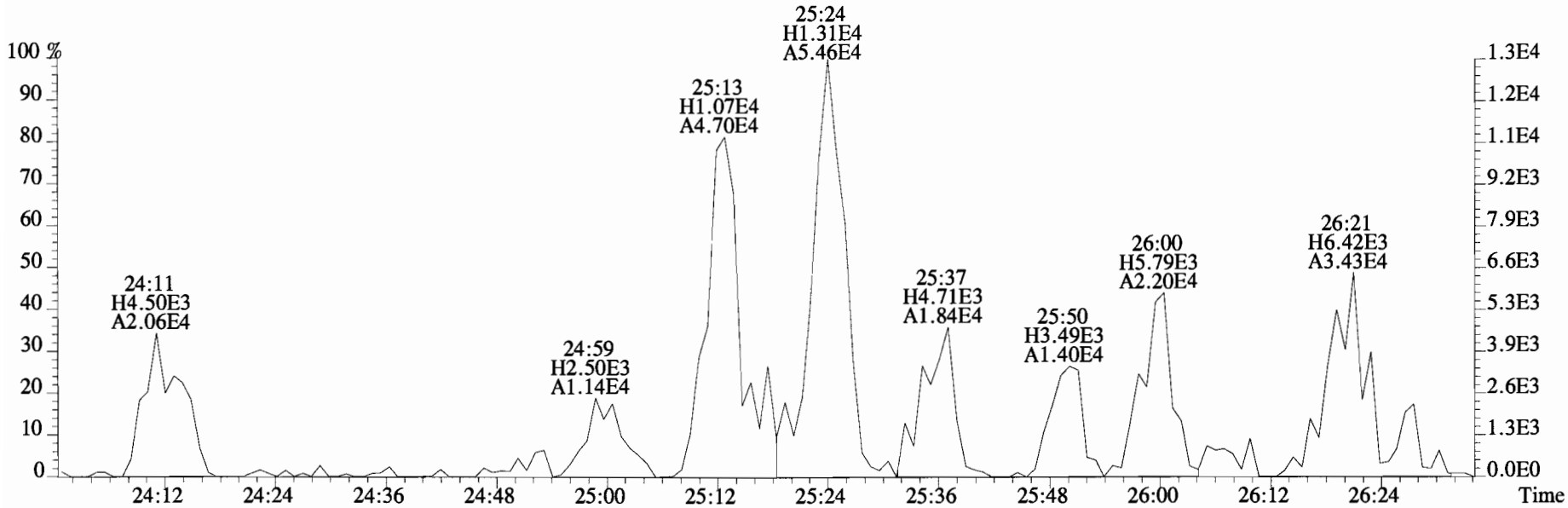
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



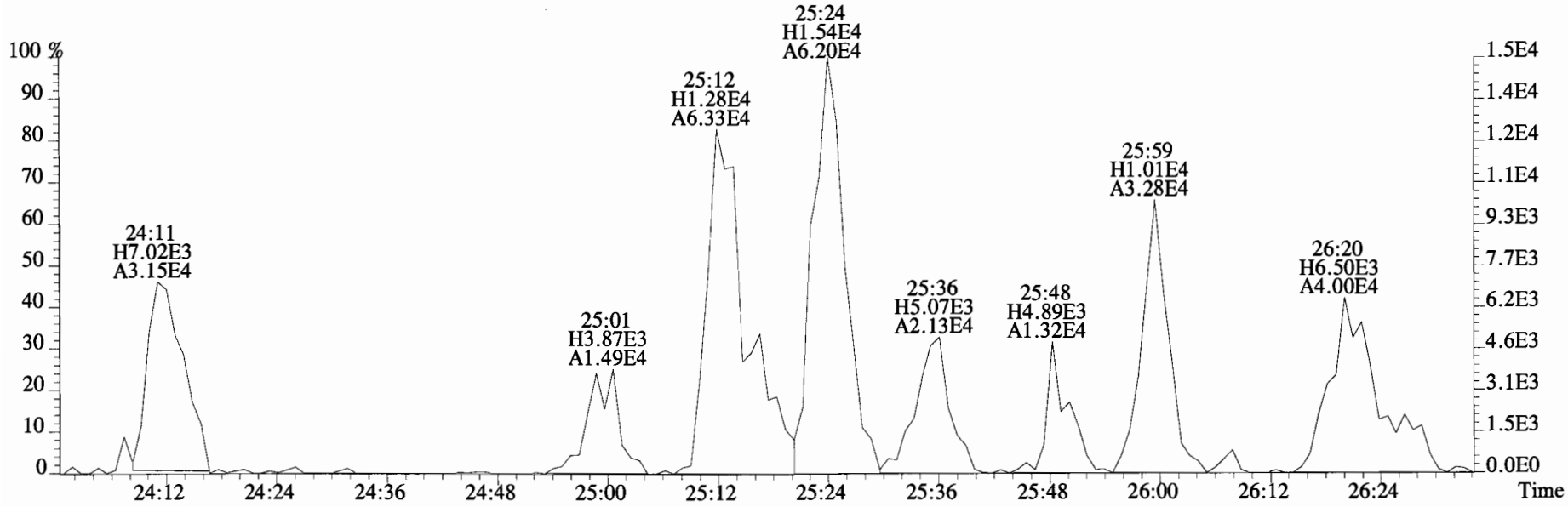
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



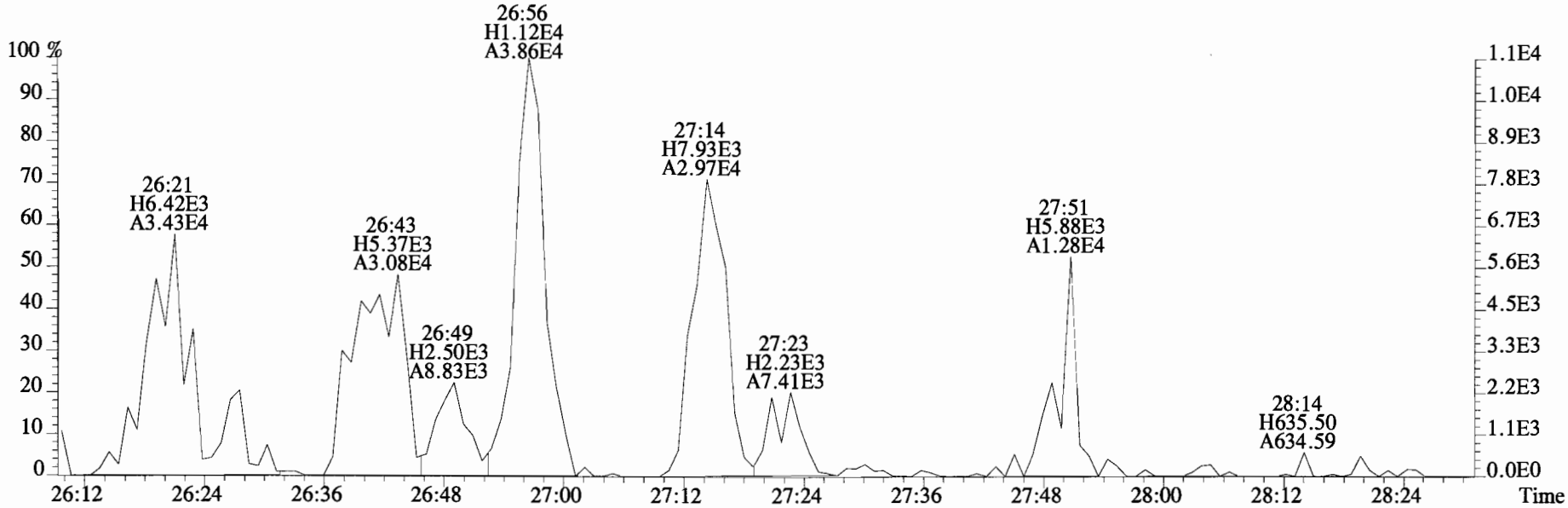
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



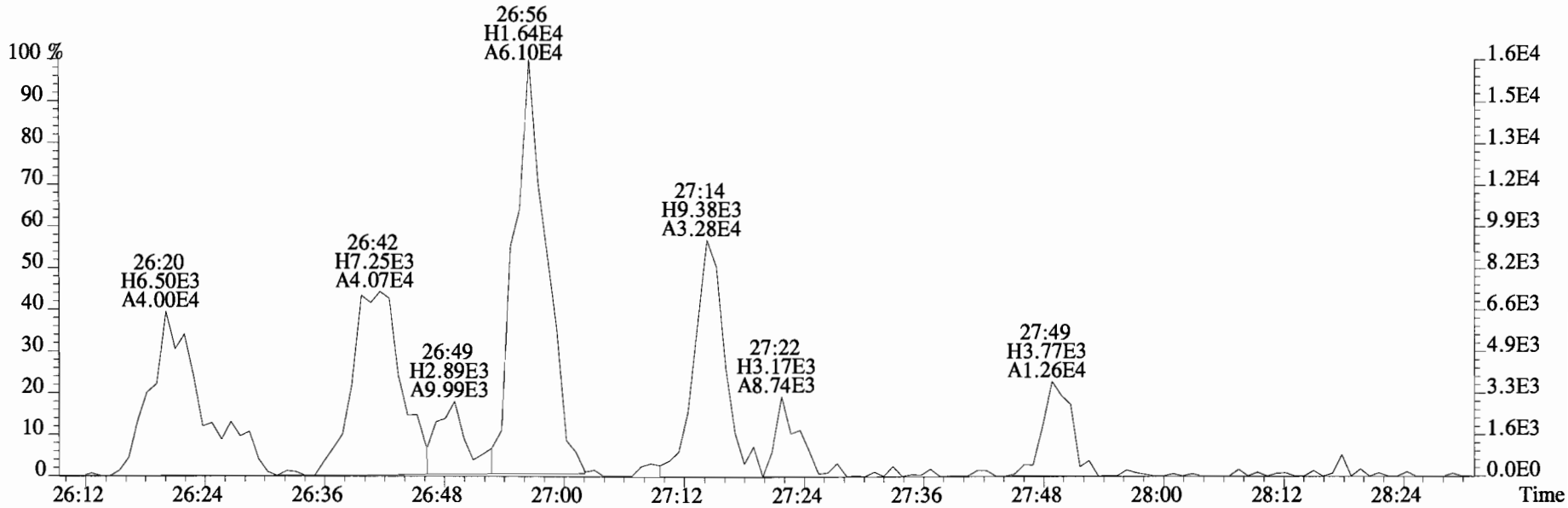
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

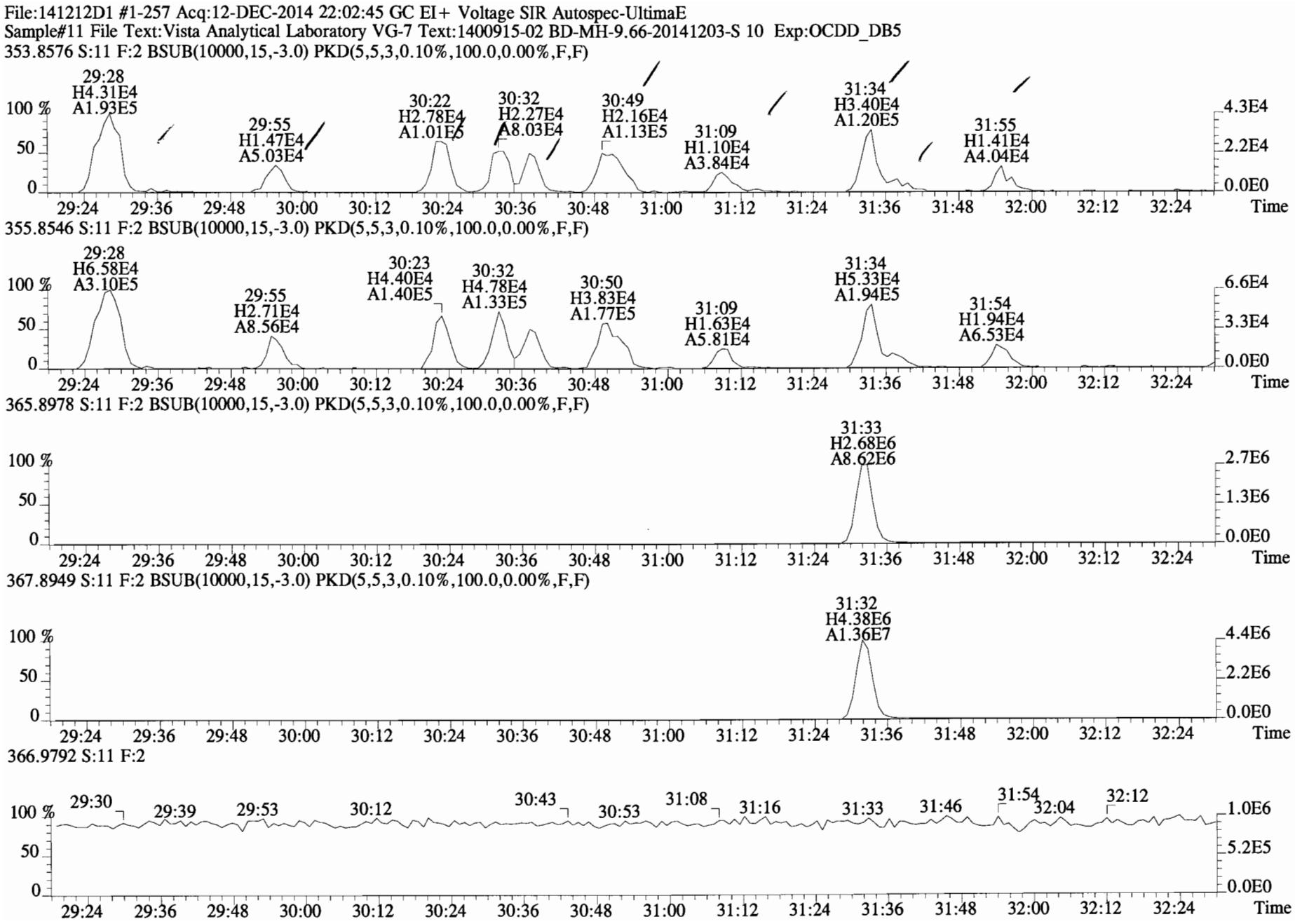


File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0)

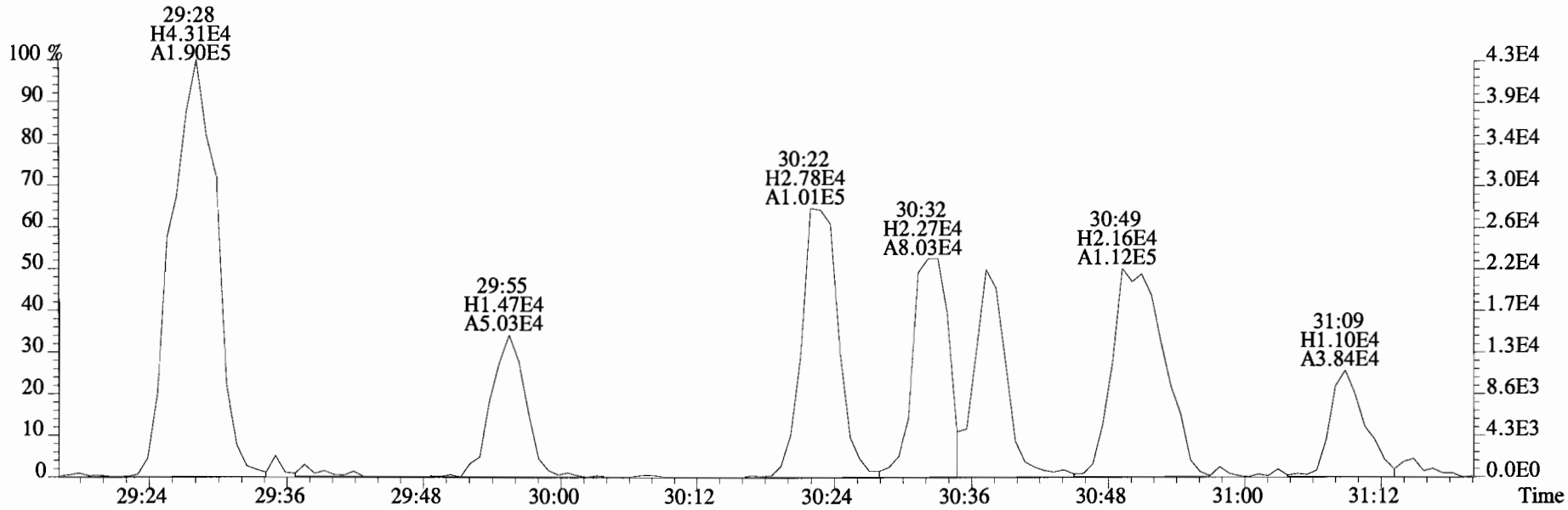


321.8936 S:11 BSUB(10000,15,-3.0)

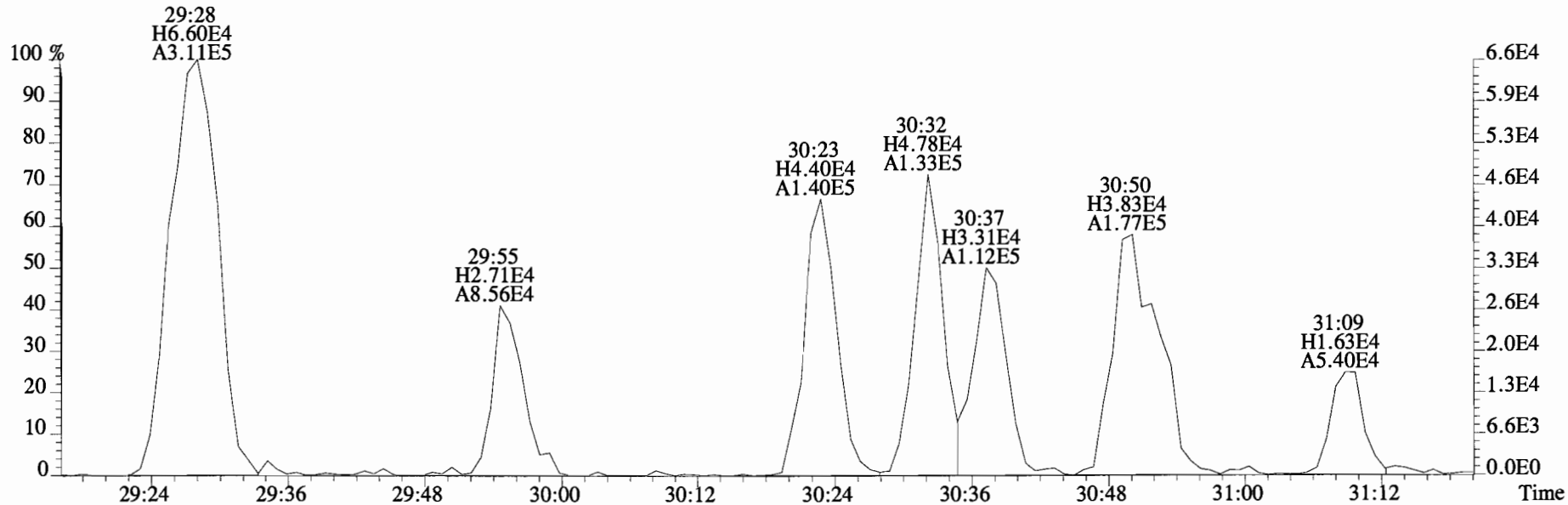



File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H4.31E4 A1.93E5
29:55 H1.47E4 A5.03E4
30:22 H2.78E4 A1.01E5
30:32 H2.27E4 A8.03E4
30:49 H2.16E4 A1.13E5
31:09 H1.10E4 A3.84E4
31:34 H3.40E4 A1.20E5
31:55 H1.41E4 A4.04E4
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H6.58E4 A3.10E5
29:55 H2.71E4 A8.56E4
30:23 H4.40E4 A1.40E5
30:32 H4.78E4 A1.33E5
30:50 H3.83E4 A1.77E5
31:09 H1.63E4 A5.81E4
31:34 H5.33E4 A1.94E5
31:54 H1.94E4 A6.53E4
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:33 H2.68E6 A8.62E6
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:32 H4.38E6 A1.36E7
366.9792 S:11 F:2
29:30
29:39
29:53
30:12
30:43
30:53
31:08
31:16
31:33
31:46
31:54
32:04
32:12
100 %
50
0
29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 32:00 32:12 32:24
Time
4.3E4
2.2E4
0.0E0
6.6E4
3.3E4
2.7E6
1.3E6
4.4E6
2.2E6
1.0E6
5.2E5

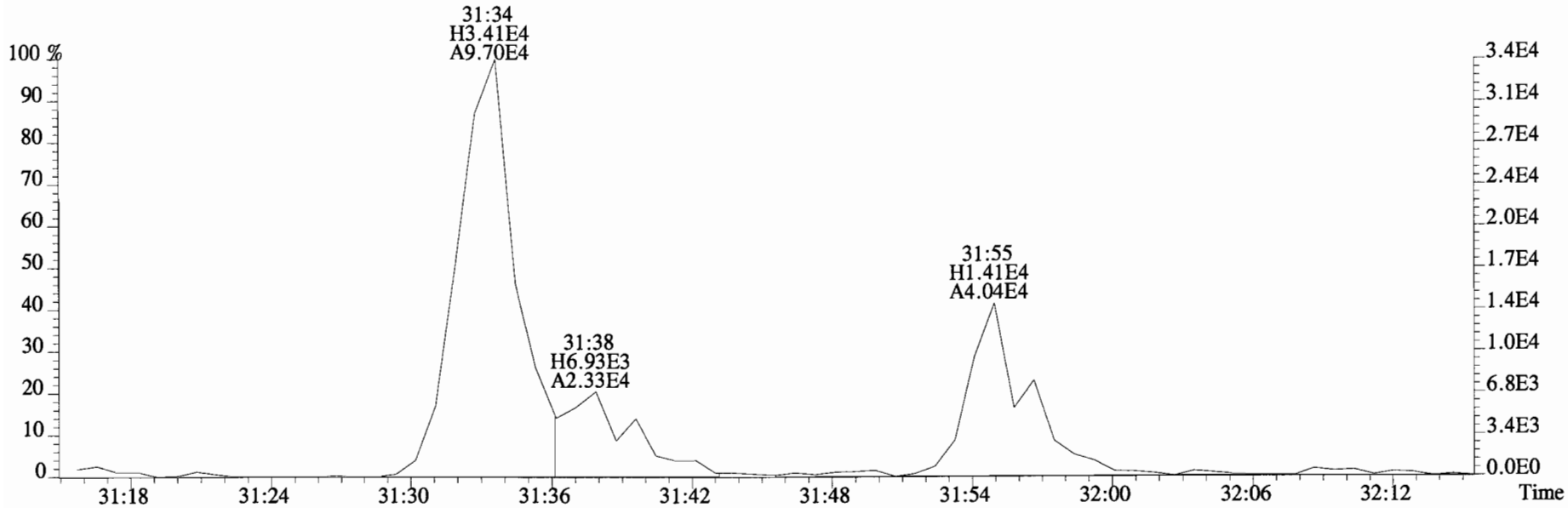
File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



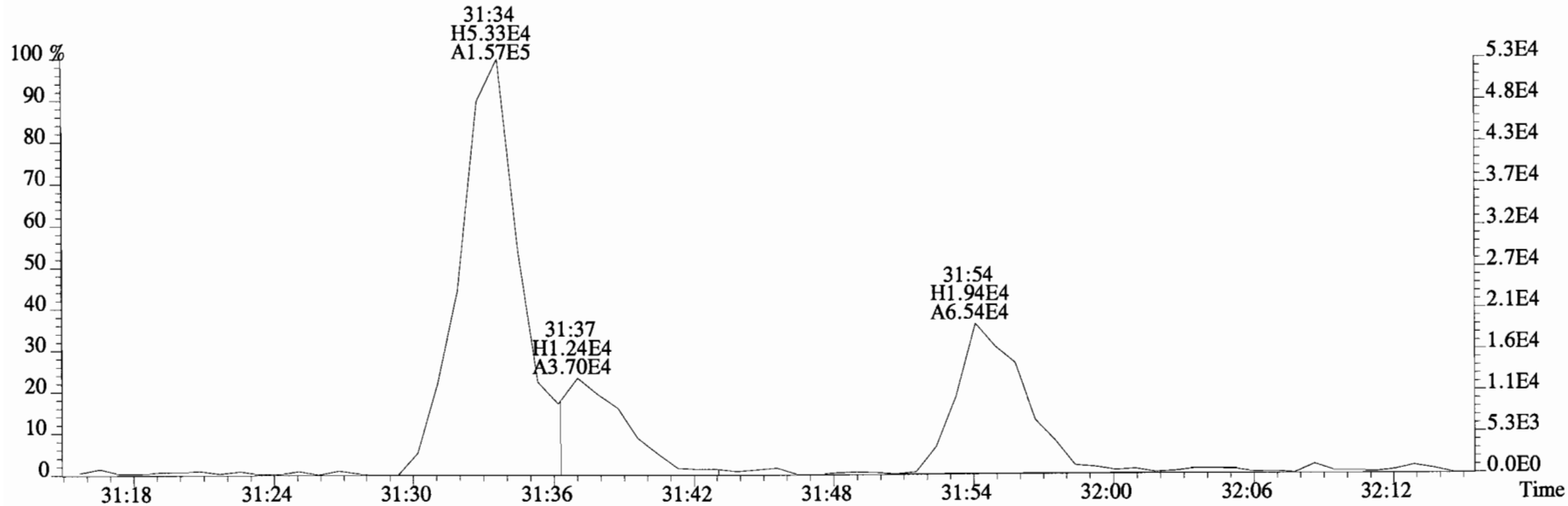
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



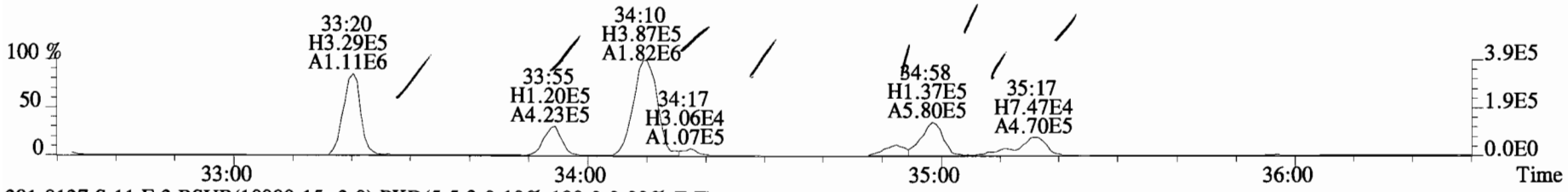
File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



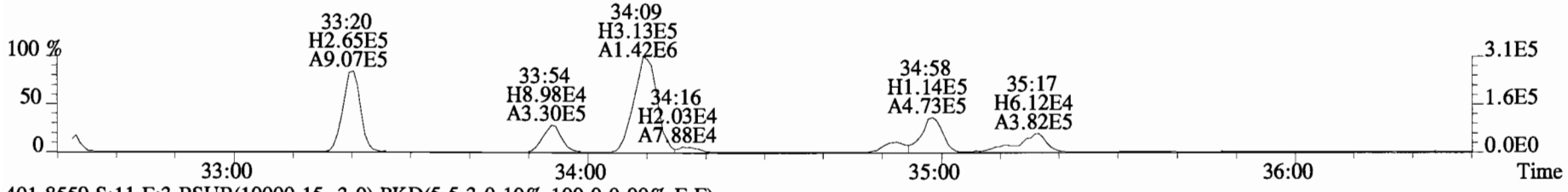
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



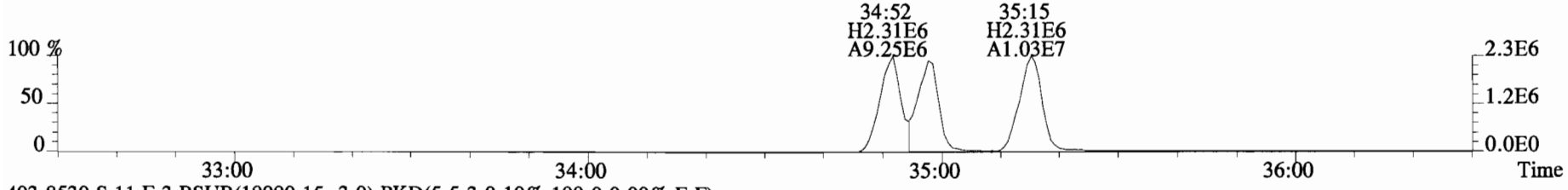
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



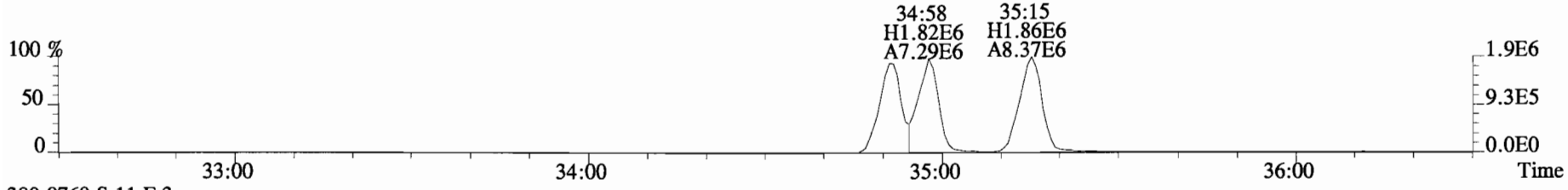
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



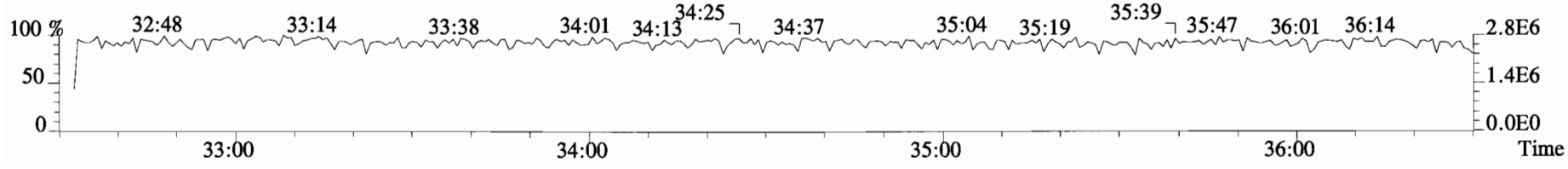
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



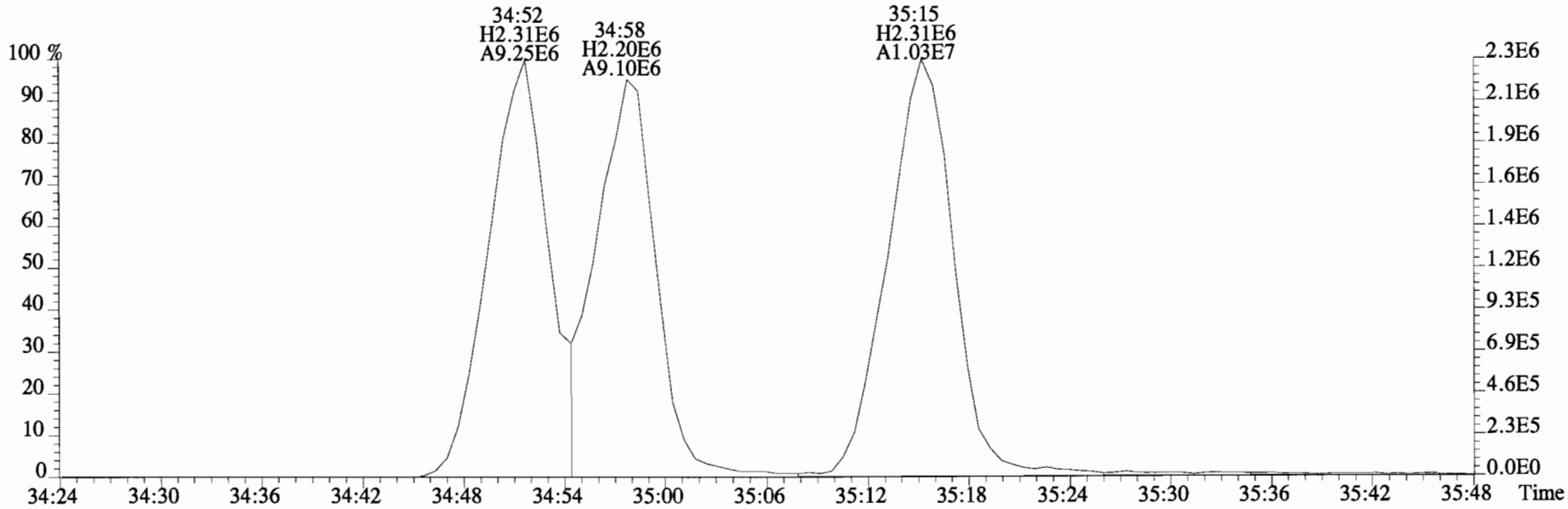
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



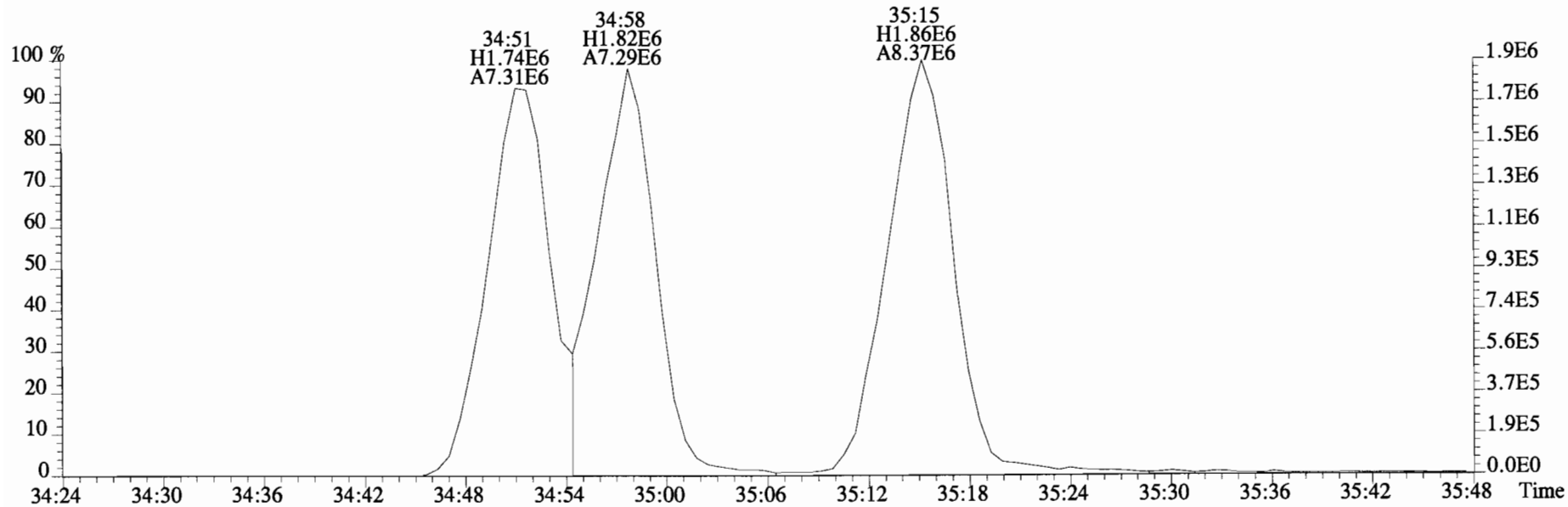
380.9760 S:11 F:3



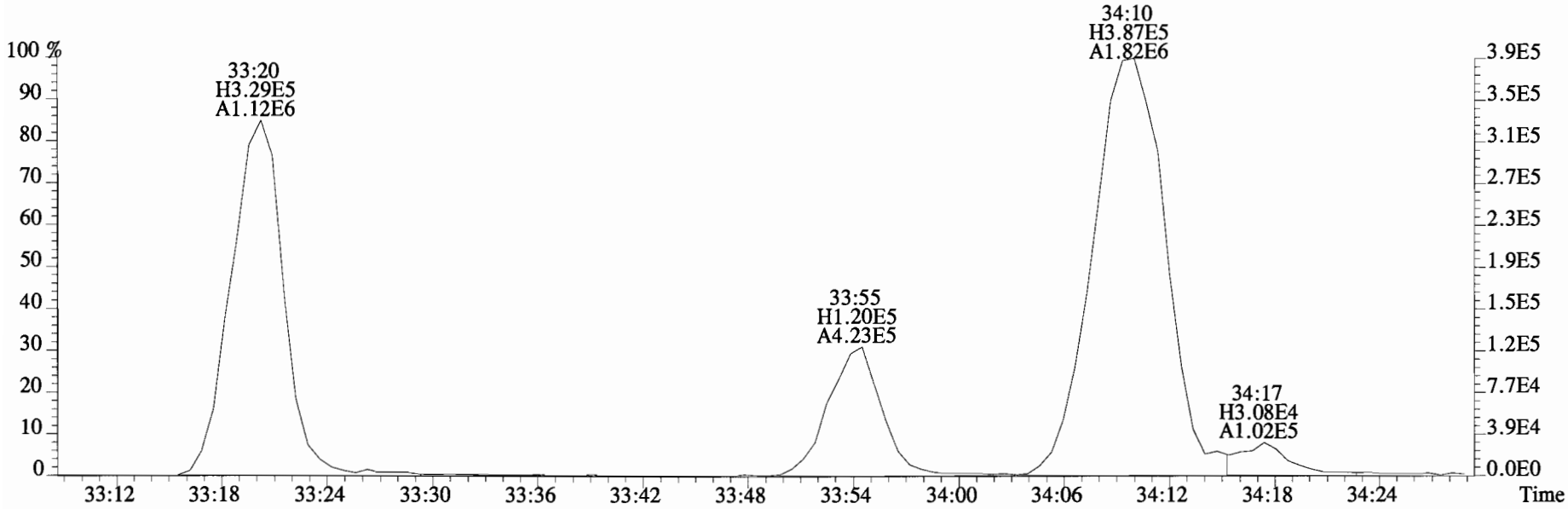
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



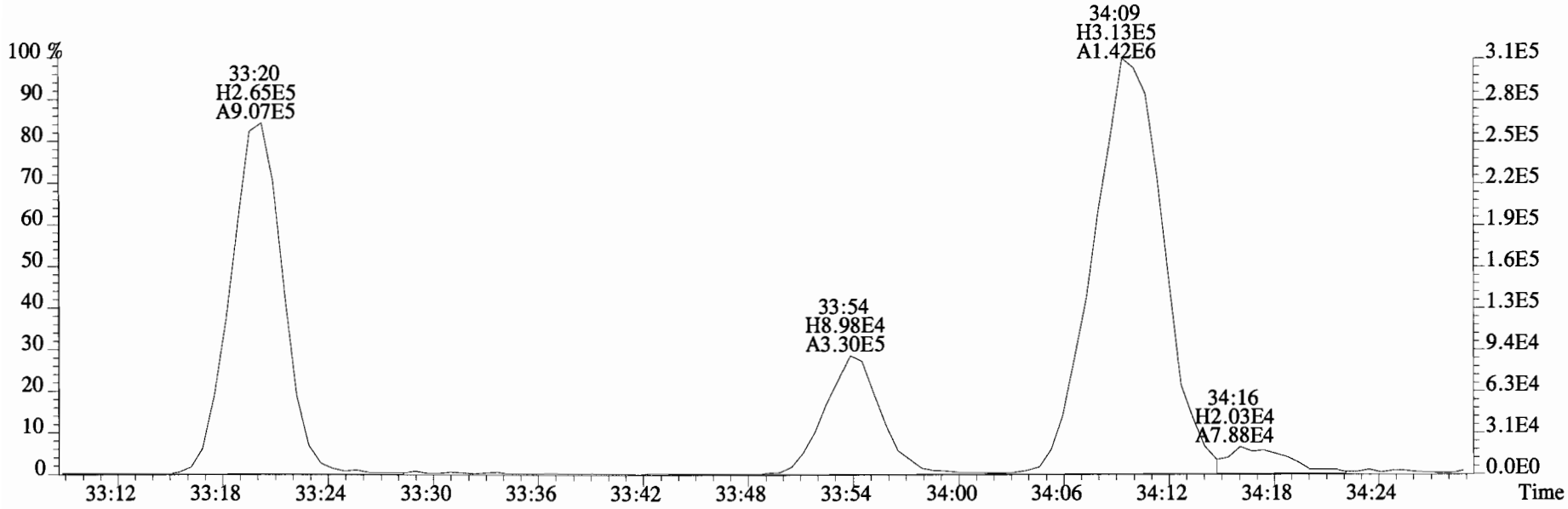
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



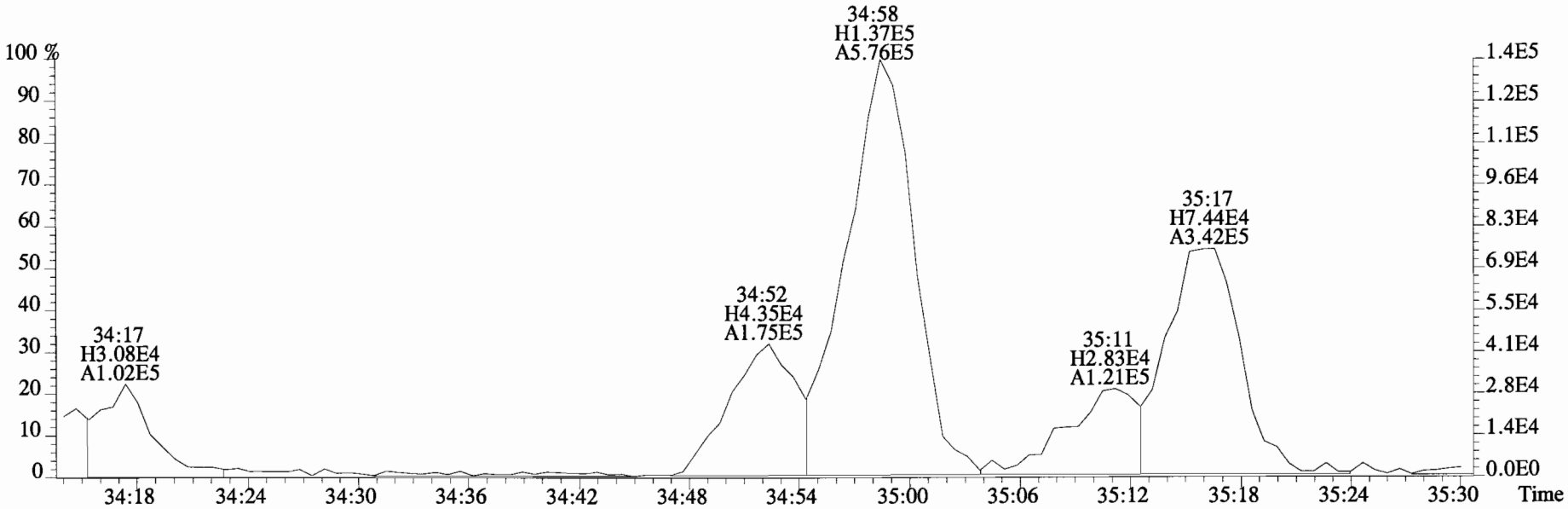
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



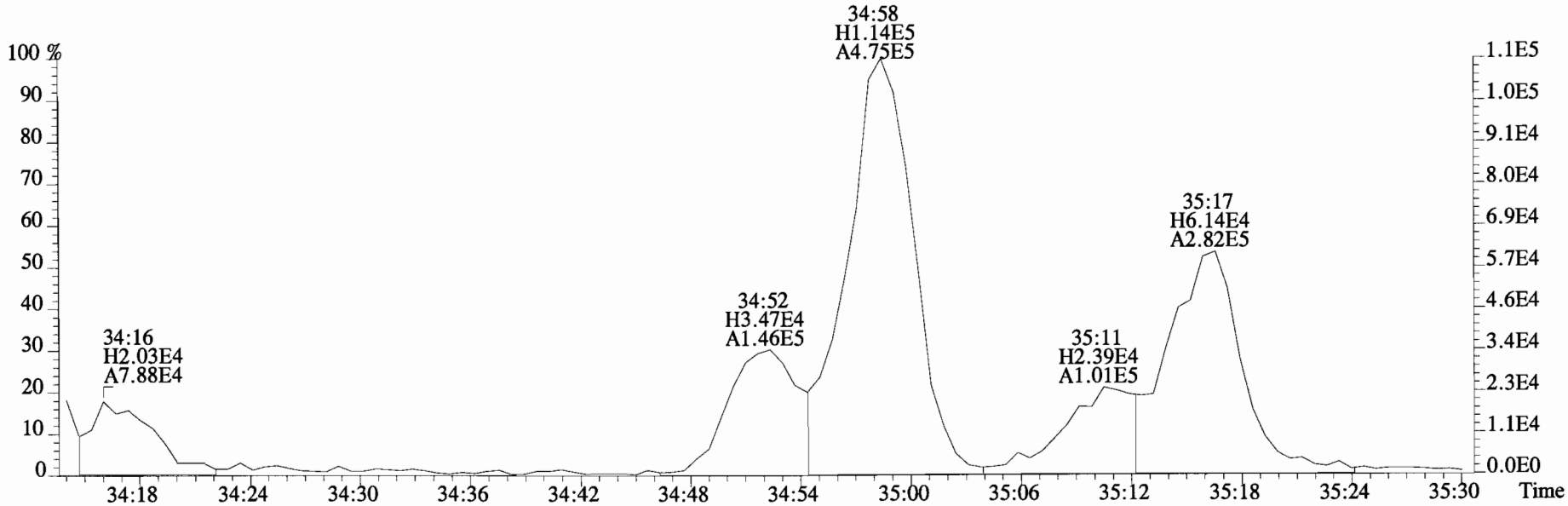
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



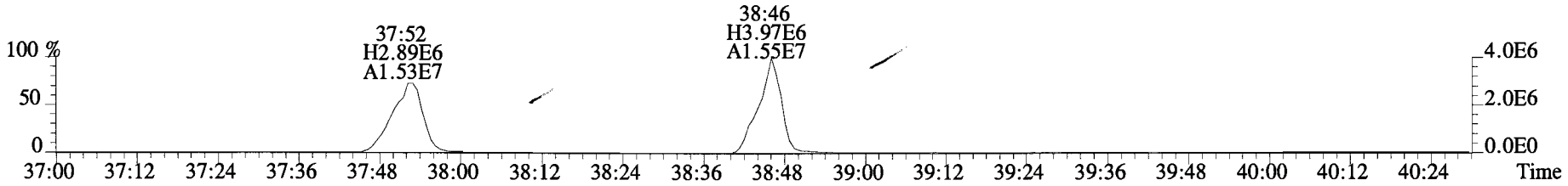
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



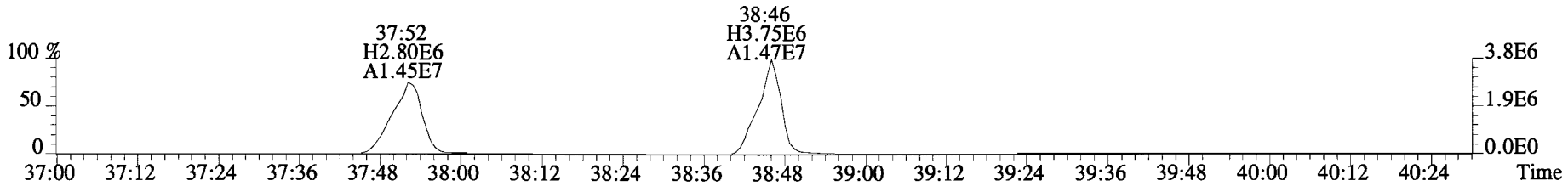
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



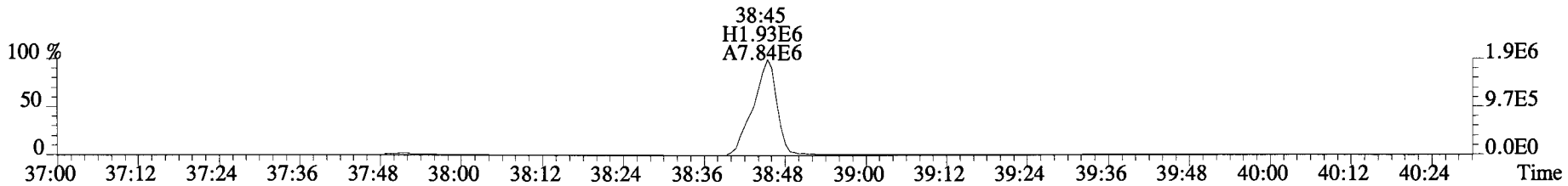
File:141212D1 #1-326 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



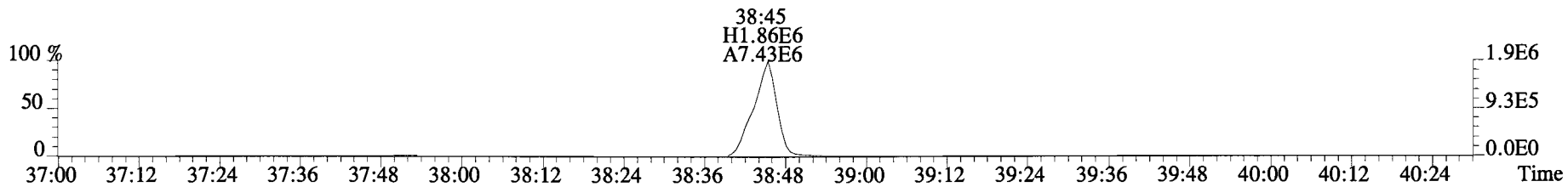
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



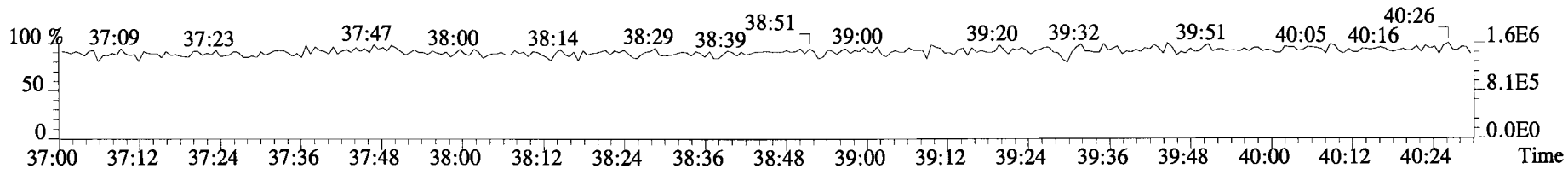
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



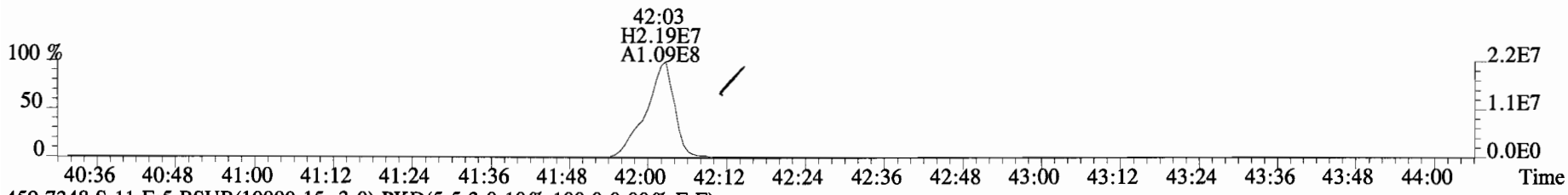
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



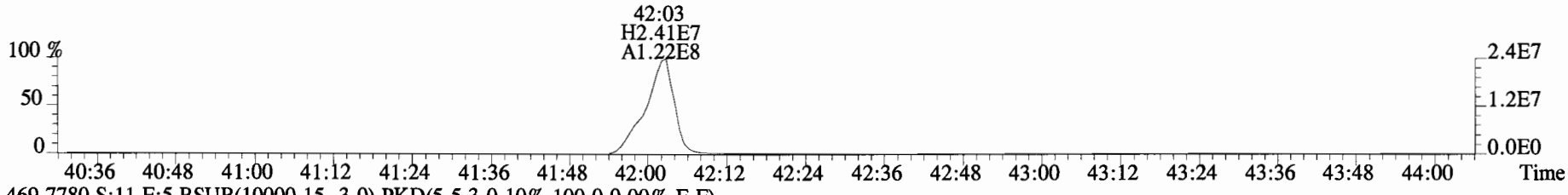
430.9728 S:11 F:4



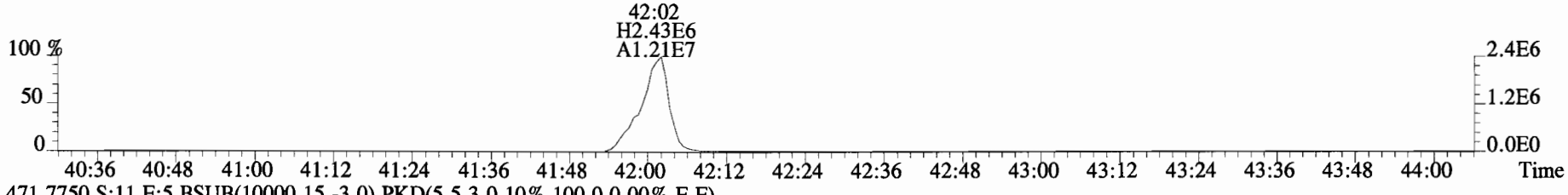
File:141212D1 #1-389 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



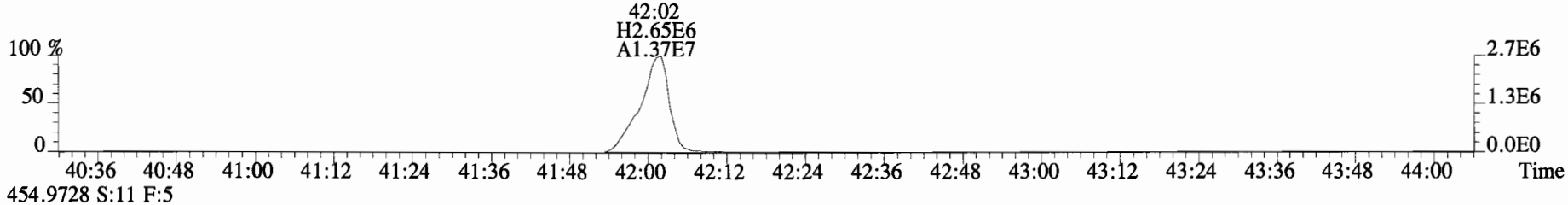
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



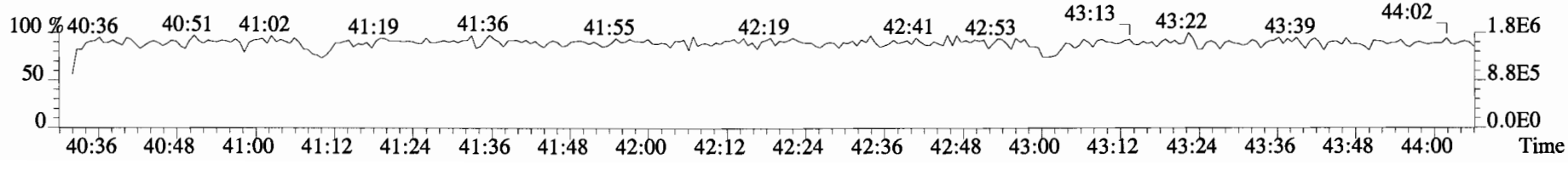
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

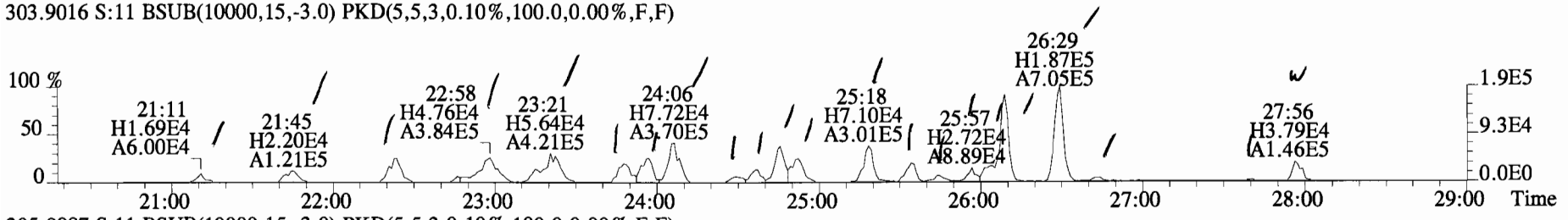


454.9728 S:11 F:5

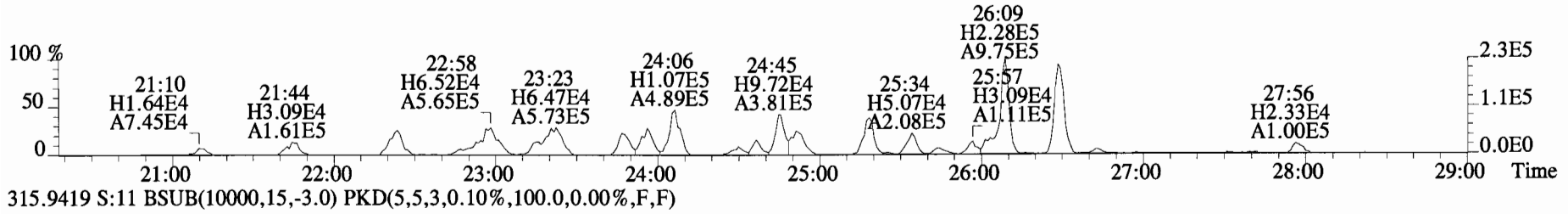


File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5

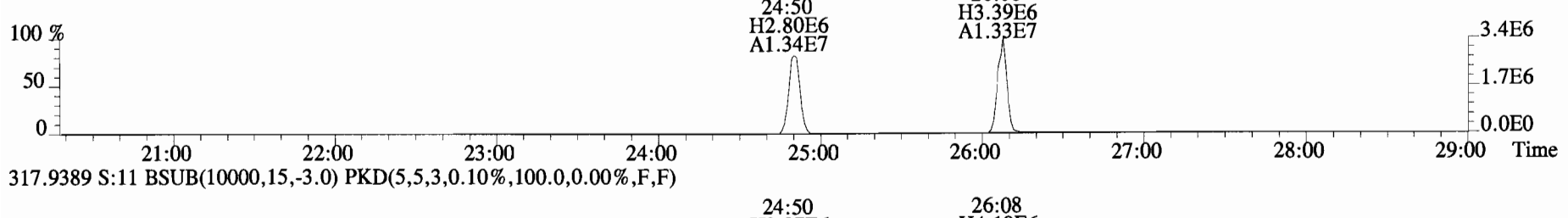
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



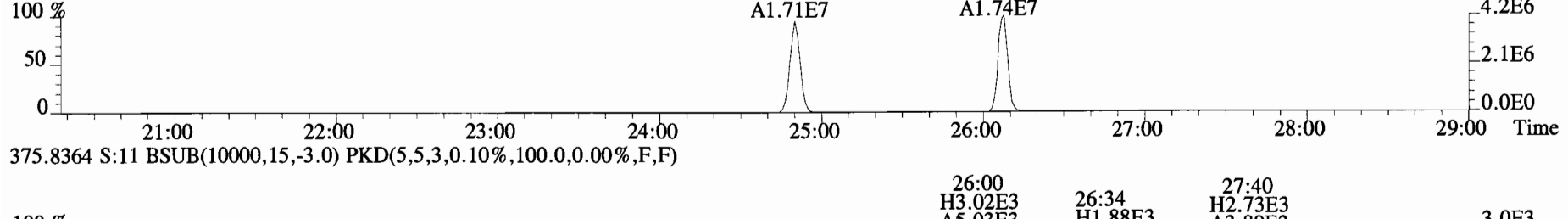
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



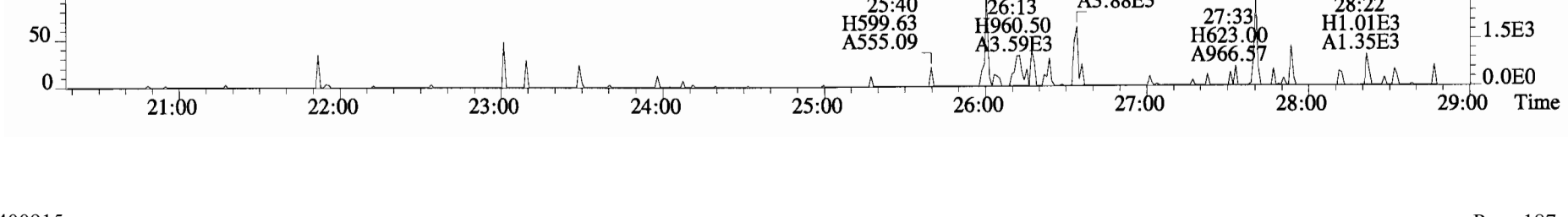
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



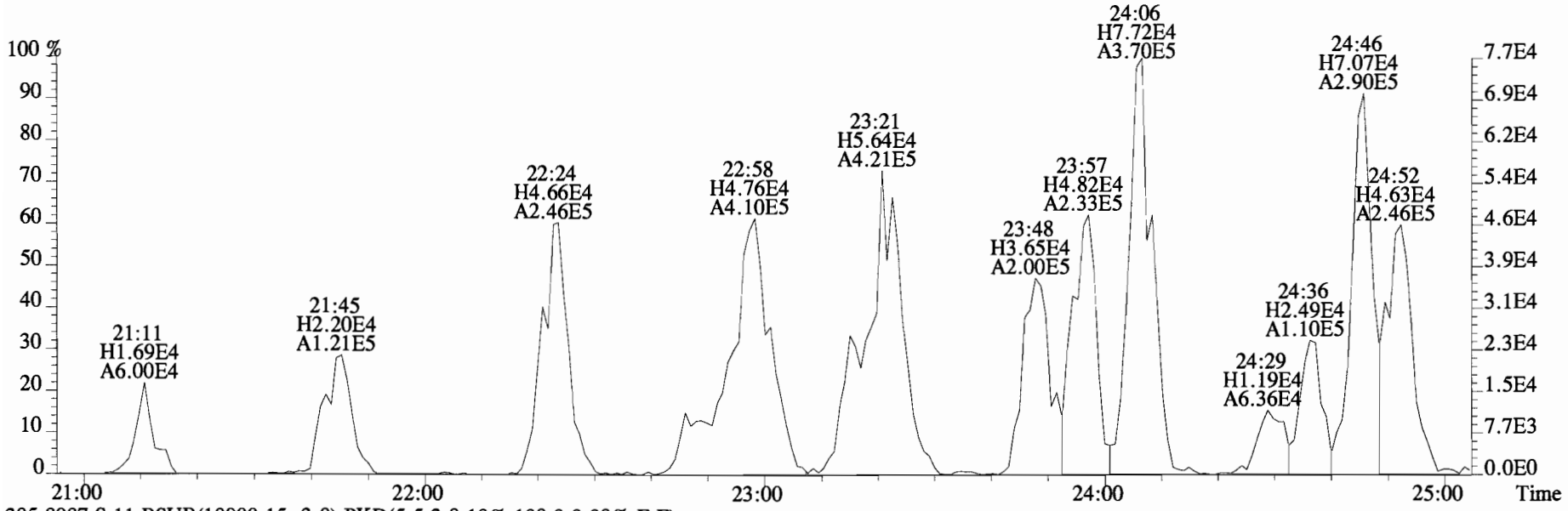
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



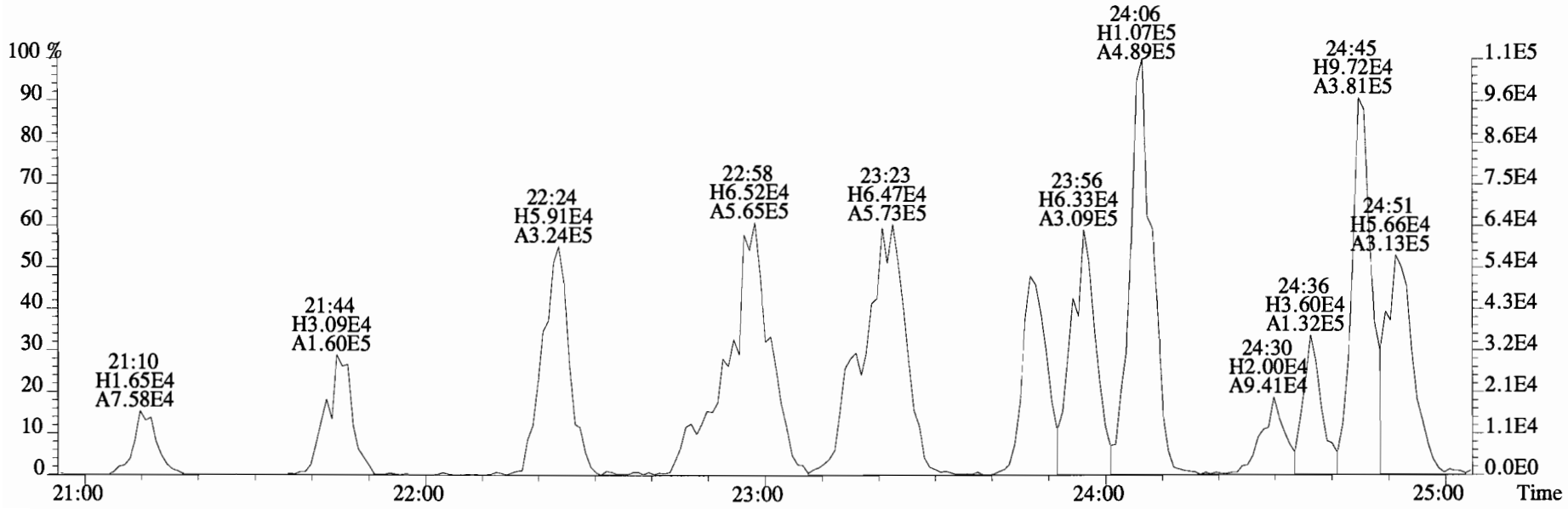
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



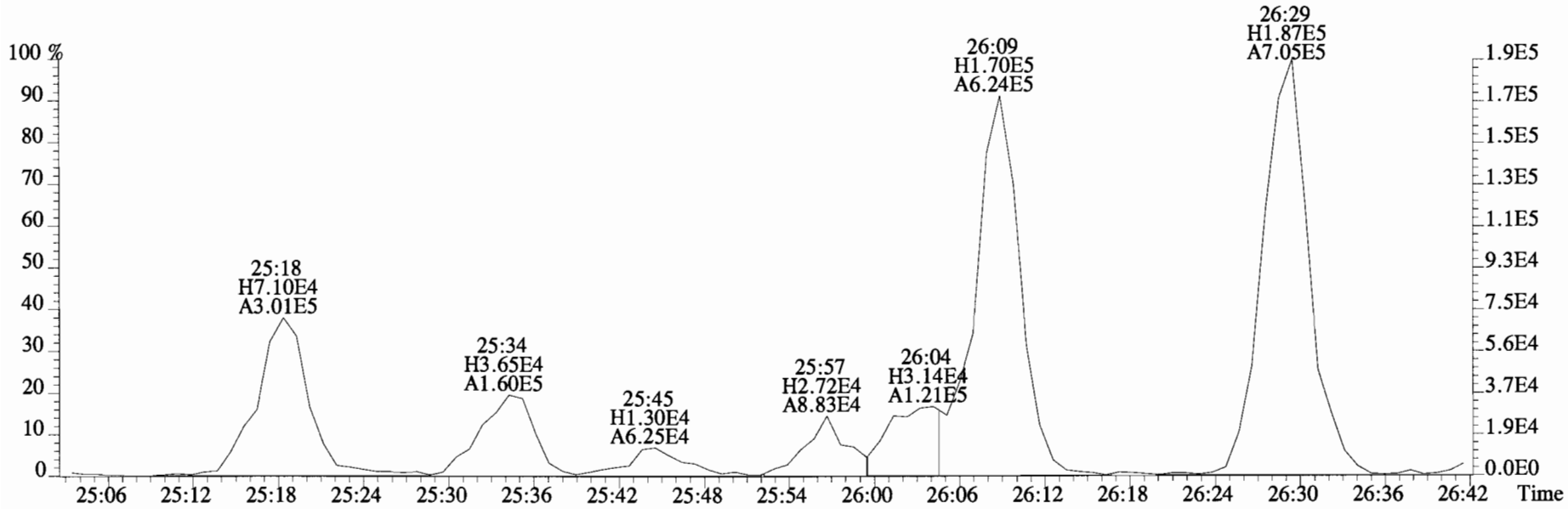
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



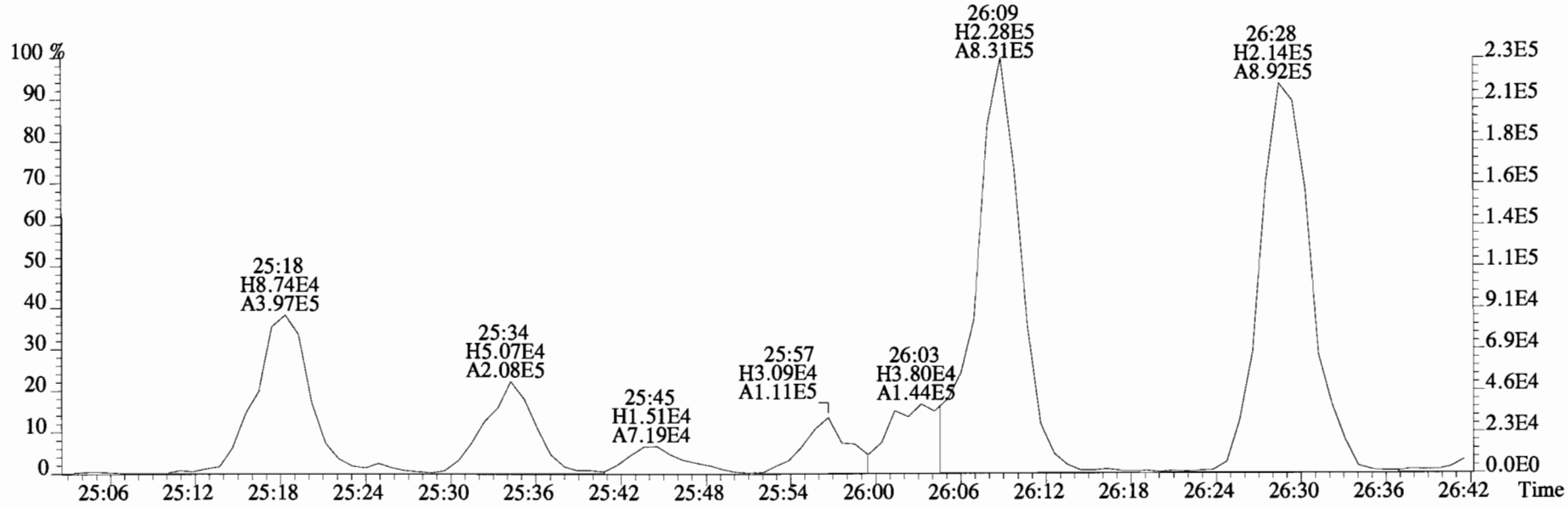
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



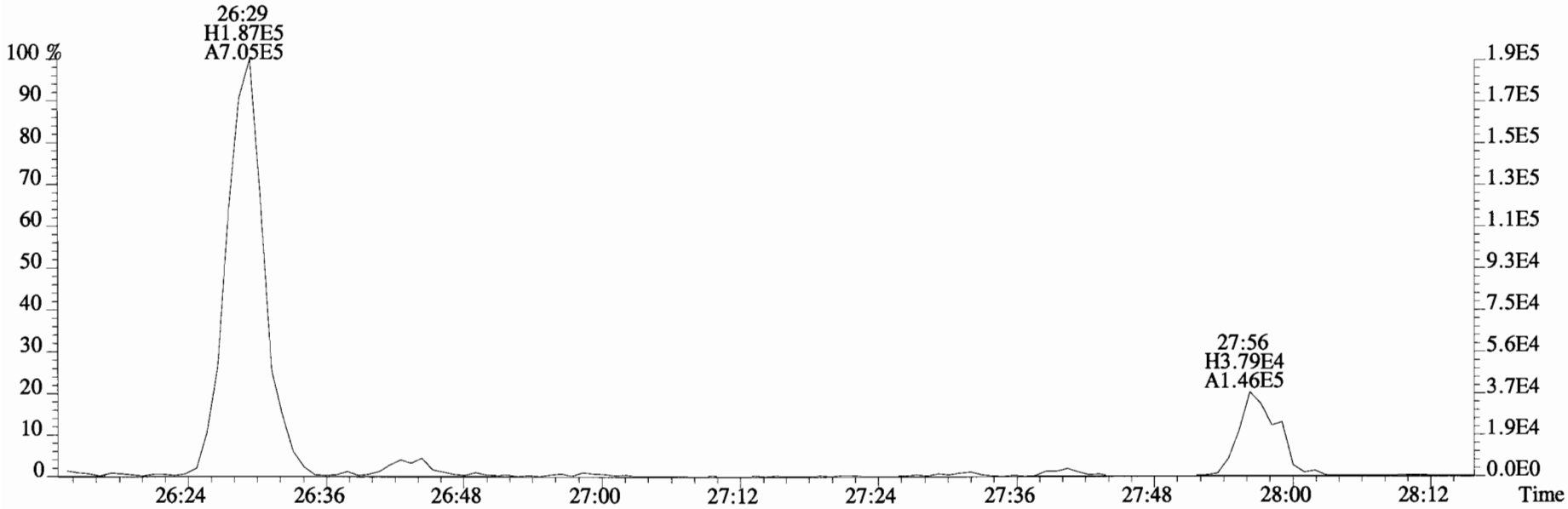
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



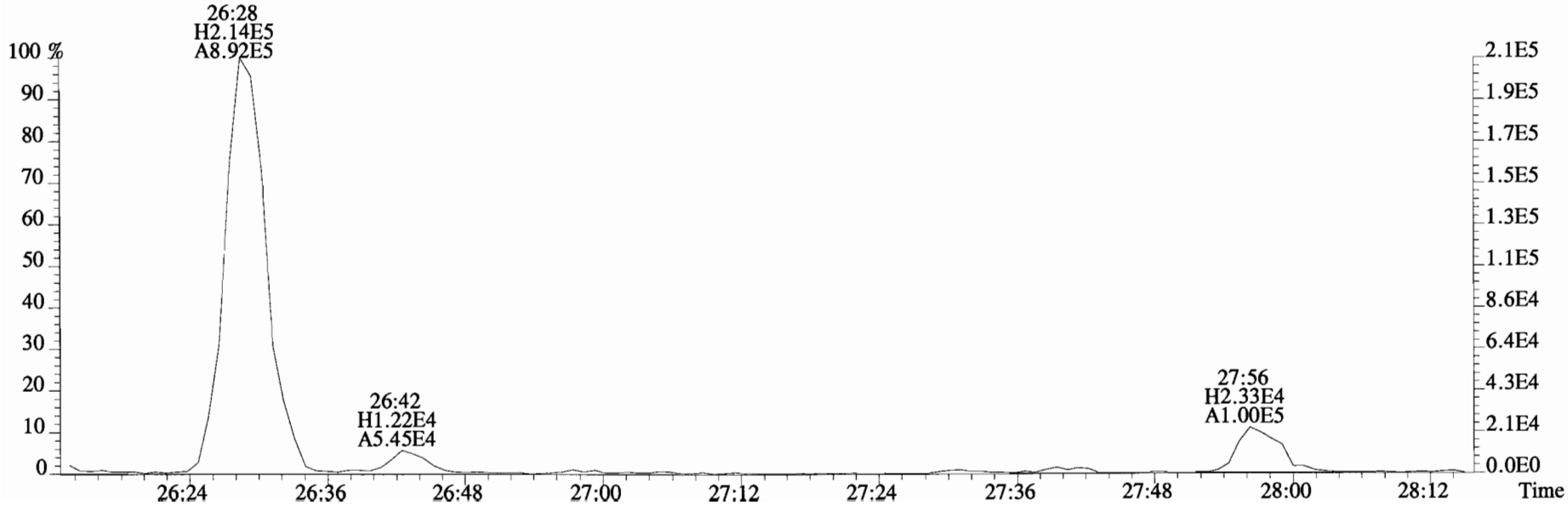
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

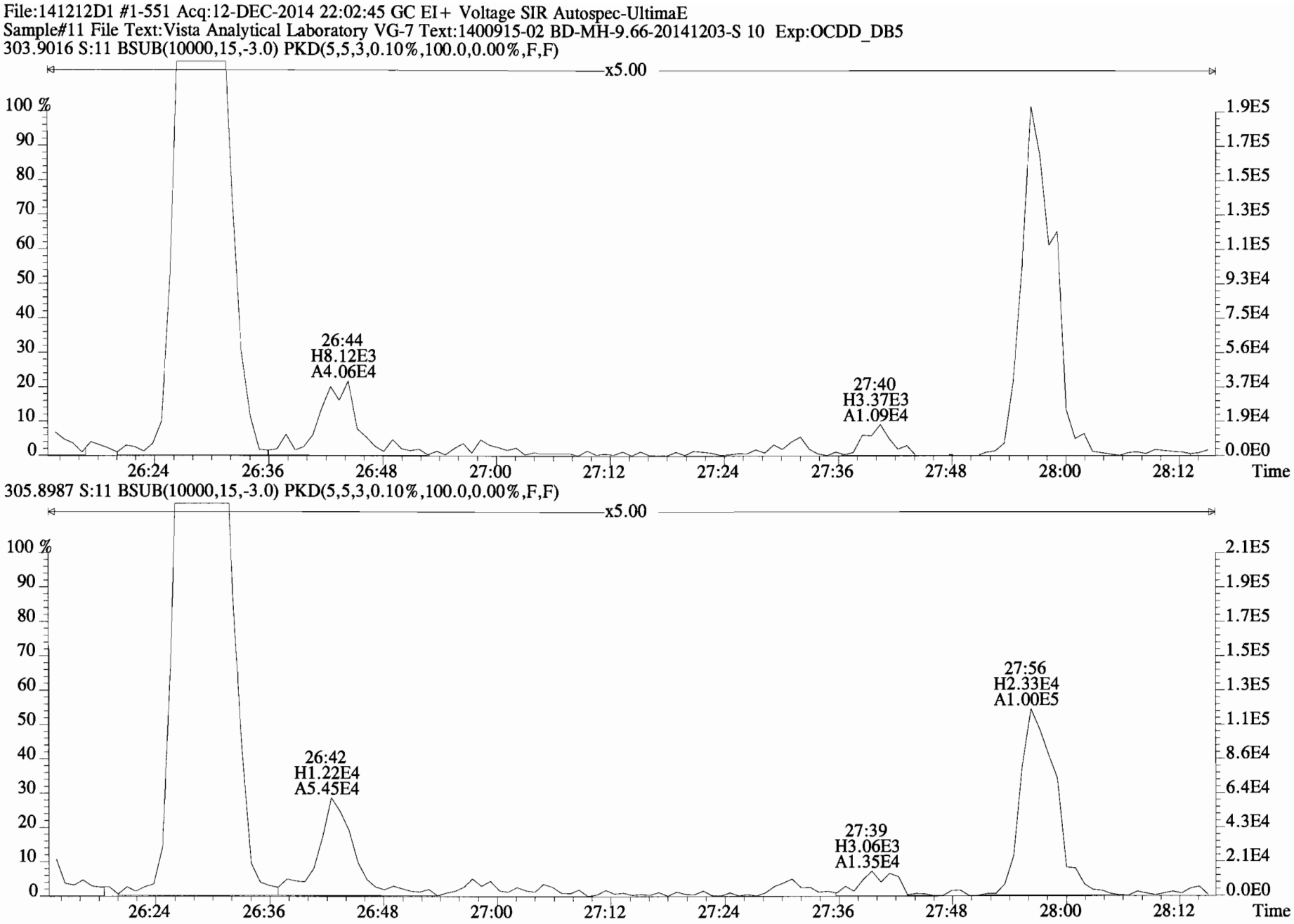


File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

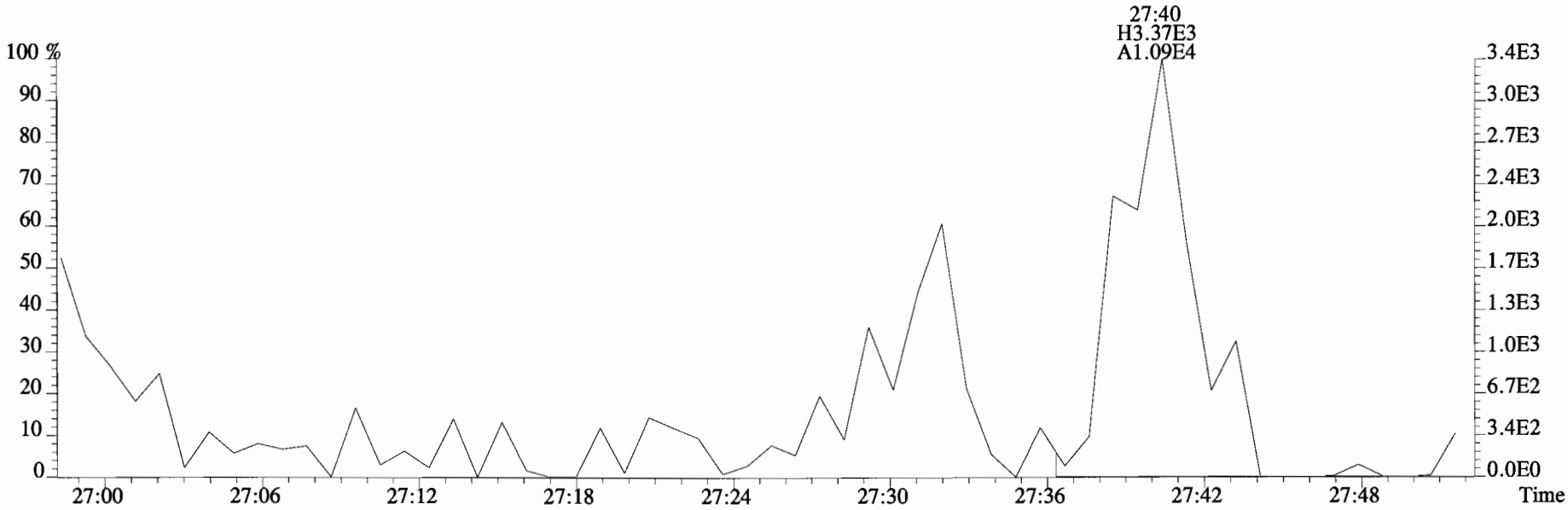


305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

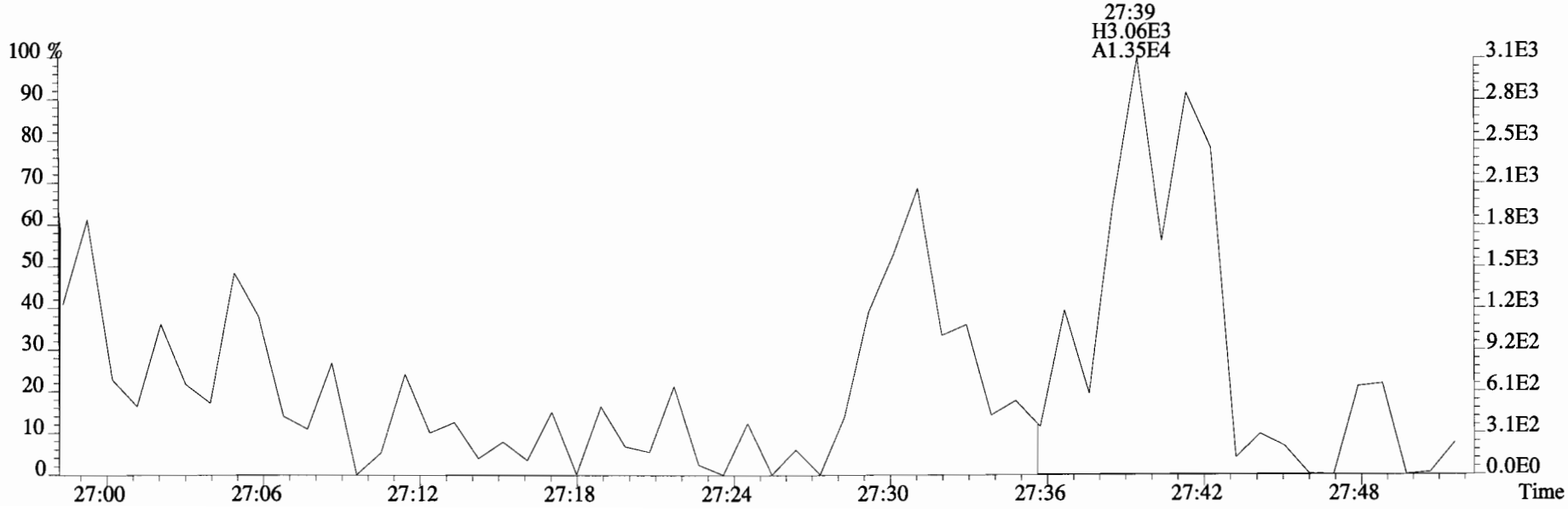



File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
26:44
H8.12E3
A4.06E4
27:40
H3.37E3
A1.09E4
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
26:42
H1.22E4
A5.45E4
27:39
H3.06E3
A1.35E4
27:56
H2.33E4
A1.00E5
Time

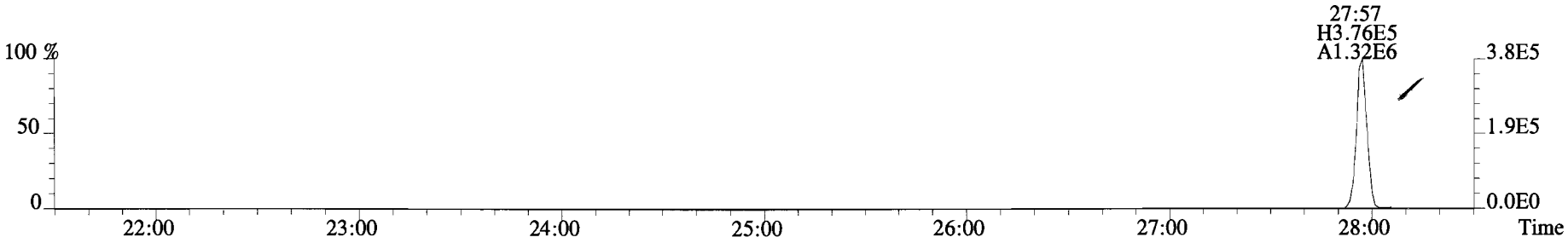
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



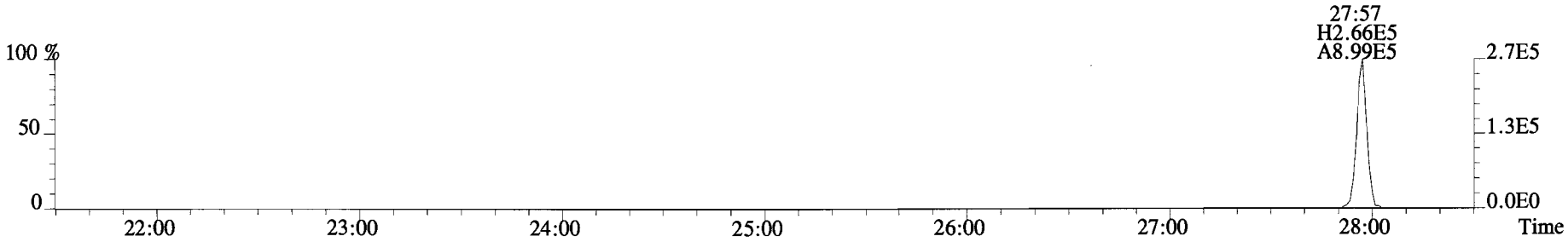
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



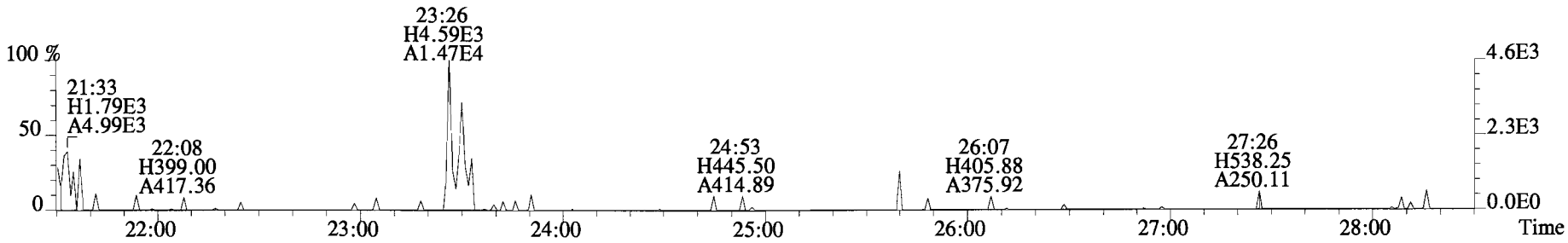
File:141212D1 #1-551 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



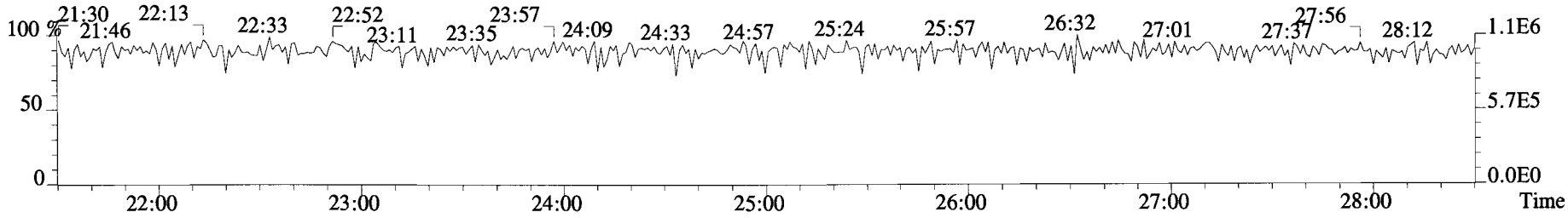
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

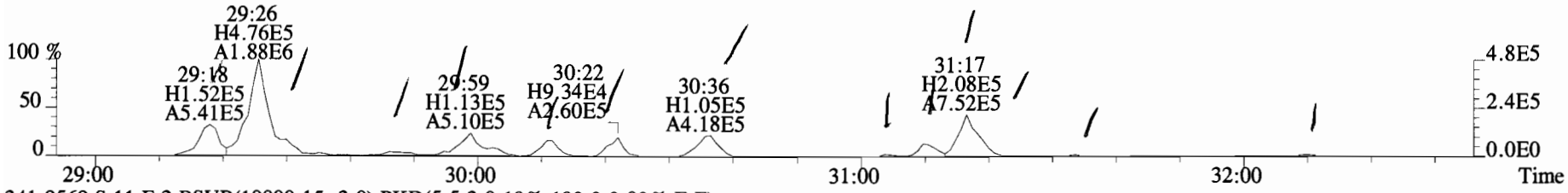


316.9824 S:11

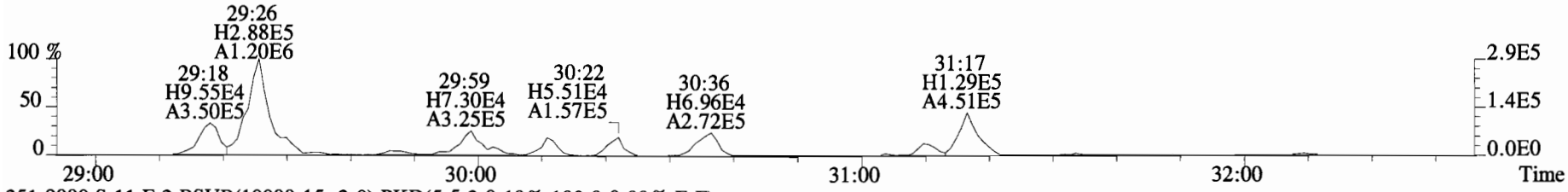


File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5

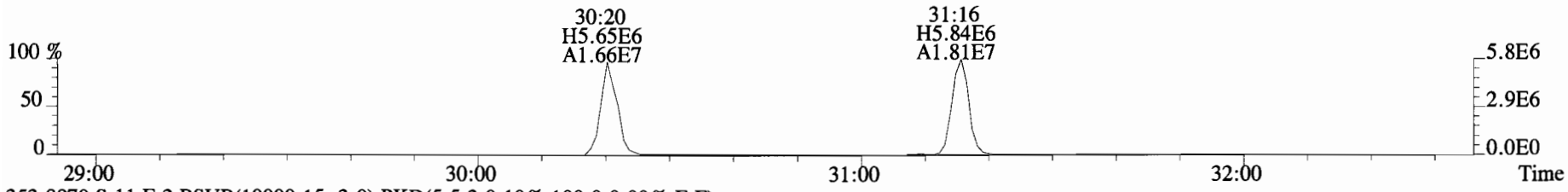
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



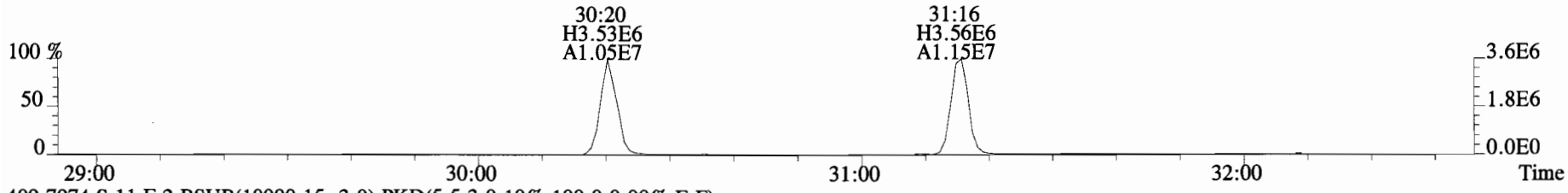
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



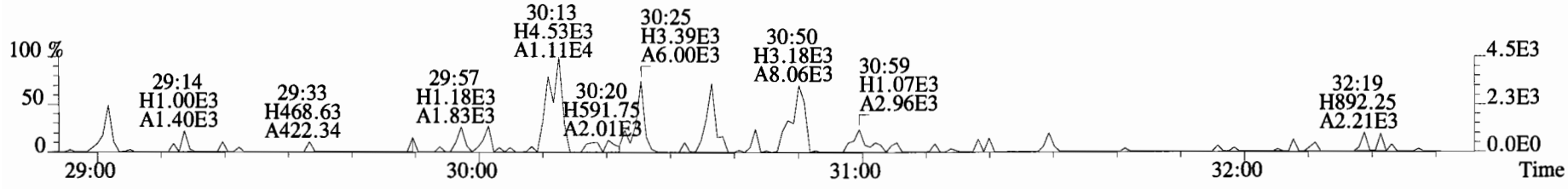
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



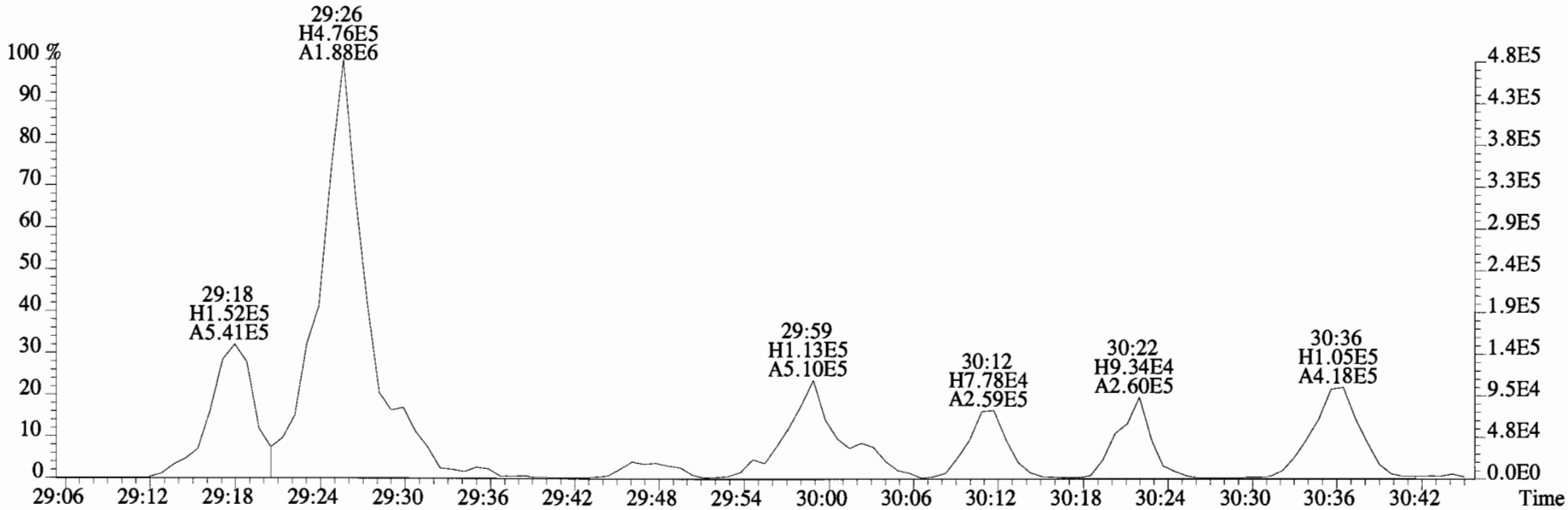
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



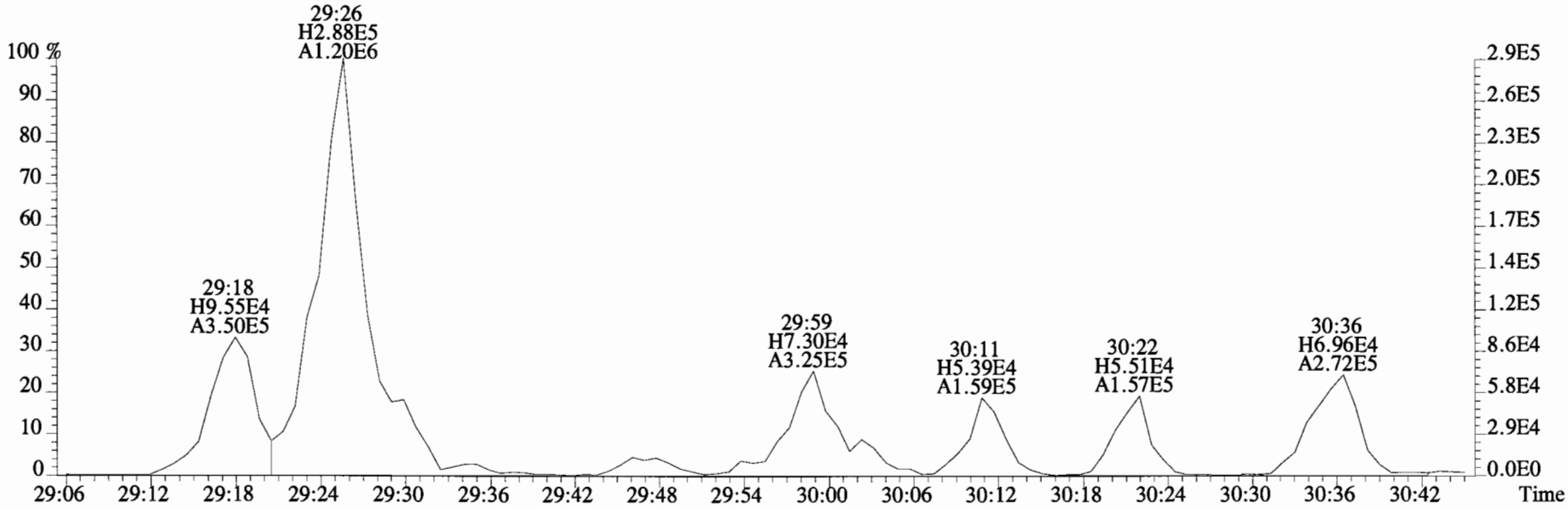
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

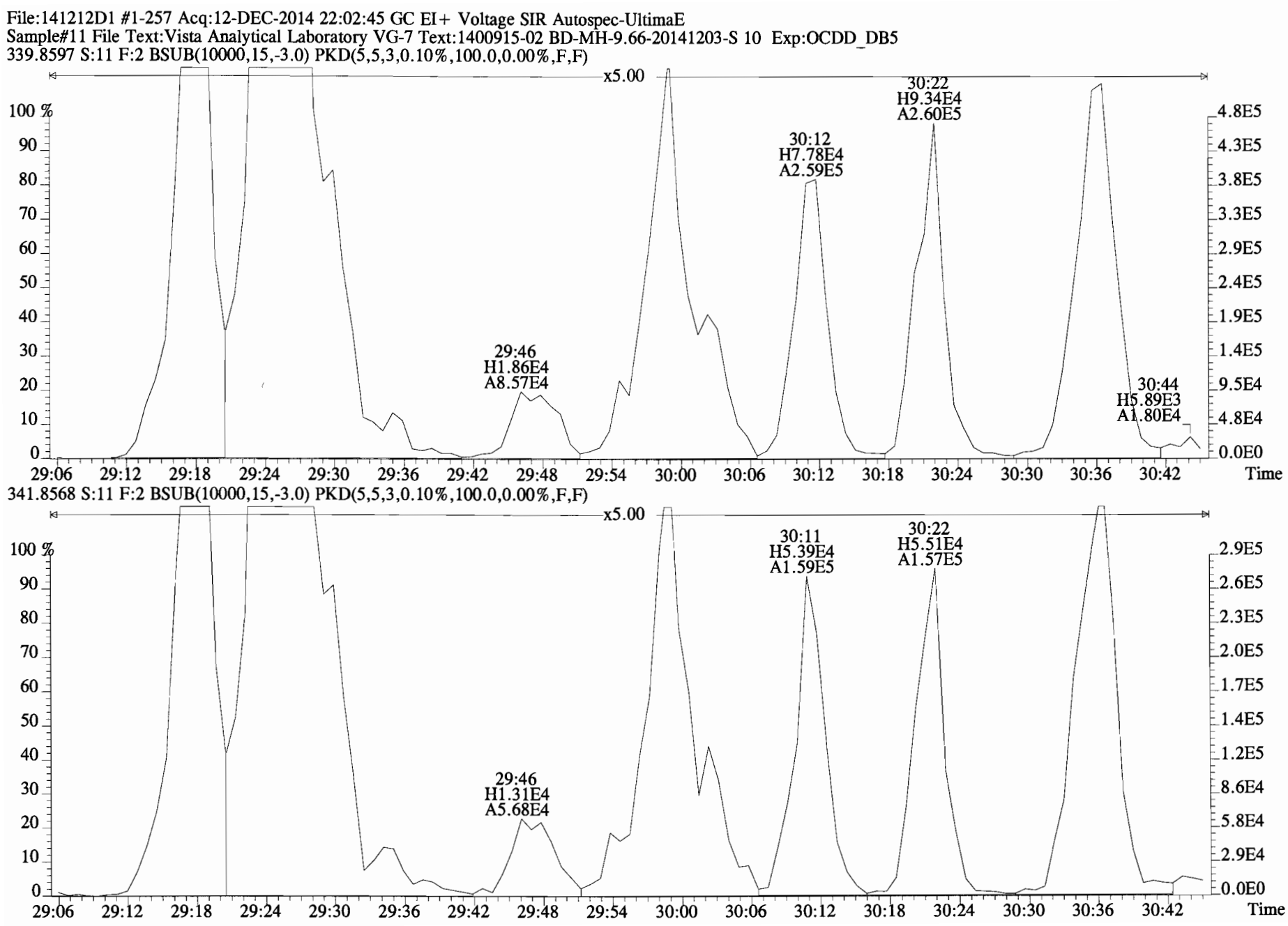


File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

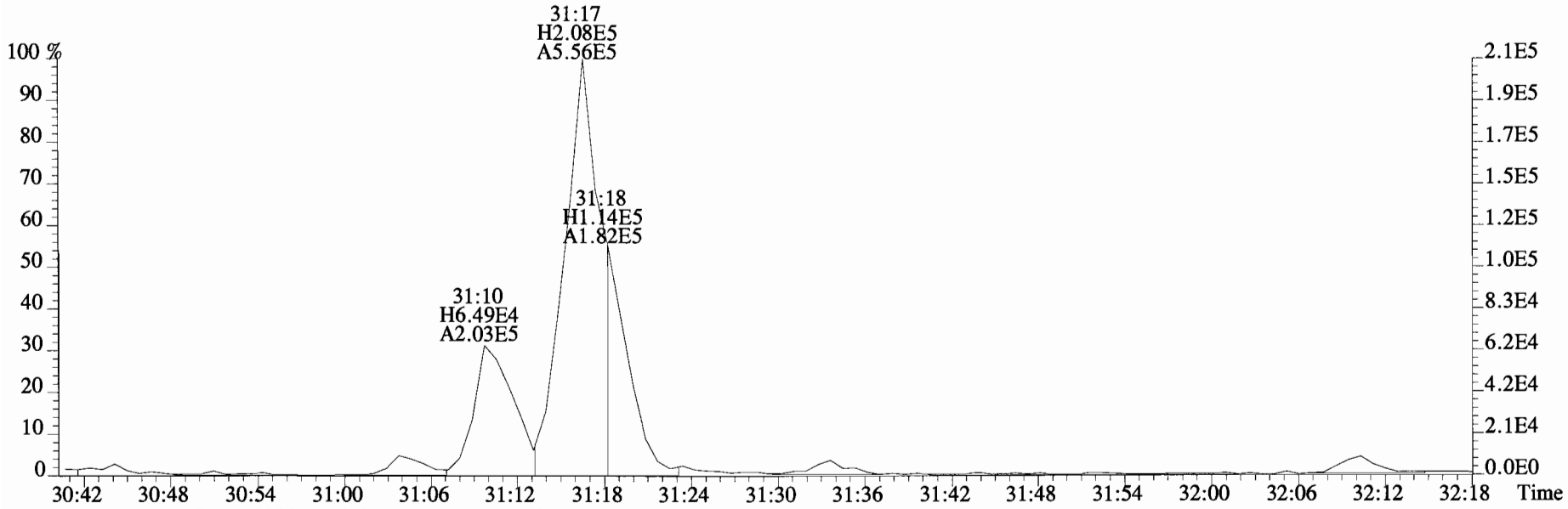


341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

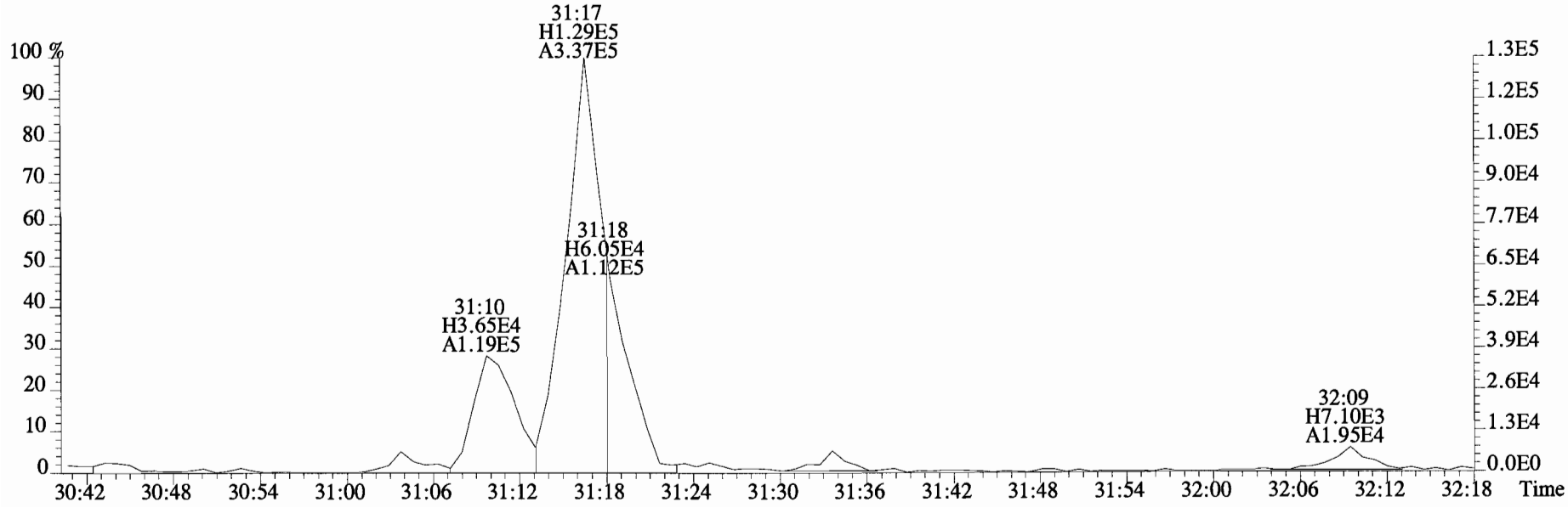


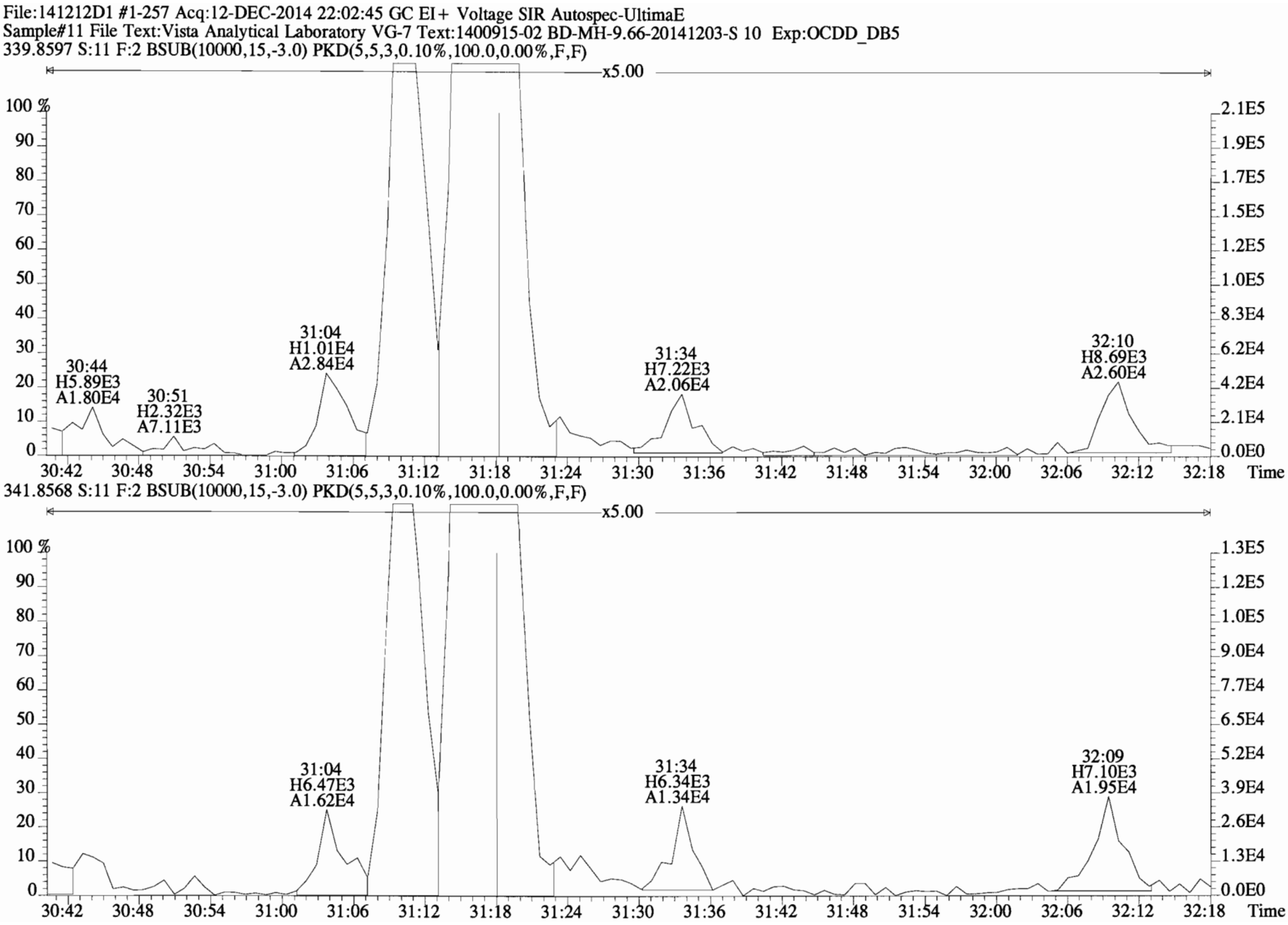

File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:22
H9.34E4
A2.60E5
30:12
H7.78E4
A2.59E5
29:46
H1.86E4
A8.57E4
30:44
H5.89E3
A1.80E4
100 %
Time
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:11
H5.39E4
A1.59E5
30:22
H5.51E4
A1.57E5
29:46
H1.31E4
A5.68E4
100 %
Time

File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



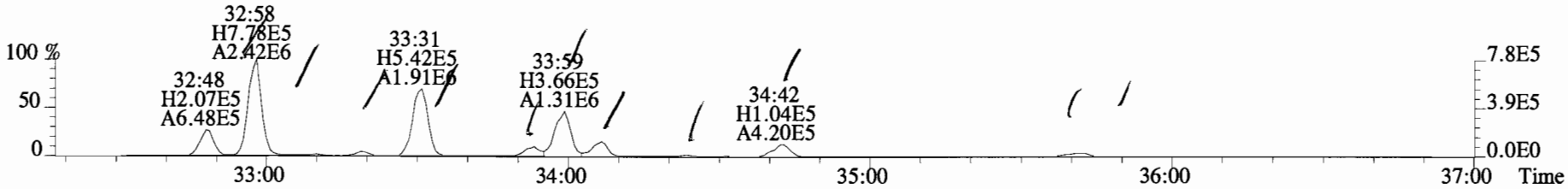
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



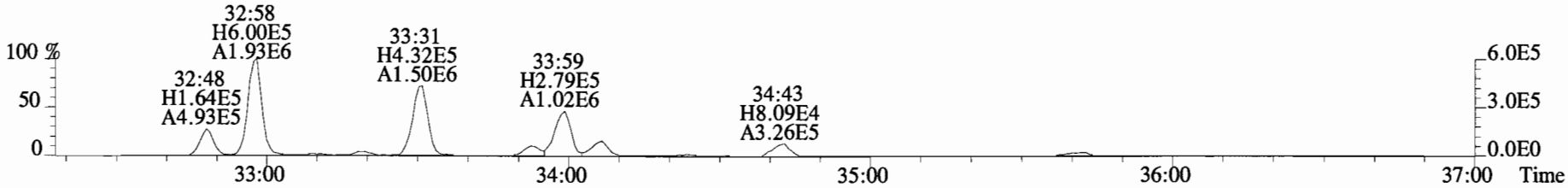

File:141212D1 #1-257 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
2.1E5
1.9E5
1.7E5
1.5E5
1.2E5
1.0E5
8.3E4
6.2E4
4.2E4
2.1E4
0.0E0
30:44
H5.89E3
A1.80E4
30:51
H2.32E3
A7.11E3
31:04
H1.01E4
A2.84E4
31:34
H7.22E3
A2.06E4
32:10
H8.69E3
A2.60E4
30:42
30:48
30:54
31:00
31:06
31:12
31:18
31:24
31:30
31:36
31:42
31:48
31:54
32:00
32:06
32:12
32:18
Time
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
1.3E5
1.2E5
1.0E5
9.0E4
7.7E4
6.5E4
5.2E4
3.9E4
2.6E4
1.3E4
0.0E0
31:04
H6.47E3
A1.62E4
31:34
H6.34E3
A1.34E4
32:09
H7.10E3
A1.95E4
30:42
30:48
30:54
31:00
31:06
31:12
31:18
31:24
31:30
31:36
31:42
31:48
31:54
32:00
32:06
32:12
32:18
Time

File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5

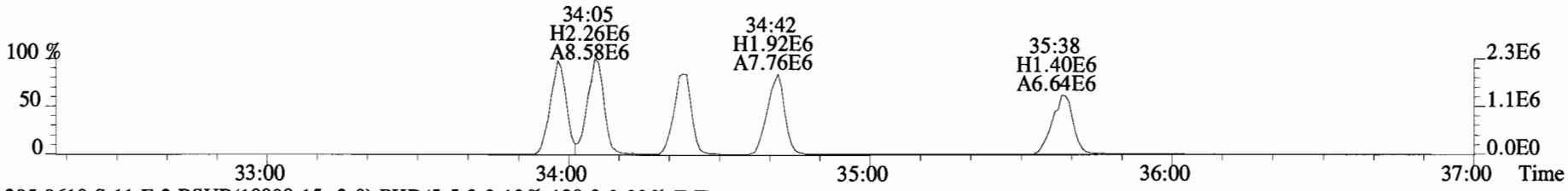
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



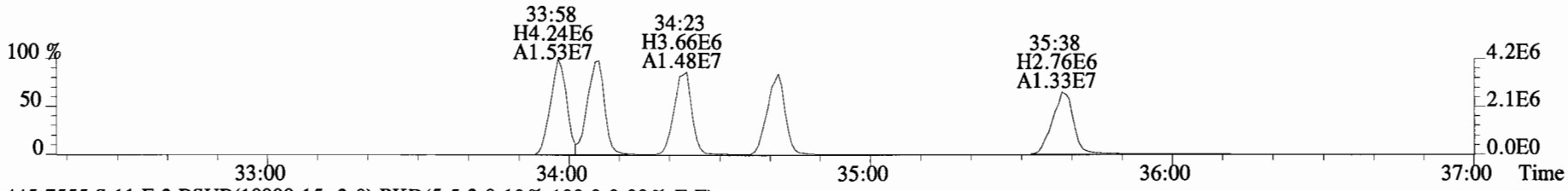
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



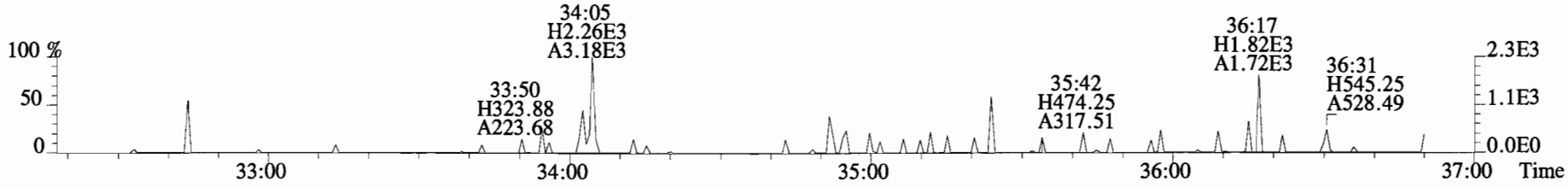
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



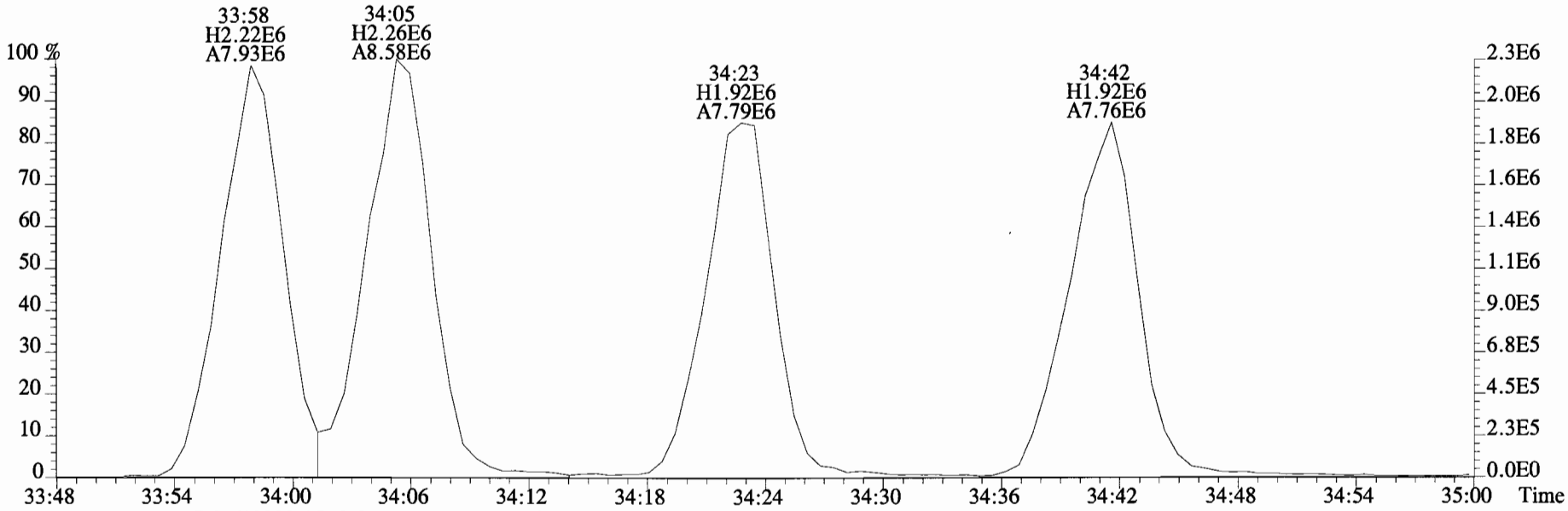
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



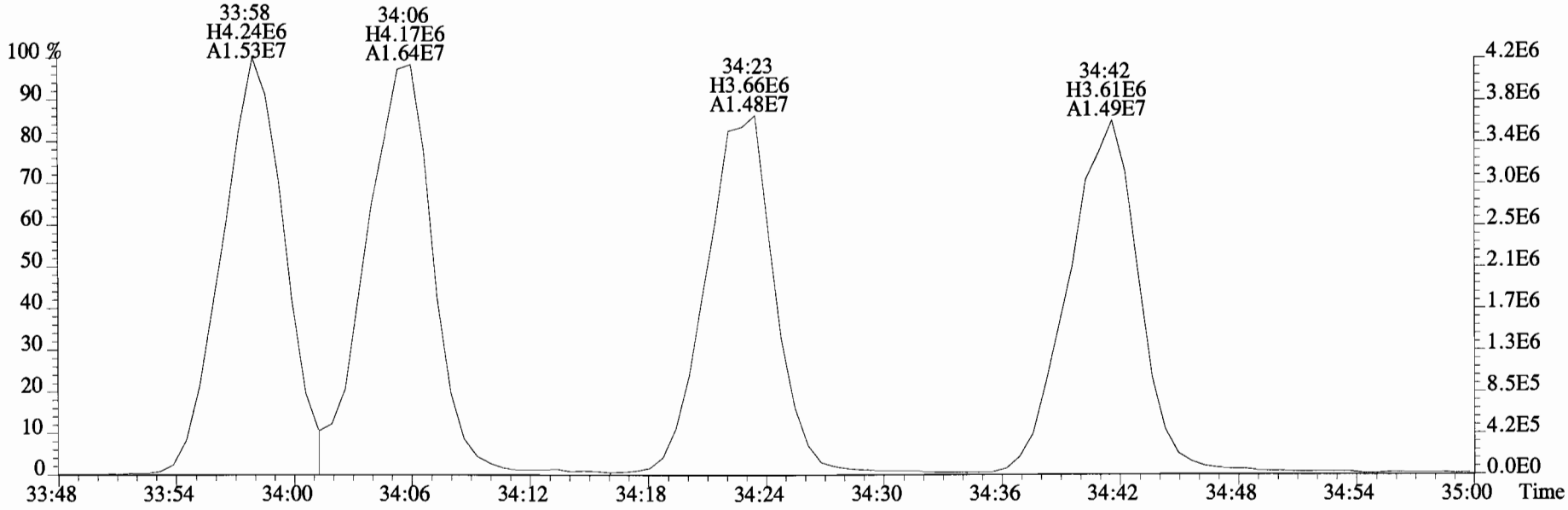
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



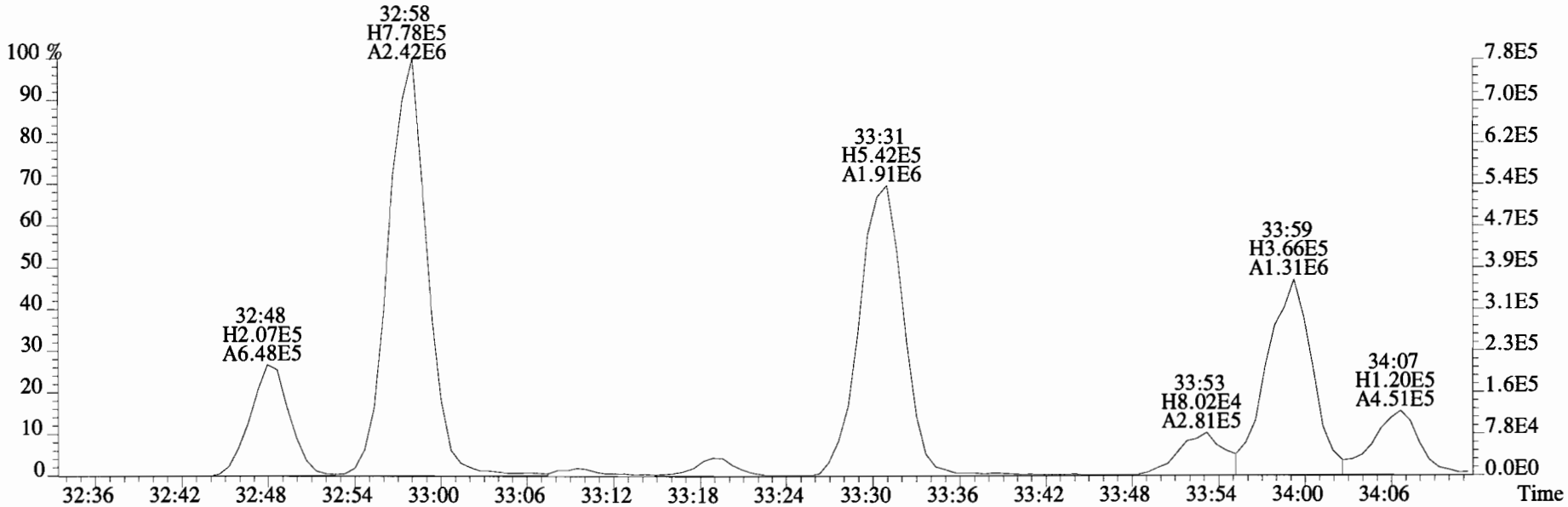
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



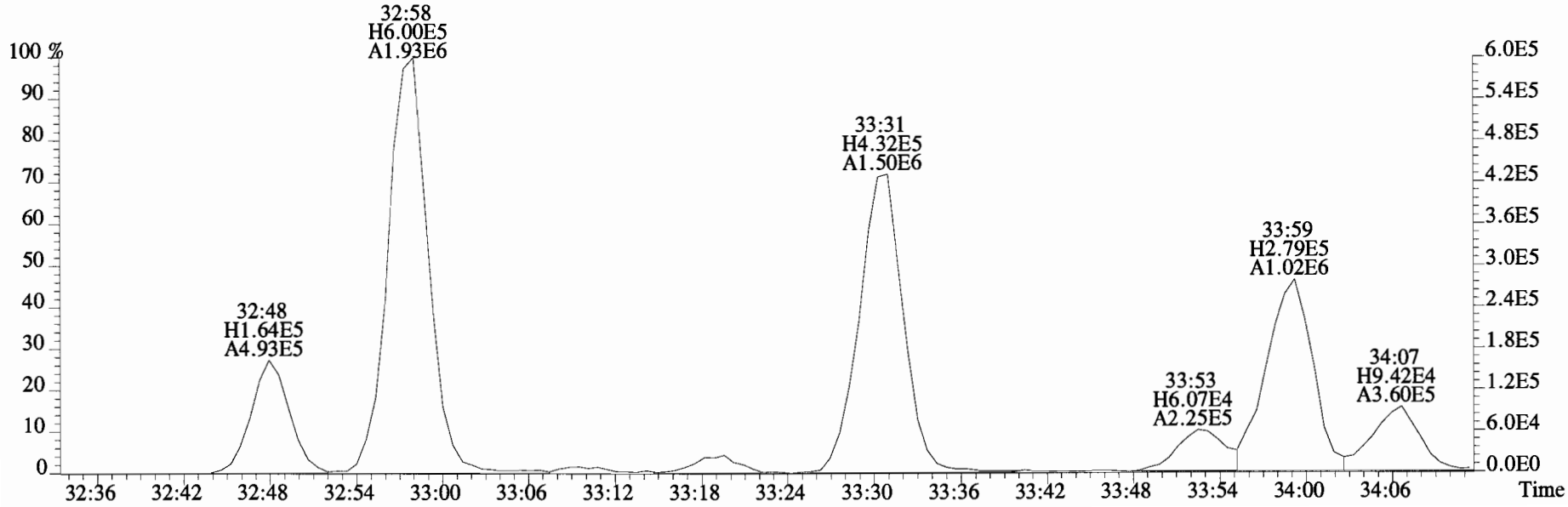
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

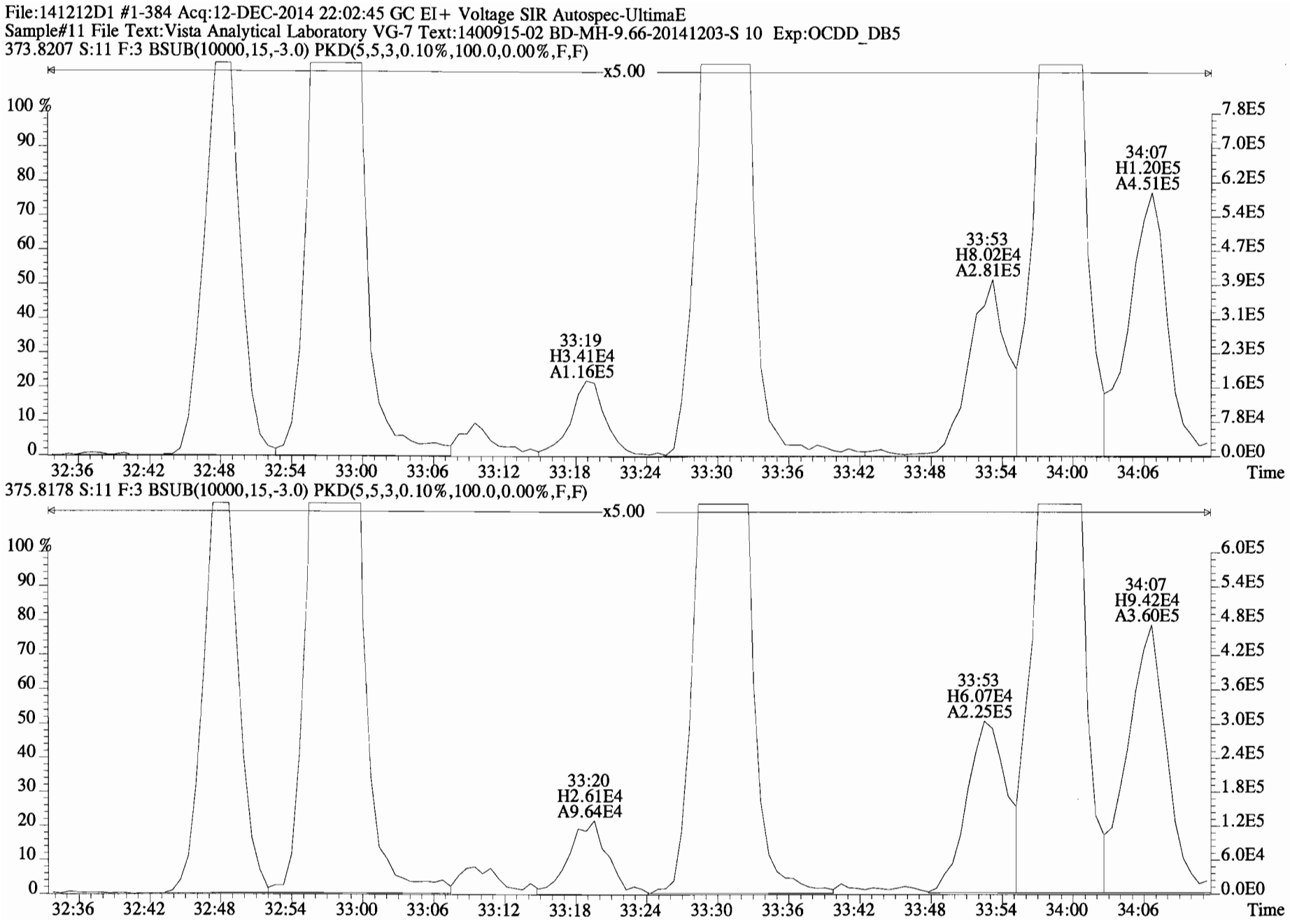


File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

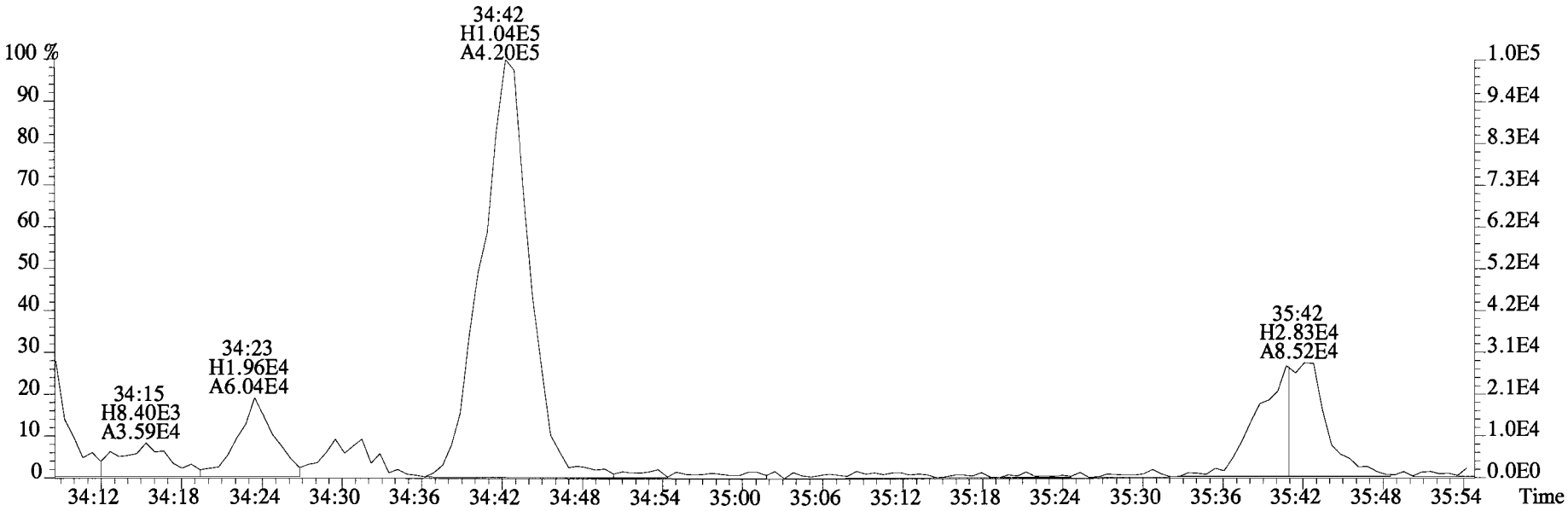


375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

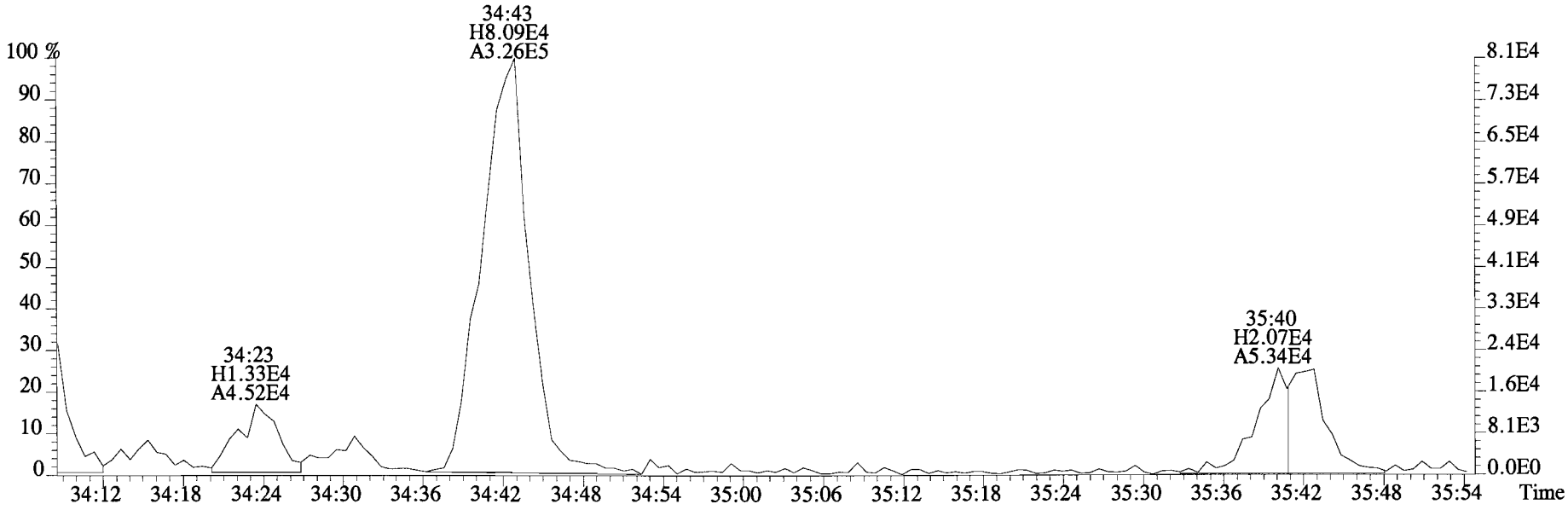



File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:19
H3.41E4
A1.16E5
33:53
H8.02E4
A2.81E5
34:07
H1.20E5
A4.51E5
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:20
H2.61E4
A9.64E4
33:53
H6.07E4
A2.25E5
34:07
H9.42E4
A3.60E5
Time

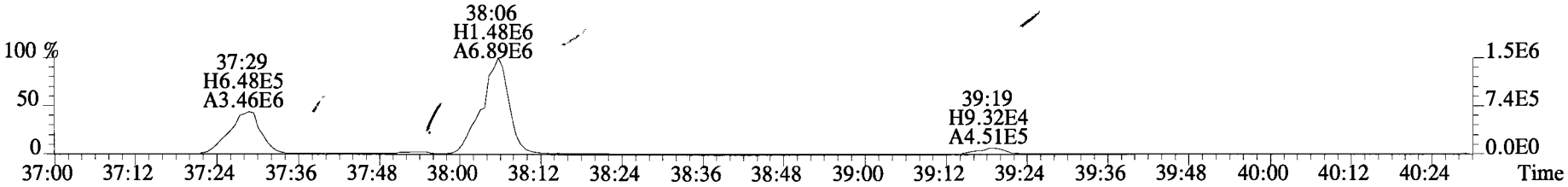
File:141212D1 #1-384 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



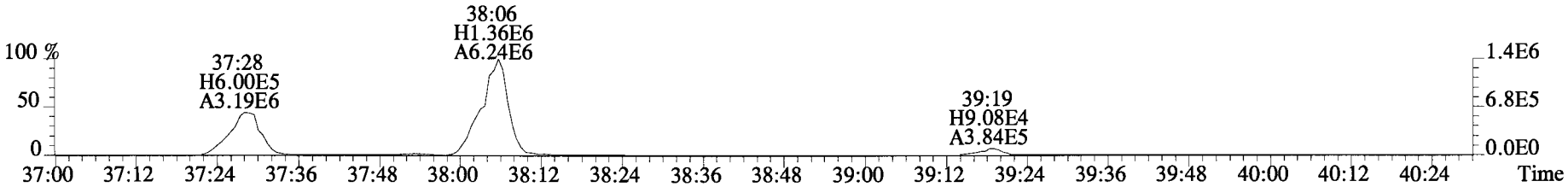
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



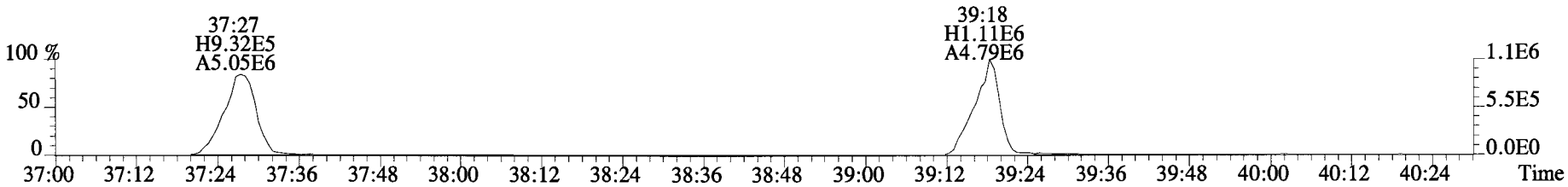
File:141212D1 #1-326 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



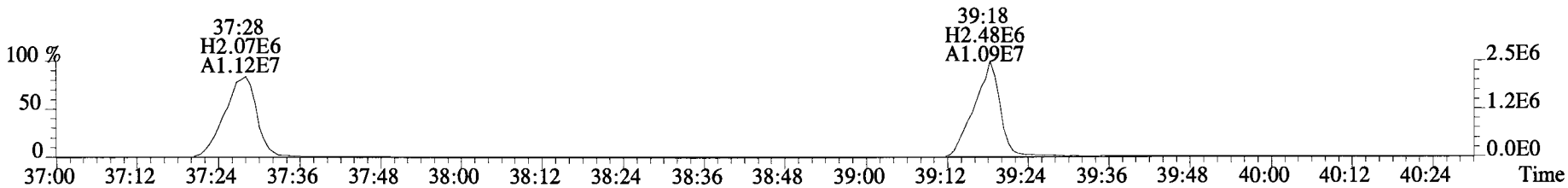
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



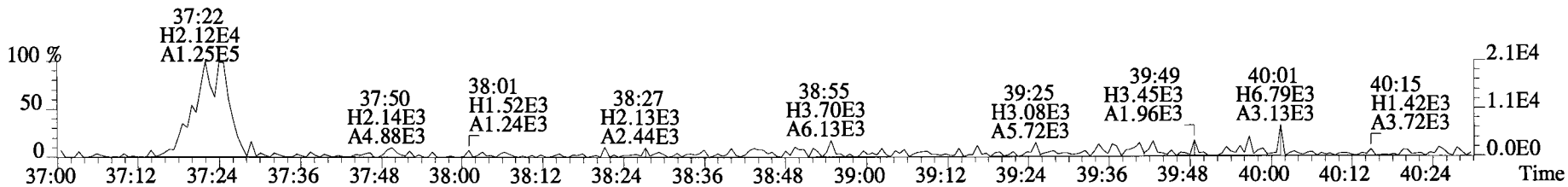
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



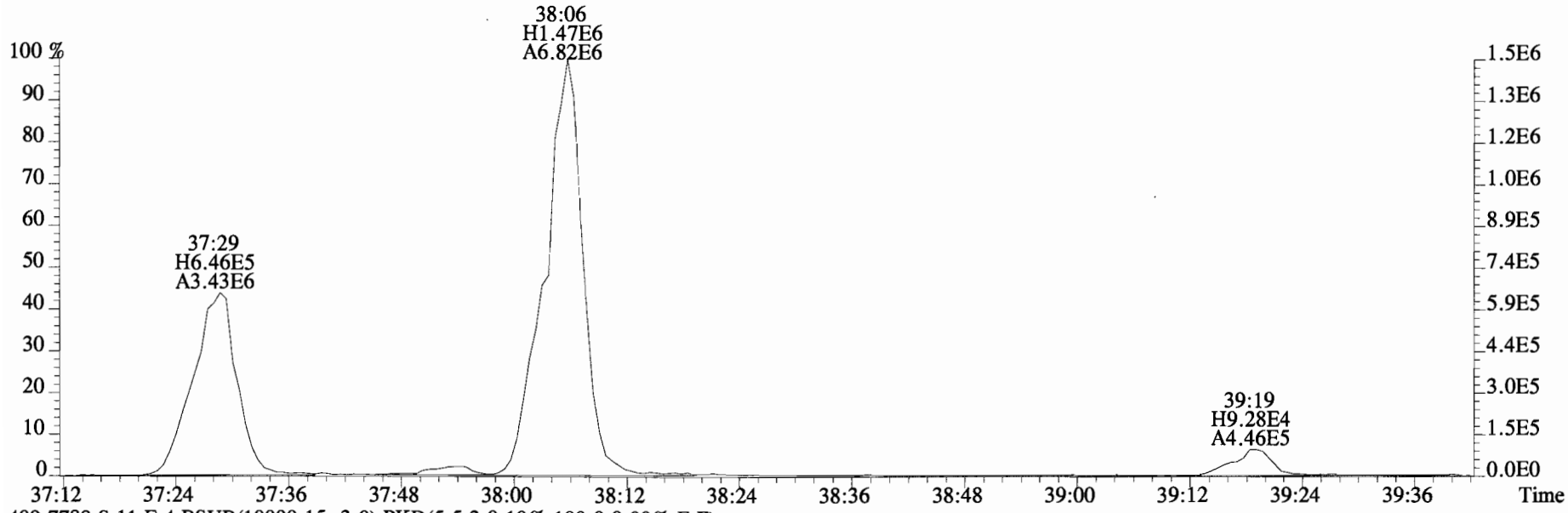
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



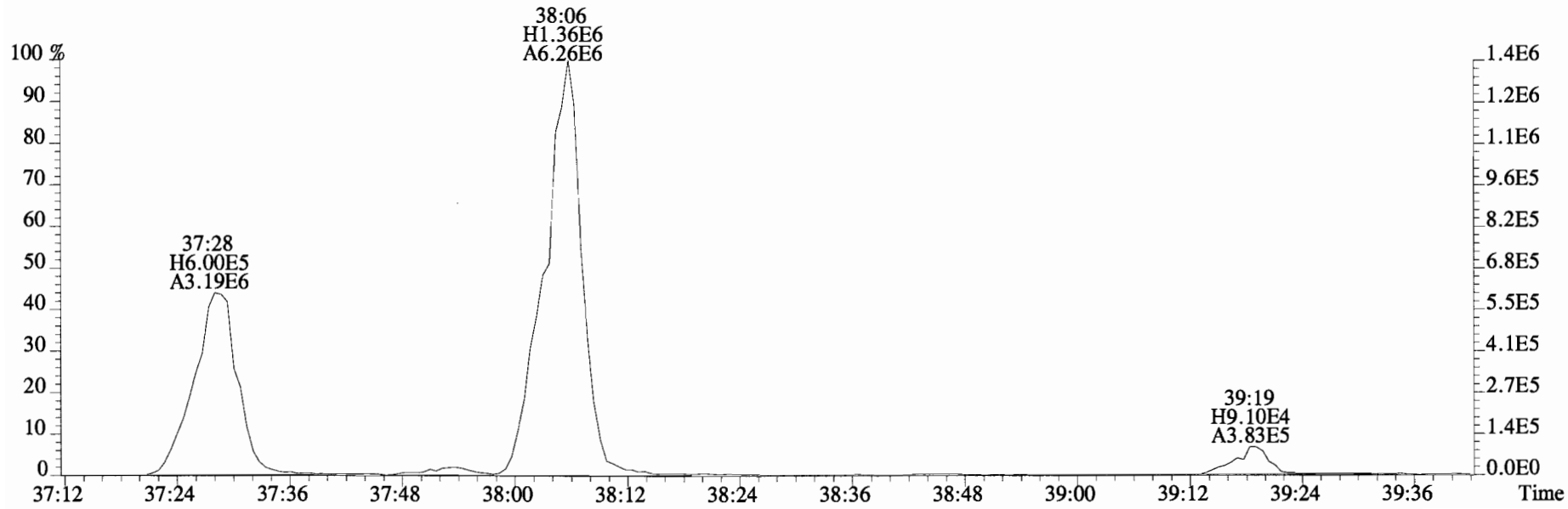
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



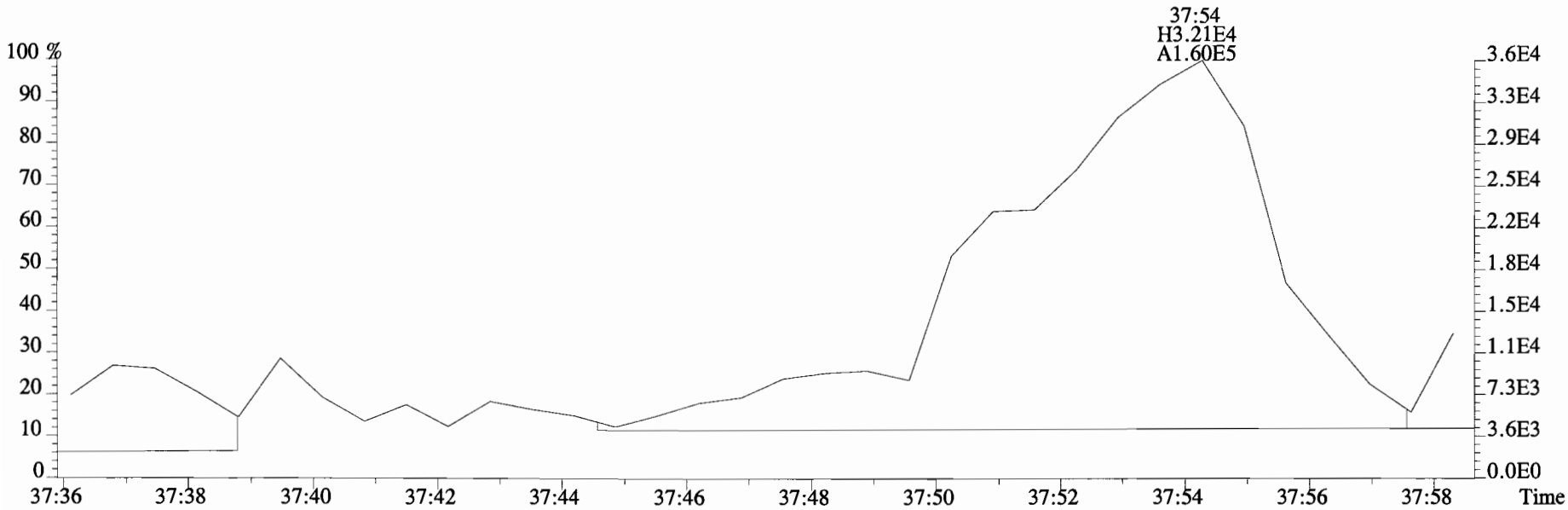
File:141212D1 #1-326 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



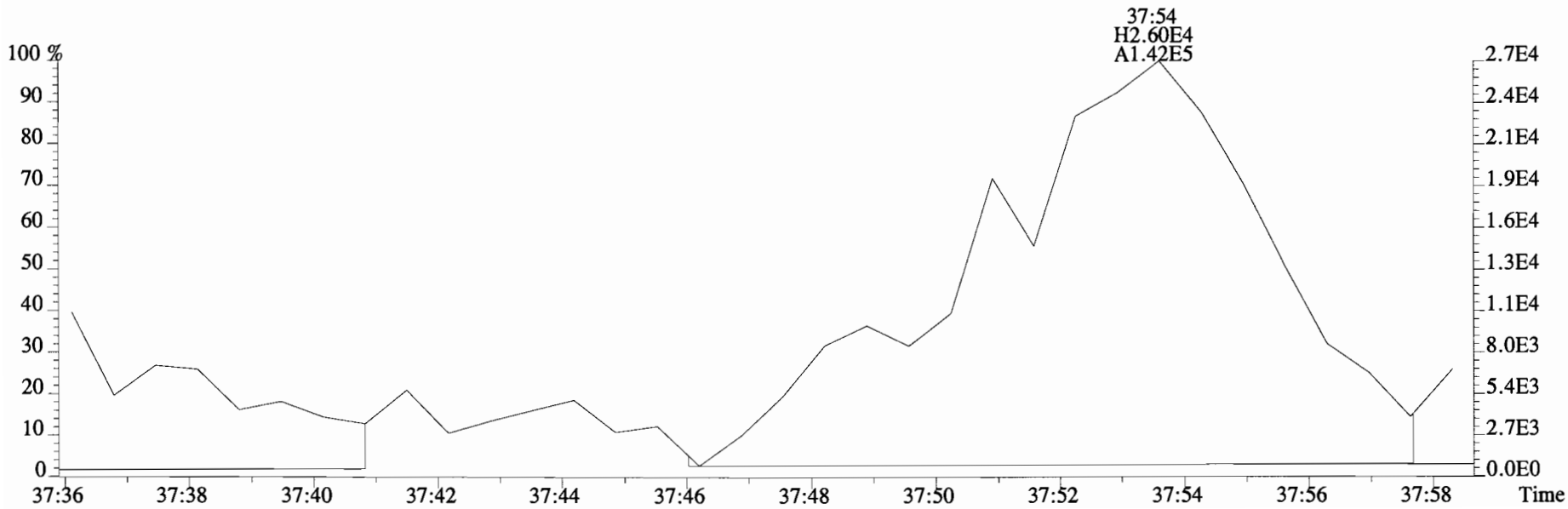
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141212D1 #1-326 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

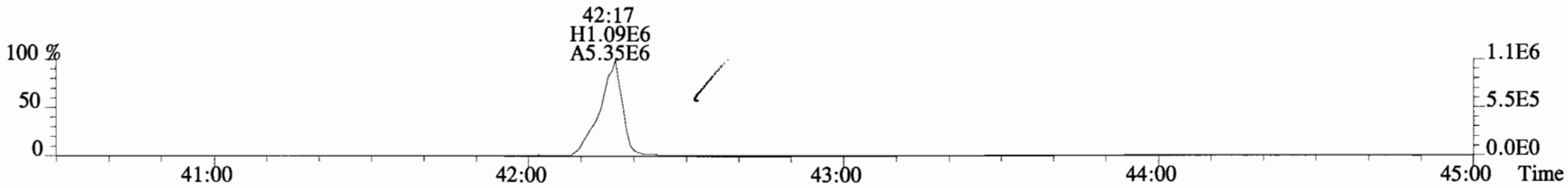


409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

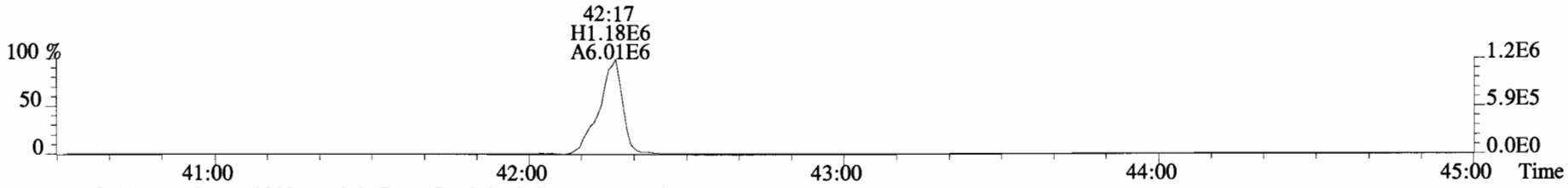


File:141212D1 #1-389 Acq:12-DEC-2014 22:02:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1400915-02 BD-MH-9.66-20141203-S 10 Exp:OCDD_DB5

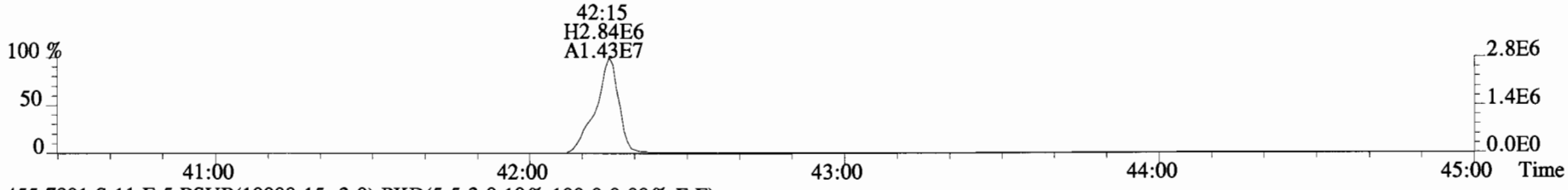
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



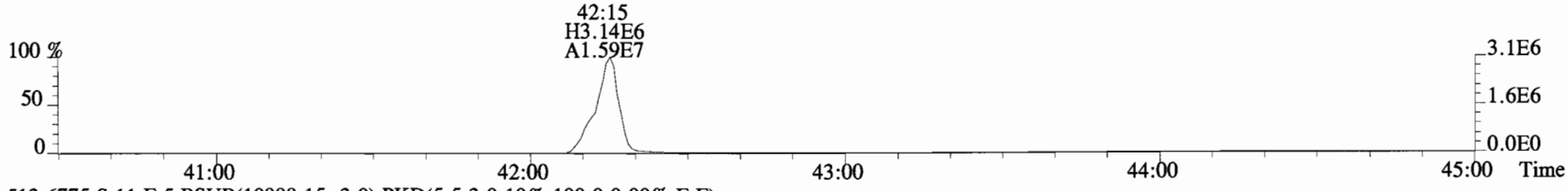
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



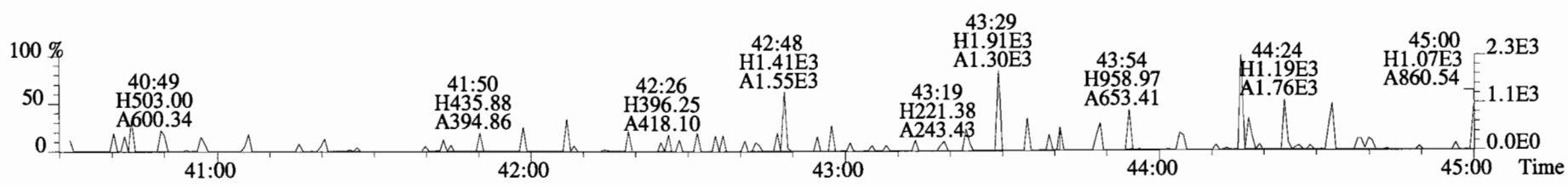
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	9.30e+04	0.67 y	1.18	26:56	1.001	7.7379		*	2.5	*
	1,2,3,7,8-PeCDD	5.94e+05	0.60 y	0.92	31:33	1.000	48.515		*	2.5	*
	1,2,3,4,7,8-HxCDD	4.73e+05	1.28 y	1.09	34:53	1.001	49.206		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.87e+05	1.26 y	1.07	34:59	1.000	102.76		*	2.5	*
	1,2,3,7,8,9-HxCDD	2.01e+06	1.22 y	0.93	35:17	1.000	204.22		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.94e+07	1.04 y	1.12	38:46	1.000	2036.8		*	2.5	*
	OCDD	1.28e+08	0.89 y	0.95	42:02	1.000	17252		*	2.5	*
	2,3,7,8-TCDF	1.43e+05	0.68 y	1.08	26:08	1.001	9.2674	Z,J9	*	2.5	*
	1,2,3,7,8-PeCDF	1.06e+05	1.63 y	1.09	30:21	1.000	6.1950		*	2.5	*
	2,3,4,7,8-PeCDF	1.59e+05	1.49 y	1.04	31:16	1.000	9.2240		*	2.5	*
	1,2,3,4,7,8-HxCDF	3.28e+05	1.24 y	1.39	33:59	1.000	18.418		*	2.5	*
	1,2,3,6,7,8-HxCDF	2.75e+05	1.21 y	1.26	34:07	1.000	16.193		*	2.5	*
	2,3,4,6,7,8-HxCDF	3.45e+05	1.23 y	1.30	34:42	1.000	22.279		*	2.5	*
	1,2,3,7,8,9-HxCDF	4.73e+04	1.10 y	1.19	35:40	1.000	3.5347		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	4.05e+06	1.11 y	1.62	37:29	1.000	276.88		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	2.37e+05	1.18 y	1.53	39:19	1.000	17.363		*	2.5	*
	OCDF	5.93e+06	0.94 y	1.10	42:16	1.000	608.67		*	2.5	*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	90.5	115		*	*
Total Penta-Dioxins	319	319		*	*
Total Hexa-Dioxins	1280	1280		*	*
Total Hepta-Dioxins	4460	4460		*	*
Total Tetra-Furans	122	135		*	*
Total Penta-Furans	175.39	176.53		*	*
Total Hexa-Furans	345	345		*	*
Total Hepta-Furans	655	655		*	*

								Rec	Qual
IS	13C-2,3,7,8-TCDD	2.03e+07	0.80 y	1.07	26:55	1.022	1801.7	90.1	
IS	13C-1,2,3,7,8-PeCDD	2.67e+07	0.62 y	1.24	31:33	1.198	2051.2	103	
IS	13C-1,2,3,4,7,8-HxCDD	1.77e+07	1.26 y	0.72	34:52	1.014	1641.7	82.1	
IS	13C-1,2,3,6,7,8-HxCDD	1.80e+07	1.24 y	0.74	34:58	1.017	1645.8	82.3	
IS	13C-1,2,3,7,8,9-HxCDD	2.11e+07	1.25 y	0.86	35:16	1.026	1661.1	83.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.71e+07	1.06 y	0.64	38:46	1.127	1782.0	89.1	
IS	13C-OCDD	3.12e+07	0.88 y	0.78	42:02	1.222	2681.5	67.1	
IS	13C-2,3,7,8-TCDF	2.87e+07	0.78 y	0.92	26:07	0.992	1885.7	94.3	
IS	13C-1,2,3,7,8-PeCDF	3.14e+07	1.59 y	0.95	30:21	1.153	2005.8	100	
IS	13C-2,3,4,7,8-PeCDF	3.31e+07	1.56 y	0.97	31:16	1.188	2067.9	103	
IS	13C-1,2,3,4,7,8-HxCDF	2.56e+07	0.53 y	0.99	33:58	0.988	1740.4	87.0	
IS	13C-1,2,3,6,7,8-HxCDF	2.69e+07	0.52 y	1.10	34:06	0.992	1647.3	82.4	
IS	13C-2,3,4,6,7,8-HxCDF	2.38e+07	0.50 y	1.03	34:42	1.009	1554.2	77.7	
IS	13C-1,2,3,7,8,9-HxCDF	2.25e+07	0.51 y	0.86	35:39	1.037	1762.9	88.2	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.81e+07	0.45 y	0.71	37:28	1.090	1705.1	85.3	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.79e+07	0.46 y	0.71	39:18	1.143	1697.8	84.9	
IS	13C-OCDF	3.54e+07	0.88 y	0.87	42:15	1.229	2723.3	68.1	
C/Up	37Cl-2,3,7,8-TCDD	9.17e+06		1.21	26:56	1.023	721.73	90.2	
RS/RT	13C-1,2,3,4-TCDD	2.10e+07	0.81 y	1.00	26:20	*	1999.4		
RS	13C-1,2,3,4-TCDF	3.29e+07	0.78 y	1.00	24:50	*	1999.4		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.97e+07	0.50 y	1.00	34:23	*	1999.4		

Integrations by Analyst: [signature] Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/18/14

Totals class: TCDD EMPC Entry #: 19

Run: 12 File: 141216D1 S: 15 I: 1 F: 1
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 115.49 Unnamed Concentration: 107.753

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:21	5.766e+04	7.172e+04	0.80	y	1.294e+05	10.768	
23:44	8.588e+04	1.095e+05	0.78	y	1.954e+05	16.262	
24:12	3.004e+04	4.052e+04	0.74	y	7.056e+04	5.8727	
24:58	4.723e+04	5.865e+04	0.81	y	1.059e+05	8.8116	
25:12	5.262e+04	6.347e+04	0.83	y	1.161e+05	9.6617	
25:24	5.451e+04	6.016e+04	0.91	n	1.065e+05	8.8622	
25:35	1.399e+04	2.203e+04	0.64	n	3.217e+04	2.6773	
25:49	1.908e+04	1.875e+04	1.02	n	3.319e+04	2.7625	
25:58	4.141e+04	6.252e+04	0.66	y	1.039e+05	8.6500	
26:19	5.262e+04	5.598e+04	0.94	n	9.908e+04	8.2458	
26:40	3.240e+04	4.639e+04	0.70	y	7.879e+04	6.5576	
26:49	1.648e+04	1.661e+04	0.99	n	2.940e+04	2.4467	
26:56	3.714e+04	5.584e+04	0.67	y	9.297e+04	7.7379	2,3,7,8-TCDD
27:14	4.415e+04	5.677e+04	0.78	y	1.009e+05	8.3995	
27:22	1.517e+04	1.870e+04	0.81	y	3.388e+04	2.8194	
27:49	2.743e+04	3.210e+04	0.85	y	5.954e+04	4.9549	

Totals class: PeCDD EMPC Entry #: 21

Run: 12 File: 141216D1 S: 15 I: 1 F: 2
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 319.45 Unnamed Concentration: 270.932

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:28	2.388e+05	3.953e+05	0.60	y	6.341e+05	51.768	
29:55	1.352e+05	2.274e+05	0.59	y	3.626e+05	29.602	
30:22	8.358e+04	1.164e+05	0.72	y	2.000e+05	16.323	
30:33	1.273e+05	2.208e+05	0.58	y	3.480e+05	28.411	
30:38	1.769e+05	2.819e+05	0.63	y	4.588e+05	37.457	
30:50	2.646e+05	4.352e+05	0.61	y	6.998e+05	57.131	
31:09	4.314e+04	6.407e+04	0.67	y	1.072e+05	8.7519	
31:33	2.225e+05	3.718e+05	0.60	y	5.943e+05	48.515	1,2,3,7,8-PeCDD
31:38	4.831e+04	7.567e+04	0.64	y	1.240e+05	10.121	
31:55	1.473e+05	2.369e+05	0.62	y	3.843e+05	31.368	

Totals class: HxCDD EMPC Entry #: 23

Run: 12 File: 141216D1 S: 15 I: 1 F: 3
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 1282.0 Unnamed Concentration: 925.841

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:20	1.692e+06	1.361e+06	1.24 y	3.053e+06	315.26	
33:54	5.312e+05	4.306e+05	1.23 y	9.618e+05	99.319	
34:10	2.255e+06	1.815e+06	1.24 y	4.070e+06	420.29	
34:18	2.605e+05	2.048e+05	1.27 y	4.653e+05	48.049	
34:53	2.659e+05	2.071e+05	1.28 y	4.730e+05	49.206	1,2,3,4,7,8-HxCDD
34:59	5.493e+05	4.373e+05	1.26 y	9.866e+05	102.76	1,2,3,6,7,8-HxCDD
35:11	2.373e+05	1.783e+05	1.33 y	4.157e+05	42.923	
35:17	1.105e+06	9.024e+05	1.22 y	2.007e+06	204.22	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 12 File: 141216D1 S: 15 I: 1 F: 4
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 4459.7 Unnamed Concentration: 2422.897

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:53	1.177e+07	1.128e+07	1.04	y	2.304e+07	2422.9	
38:46	9.868e+06	9.504e+06	1.04	y	1.937e+07	2036.8	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 12 File: 141216D1 S: 15 I: 1 F: 1
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 135.45 Unnamed Concentration: 126.186

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
21:08	1.670e+04	2.677e+04	0.62	n	3.839e+04	2.4847	
21:42	3.003e+04	4.338e+04	0.69	y	7.341e+04	4.7517	
22:21	7.544e+04	9.000e+04	0.84	y	1.654e+05	10.709	
22:54	1.126e+05	1.327e+05	0.85	y	2.453e+05	15.878	
23:19	6.272e+04	8.853e+04	0.71	y	1.513e+05	9.7905	
23:46	4.473e+04	4.757e+04	0.94	n	8.421e+04	5.4507	
23:55	3.282e+04	4.583e+04	0.72	y	7.865e+04	5.0912	
24:05	4.218e+04	5.217e+04	0.81	y	9.435e+04	6.1070	
24:27	2.026e+04	2.390e+04	0.85	y	4.415e+04	2.8581	
24:35	3.641e+04	4.940e+04	0.74	y	8.581e+04	5.5543	
24:44	6.161e+04	7.103e+04	0.87	y	1.326e+05	8.5862	
24:51	6.383e+04	8.842e+04	0.72	y	1.523e+05	9.8553	
25:17	4.224e+04	5.542e+04	0.76	y	9.766e+04	6.3217	
25:33	2.306e+04	3.979e+04	0.58	n	5.300e+04	3.4307	
25:44	2.694e+04	3.439e+04	0.78	y	6.133e+04	3.9699	
25:55	2.916e+04	3.646e+04	0.80	y	6.562e+04	4.2479	
26:02	1.523e+04	2.172e+04	0.70	y	3.694e+04	2.3914	
26:08	5.810e+04	8.507e+04	0.68	y	1.432e+05	9.2674	2,3,7,8-TCDF
26:29	1.144e+05	1.354e+05	0.85	y	2.498e+05	16.170	
27:57	2.909e+04	2.215e+04	1.31	n	3.921e+04	2.5379	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 12 File: 141216D1 S: 15 I: 1 F: 1
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 47.452 Unnamed Concentration: 47.452

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:57	4.915e+05	3.229e+05	1.52 y	8.144e+05	47.452	

Totals class: PeCDF EMPC Entry #: 31

Run: 12 File: 141216D1 S: 15 I: 1 F: 2
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 129.08 Unnamed Concentration: 113.662

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:17	1.539e+05	9.613e+04	1.60	y	2.501e+05	14.571	
29:26	4.790e+05	3.070e+05	1.56	y	7.860e+05	45.796	
29:46	3.036e+04	2.170e+04	1.40	y	5.206e+04	3.0336	
29:58	2.298e+05	1.438e+05	1.60	y	3.736e+05	21.770	
30:11	3.978e+04	2.580e+04	1.54	y	6.559e+04	3.8215	
30:21	6.559e+04	4.031e+04	1.63	y	1.059e+05	6.1950	1,2,3,7,8-PeCDF
30:36	1.030e+05	6.903e+04	1.49	y	1.720e+05	10.023	
31:05	1.007e+04	6.536e+03	1.54	y	1.660e+04	0.96749	
31:10	9.125e+04	6.870e+04	1.33	y	1.599e+05	9.3197	
31:16	9.502e+04	6.382e+04	1.49	y	1.588e+05	9.2240	2,3,4,7,8-PeCDF
31:19	3.300e+04	2.227e+04	1.48	y	5.527e+04	3.2205	
32:10	1.189e+04	1.463e+04	0.81	n	1.957e+04	1.1400	

Totals class: HxCDF EMPC Entry #: 33

Run: 12 File: 141216D1 S: 15 I: 1 F: 3
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 345.01 Unnamed Concentration: 284.585

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:48	3.408e+05	2.596e+05	1.31 y	6.004e+05	37.732	
32:58	1.252e+06	9.657e+05	1.30 y	2.218e+06	139.38	
33:19	4.369e+04	3.216e+04	1.36 y	7.585e+04	4.7671	
33:31	7.689e+05	6.015e+05	1.28 y	1.370e+06	86.126	
33:53	1.302e+05	9.332e+04	1.40 y	2.235e+05	14.047	
33:59	1.814e+05	1.466e+05	1.24 y	3.280e+05	18.418	1,2,3,4,7,8-HxCDF
34:07	1.507e+05	1.241e+05	1.21 y	2.747e+05	16.193	1,2,3,6,7,8-HxCDF
34:42	1.904e+05	1.544e+05	1.23 y	3.448e+05	22.279	2,3,4,6,7,8-HxCDF
35:40	2.484e+04	2.250e+04	1.10 y	4.734e+04	3.5347	1,2,3,7,8,9-HxCDF
35:43	2.327e+04	1.696e+04	1.37 y	4.023e+04	2.5282	

Totals class: HpCDF EMPC Entry #: 35

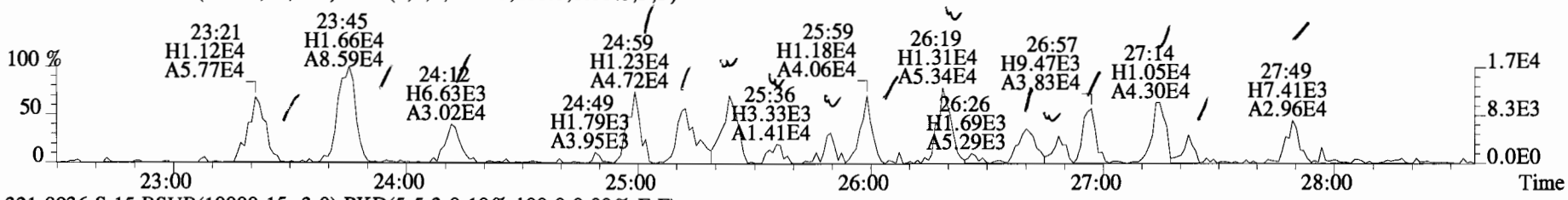
Run: 12 File: 141216D1 S: 15 I: 1 F: 4
Acquired: 17-DEC-14 02:03:21 Processed: 17-DEC-14 08:52:58

Total Concentration: 654.52 Unnamed Concentration: 360.278

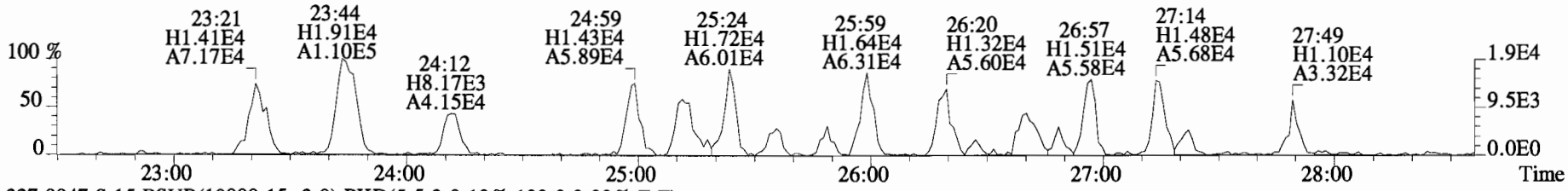
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:29	2.132e+06	1.914e+06	1.11 y	4.046e+06	276.88	1,2,3,4,6,7,8-HpCDF
38:06	2.762e+06	2.326e+06	1.19 y	5.088e+06	360.28	
39:19	1.280e+05	1.088e+05	1.18 y	2.368e+05	17.363	1,2,3,4,7,8,9-HpCDF

File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5

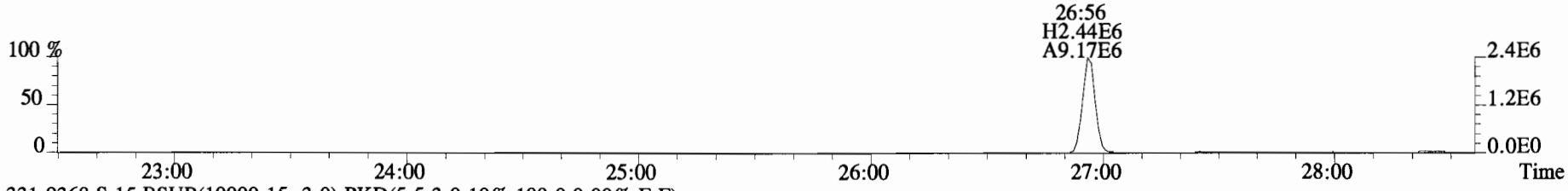
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



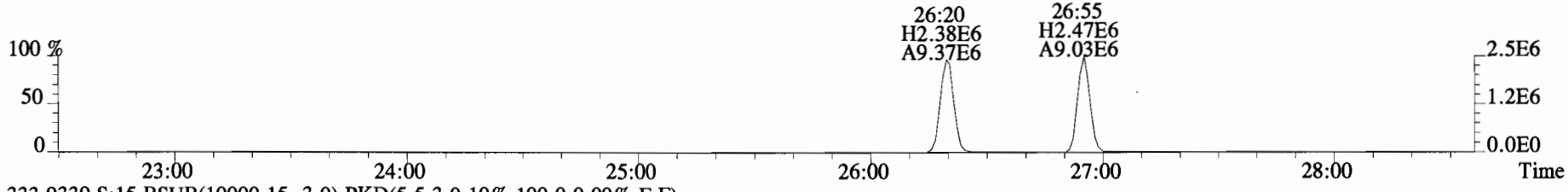
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



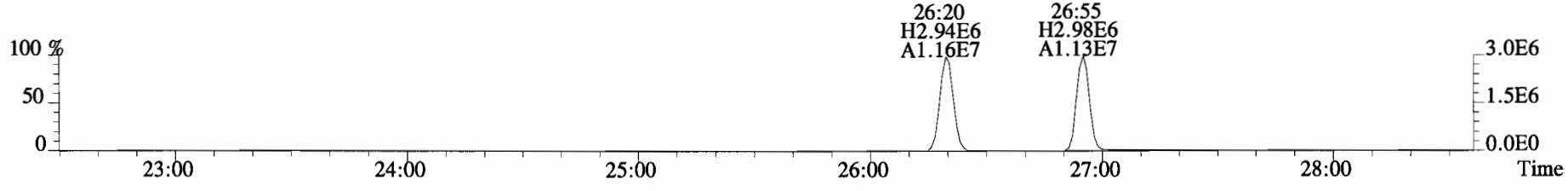
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



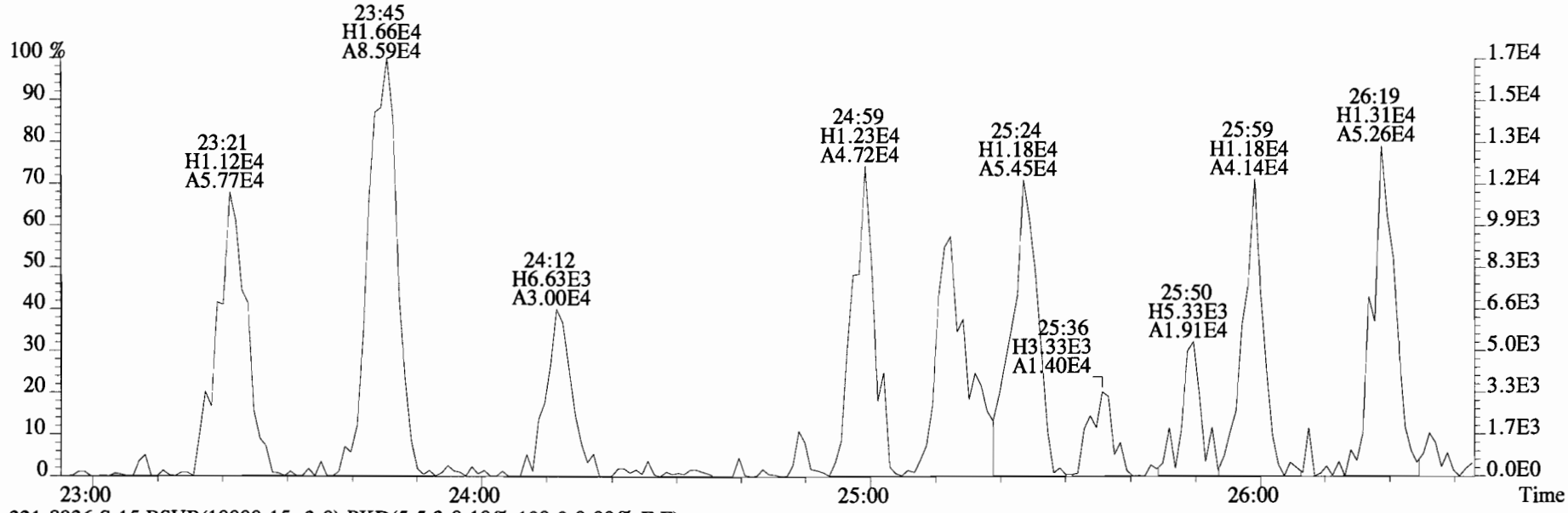
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



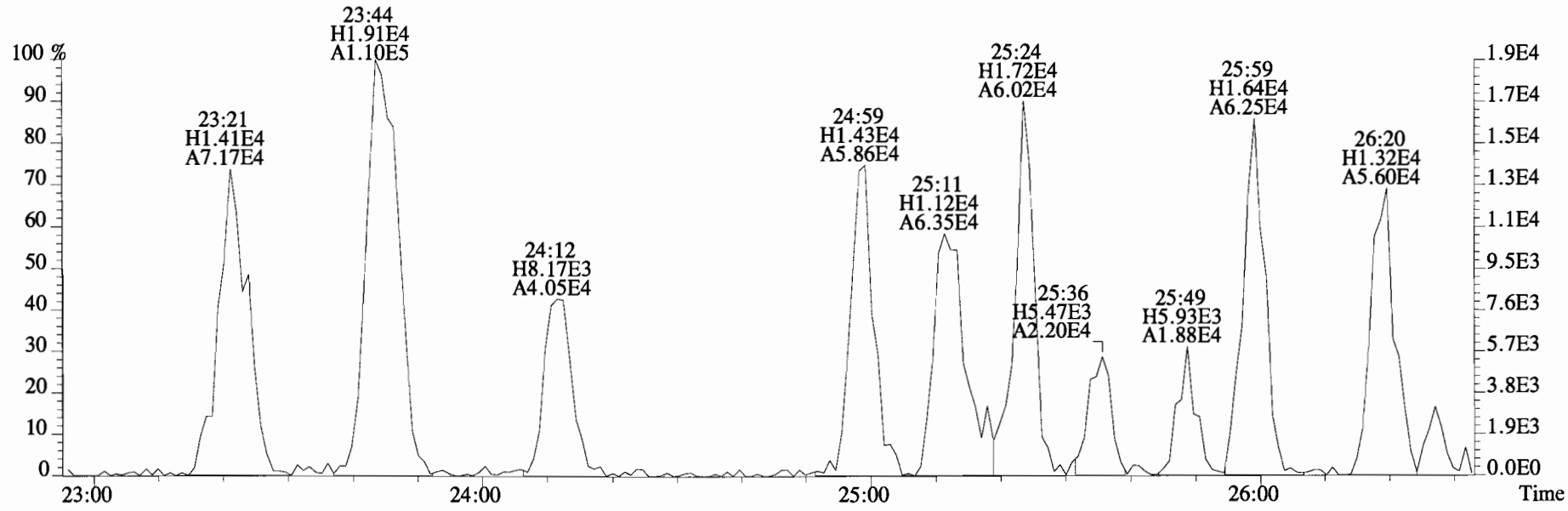
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



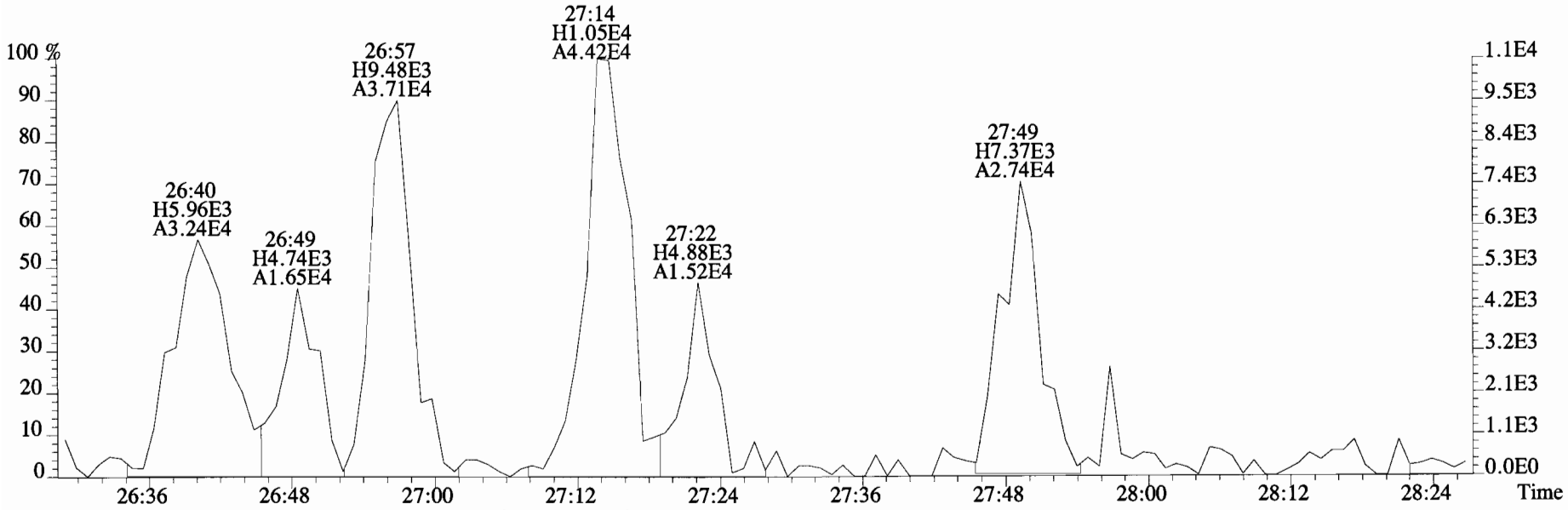
File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



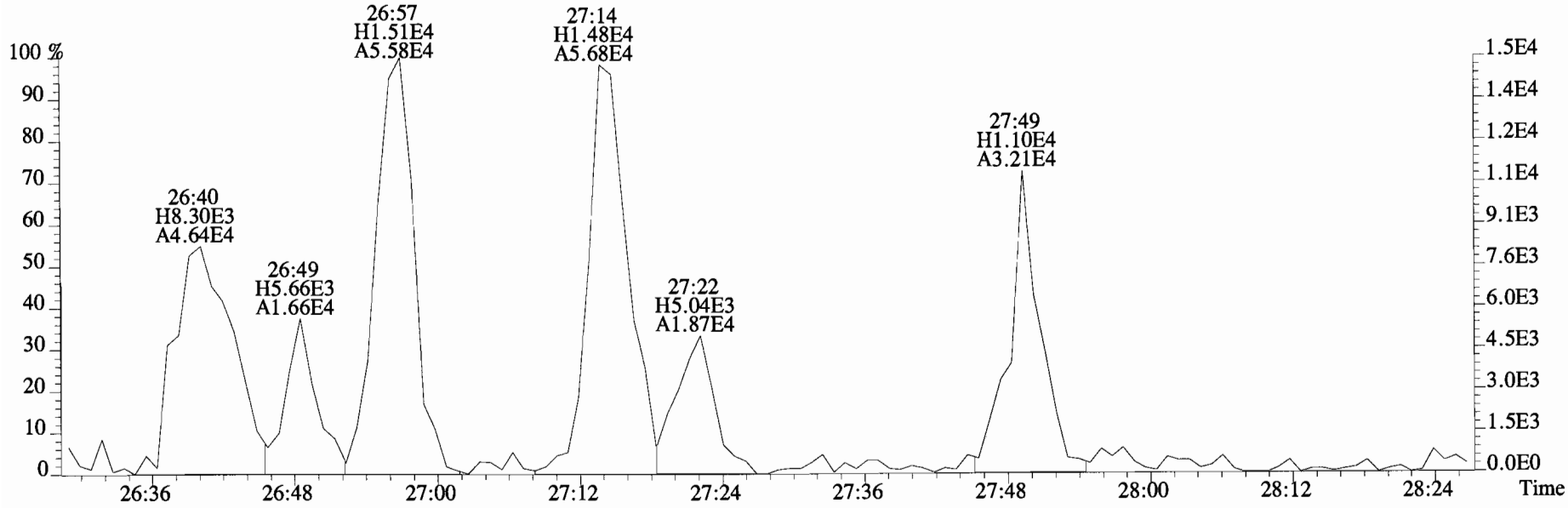
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

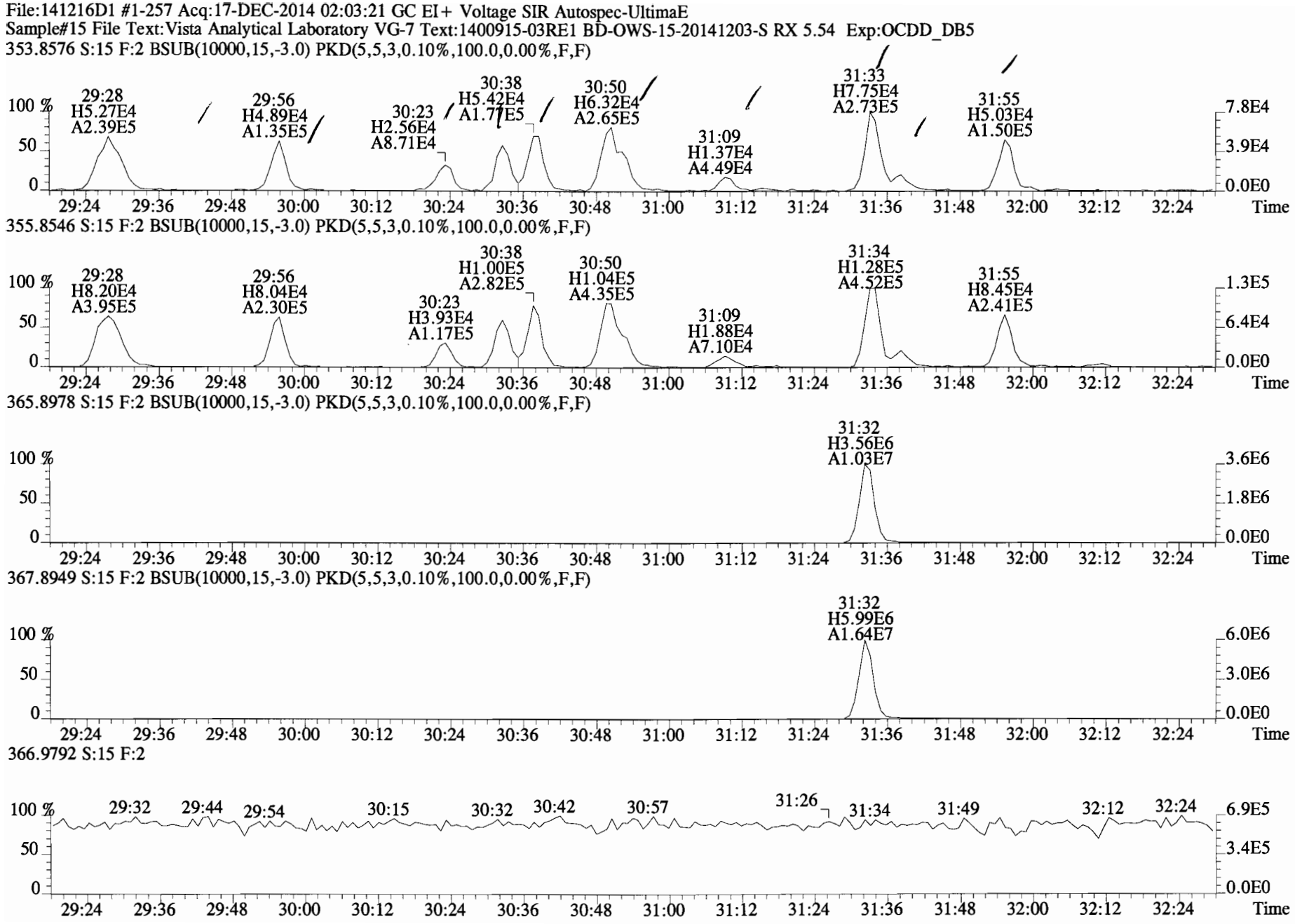


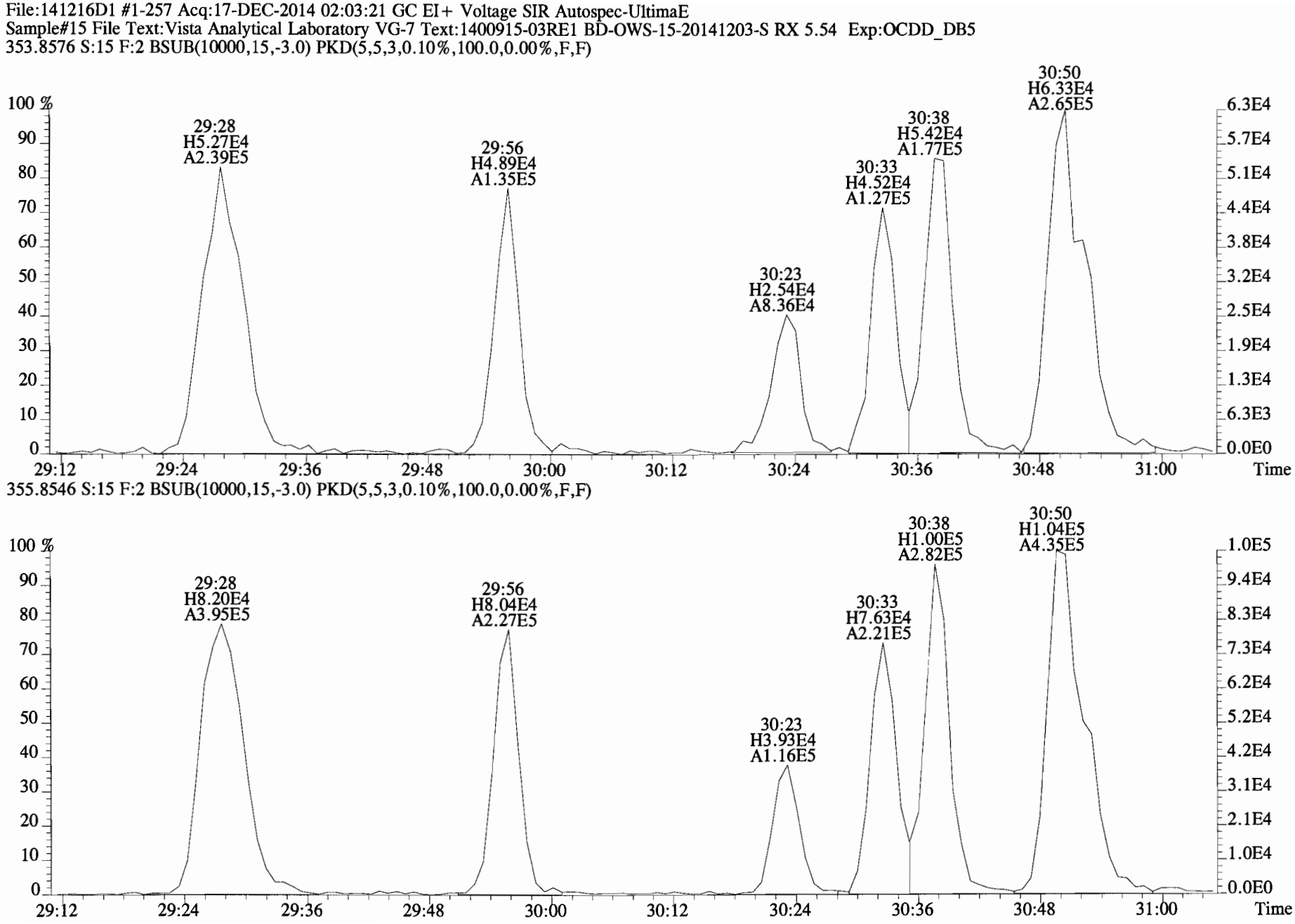
File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



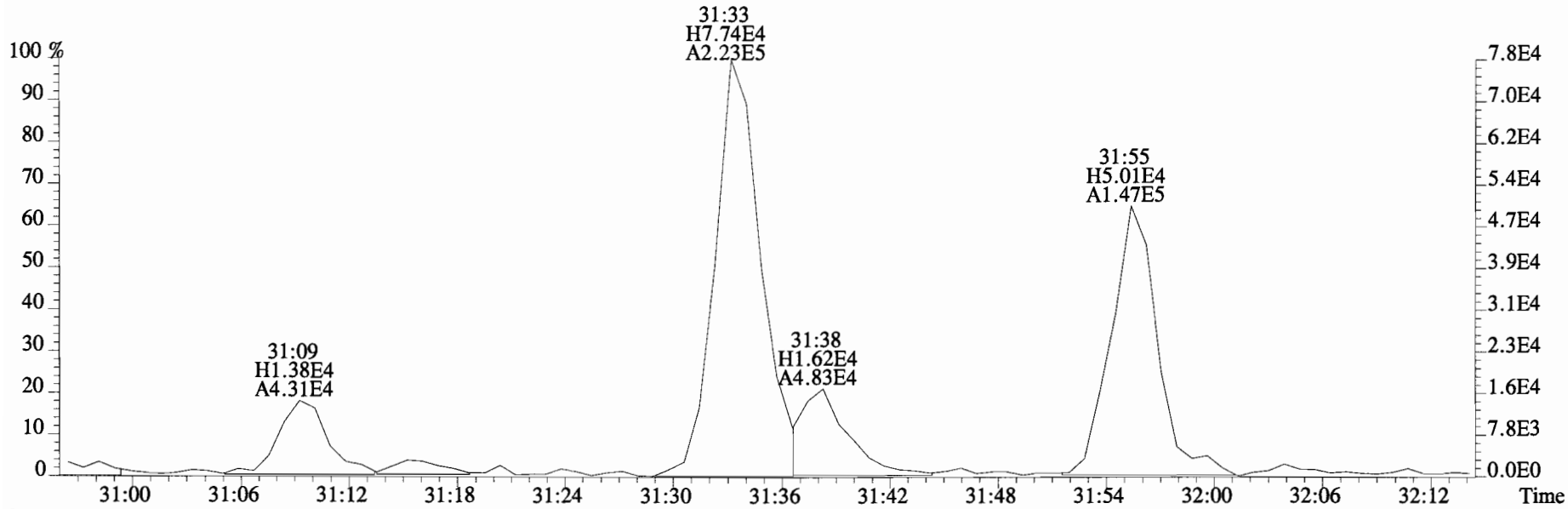
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



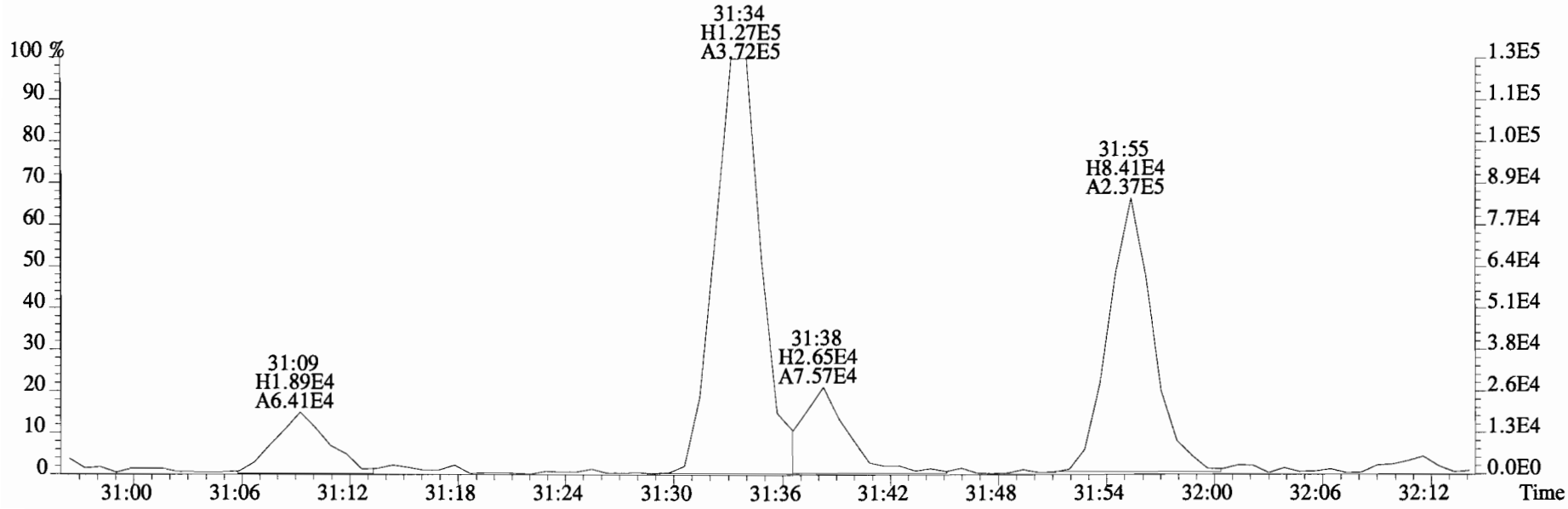

File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H5.27E4 A2.39E5
29:56 H4.89E4 A1.35E5
30:23 H2.56E4 A8.71E4
30:38 H5.42E4 A1.77E5
30:50 H6.32E4 A2.65E5
31:09 H1.37E4 A4.49E4
31:33 H7.75E4 A2.73E5
31:55 H5.03E4 A1.50E5
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H8.20E4 A3.95E5
29:56 H8.04E4 A2.30E5
30:23 H3.93E4 A1.17E5
30:38 H1.00E5 A2.82E5
30:50 H1.04E5 A4.35E5
31:09 H1.88E4 A7.10E4
31:34 H1.28E5 A4.52E5
31:55 H8.45E4 A2.41E5
365.8978 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:32 H3.56E6 A1.03E7
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:32 H5.99E6 A1.64E7
366.9792 S:15 F:2
29:32 29:44 29:54 30:15 30:32 30:42 30:57 31:26 31:34 31:49 32:12 32:24
100 %
50
0
29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 32:00 32:12 32:24
Time
7.8E4
3.9E4
0.0E0
1.3E5
6.4E4
3.6E6
1.8E6
6.0E6
3.0E6
6.9E5
3.4E5


File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H5.27E4 A2.39E5
29:56 H4.89E4 A1.35E5
30:23 H2.54E4 A8.36E4
30:33 H4.52E4 A1.27E5
30:38 H5.42E4 A1.77E5
30:50 H6.33E4 A2.65E5
100 %
90
80
70
60
50
40
30
20
10
0
6.3E4
5.7E4
5.1E4
4.4E4
3.8E4
3.2E4
2.5E4
1.9E4
1.3E4
6.3E3
0.0E0
29:12
29:24
29:36
29:48
30:00
30:12
30:24
30:36
30:48
31:00
Time
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H8.20E4 A3.95E5
29:56 H8.04E4 A2.27E5
30:23 H3.93E4 A1.16E5
30:33 H7.63E4 A2.21E5
30:38 H1.00E5 A2.82E5
30:50 H1.04E5 A4.35E5
100 %
90
80
70
60
50
40
30
20
10
0
1.0E5
9.4E4
8.3E4
7.3E4
6.2E4
5.2E4
4.2E4
3.1E4
2.1E4
1.0E4
0.0E0
29:12
29:24
29:36
29:48
30:00
30:12
30:24
30:36
30:48
31:00
Time

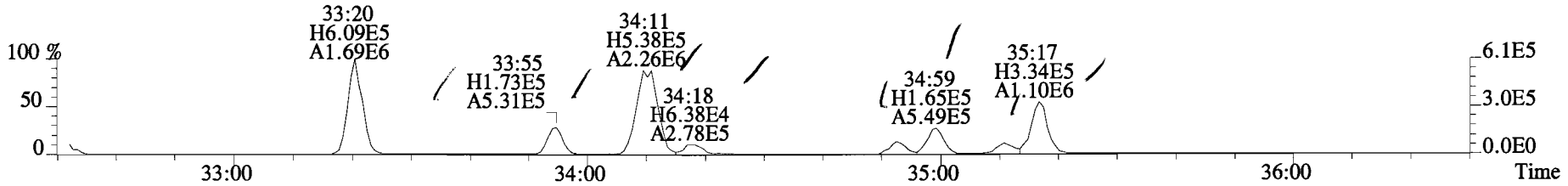
File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



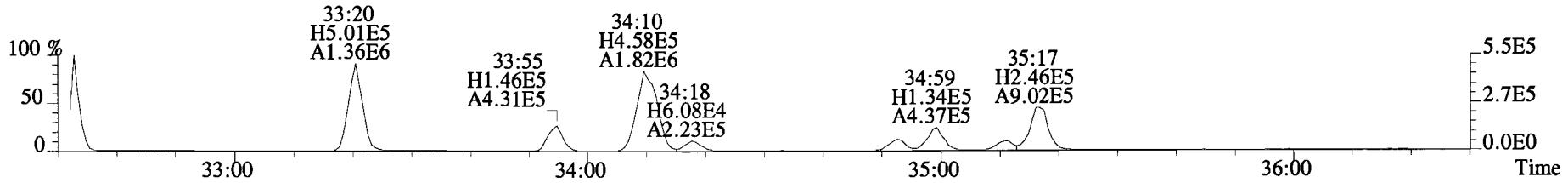
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



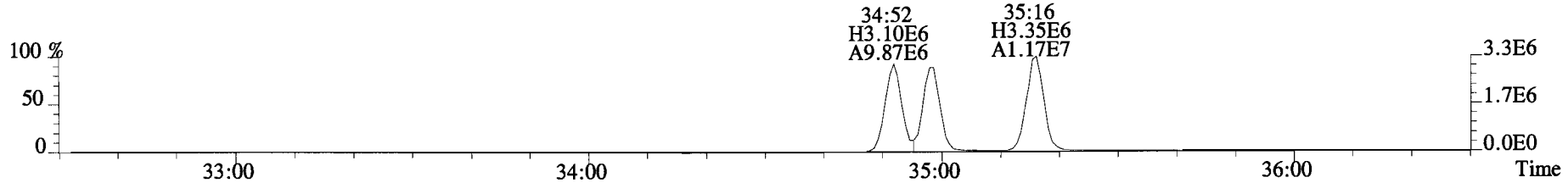
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



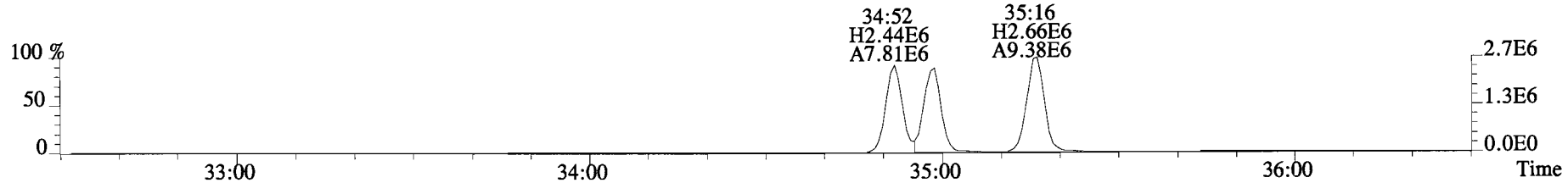
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



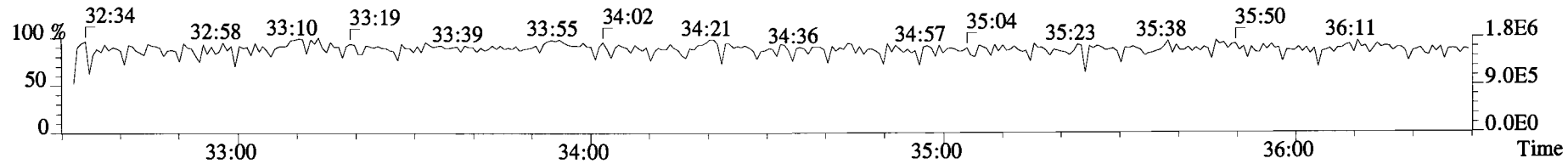
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



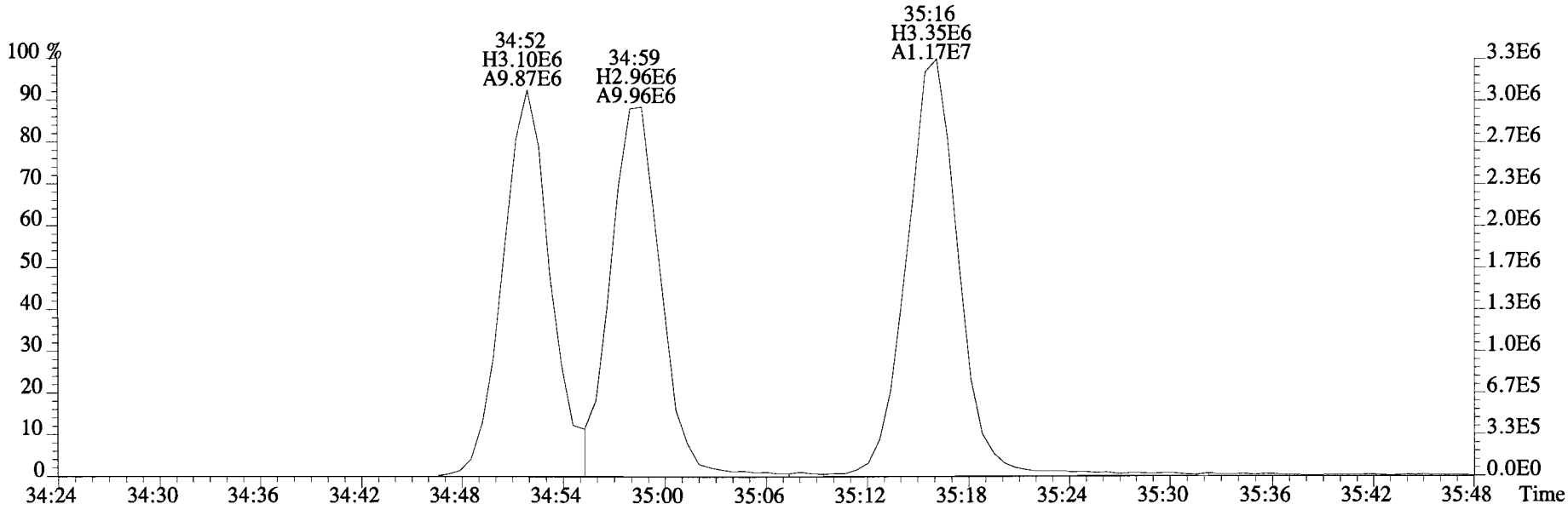
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



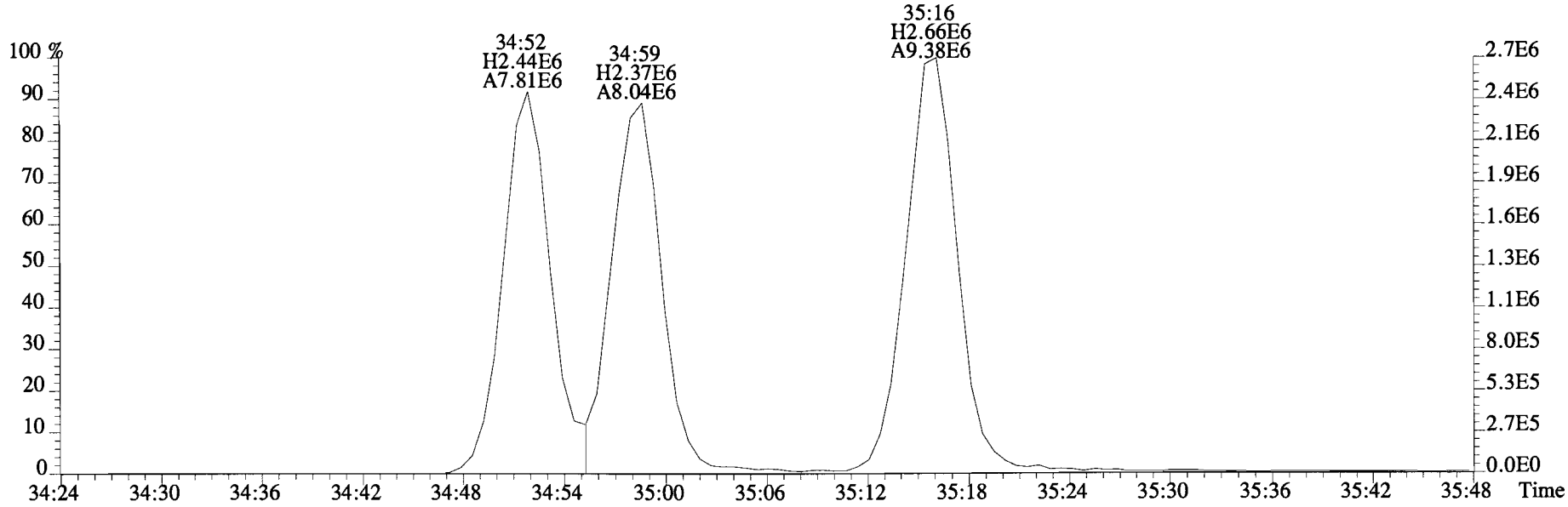
380.9760 S:15 F:3



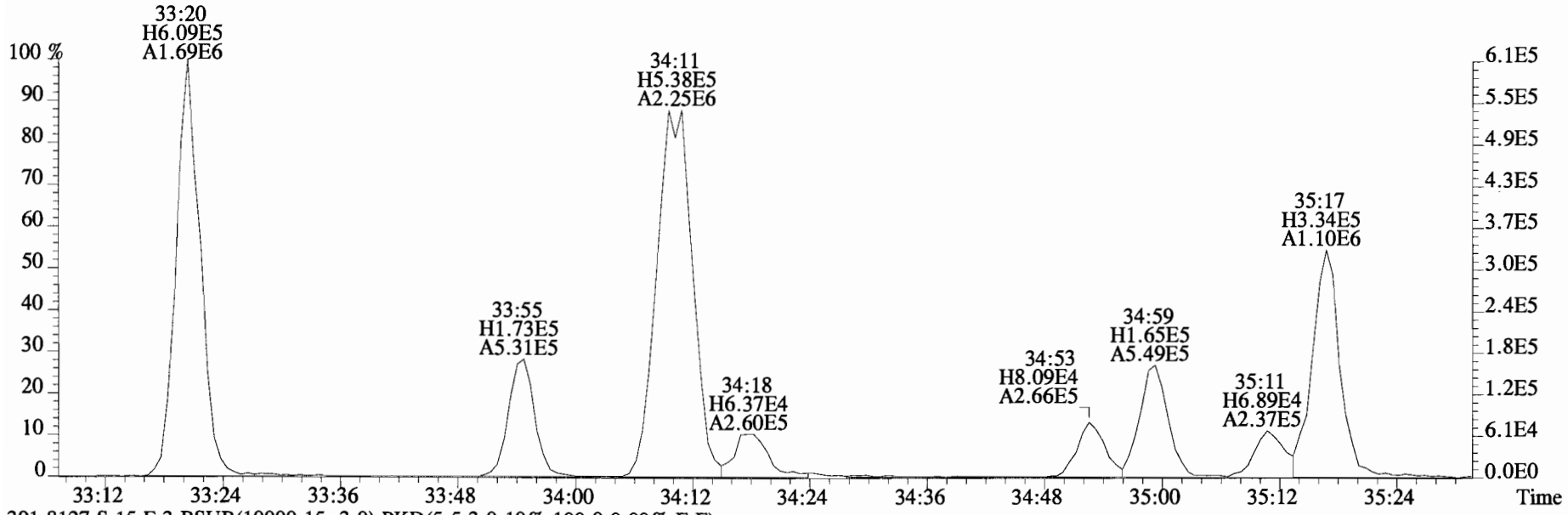
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



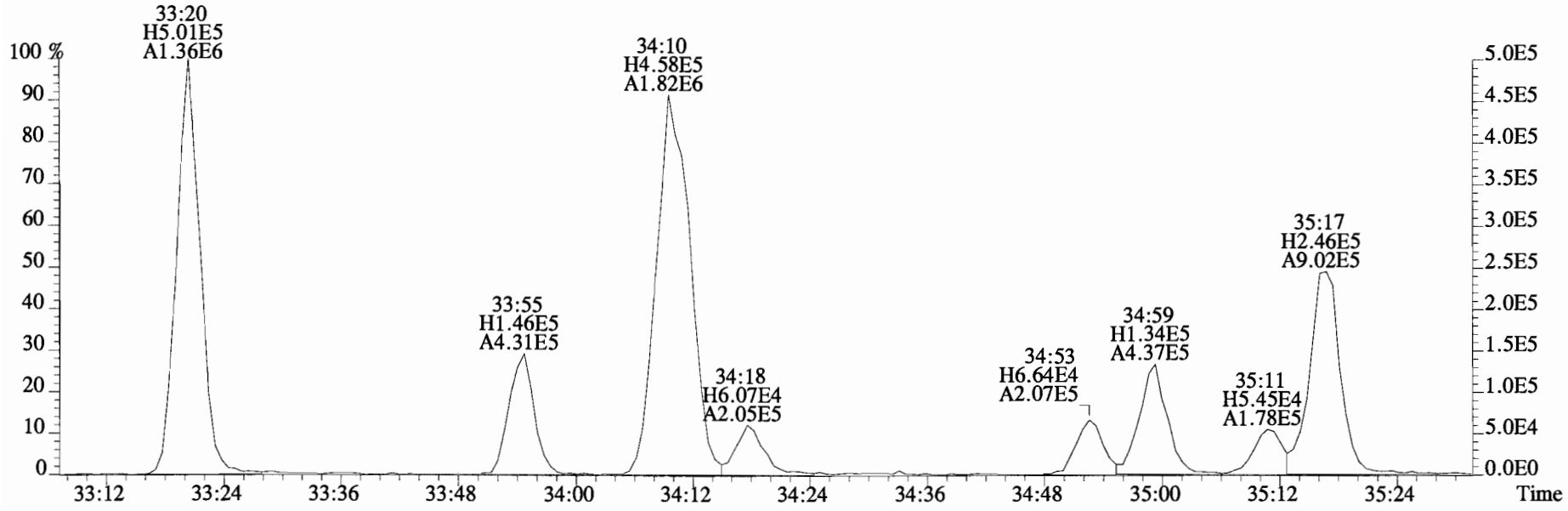
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



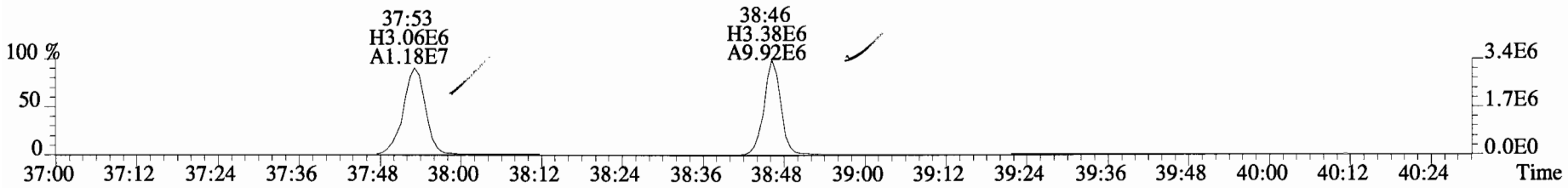
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



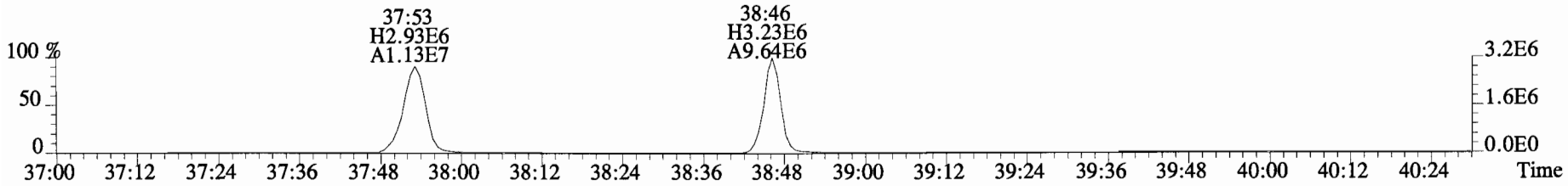
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



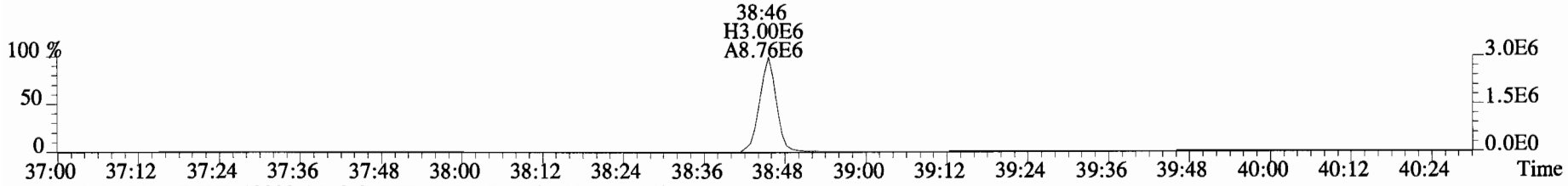
File:141216D1 #1-326 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



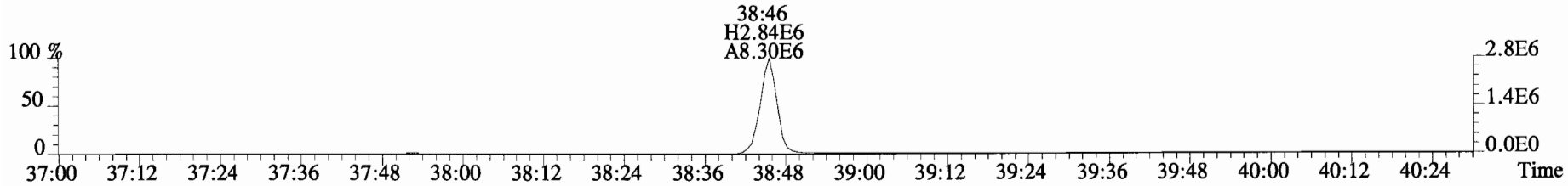
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



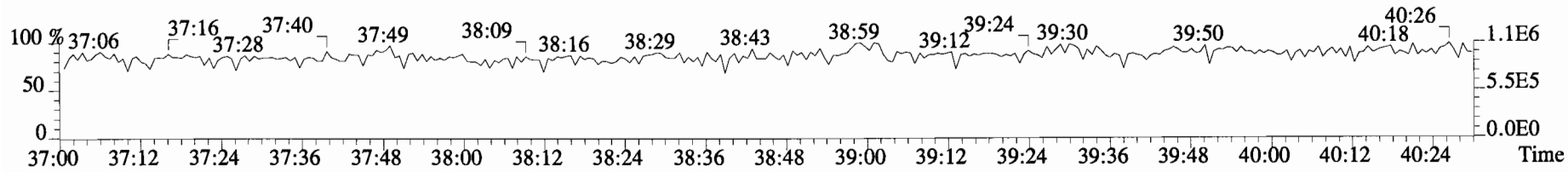
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



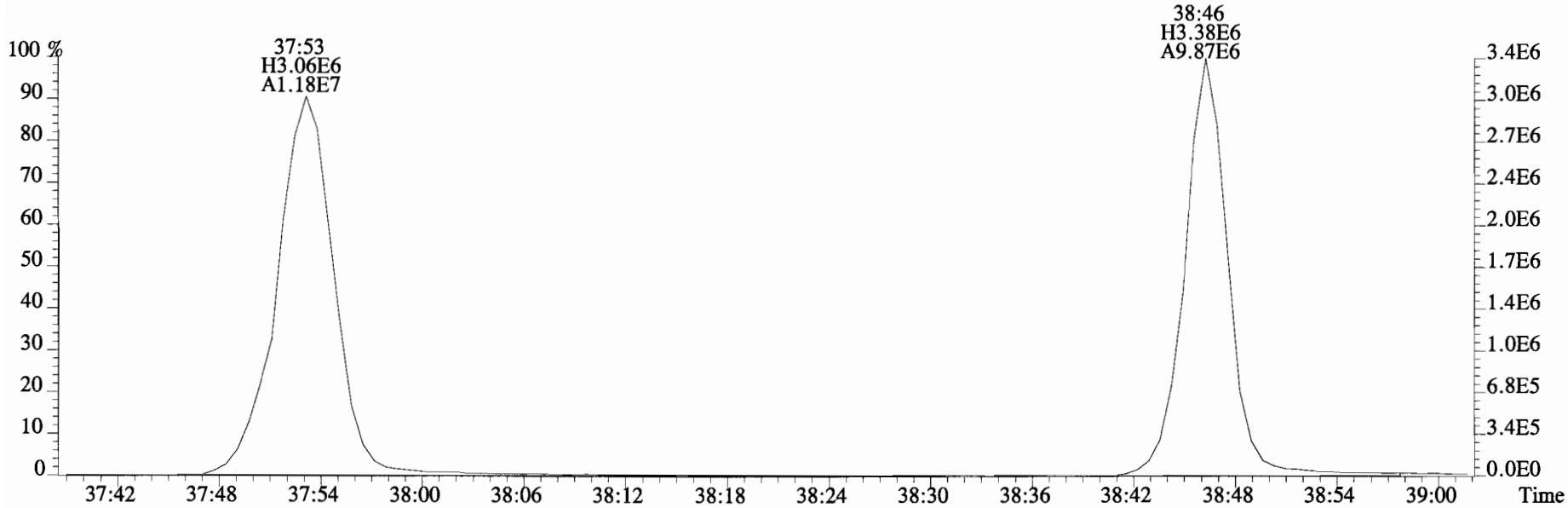
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



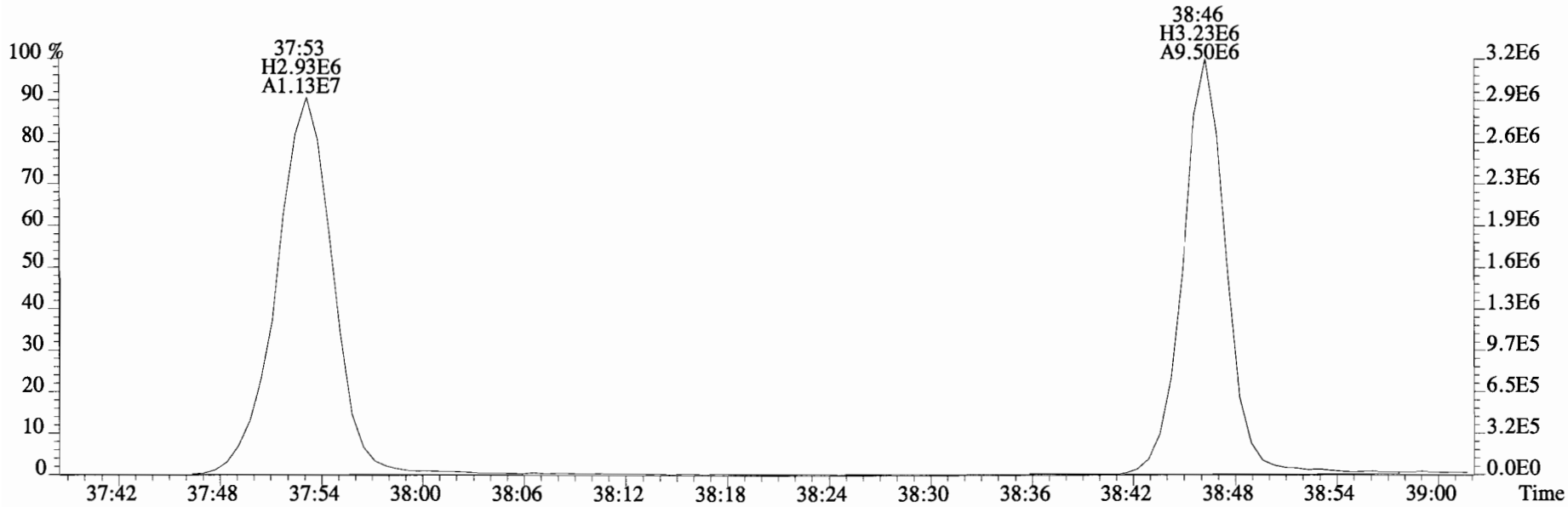
430.9728 S:15 F:4



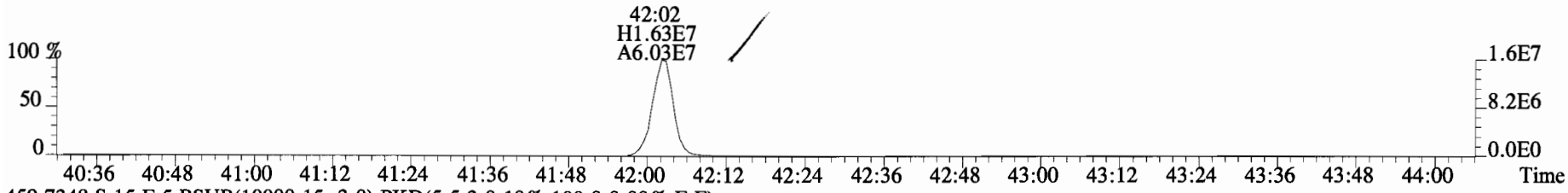
File:141216D1 #1-326 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



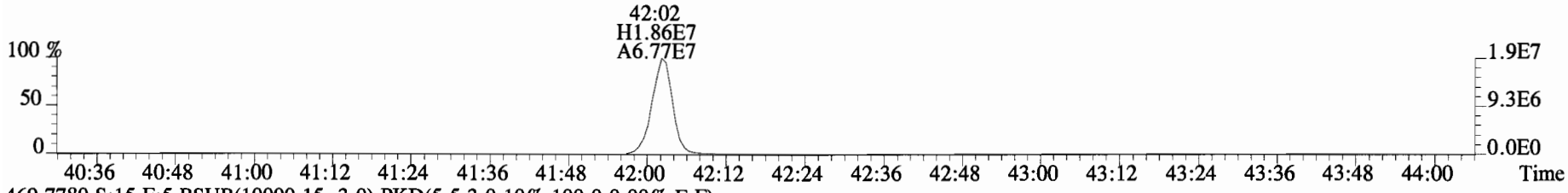
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



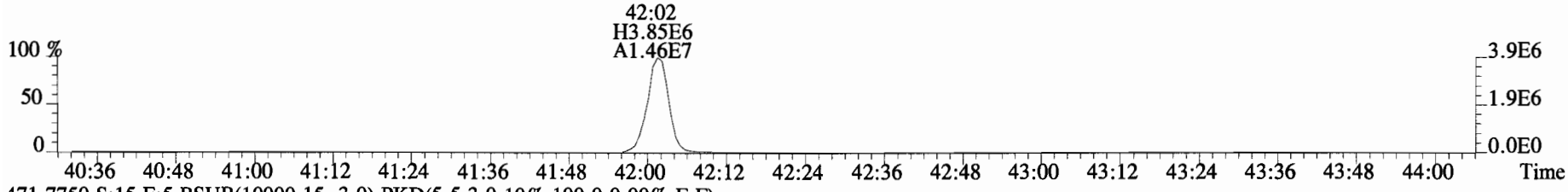
File:141216D1 #1-388 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



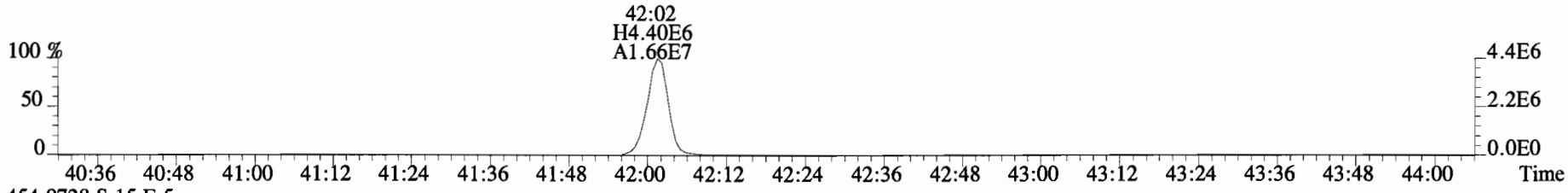
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



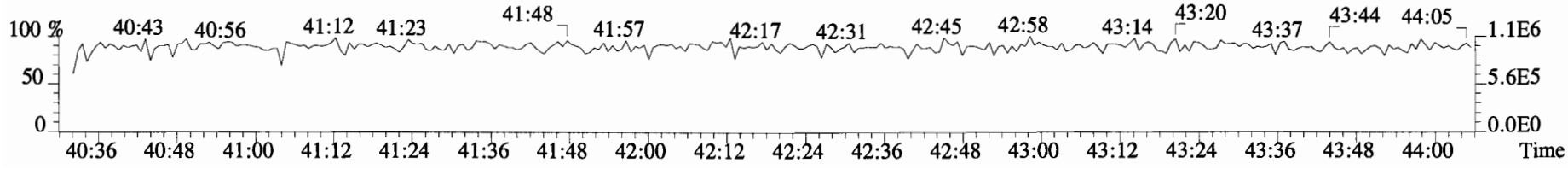
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

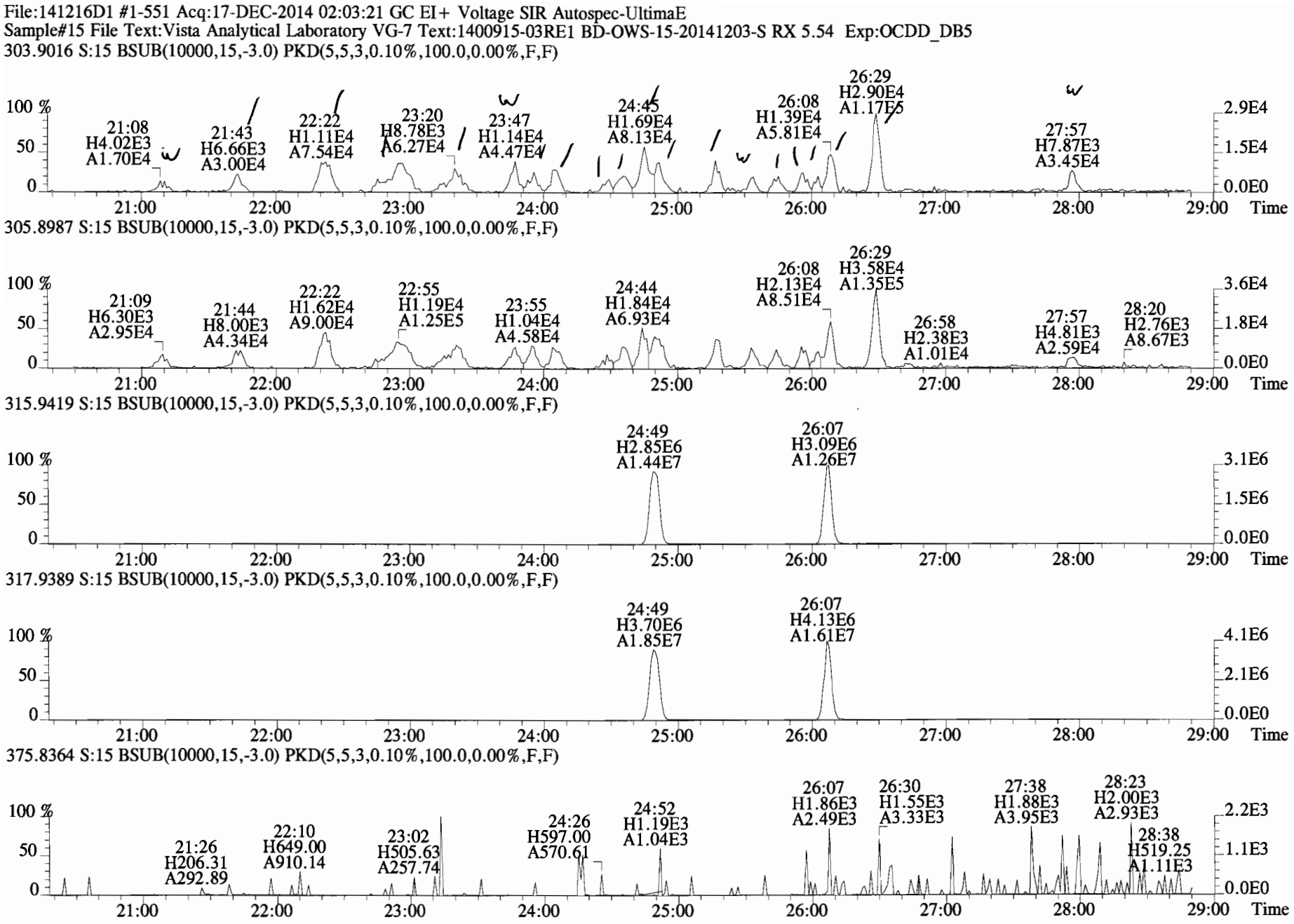


471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

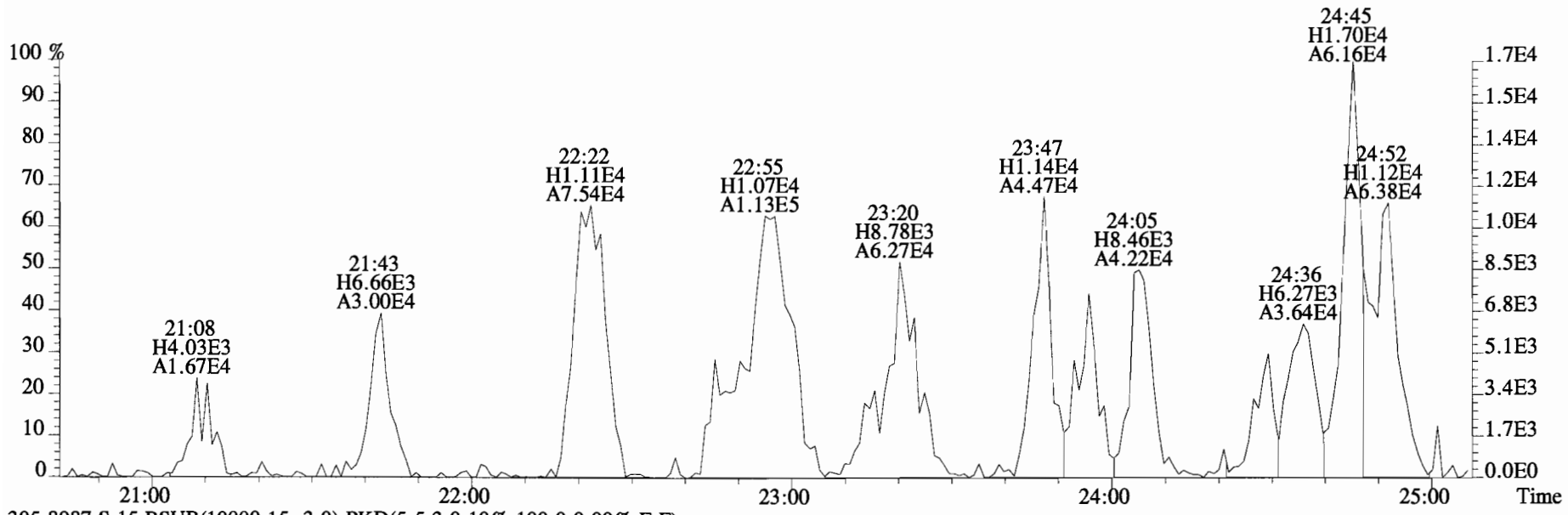


454.9728 S:15 F:5

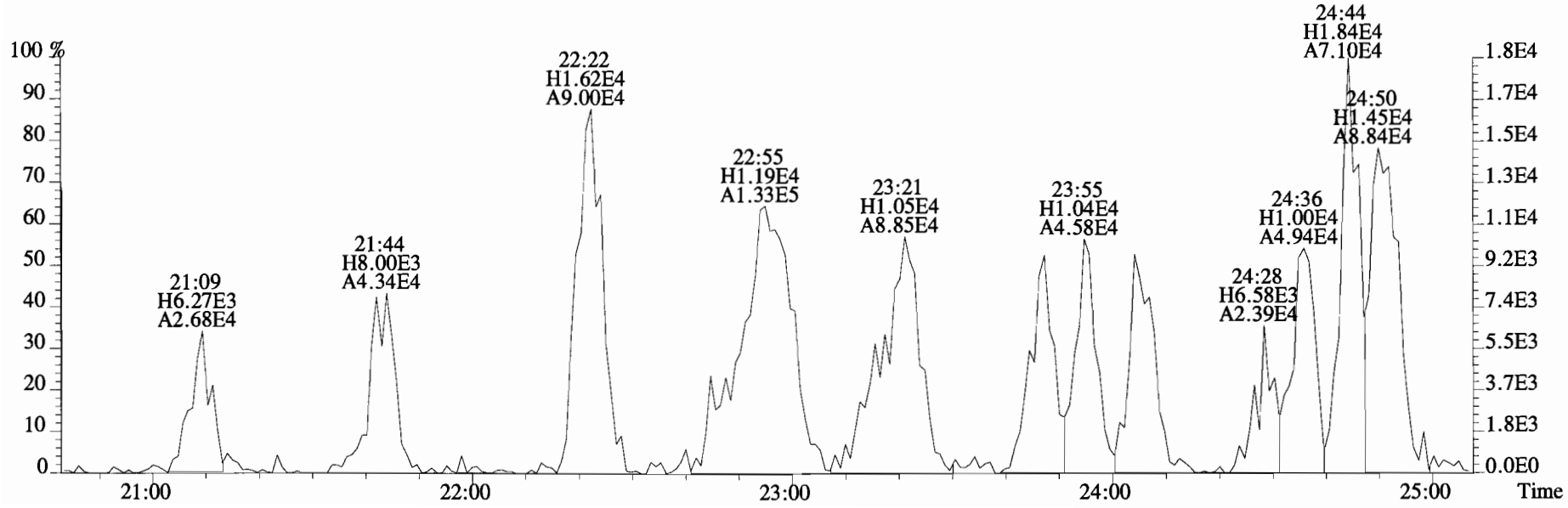



File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:08 H4.02E3 A1.70E4
21:43 H6.66E3 A3.00E4
22:22 H1.11E4 A7.54E4
23:20 H8.78E3 A6.27E4
23:47 H1.14E4 A4.47E4
24:45 H1.69E4 A8.13E4
26:08 H1.39E4 A5.81E4
26:29 H2.90E4 A1.17E5
27:57 H7.87E3 A3.45E4
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:09 H6.30E3 A2.95E4
21:44 H8.00E3 A4.34E4
22:22 H1.62E4 A9.00E4
22:55 H1.19E4 A1.25E5
23:55 H1.04E4 A4.58E4
24:44 H1.84E4 A6.93E4
26:08 H2.13E4 A8.51E4
26:29 H3.58E4 A1.35E5
26:58 H2.38E3 A1.01E4
27:57 H4.81E3 A2.59E4
28:20 H2.76E3 A8.67E3
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:49 H2.85E6 A1.44E7
26:07 H3.09E6 A1.26E7
317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:49 H3.70E6 A1.85E7
26:07 H4.13E6 A1.61E7
375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:26 H206.31 A292.89
22:10 H649.00 A910.14
23:02 H505.63 A257.74
24:26 H597.00 A570.61
24:52 H1.19E3 A1.04E3
26:07 H1.86E3 A2.49E3
26:30 H1.55E3 A3.33E3
27:38 H1.88E3 A3.95E3
28:23 H2.00E3 A2.93E3
28:38 H519.25 A1.11E3
100 %
50
0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
Time
2.9E4
1.5E4
0.0E0
3.6E4
1.8E4
3.1E6
1.5E6
4.1E6
2.1E6
2.2E3
1.1E3

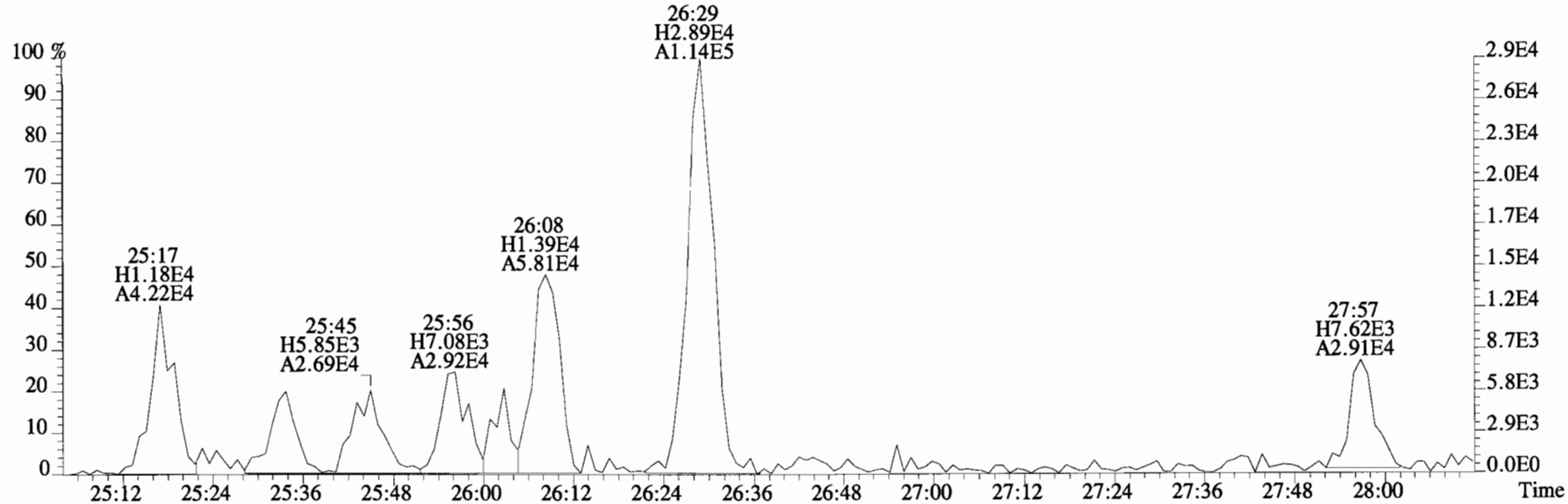
File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



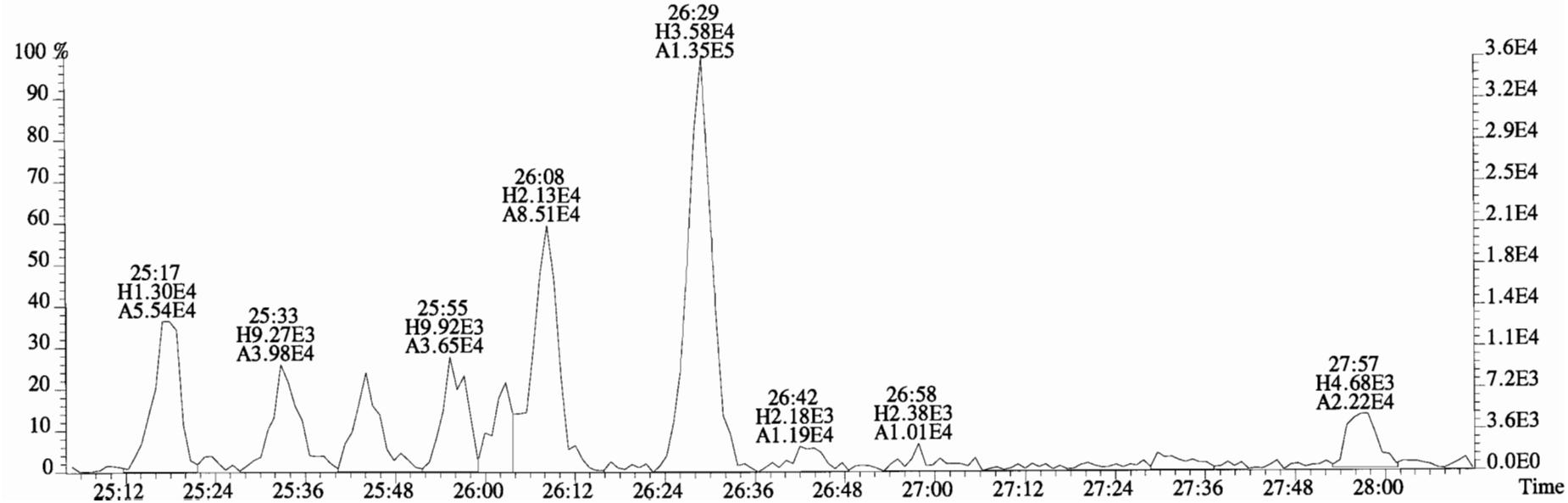
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



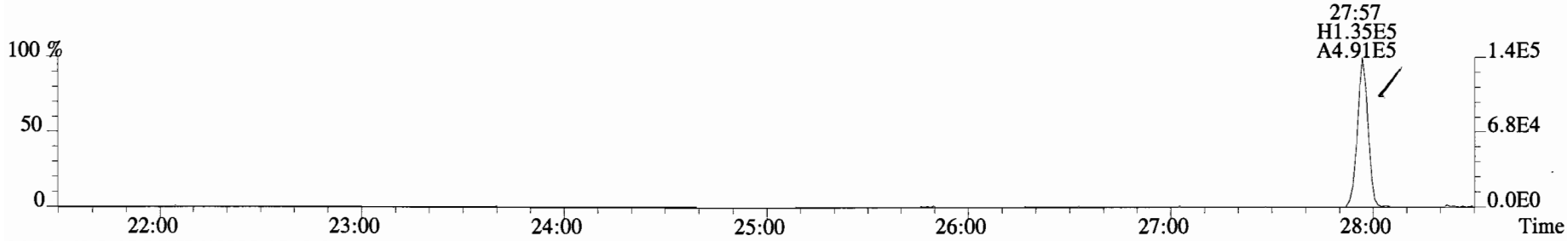
File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



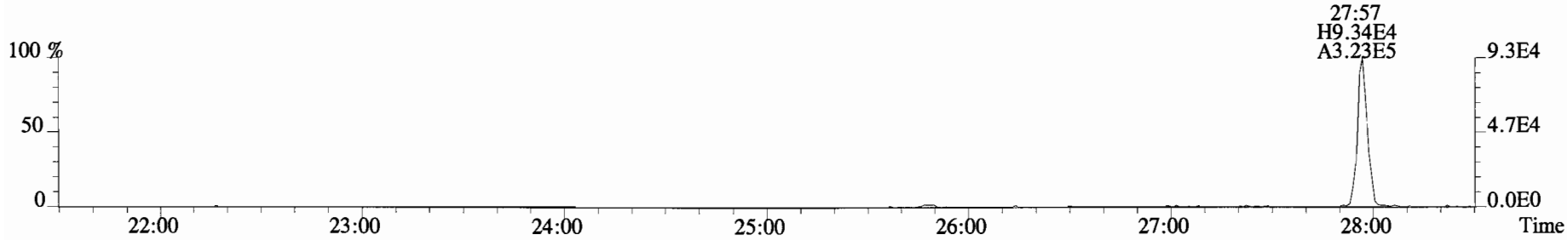
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



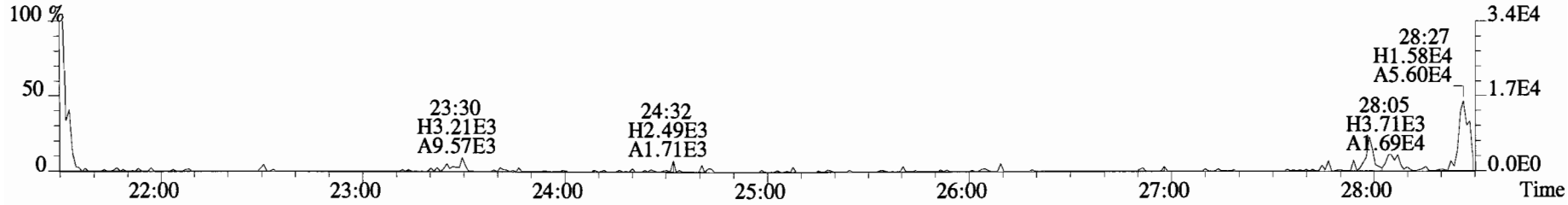
File:141216D1 #1-551 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



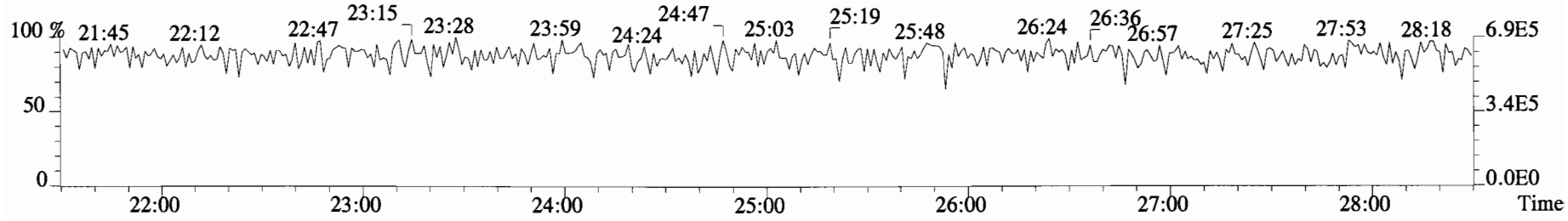
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

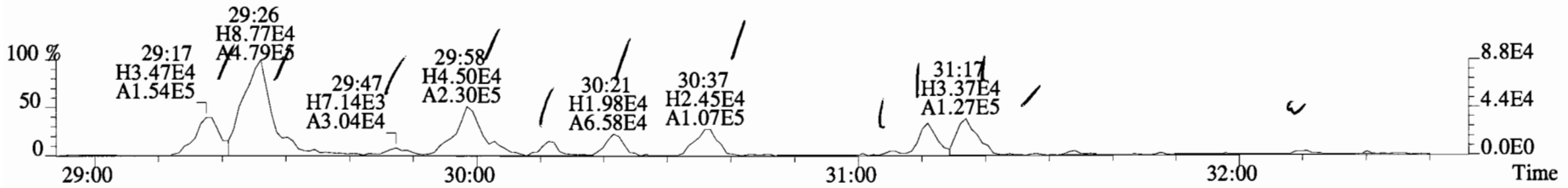


316.9824 S:15

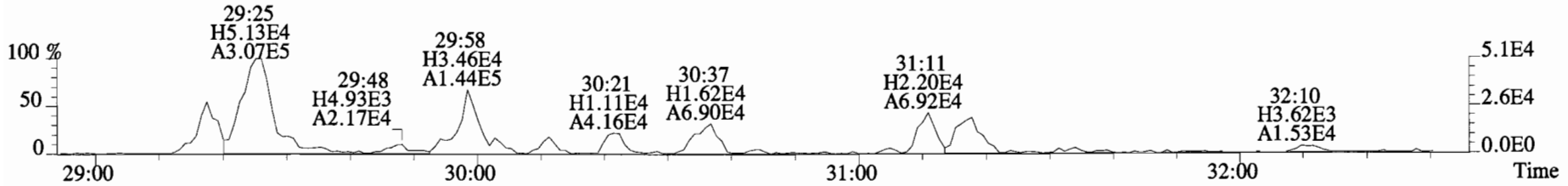


File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5

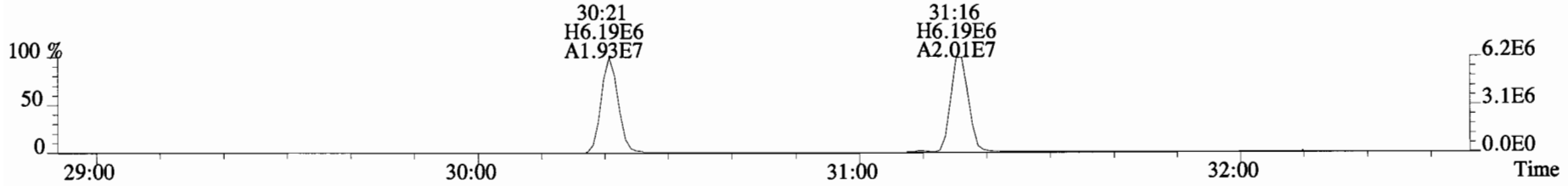
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



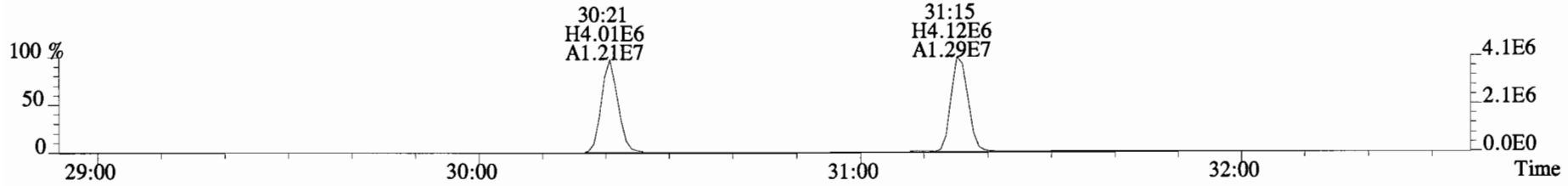
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



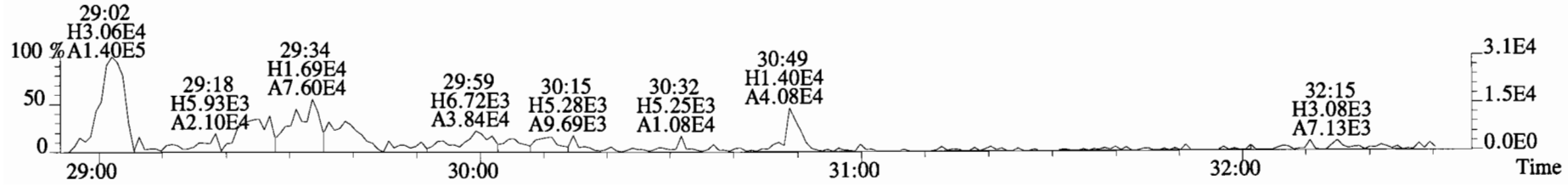
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



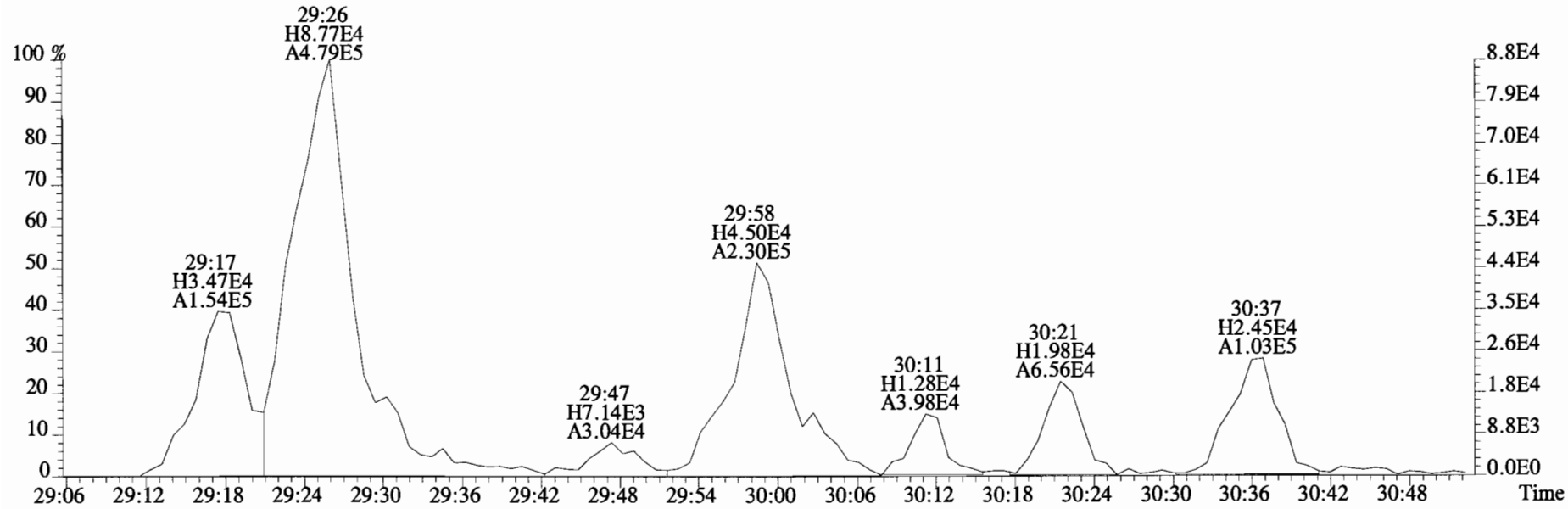
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



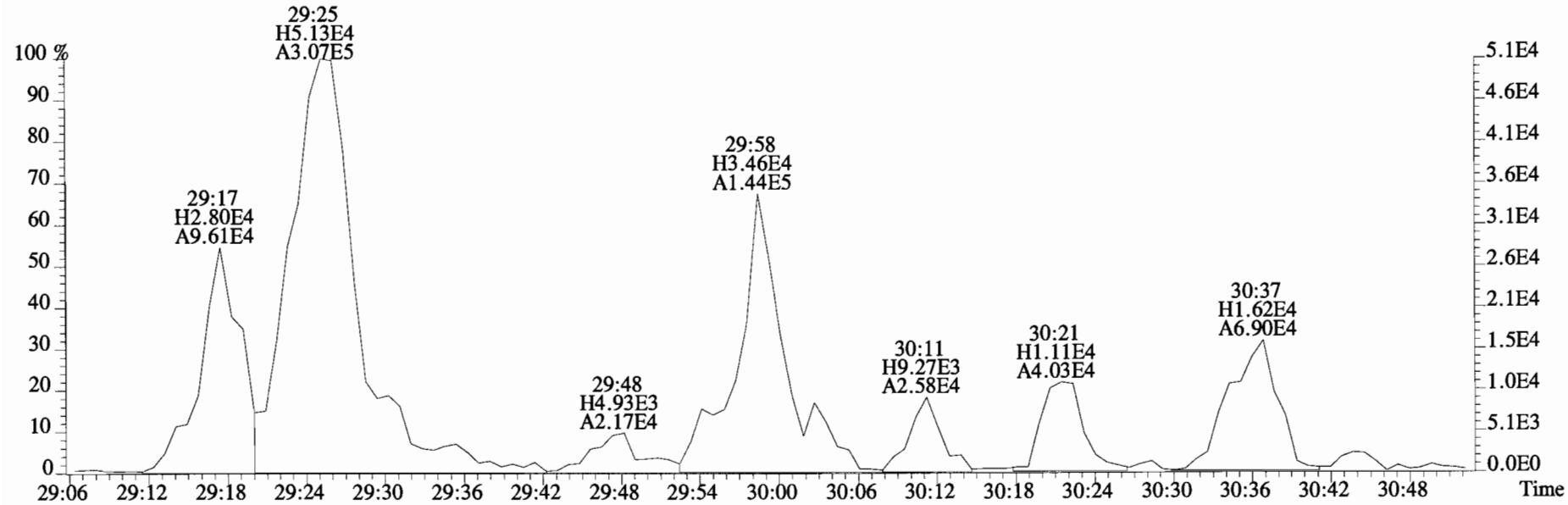
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



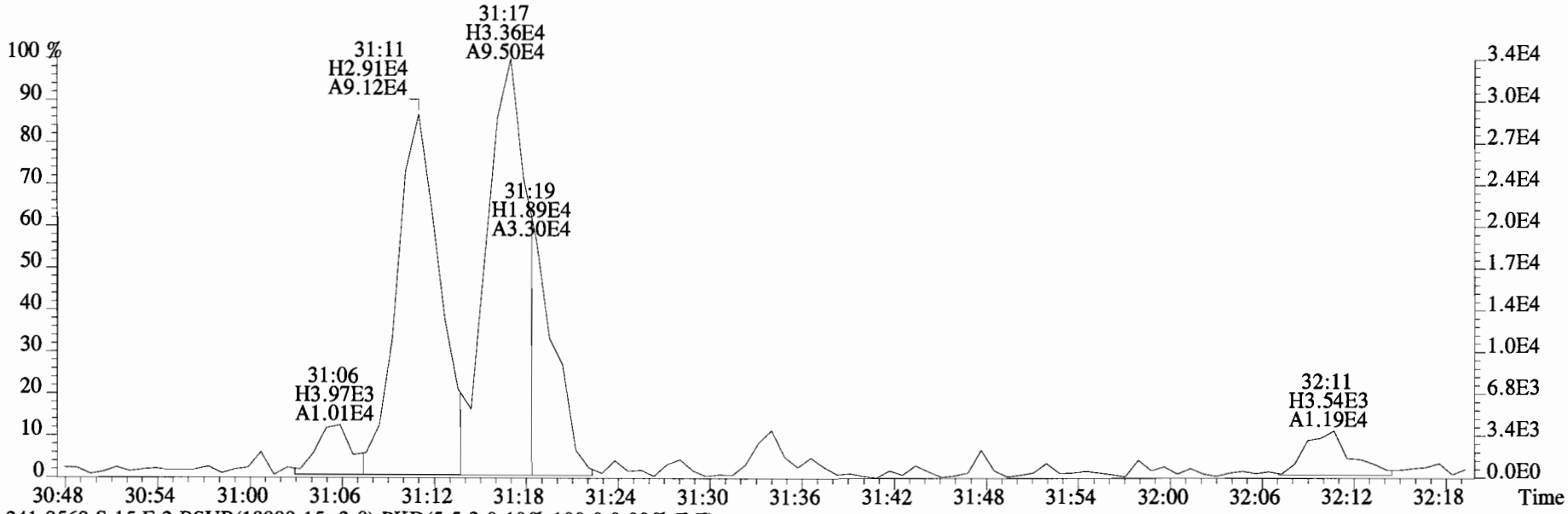
File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



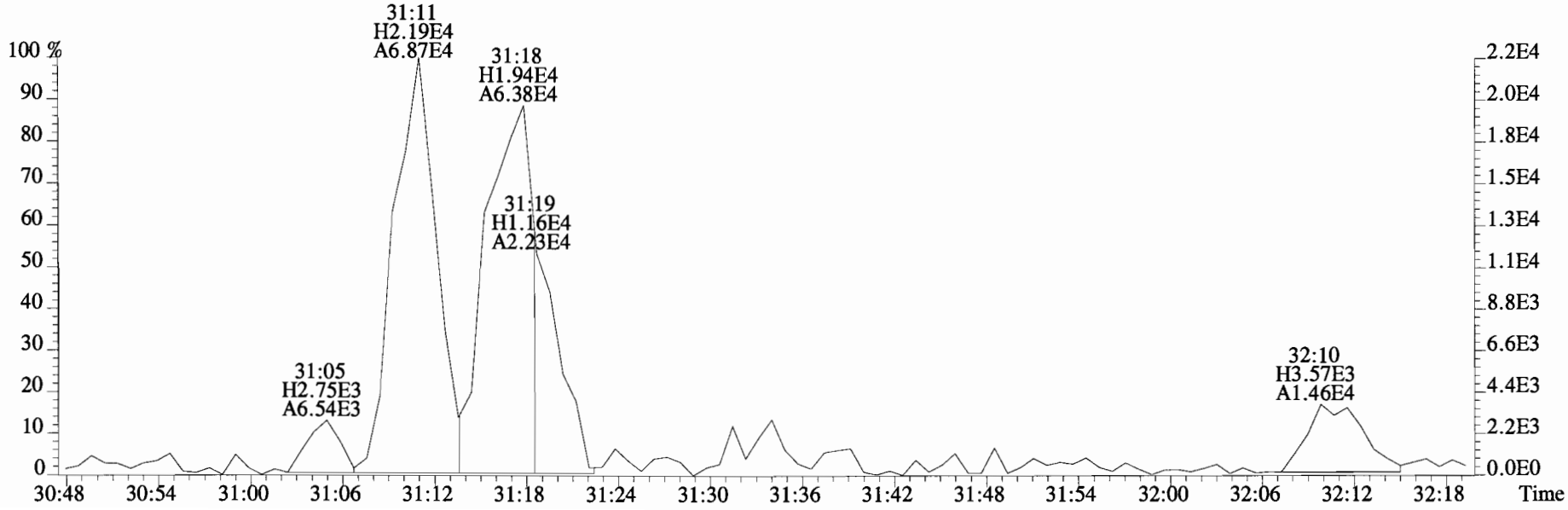
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

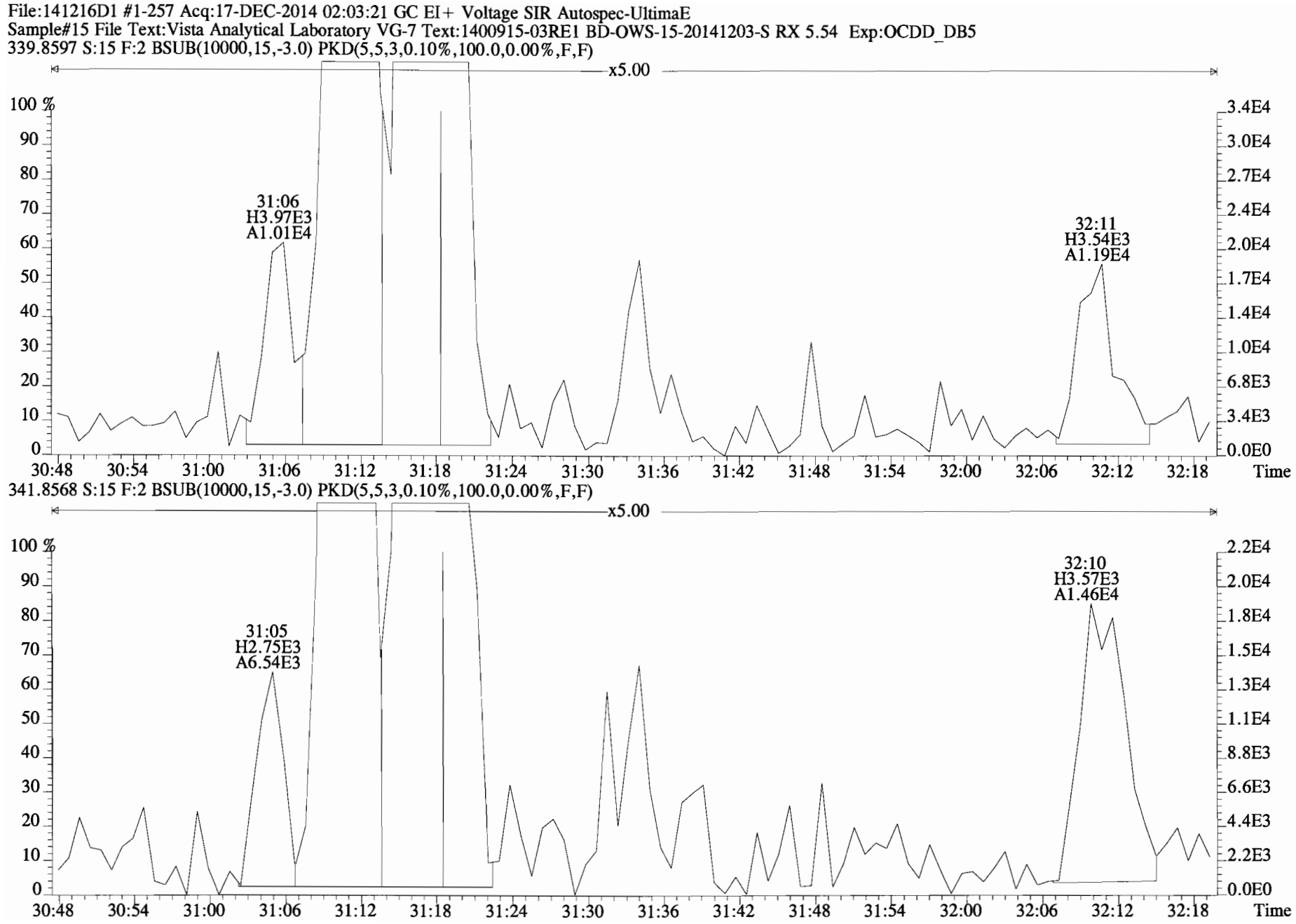


File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

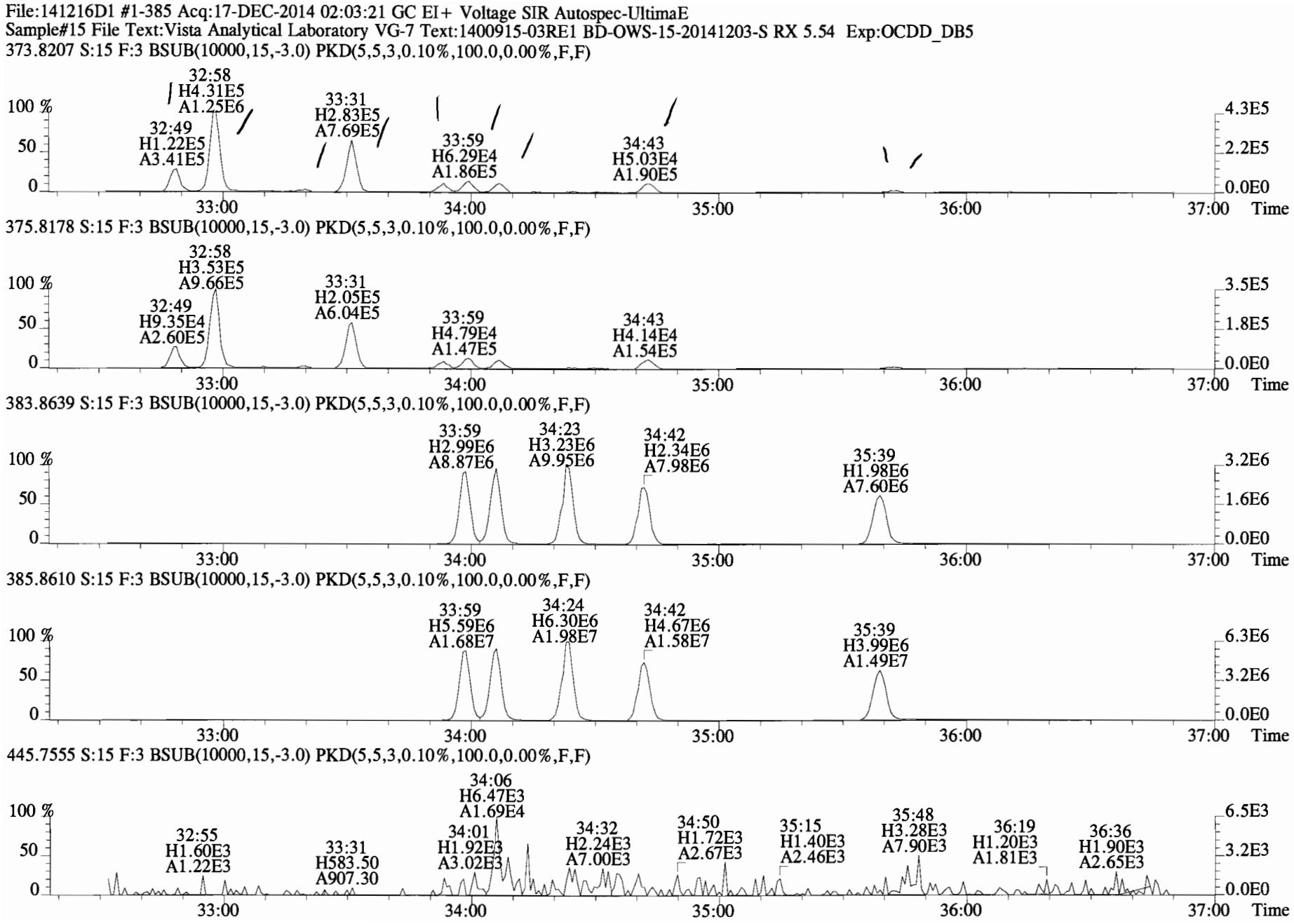


341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

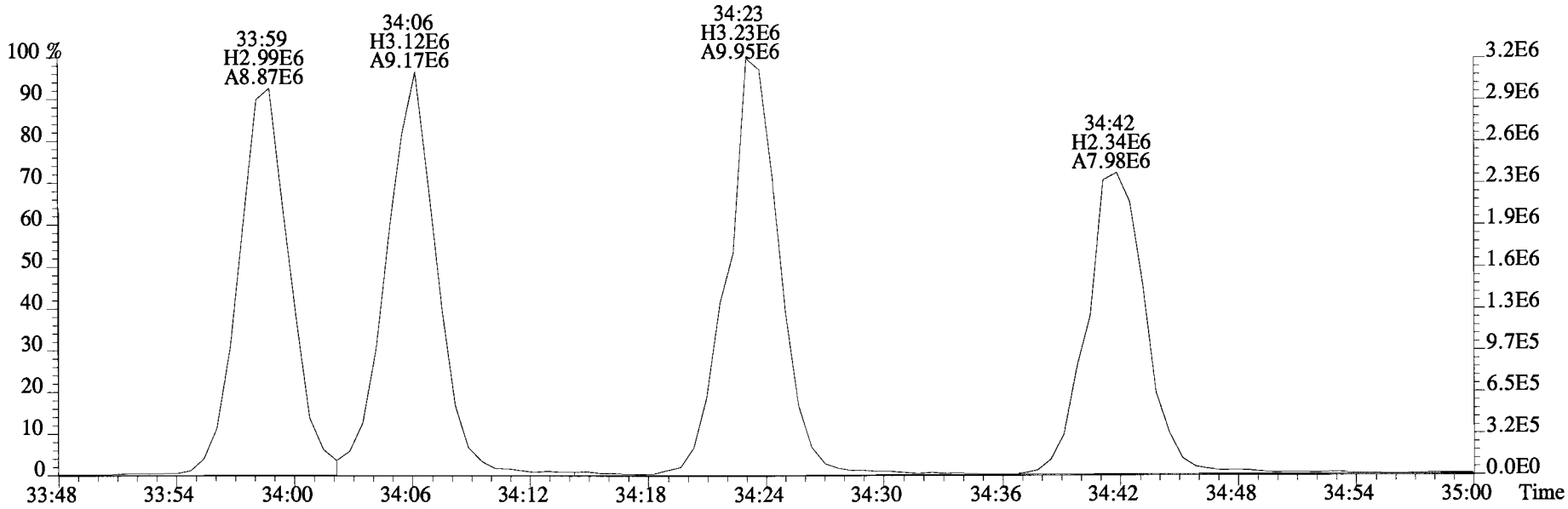



File:141216D1 #1-257 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
31:06
H3.97E3
A1.01E4
32:11
H3.54E3
A1.19E4
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
31:05
H2.75E3
A6.54E3
32:10
H3.57E3
A1.46E4
Time

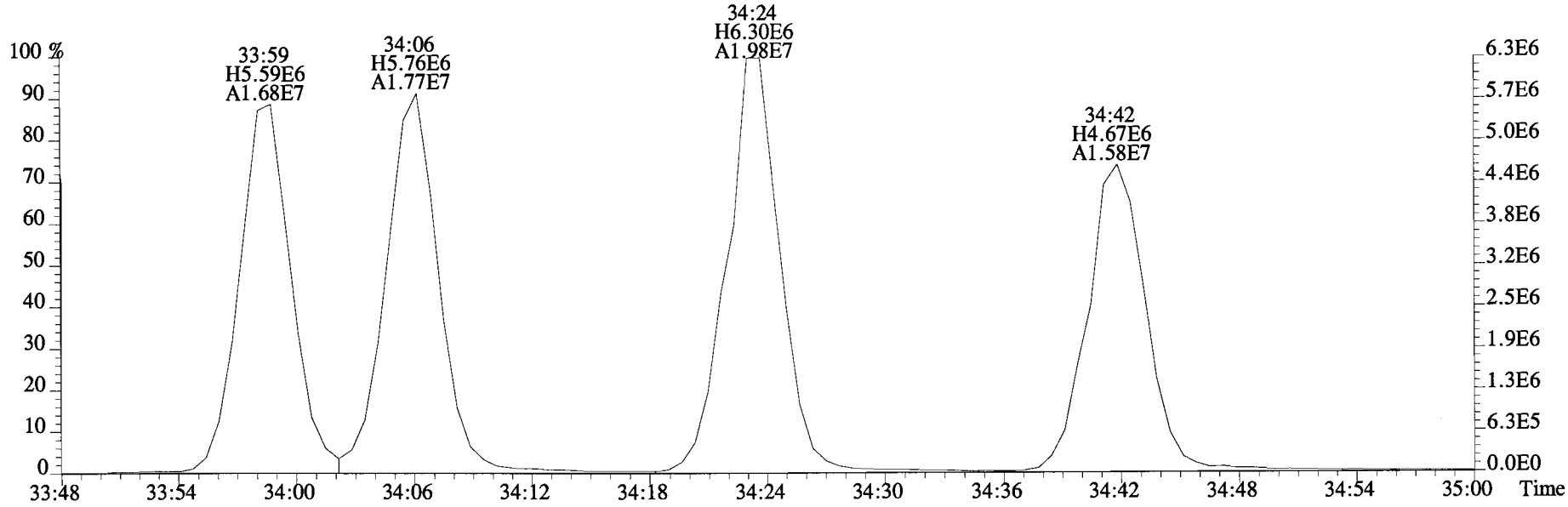
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5



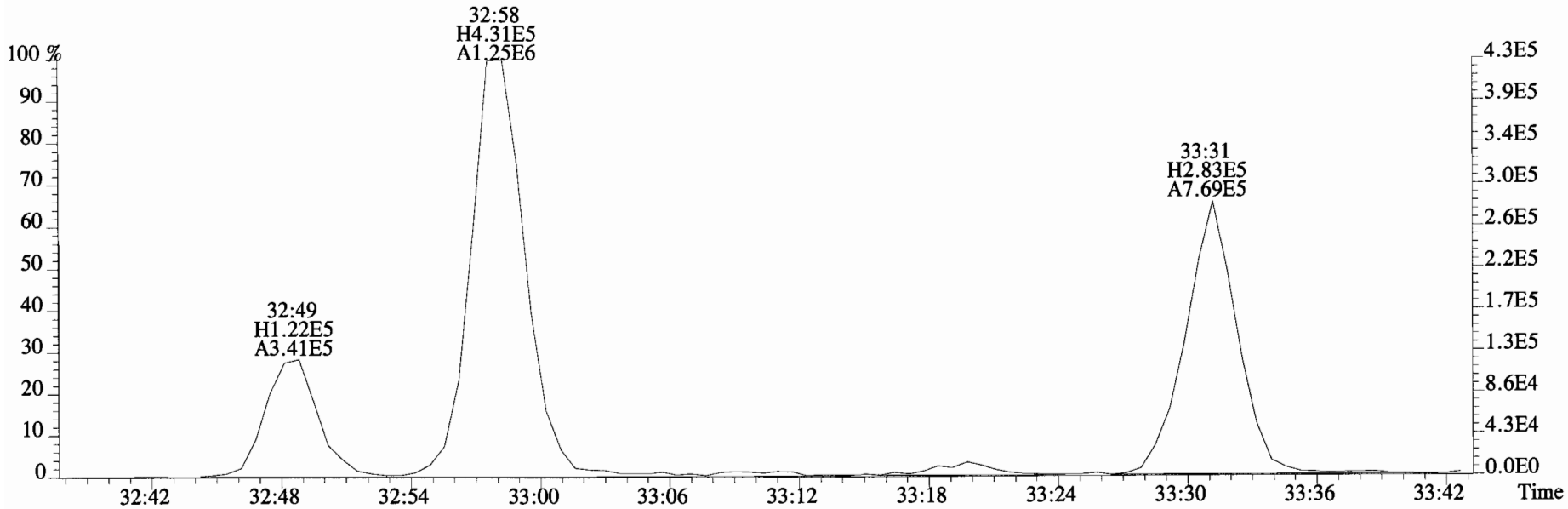
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



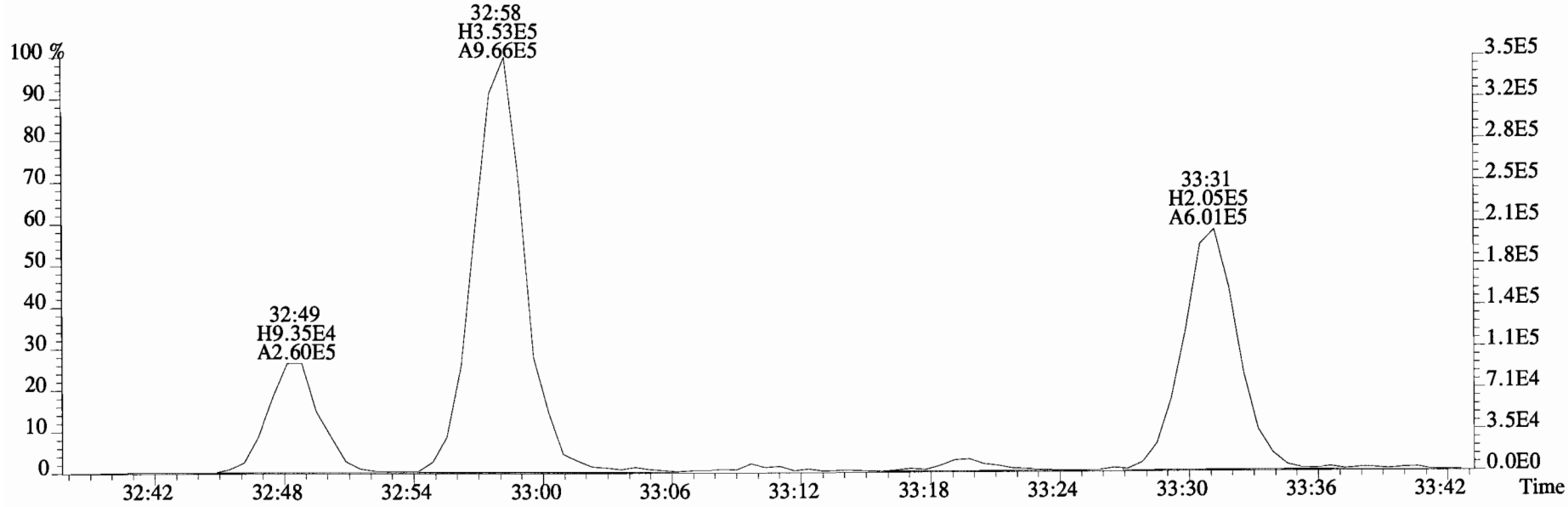
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



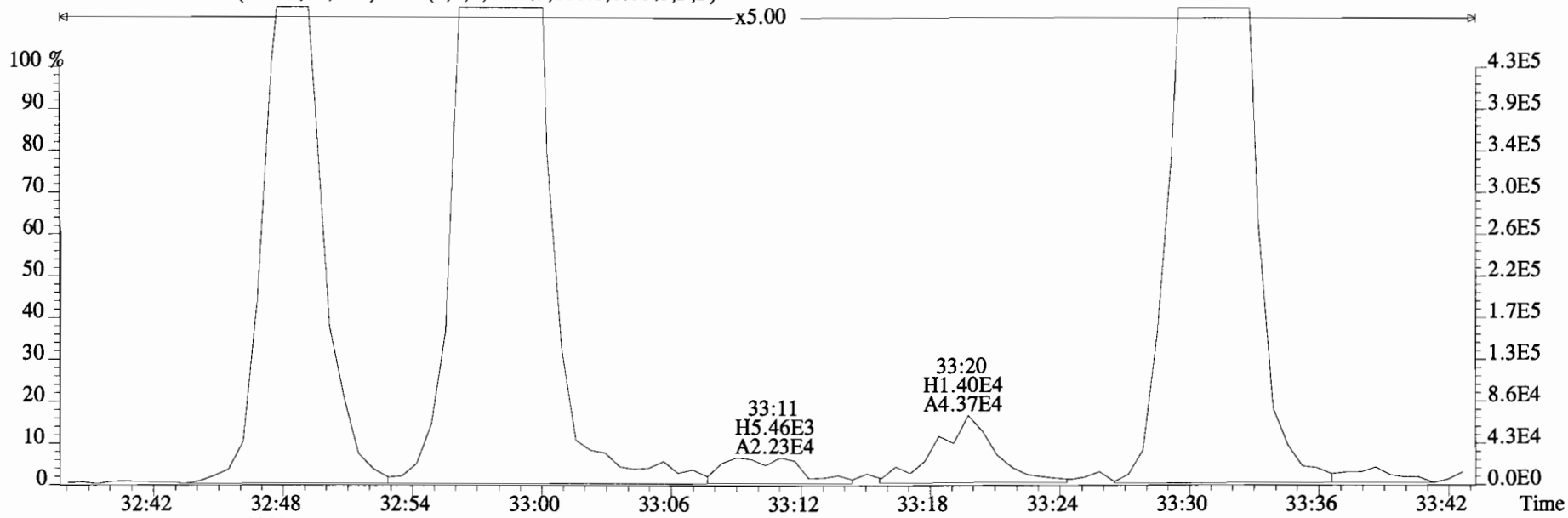
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



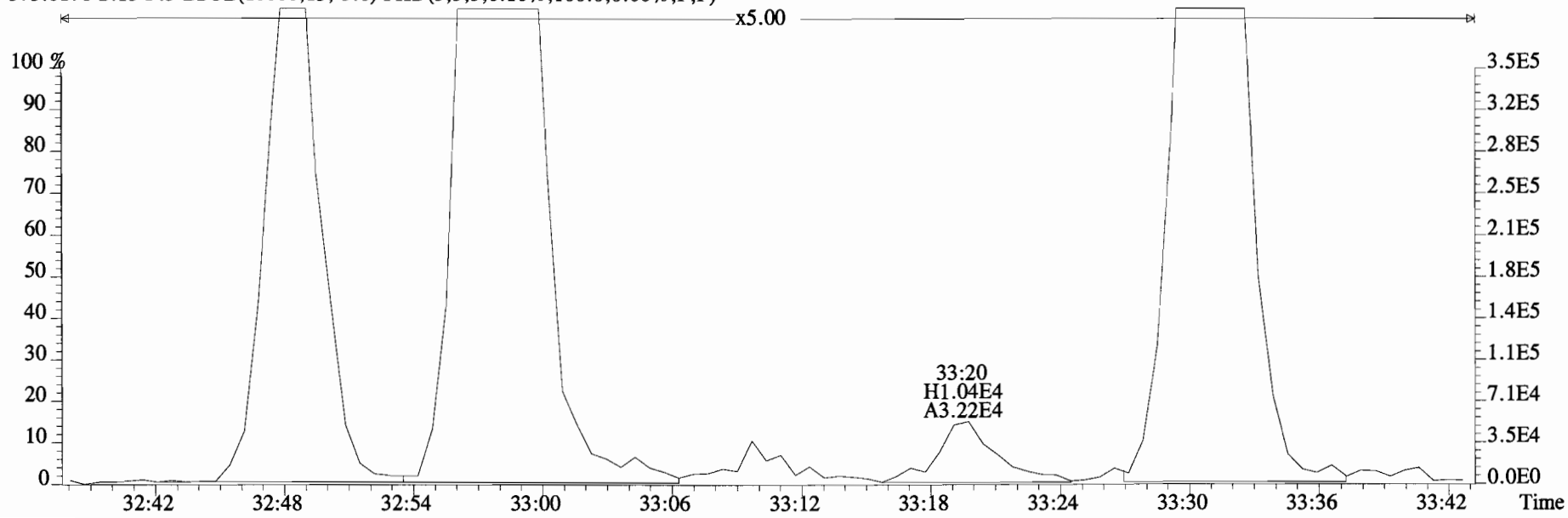
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



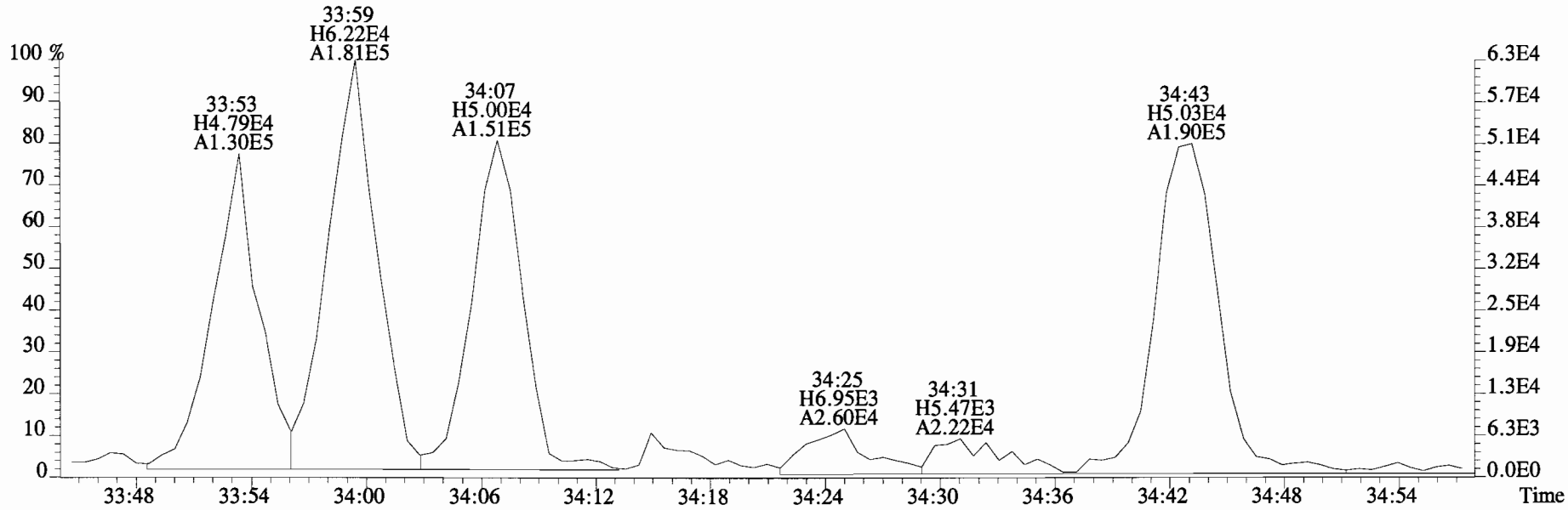
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



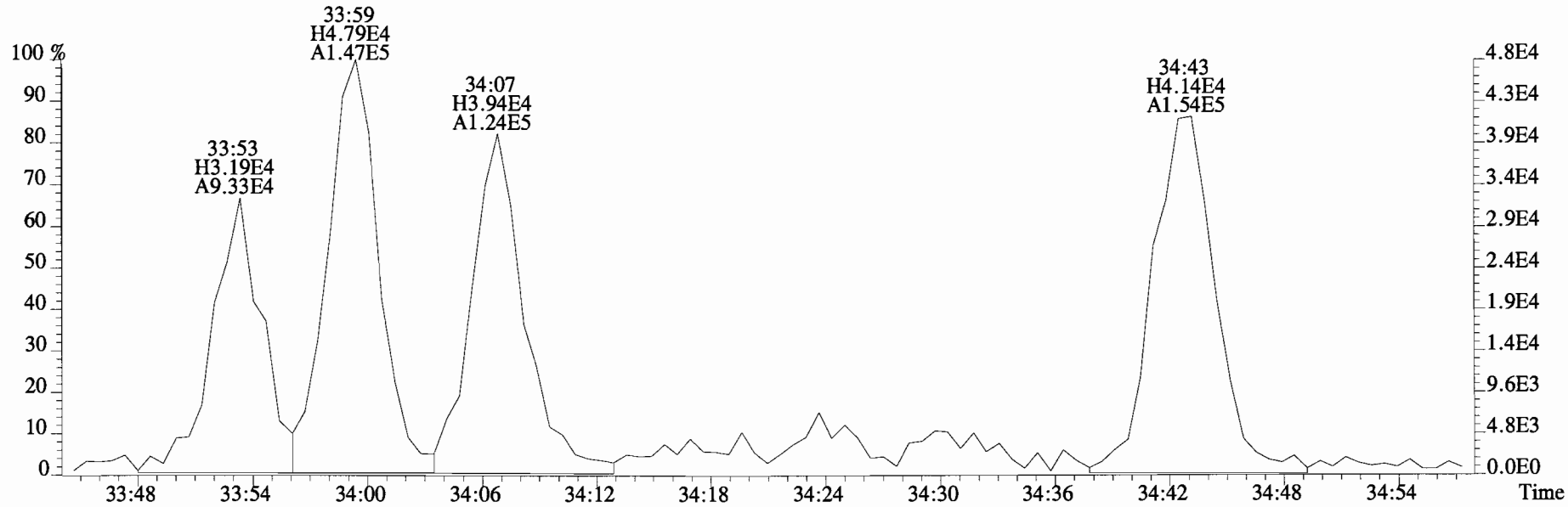
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



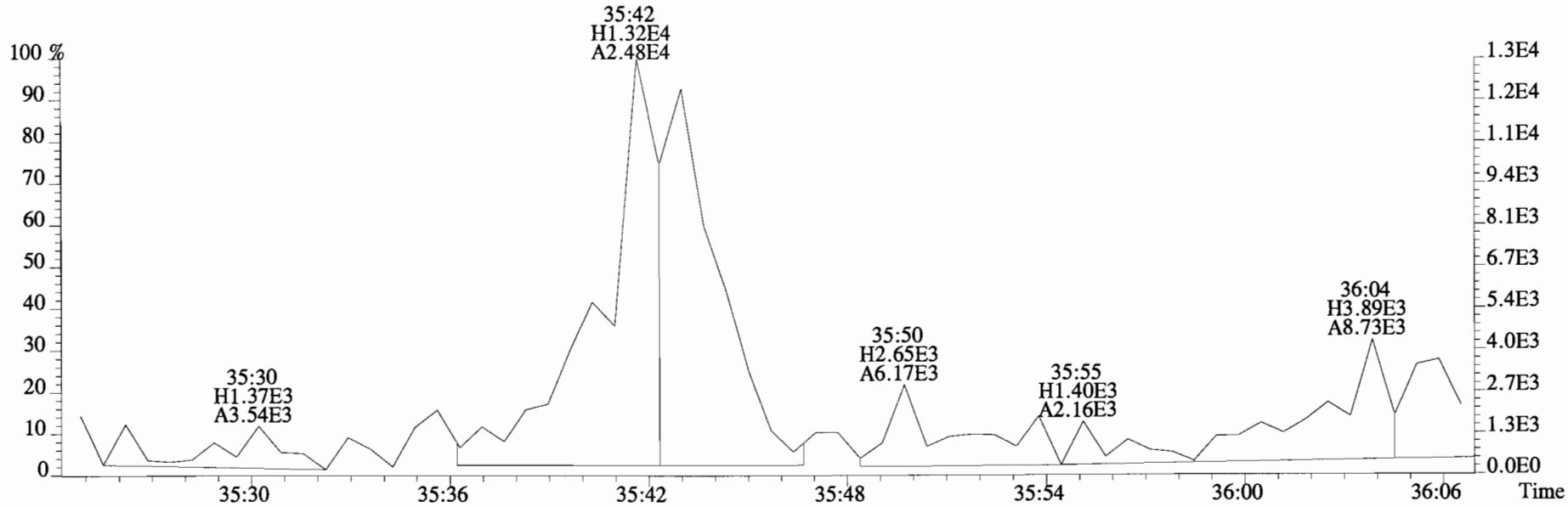
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



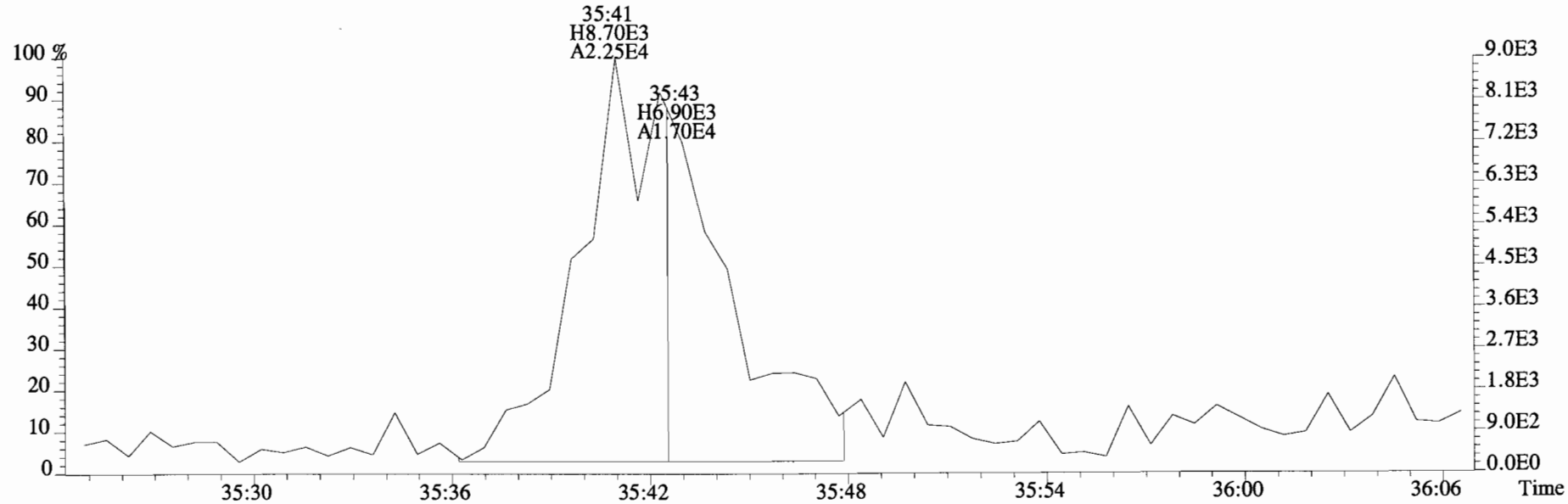
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



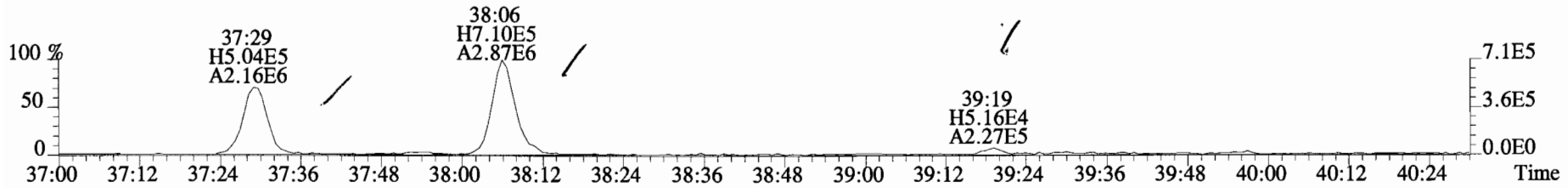
File:141216D1 #1-385 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



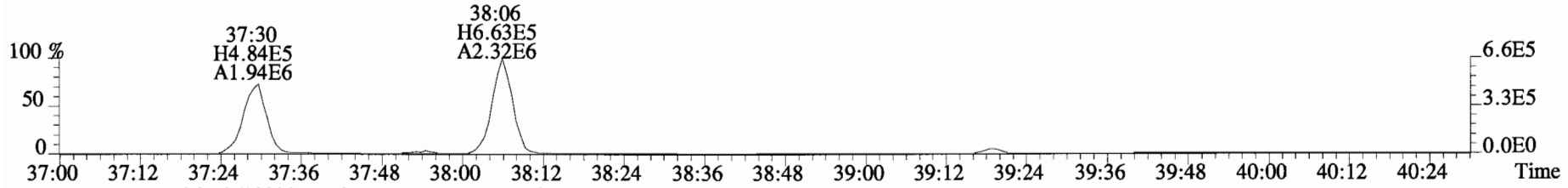
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



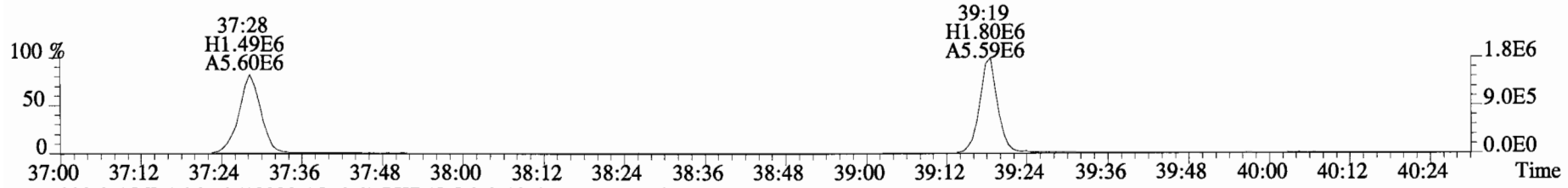
File:141216D1 #1-326 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



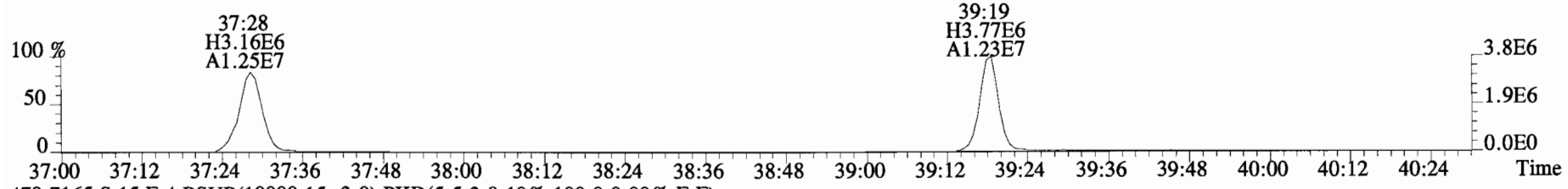
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



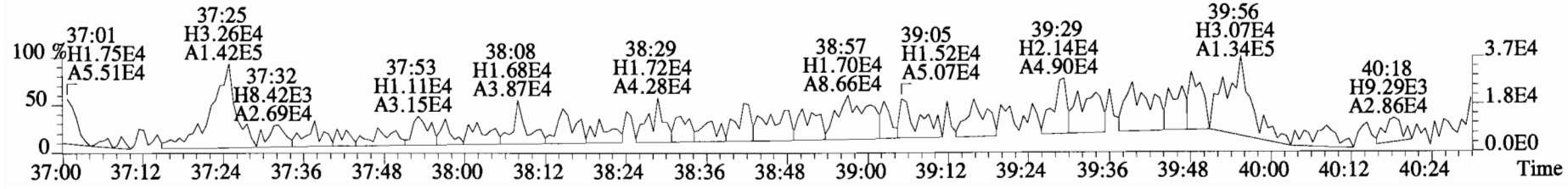
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



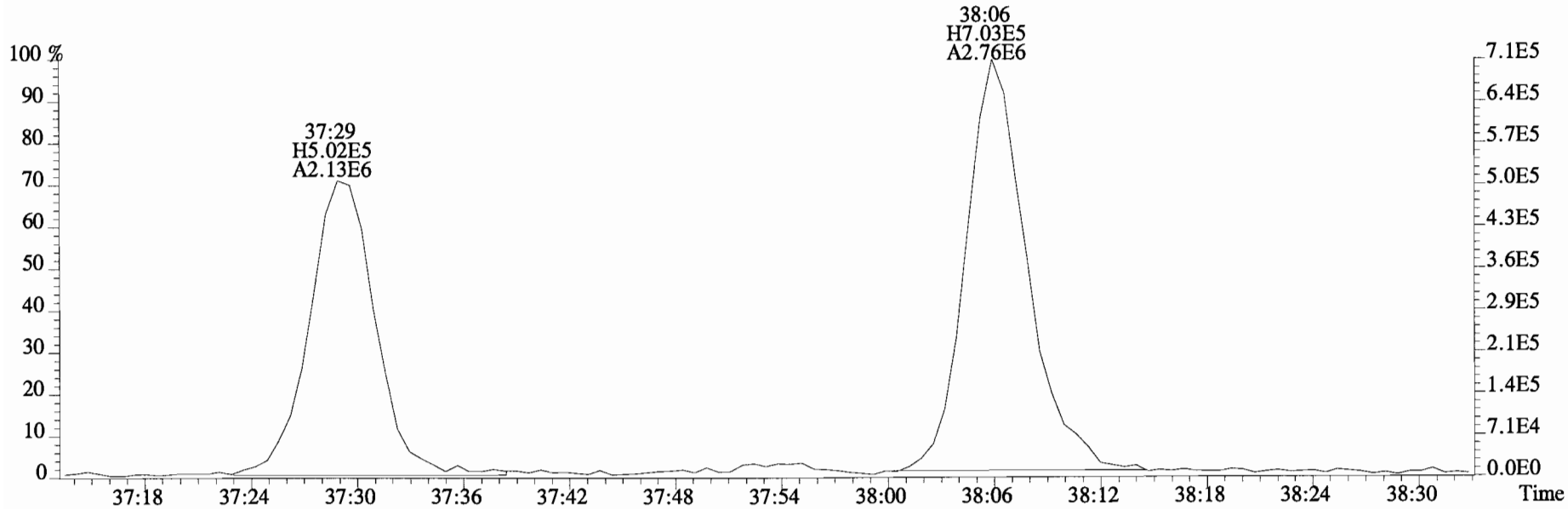
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



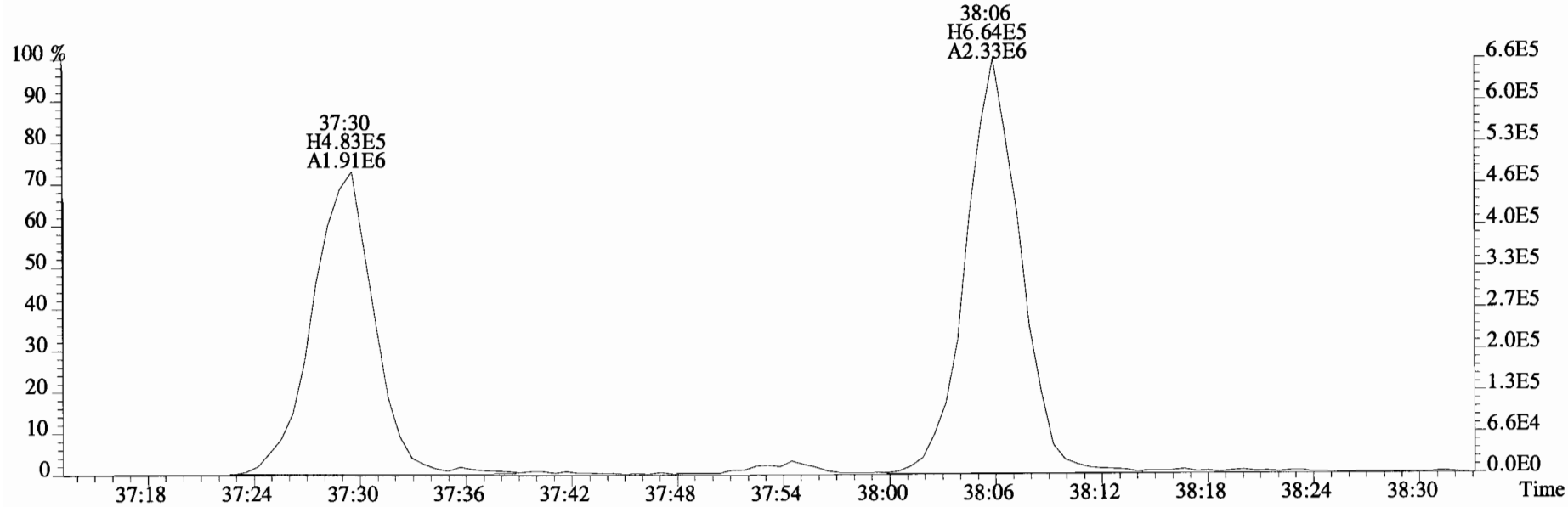
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



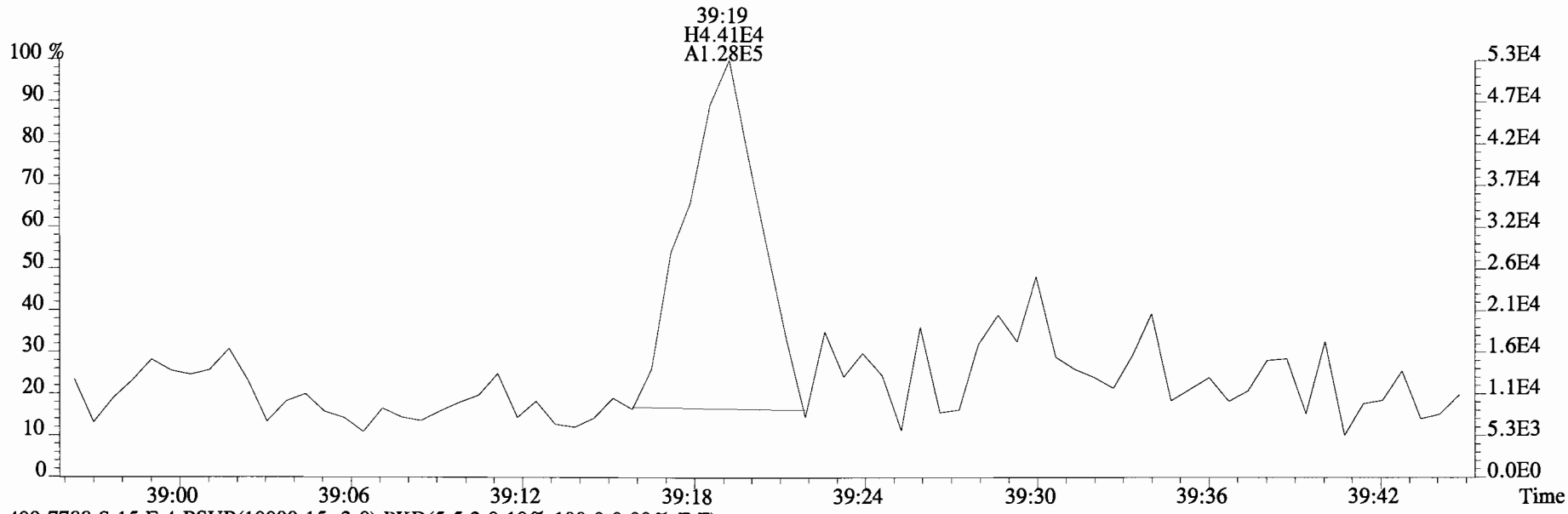
File:141216D1 #1-326 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



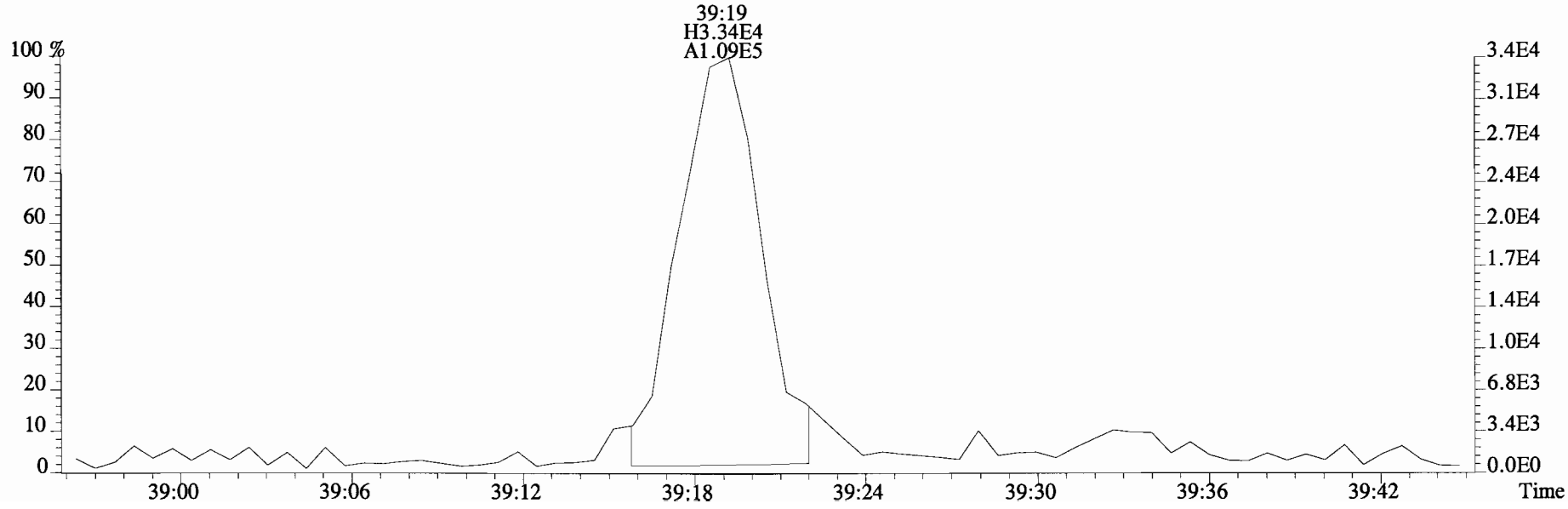
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



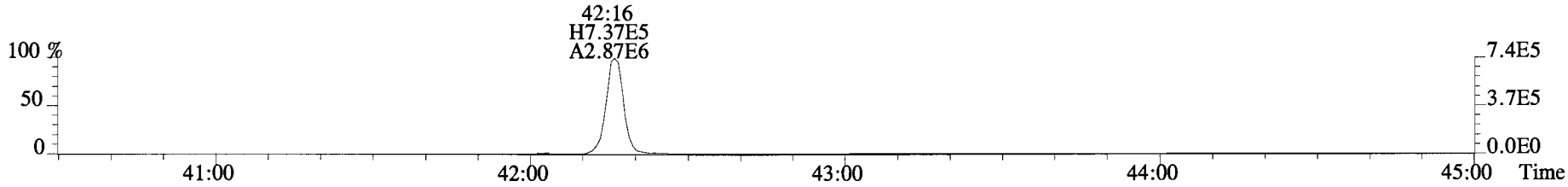
File:141216D1 #1-326 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



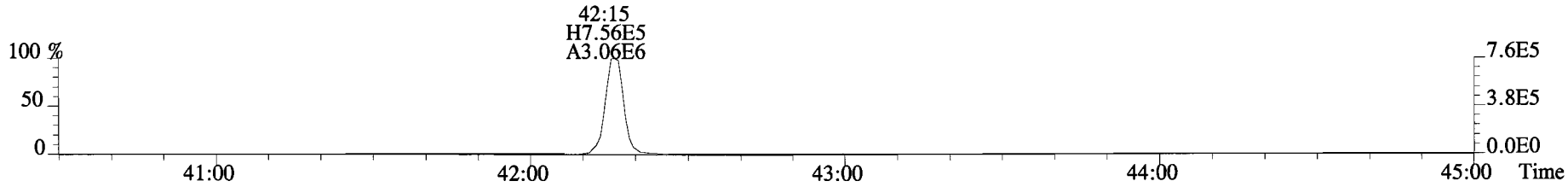
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



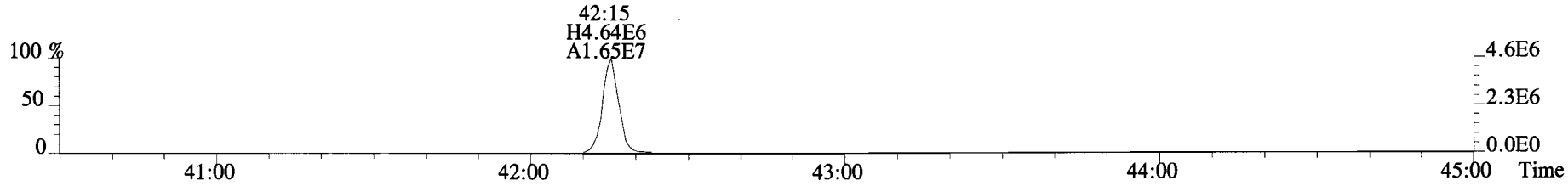
File:141216D1 #1-388 Acq:17-DEC-2014 02:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-03RE1 BD-OWS-15-20141203-S RX 5.54 Exp:OCDD_DB5
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



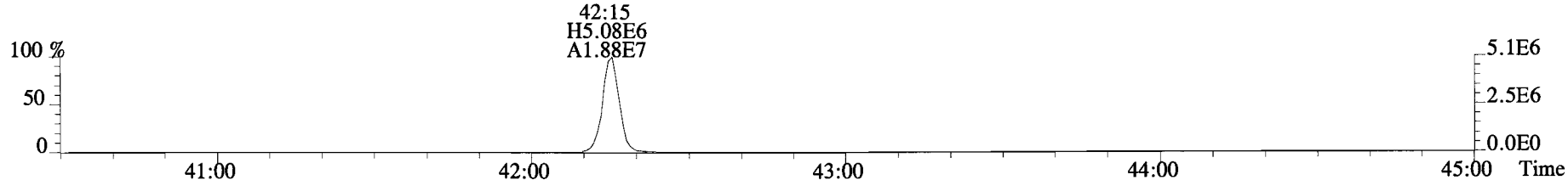
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



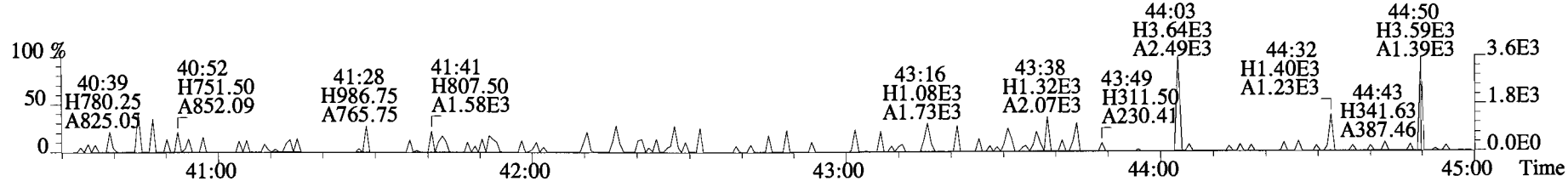
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-MH-10.9-20141203-S Filename: 141212D1 S:13 Acq:12-DEC-14 23:40:03 ConCal: ST141212D1-1
Lab ID: 1400915-04 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol:10.117 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	4.73e+05	0.78 y	1.18	26:56	1.001	3.9381		*	2.5	*
	1,2,3,7,8-PeCDD	1.72e+06	0.62 y	0.92	31:33	1.001	15.677		*	2.5	*
	1,2,3,4,7,8-HxCDD	2.85e+06	1.22 y	1.09	34:52	1.000	27.435		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.96e+06	1.26 y	1.07	34:59	1.000	84.838		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.04e+06	1.27 y	0.93	35:16	1.000	57.672		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.72e+08	1.05 y	1.12	38:46	1.000	1684.9		*	2.5	*
	OCDD	1.17e+09	0.90 y	0.95	42:03	1.000	16926		*	2.5	*
	2,3,7,8-TCDF	1.37e+07	0.75 y	1.08	26:08	1.001	74.777	OK	*	2.5	*
	1,2,3,7,8-PeCDF	2.84e+06	1.57 y	1.09	30:21	1.000	17.186		*	2.5	*
	2,3,4,7,8-PeCDF	5.10e+06	1.58 y	1.04	31:16	1.001	34.318		*	2.5	*
	1,2,3,4,7,8-HxCDF	8.40e+06	1.28 y	1.39	33:59	1.000	48.340		*	2.5	*
	1,2,3,6,7,8-HxCDF	5.31e+06	1.32 y	1.26	34:08	1.000	30.686		*	2.5	*
	2,3,4,6,7,8-HxCDF	5.14e+06	1.29 y	1.30	34:42	1.000	31.294		*	2.5	*
	1,2,3,7,8,9-HxCDF	4.53e+05	1.26 y	1.19	35:39	1.000	3.3261		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	4.23e+07	1.07 y	1.62	37:29	1.000	277.07		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	4.10e+06	1.10 y	1.53	39:19	1.000	29.329		*	2.5	*
	OCDF	5.98e+07	0.89 y	1.10	42:17	1.000	648.03		*	2.5	*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	66.7	66.7		*	*
Total Penta-Dioxins	138	138		*	*
Total Hexa-Dioxins	766	766		*	*
Total Hepta-Dioxins	3350	3350		*	*
Total Tetra-Furans	557	562		*	*
Total Penta-Furans	456.91	456.91		*	*
Total Hexa-Furans	505	505		*	*
Total Hepta-Furans	770	770		*	*

	Name	Resp	RA	RRF	RT	RRT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	2.00e+07	0.81 y	1.07	26:55	1.022	162.71	82.3	
IS	13C-1,2,3,7,8-PeCDD	2.36e+07	0.62 y	1.24	31:32	1.197	166.13	84.0	
IS	13C-1,2,3,4,7,8-HxCDD	1.89e+07	1.25 y	0.72	34:52	1.014	158.92	80.4	
IS	13C-1,2,3,6,7,8-HxCDD	1.96e+07	1.24 y	0.74	34:58	1.017	161.87	81.9	
IS	13C-1,2,3,7,8,9-HxCDD	2.22e+07	1.24 y	0.86	35:16	1.026	158.29	80.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.81e+07	1.08 y	0.64	38:46	1.127	170.99	86.5	
IS	13C-OCDD	2.87e+07	0.92 y	0.78	42:02	1.222	223.22	56.5	
IS	13C-2,3,7,8-TCDF	3.35e+07	0.77 y	0.92	26:07	0.992	179.43	90.8	
IS	13C-1,2,3,7,8-PeCDF	3.01e+07	1.59 y	0.95	30:21	1.153	156.14	79.0	
IS	13C-2,3,4,7,8-PeCDF	2.82e+07	1.55 y	0.97	31:15	1.187	143.43	72.6	
IS	13C-1,2,3,4,7,8-HxCDF	2.47e+07	0.51 y	0.99	33:58	0.988	151.93	76.9	
IS	13C-1,2,3,6,7,8-HxCDF	2.71e+07	0.51 y	1.10	34:06	0.992	150.33	76.0	
IS	13C-2,3,4,6,7,8-HxCDF	2.50e+07	0.51 y	1.03	34:42	1.009	147.58	74.7	
IS	13C-1,2,3,7,8,9-HxCDF	2.26e+07	0.51 y	0.86	35:39	1.037	160.28	81.1	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.87e+07	0.44 y	0.71	37:28	1.090	159.19	80.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.81e+07	0.45 y	0.71	39:18	1.143	155.55	78.7	
IS	13C-OCDF	3.31e+07	0.90 y	0.87	42:16	1.229	230.70	58.4	
C/Up	37Cl-2,3,7,8-TCDD	9.88e+06		1.21	26:57	1.023	71.027	89.8	
RS/RT	13C-1,2,3,4-TCDD	2.27e+07	0.80 y	1.00	26:20	*	197.69		
RS	13C-1,2,3,4-TCDF	4.00e+07	0.78 y	1.00	24:50	*	197.69		
RS/RT	13C-1,2,3,4,6,9-HxCDF	3.25e+07	0.52 y	1.00	34:23	*	197.69		

Integrations by Analyst: [signature] Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/18/14

Totals class: TCDD EMPC Entry #: 19

Run: 17 File: 141212D1 S: 13 I: 1 F: 1
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 66.668 Unnamed Concentration: 62.730

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:22	7.822e+05	1.046e+06	0.75	y	1.828e+06	15.227	
23:45	4.818e+05	6.526e+05	0.74	y	1.134e+06	9.4494	
24:11	1.495e+05	1.916e+05	0.78	y	3.412e+05	2.8417	
24:59	5.948e+04	8.068e+04	0.74	y	1.402e+05	1.1675	
25:13	3.103e+05	4.006e+05	0.77	y	7.109e+05	5.9215	
25:23	3.034e+05	4.171e+05	0.73	y	7.205e+05	6.0012	
25:35	1.298e+05	1.564e+05	0.83	y	2.862e+05	2.3837	
25:50	6.058e+04	8.882e+04	0.68	y	1.494e+05	1.2444	
25:59	1.573e+05	1.962e+05	0.80	y	3.535e+05	2.9444	
26:20	1.903e+05	2.489e+05	0.76	y	4.391e+05	3.6580	
26:27	4.594e+04	5.716e+04	0.80	y	1.031e+05	0.85883	
26:41	2.381e+05	3.118e+05	0.76	y	5.499e+05	4.5804	
26:48	5.158e+04	7.009e+04	0.74	y	1.217e+05	1.0136	
26:56	2.067e+05	2.660e+05	0.78	y	4.728e+05	3.9381	2,3,7,8-TCDD
27:15	1.727e+05	2.187e+05	0.79	y	3.915e+05	3.2608	
27:22	4.707e+04	6.064e+04	0.78	y	1.077e+05	0.89725	
27:49	6.763e+04	8.604e+04	0.79	y	1.537e+05	1.2800	

Totals class: PeCDD EMPC Entry #: 21

Run: 17 File: 141212D1 S: 13 I: 1 F: 2
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 138.16 Unnamed Concentration: 122.480

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:28	1.418e+06	2.293e+06	0.62 y	3.711e+06	33.804	
29:55	3.319e+05	5.757e+05	0.58 y	9.077e+05	8.2689	
30:22	6.040e+05	1.064e+06	0.57 y	1.668e+06	15.200	
30:32	6.679e+05	1.093e+06	0.61 y	1.761e+06	16.047	
30:38	5.556e+05	9.231e+05	0.60 y	1.479e+06	13.471	
30:50	7.635e+05	1.310e+06	0.58 y	2.074e+06	18.892	
31:09	2.583e+05	4.515e+05	0.57 y	7.098e+05	6.4665	
31:33	6.580e+05	1.063e+06	0.62 y	1.721e+06	15.677	1,2,3,7,8-PeCDD
31:38	1.879e+05	2.763e+05	0.68 y	4.642e+05	4.2290	
31:54	2.604e+05	4.093e+05	0.64 y	6.697e+05	6.1010	

Totals class: HxCDD EMPC Entry #: 23

Run: 17 File: 141212D1 S: 13 I: 1 F: 3
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 766.06 Unnamed Concentration: 596.110

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:20	9.468e+06	7.630e+06	1.24 y	1.710e+07	163.23	
33:54	3.141e+06	2.564e+06	1.22 y	5.705e+06	54.468	
34:09	2.010e+07	1.581e+07	1.27 y	3.591e+07	342.85	
34:18	9.675e+05	8.794e+05	1.10 y	1.847e+06	17.632	
34:52	1.570e+06	1.285e+06	1.22 y	2.855e+06	27.435	1,2,3,4,7,8-HxCDD
34:59	4.990e+06	3.969e+06	1.26 y	8.958e+06	84.838	1,2,3,6,7,8-HxCDD
35:10	1.035e+06	8.428e+05	1.23 y	1.878e+06	17.930	
35:16	3.377e+06	2.663e+06	1.27 y	6.040e+06	57.672	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 17 File: 141212D1 S: 13 I: 1 F: 4
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 3346.0 Unnamed Concentration: 1661.073

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:52	8.637e+07	8.314e+07	1.04	y	1.695e+08	1661.1	
38:46	8.794e+07	8.401e+07	1.05	y	1.719e+08	1684.9	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 17 File: 141212D1 S: 13 I: 1 F: 1
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 561.94 Unnamed Concentration: 487.164

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
21:10	2.790e+05	3.694e+05	0.76	y	6.484e+05	3.5474	
21:44	8.172e+05	1.099e+06	0.74	y	1.916e+06	10.483	
22:22	1.583e+06	2.133e+06	0.74	y	3.716e+06	20.329	
22:55	3.005e+06	3.958e+06	0.76	y	6.964e+06	38.099	
23:20	2.748e+06	3.632e+06	0.76	y	6.380e+06	34.906	
23:47	1.233e+06	1.646e+06	0.75	y	2.879e+06	15.751	
23:56	3.200e+06	4.219e+06	0.76	y	7.419e+06	40.588	
24:06	3.330e+06	4.409e+06	0.76	y	7.739e+06	42.342	
24:28	4.597e+05	6.351e+05	0.72	y	1.095e+06	5.9896	
24:36	1.066e+06	1.426e+06	0.75	y	2.493e+06	13.637	
24:44	2.164e+06	3.097e+06	0.70	y	5.261e+06	28.785	
24:52	2.132e+06	2.512e+06	0.85	y	4.644e+06	25.408	
25:18	2.175e+06	2.875e+06	0.76	y	5.050e+06	27.628	
25:34	1.611e+06	2.119e+06	0.76	y	3.730e+06	20.406	
25:44	5.281e+05	6.720e+05	0.79	y	1.200e+06	6.5656	
25:56	6.620e+05	8.201e+05	0.81	y	1.482e+06	8.1083	
26:02	6.510e+05	8.076e+05	0.81	y	1.459e+06	7.9802	
26:08	5.859e+06	7.809e+06	0.75	y	1.367e+07	74.777	2,3,7,8-TCDF
26:29	9.945e+06	1.333e+07	0.75	y	2.328e+07	127.35	
26:43	3.031e+05	3.850e+05	0.79	y	6.881e+05	3.7645	
26:51	4.877e+04	2.588e+04	1.88	n	4.580e+04	0.25059	
26:58	5.560e+04	6.789e+04	0.82	y	1.235e+05	0.67563	
27:57	6.181e+05	4.719e+05	1.31	n	8.352e+05	4.5696	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 17 File: 141212D1 S: 13 I: 1 F: 1
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 88.040 Unnamed Concentration: 88.040

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:57	8.339e+06	5.470e+06	1.52 y	1.381e+07	88.040	

Totals class: PeCDF EMPC Entry #: 31

Run: 17 File: 141212D1 S: 13 I: 1 F: 2
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 368.87 Unnamed Concentration: 317.369

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:17	5.981e+06	3.776e+06	1.58	y	9.757e+06	62.206	
29:25	1.322e+07	8.344e+06	1.58	y	2.157e+07	137.51	
29:46	7.428e+05	4.674e+05	1.59	y	1.210e+06	7.7156	
29:58	3.186e+06	1.996e+06	1.60	y	5.182e+06	33.039	
30:10	8.365e+05	5.379e+05	1.55	y	1.374e+06	8.7629	
30:21	1.737e+06	1.107e+06	1.57	y	2.844e+06	17.186	1,2,3,7,8-PeCDF
30:35	2.977e+06	1.882e+06	1.58	y	4.858e+06	30.976	
30:44	8.672e+04	5.067e+04	1.71	y	1.374e+05	0.87601	
31:04	1.867e+05	1.305e+05	1.43	y	3.172e+05	2.0221	
31:10	1.854e+06	1.204e+06	1.54	y	3.058e+06	19.494	
31:16	3.125e+06	1.972e+06	1.58	y	5.097e+06	34.318	2,3,4,7,8-PeCDF
31:19	1.134e+06	7.066e+05	1.61	y	1.841e+06	11.736	
31:34	1.706e+05	1.008e+05	1.69	y	2.714e+05	1.7302	
32:10	1.242e+05	7.956e+04	1.56	y	2.038e+05	1.2991	

Totals class: HxCDF EMPC Entry #: 33

Run: 17 File: 141212D1 S: 13 I: 1 F: 3
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

Total Concentration: 505.25 Unnamed Concentration: 391.604

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:48	4.513e+06	3.479e+06	1.30 y	7.993e+06	49.341	
32:58	1.695e+07	1.332e+07	1.27 y	3.027e+07	186.88	
33:10	3.267e+05	2.557e+05	1.28 y	5.824e+05	3.5955	
33:19	7.371e+05	5.584e+05	1.32 y	1.296e+06	7.9977	
33:30	1.028e+07	7.902e+06	1.30 y	1.818e+07	112.22	
33:53	1.622e+06	1.262e+06	1.29 y	2.884e+06	17.806	
33:59	4.724e+06	3.679e+06	1.28 y	8.403e+06	48.340	1,2,3,4,7,8-HxCDF
34:06	3.028e+06	2.285e+06	1.32 y	5.313e+06	30.686	1,2,3,6,7,8-HxCDF
34:16	1.996e+05	1.460e+05	1.37 y	3.456e+05	2.1333	
34:24	3.323e+05	2.611e+05	1.27 y	5.934e+05	3.6635	
34:30	2.867e+05	2.106e+05	1.36 y	4.972e+05	3.0696	
34:42	2.894e+06	2.248e+06	1.29 y	5.142e+06	31.294	2,3,4,6,7,8-HxCDF
35:39	2.527e+05	2.002e+05	1.26 y	4.529e+05	3.3261	1,2,3,7,8,9-HxCDF
35:42	4.555e+05	3.385e+05	1.35 y	7.941e+05	4.9018	

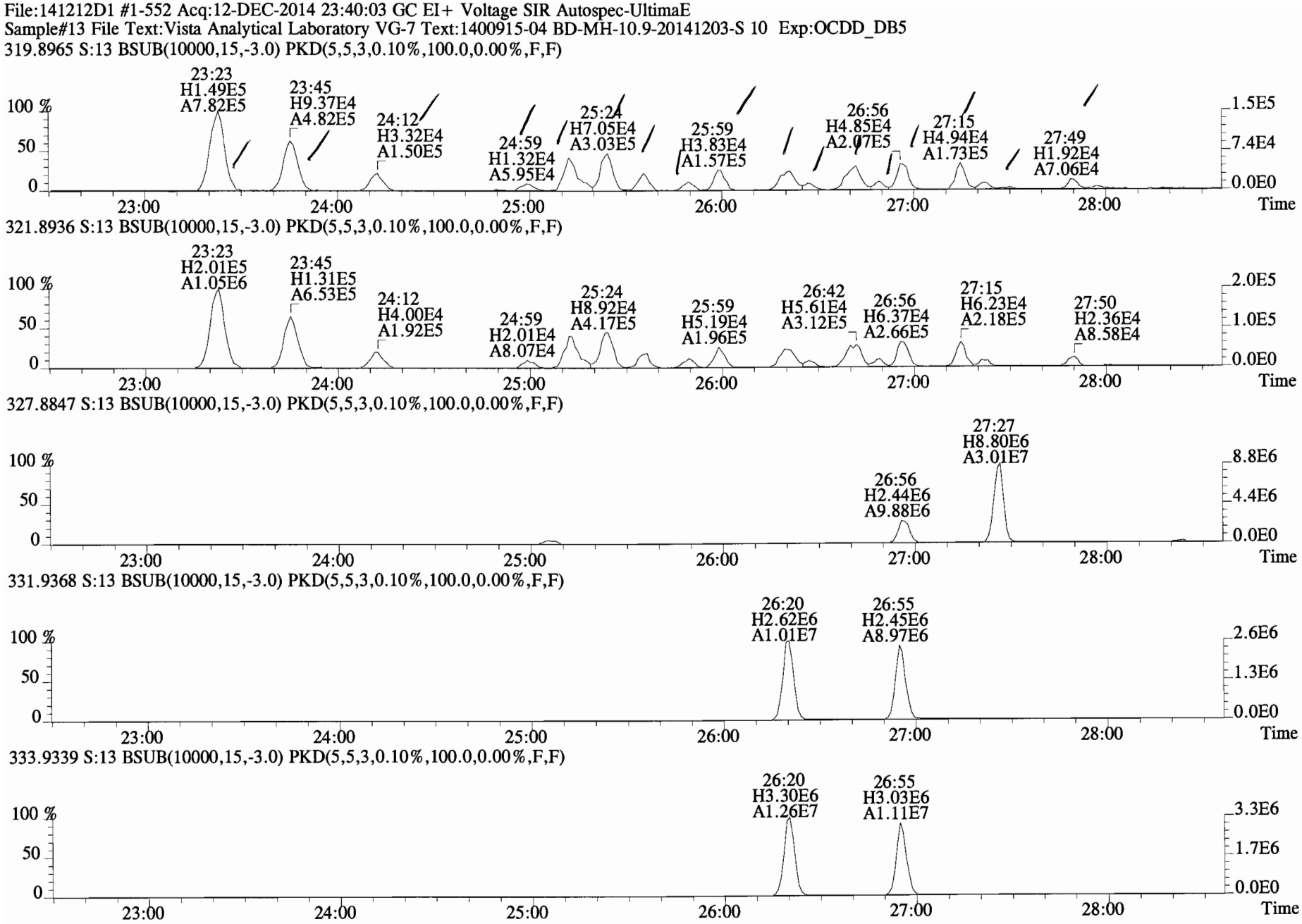
Totals class: HpCDF EMPC Entry #: 35

Run: 17 File: 141212D1 S: 13 I: 1 F: 4
Acquired: 12-DEC-14 23:40:03 Processed: 15-DEC-14 08:55:35

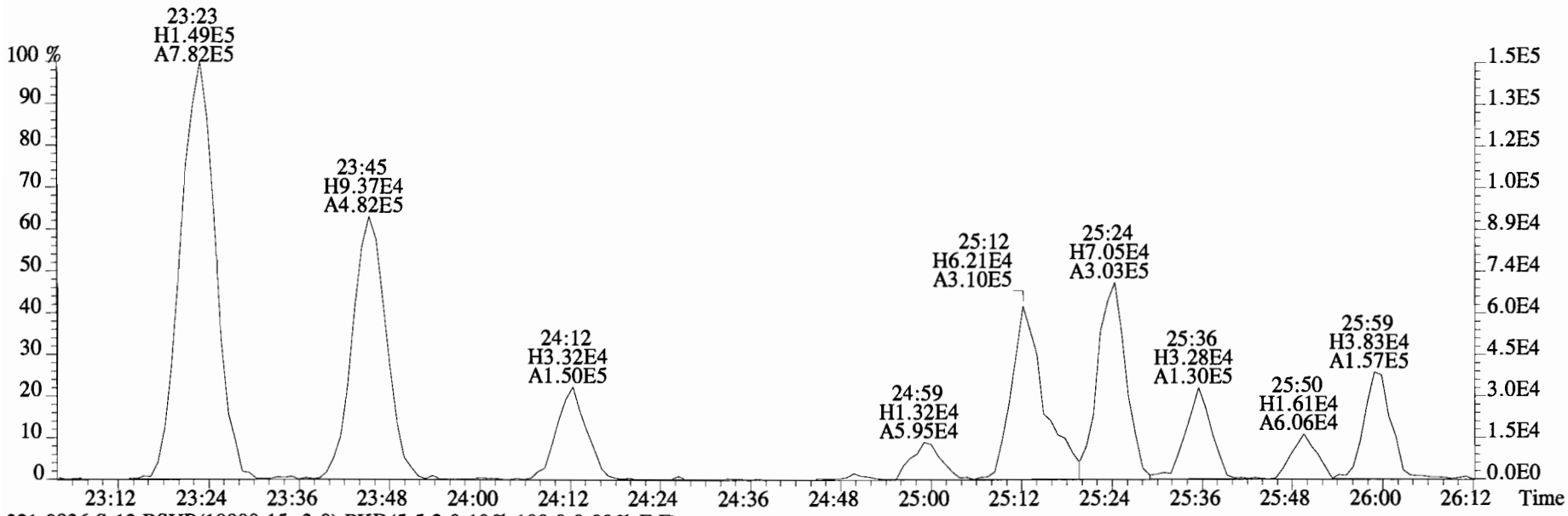
Total Concentration: 770.33 Unnamed Concentration: 463.929

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:29	2.190e+07	2.037e+07	1.07 y	4.227e+07	277.07	1,2,3,4,6,7,8-HpCDF
37:54	9.092e+05	8.316e+05	1.09 y	1.741e+06	11.918	
38:05	3.581e+07	3.021e+07	1.19 y	6.602e+07	452.01	
39:19	2.143e+06	1.954e+06	1.10 y	4.097e+06	29.329	1,2,3,4,7,8,9-HpCDF

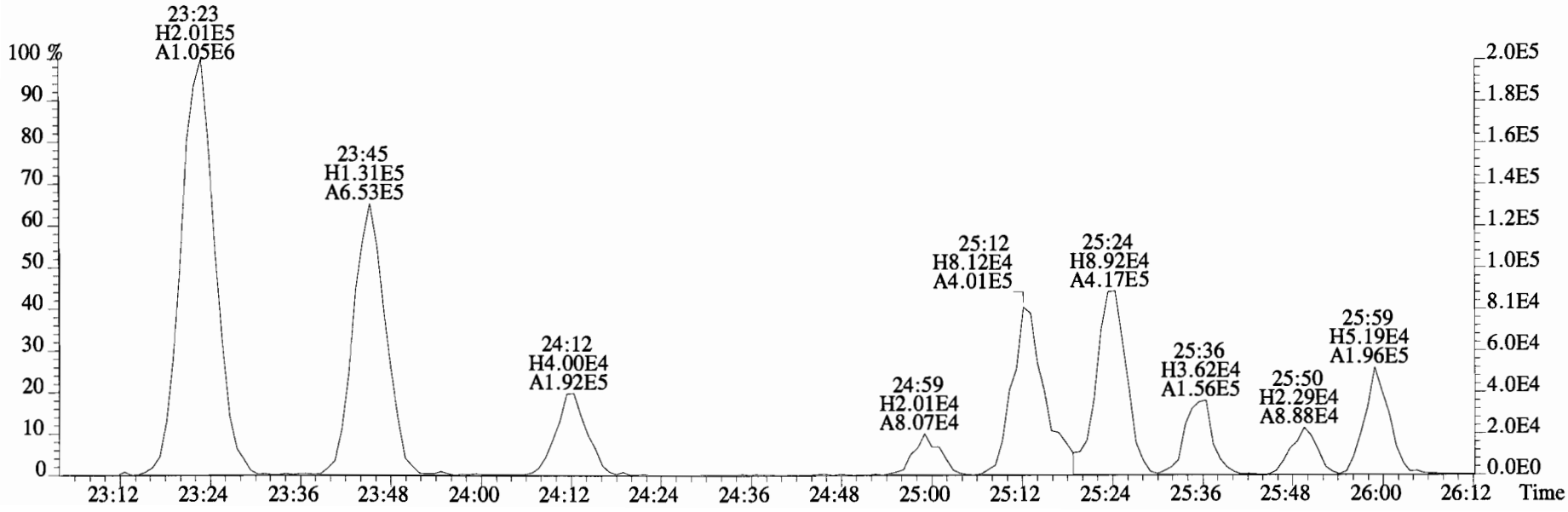
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5



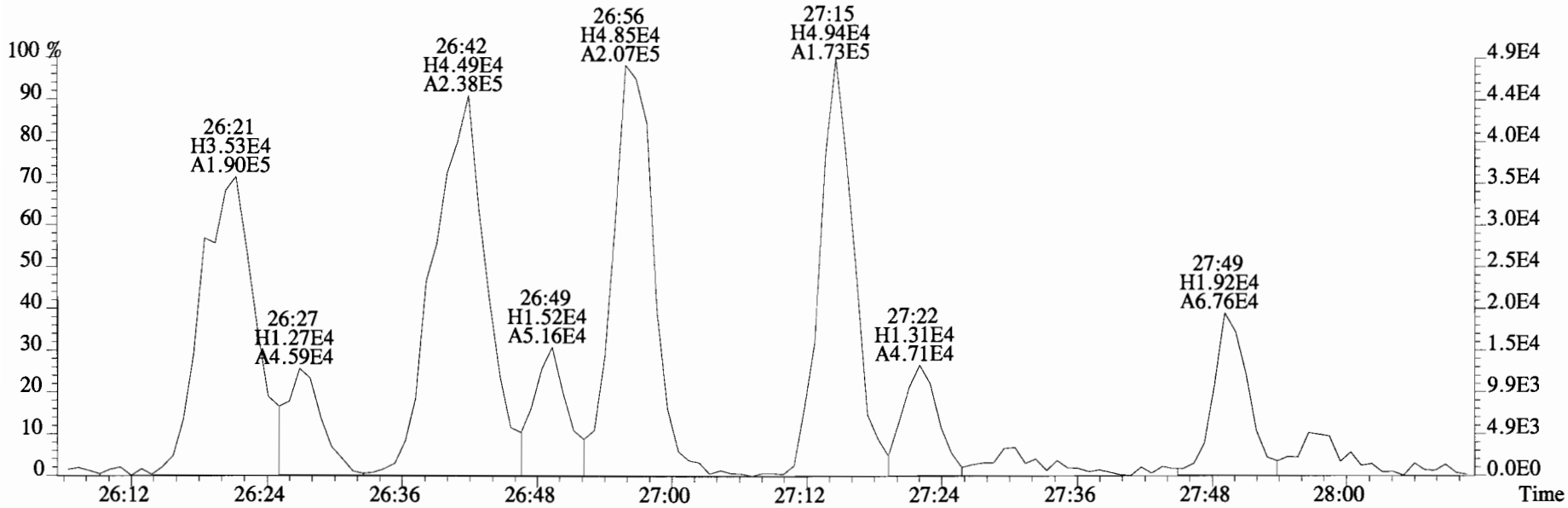
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



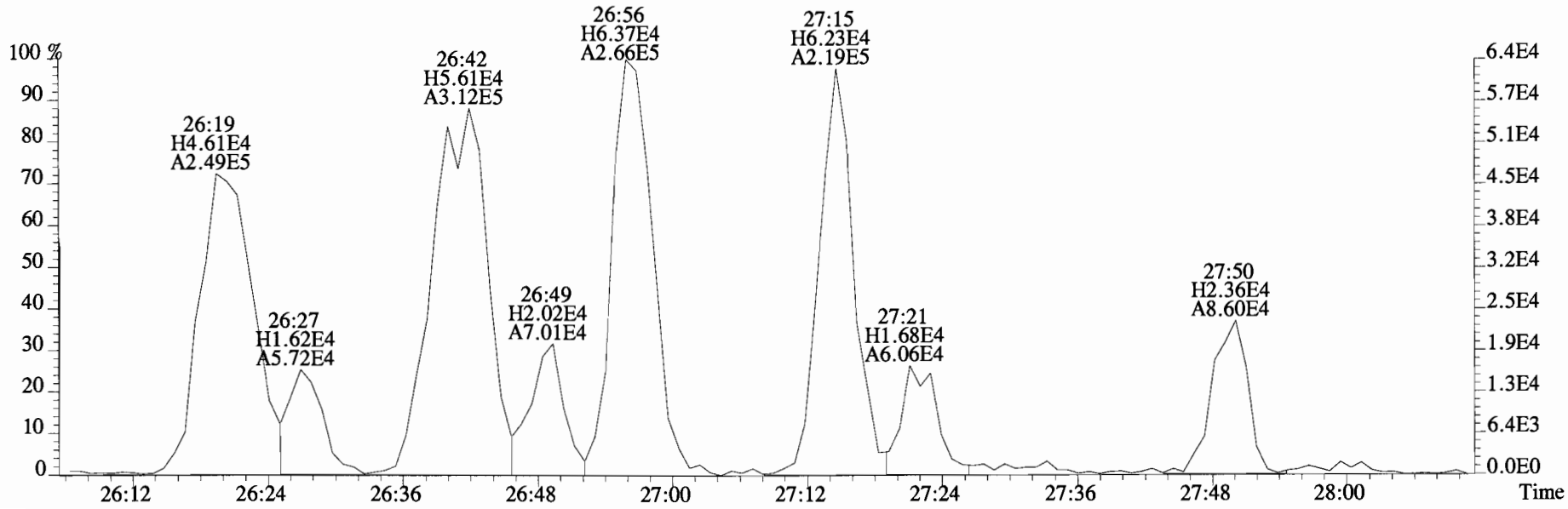
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



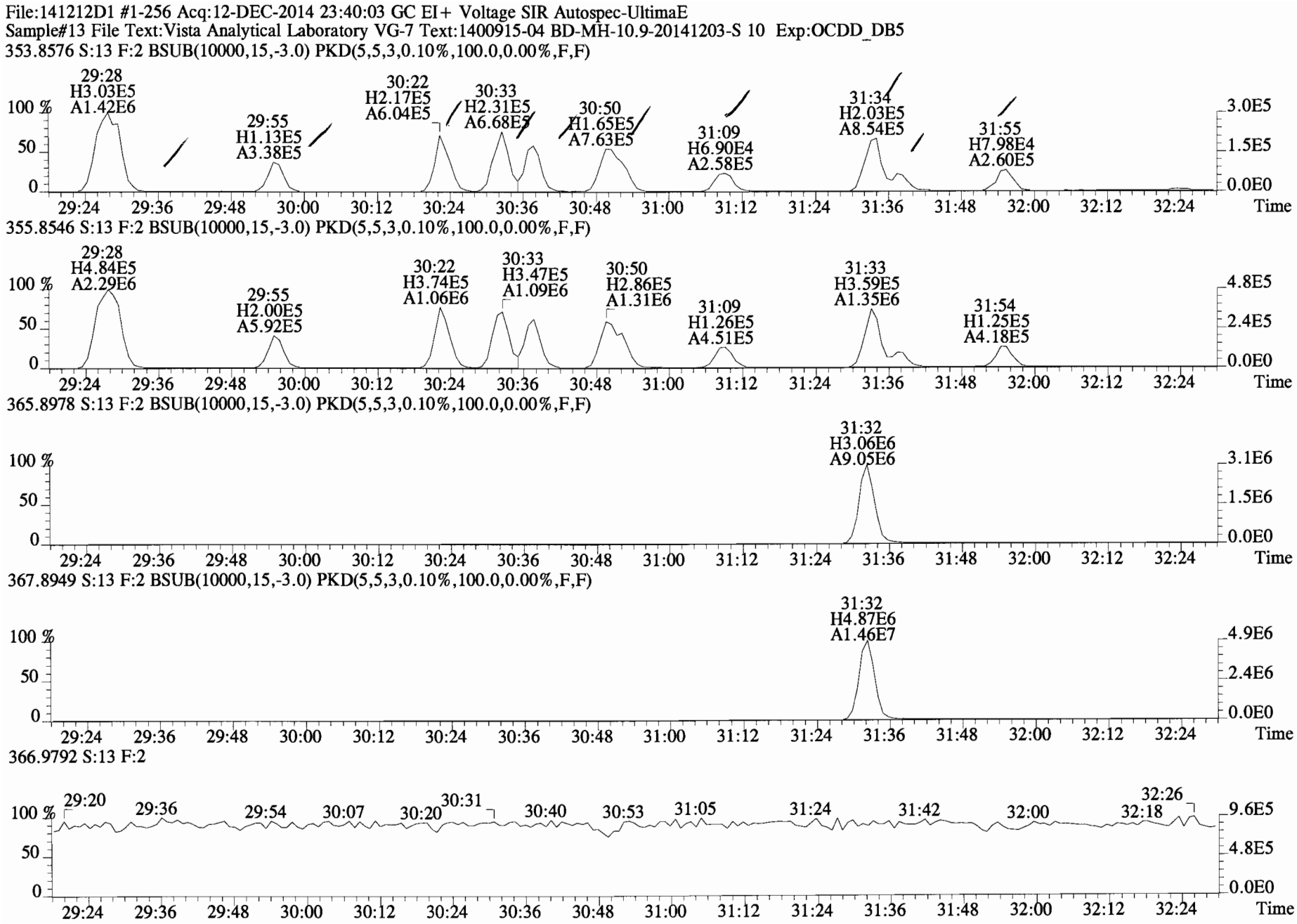
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

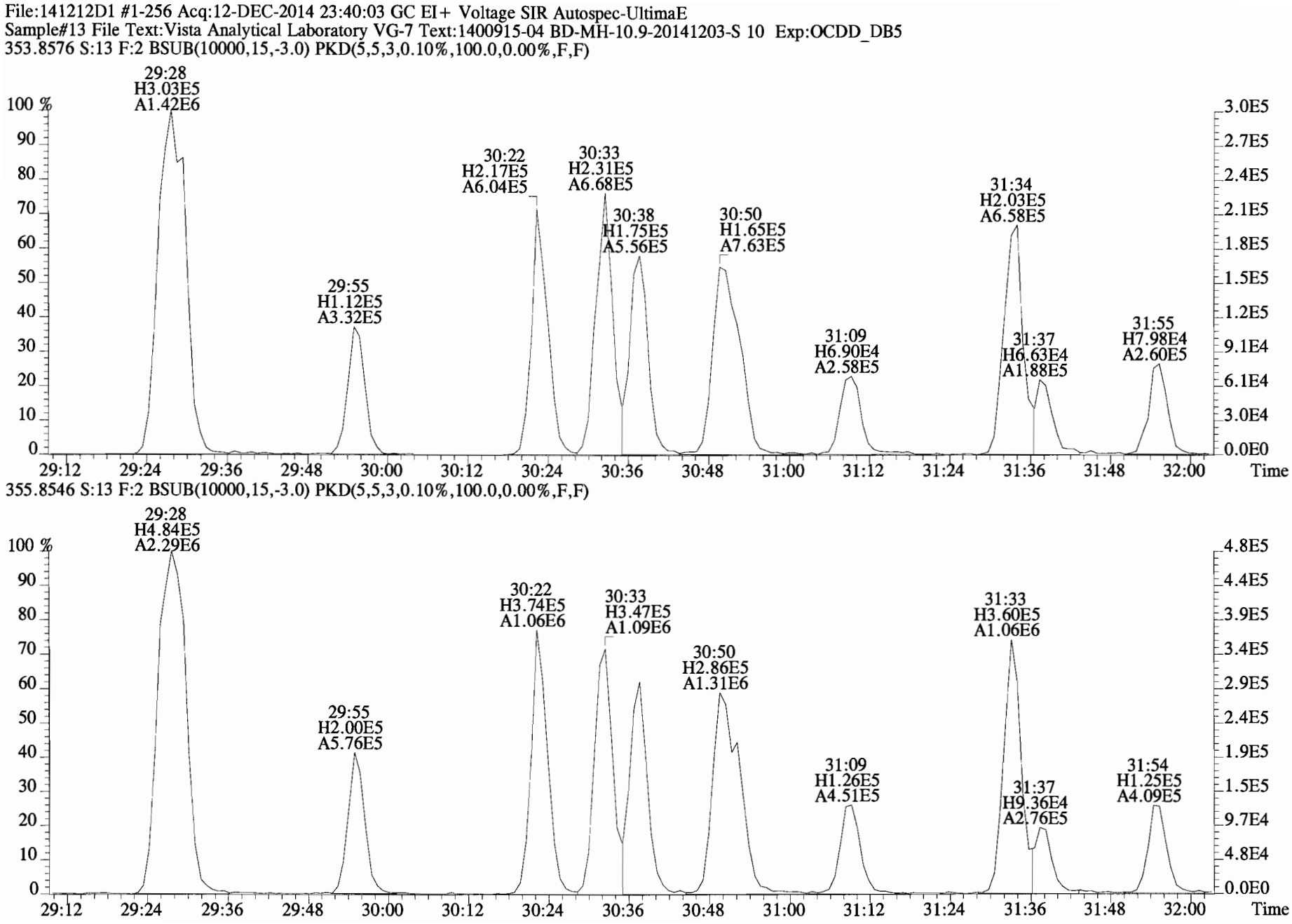


321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



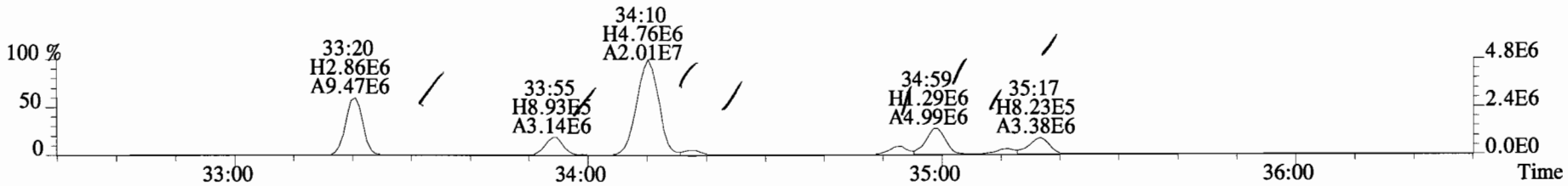
File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5



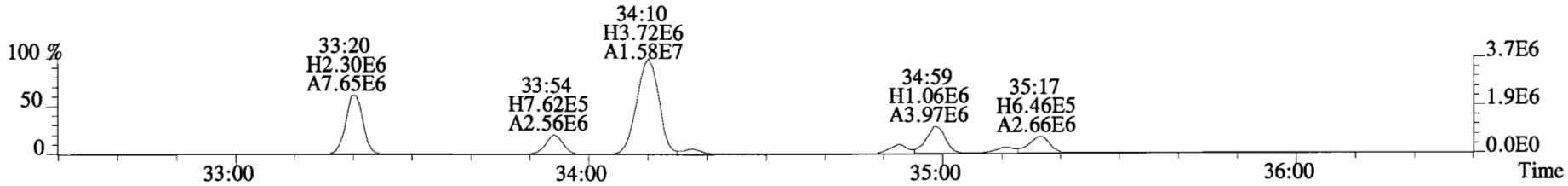

File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H3.03E5 A1.42E6
30:22 H2.17E5 A6.04E5
30:33 H2.31E5 A6.68E5
30:38 H1.75E5 A5.56E5
30:50 H1.65E5 A7.63E5
31:34 H2.03E5 A6.58E5
29:55 H1.12E5 A3.32E5
31:09 H6.90E4 A2.58E5
31:37 H6.63E4 A1.88E5
31:55 H7.98E4 A2.60E5
100 %
Time
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:28 H4.84E5 A2.29E6
30:22 H3.74E5 A1.06E6
30:33 H3.47E5 A1.09E6
30:50 H2.86E5 A1.31E6
31:33 H3.60E5 A1.06E6
29:55 H2.00E5 A5.76E5
31:09 H1.26E5 A4.51E5
31:37 H9.36E4 A2.76E5
31:54 H1.25E5 A4.09E5
100 %
Time

File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5

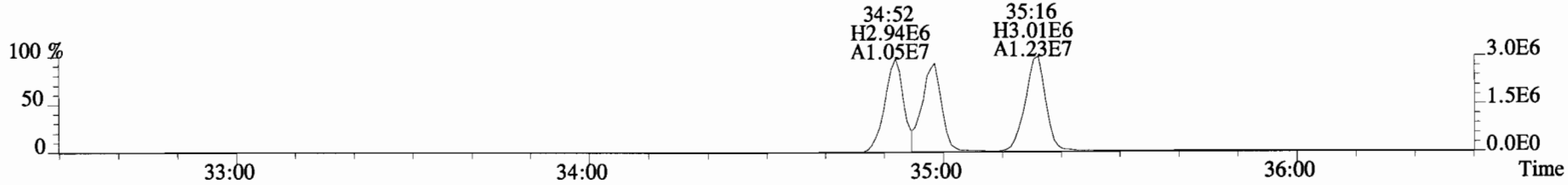
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



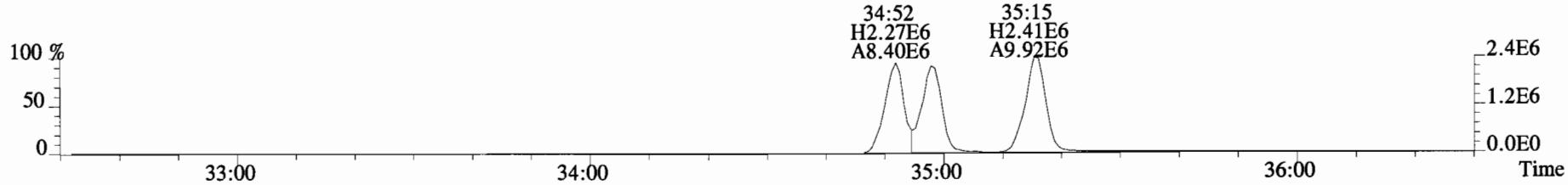
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



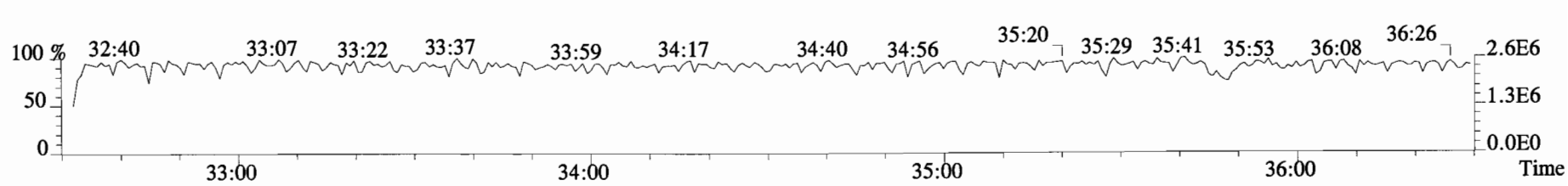
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



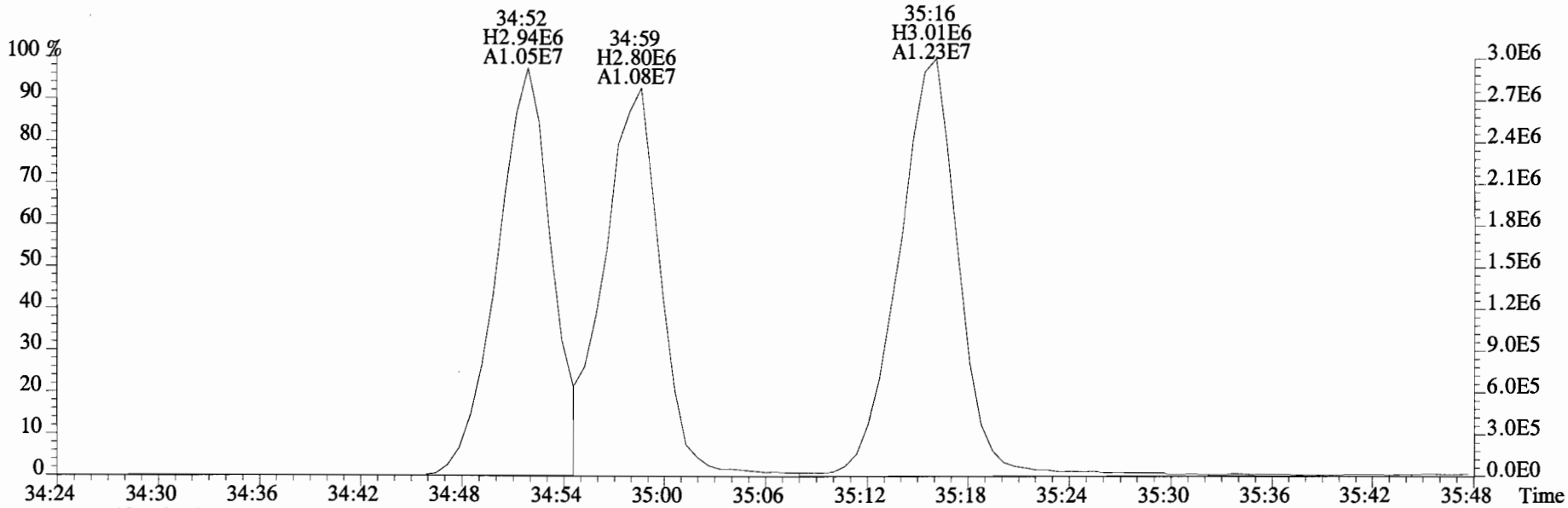
403.8530 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



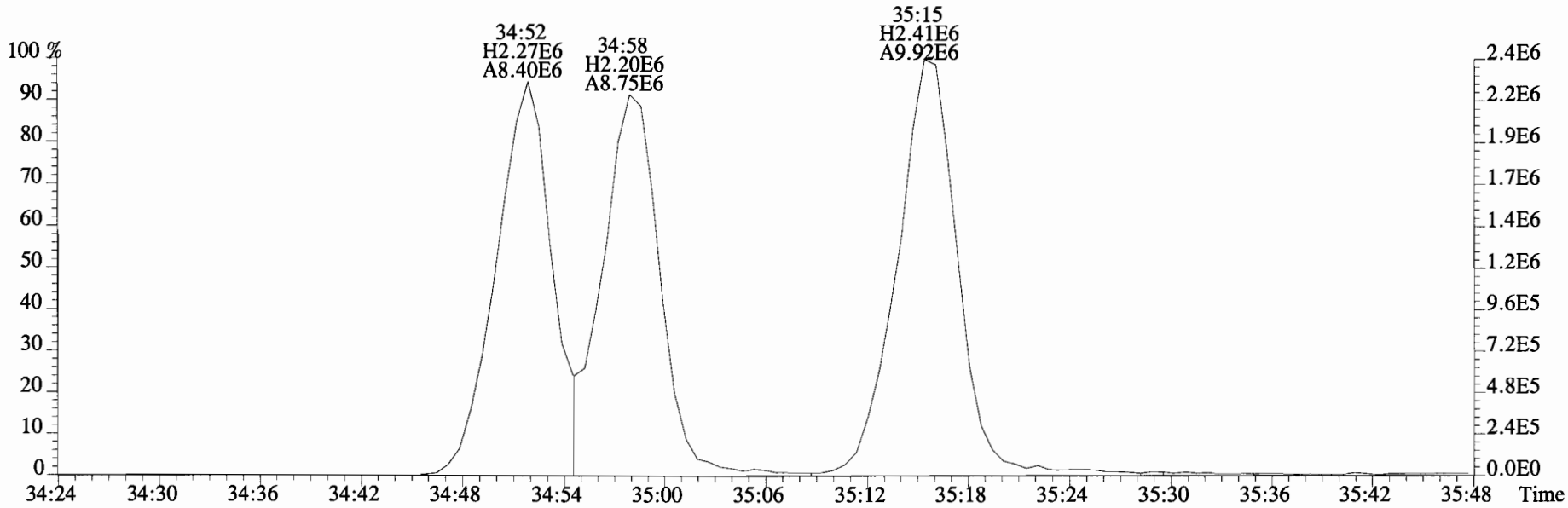
380.9760 S:13 F:3



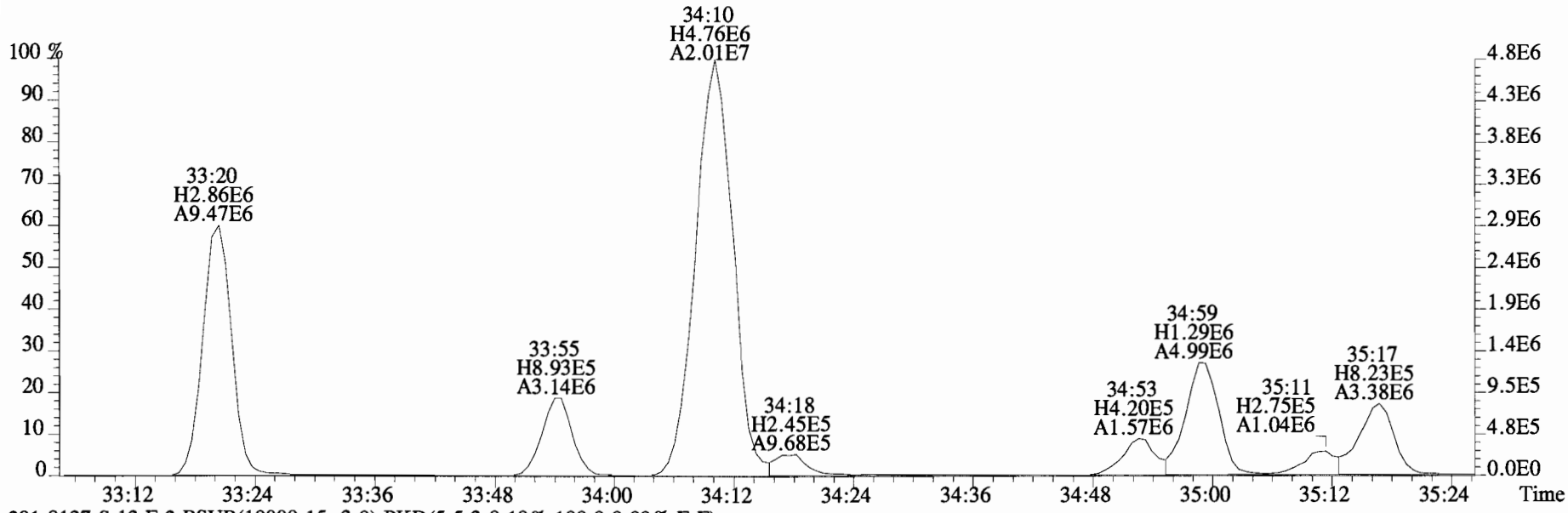
File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



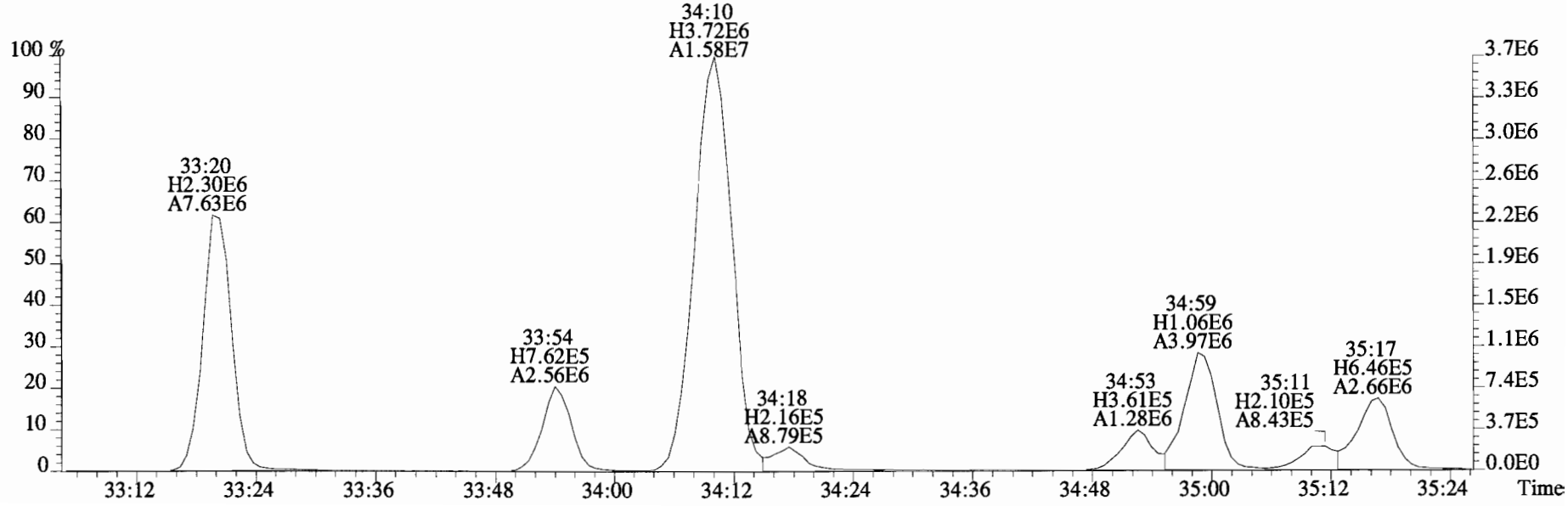
403.8530 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



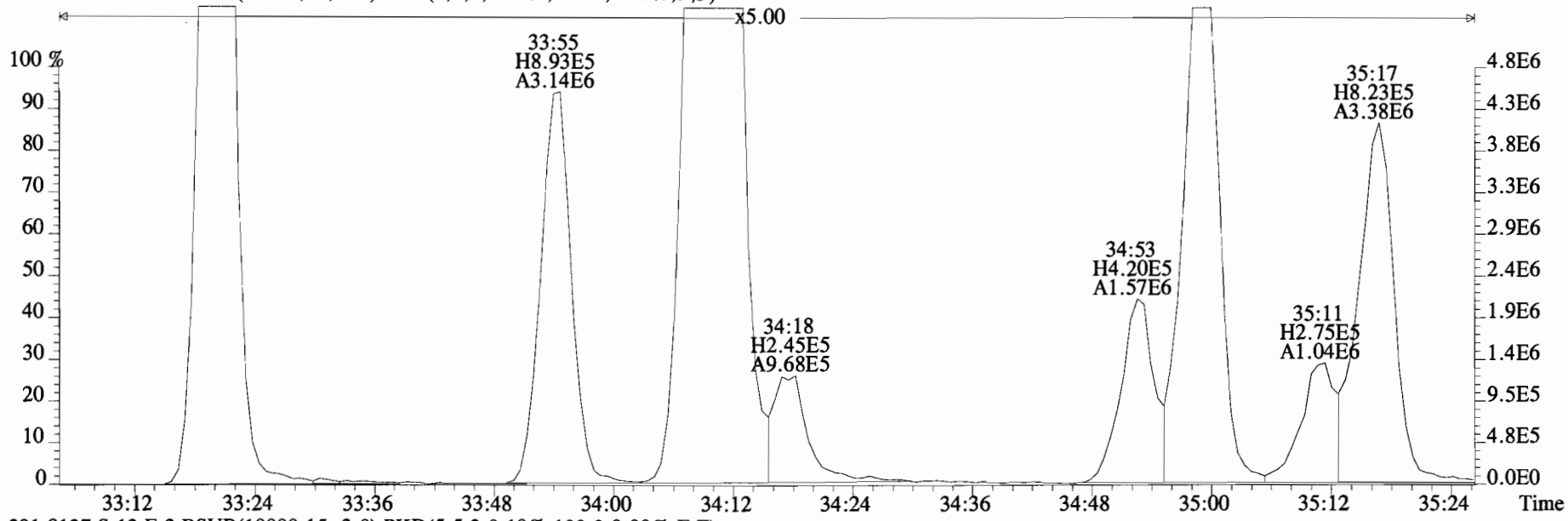
File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



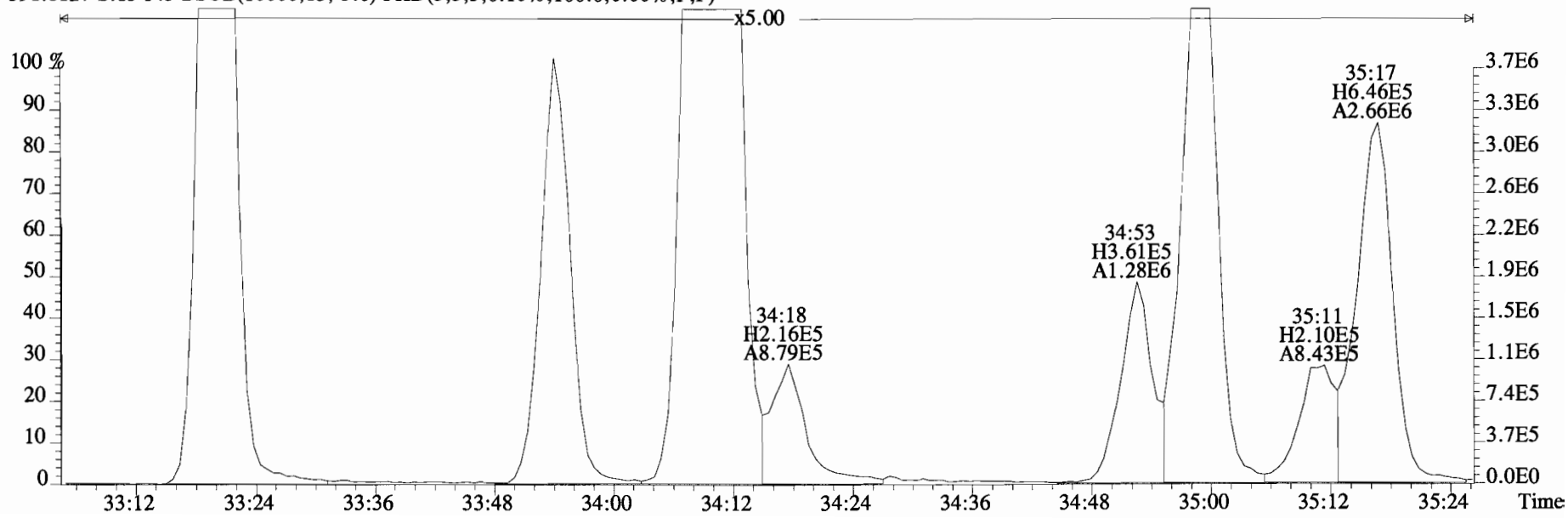
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



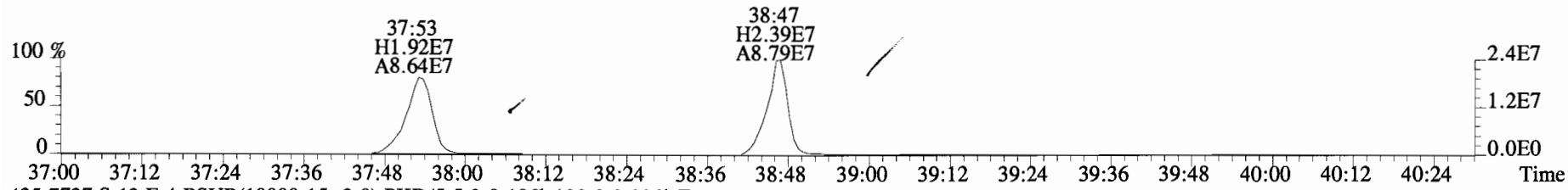
File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



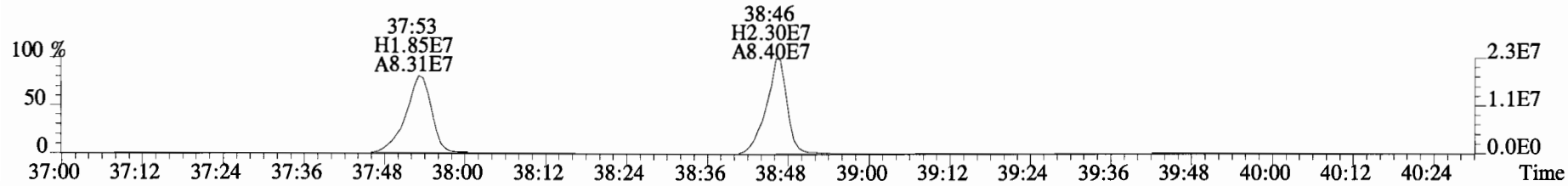
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



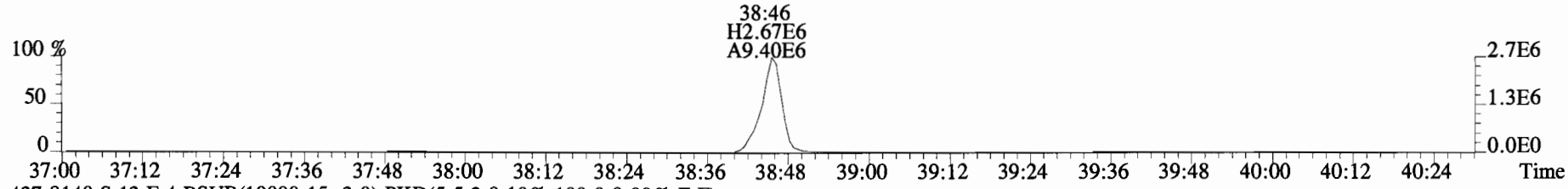
File:141212D1 #1-326 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



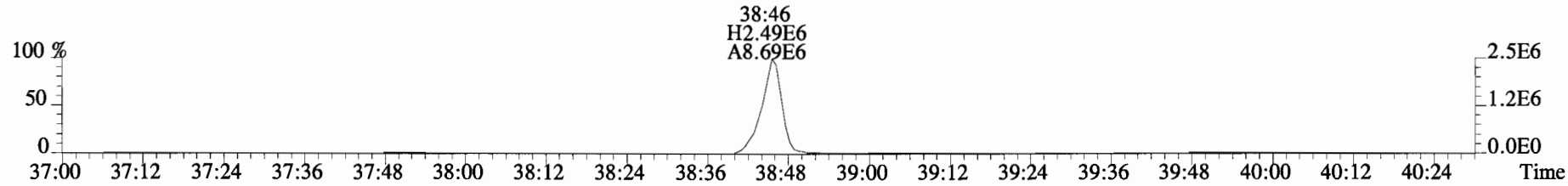
425.7737 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



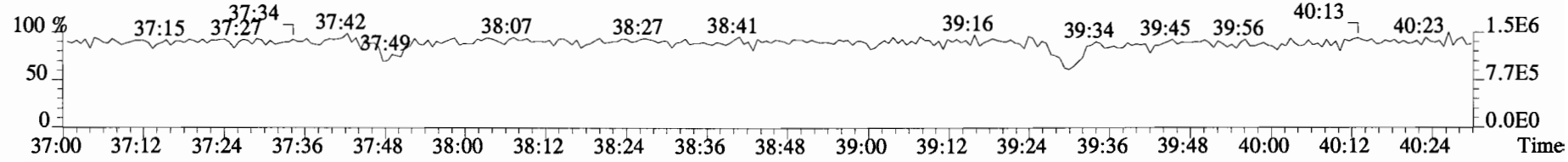
435.8169 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



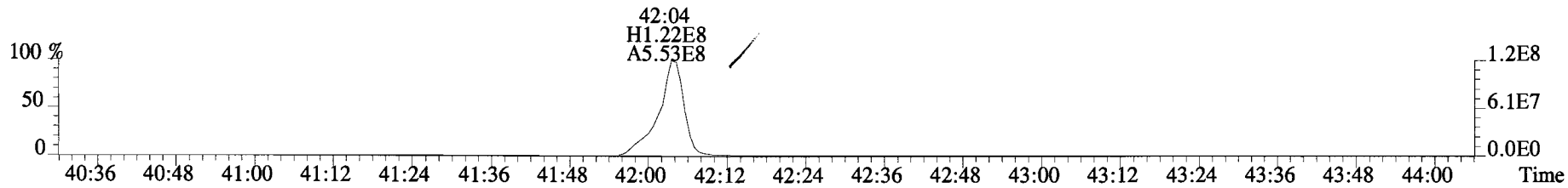
437.8140 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



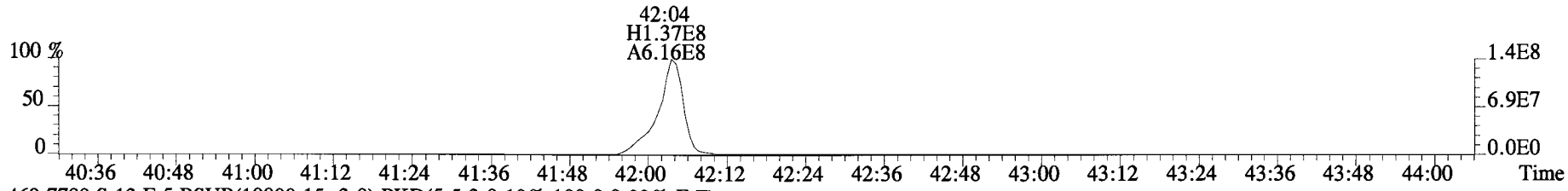
430.9728 S:13 F:4



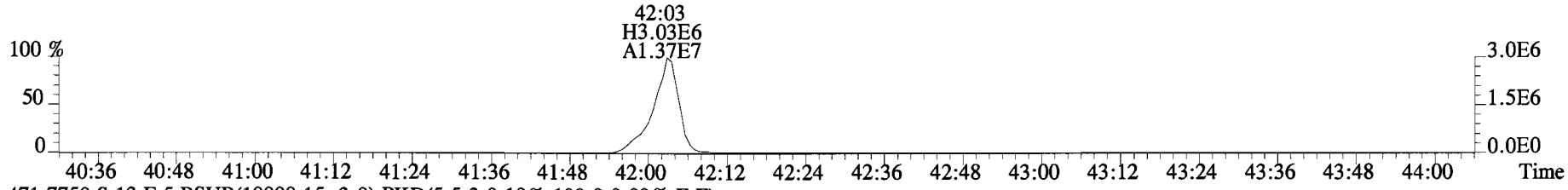
File:141212D1 #1-388 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



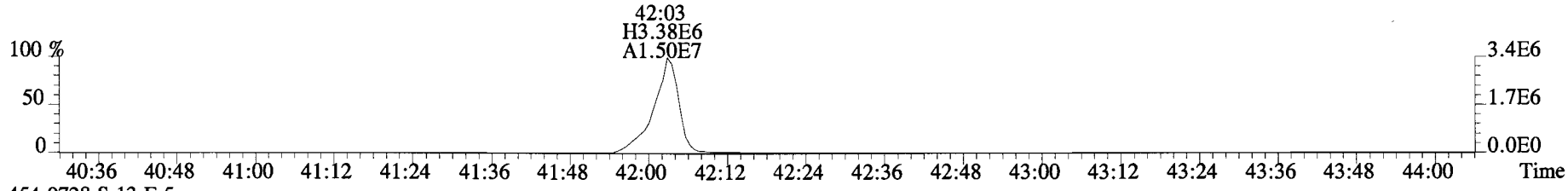
459.7348 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



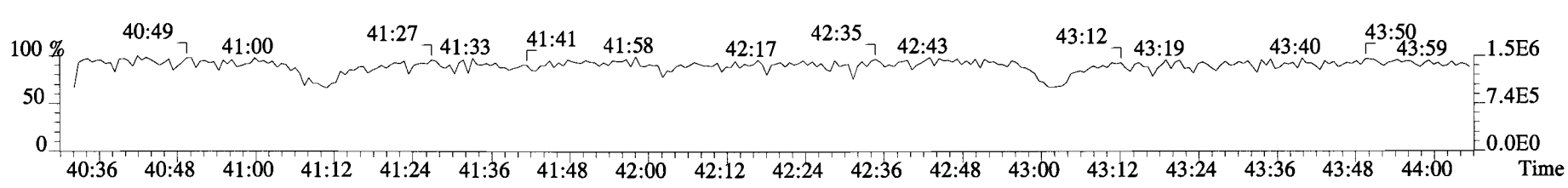
469.7780 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

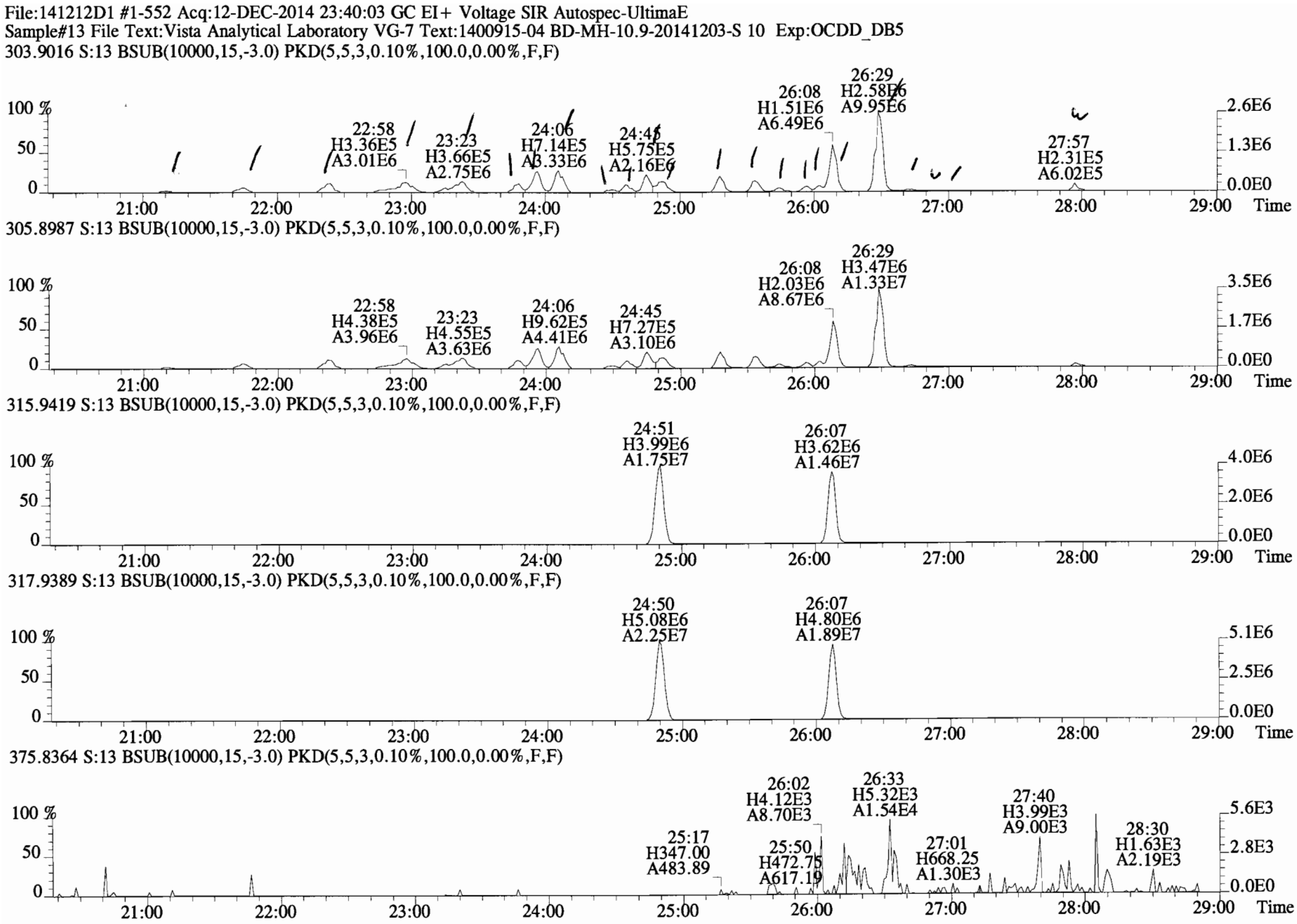


471.7750 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

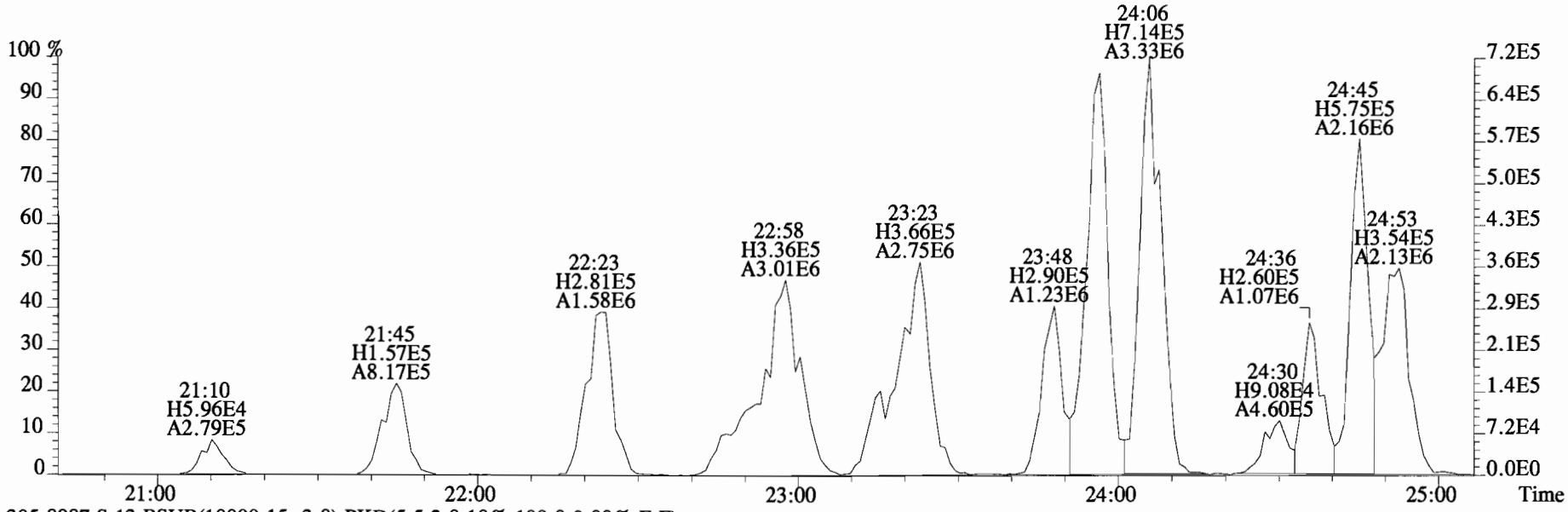


454.9728 S:13 F:5

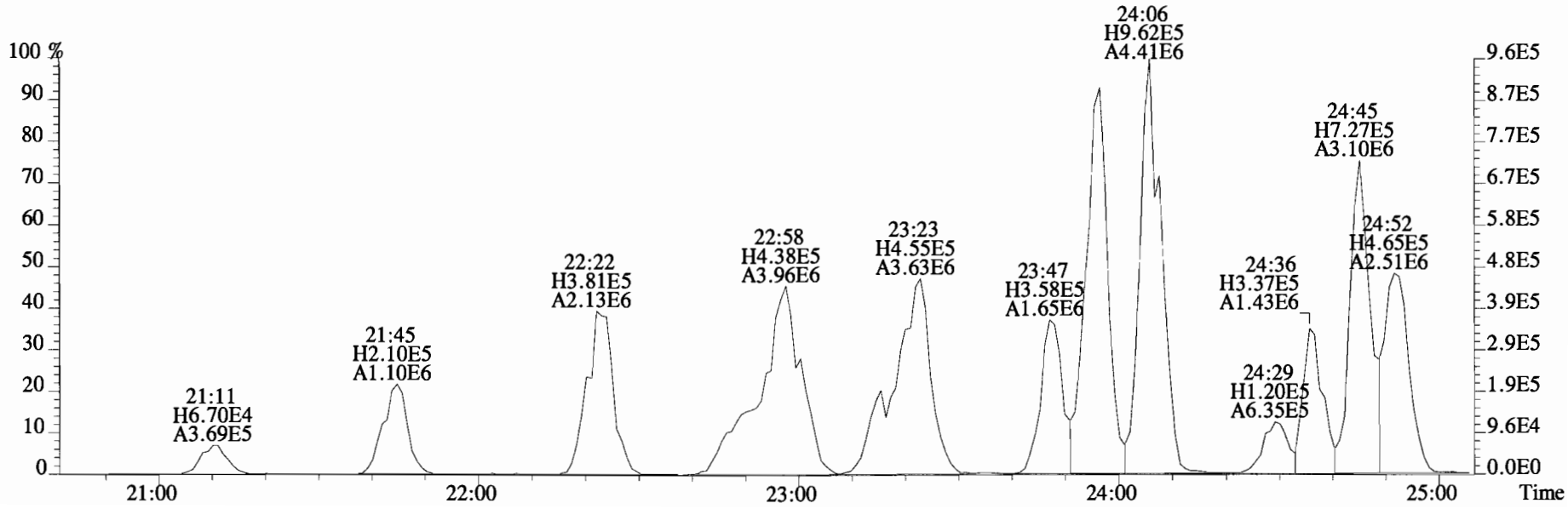



File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:58 H3.36E5 A3.01E6
23:23 H3.66E5 A2.75E6
24:06 H7.14E5 A3.33E6
24:45 H5.75E5 A2.16E6
26:08 H1.51E6 A6.49E6
26:29 H2.58E6 A9.95E6
27:57 H2.31E5 A6.02E5
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:58 H4.38E5 A3.96E6
23:23 H4.55E5 A3.63E6
24:06 H9.62E5 A4.41E6
24:45 H7.27E5 A3.10E6
26:08 H2.03E6 A8.67E6
26:29 H3.47E6 A1.33E7
315.9419 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:51 H3.99E6 A1.75E7
26:07 H3.62E6 A1.46E7
317.9389 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:50 H5.08E6 A2.25E7
26:07 H4.80E6 A1.89E7
375.8364 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:17 H347.00 A483.89
25:50 H472.75 A617.19
26:02 H4.12E3 A8.70E3
26:33 H5.32E3 A1.54E4
27:01 H668.25 A1.30E3
27:40 H3.99E3 A9.00E3
28:30 H1.63E3 A2.19E3
100 %
50
0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
Time
2.6E6
1.3E6
0.0E0
3.5E6
1.7E6
4.0E6
2.0E6
5.1E6
2.5E6
5.6E3
2.8E3

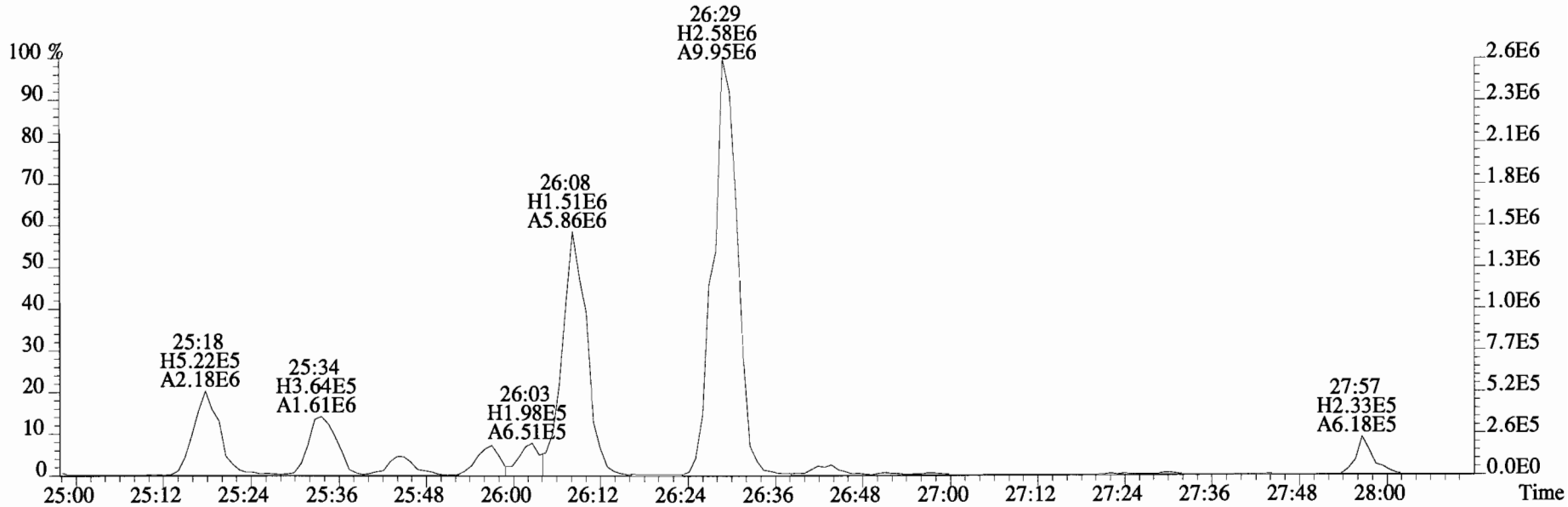
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



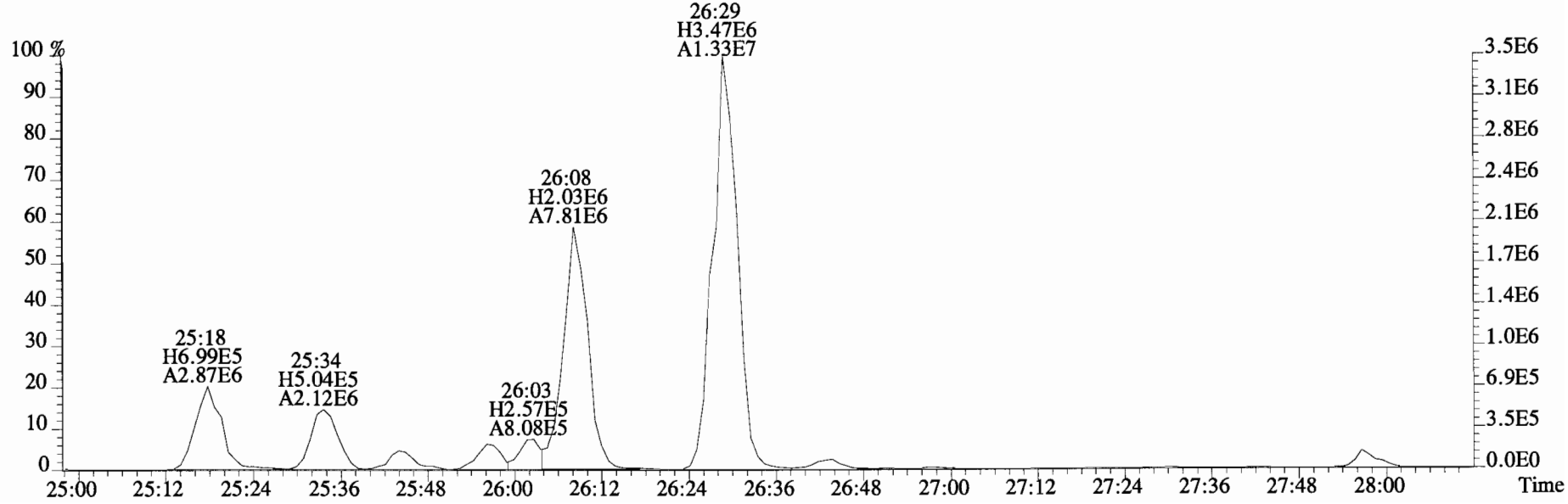
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



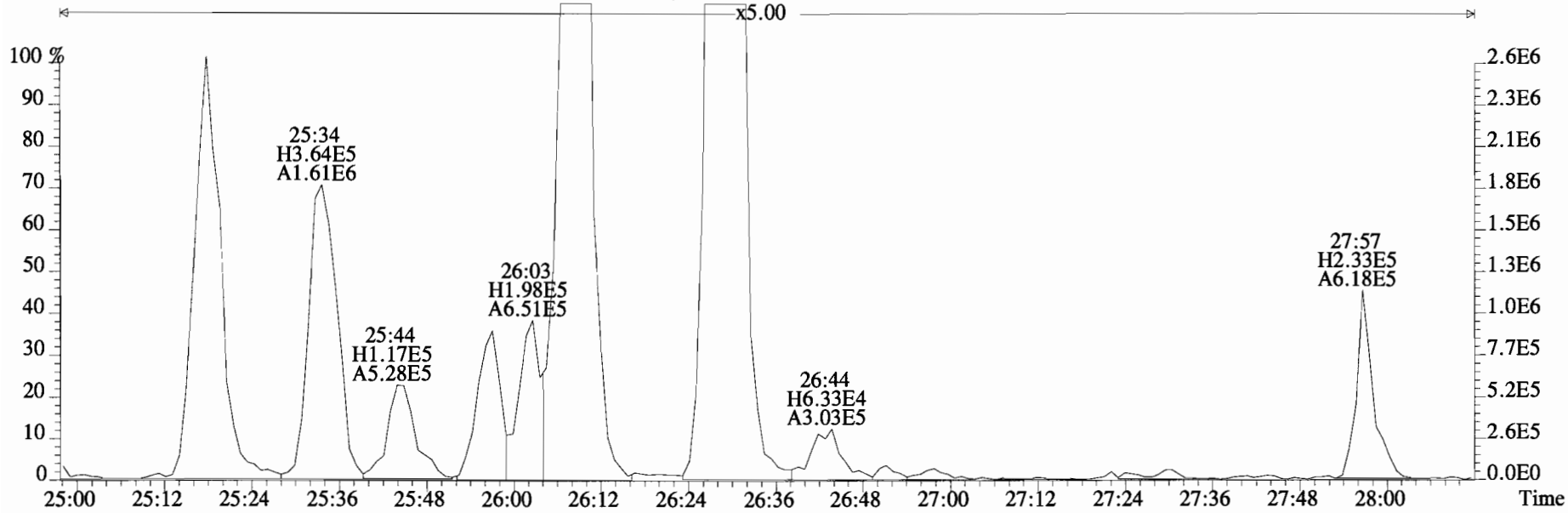
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



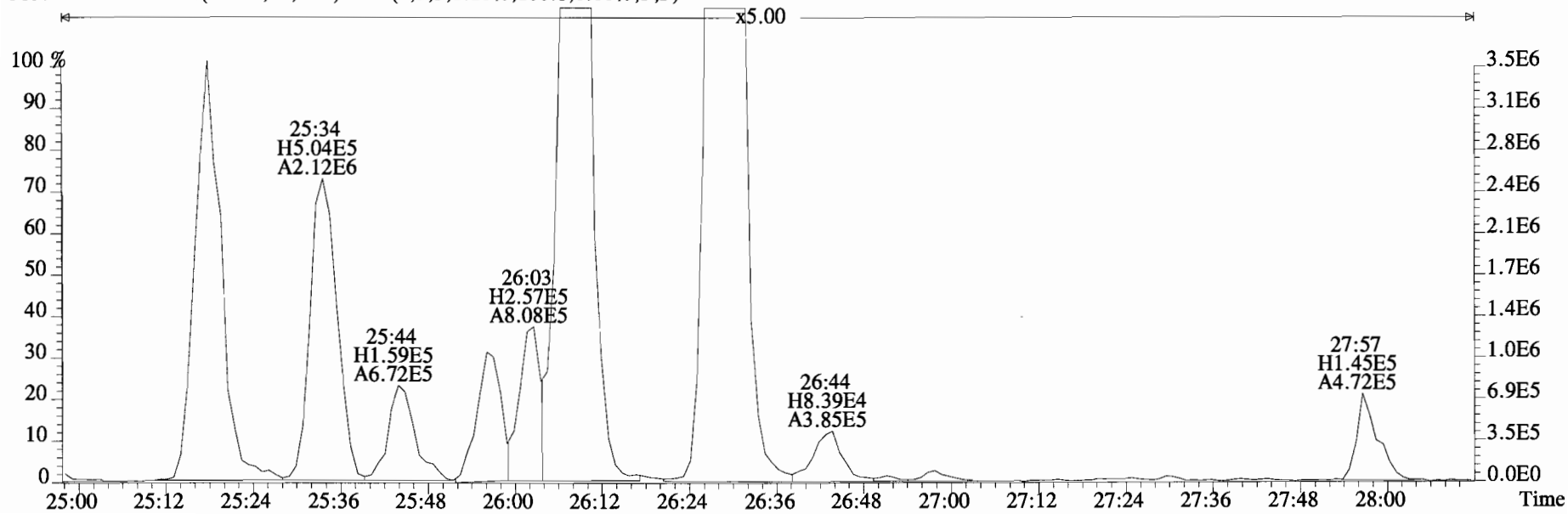
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



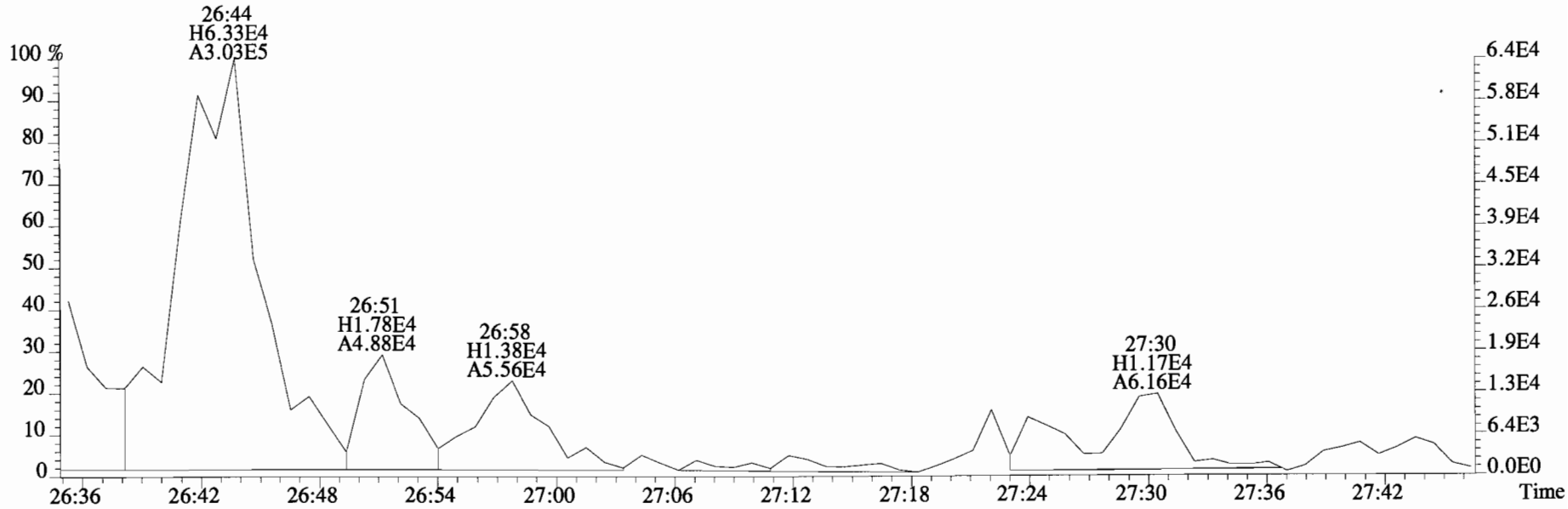
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



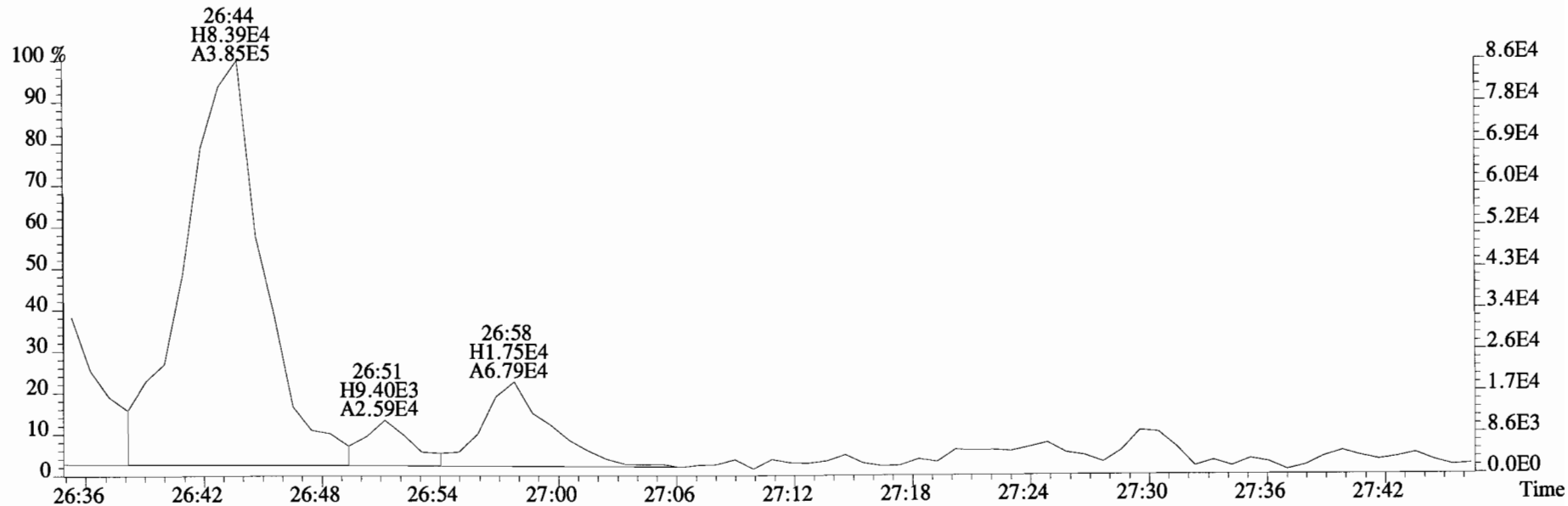
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



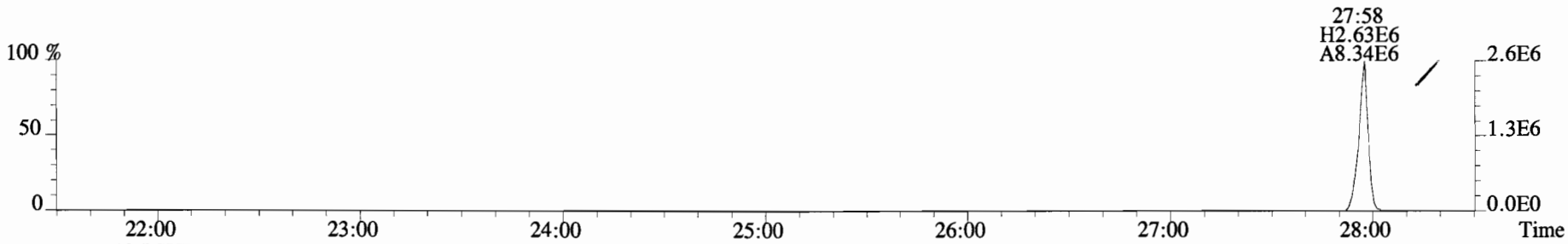
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



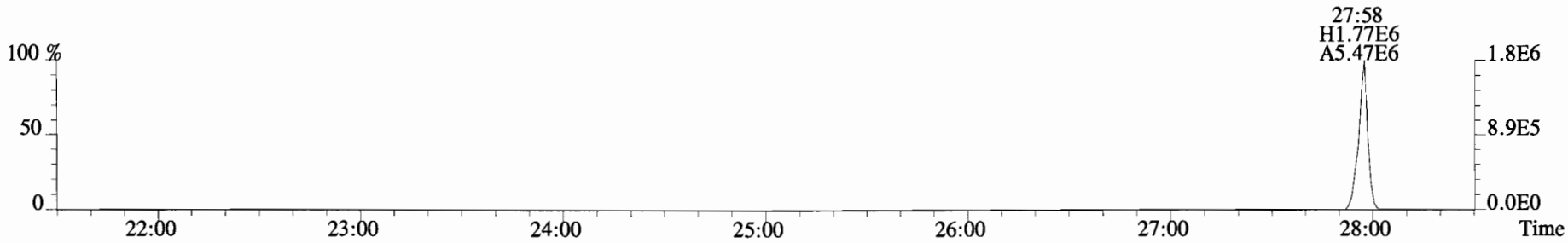
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



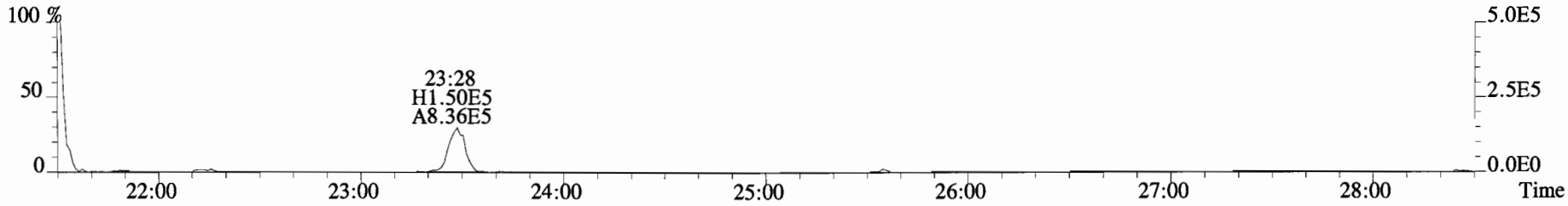
File:141212D1 #1-552 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



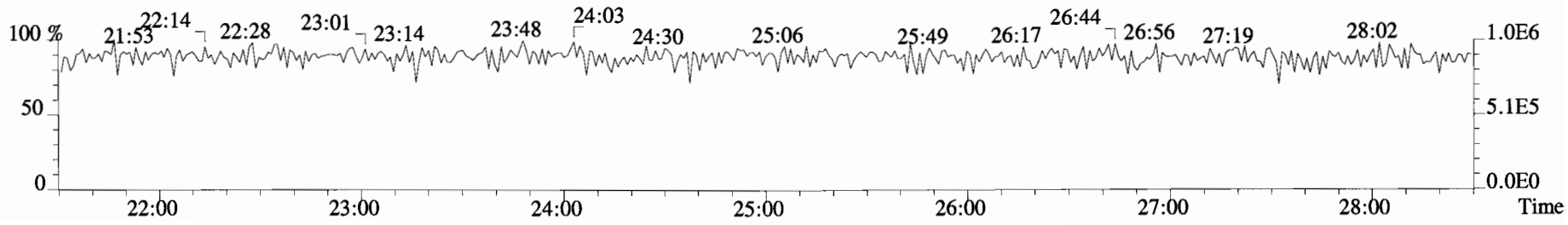
341.8568 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

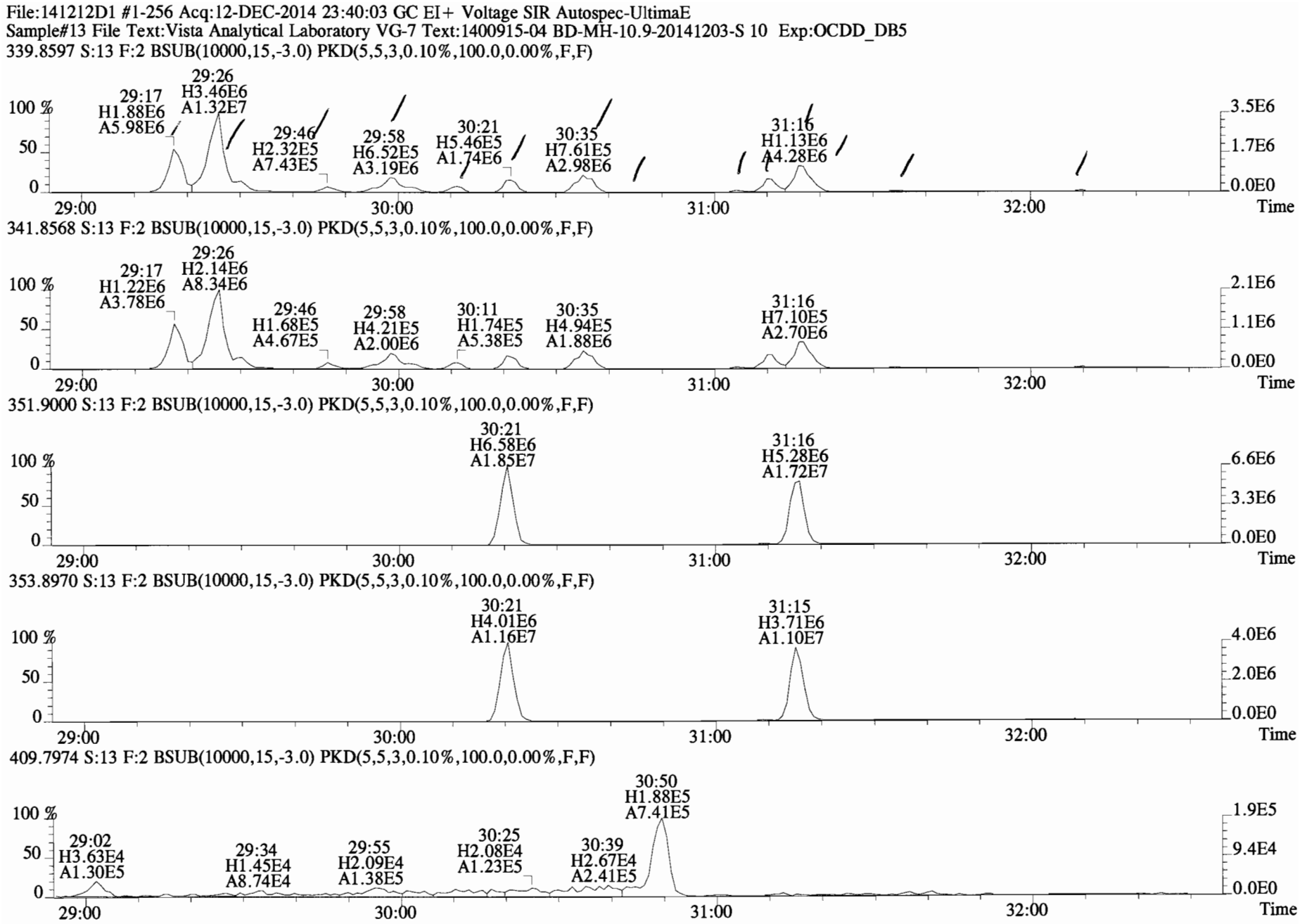


409.7974 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

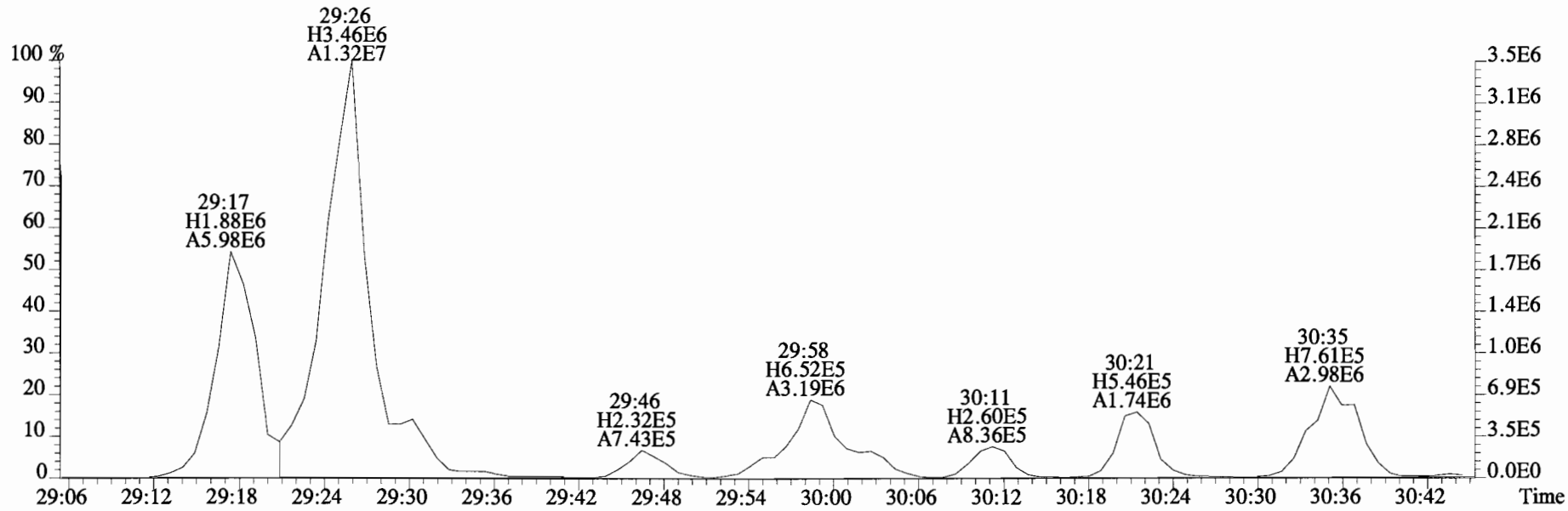


316.9824 S:13

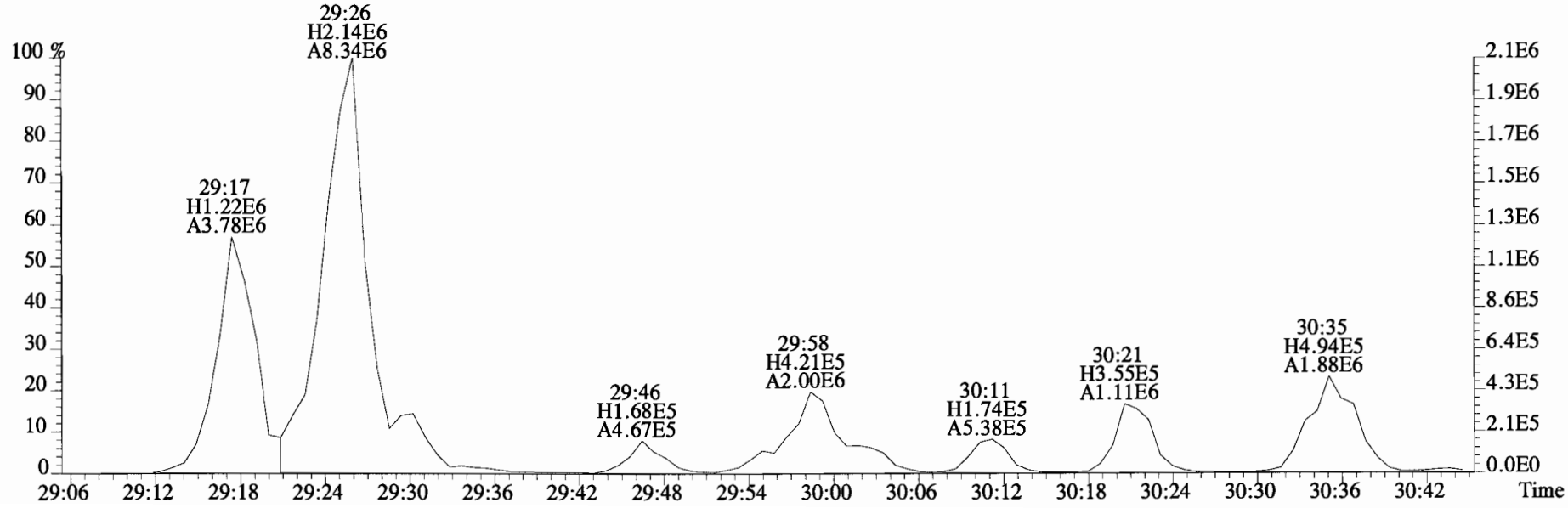



File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:17 H1.88E6 A5.98E6
29:26 H3.46E6 A1.32E7
29:46 H2.32E5 A7.43E5
29:58 H6.52E5 A3.19E6
30:21 H5.46E5 A1.74E6
30:35 H7.61E5 A2.98E6
31:16 H1.13E6 A4.28E6
100 %
50
0
3.5E6
1.7E6
0.0E0
29:00
30:00
31:00
32:00
Time
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:17 H1.22E6 A3.78E6
29:26 H2.14E6 A8.34E6
29:46 H1.68E5 A4.67E5
29:58 H4.21E5 A2.00E6
30:11 H1.74E5 A5.38E5
30:35 H4.94E5 A1.88E6
31:16 H7.10E5 A2.70E6
100 %
50
0
2.1E6
1.1E6
0.0E0
29:00
30:00
31:00
32:00
Time
351.9000 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:21 H6.58E6 A1.85E7
31:16 H5.28E6 A1.72E7
100 %
50
0
6.6E6
3.3E6
0.0E0
29:00
30:00
31:00
32:00
Time
353.8970 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:21 H4.01E6 A1.16E7
31:15 H3.71E6 A1.10E7
100 %
50
0
4.0E6
2.0E6
0.0E0
29:00
30:00
31:00
32:00
Time
409.7974 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:50 H1.88E5 A7.41E5
29:02 H3.63E4 A1.30E5
29:34 H1.45E4 A8.74E4
29:55 H2.09E4 A1.38E5
30:25 H2.08E4 A1.23E5
30:39 H2.67E4 A2.41E5
100 %
50
0
1.9E5
9.4E4
0.0E0
29:00
30:00
31:00
32:00
Time

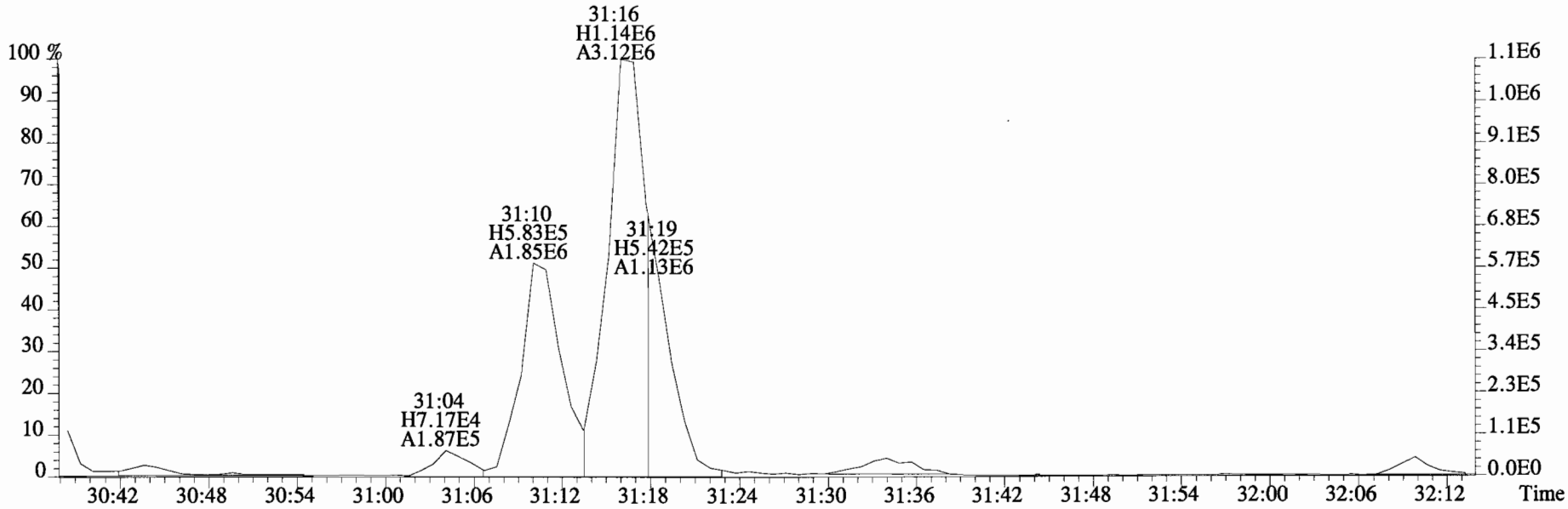
File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



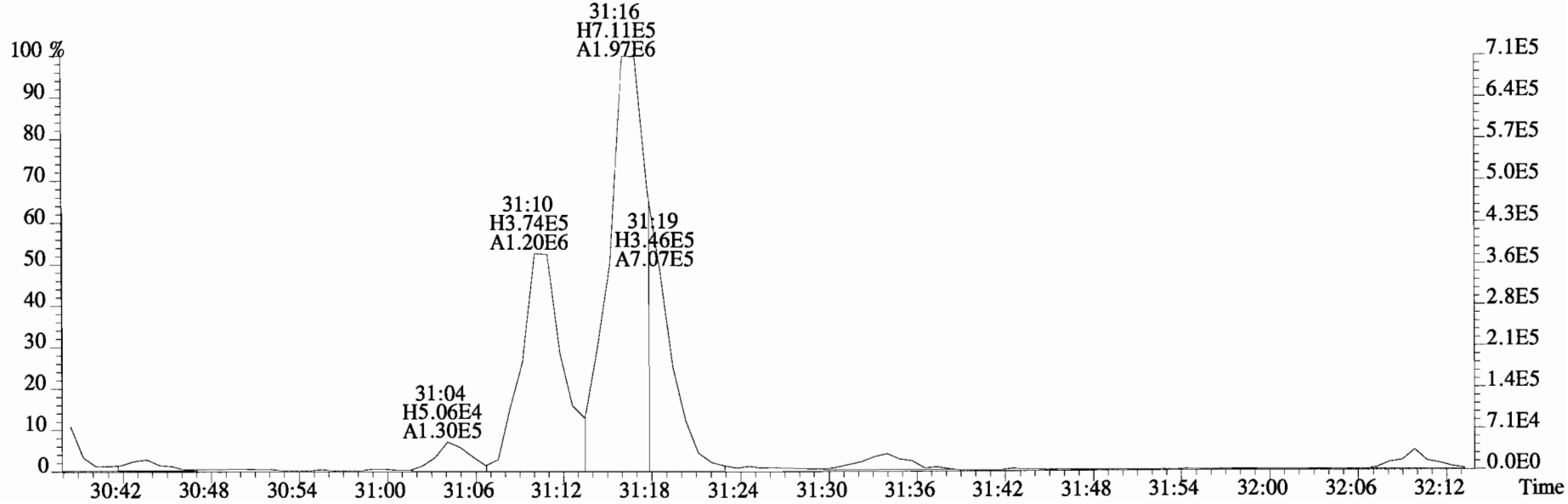
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

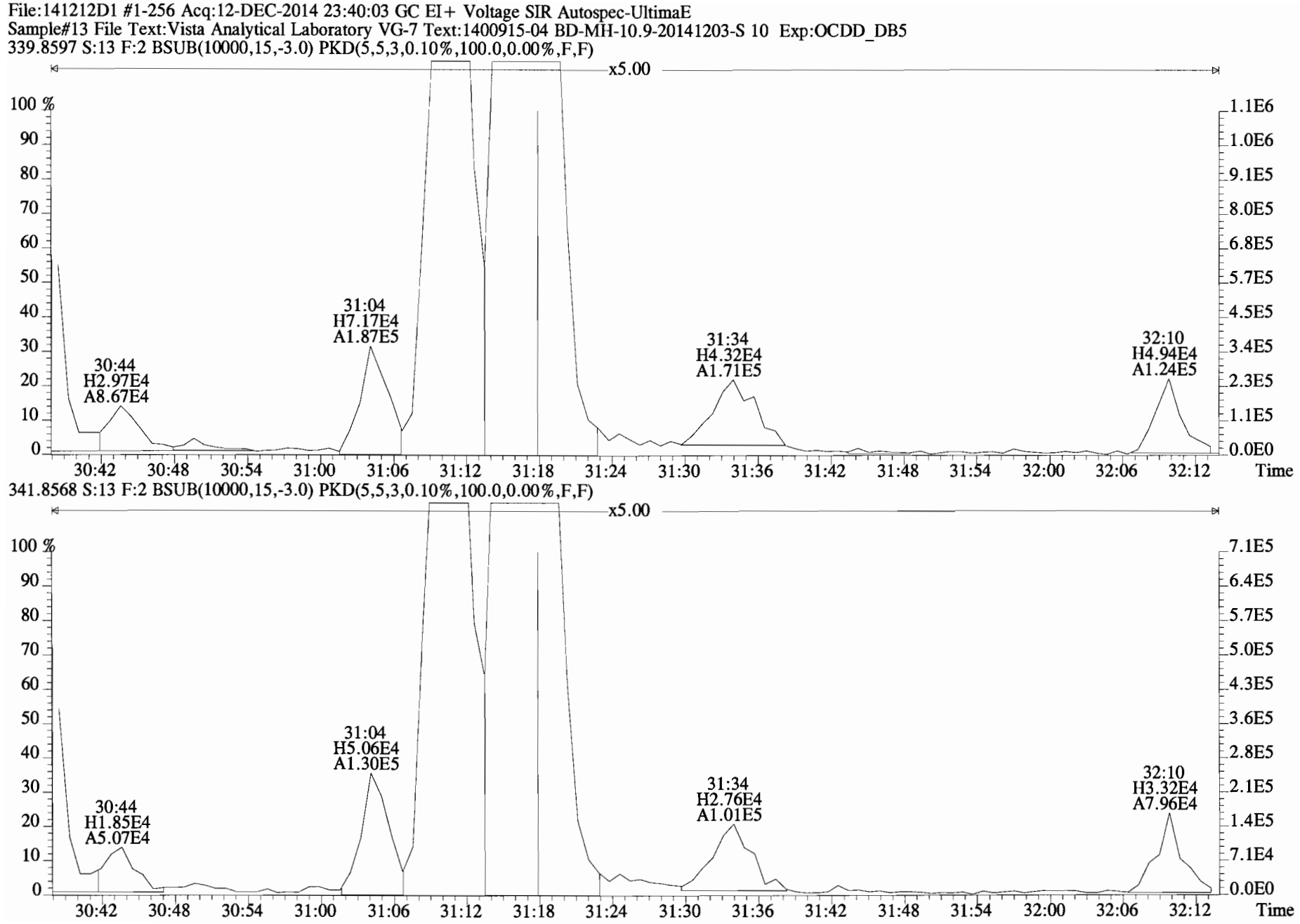


File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



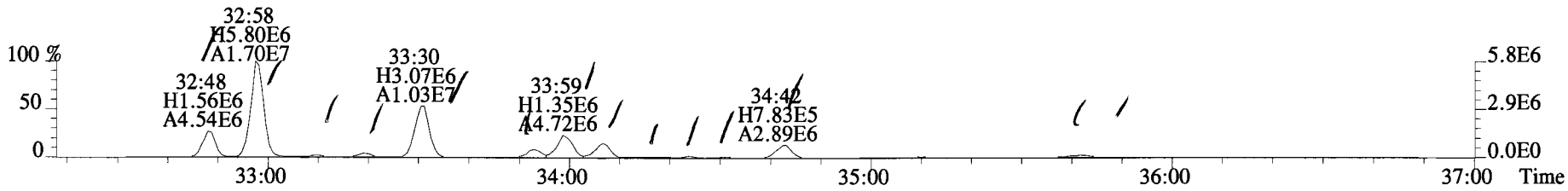
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



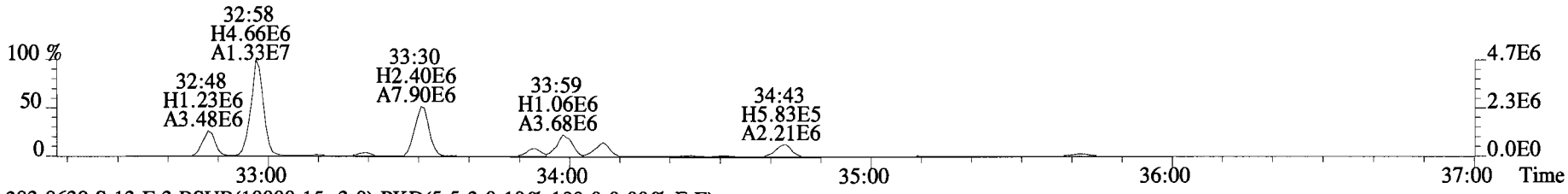

File:141212D1 #1-256 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:44
H2.97E4
A8.67E4
31:04
H7.17E4
A1.87E5
31:34
H4.32E4
A1.71E5
32:10
H4.94E4
A1.24E5
Time
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:44
H1.85E4
A5.07E4
31:04
H5.06E4
A1.30E5
31:34
H2.76E4
A1.01E5
32:10
H3.32E4
A7.96E4
Time

File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5

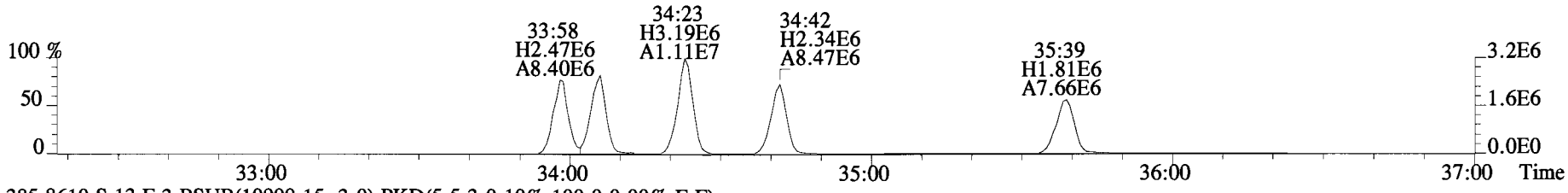
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



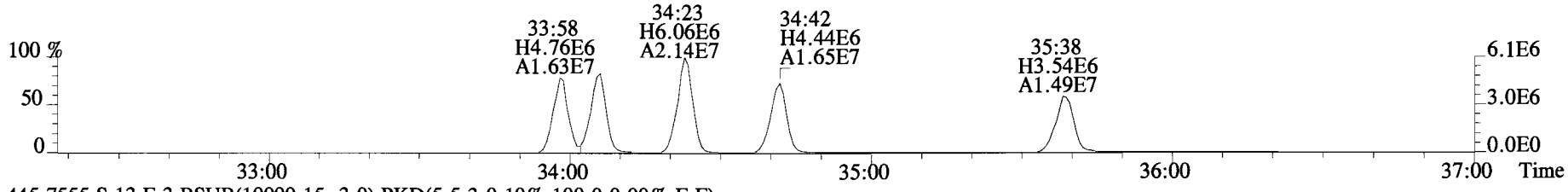
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



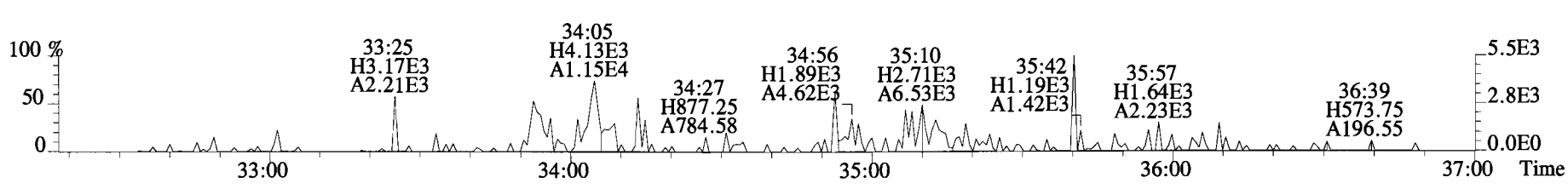
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



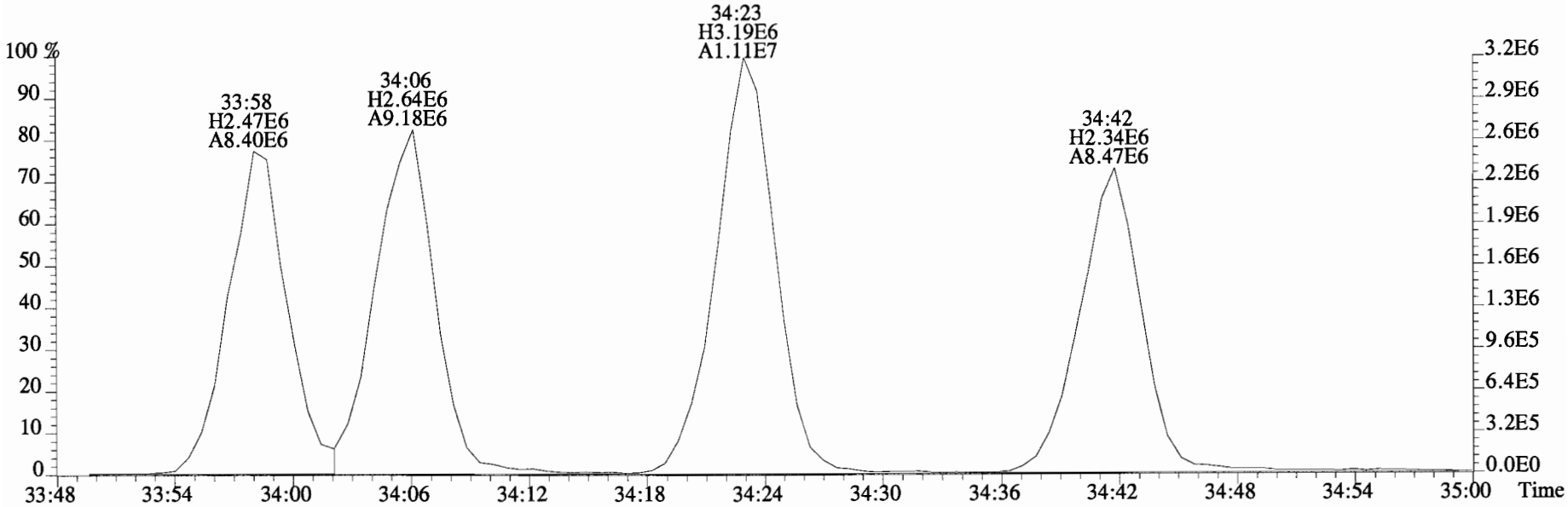
385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



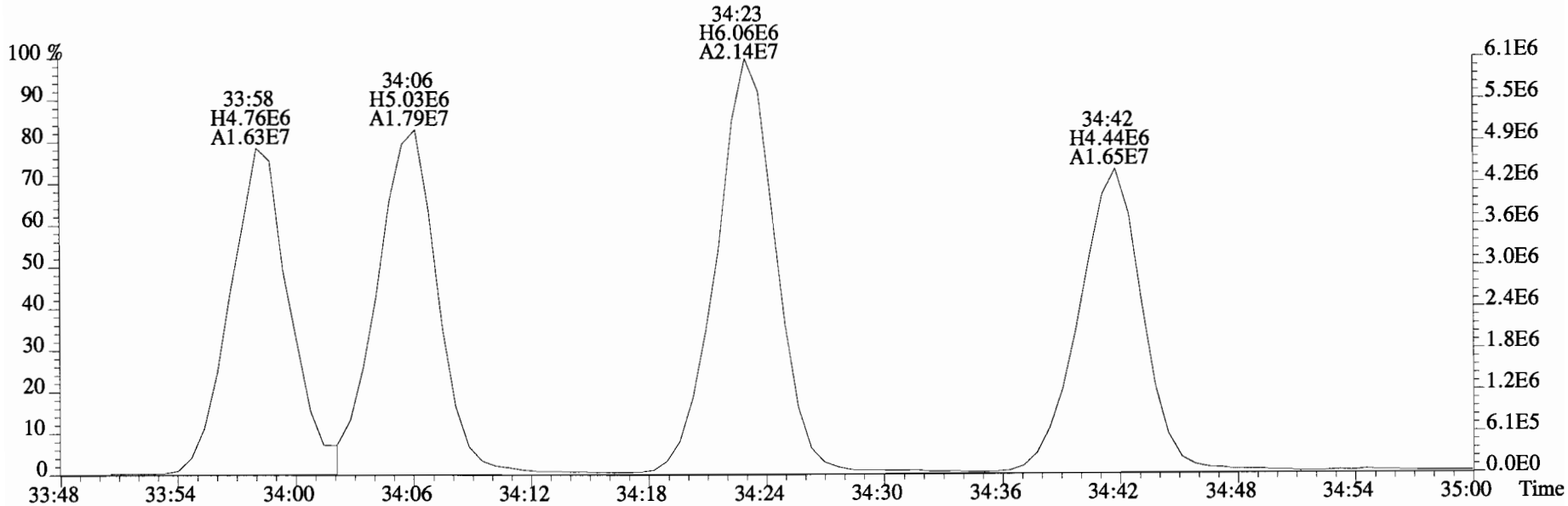
445.7555 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

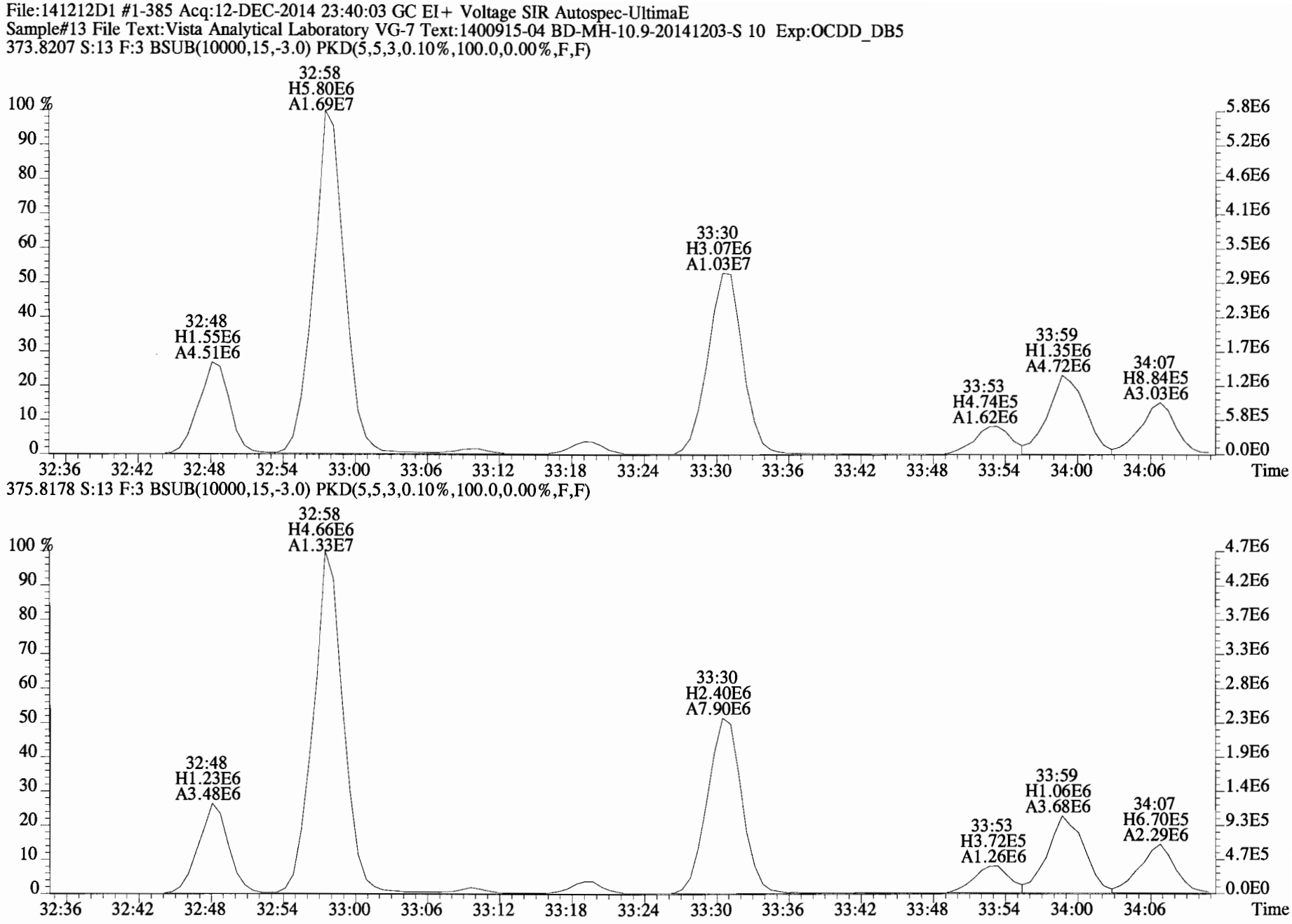


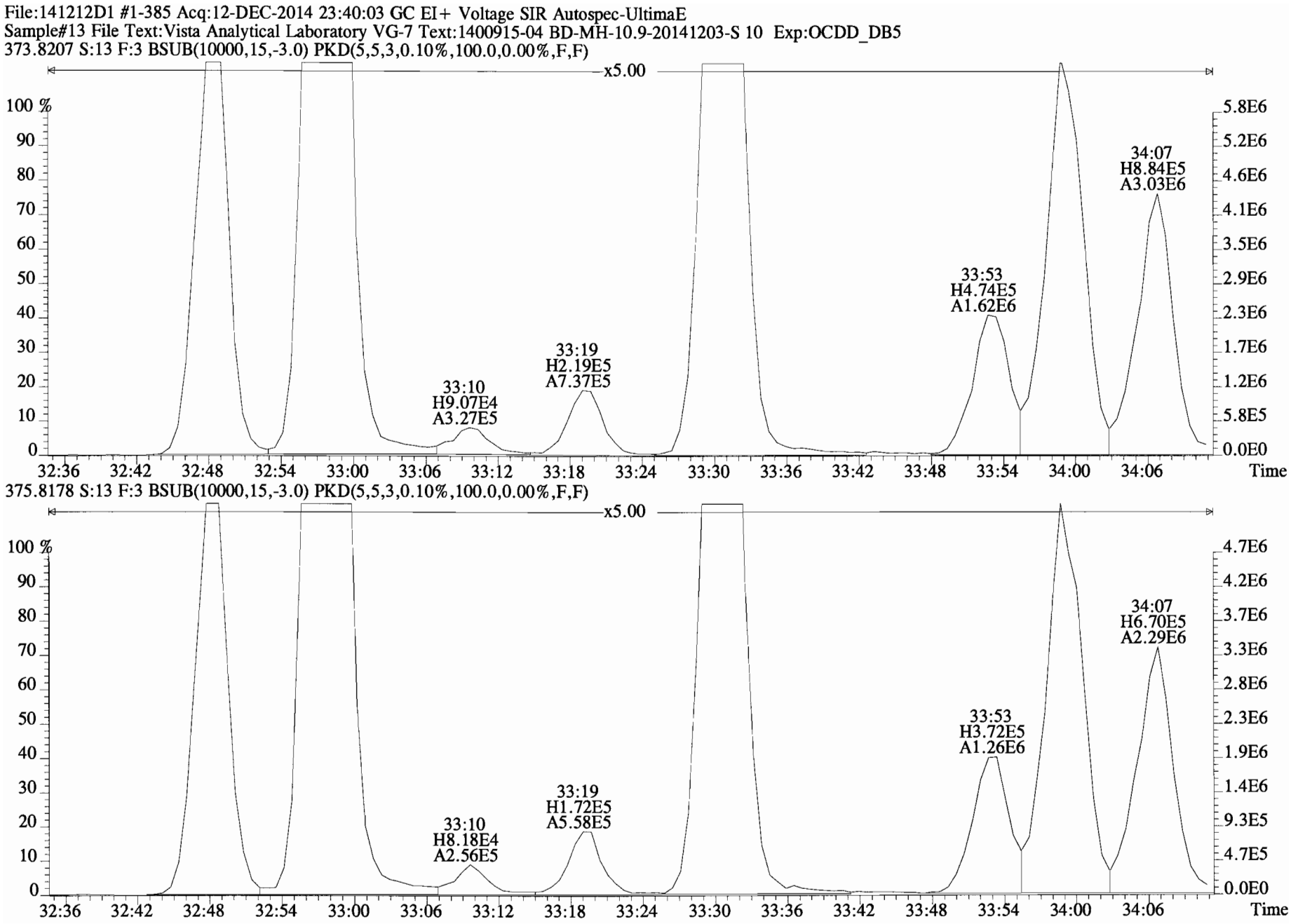
File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



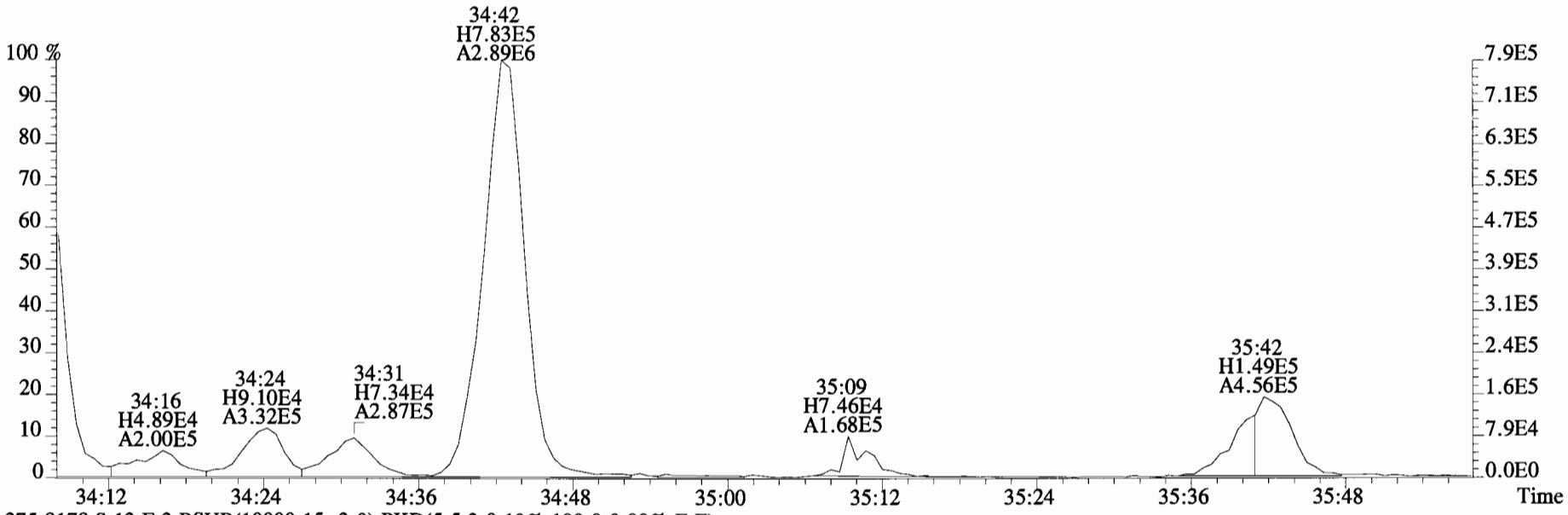
385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



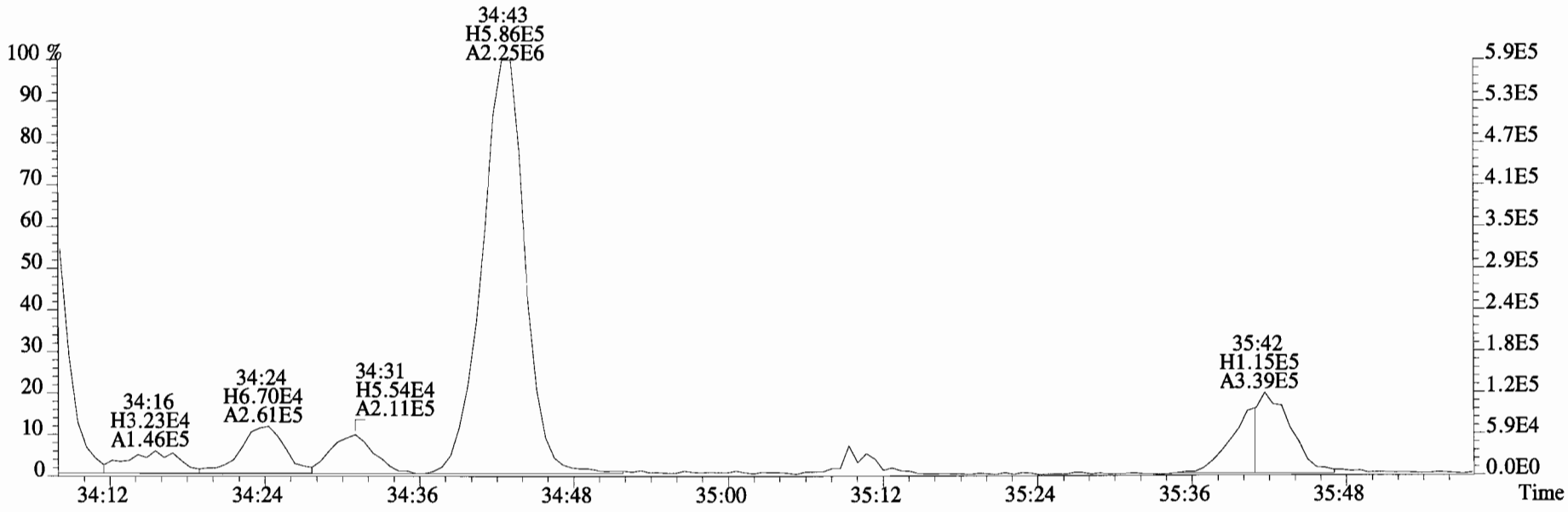

File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:58
H5.80E6
A1.69E7
33:30
H3.07E6
A1.03E7
32:48
H1.55E6
A4.51E6
33:59
H1.35E6
A4.72E6
34:07
H8.84E5
A3.03E6
33:53
H4.74E5
A1.62E6
100 %
90
80
70
60
50
40
30
20
10
0
5.8E6
5.2E6
4.6E6
4.1E6
3.5E6
2.9E6
2.3E6
1.7E6
1.2E6
5.8E5
0.0E0
32:36
32:42
32:48
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:58
H4.66E6
A1.33E7
33:30
H2.40E6
A7.90E6
32:48
H1.23E6
A3.48E6
33:59
H1.06E6
A3.68E6
34:07
H6.70E5
A2.29E6
33:53
H3.72E5
A1.26E6
100 %
90
80
70
60
50
40
30
20
10
0
4.7E6
4.2E6
3.7E6
3.3E6
2.8E6
2.3E6
1.9E6
1.4E6
9.3E5
4.7E5
0.0E0
32:36
32:42
32:48
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time


File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
5.8E6
5.2E6
4.6E6
4.1E6
3.5E6
2.9E6
2.3E6
1.7E6
1.2E6
5.8E5
0.0E0
33:10
H9.07E4
A3.27E5
33:19
H2.19E5
A7.37E5
33:53
H4.74E5
A1.62E6
34:07
H8.84E5
A3.03E6
32:36
32:42
32:48
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
4.7E6
4.2E6
3.7E6
3.3E6
2.8E6
2.3E6
1.9E6
1.4E6
9.3E5
4.7E5
0.0E0
33:10
H8.18E4
A2.56E5
33:19
H1.72E5
A5.58E5
33:53
H3.72E5
A1.26E6
34:07
H6.70E5
A2.29E6
32:36
32:42
32:48
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time

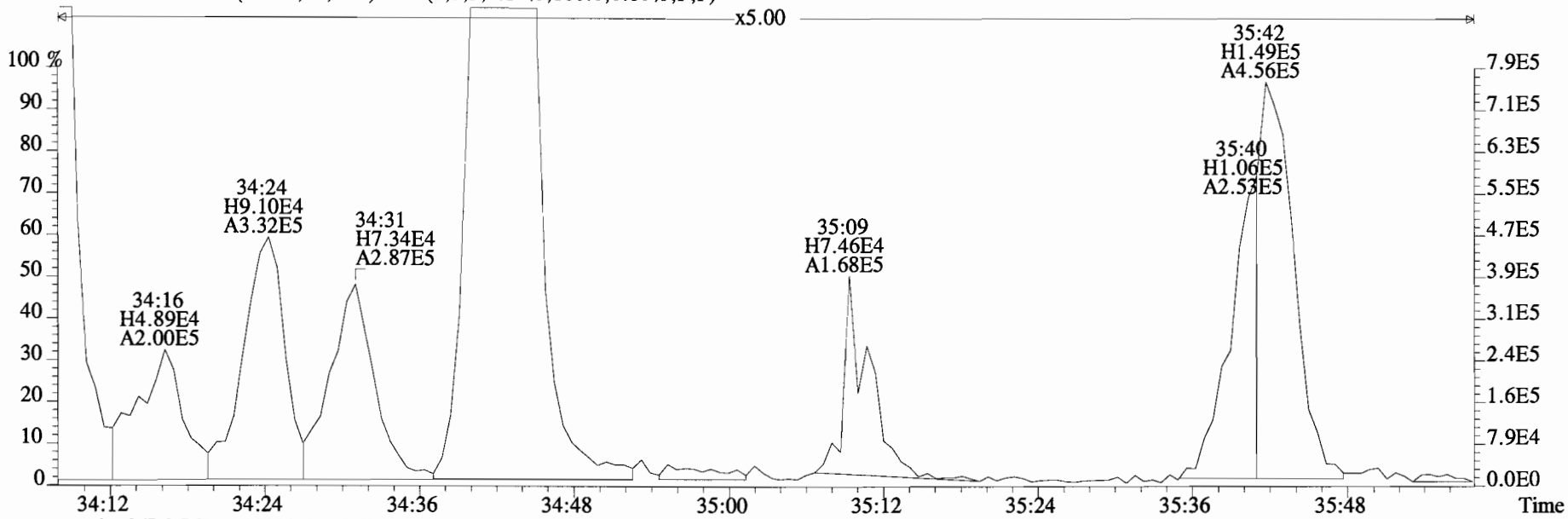
File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



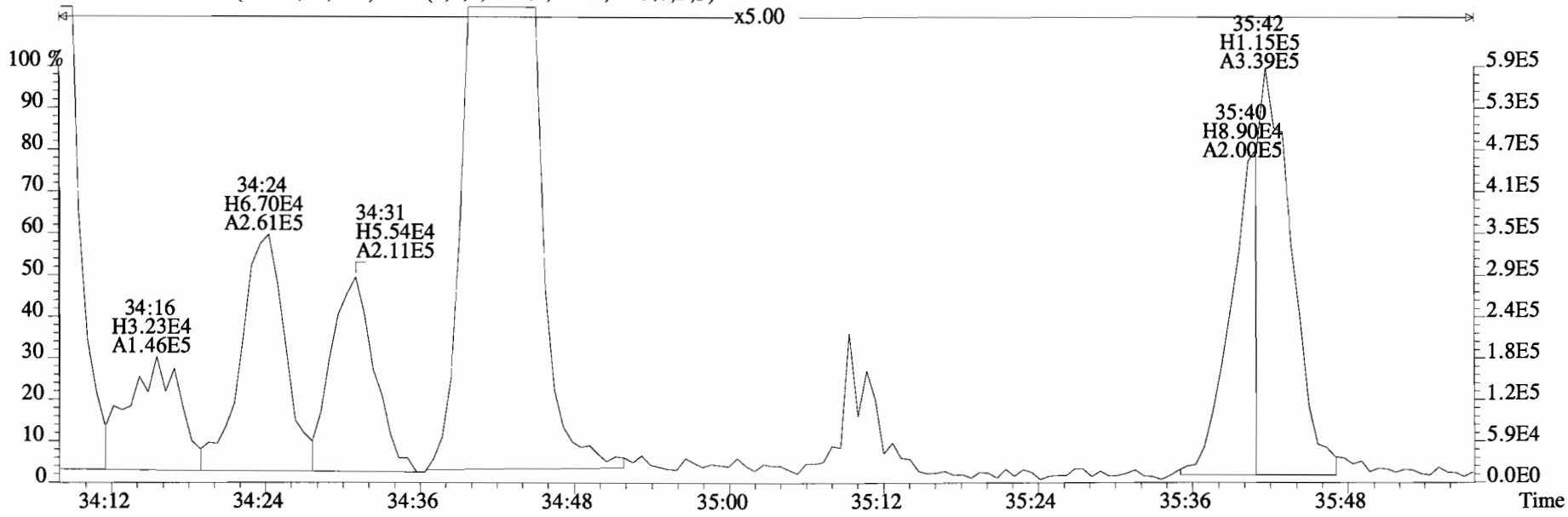
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141212D1 #1-385 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

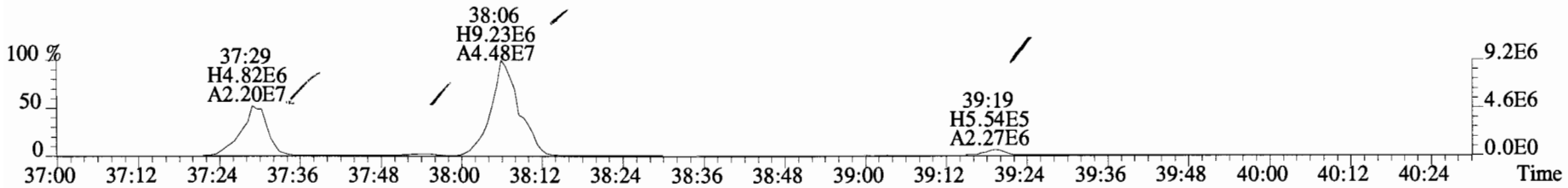


375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

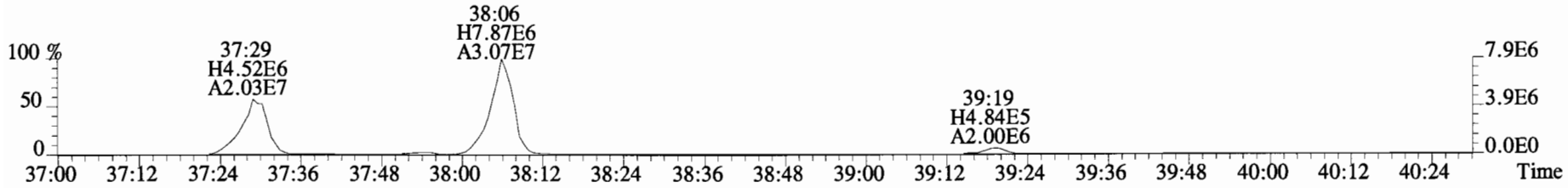


File:141212D1 #1-326 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5

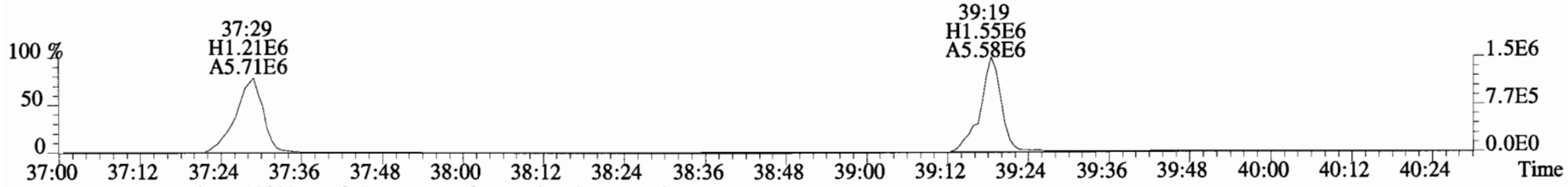
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



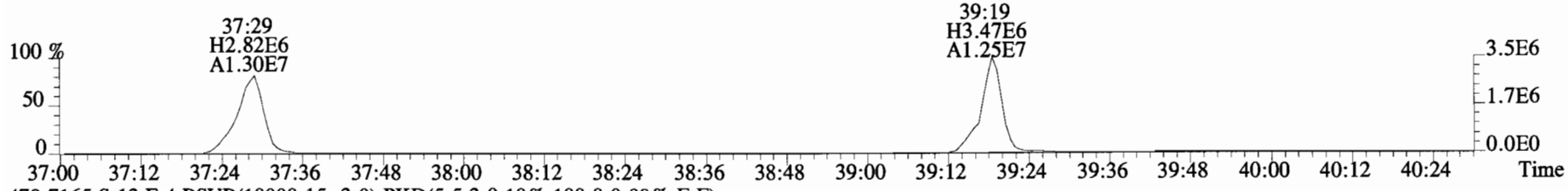
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



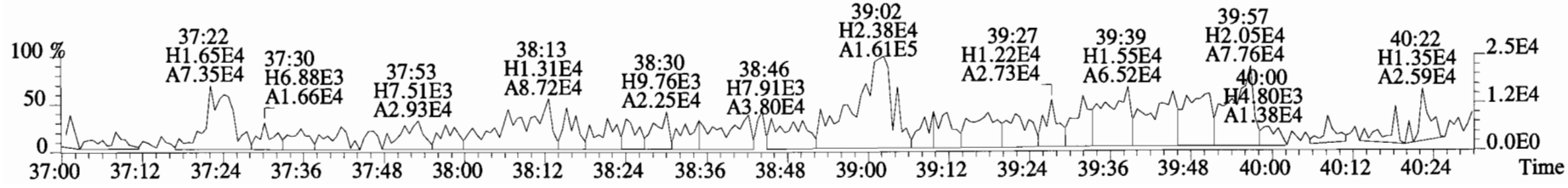
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



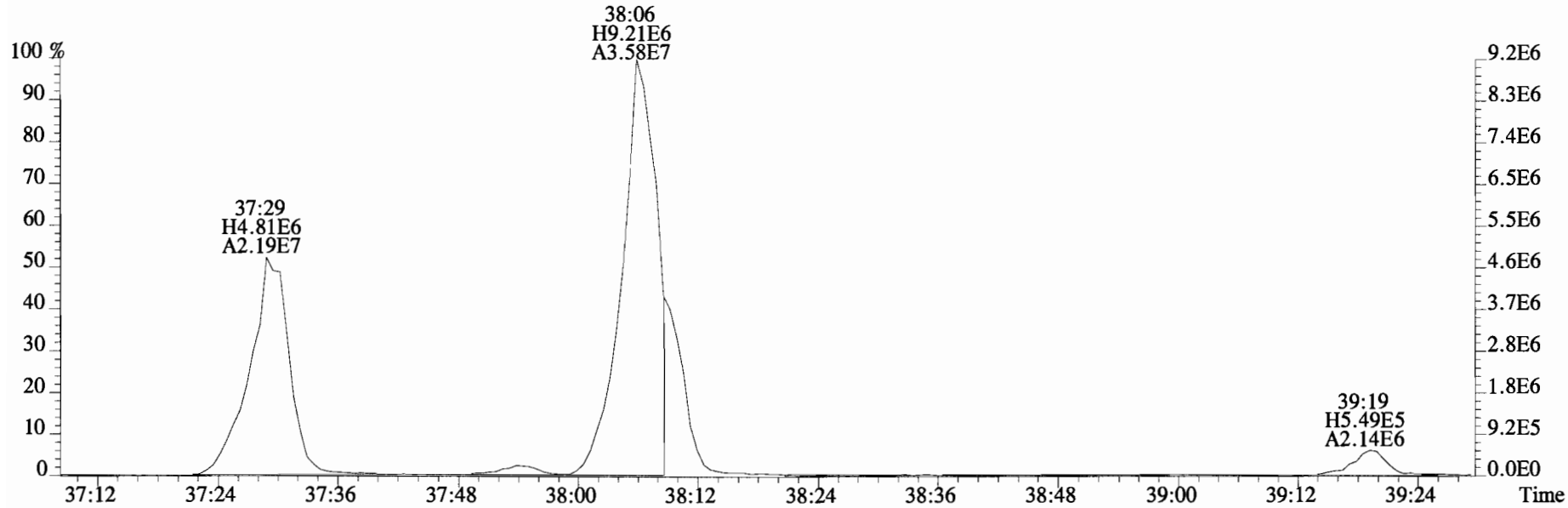
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



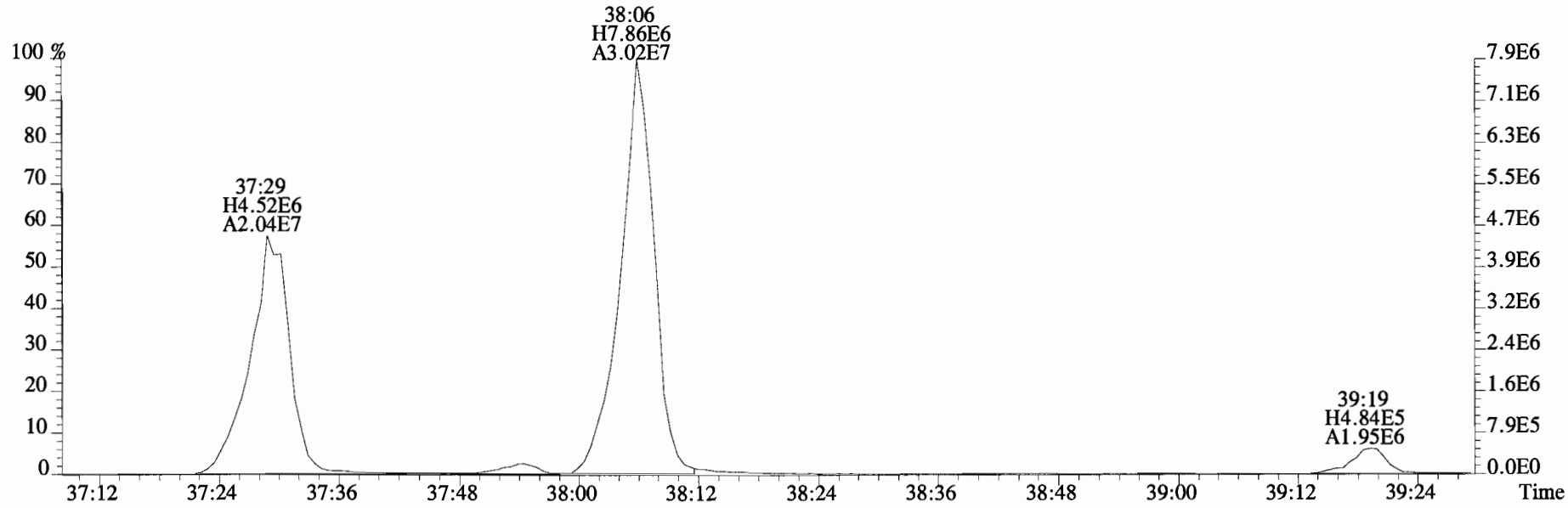
479.7165 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

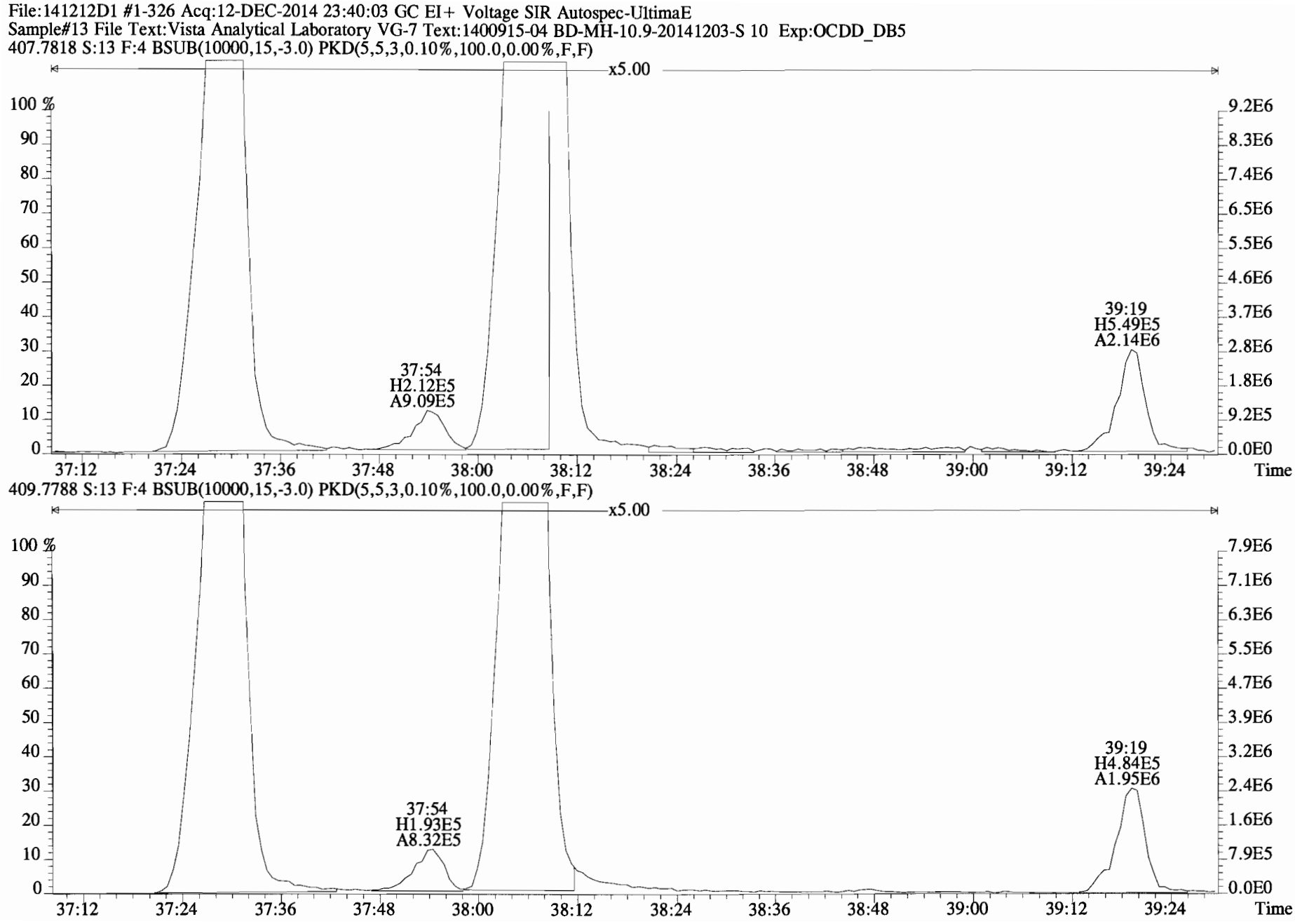


File:141212D1 #1-326 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



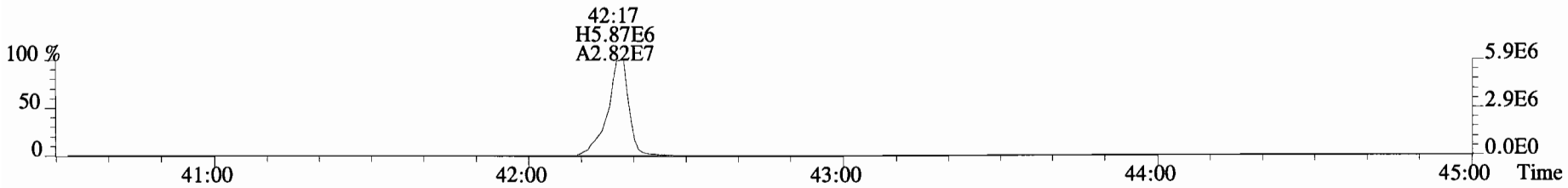
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



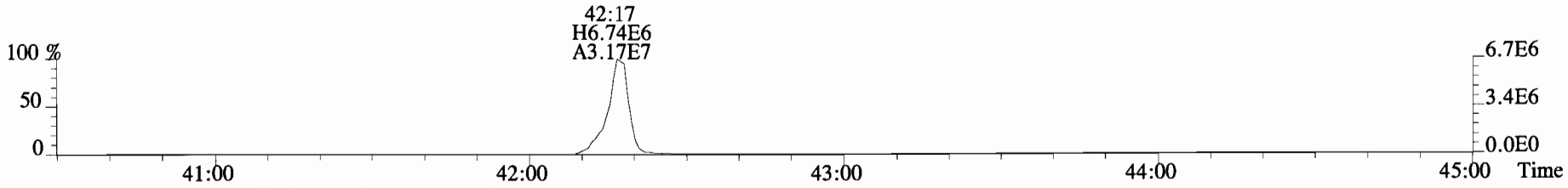

File:141212D1 #1-326 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
37:54
H2.12E5
A9.09E5
39:19
H5.49E5
A2.14E6
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
37:54
H1.93E5
A8.32E5
39:19
H4.84E5
A1.95E6
Time

File:141212D1 #1-388 Acq:12-DEC-2014 23:40:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG-7 Text:1400915-04 BD-MH-10.9-20141203-S 10 Exp:OCDD_DB5

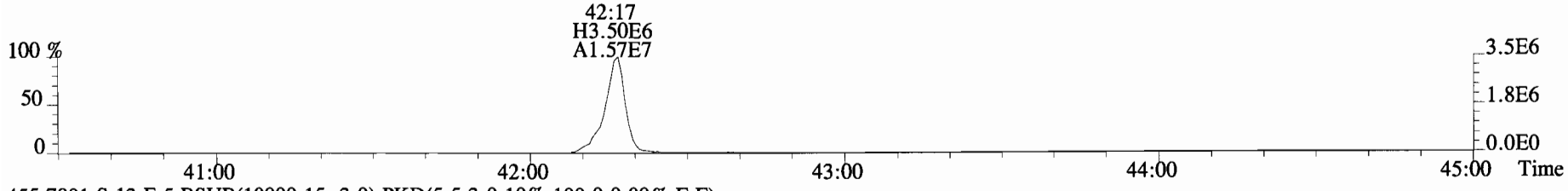
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



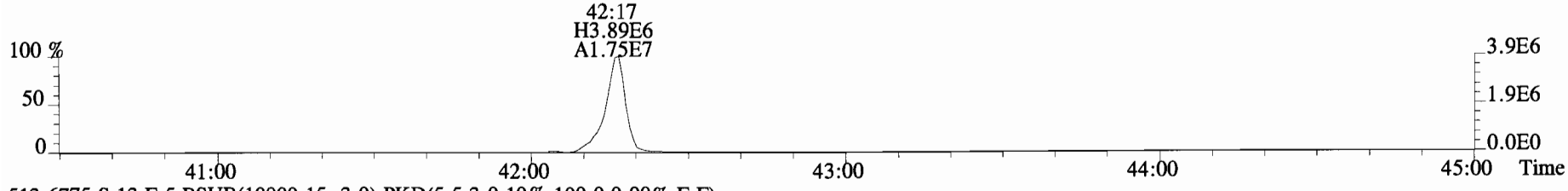
443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



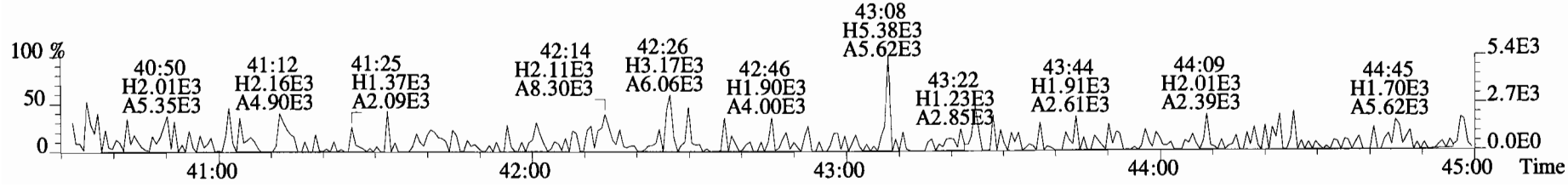
453.7831 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-MH-13.43-20141202-S¶ Filename: 141216D1 S:16 Acq:17-DEC-14 02:52:03 ConCal: ST141216D1-2
Lab ID: 1400915-05RE1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.035 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	5.98e+04	0.53	n	1.18	26:56	1.001	5.3871		*	2.5	*
	1,2,3,7,8-PeCDD	4.19e+05	0.60	y	0.92	31:32	1.000	40.390		*	2.5	*
	1,2,3,4,7,8-HxCDD	4.09e+05	1.36	y	1.09	34:52	1.000	45.033		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.36e+05	1.21	y	1.07	34:59	1.001	91.612		*	2.5	*
	1,2,3,7,8,9-HxCDD	1.51e+06	1.28	y	0.93	35:16	1.000	164.02		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.59e+07	1.05	y	1.12	38:46	1.000	1765.3		*	2.5	*
	OCDD	1.23e+08	0.89	y	0.95	42:02	1.000	17173		*	2.5	*
	2,3,7,8-TCDF	1.27e+05	0.72	y	1.08	26:07	1.000	8.6177	6.98	*	2.5	*
	1,2,3,7,8-PeCDF	8.40e+04	1.43	y	1.09	30:21	1.000	5.3199		*	2.5	*
	2,3,4,7,8-PeCDF	1.16e+05	1.60	y	1.04	31:16	1.000	7.4015		*	2.5	*
	1,2,3,4,7,8-HxCDF	2.58e+05	1.28	y	1.39	33:59	1.000	15.801		*	2.5	*
	1,2,3,6,7,8-HxCDF	2.21e+05	1.25	y	1.26	34:06	1.000	14.103		*	2.5	*
	2,3,4,6,7,8-HxCDF	2.82e+05	1.16	y	1.30	34:42	1.000	18.905		*	2.5	*
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF¶	*	*		1720	2.5	2.11
	1,2,3,4,6,7,8-HpCDF	2.77e+06	1.05	y	1.62	37:28	1.000	200.24		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	2.06e+05	1.14	y	1.53	39:19	1.000	16.586		*	2.5	*
	OCDF	5.25e+06	0.92	y	1.10	42:16	1.000	542.97		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.81e+07	0.80	y	1.07	26:55	1.022	1657.6				85.8
IS	13C-1,2,3,7,8-PeCDD	2.18e+07	0.63	y	1.24	31:32	1.198	1733.2				89.7
IS	13C-1,2,3,4,7,8-HxCDD	1.62e+07	1.26	y	0.72	34:51	1.014	1624.5				84.1
IS	13C-1,2,3,6,7,8-HxCDD	1.65e+07	1.23	y	0.74	34:58	1.017	1637.6				84.8
IS	13C-1,2,3,7,8,9-HxCDD	1.91e+07	1.22	y	0.86	35:15	1.025	1625.4				84.1
IS	13C-1,2,3,4,6,7,8-HpCDD	1.56e+07	1.05	y	0.64	38:45	1.127	1764.4				91.3
IS	13C-OCDD	2.91e+07	0.89	y	0.78	42:01	1.222	2705.0				70.0
IS	13C-2,3,7,8-TCDF	2.65e+07	0.77	y	0.92	26:07	0.992	1713.9				88.7
IS	13C-1,2,3,7,8-PeCDF	2.80e+07	1.57	y	0.95	30:20	1.153	1763.2				91.3
IS	13C-2,3,4,7,8-PeCDF	2.89e+07	1.56	y	0.97	31:15	1.187	1783.1				92.3
IS	13C-1,2,3,4,7,8-HxCDF	2.27e+07	0.52	y	0.99	33:58	0.988	1669.5				86.4
IS	13C-1,2,3,6,7,8-HxCDF	2.40e+07	0.52	y	1.10	34:05	0.992	1594.3				82.5
IS	13C-2,3,4,6,7,8-HxCDF	2.22e+07	0.51	y	1.03	34:41	1.009	1570.0				81.3
IS	13C-1,2,3,7,8,9-HxCDF	1.99e+07	0.52	y	0.86	35:39	1.037	1693.6				87.7
IS	13C-1,2,3,4,6,7,8-HpCDF	1.66e+07	0.44	y	0.71	37:28	1.090	1691.0				87.5
IS	13C-1,2,3,4,7,8,9-HpCDF	1.57e+07	0.43	y	0.71	39:18	1.143	1619.4				83.8
IS	13C-OCDF	3.39e+07	0.89	y	0.87	42:15	1.229	2827.8				73.2
C/Up	37Cl-2,3,7,8-TCDD	8.94e+06			1.21	26:56	1.023	725.59				93.9
RS/RT	13C-1,2,3,4-TCDD	1.96e+07	0.80	y	1.00	26:19	*	1931.7				
RS	13C-1,2,3,4-TCDF	3.23e+07	0.75	y	1.00	24:49	*	1931.7				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.65e+07	0.51	y	1.00	34:23	*	1931.7				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	118	142		*	*
Total Penta-Dioxins	350	350		*	*
Total Hexa-Dioxins	1220	1220		*	*
Total Hepta-Dioxins	3640	3640		*	*
Total Tetra-Furans	129	133		*	*
Total Penta-Furans	170.04	170.04		*	*
Total Hexa-Furans	299	299		*	*
Total Hepta-Furans	551	551		*	*

Integrations by Analyst: M Date: 12/17/14

Reviewed by Analyst: [illegible] Date: 12/18/14

Totals class: TCDD EMPC Entry #: 19

Run: 13 File: 141216D1 S: 16 I: 1 F: 1
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 141.67 Unnamed Concentration: 136.281

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:20	1.550e+05	2.001e+05	0.77	y	3.550e+05	32.009	
23:44	1.304e+05	1.627e+05	0.80	y	2.931e+05	26.429	
24:11	3.203e+04	3.484e+04	0.92	n	6.167e+04	5.5603	
24:57	4.538e+04	5.737e+04	0.79	y	1.027e+05	9.2637	
25:12	4.731e+04	5.665e+04	0.84	y	1.040e+05	9.3729	
25:23	4.370e+04	5.176e+04	0.84	y	9.546e+04	8.6070	
25:35	1.547e+04	1.713e+04	0.90	n	3.032e+04	2.7336	
25:48	1.082e+04	1.276e+04	0.85	y	2.358e+04	2.1259	
25:58	3.685e+04	4.603e+04	0.80	y	8.288e+04	7.4722	
26:19	6.311e+04	8.663e+04	0.73	y	1.497e+05	13.500	
26:39	3.196e+04	3.131e+04	1.02	n	5.542e+04	4.9962	
26:48	8.147e+03	1.171e+04	0.70	y	1.986e+04	1.7905	
26:56	2.599e+04	4.922e+04	0.53	n	5.975e+04	5.3871	2,3,7,8-TCDD
27:14	2.800e+04	3.564e+04	0.79	y	6.364e+04	5.7375	
27:21	9.617e+03	1.408e+04	0.68	y	2.370e+04	2.1368	
27:48	2.749e+04	2.848e+04	0.97	n	5.042e+04	4.5456	

Totals class: PeCDD EMPC Entry #: 21

Run: 13 File: 141216D1 S: 16 I: 1 F: 2
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 349.86 Unnamed Concentration: 309.466

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:27	2.630e+05	4.173e+05	0.63	y	6.803e+05	65.502	
29:55	1.589e+05	2.670e+05	0.59	y	4.259e+05	41.009	
30:22	1.087e+05	1.847e+05	0.59	y	2.934e+05	28.251	
30:32	9.068e+04	1.658e+05	0.55	y	2.565e+05	24.697	
30:37	1.895e+05	3.109e+05	0.61	y	5.004e+05	48.180	
30:50	2.289e+05	3.772e+05	0.61	y	6.061e+05	58.364	
31:08	2.378e+04	4.209e+04	0.56	y	6.587e+04	6.3425	
31:32	1.568e+05	2.627e+05	0.60	y	4.195e+05	40.390	1,2,3,7,8-PeCDD
31:37	4.166e+04	6.036e+04	0.69	y	1.020e+05	9.8236	
31:54	1.060e+05	1.775e+05	0.60	y	2.835e+05	27.297	

Totals class: HxCDD EMPC Entry #: 23

Run: 13 File: 141216D1 S: 16 I: 1 F: 3
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 1218.1 Unnamed Concentration: 917.440

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:20	1.840e+06	1.471e+06	1.25 y	3.310e+06	362.40	
33:54	6.585e+05	5.532e+05	1.19 y	1.212e+06	132.66	
34:10	1.843e+06	1.508e+06	1.22 y	3.351e+06	366.86	
34:18	1.332e+05	9.988e+04	1.33 y	2.331e+05	25.515	
34:52	2.359e+05	1.735e+05	1.36 y	4.093e+05	45.033	1,2,3,4,7,8-HxCDD
34:59	4.571e+05	3.791e+05	1.21 y	8.363e+05	91.612	1,2,3,6,7,8-HxCDD
35:10	1.440e+05	1.301e+05	1.11 y	2.741e+05	30.004	
35:16	8.454e+05	6.619e+05	1.28 y	1.507e+06	164.02	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 13 File: 141216D1 S: 16 I: 1 F: 4
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 3644.5 Unnamed Concentration: 1879.172

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:52	8.596e+06	8.312e+06	1.03	y	1.691e+07	1879.2	
38:46	8.142e+06	7.742e+06	1.05	y	1.588e+07	1765.3	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 13 File: 141216D1 S: 16 I: 1 F: 1
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 133.20 Unnamed Concentration: 124.582

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
21:08	1.559e+04	1.817e+04	0.86	y	3.376e+04	2.2875	
21:42	2.320e+04	2.856e+04	0.81	y	5.176e+04	3.5077	
22:20	7.730e+04	8.826e+04	0.88	y	1.656e+05	11.219	
22:53	7.976e+04	9.982e+04	0.80	y	1.796e+05	12.170	
23:19	7.381e+04	8.717e+04	0.85	y	1.610e+05	10.909	
23:45	5.434e+04	7.962e+04	0.68	y	1.340e+05	9.0778	
23:54	2.860e+04	3.908e+04	0.73	y	6.768e+04	4.5863	
24:05	3.795e+04	4.466e+04	0.85	y	8.261e+04	5.5978	
24:27	1.323e+04	2.006e+04	0.66	y	3.328e+04	2.2554	
24:35	3.301e+04	4.792e+04	0.69	y	8.093e+04	5.4840	
24:43	5.646e+04	6.562e+04	0.86	y	1.221e+05	8.2724	
24:51	6.510e+04	7.895e+04	0.82	y	1.440e+05	9.7613	
25:17	4.141e+04	5.438e+04	0.76	y	9.579e+04	6.4910	
25:33	2.631e+04	3.613e+04	0.73	y	6.245e+04	4.2317	
25:43	2.518e+04	3.394e+04	0.74	y	5.912e+04	4.0063	
25:55	2.138e+04	2.435e+04	0.88	y	4.573e+04	3.0989	
26:01	2.239e+04	2.600e+04	0.86	y	4.839e+04	3.2793	
26:07	5.327e+04	7.390e+04	0.72	y	1.272e+05	8.6177	2,3,7,8-TCDF
26:28	8.871e+04	1.171e+05	0.76	y	2.058e+05	13.944	
26:41	8.305e+03	7.412e+03	1.12	n	1.312e+04	0.88897	
27:57	4.978e+04	2.929e+04	1.70	n	5.185e+04	3.5137	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 13 File: 141216D1 S: 16 I: 1 F: 1
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 57.694 Unnamed Concentration: 57.694

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:56	5.417e+05	3.641e+05	1.49 y	9.058e+05	57.694	

Totals class: PeCDF EMPC Entry #: 31

Run: 13 File: 141216D1 S: 16 I: 1 F: 2
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 112.34 Unnamed Concentration: 99.621

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:17	1.161e+05	6.851e+04	1.69	y	1.846e+05	11.760	
29:25	4.179e+05	2.648e+05	1.58	y	6.827e+05	43.486	
29:47	1.953e+04	1.414e+04	1.38	y	3.367e+04	2.1445	
29:58	1.755e+05	1.273e+05	1.38	y	3.029e+05	19.291	
30:11	2.702e+04	1.881e+04	1.44	y	4.583e+04	2.9189	
30:21	4.940e+04	3.461e+04	1.43	y	8.401e+04	5.3199	1,2,3,7,8-PeCDF
30:35	8.515e+04	5.594e+04	1.52	y	1.411e+05	8.9862	
31:10	5.354e+04	3.692e+04	1.45	y	9.046e+04	5.7616	
31:16	7.108e+04	4.443e+04	1.60	y	1.155e+05	7.4015	2,3,4,7,8-PeCDF
31:19	5.054e+04	3.224e+04	1.57	y	8.278e+04	5.2724	

Totals class: HxCDF EMPC Entry #: 33

Run: 13 File: 141216D1 S: 16 I: 1 F: 3
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 298.71 Unnamed Concentration: 249.900

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:47	2.906e+05	2.412e+05	1.20 y	5.317e+05	35.901	
32:58	1.045e+06	8.060e+05	1.30 y	1.851e+06	125.00	
33:31	6.509e+05	5.092e+05	1.28 y	1.160e+06	78.323	
33:53	6.496e+04	4.986e+04	1.30 y	1.148e+05	7.7521	
33:59	1.449e+05	1.130e+05	1.28 y	2.579e+05	15.801	1,2,3,4,7,8-HxCDF
34:06	1.228e+05	9.847e+04	1.25 y	2.213e+05	14.103	1,2,3,6,7,8-HxCDF
34:42	1.516e+05	1.308e+05	1.16 y	2.824e+05	18.905	2,3,4,6,7,8-HxCDF
35:42	2.435e+04	1.896e+04	1.28 y	4.330e+04	2.9236	

Totals class: HpCDF EMPC Entry #: 35

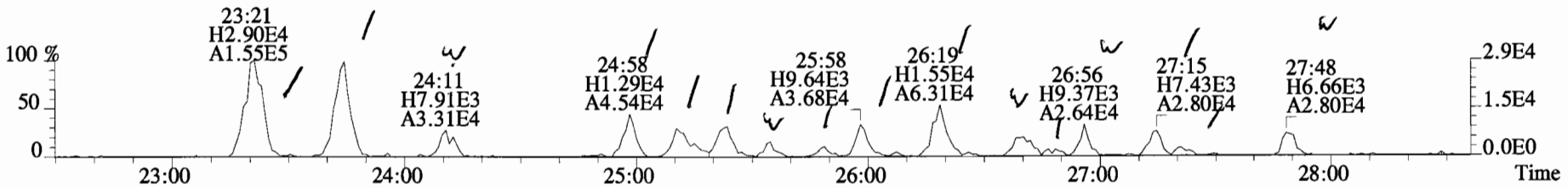
Run: 13 File: 141216D1 S: 16 I: 1 F: 4
Acquired: 17-DEC-14 02:52:03 Processed: 17-DEC-14 08:53:01

Total Concentration: 551.19 Unnamed Concentration: 334.363

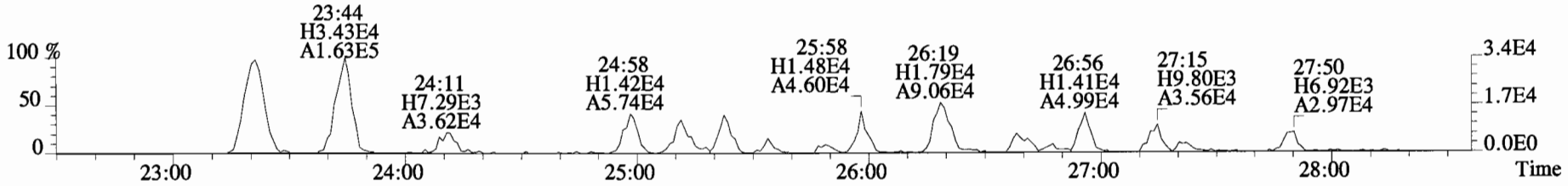
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:28	1.421e+06	1.352e+06	1.05	y	2.773e+06	200.24	1,2,3,4,6,7,8-HpCDF
37:53	6.660e+04	5.825e+04	1.14	y	1.249e+05	9.5101	
38:05	2.244e+06	2.021e+06	1.11	y	4.265e+06	324.85	
39:19	1.100e+05	9.614e+04	1.14	y	2.061e+05	16.586	1,2,3,4,7,8,9-HpCDF

File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5

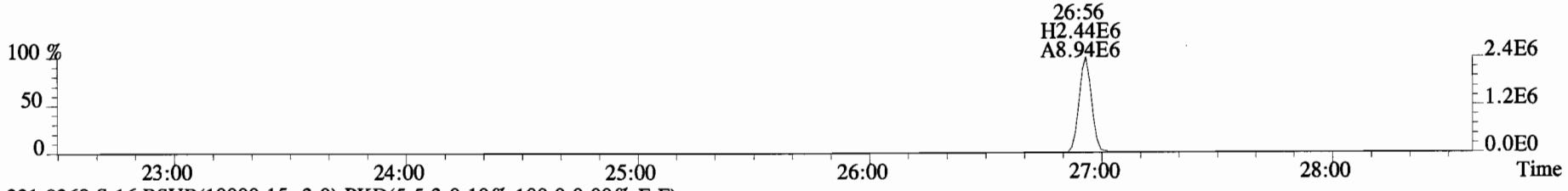
319.8965 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



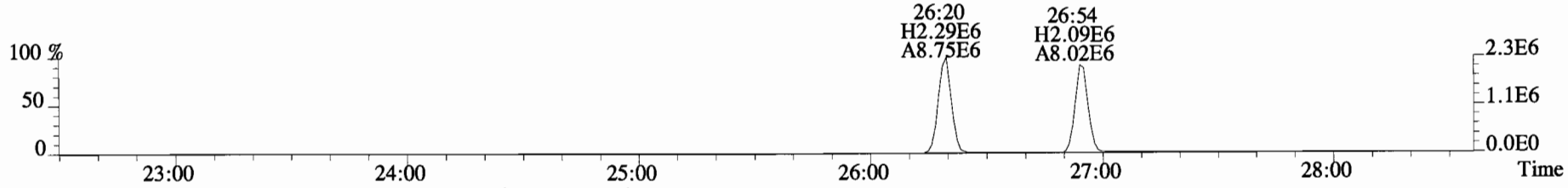
321.8936 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



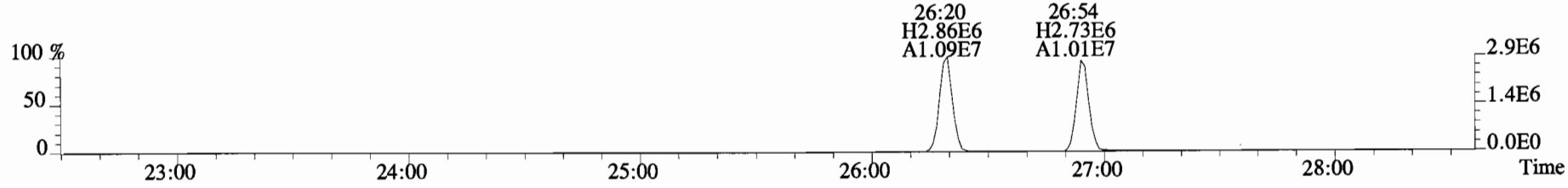
327.8847 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



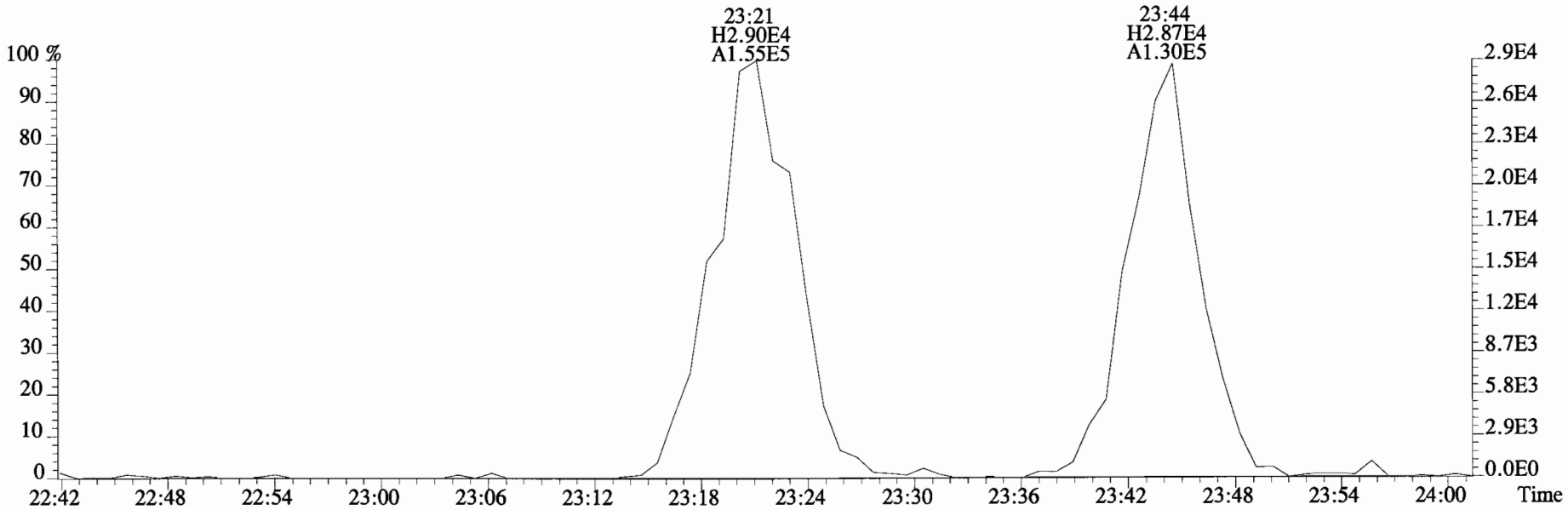
331.9368 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



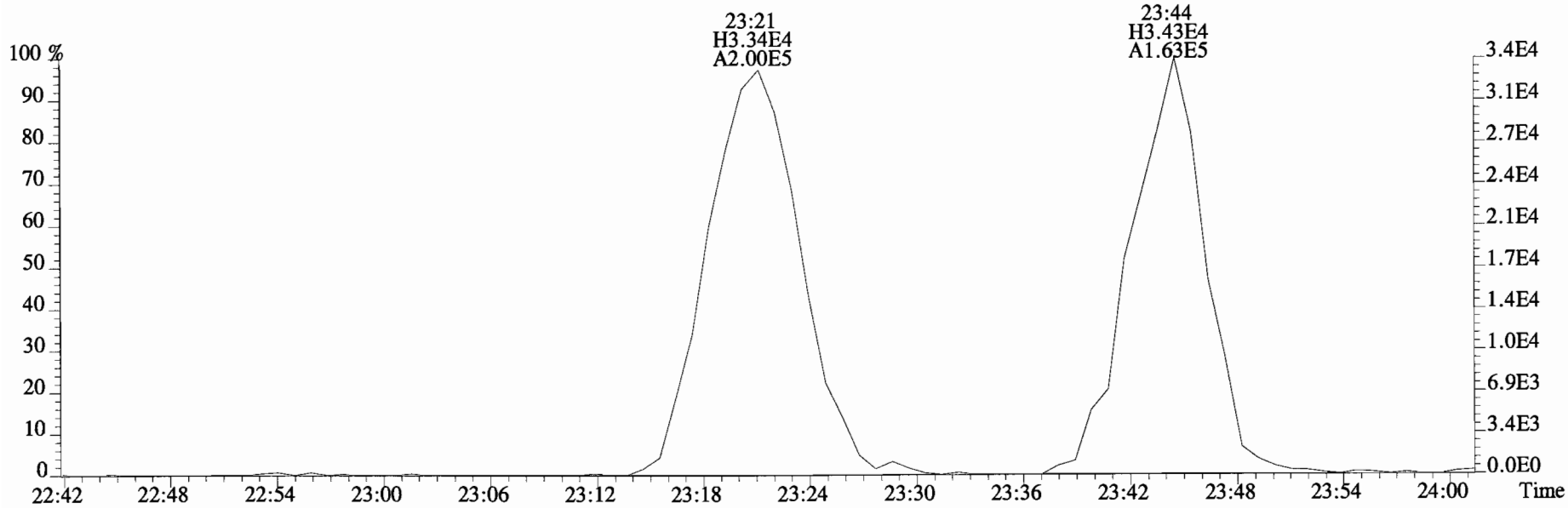
333.9339 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



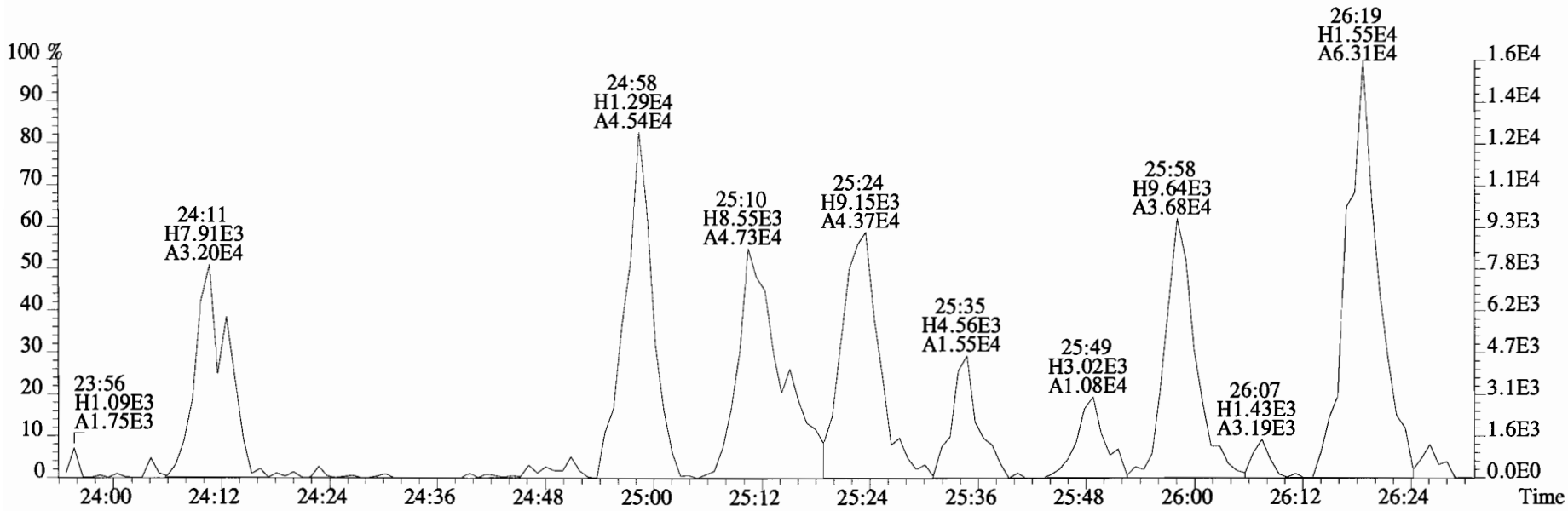
File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
319.8965 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



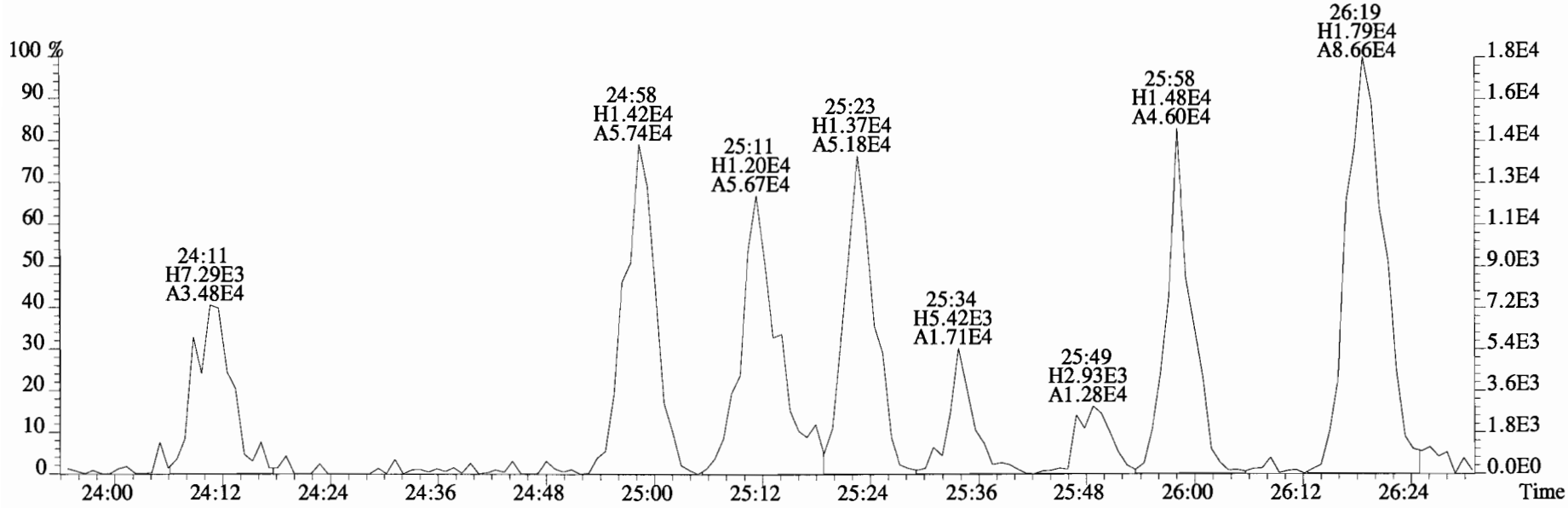
321.8936 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



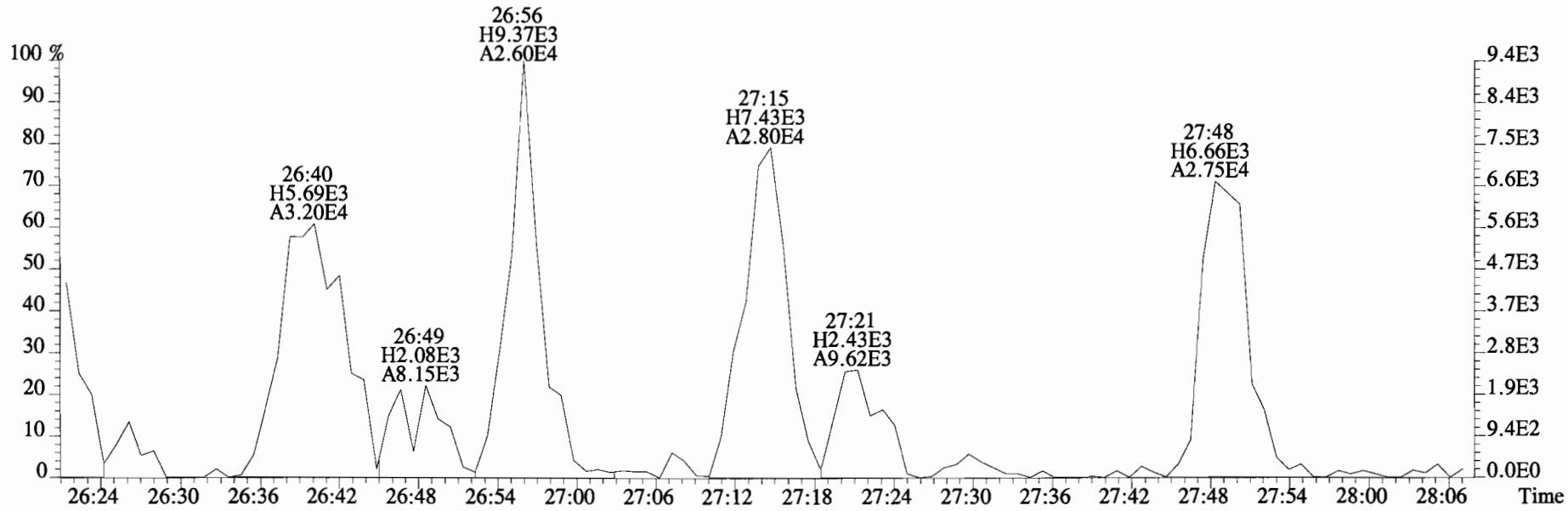
File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
319.8965 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



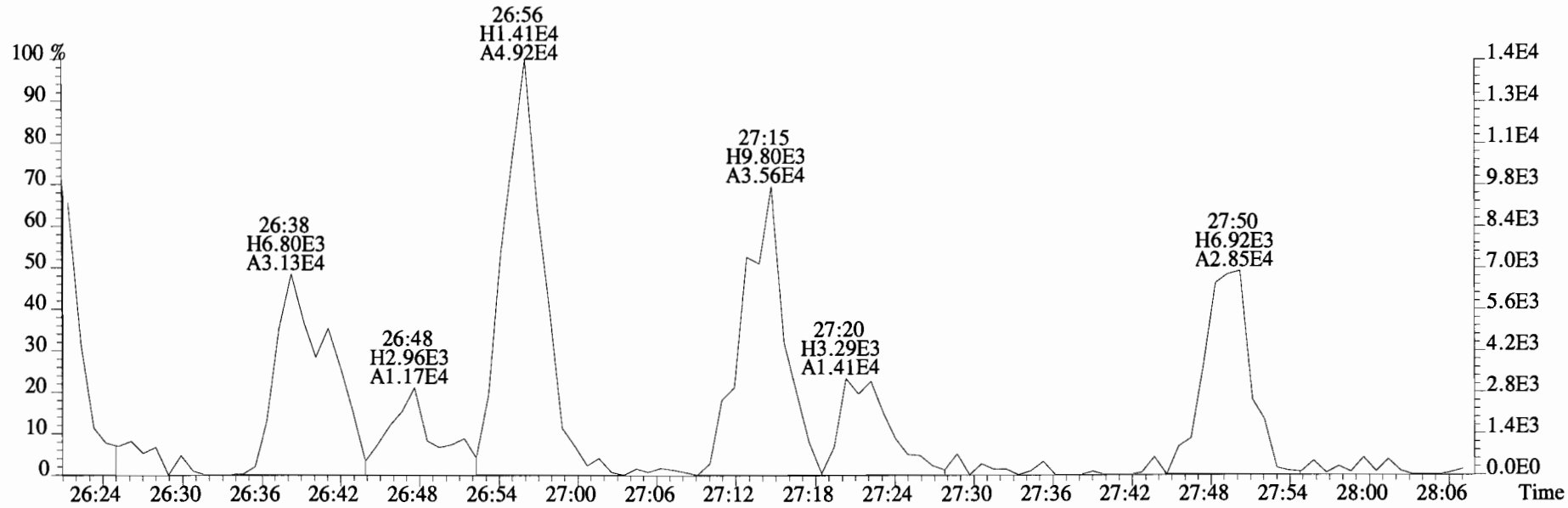
321.8936 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



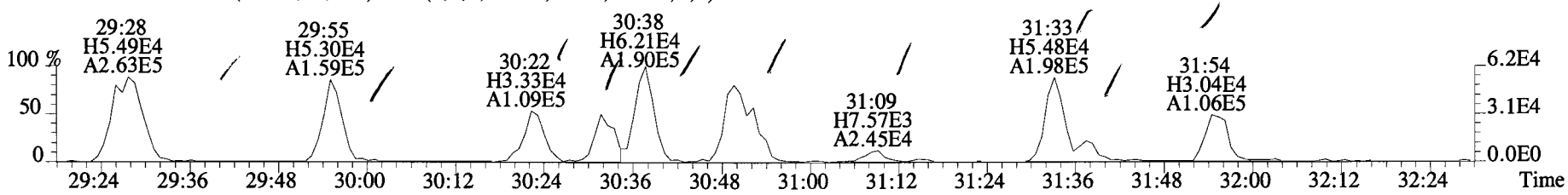
File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
319.8965 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



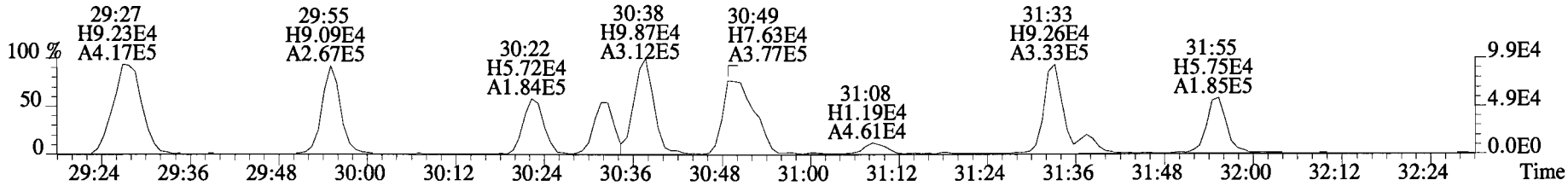
321.8936 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



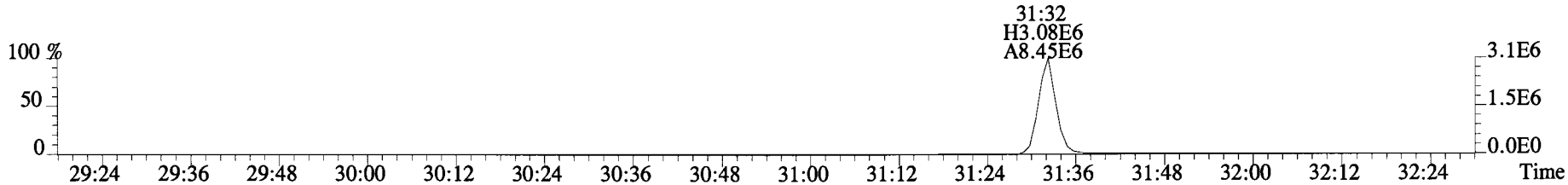
File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
353.8576 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



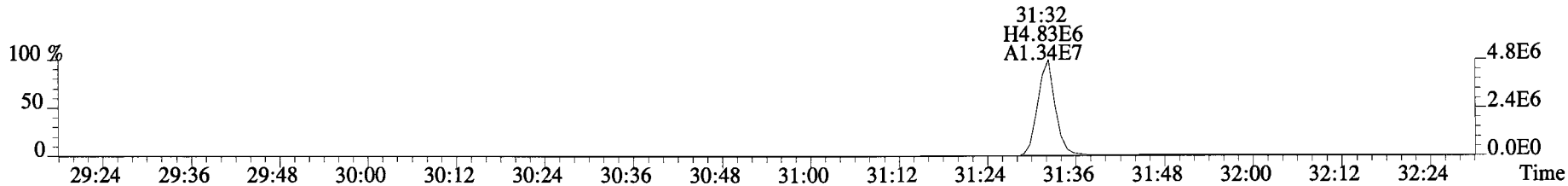
355.8546 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



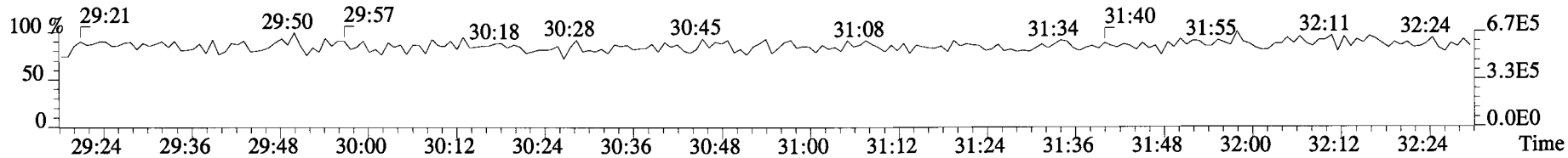
365.8978 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



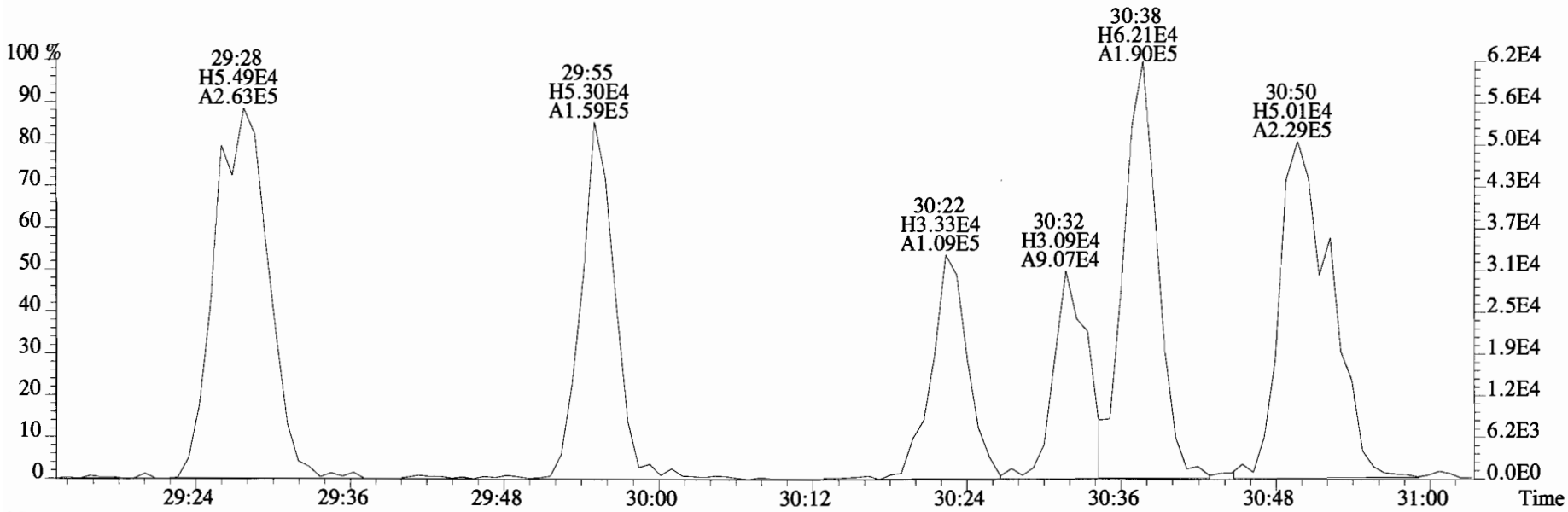
367.8949 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



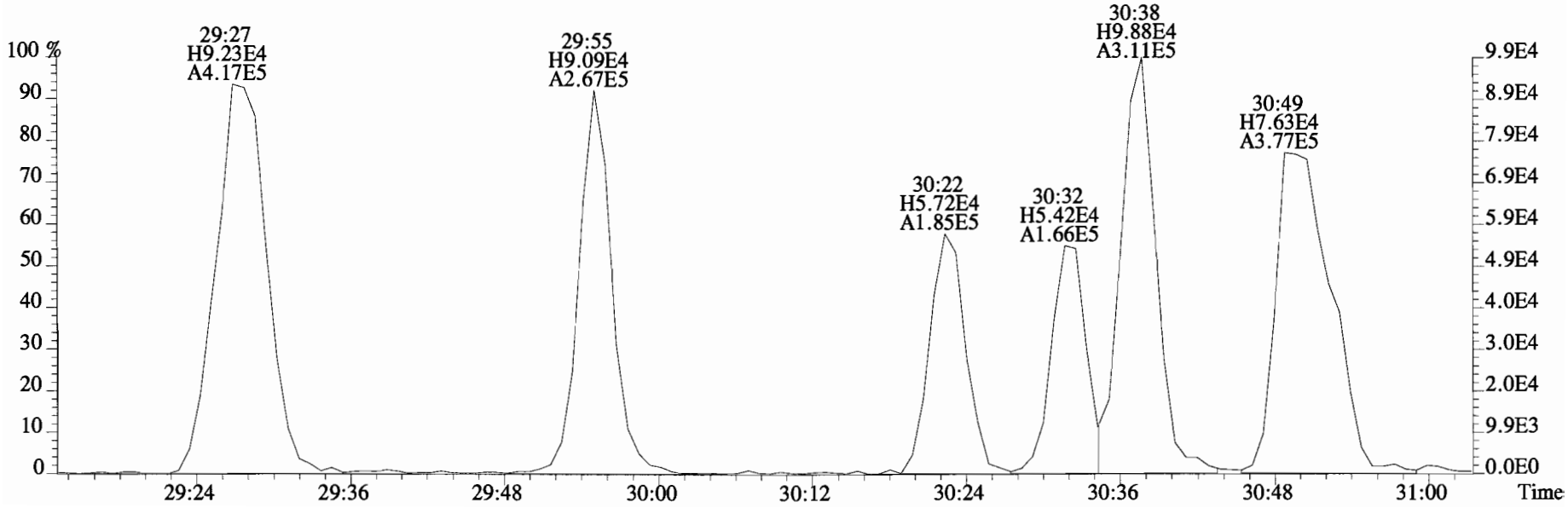
366.9792 S:16 F:2



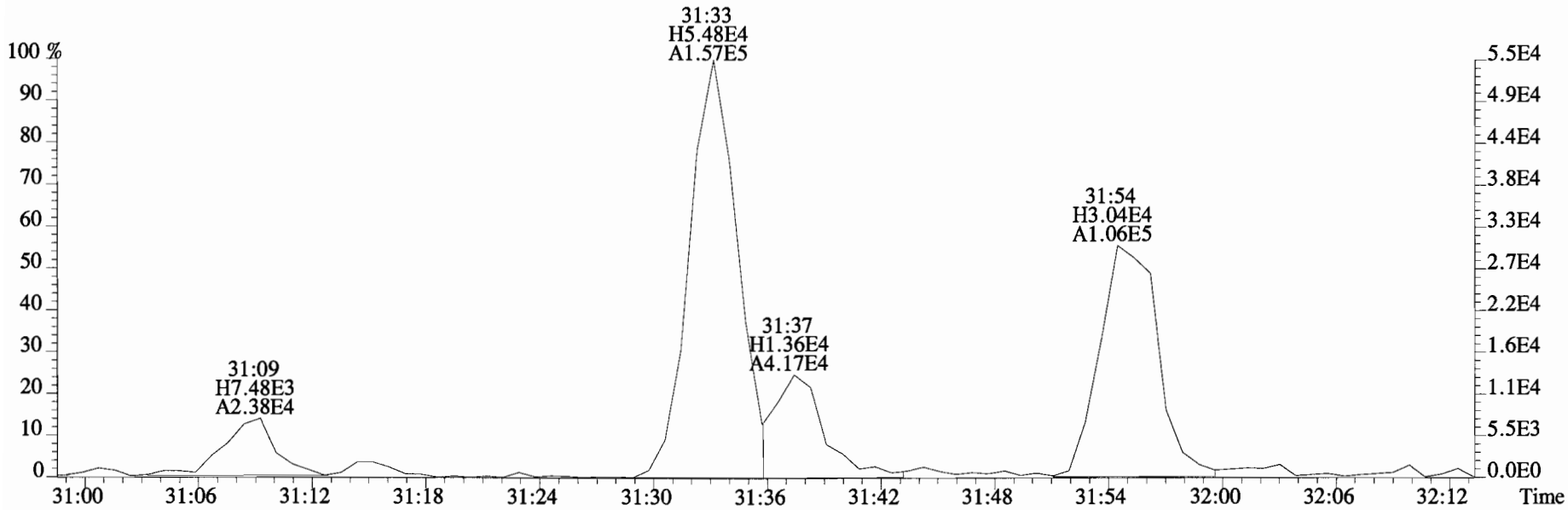
File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
353.8576 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



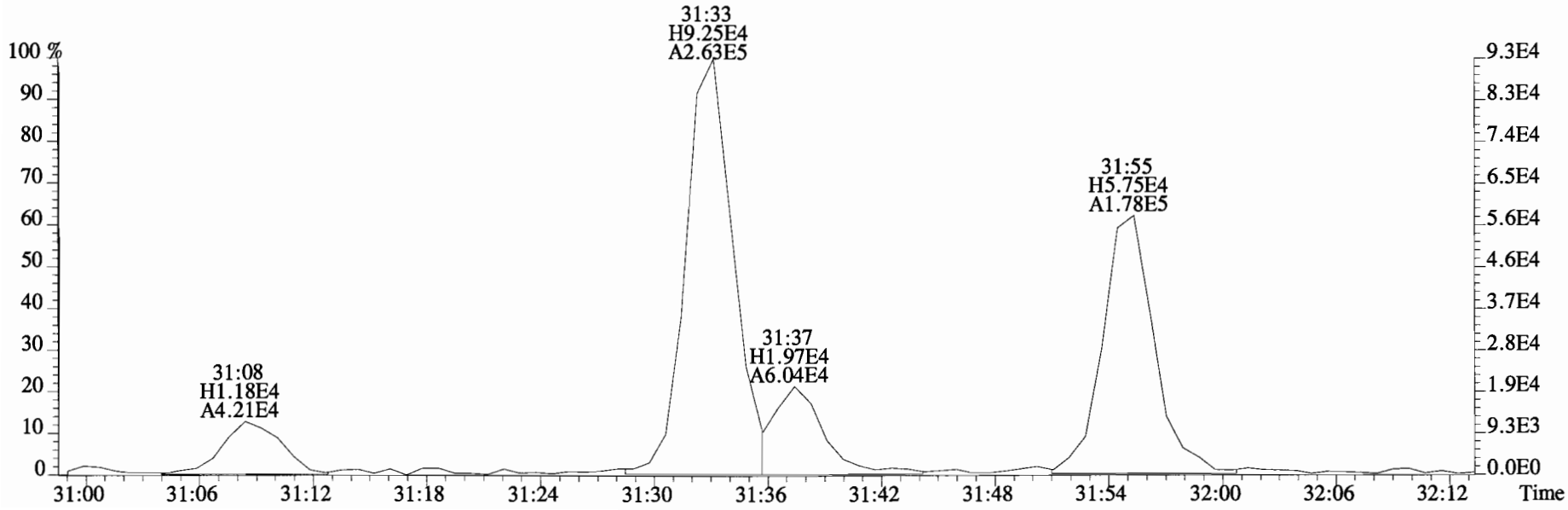
355.8546 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
353.8576 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

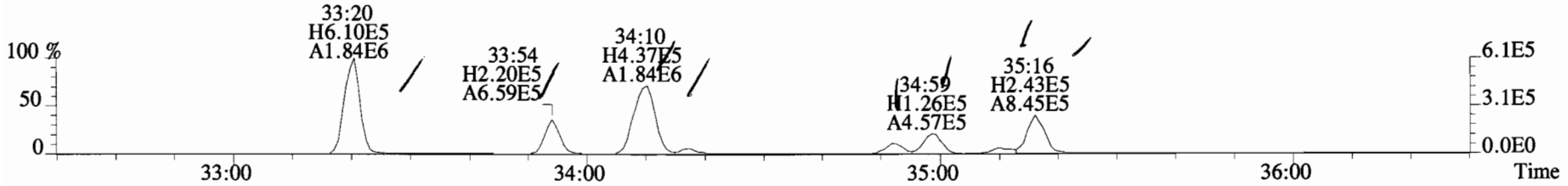


355.8546 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

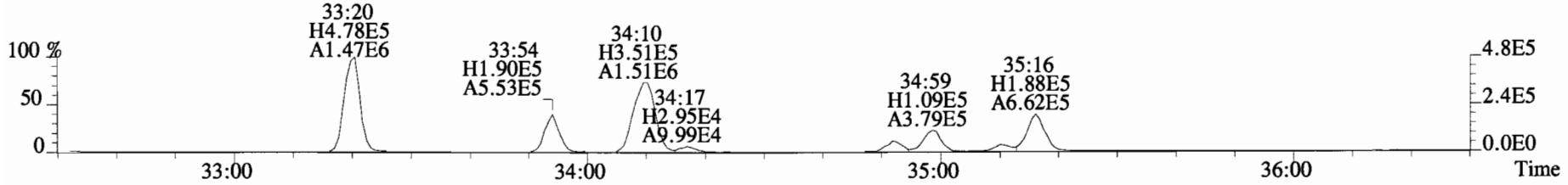


File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5

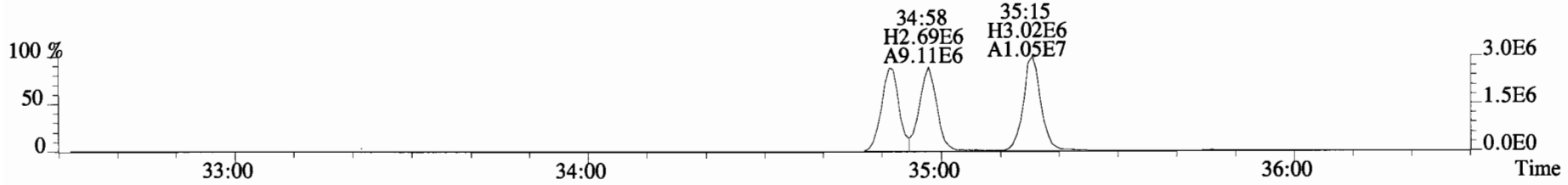
389.8156 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



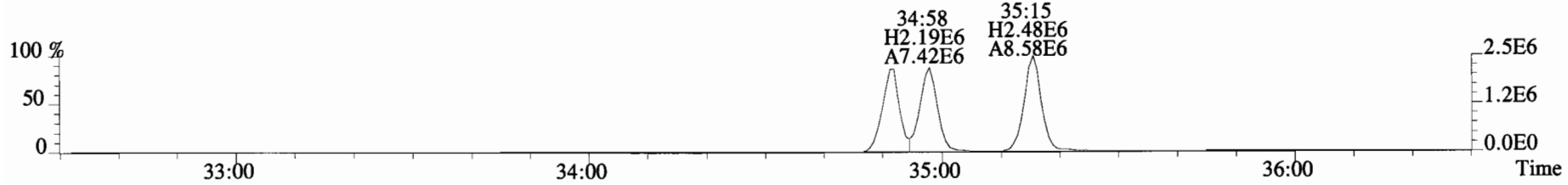
391.8127 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



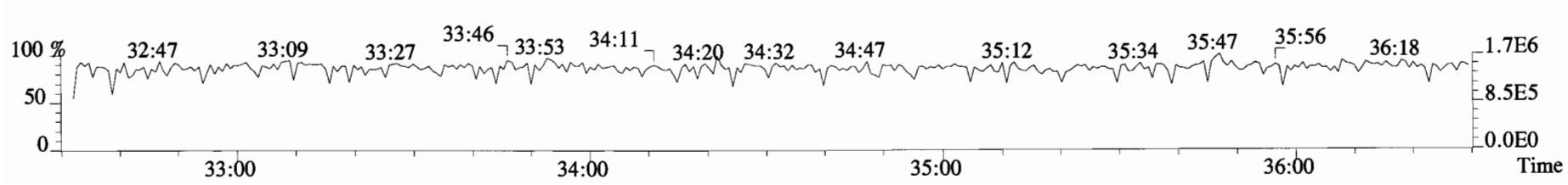
401.8559 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



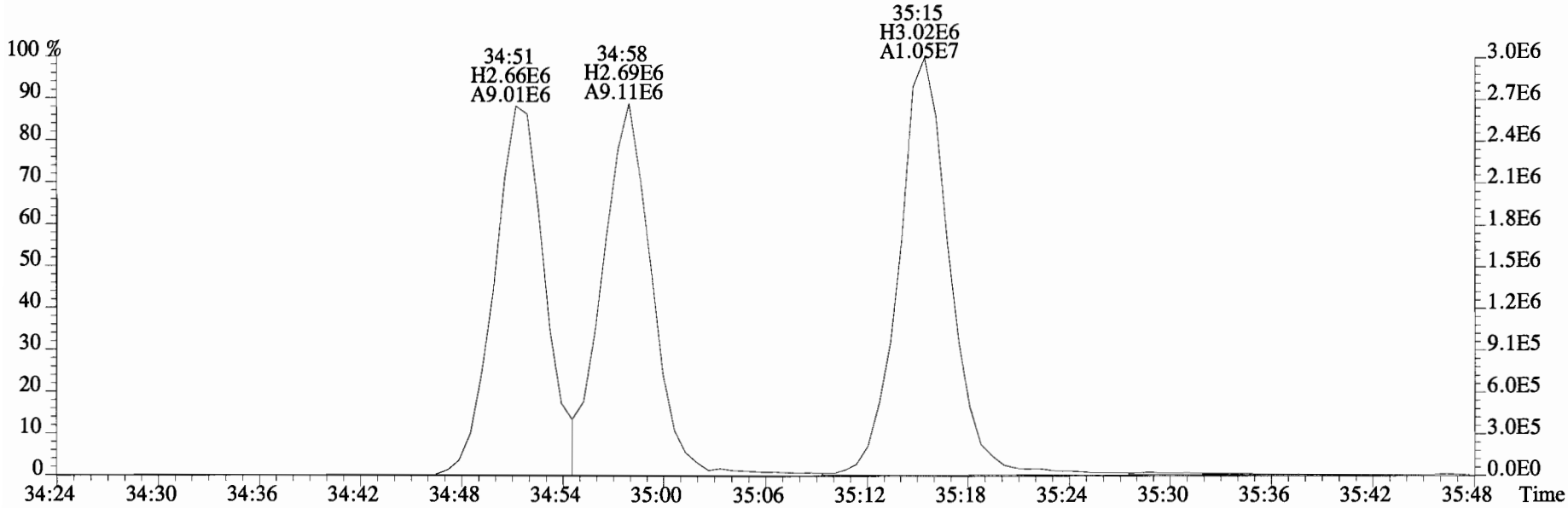
403.8530 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



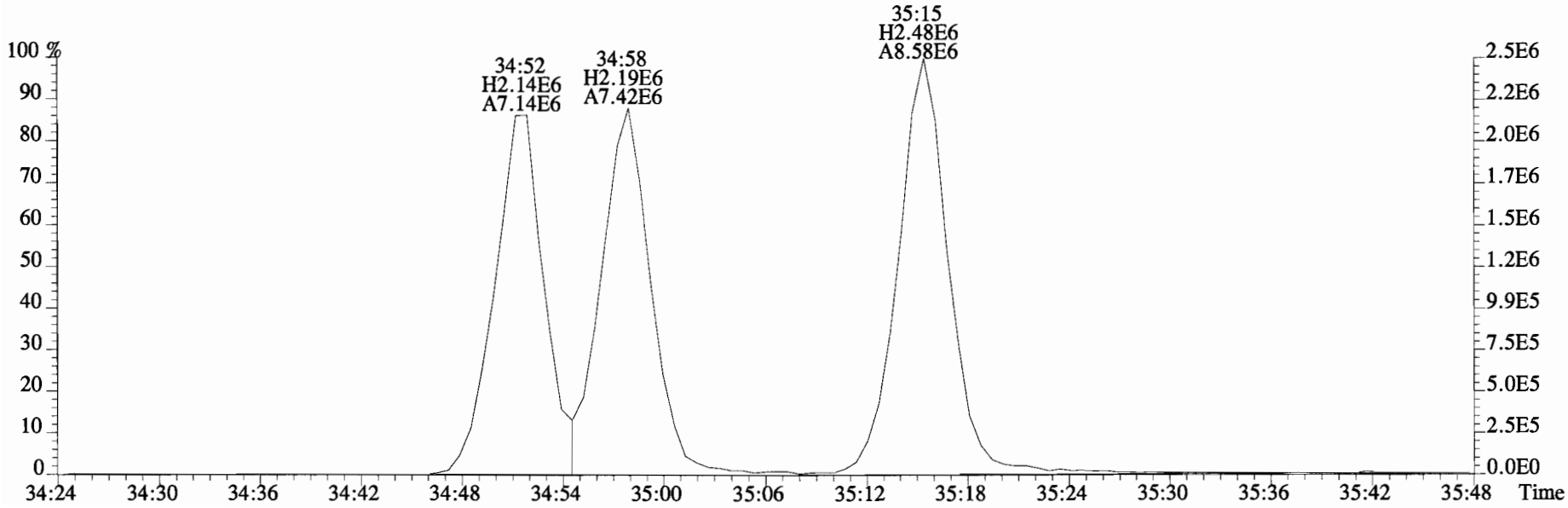
380.9760 S:16 F:3



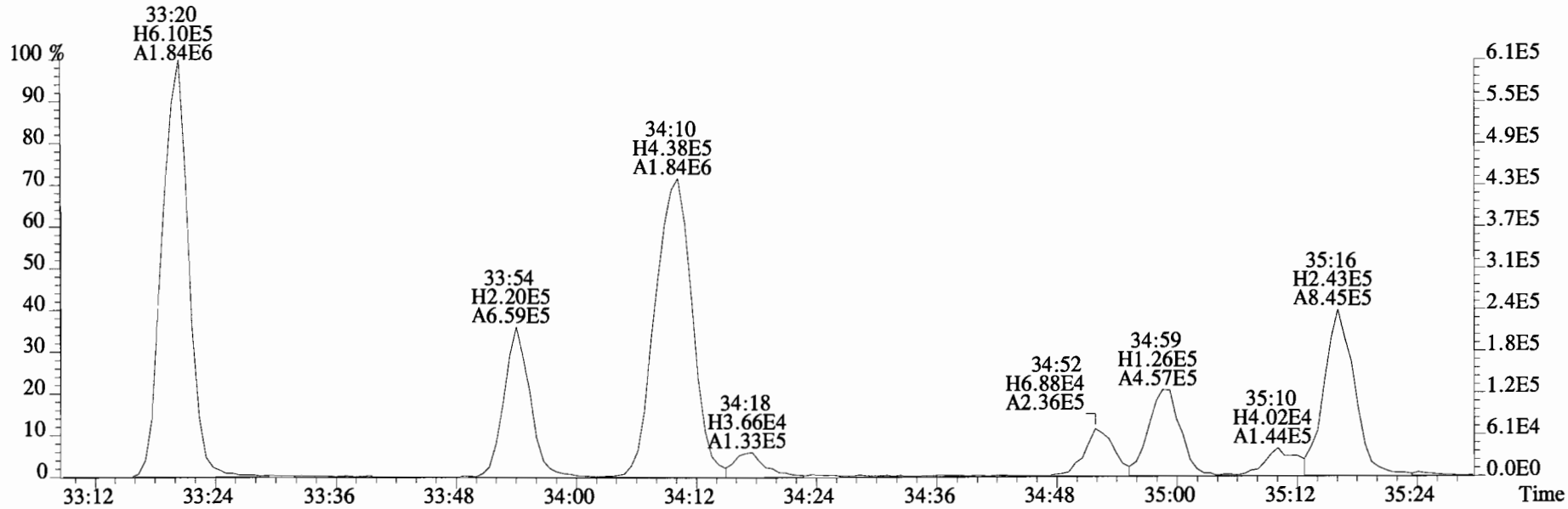
File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
401.8559 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



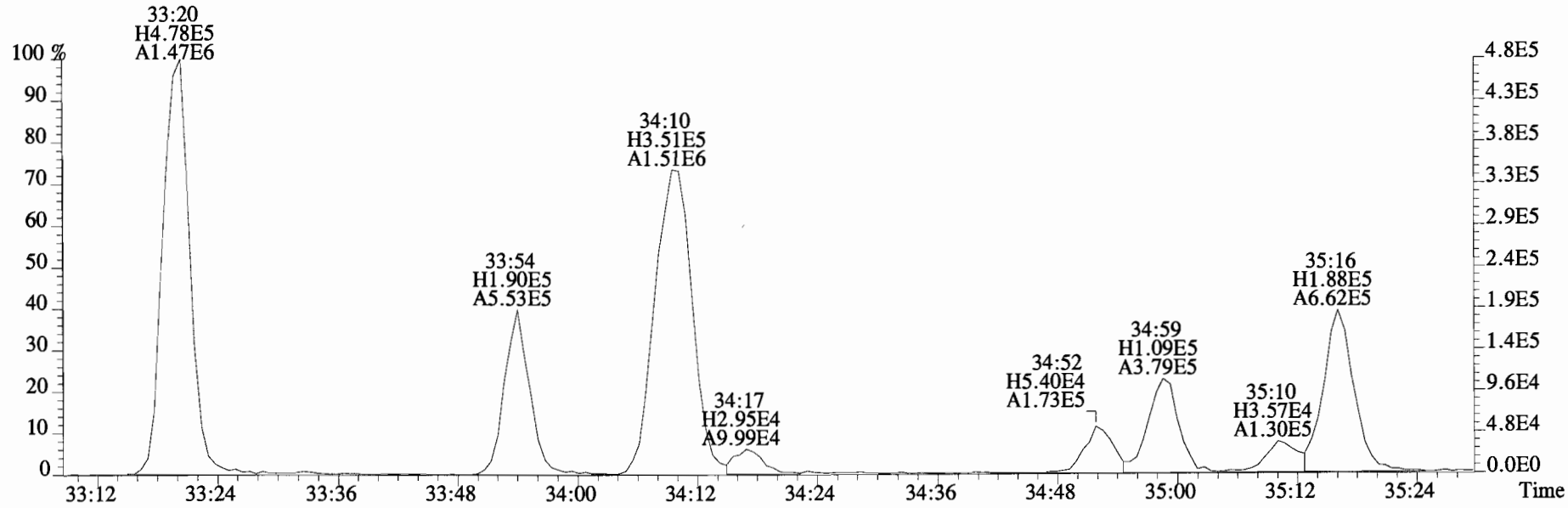
403.8530 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

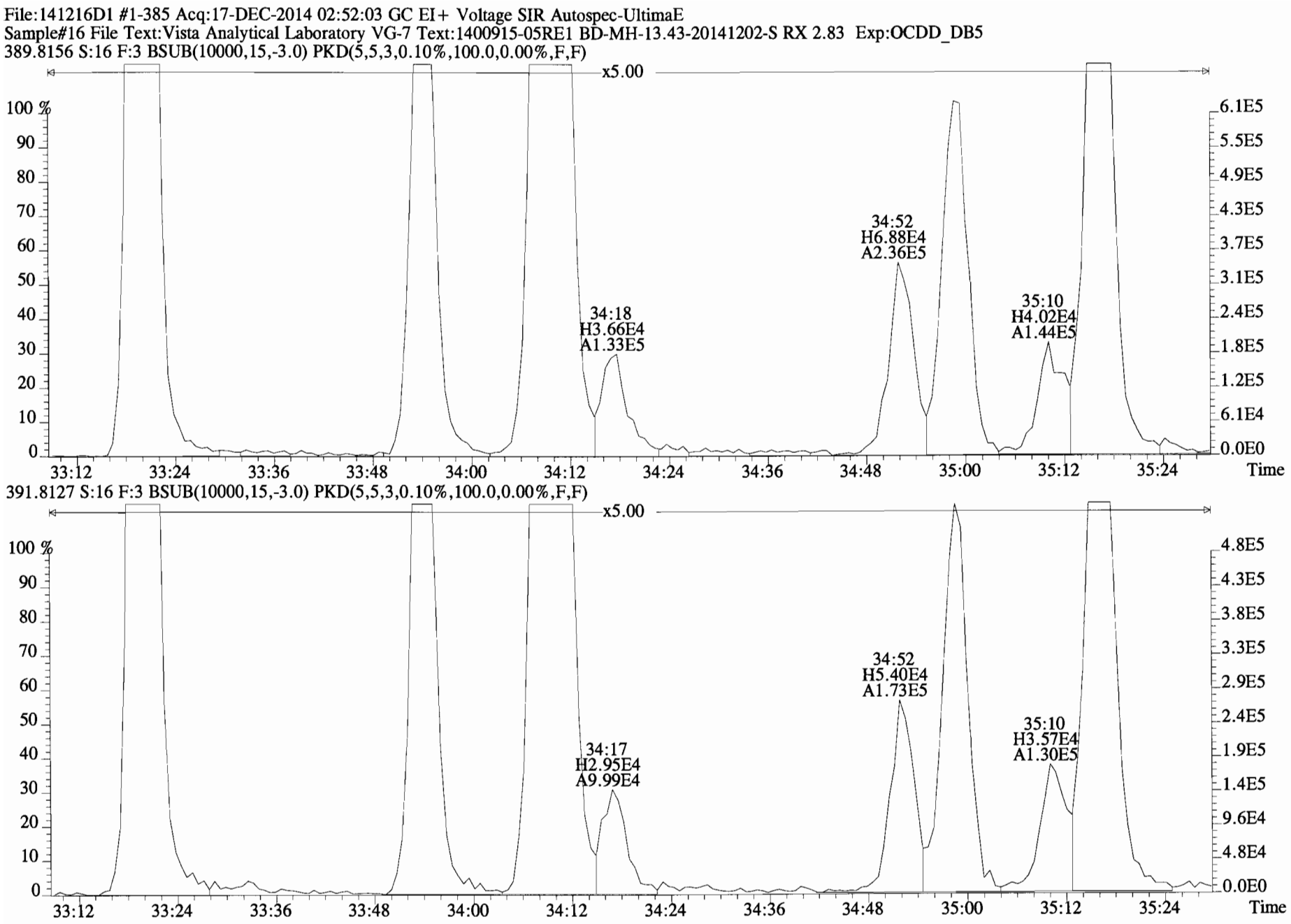


File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
389.8156 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

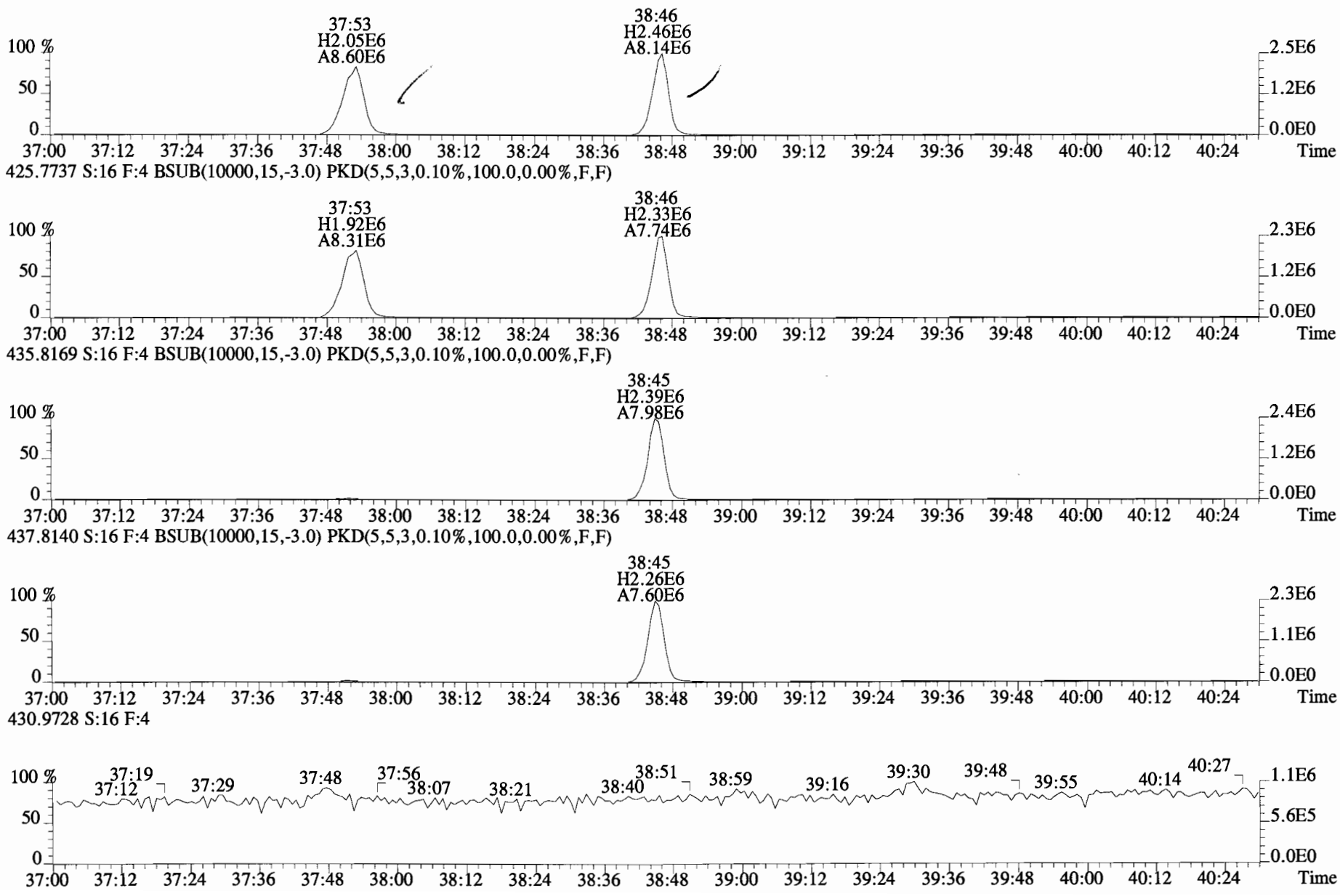


391.8127 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

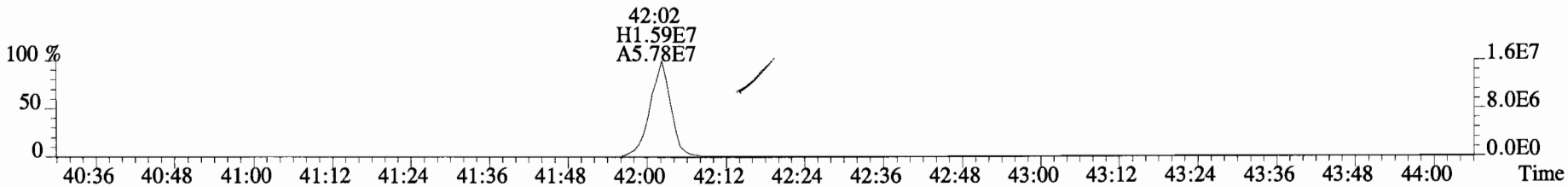



File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
389.8156 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
34:18
H3.66E4
A1.33E5
34:52
H6.88E4
A2.36E5
35:10
H4.02E4
A1.44E5
Time
391.8127 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
34:17
H2.95E4
A9.99E4
34:52
H5.40E4
A1.73E5
35:10
H3.57E4
A1.30E5
Time

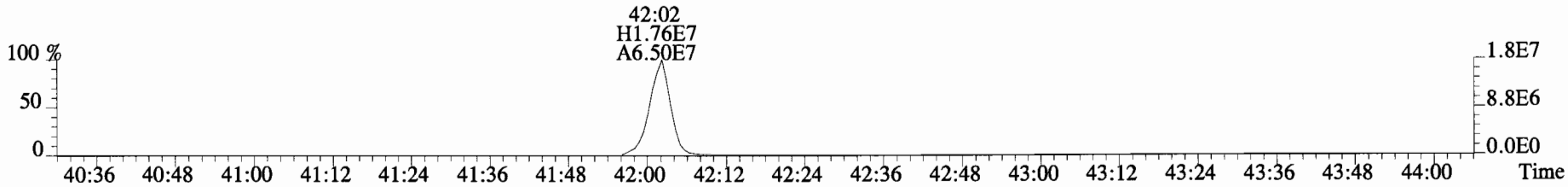
File:141216D1 #1-326 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5



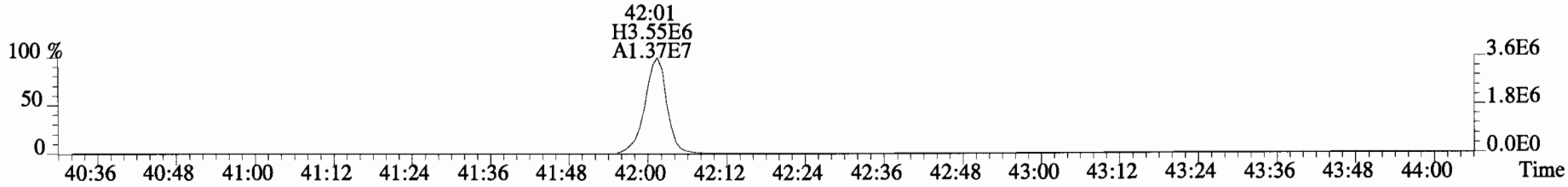
File:141216D1 #1-388 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
457.7377 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



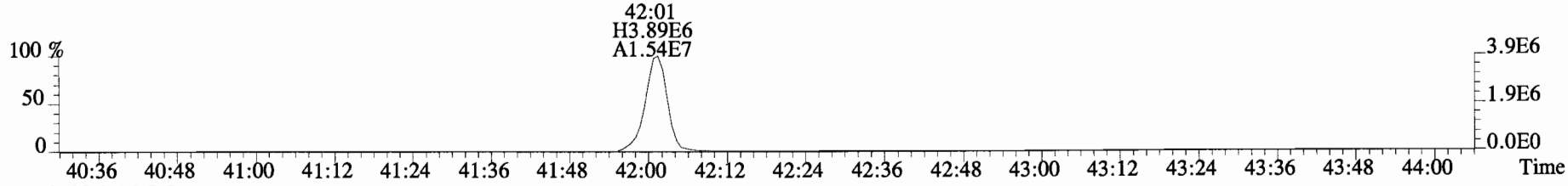
459.7348 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



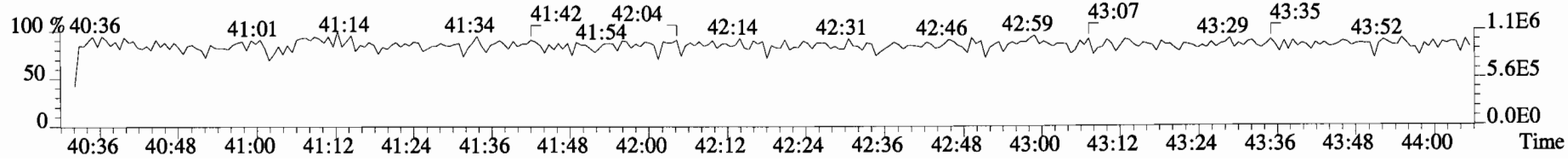
469.7780 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

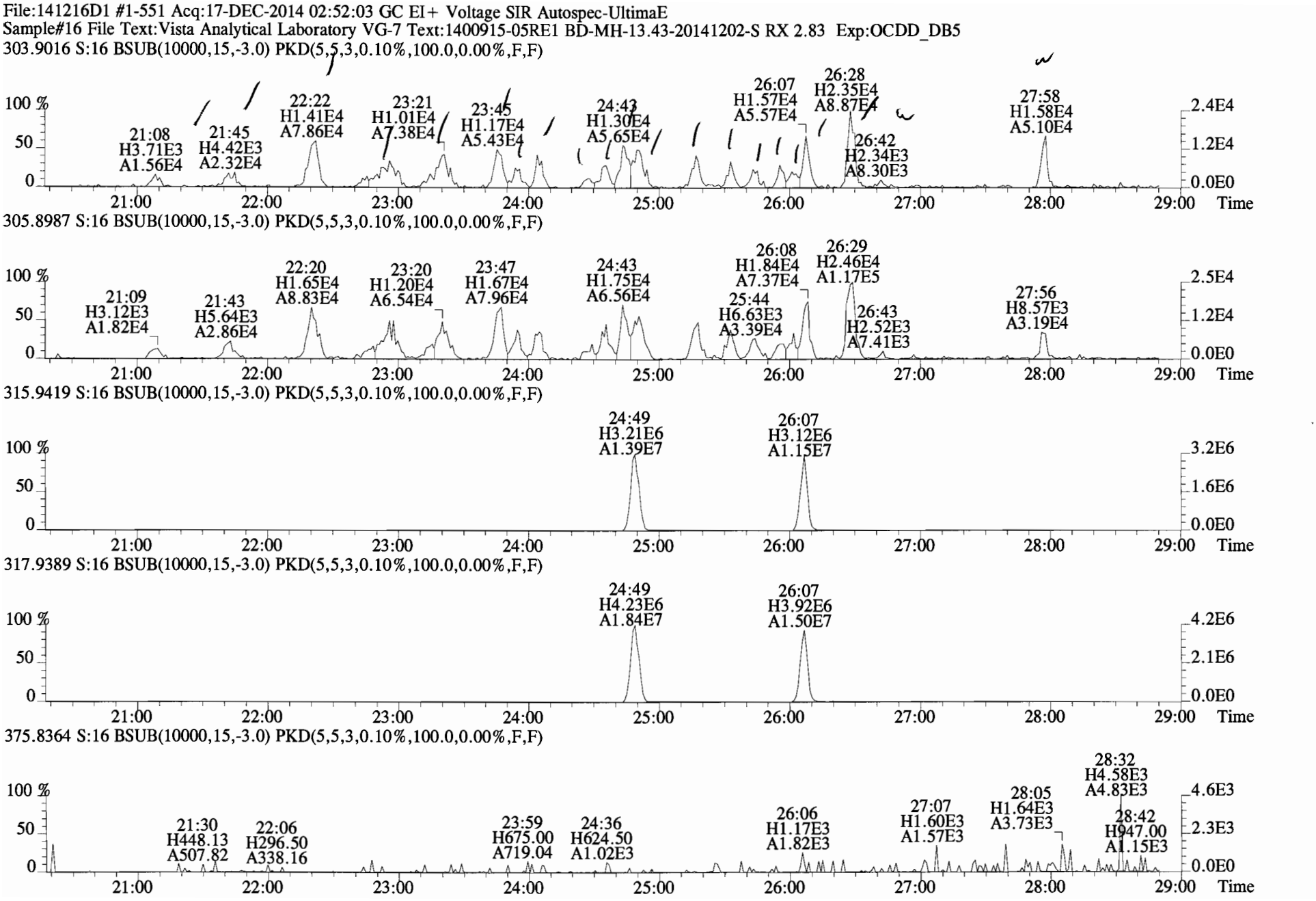


471.7750 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

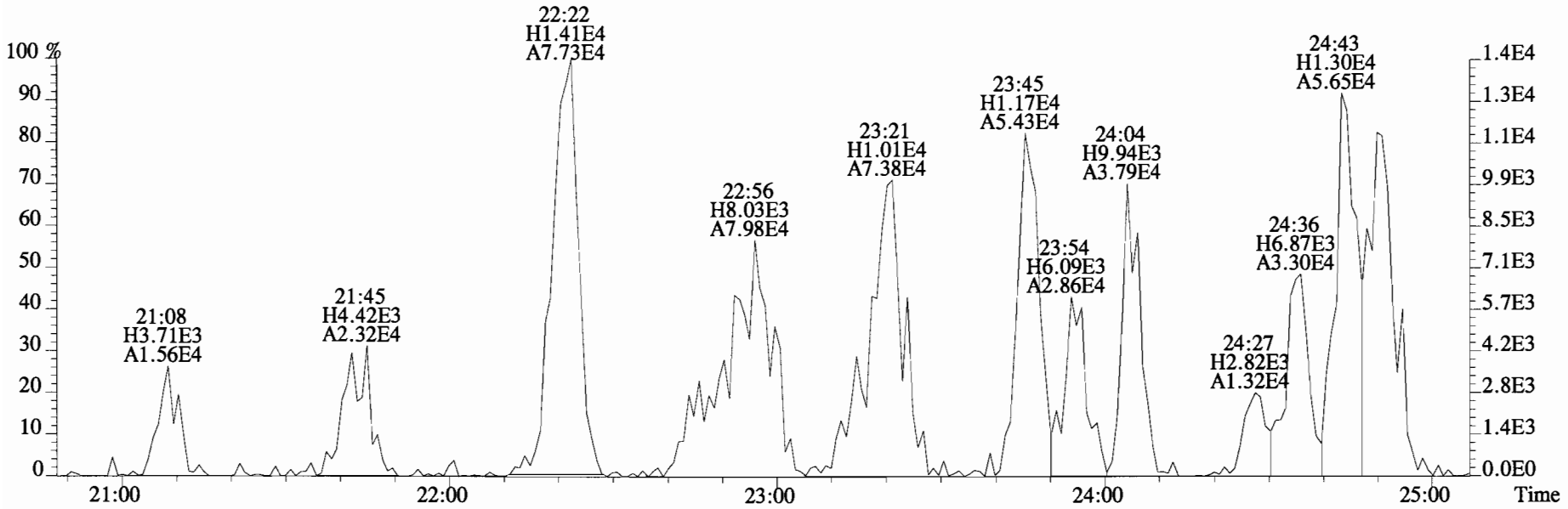


454.9728 S:16 F:5

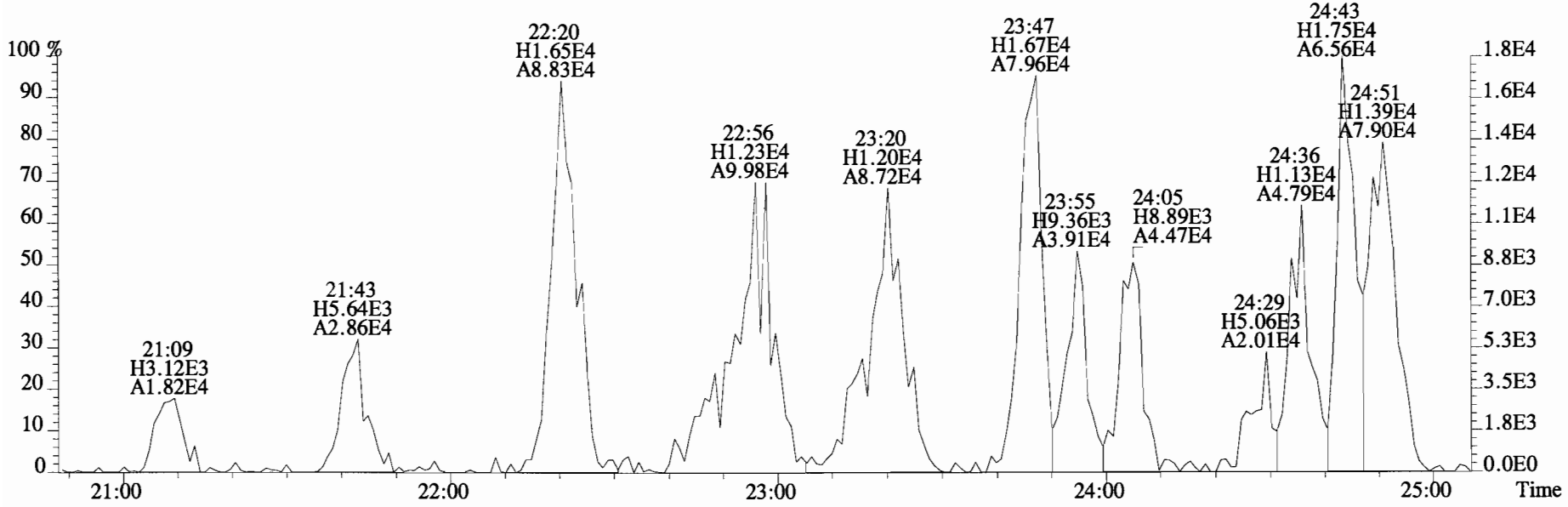



File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:08 H3.71E3 A1.56E4
21:45 H4.42E3 A2.32E4
22:22 H1.41E4 A7.86E4
23:21 H1.01E4 A7.38E4
23:45 H1.17E4 A5.43E4
24:43 H1.30E4 A5.65E4
26:07 H1.57E4 A5.57E4
26:28 H2.35E4 A8.87E4
26:42 H2.34E3 A8.30E3
27:58 H1.58E4 A5.10E4
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:09 H3.12E3 A1.82E4
21:43 H5.64E3 A2.86E4
22:20 H1.65E4 A8.83E4
23:20 H1.20E4 A6.54E4
23:47 H1.67E4 A7.96E4
24:43 H1.75E4 A6.56E4
25:44 H6.63E3 A3.39E4
26:08 H1.84E4 A7.37E4
26:29 H2.46E4 A1.17E5
26:43 H2.52E3 A7.41E3
27:56 H8.57E3 A3.19E4
315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:49 H3.21E6 A1.39E7
26:07 H3.12E6 A1.15E7
317.9389 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:49 H4.23E6 A1.84E7
26:07 H3.92E6 A1.50E7
375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:30 H448.13 A507.82
22:06 H296.50 A338.16
23:59 H675.00 A719.04
24:36 H624.50 A1.02E3
26:06 H1.17E3 A1.82E3
27:07 H1.60E3 A1.57E3
28:05 H1.64E3 A3.73E3
28:32 H4.58E3 A4.83E3
28:42 H947.00 A1.15E3
100 %
50
0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
Time
2.4E4
1.2E4
0.0E0
2.5E4
3.2E6
1.6E6
4.2E6
2.1E6
4.6E3
2.3E3

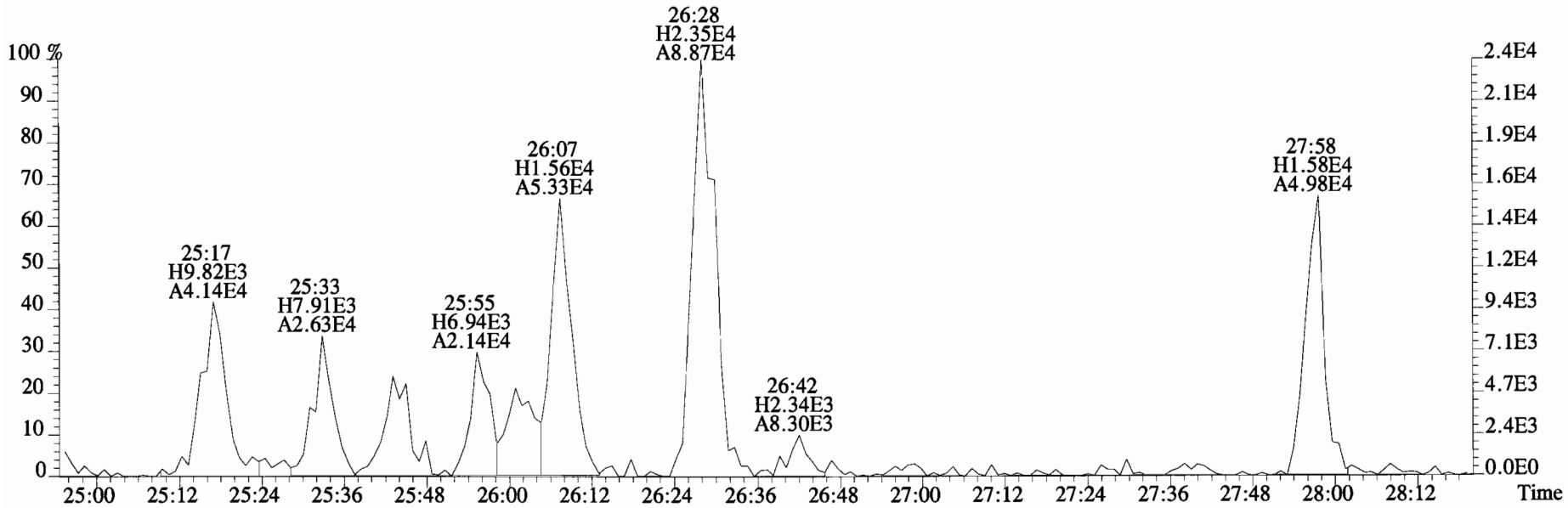
File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



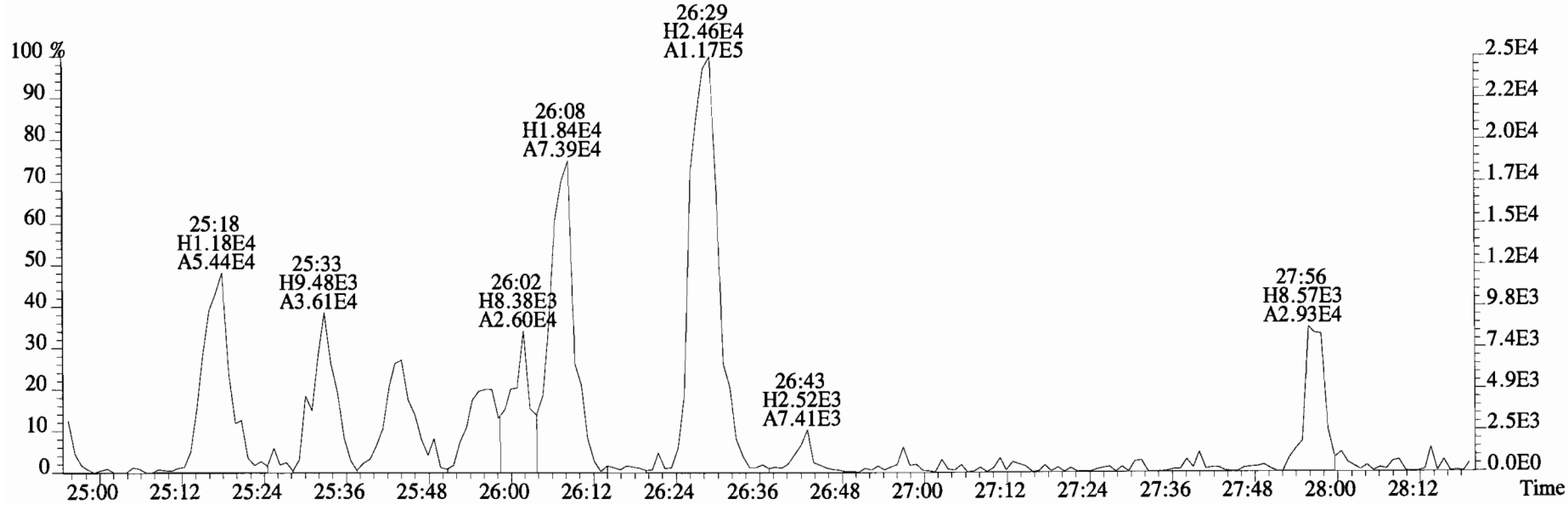
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

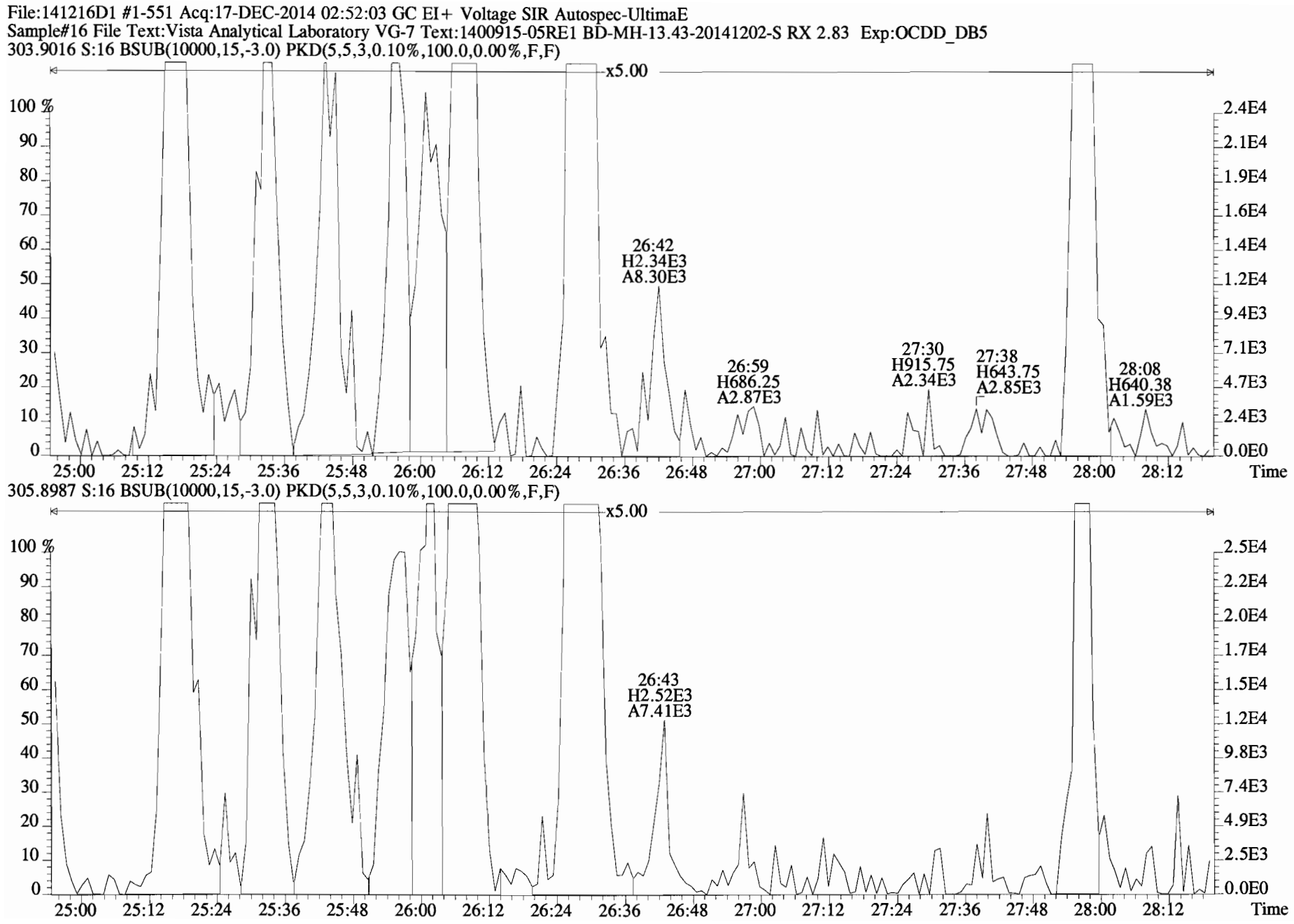


File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

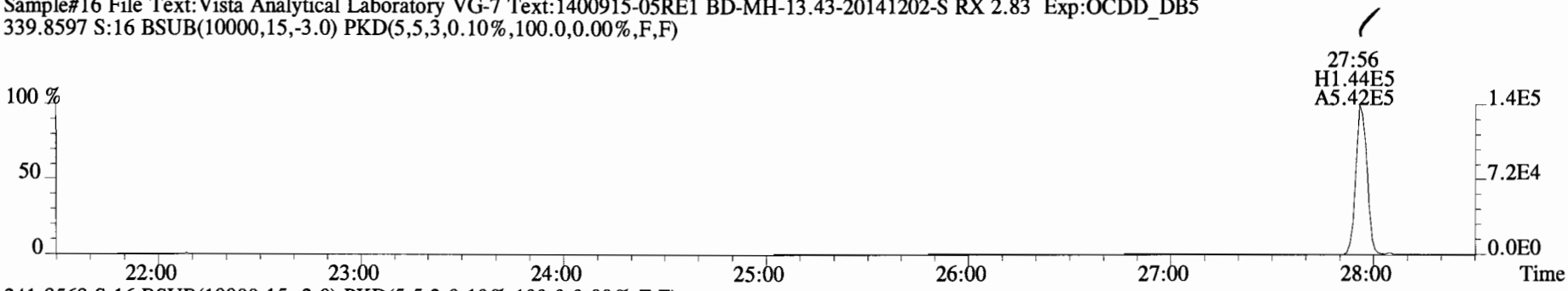


305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

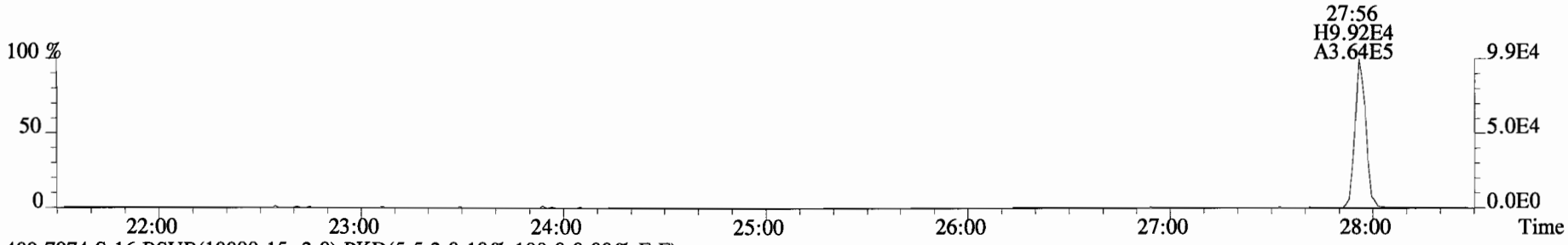



File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
26:42
H2.34E3
A8.30E3
26:59
H686.25
A2.87E3
27:30
H915.75
A2.34E3
27:38
H643.75
A2.85E3
28:08
H640.38
A1.59E3
Time
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
26:43
H2.52E3
A7.41E3
Time

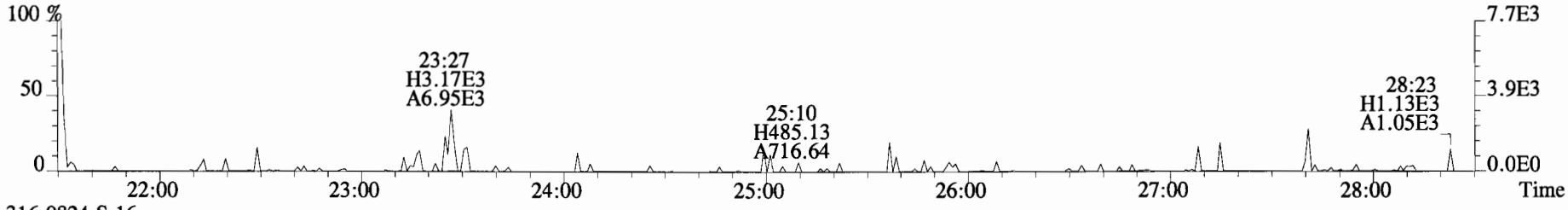
File:141216D1 #1-551 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



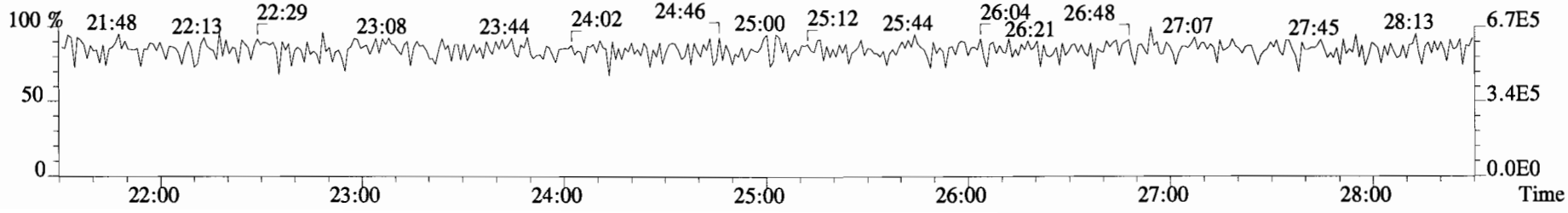
341.8568 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

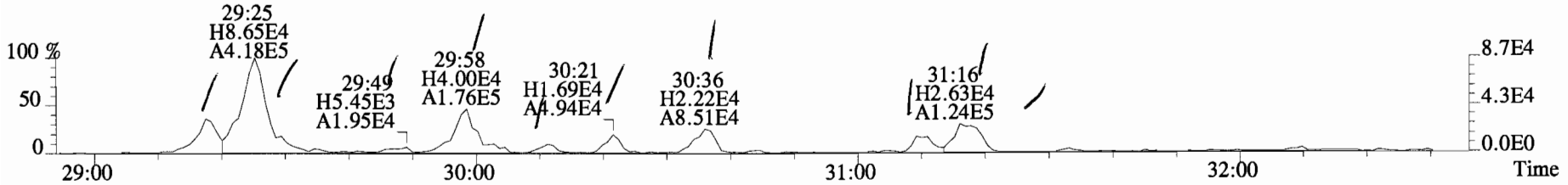


316.9824 S:16

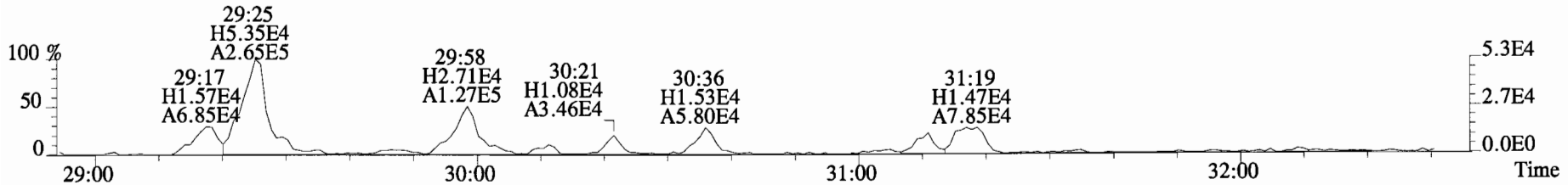


File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5

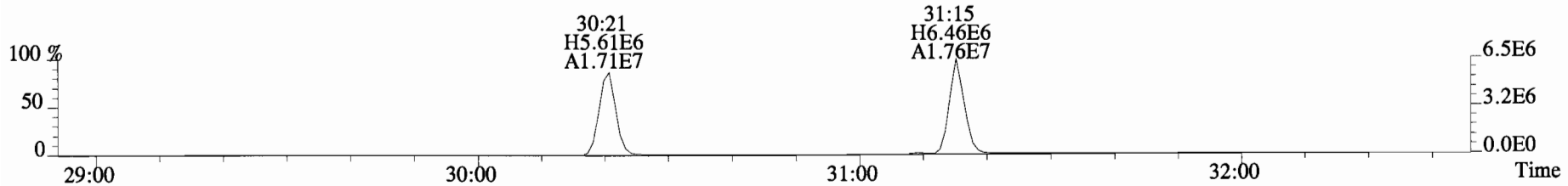
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



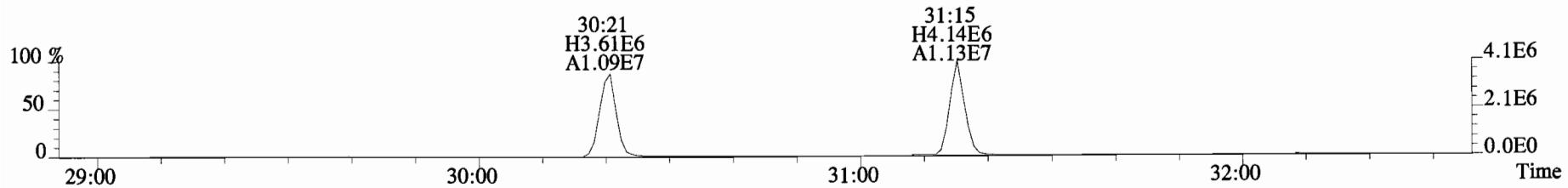
341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



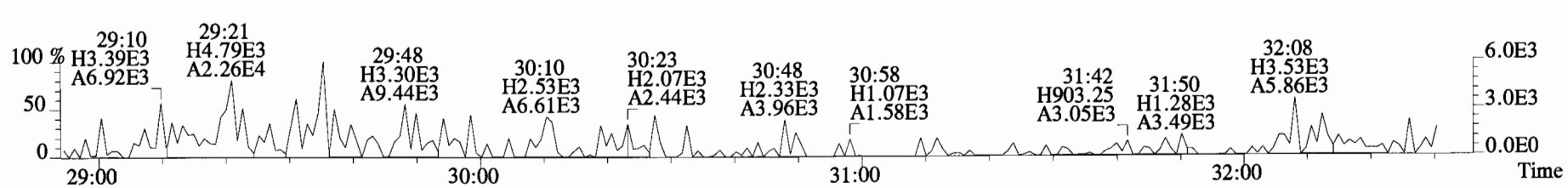
351.9000 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



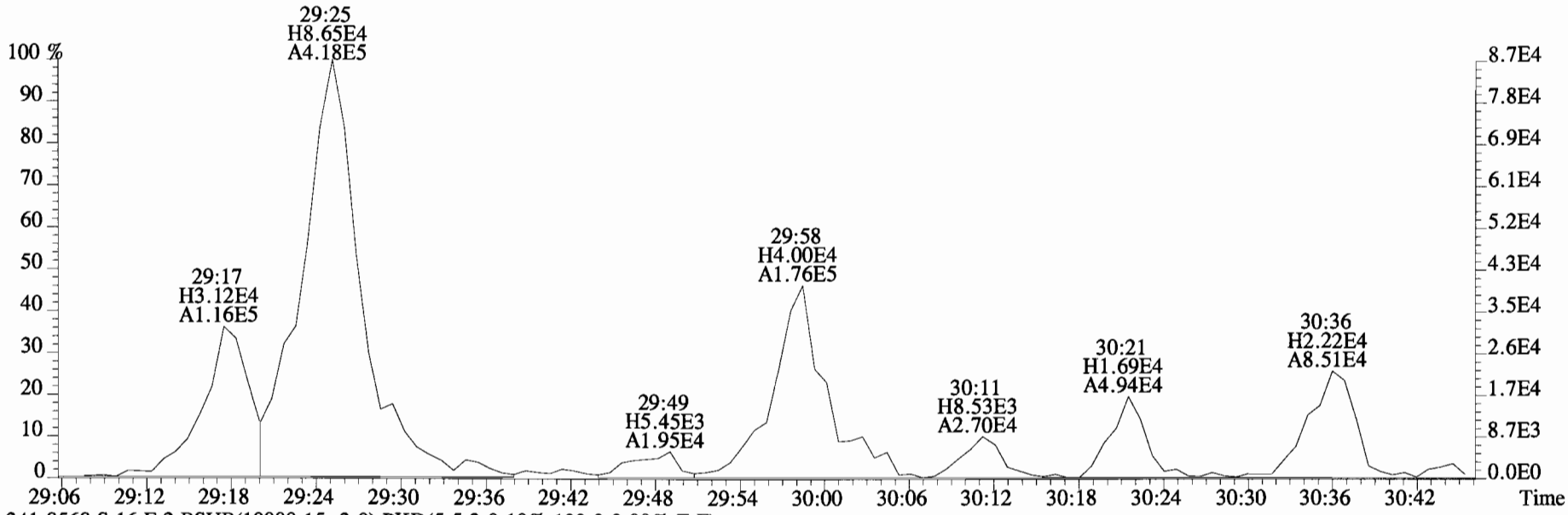
353.8970 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



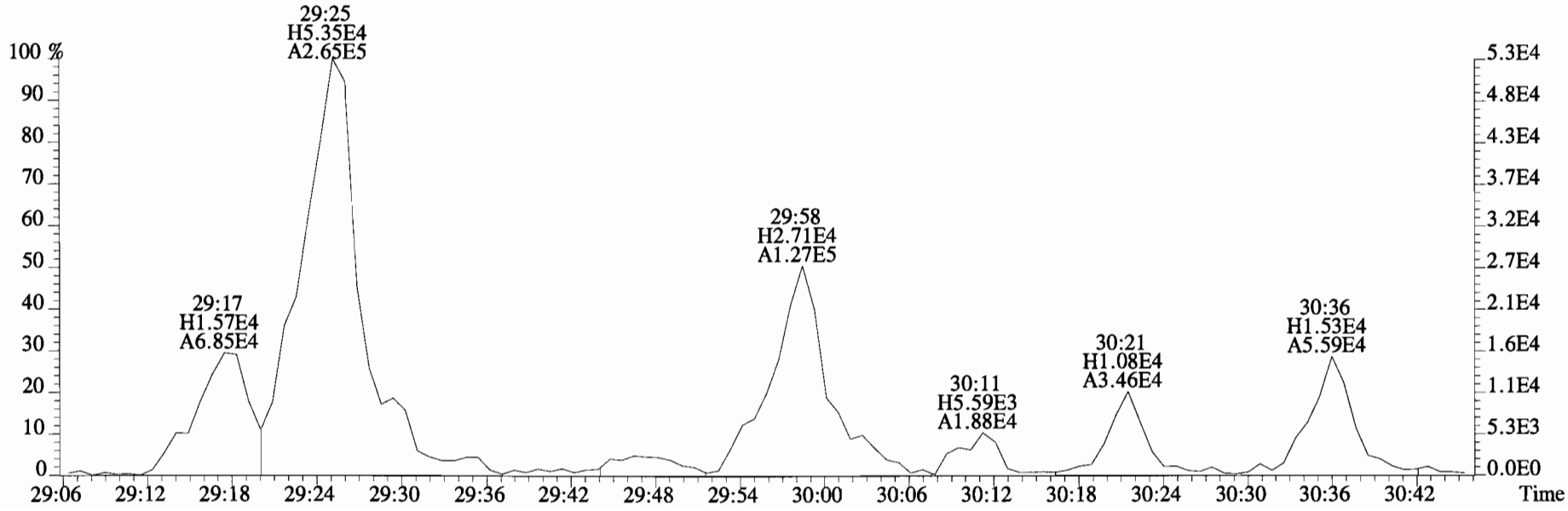
409.7974 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



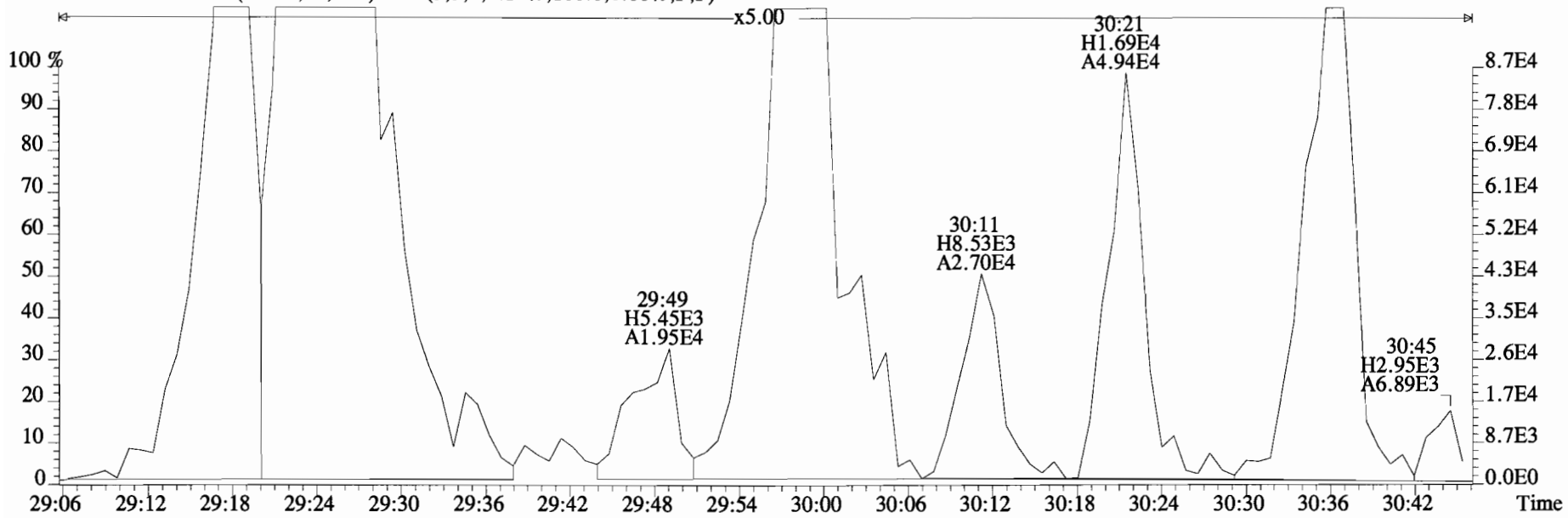
File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



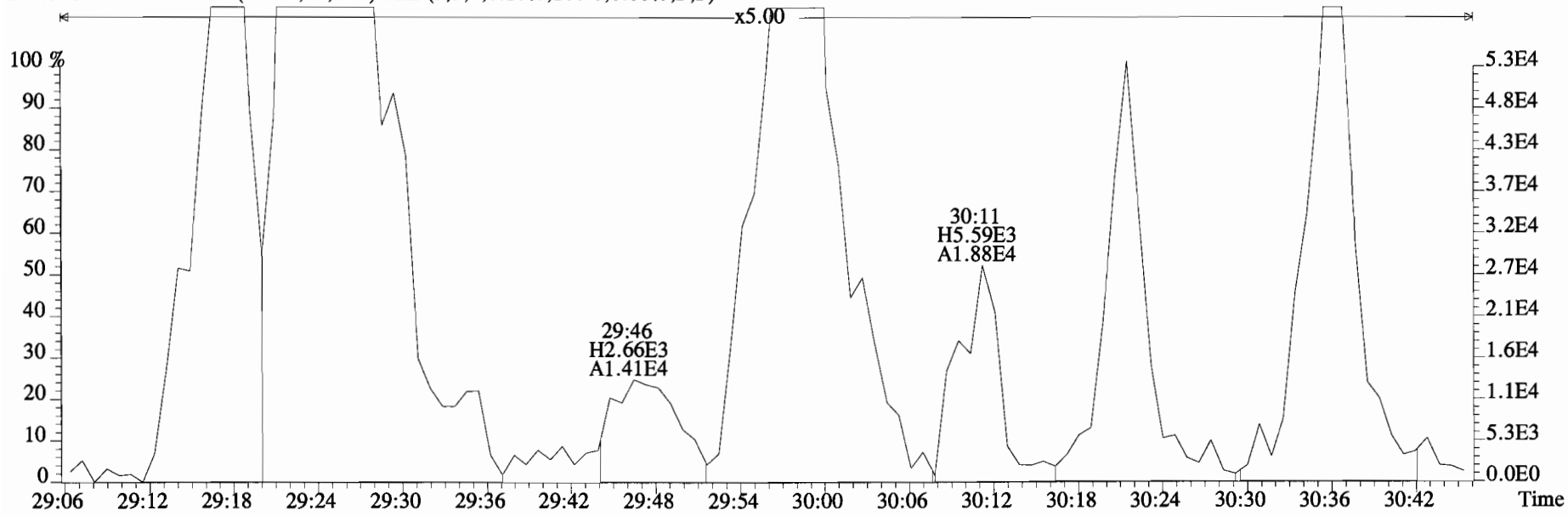
341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



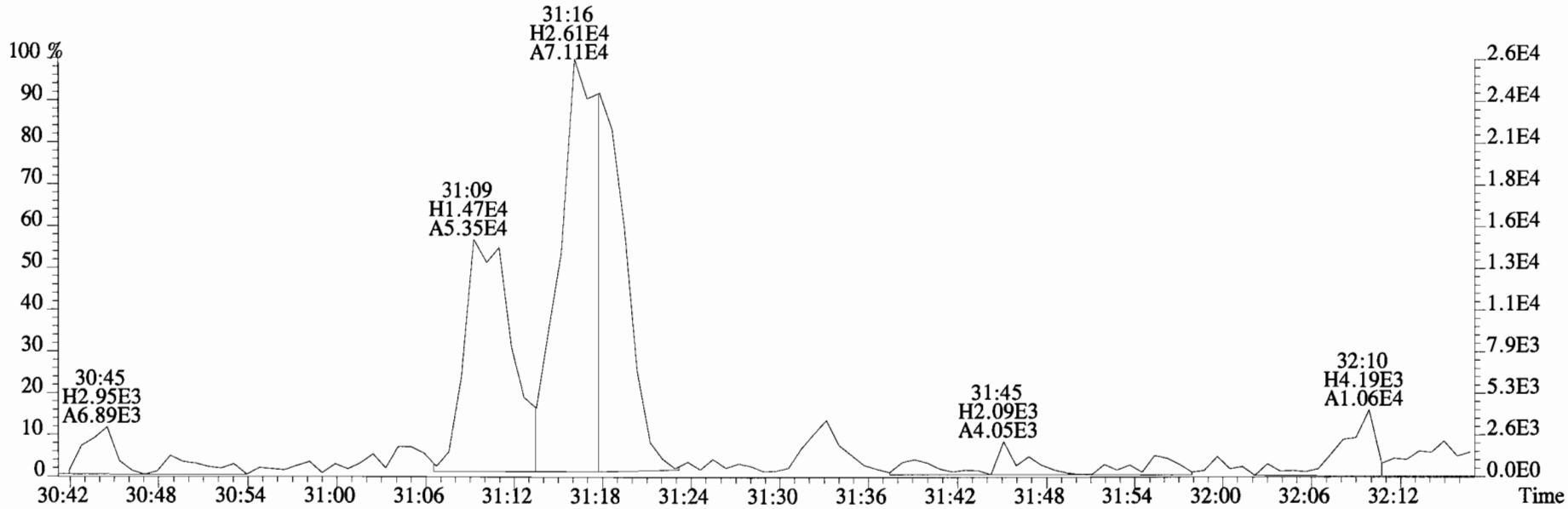
File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



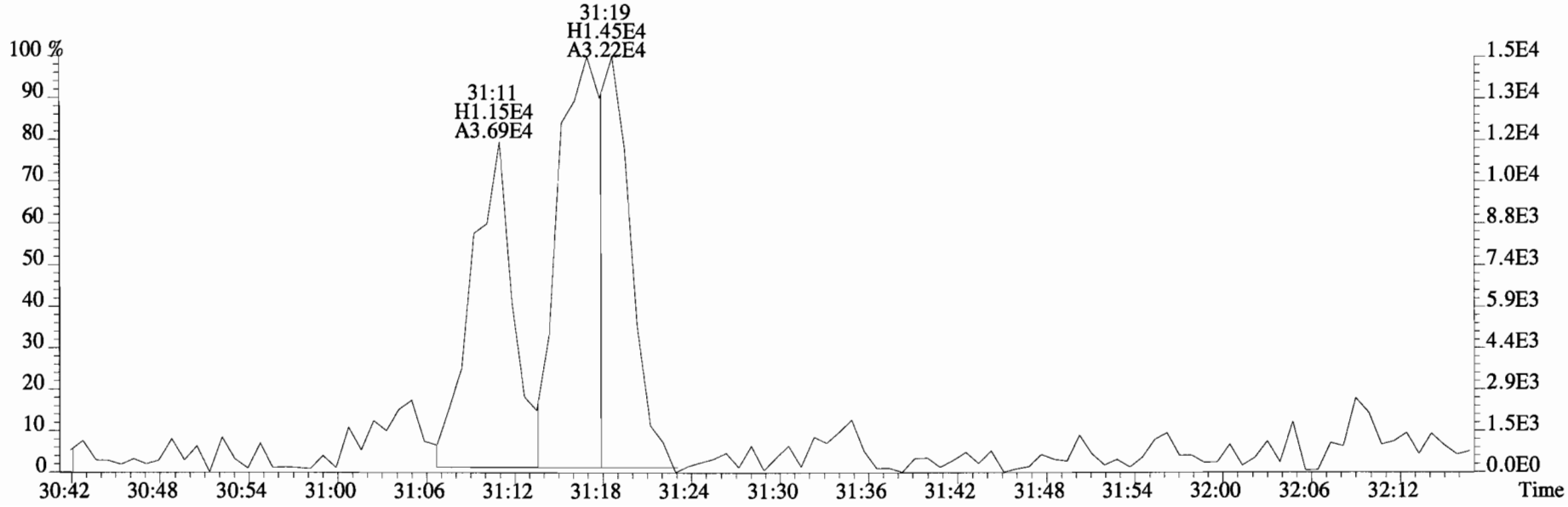
341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:141216D1 #1-257 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

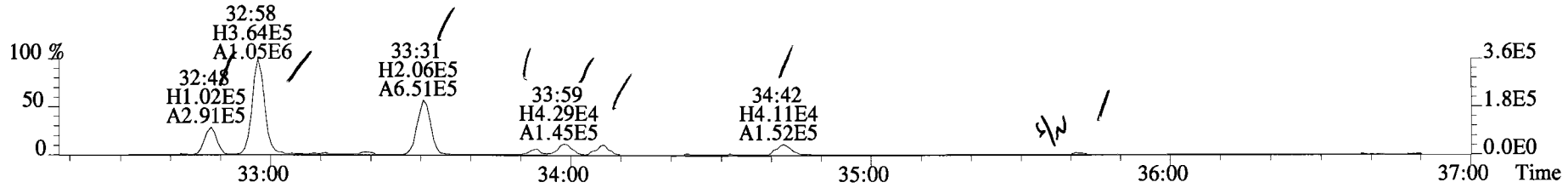


341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

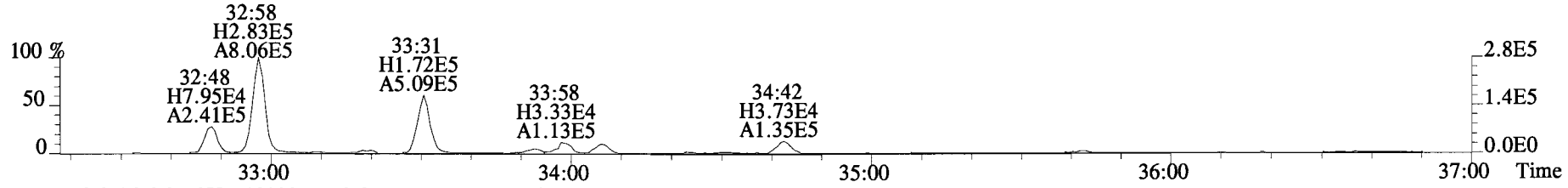


File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5

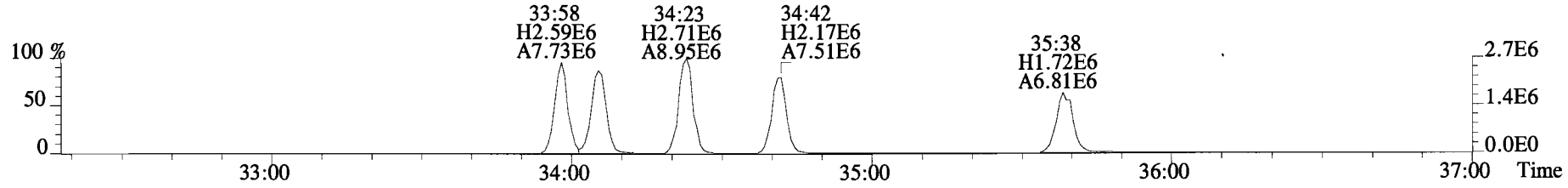
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



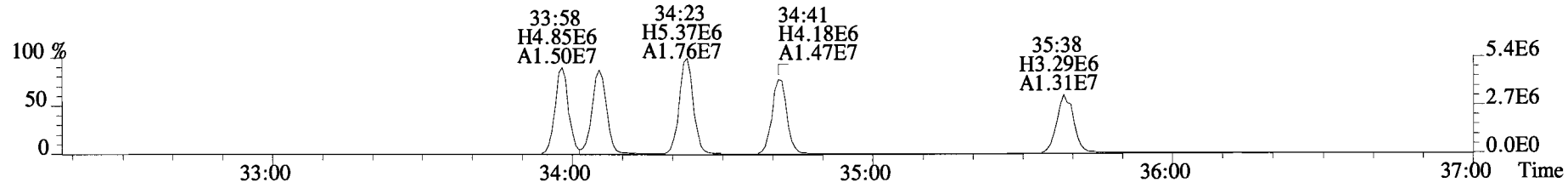
375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



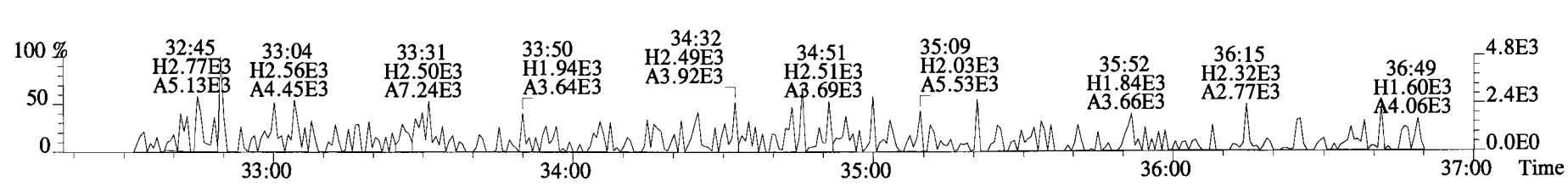
383.8639 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



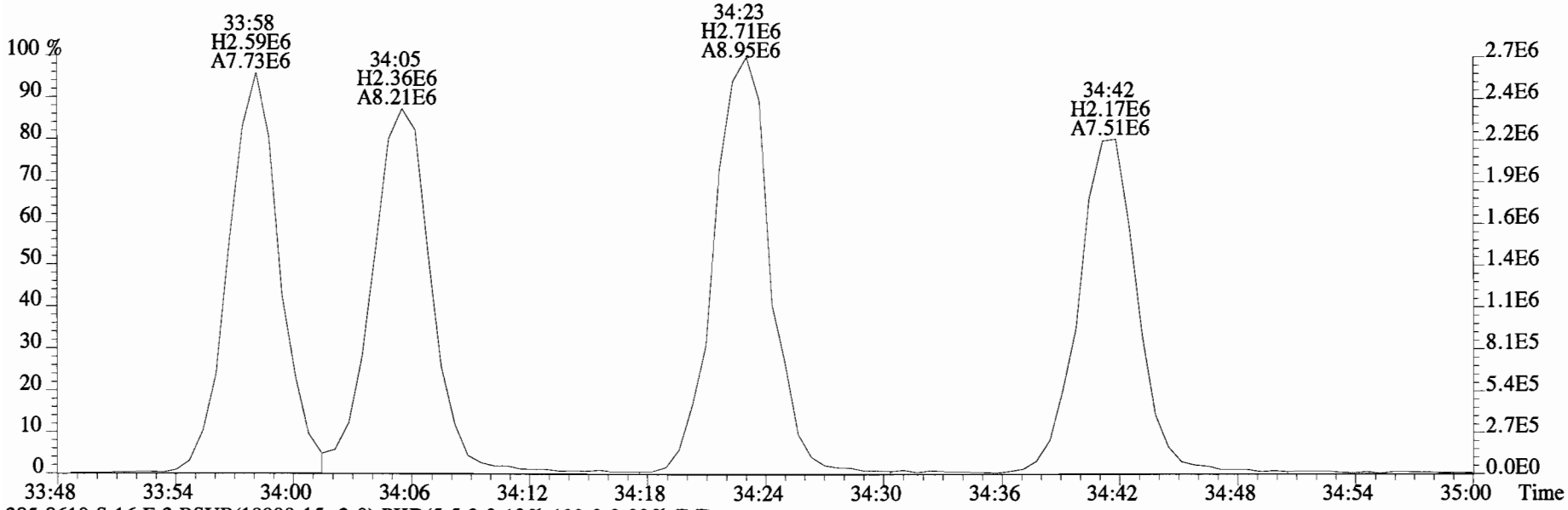
385.8610 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



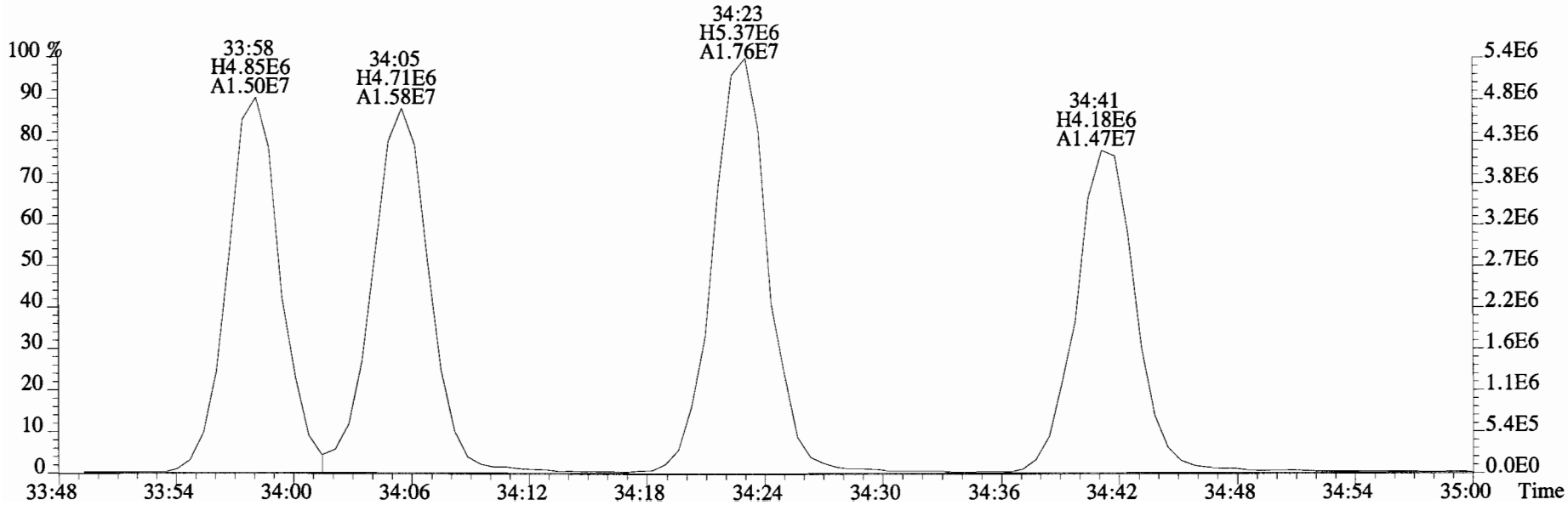
445.7555 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



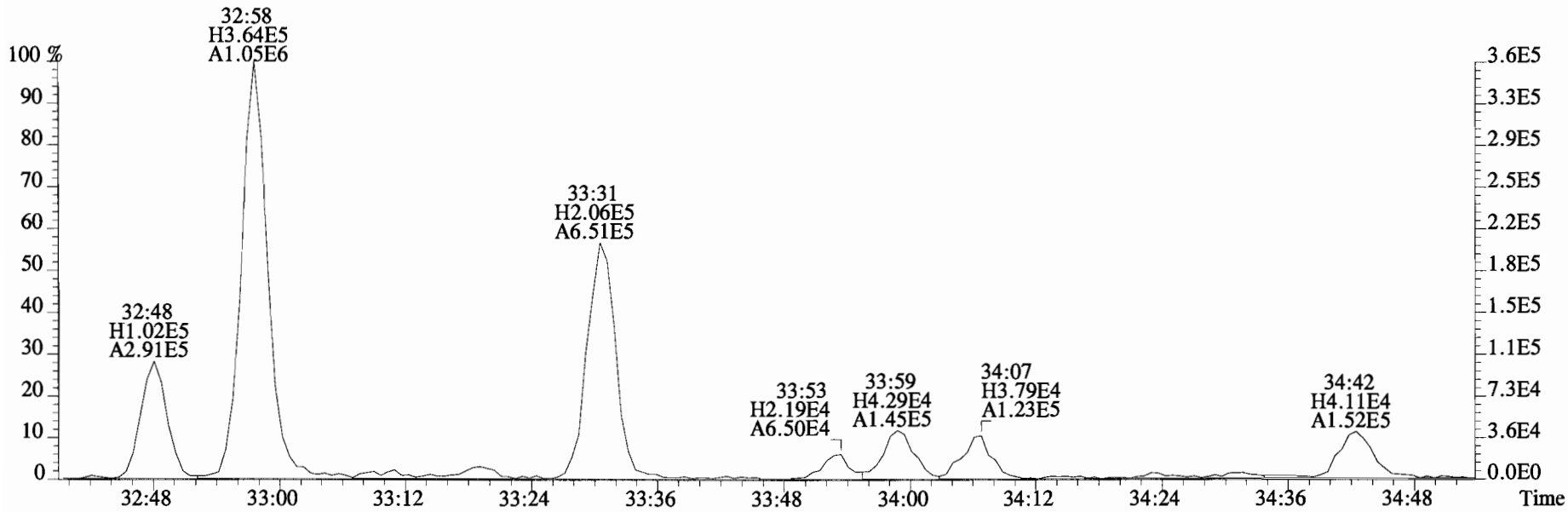
File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
383.8639 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



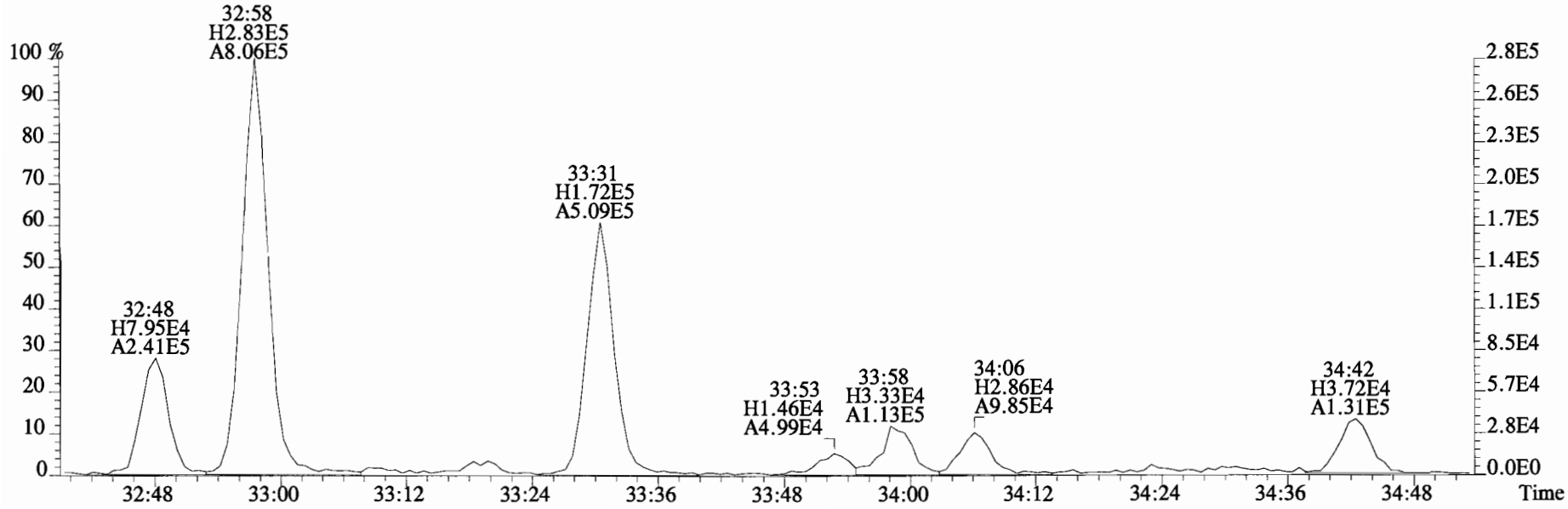
385.8610 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

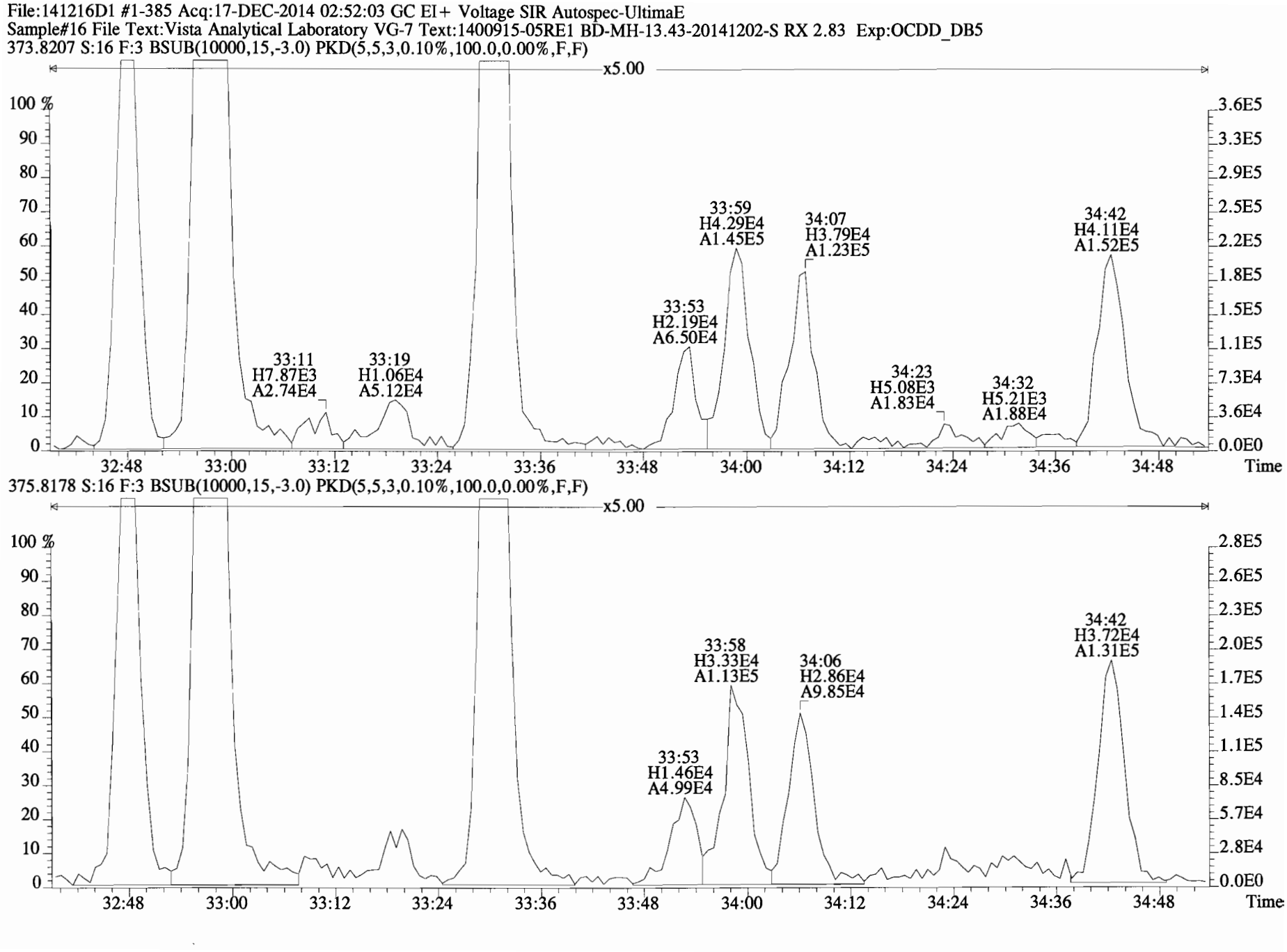


File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

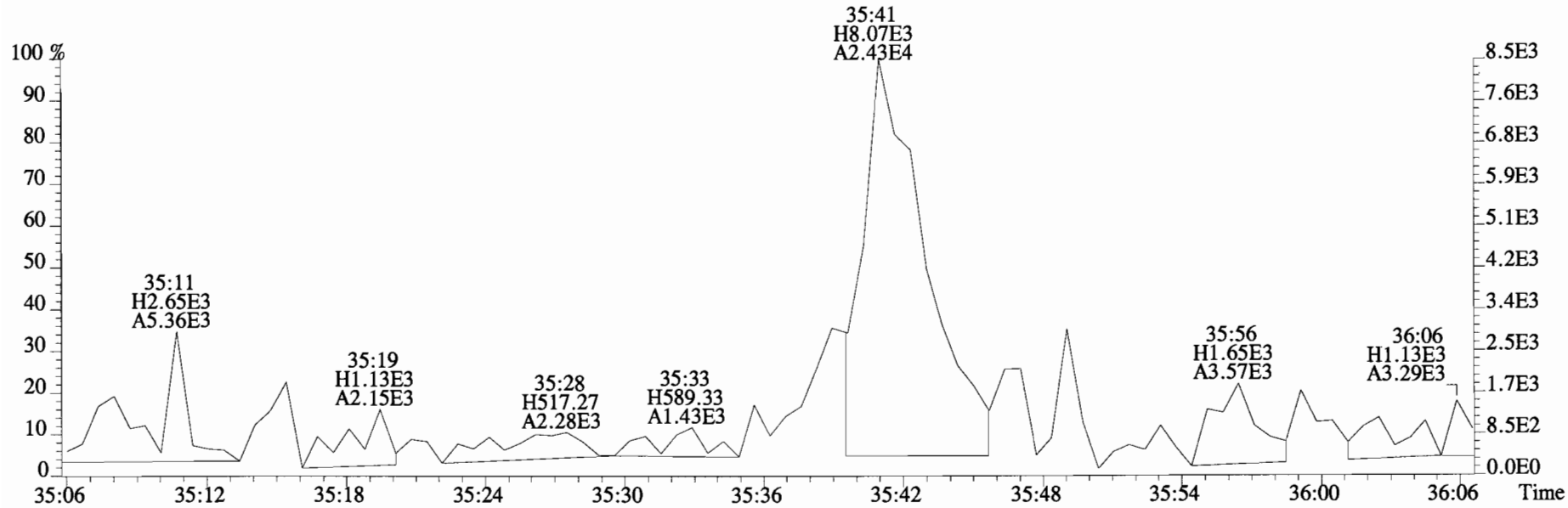


375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

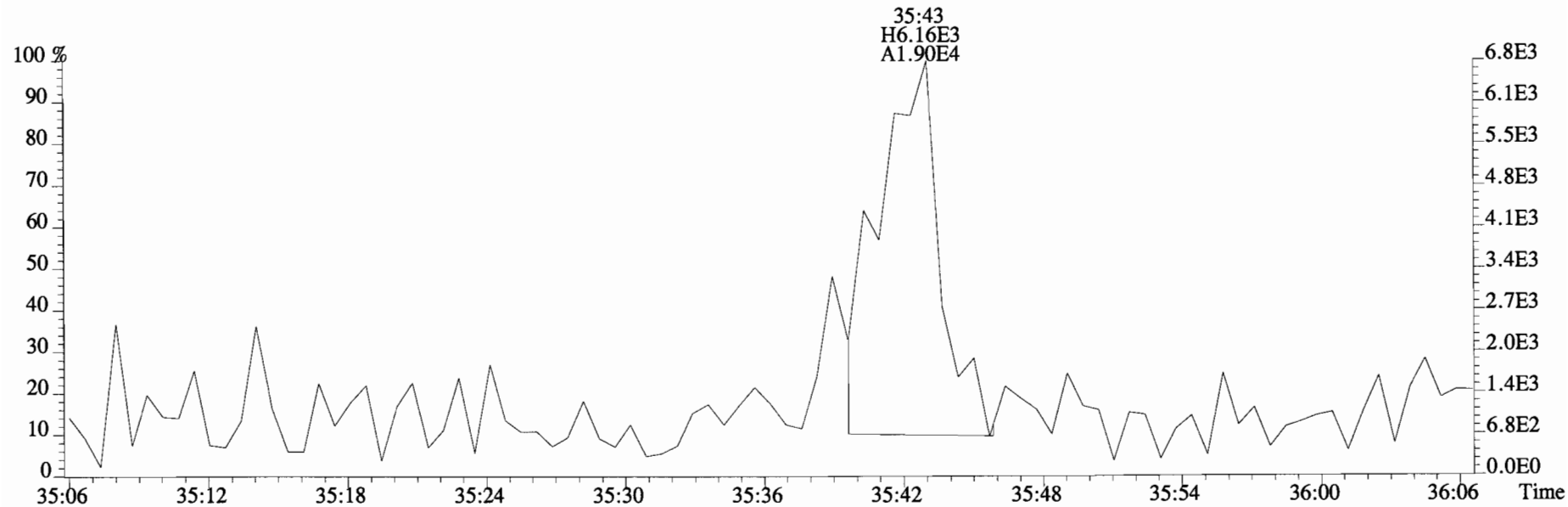



File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:11 H7.87E3 A2.74E4
33:19 H1.06E4 A5.12E4
33:53 H2.19E4 A6.50E4
33:59 H4.29E4 A1.45E5
34:07 H3.79E4 A1.23E5
34:23 H5.08E3 A1.83E4
34:32 H5.21E3 A1.88E4
34:42 H4.11E4 A1.52E5
Time
375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:53 H1.46E4 A4.99E4
33:58 H3.33E4 A1.13E5
34:06 H2.86E4 A9.85E4
34:42 H3.72E4 A1.31E5
Time

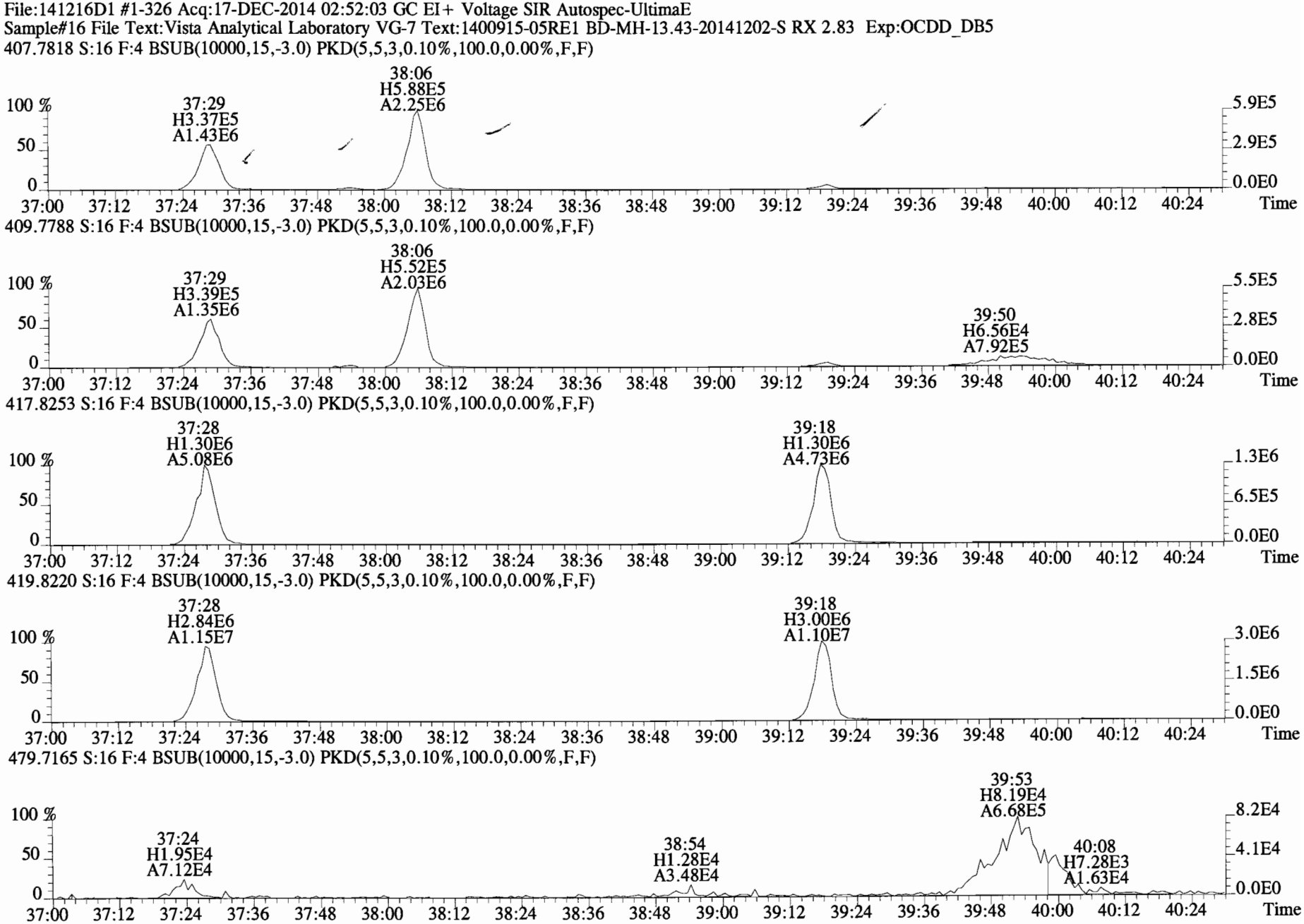
File:141216D1 #1-385 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



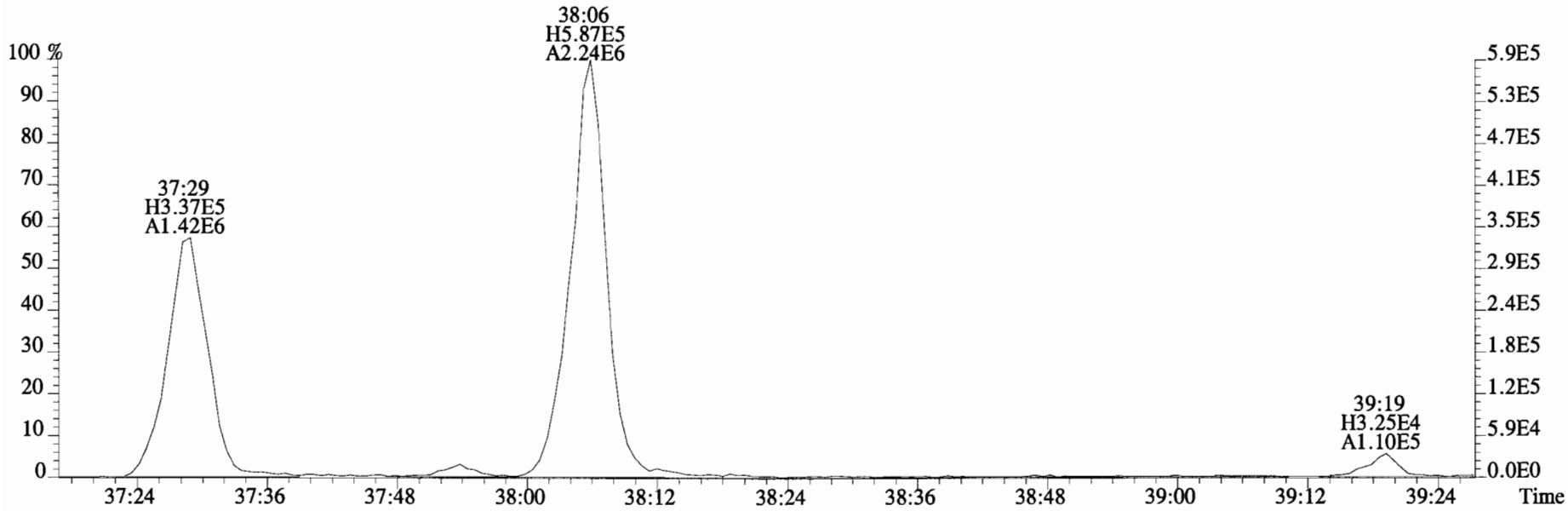
375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



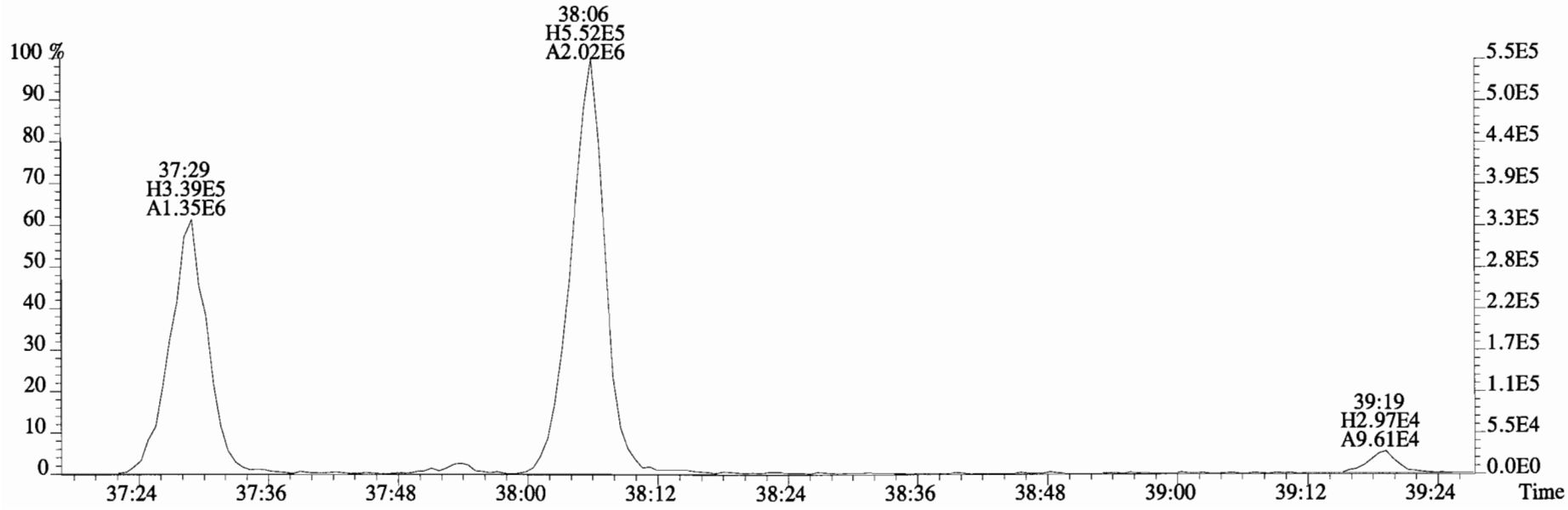
File:141216D1 #1-326 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5

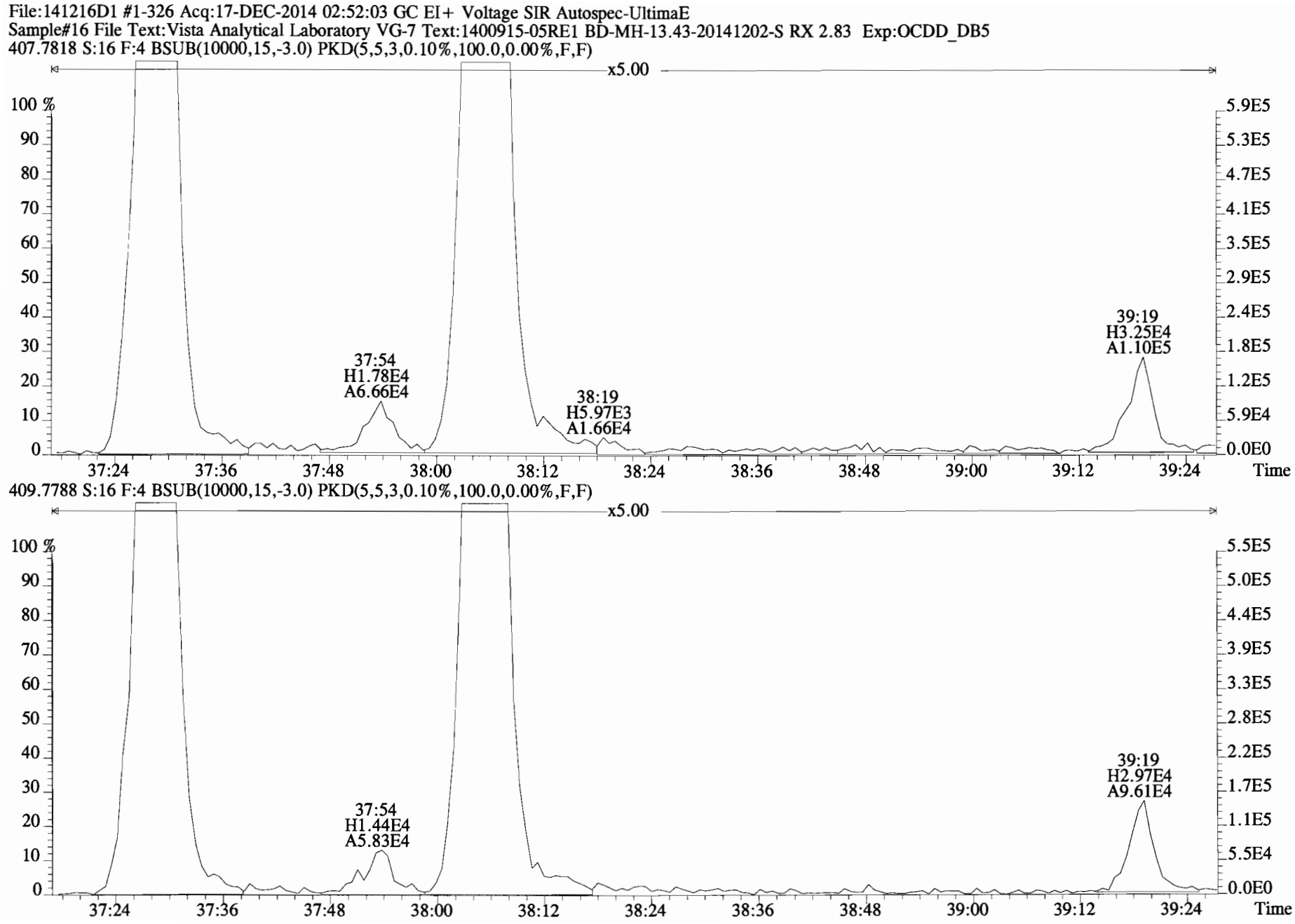


File:141216D1 #1-326 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

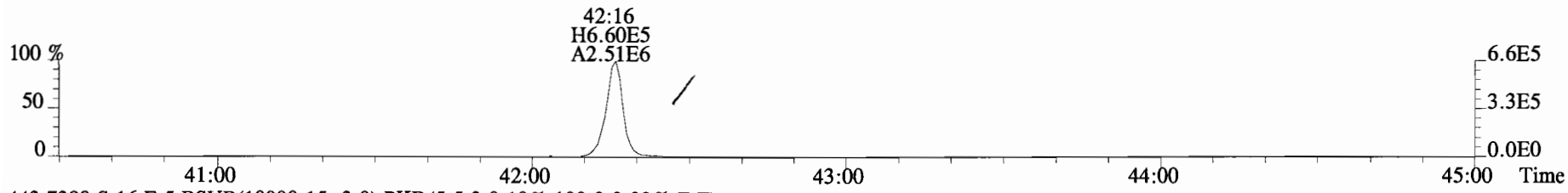


409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

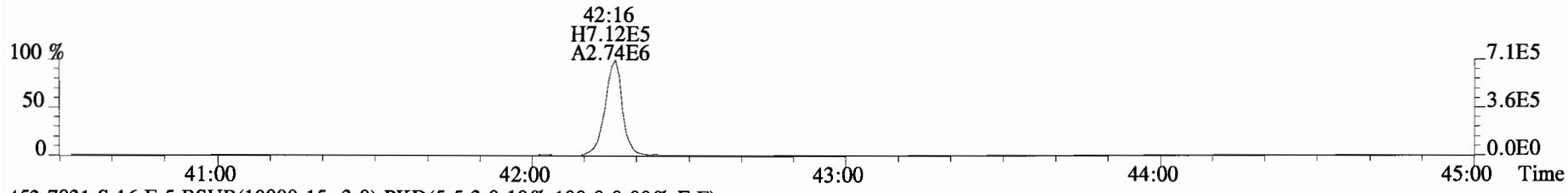



File:141216D1 #1-326 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
37:54
H1.78E4
A6.66E4
38:19
H5.97E3
A1.66E4
39:19
H3.25E4
A1.10E5
409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
37:54
H1.44E4
A5.83E4
39:19
H2.97E4
A9.61E4
Time

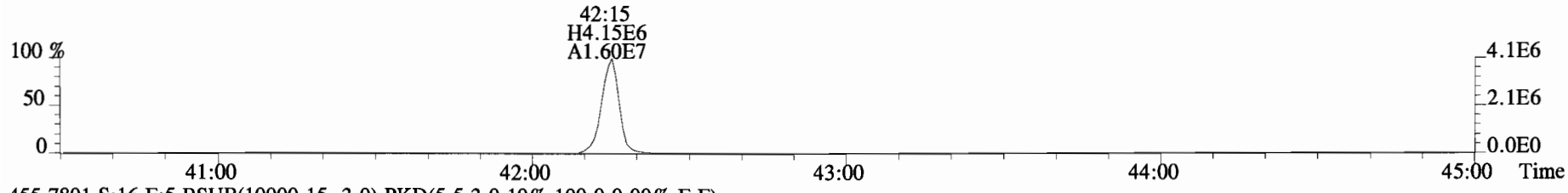
File:141216D1 #1-388 Acq:17-DEC-2014 02:52:03 GC EI+ Voltage SIR Autospec-UltimaE
Sample#16 File Text:Vista Analytical Laboratory VG-7 Text:1400915-05RE1 BD-MH-13.43-20141202-S RX 2.83 Exp:OCDD_DB5
441.7428 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



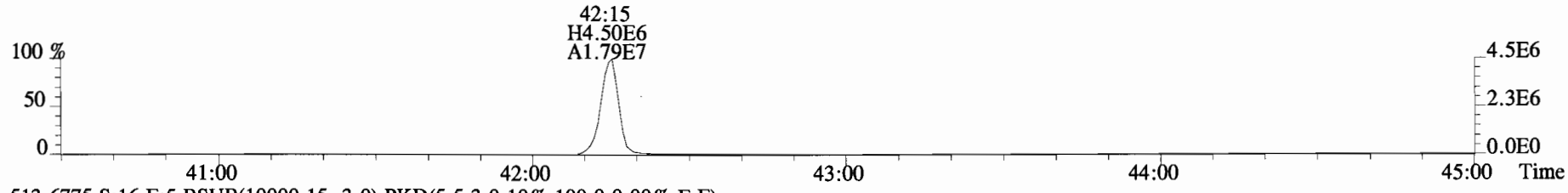
443.7398 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



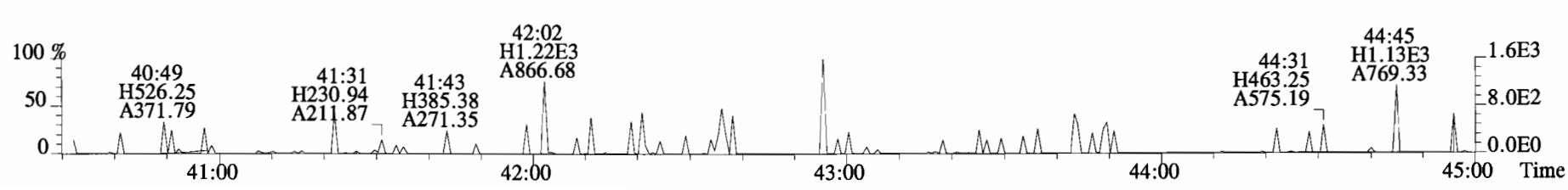
453.7831 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



SAMPLE DATA

EPA Method 1668C

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n NotF	1.25	*		2050	2.5	1.76	*	0.996	1.006
Mono	PCB-2	*	*	n NotF	1.18	*		2050	2.5	2.05	*	0.983	0.993
Mono	PCB-3	*	*	n NotF	1.22	*		2050	2.5	1.99	*	0.996	1.006
Di	PCB-4/10	*	*	n NotF	1.55	*		12100	2.5	9.24	*	0.998	1.008
Di	PCB-7/9	*	*	n NotF	1.27	*		12100	2.5	7.41	*	0.865	0.873
Di	PCB-6	*	*	n NotF	1.26	*		12100	2.5	7.46	*	0.890	0.899
Di	PCB-5/8	*	*	n NotF	1.23	*		12100	2.5	7.62	*	0.906	0.916
Di	PCB-14	*	*	n NotF	1.23	*		12100	2.5	6.79	*	0.949	0.959
Di	PCB-11	*	*	n NotF	1.16	*		12100	2.5	7.22	*	0.996	1.006
Di	PCB-12/13	*	*	n NotF	1.10	*		12100	2.5	7.61	*	1.010	1.020
Di	PCB-15	*	*	n NotF	1.21	*		12100	2.5	6.92	*	1.024	1.034
Tri	PCB-19	*	*	n NotF	1.30	*		1350	2.5	1.17	*	0.996	1.006
Tri	PCB-30	*	*	n NotF	1.83	*		1350	2.5	0.825	*	1.032	1.042
Tri	PCB-18	*	*	n NotF	0.86	*		1350	2.5	1.18	*	0.949	0.959
Tri	PCB-17	*	*	n NotF	0.90	*		1350	2.5	1.12	*	0.955	0.965
Tri	PCB-24/27	*	*	n NotF	1.18	*		1350	2.5	0.858	*	0.976	0.986
Tri	PCB-16/32	*	*	n NotF	1.03	*		1350	2.5	0.981	*	0.995	1.005
Tri	PCB-34	*	*	n NotF	1.26	*		1660	2.5	0.947	*	0.956	0.966
Tri	PCB-23	*	*	n NotF	1.31	*		1660	2.5	0.912	*	0.959	0.969
Tri	PCB-29	*	*	n NotF	1.33	*		1660	2.5	0.900	*	0.967	0.977
Tri	PCB-26	*	*	n NotF	1.29	*		1660	2.5	0.926	*	0.974	0.984
Tri	PCB-25	*	*	n NotF	1.34	*		1660	2.5	0.890	*	0.980	0.990
Tri	PCB-31	*	*	n NotF	1.42	*		1660	2.5	0.842	*	0.992	1.002
Tri	PCB-28	*	*	n NotF	1.38	*		1660	2.5	0.868	*	0.996	1.006
Tri	PCB-20/21/33	*	*	n NotF	1.31	*		1660	2.5	0.912	*	1.017	1.027
Tri	PCB-22	*	*	n NotF	1.32	*		1660	2.5	0.904	*	1.032	1.042
Tri	PCB-36	*	*	n NotF	1.38	*		1660	2.5	0.806	*	0.929	0.939
Tri	PCB-39	*	*	n NotF	1.42	*		1660	2.5	0.781	*	0.943	0.953
Tri	PCB-38	*	*	n NotF	1.35	*		1660	2.5	0.819	*	0.967	0.976
Tri	PCB-35	*	*	n NotF	1.38	*		1660	2.5	0.806	*	0.982	0.992
Tri	PCB-37	*	*	n NotF	1.39	*		1660	2.5	0.797	*	0.996	1.006
Tetra	PCB-54	*	*	n NotF	1.20	*		2310	2.5	1.61	*	0.996	1.006
Tetra	PCB-50	*	*	n NotF	0.97	*		2310	2.5	2.00	*	1.037	1.047
Tetra	PCB-53	*	*	n NotF	1.19	*		2310	2.5	1.74	*	0.941	0.951
Tetra	PCB-51	*	*	n NotF	1.15	*		2310	2.5	1.80	*	0.952	0.962
Tetra	PCB-45	*	*	n NotF	0.97	*		2310	2.5	2.15	*	0.966	0.976
Tetra	PCB-46	*	*	n NotF	0.95	*		2310	2.5	2.18	*	0.982	0.992

Integrations by:

Analyst: [signature]

Date: 12/14/14

Reviewed by: CT

Date: 12/15/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	*	n NotF	1.28	*		2310	2.5	1.62	*	0.996	1.006
Tetra	PCB-73	*	*	n NotF	1.37	*		2310	2.5	1.51	*	1.000	1.010
Tetra	PCB-43/49	*	*	n NotF	1.11	*		2310	2.5	1.86	*	1.005	1.015
Tetra	PCB-47	*	*	n NotF	1.13	*		2310	2.5	1.70	*	0.996	1.006
Tetra	PCB-48/75	*	*	n NotF	1.30	*		2310	2.5	1.48	*	0.999	1.009
Tetra	PCB-65	*	*	n NotF	1.33	*		2310	2.5	1.44	*	1.007	1.017
Tetra	PCB-62	*	*	n NotF	1.29	*		2310	2.5	1.49	*	1.011	1.021
Tetra	PCB-44	*	*	n NotF	0.94	*		2310	2.5	2.05	*	1.020	1.030
Tetra	PCB-42/59	*	*	n NotF	1.22	*		2310	2.5	1.58	*	1.028	1.038
Tetra	PCB-41/64/71/72	*	*	n NotF	1.31	*		2310	2.5	1.47	*	1.046	1.056
Tetra	PCB-68	*	*	n NotF	1.49	*		2310	2.5	1.30	*	1.054	1.064
Tetra	PCB-40	*	*	n NotF	0.82	*		2310	2.5	2.35	*	1.061	1.071
Tetra	PCB-57	*	*	n NotF	1.11	*		2310	2.5	1.36	*	0.965	0.975
Tetra	PCB-67	*	*	n NotF	1.07	*		2310	2.5	1.41	*	0.974	0.984
Tetra	PCB-58	*	*	n NotF	1.10	*		2310	2.5	1.38	*	0.977	0.987
Tetra	PCB-63	*	*	n NotF	1.12	*		2310	2.5	1.36	*	0.982	0.992
Tetra	PCB-74	*	*	n NotF	1.20	*		2310	2.5	1.26	*	0.990	1.000
Tetra	PCB-61/70	*	*	n NotF	1.08	*		2310	2.5	1.40	*	0.994	1.004
Tetra	PCB-76/66	*	*	n NotF	1.14	*		2310	2.5	1.33	*	1.001	1.011
Tetra	PCB-80	*	*	n NotF	1.28	*		2310	2.5	1.20	*	0.996	1.006
Tetra	PCB-55	*	*	n NotF	1.11	*		2310	2.5	1.38	*	1.005	1.015
Tetra	PCB-56/60	*	*	n NotF	1.09	*		2310	2.5	1.41	*	1.018	1.028
Tetra	PCB-79	*	*	n NotF	1.12	*		2310	2.5	1.36	*	1.048	1.058
Tetra	PCB-78	*	*	n NotF	1.24	*		2310	2.5	1.32	*	0.982	0.992
Tetra	PCB-81	*	*	n NotF	1.38	*		2310	2.5	1.18	*	0.995	1.005
Tetra	PCB-77	*	*	n NotF	1.21	*		2310	2.5	1.32	*	0.995	1.005
Penta	PCB-104	*	*	n NotF	1.26	*		1450	2.5	2.10	*	0.996	1.006
Penta	PCB-96	*	*	n NotF	1.09	*		1450	2.5	2.42	*	1.034	1.044
Penta	PCB-103	*	*	n NotF	0.93	*		1450	2.5	2.84	*	1.050	1.060
Penta	PCB-100	*	*	n NotF	1.00	*		1450	2.5	2.64	*	1.061	1.071
Penta	PCB-94	*	*	n NotF	1.11	*		1450	2.5	3.20	*	0.981	0.991
Penta	PCB-95/98/102	*	*	n NotF	1.21	*		1450	2.5	2.92	*	0.994	1.004
Penta	PCB-93	*	*	n NotF	1.13	*		1450	2.5	3.13	*	0.998	1.008
Penta	PCB-88/91	*	*	n NotF	1.02	*		1450	2.5	3.47	*	1.006	1.016
Penta	PCB-121	*	*	n NotF	1.90	*		1450	2.5	1.86	*	1.009	1.019
Penta	PCB-84/92	*	*	n NotF	1.05	*		1450	2.5	3.14	*	0.986	0.996
Penta	PCB-89	*	*	n NotF	1.02	*		1450	2.5	3.25	*	0.991	1.001

Analyst: _____

Date: 12/14/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1

Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	*	*	n NotF¶	1.19	*		1450	2.5	2.77	*	0.996	1.006
Penta	PCB-113	*	*	n NotF¶	1.35	*		1450	2.5	2.44	*	1.002	1.012
Penta	PCB-99	*	*	n NotF¶	1.29	*		1450	2.5	2.56	*	1.005	1.015
Penta	PCB-119	*	*	n NotF¶	1.72	*		1450	2.5	2.09	*	0.982	0.992
Penta	PCB-108/112	*	*	n NotF¶	1.29	*		1450	2.5	2.79	*	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.52	*		1450	2.5	2.37	*	0.991	1.001
Penta	PCB-97	*	*	n NotF¶	1.25	*		1450	2.5	2.88	*	0.996	1.006
Penta	PCB-86	*	*	n NotF¶	1.02	*		1450	2.5	3.52	*	1.000	1.010
Penta	PCB-87/117/125	*	*	n NotF¶	1.56	*		1450	2.5	2.31	*	1.002	1.012
Penta	PCB-111/115	*	*	n NotF¶	1.75	*		1450	2.5	2.05	*	1.007	1.017
Penta	PCB-85/116	*	*	n NotF¶	1.30	*		1450	2.5	2.76	*	1.010	1.020
Penta	PCB-120	*	*	n NotF¶	1.78	*		1450	2.5	2.02	*	1.016	1.026
Penta	PCB-110	*	*	n NotF¶	1.68	*		1450	2.5	2.14	*	1.020	1.030
Penta	PCB-82	*	*	n NotF¶	0.74	*		1450	2.5	3.38	*	0.972	0.982
Penta	PCB-124	*	*	n NotF¶	1.32	*		1450	2.5	1.89	*	0.988	0.998
Penta	PCB-107/109	*	*	n NotF¶	1.22	*		1450	2.5	2.04	*	0.991	1.001
Penta	PCB-123	*	*	n NotF¶	1.22	*		1450	2.5	2.05	*	0.995	1.005
Penta	PCB-106/118	*	*	n NotF¶	1.22	*		1450	2.5	2.05	*	0.996	1.006
Penta	PCB-114	*	*	n NotF¶	1.36	*		1530	2.5	1.38	*	0.995	1.005
Penta	PCB-122	*	*	n NotF¶	1.24	*		1530	2.5	1.52	*	0.999	1.009
Penta	PCB-105	*	*	n NotF¶	1.28	*		1530	2.5	1.39	*	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.14	*		1530	2.5	1.38	*	0.995	1.005
Penta	PCB-126	*	*	n NotF¶	1.28	*		1530	2.5	1.39	*	0.995	1.005
Hexa	PCB-155	*	*	n NotF¶	1.14	*		1180	2.5	2.54	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF¶	1.06	*		1180	2.5	2.72	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF¶	1.10	*		1180	2.5	2.63	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF¶	1.09	*		1180	2.5	2.64	*	1.055	1.065
Hexa	PCB-136	*	*	n NotF¶	1.08	*		1180	2.5	2.66	*	1.064	1.074
Hexa	PCB-148	*	*	n NotF¶	0.74	*		1180	2.5	3.90	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF¶	0.88	*		1180	2.5	3.27	*	1.079	1.089
Hexa	PCB-151	*	*	n NotF¶	0.81	*		1180	2.5	3.57	*	1.097	1.107
Hexa	PCB-135	*	*	n NotF¶	0.78	*		1180	2.5	3.71	*	1.101	1.113
Hexa	PCB-144	*	*	n NotF¶	0.82	*		1180	2.5	3.52	*	1.105	1.116
Hexa	PCB-147	*	*	n NotF¶	0.83	*		1180	2.5	3.49	*	1.011	1.120
Hexa	PCB-139/149	*	*	n NotF¶	0.84	*		1180	2.5	3.42	*	1.115	1.127
Hexa	PCB-140	*	*	n NotF¶	0.79	*		1180	2.5	3.68	*	1.120	1.132
Hexa	PCB-134/143	*	*	n NotF¶	0.93	*		1180	2.5	1.55	*	0.970	0.980

Analyst: _____

Date: 12/14/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n NotF¶	0.95	*		1540	2.5	1.98	*	0.977	0.987
Hexa	PCB-131	*	*	n NotF¶	0.91	*		1540	2.5	2.05	*	0.981	0.991
Hexa	PCB-146/165	*	*	n NotF¶	1.16	*		1540	2.5	1.62	*	0.986	0.996
Hexa	PCB-132/161	*	*	n NotF¶	1.11	*		1540	2.5	1.69	*	0.992	1.002
Hexa	PCB-153	3.21e+04	0.97	n 43:15	1.18	1.18	R	*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n NotF¶	1.37	*		1540	2.5	1.37	*	1.000	1.010
Hexa	PCB-141	*	*	n NotF¶	0.97	*		1540	2.5	1.98	*	0.996	1.005
Hexa	PCB-137	*	*	n NotF¶	1.07	*		1540	2.5	1.80	*	1.004	1.014
Hexa	PCB-130	*	*	n NotF¶	0.85	*		1540	2.5	2.27	*	1.007	1.017
Hexa	PCB-138/163/164	3.53e+04	0.93	n 44:51	1.23	1.28	R	*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	*	*	n NotF¶	1.29	*		1540	2.5	1.51	*	1.001	1.011
Hexa	PCB-129	*	*	n NotF¶	0.92	*		1540	2.5	2.11	*	1.007	1.017
Hexa	PCB-166	*	*	n NotF¶	1.12	*		1540	2.5	1.44	*	0.988	0.998
Hexa	PCB-159	*	*	n NotF¶	1.16	*		1540	2.5	1.38	*	0.995	1.005
Hexa	PCB-128/162	*	*	n NotF¶	1.02	*		1540	2.5	1.58	*	1.002	1.012
Hexa	PCB-167	*	*	n NotF¶	1.06	*		1540	2.5	1.46	*	0.995	1.005
Hexa	PCB-156	*	*	n NotF¶	1.18	*		1540	2.5	1.38	*	0.995	1.005
Hexa	PCB-157	*	*	n NotF¶	1.08	*		1540	2.5	1.52	*	0.995	1.005
Hexa	PCB-169	*	*	n NotF¶	1.11	*		1540	2.5	1.45	*	0.995	1.005
Hepta	PCB-188	*	*	n NotF¶	1.40	*		1370	2.5	1.04	*	0.995	1.005
Hepta	PCB-184	*	*	n NotF¶	1.24	*		1370	2.5	1.18	*	1.006	1.016
Hepta	PCB-179	*	*	n NotF¶	1.30	*		1370	2.5	1.12	*	1.024	1.034
Hepta	PCB-176	*	*	n NotF¶	1.36	*		1370	2.5	1.07	*	1.035	1.045
Hepta	PCB-186	*	*	n NotF¶	1.28	*		1370	2.5	1.14	*	1.049	1.059
Hepta	PCB-178	*	*	n NotF¶	0.94	*		1370	2.5	1.56	*	1.061	1.071
Hepta	PCB-175	*	*	n NotF¶	0.97	*		1370	2.5	1.50	*	1.069	1.079
Hepta	PCB-182/187	*	*	n NotF¶	1.01	*		1370	2.5	1.44	*	1.073	1.083
Hepta	PCB-183	*	*	n NotF¶	1.08	*		1370	2.5	1.35	*	1.080	1.090
Hepta	PCB-185	*	*	n NotF¶	1.34	*		1370	2.5	1.47	*	0.951	0.961
Hepta	PCB-174	*	*	n NotF¶	1.34	*		1370	2.5	1.47	*	0.958	0.968
Hepta	PCB-181	*	*	n NotF¶	1.36	*		1370	2.5	1.45	*	0.961	0.971
Hepta	PCB-177	*	*	n NotF¶	1.24	*		1370	2.5	1.59	*	0.964	0.974
Hepta	PCB-171	*	*	n NotF¶	1.31	*		1370	2.5	1.50	*	0.970	0.980
Hepta	PCB-173	*	*	n NotF¶	1.16	*		1370	2.5	1.70	*	0.979	0.989
Hepta	PCB-172	*	*	n NotF¶	1.22	*		1370	2.5	1.61	*	0.988	0.998
Hepta	PCB-192	*	*	n NotF¶	1.53	*		1370	2.5	1.29	*	0.991	1.001
Hepta	PCB-180	*	*	n NotF¶	1.43	*		1370	2.5	1.38	*	0.995	1.005

Analyst: _____

Date: 12/14/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF	1.65	*		1370	2.5	1.19	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF	1.67	*		1370	2.5	1.18	*	1.004	1.014
Hepta	PCB-170	*	*	n	NotF	1.50	*		1370	2.5	1.46	*	0.995	1.005
Hepta	PCB-190	*	*	n	NotF	2.02	*		1370	2.5	1.08	*	0.998	1.008
Hepta	PCB-189	*	*	n	NotF	1.54	*		1370	2.5	1.07	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF	1.04	*		1090	2.5	1.90	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF	1.10	*		1090	2.5	1.80	*	1.006	1.016
Octa	PCB-204	*	*	n	NotF	0.99	*		1090	2.5	1.99	*	1.009	1.019
Octa	PCB-197	*	*	n	NotF	1.07	*		1090	2.5	1.85	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF	1.02	*		1090	2.5	1.95	*	1.032	1.044
Octa	PCB-198	*	*	n	NotF	0.74	*		1090	2.5	2.66	*	1.058	1.068
Octa	PCB-199	*	*	n	NotF	0.73	*		1090	2.5	2.72	*	1.060	1.070
Octa	PCB-196/203	*	*	n	NotF	0.77	*		1090	2.5	2.56	*	1.066	1.076
Octa	PCB-195	*	*	n	NotF	1.20	*		1230	2.5	1.33	*	0.979	0.989
Octa	PCB-194	*	*	n	NotF	1.25	*		1230	2.5	1.28	*	0.995	1.005
Octa	PCB-205	*	*	n	NotF	1.41	*		1230	2.5	1.13	*	1.001	1.011
Nona	PCB-208	*	*	n	NotF	0.96	*		1040	2.5	0.929	*	0.995	1.005
Nona	PCB-207	*	*	n	NotF	0.92	*		1040	2.5	0.973	*	1.001	1.011
Nona	PCB-206	*	*	n	NotF	1.03	*		1040	2.5	*	*	0.995	1.005
Deca	PCB-209	*	*	n	NotF	1.18	*		1010	2.5	2.91	*	0.995	1.005

Analyst: [signature]

Date: 12/14/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST141209E2-2

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.22	*	
Total Di-PCB	*	*	n	NotFnd	1.21	*	
Total Tri-PCB	*	*	n	NotFnd	1.16	*	
Total Tri-PCB	*	*	n	NotFnd	1.35	*	Sum:0.00000
Total Tetra-PCB	*	*	n	NotFnd	1.17	*	
Total Penta-PCB	*	*	n	NotFnd	1.21	*	
Total Penta-PCB	*	*	n	NotFnd	1.26	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.92	*	
Total Hexa-PCB	*	*	n	NotFnd	1.08	*	Sum:0.00000
Total Hepta-PCB	*	*	n	NotFnd	1.27	*	
Total Octa-PCB	*	*	n	NotFnd	0.92	*	
Total Octa-PCB	*	*	n	NotFnd	1.29	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	0.96	*	
Total Deca-PCB	*	*	n	NotFnd	1.18	*	

Total PCB Conc:2.45488300000

Integrations by Analyst: [signature]

Date: 12/15/14

Client ID: Method Blank Filename: 141209E2 S:4 Acq:10-DEC-14 06:15:30 ConCal: ST141209E2-1
Lab ID: B4L0058-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: ST141209E2-2

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.20e+07	3.39 y	0.89	16:12	0.623	0.622	0.628	1570	78.6
13C-PCB-3	6.21e+07	3.52 y	0.93	18:48	0.724	0.721	0.729	1510	75.7
13C-PCB-4	3.94e+07	1.60 y	0.55	20:08	0.775	0.772	0.780	1620	81.1
13C-PCB-9	6.12e+07	1.60 y	0.83	21:55	0.843	0.840	0.848	1670	83.7
13C-PCB-11	7.34e+07	1.57 y	0.94	25:17	0.973	0.968	0.978	1770	88.4
13C-PCB-19	3.59e+07	1.08 y	0.53	24:16	0.934	0.929	0.939	1520	76.2
13C-PCB-28	6.65e+07	1.04 y	0.89	29:08	1.004	0.999	1.009	1840	91.8
13C-PCB-32	5.56e+07	1.06 y	0.81	27:10	1.046	1.041	1.051	1540	77.1
13C-PCB-37	7.32e+07	1.06 y	0.83	33:00	1.137	1.131	1.143	2160	108
13C-PCB-47	5.04e+07	0.78 y	0.74	32:02	0.871	0.867	0.875	1790	89.6
13C-PCB-52	4.80e+07	0.79 y	0.71	31:32	0.857	0.853	0.861	1790	89.7
13C-PCB-54	5.05e+07	0.82 y	0.85	28:01	0.762	0.758	0.766	1570	78.6
13C-PCB-70	6.77e+07	0.80 y	0.94	35:32	0.966	0.961	0.971	1900	94.8
13C-PCB-77	6.58e+07	0.80 y	0.89	39:39	1.078	1.073	1.083	1950	97.4
13C-PCB-80	6.77e+07	0.80 y	0.96	35:57	0.977	0.972	0.982	1860	93.0
13C-PCB-81	6.28e+07	0.81 y	0.84	39:03	1.062	1.057	1.067	1980	99.1
13C-PCB-95	2.59e+07	1.64 y	0.74	35:50	0.913	0.908	0.918	1760	88.0
13C-PCB-97	2.64e+07	1.64 y	0.69	38:49	0.989	0.984	0.994	1930	96.7
13C-PCB-101	2.91e+07	1.69 y	0.79	37:31	0.956	0.951	0.961	1870	93.5
13C-PCB-104	3.44e+07	1.68 y	1.00	32:41	0.833	0.829	0.837	1750	87.3
13C-PCB-105	5.58e+07	1.58 y	1.24	43:04	0.929	0.924	0.934	2040	102
13C-PCB-114	5.24e+07	1.61 y	1.21	42:13	0.910	0.905	0.915	1970	98.4
13C-PCB-118	3.72e+07	1.65 y	0.98	41:33	1.059	1.054	1.064	1910	95.5
13C-PCB-123	3.63e+07	1.57 y	0.95	41:23	1.054	1.049	1.059	1930	96.5
13C-PCB-126	5.58e+07	1.58 y	1.16	45:18	0.977	0.972	0.982	2170	109
13C-PCB-127	6.32e+07	1.61 y	1.34	43:25	0.936	0.931	0.941	2130	107
13C-PCB-138	4.51e+07	1.27 y	1.04	44:48	0.966	0.961	0.971	1960	97.9
13C-PCB-141	4.55e+07	1.30 y	1.07	43:58	0.948	0.943	0.953	1920	96.2
13C-PCB-153	4.63e+07	1.27 y	1.11	43:14	0.932	0.927	0.937	1880	94.2
13C-PCB-155	2.27e+07	1.27 y	0.83	37:04	0.944	0.939	0.949	1380	69.0
13C-PCB-156	5.55e+07	1.26 y	1.24	48:04	1.037	1.032	1.042	2020	101
13C-PCB-157	5.73e+07	1.29 y	1.31	48:20	1.042	1.037	1.047	1980	98.9
13C-PCB-159	5.36e+07	1.26 y	1.20	46:06	0.994	0.989	0.999	2020	101
13C-PCB-167	5.79e+07	1.29 y	1.32	46:46	1.009	1.004	1.014	1990	99.3
13C-PCB-169	5.59e+07	1.30 y	1.22	50:28	1.088	1.082	1.092	2090	104
13C-PCB-170	2.17e+07	0.47 y	0.54	50:50	1.096	1.089	1.101	1840	91.9
13C-PCB-180	2.60e+07	0.46 y	0.67	49:21	1.064	1.059	1.069	1750	87.5
13C-PCB-188	3.34e+07	0.45 y	0.94	42:52	0.925	0.919	0.929	1620	80.8
13C-PCB-189	3.02e+07	0.47 y	0.72	52:20	1.129	1.120	1.132	1910	95.5
13C-PCB-194	3.53e+07	0.89 y	0.81	53:51	0.995	0.990	1.000	1990	99.6
13C-PCB-202	2.69e+07	0.93 y	0.83	48:17	1.041	1.036	1.046	1470	73.3
13C-PCB-206	2.47e+07	0.80 y	0.66	55:30	1.025	1.021	1.031	1720	86.1
13C-PCB-208	4.33e+07	0.79 y	1.12	53:07	0.981	0.976	0.986	1770	88.3
13C-PCB-209	2.10e+07	1.20 y	0.61	56:53	1.051	1.044	1.054	1560	78.2

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.29e+07	0.81 y	1.01	37:50	1.029	1.023	1.033	1920	95.9
13C-PCB-178	2.42e+07	0.46 y	0.63	45:39	0.985	0.979	0.989	1740	87.1

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.29e+07	0.81 y	1.20	37:50	0.969	0.963	0.973	1930	96.7
13C-PCB-178	2.42e+07	0.46 y	0.94	45:39	0.925	0.920	0.930	1990	99.5

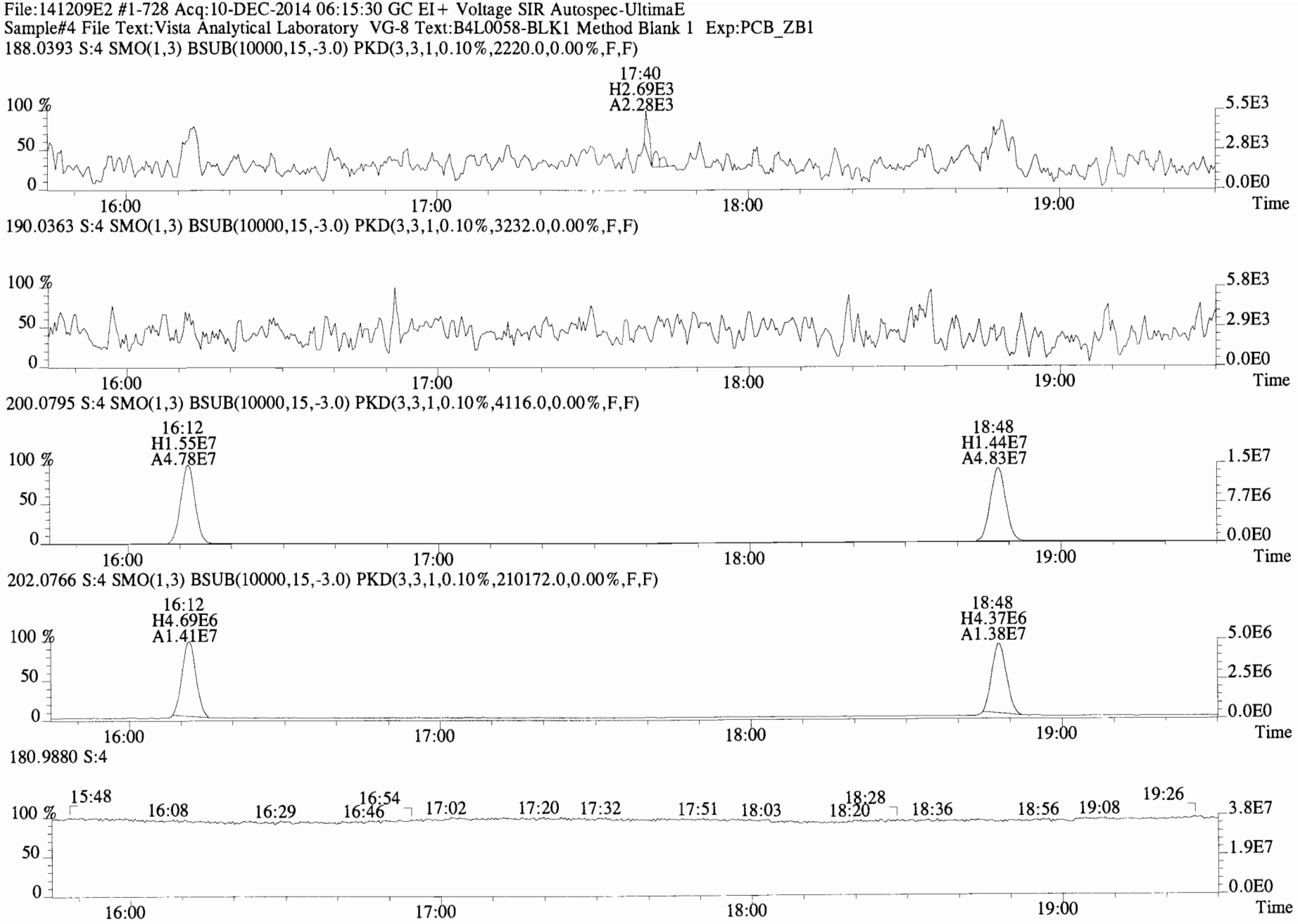
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	8.86e+07	1.60	y	1.00	25:59	2000
13C-PCB-31	8.16e+07	1.02	y	1.00	29:01	2000
13C-PCB-60	7.56e+07	0.79	y	1.00	36:47	2000
13C-PCB-111	3.96e+07	1.66	y	1.00	39:15	2000
13C-PCB-128	4.41e+07	1.29	y	1.00	46:22	2000
13C-PCB-205	4.37e+07	0.91	y	1.00	54:08	2000

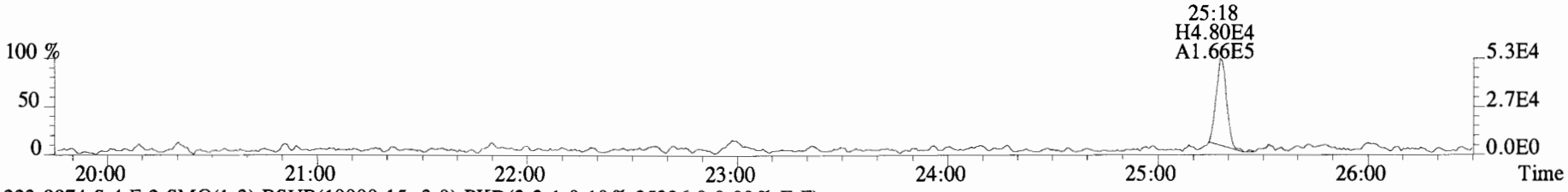
Analyst: 

Date: 12/14/14

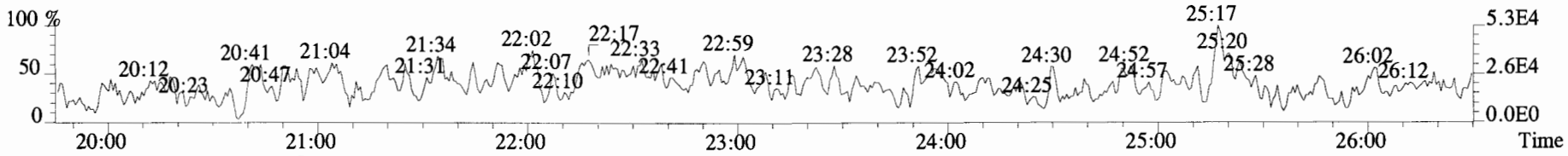
File:141209E2 #1-728 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1



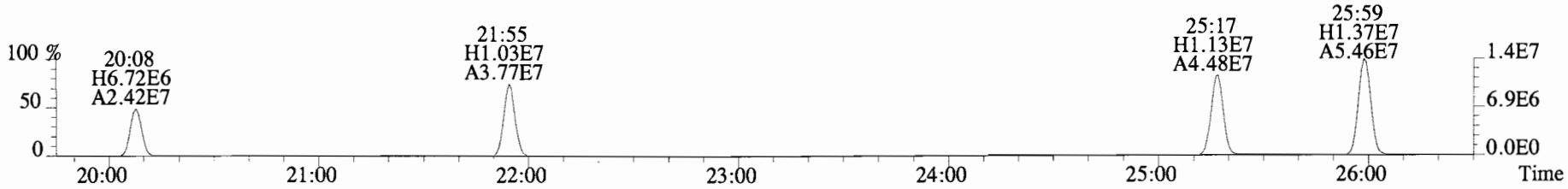
File:141209E2 #1-758 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3568.0,0.00%,F,F)



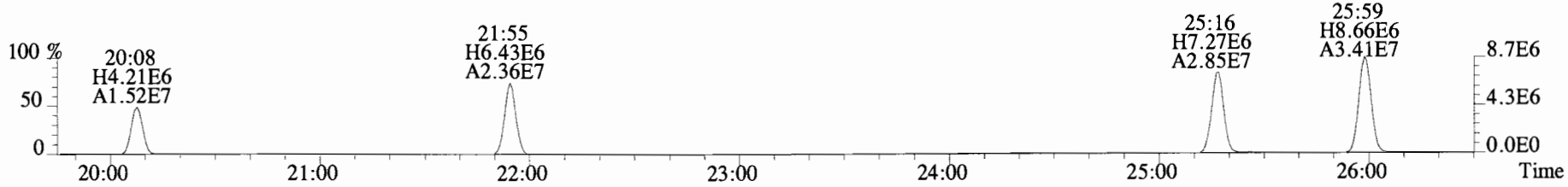
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25336.0,0.00%,F,F)



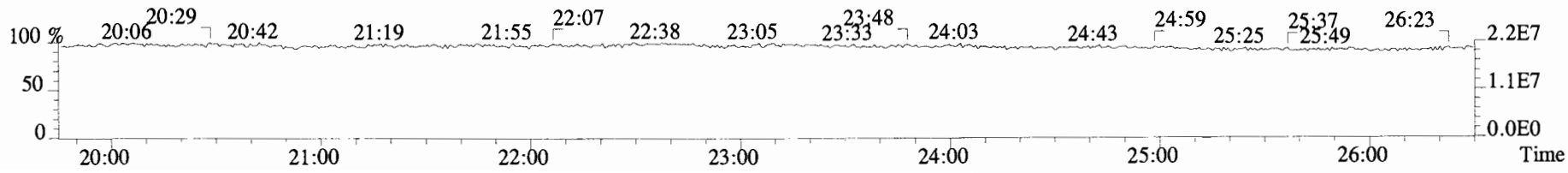
234.0406 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3964.0,0.00%,F,F)



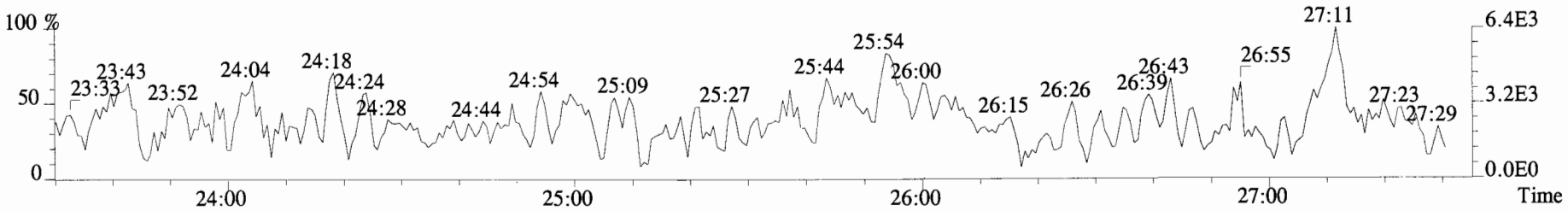
236.0376 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



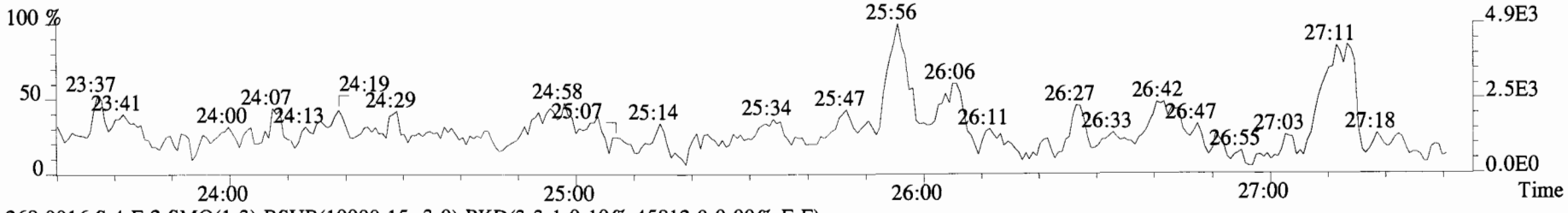
230.9856 S:4 F:2



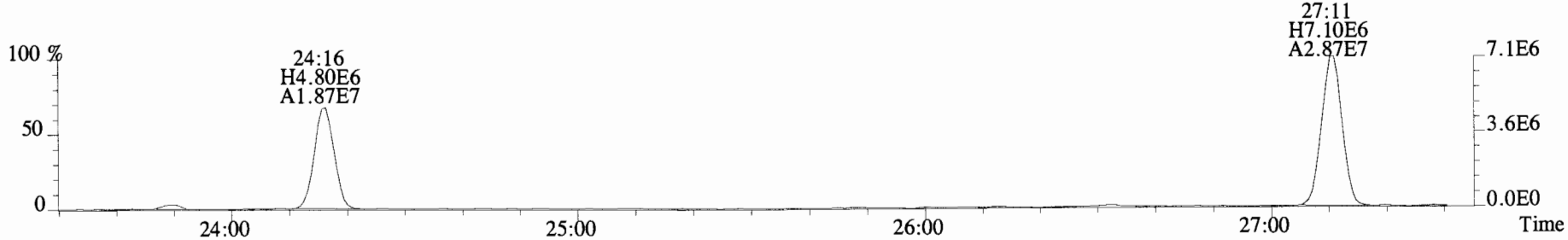
File:141209E2 #1-758 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3096.0,0.00%,F,F)



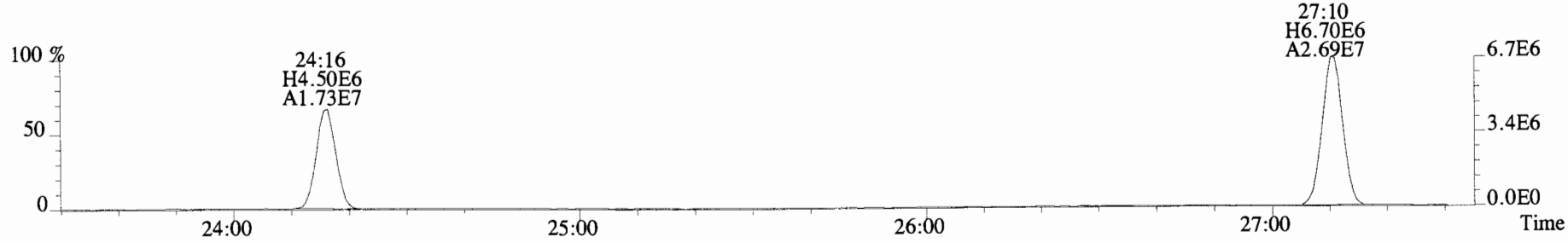
257.9584 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1604.0,0.00%,F,F)



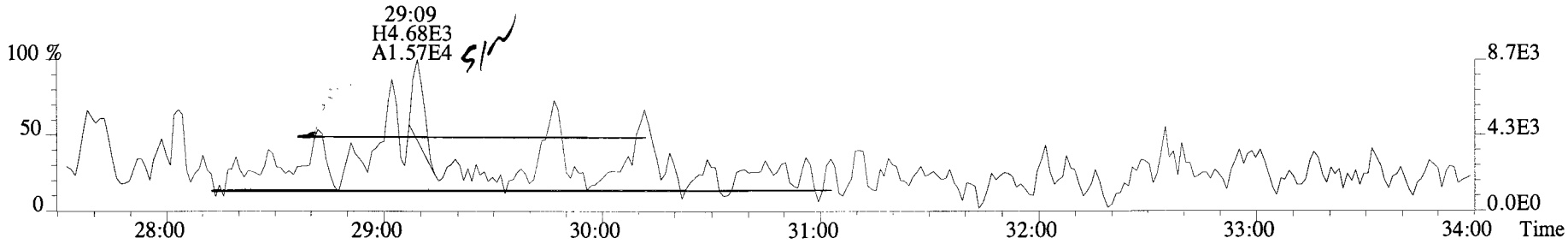
268.0016 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,45812.0,0.00%,F,F)



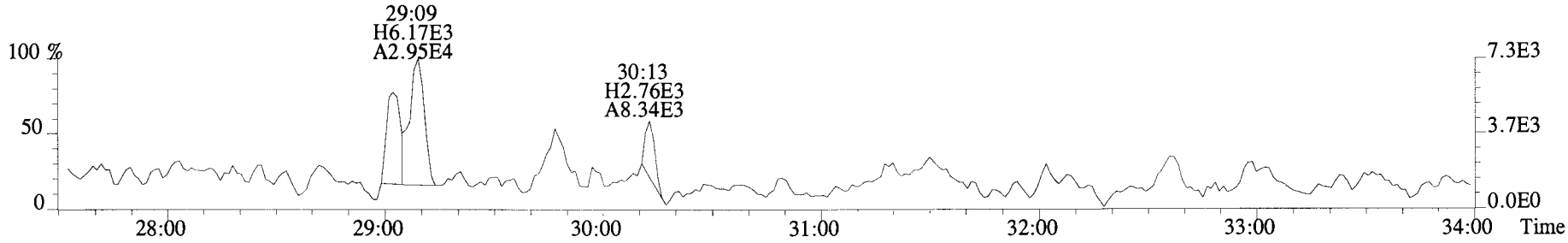
269.9986 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30064.0,0.00%,F,F)



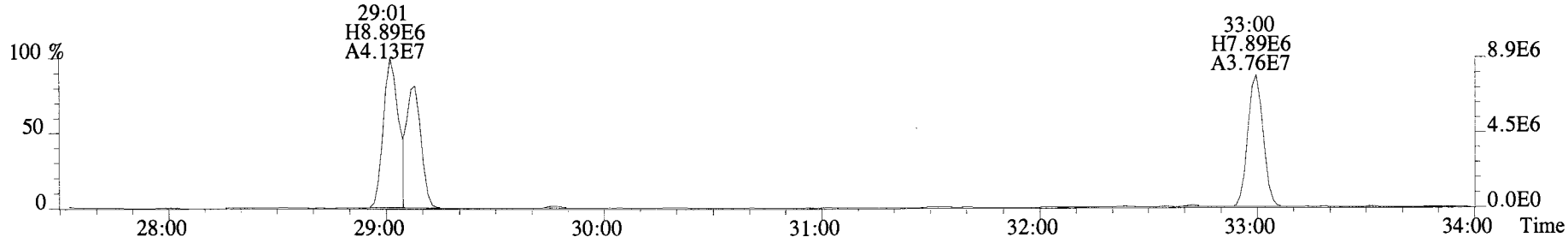
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2872.0,0.00%,F,F)



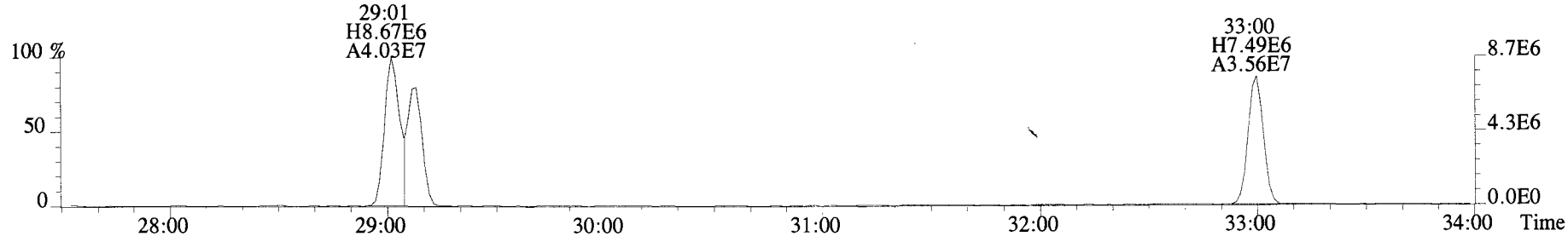
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



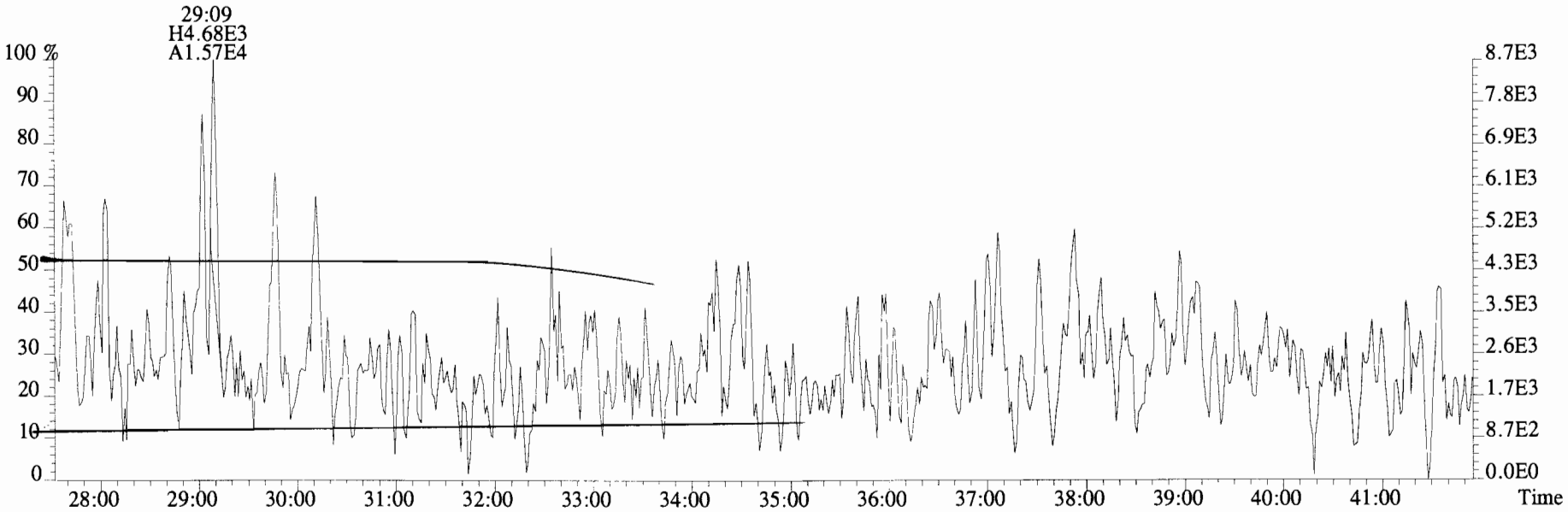
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,47832.0,0.00%,F,F)



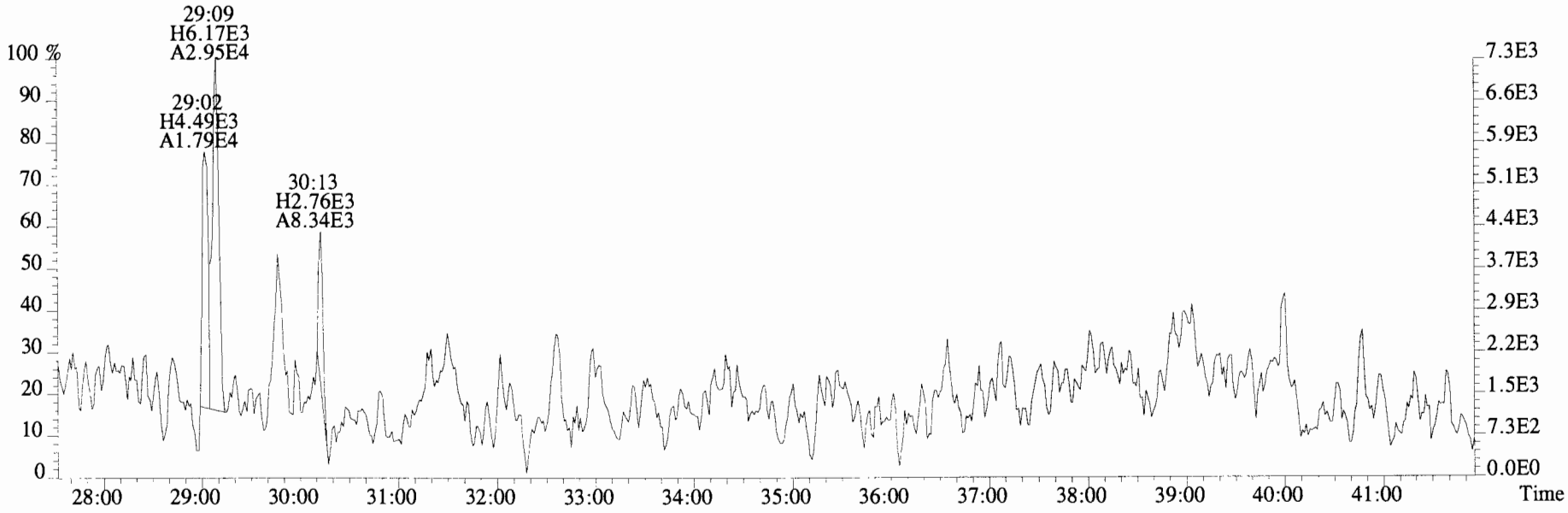
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,24112.0,0.00%,F,F)



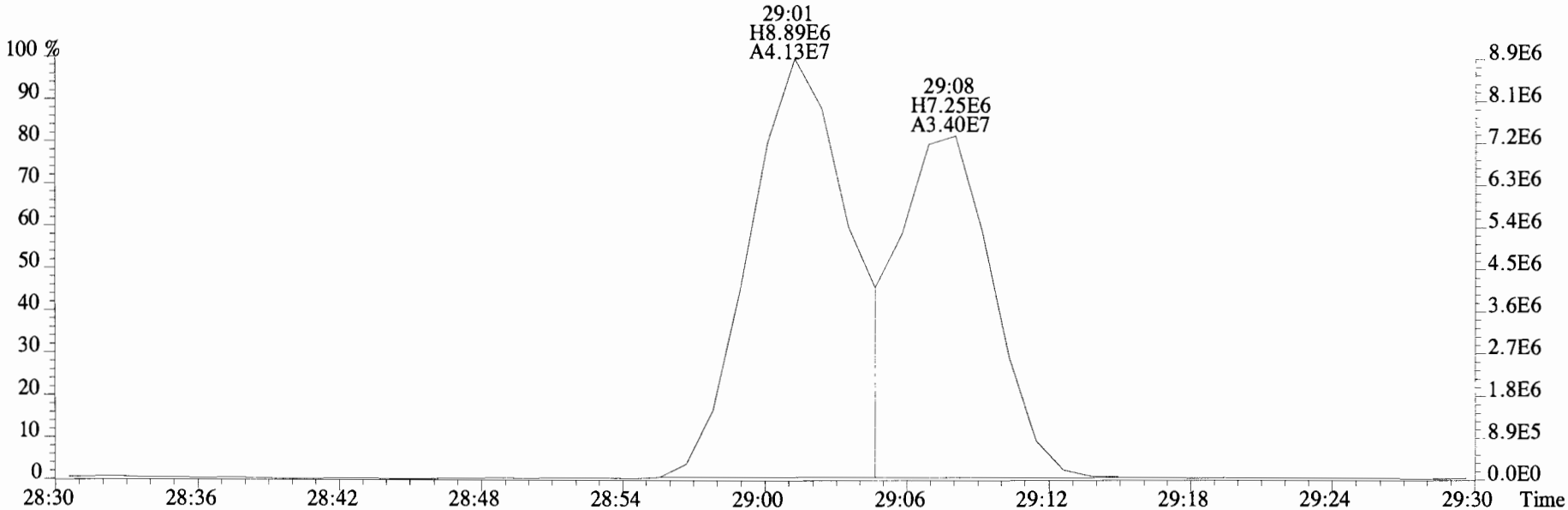
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2872.0,0.00%,F,F)



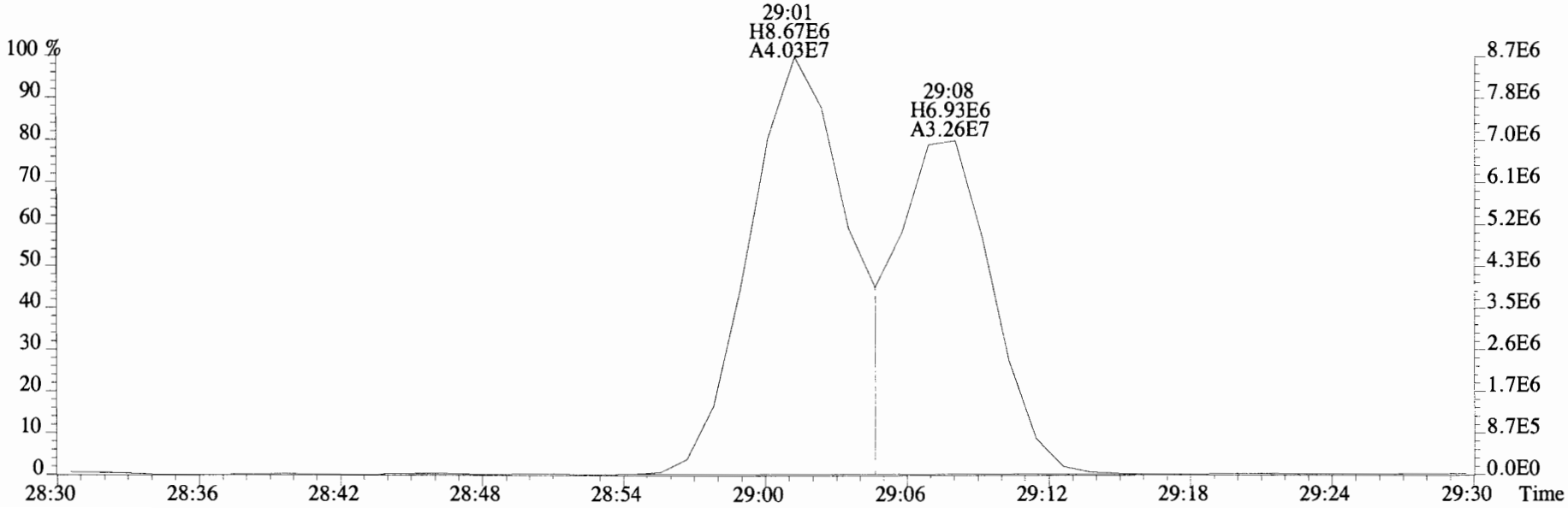
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)

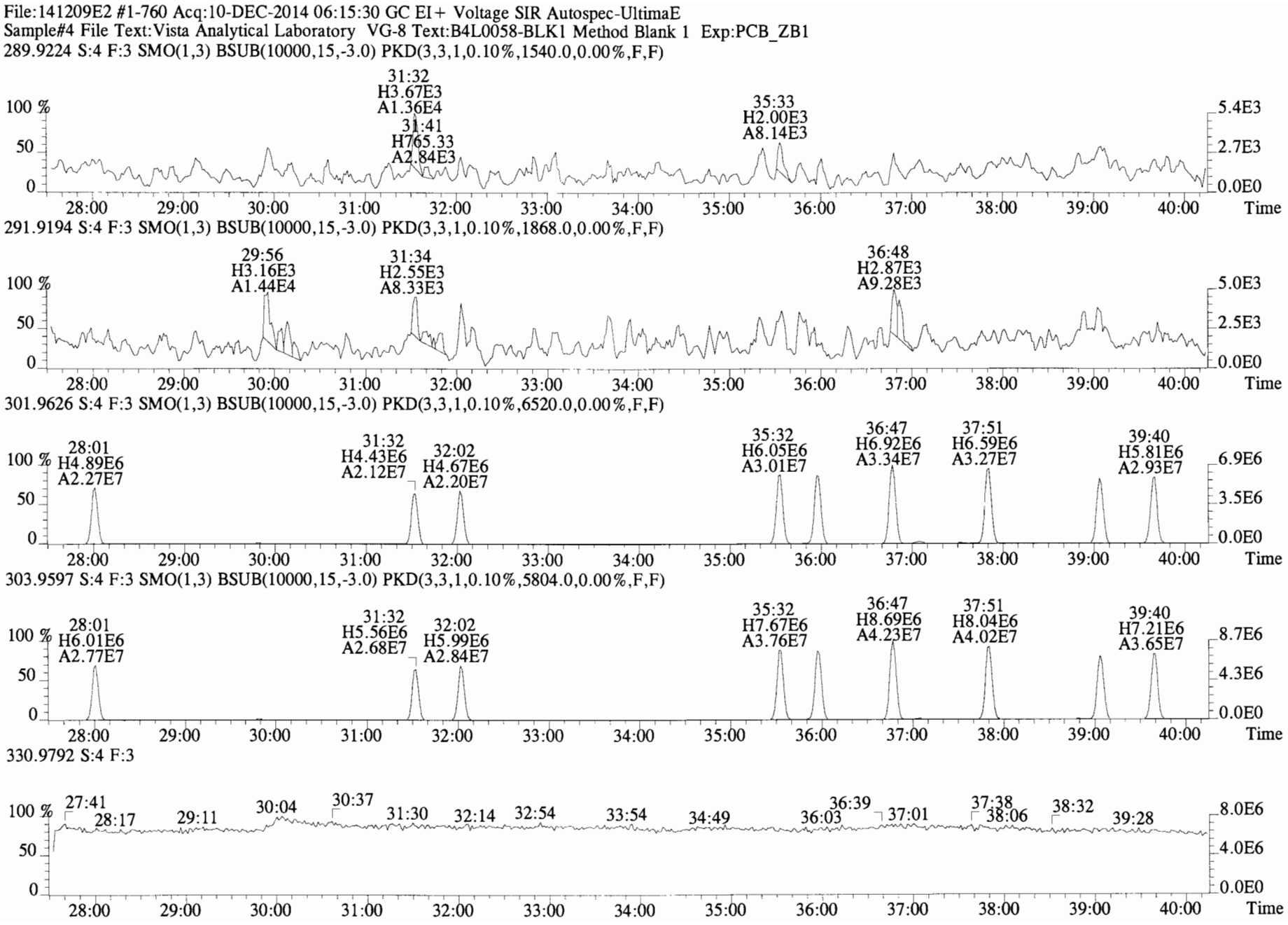


File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,47832.0,0.00%,F,F)

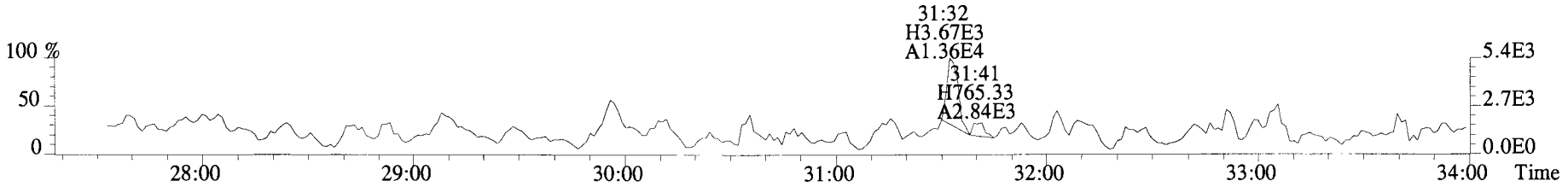


269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,24112.0,0.00%,F,F)

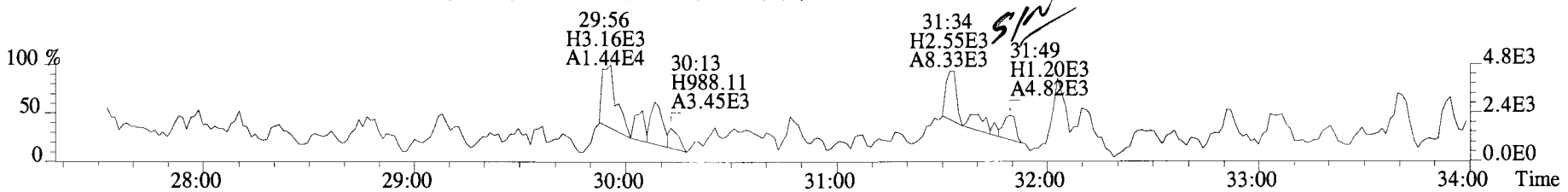



File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)
31:32 H3.67E3 A1.36E4
31:41 H765.33 A2.84E3
35:33 H2.00E3 A8.14E3
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1868.0,0.00%,F,F)
29:56 H3.16E3 A1.44E4
31:34 H2.55E3 A8.33E3
36:48 H2.87E3 A9.28E3
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6520.0,0.00%,F,F)
28:01 H4.89E6 A2.27E7
31:32 H4.43E6 A2.12E7
32:02 H4.67E6 A2.20E7
35:32 H6.05E6 A3.01E7
36:47 H6.92E6 A3.34E7
37:51 H6.59E6 A3.27E7
39:40 H5.81E6 A2.93E7
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5804.0,0.00%,F,F)
28:01 H6.01E6 A2.77E7
31:32 H5.56E6 A2.68E7
32:02 H5.99E6 A2.84E7
35:32 H7.67E6 A3.76E7
36:47 H8.69E6 A4.23E7
37:51 H8.04E6 A4.02E7
39:40 H7.21E6 A3.65E7
330.9792 S:4 F:3
27:41 28:17 29:11 30:04 30:37 31:30 32:14 32:54 33:54 34:49 36:03 36:39 37:01 37:38 38:06 38:32 39:28
100 %
50
0
28:00 29:00 30:00 31:00 32:00 33:00 34:00 35:00 36:00 37:00 38:00 39:00 40:00 Time
5.4E3 2.7E3 0.0E0
5.0E3 2.5E3 0.0E0
6.9E6 3.5E6 0.0E0
8.7E6 4.3E6 0.0E0
8.0E6 4.0E6 0.0E0

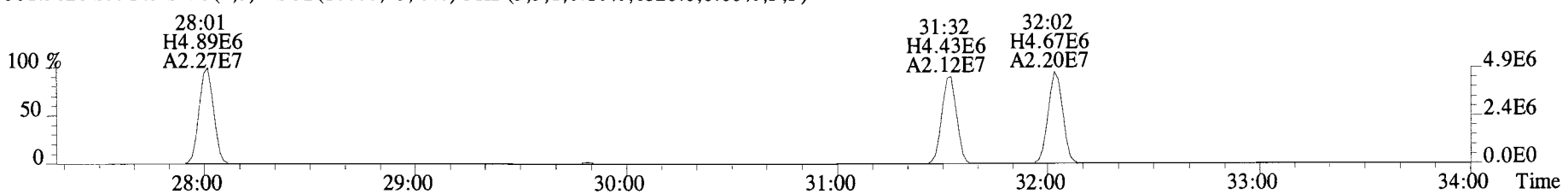
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)



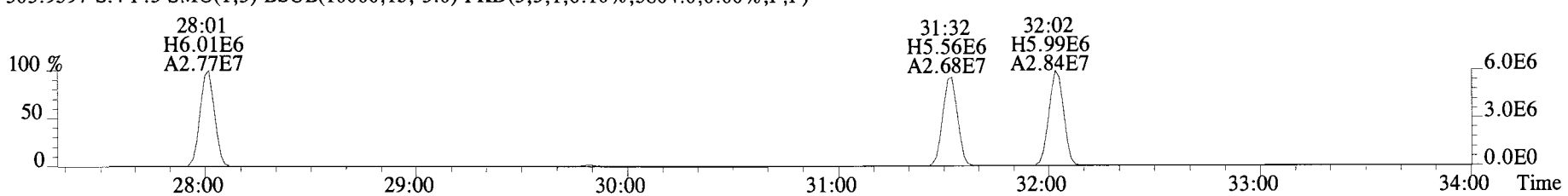
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1868.0,0.00%,F,F)



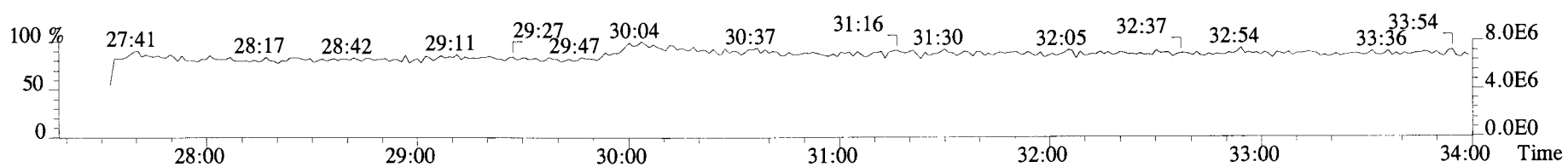
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6520.0,0.00%,F,F)

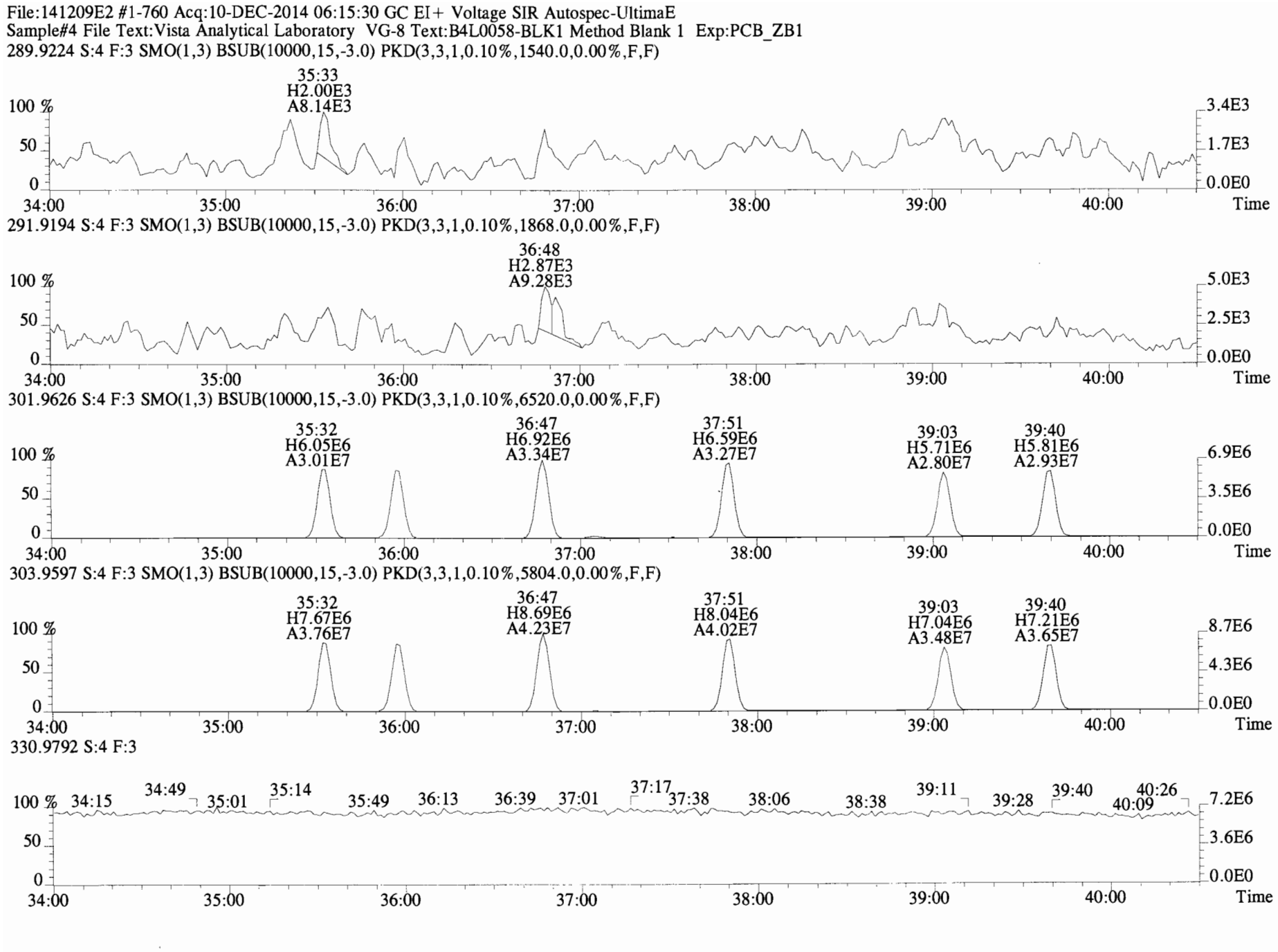


303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5804.0,0.00%,F,F)

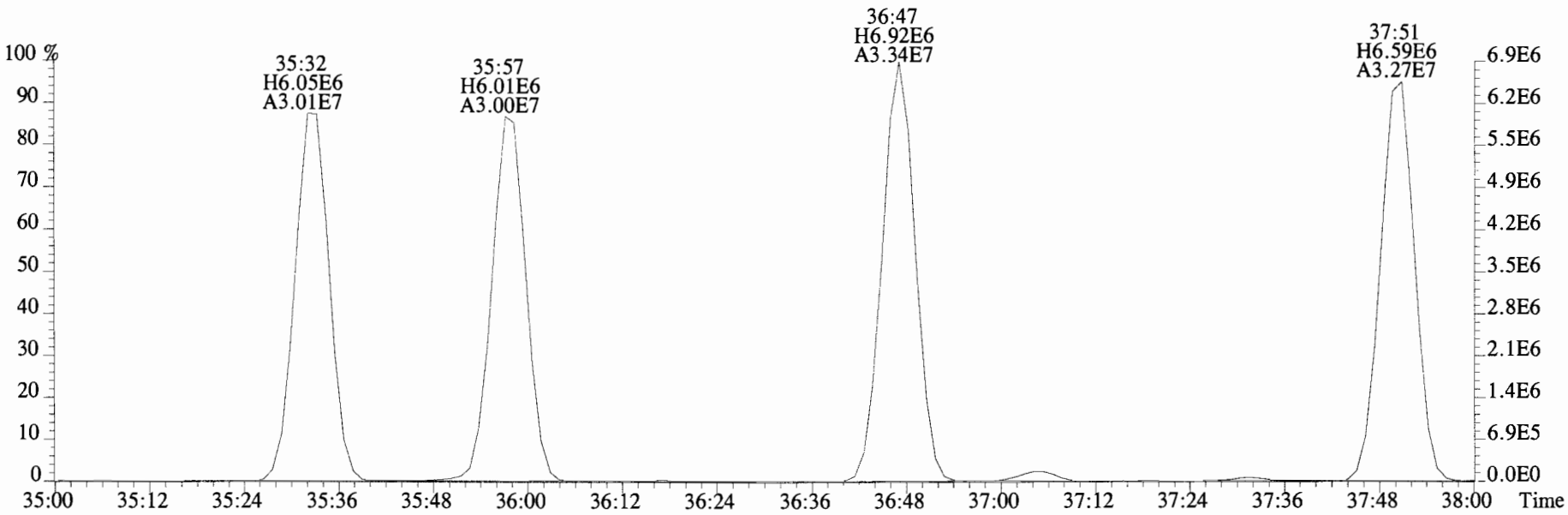


330.9792 S:4 F:3

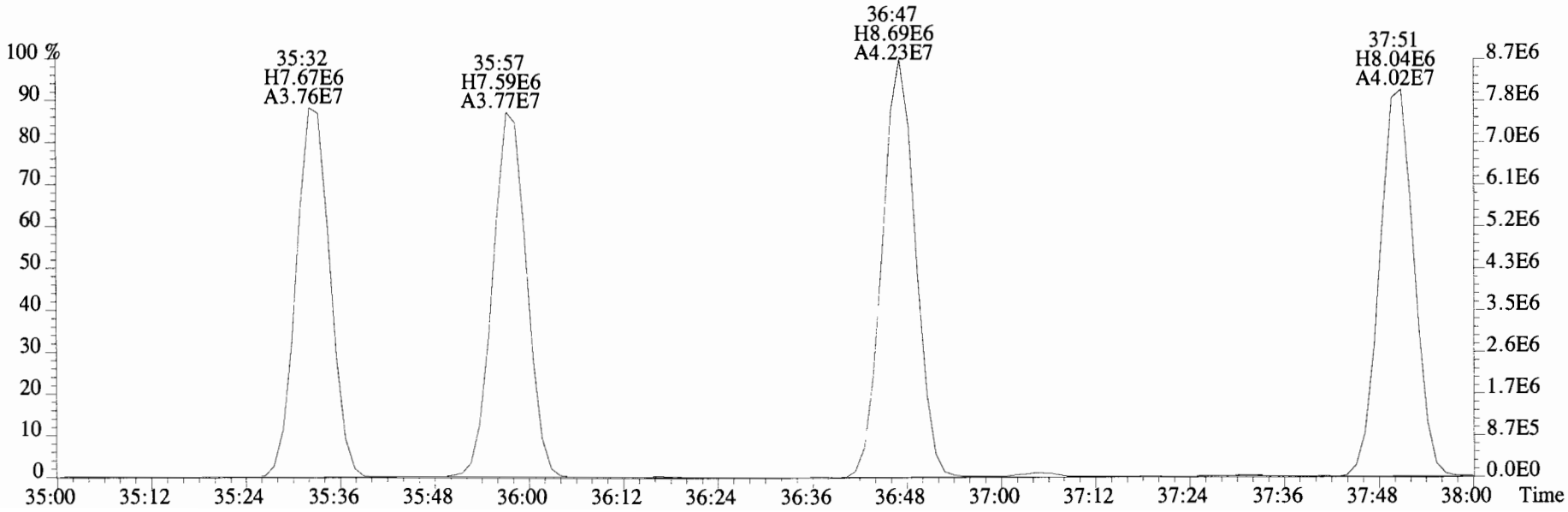



File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)
35:33
H2.00E3
A8.14E3
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1868.0,0.00%,F,F)
36:48
H2.87E3
A9.28E3
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6520.0,0.00%,F,F)
35:32
H6.05E6
A3.01E7
36:47
H6.92E6
A3.34E7
37:51
H6.59E6
A3.27E7
39:03
H5.71E6
A2.80E7
39:40
H5.81E6
A2.93E7
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5804.0,0.00%,F,F)
35:32
H7.67E6
A3.76E7
36:47
H8.69E6
A4.23E7
37:51
H8.04E6
A4.02E7
39:03
H7.04E6
A3.48E7
39:40
H7.21E6
A3.65E7
330.9792 S:4 F:3
34:15
34:49
35:01
35:14
35:49
36:13
36:39
37:01
37:17
37:38
38:06
38:38
39:11
39:28
39:40
40:09
40:26
100 %
50
0
34:00
35:00
36:00
37:00
38:00
39:00
40:00
Time
3.4E3
1.7E3
0.0E0
5.0E3
2.5E3
0.0E0
6.9E6
3.5E6
0.0E0
8.7E6
4.3E6
0.0E0
7.2E6
3.6E6
0.0E0

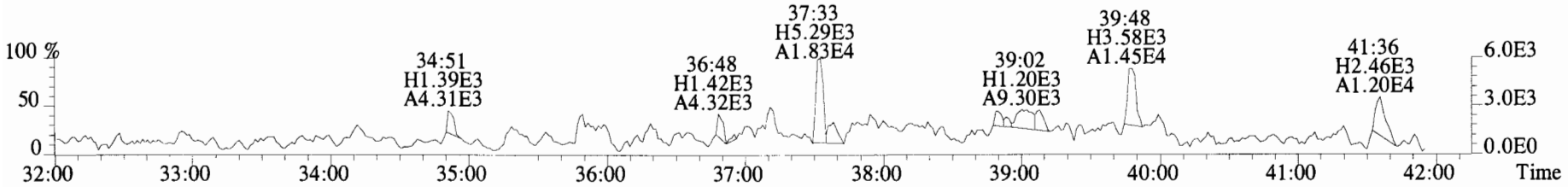
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6520.0,0.00%,F,F)



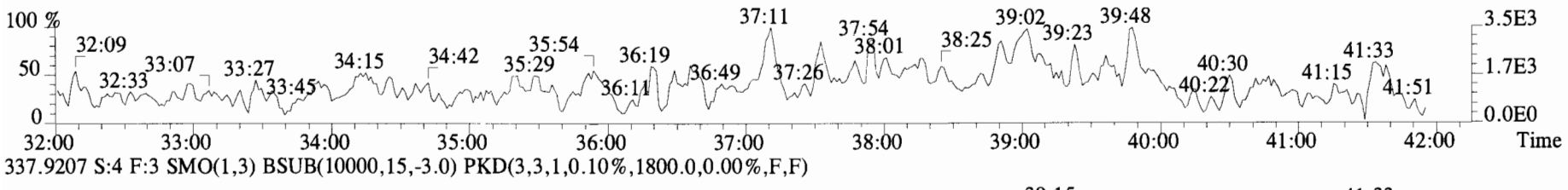
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5804.0,0.00%,F,F)



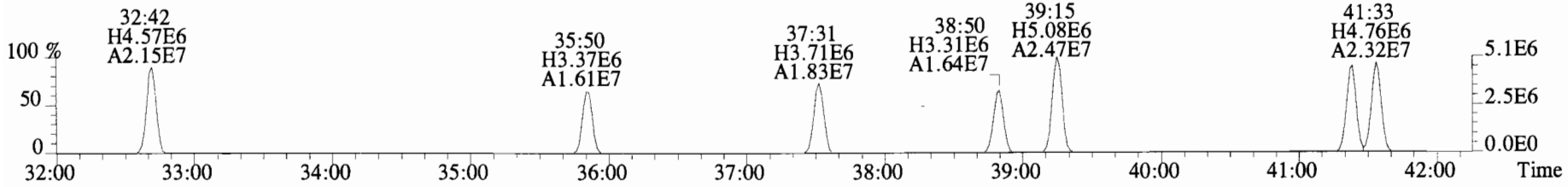
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1244.0,0.00%,F,F)



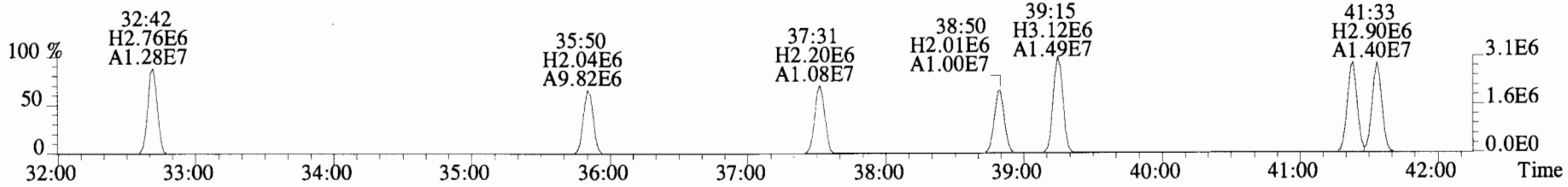
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1572.0,0.00%,F,F)



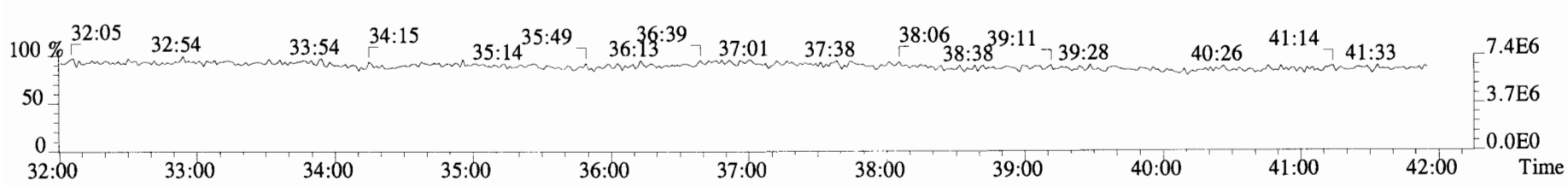
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1800.0,0.00%,F,F)



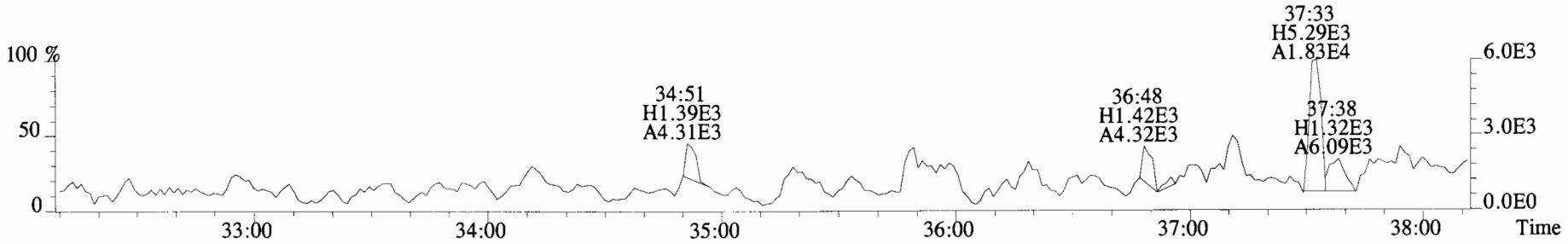
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)



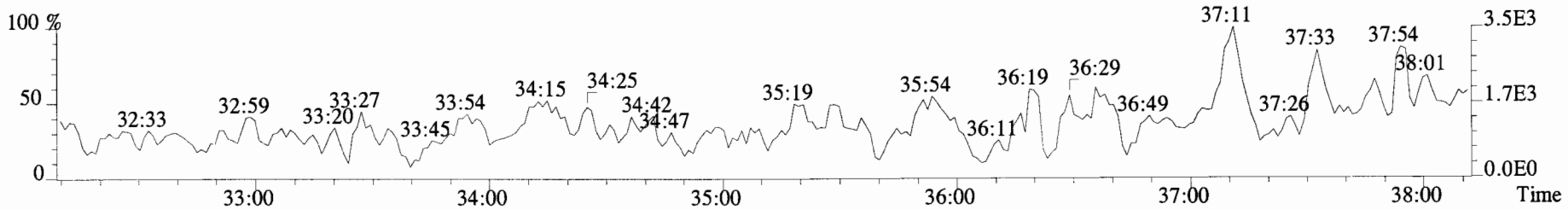
330.9792 S:4 F:3



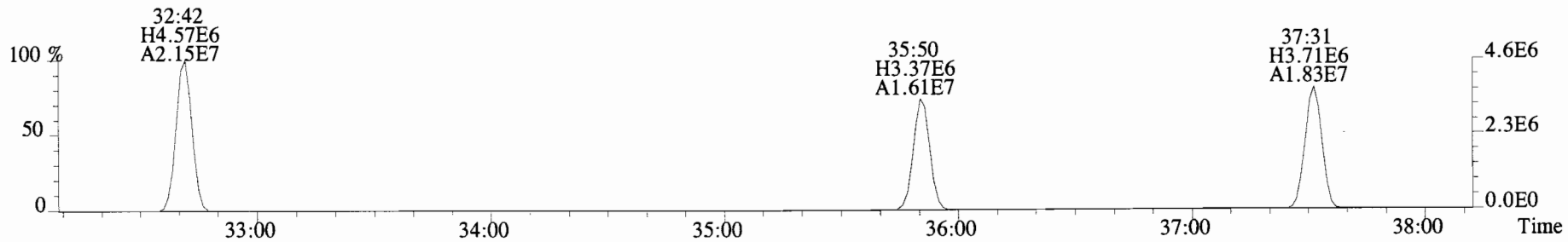
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1244.0,0.00%,F,F)



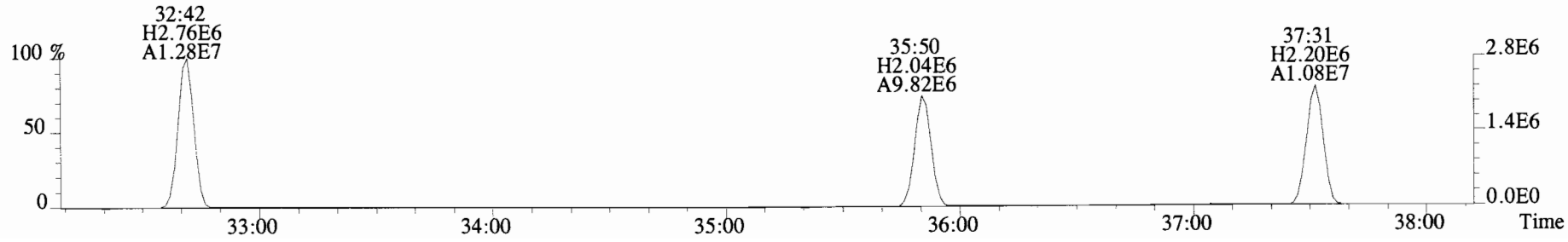
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1572.0,0.00%,F,F)



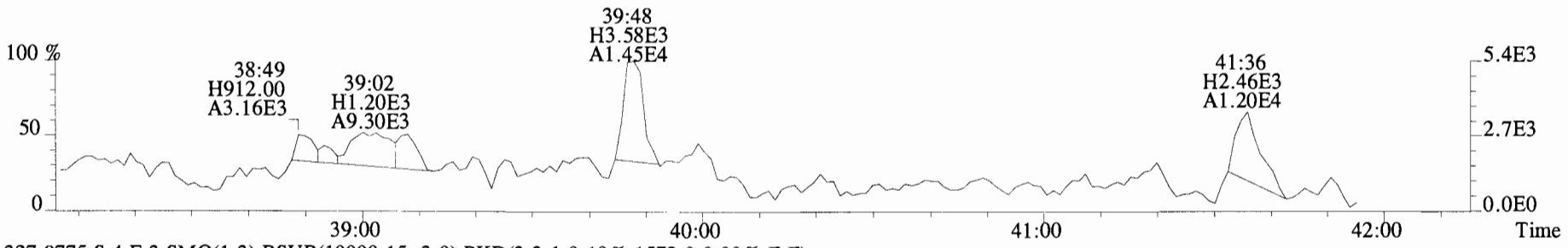
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1800.0,0.00%,F,F)



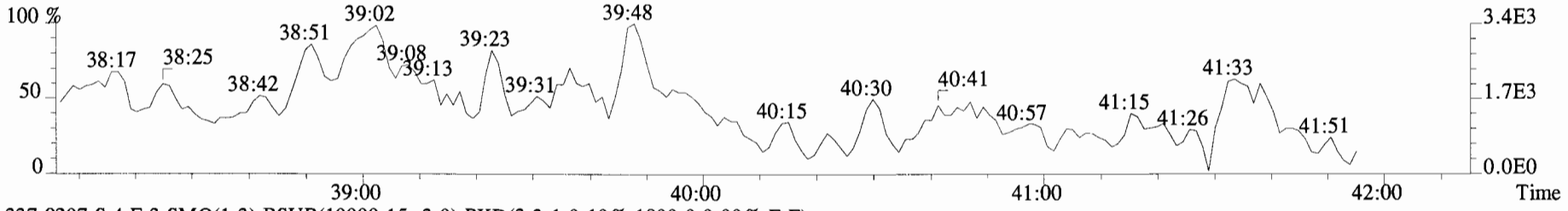
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)



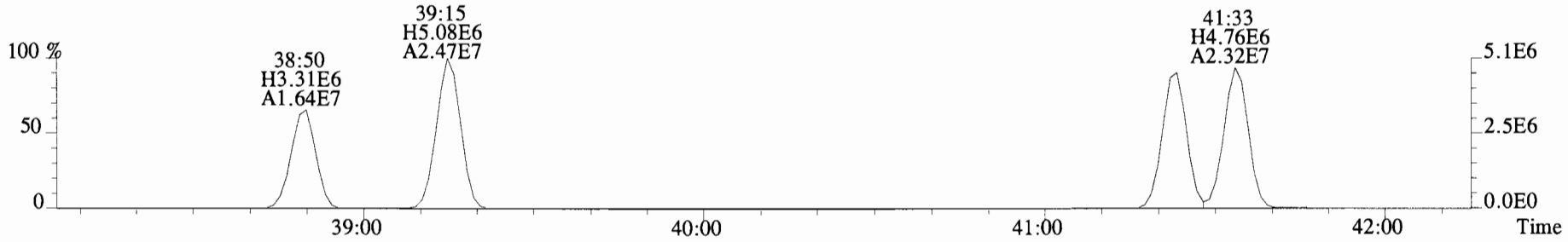
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1244.0,0.00%,F,F)



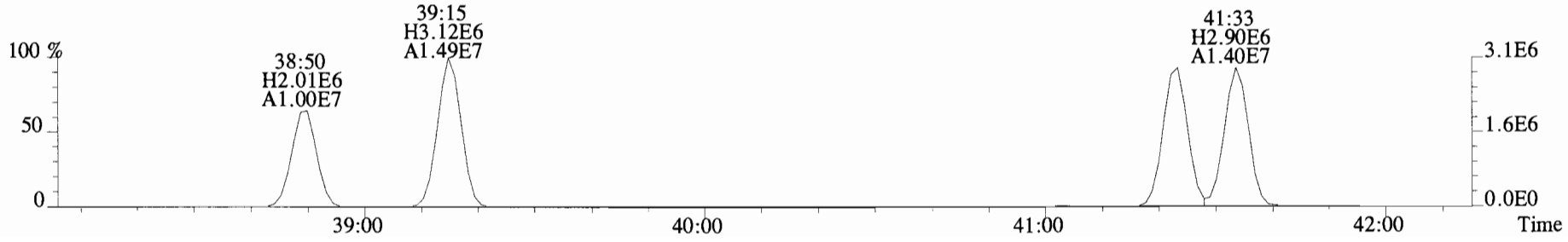
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1572.0,0.00%,F,F)



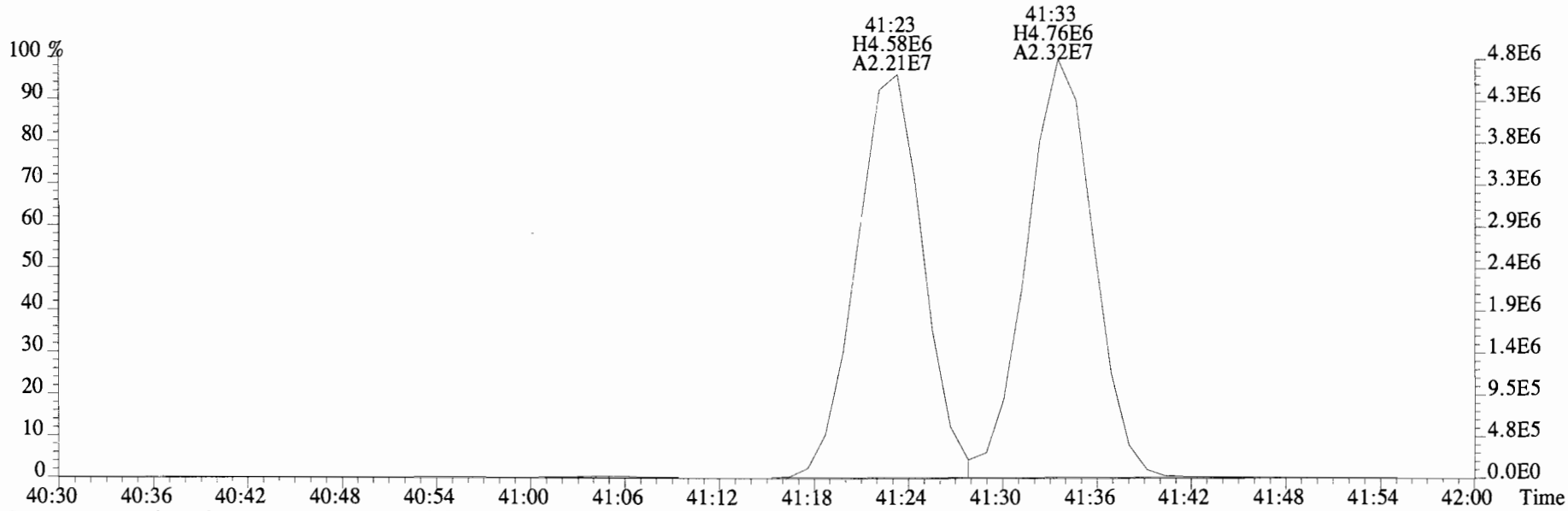
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1800.0,0.00%,F,F)



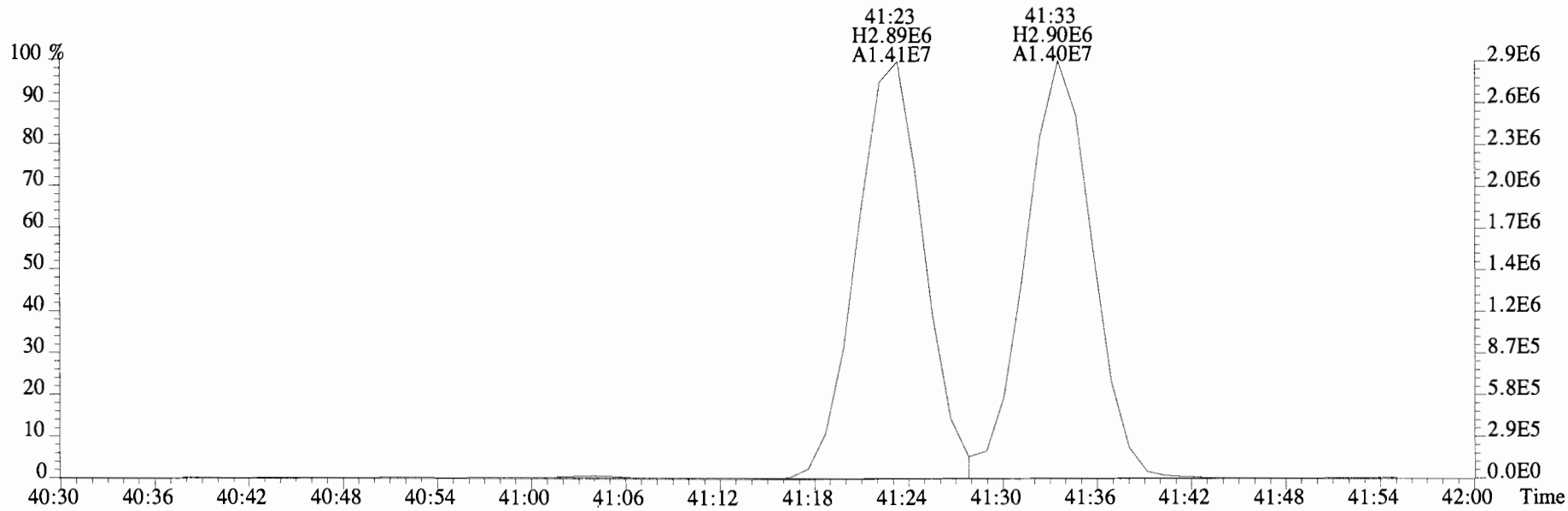
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)

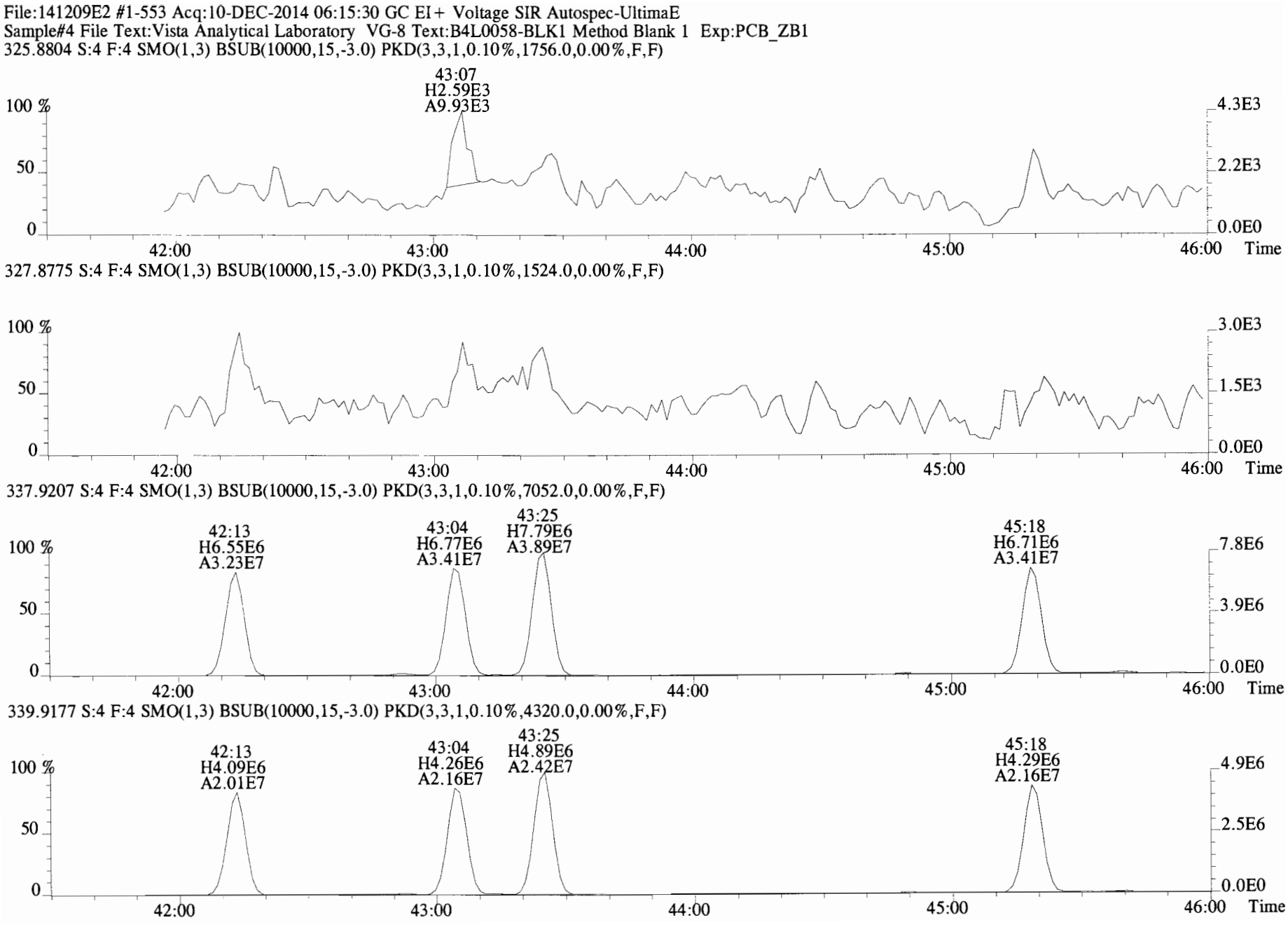


File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1800.0,0.00%,F,F)

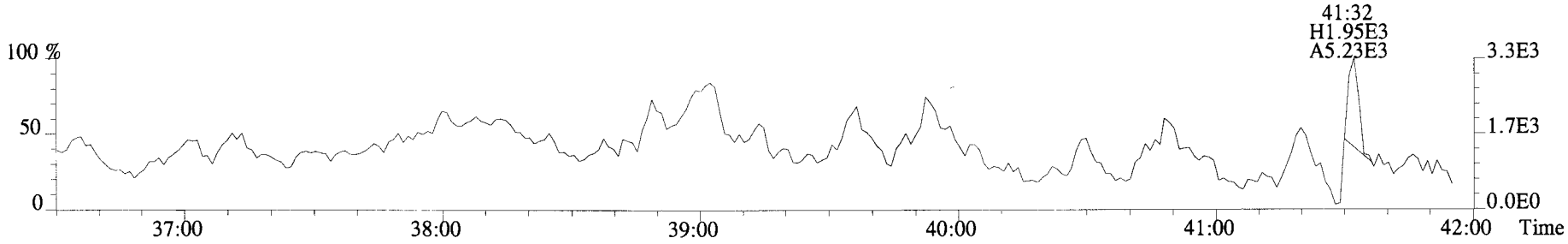


339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)

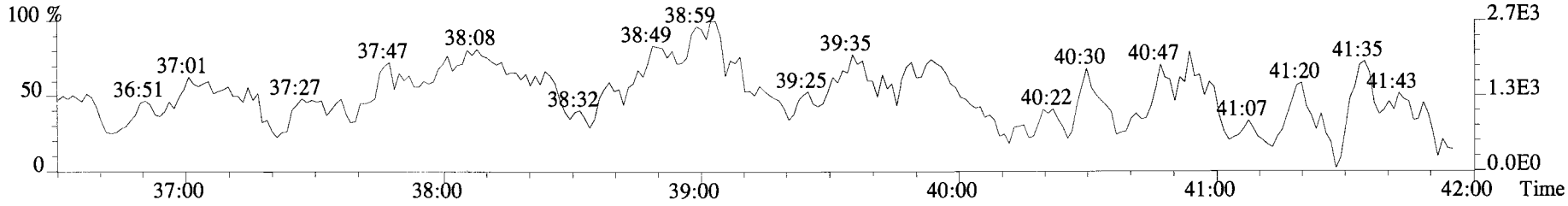



File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1756.0,0.00%,F,F)
43:07
H2.59E3
A9.93E3
100 %
50
0
4.3E3
2.2E3
0.0E0
42:00
43:00
44:00
45:00
46:00
Time
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)
100 %
50
0
3.0E3
1.5E3
0.0E0
42:00
43:00
44:00
45:00
46:00
Time
337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7052.0,0.00%,F,F)
42:13
H6.55E6
A3.23E7
43:04
H6.77E6
A3.41E7
43:25
H7.79E6
A3.89E7
45:18
H6.71E6
A3.41E7
100 %
50
0
7.8E6
3.9E6
0.0E0
42:00
43:00
44:00
45:00
46:00
Time
339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4320.0,0.00%,F,F)
42:13
H4.09E6
A2.01E7
43:04
H4.26E6
A2.16E7
43:25
H4.89E6
A2.42E7
45:18
H4.29E6
A2.16E7
100 %
50
0
4.9E6
2.5E6
0.0E0
42:00
43:00
44:00
45:00
46:00
Time

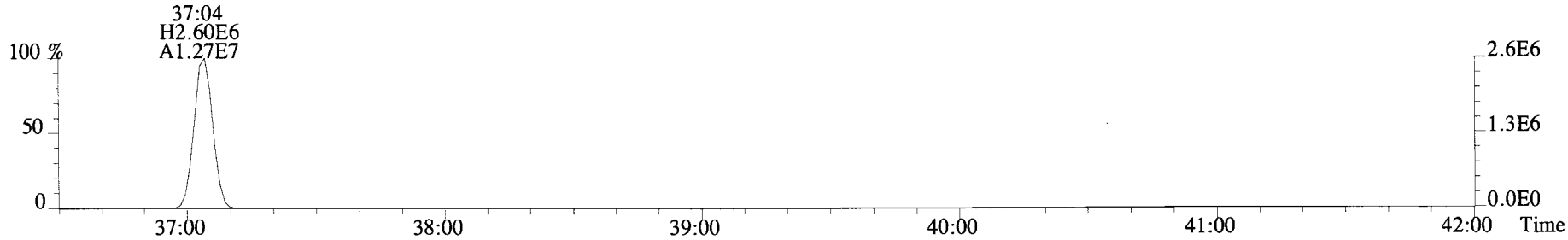
File:141209E2 #1-760 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1460.0,0.00%,F,F)



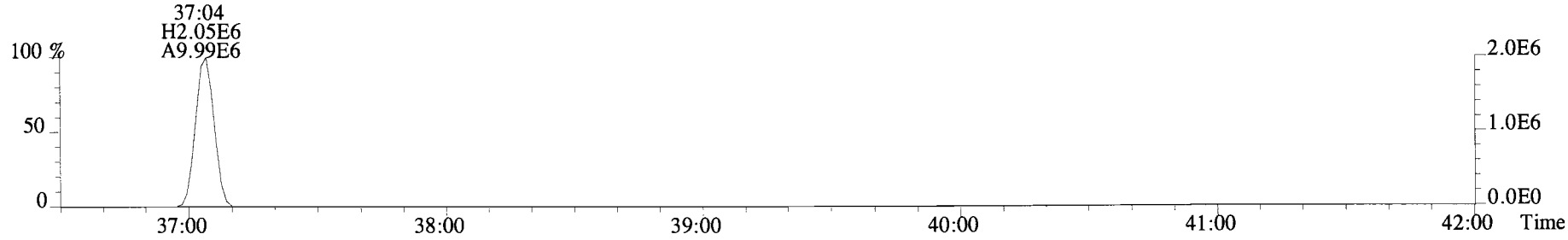
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1456.0,0.00%,F,F)

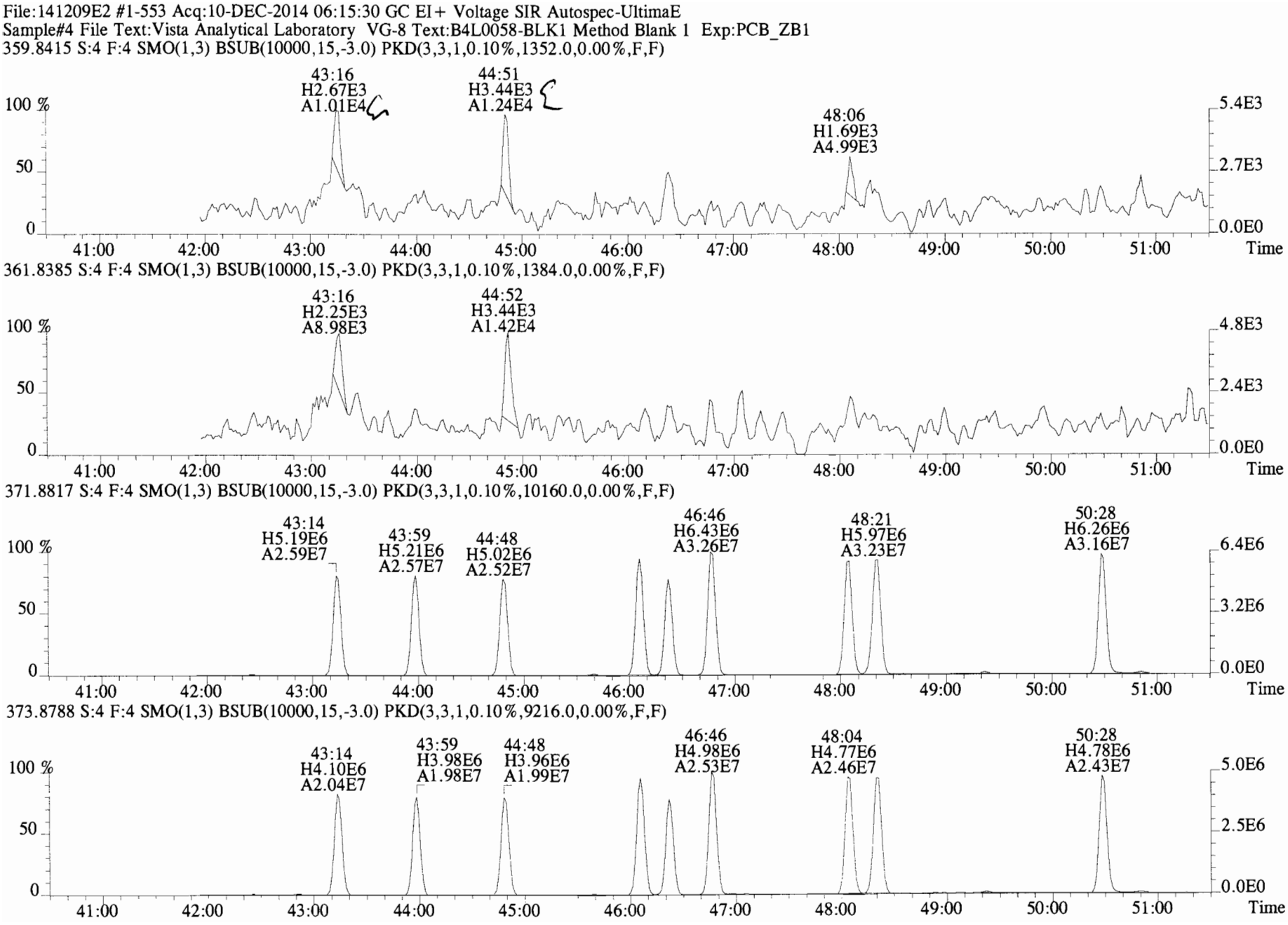


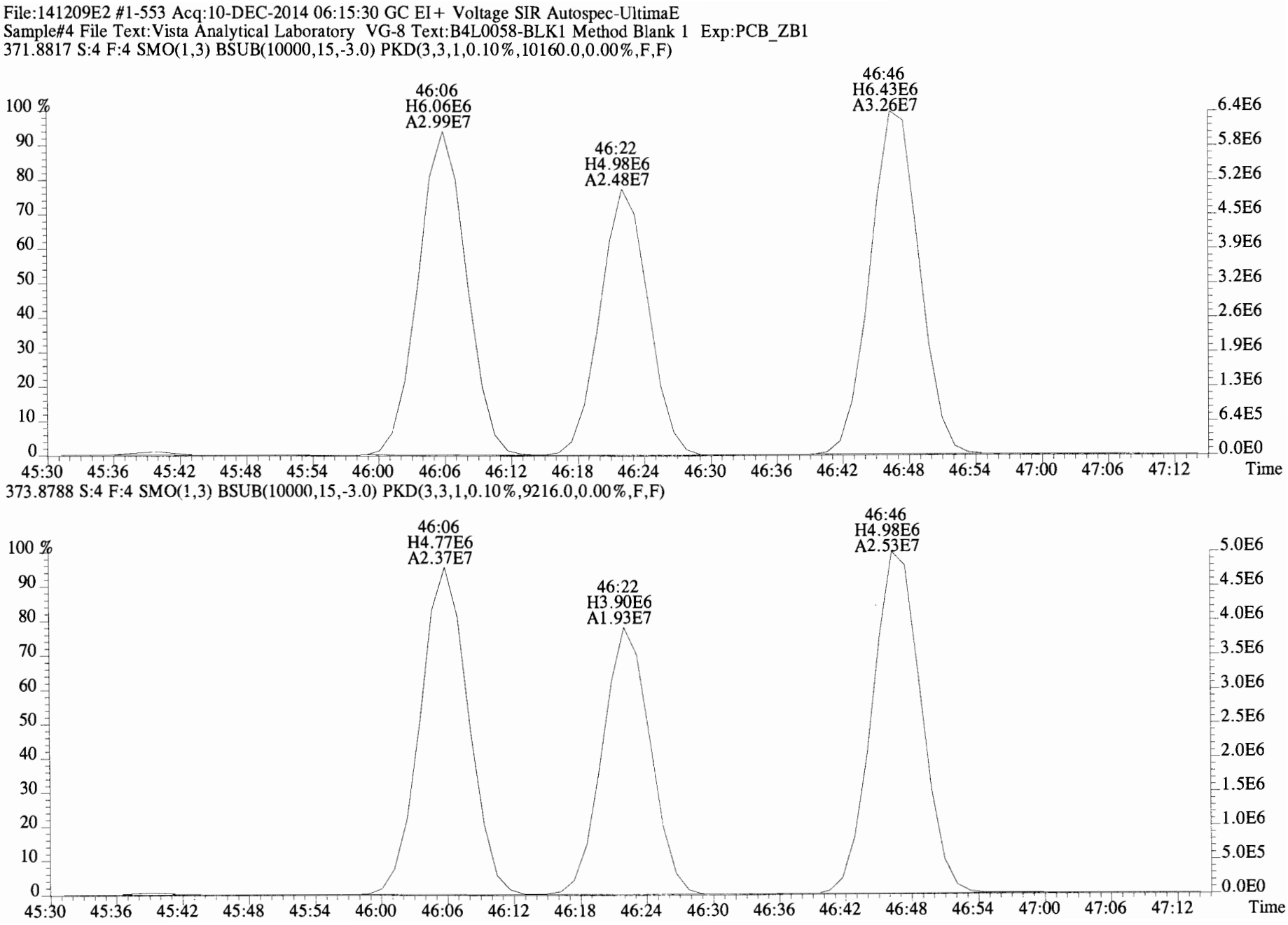
371.8817 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1432.0,0.00%,F,F)



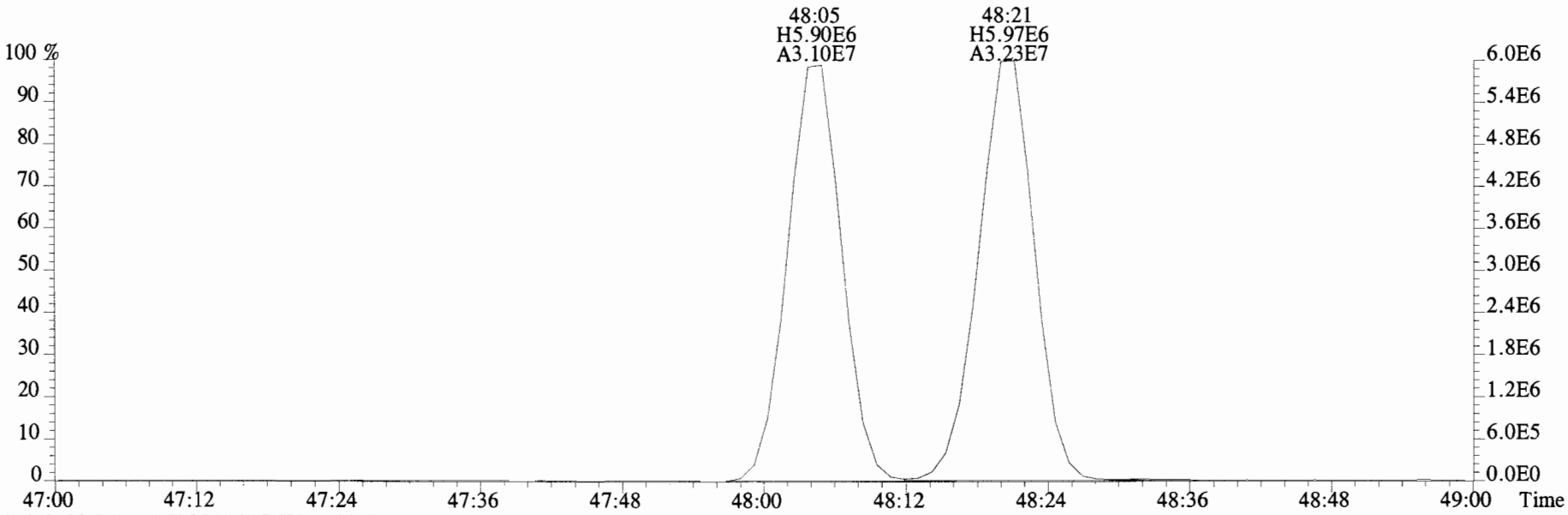
373.8788 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1512.0,0.00%,F,F)



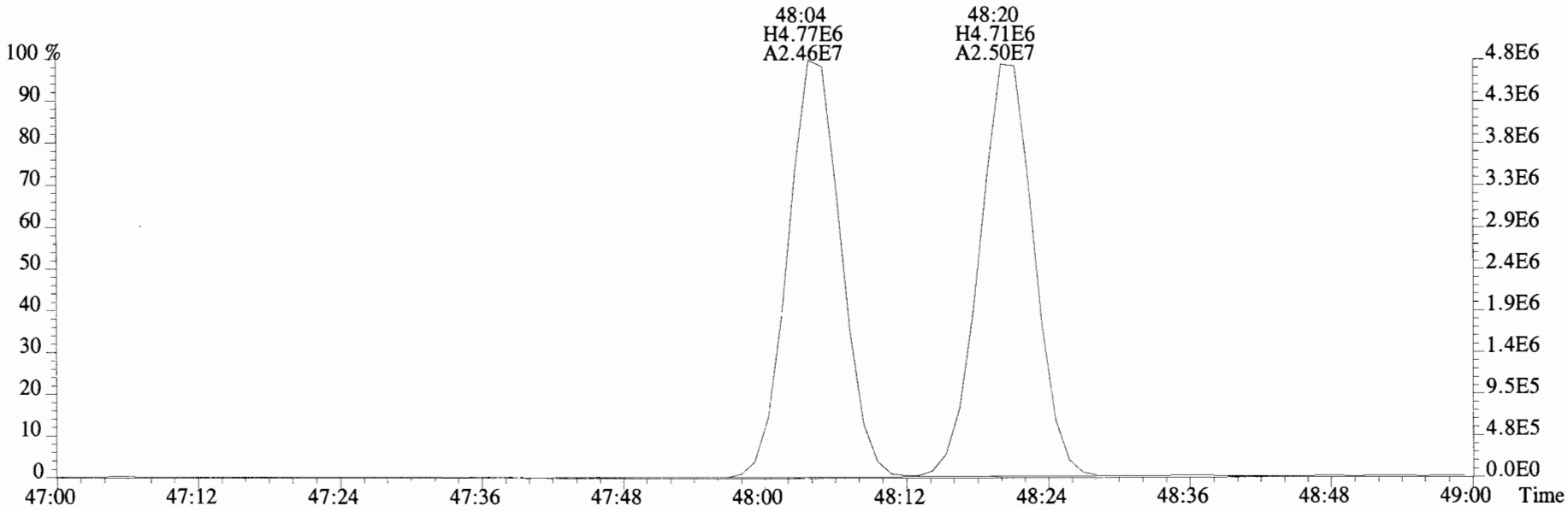

File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1352.0,0.00%,F,F)
43:16 H2.67E3 A1.01E4
44:51 H3.44E3 A1.24E4
48:06 H1.69E3 A4.99E3
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1384.0,0.00%,F,F)
43:16 H2.25E3 A8.98E3
44:52 H3.44E3 A1.42E4
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10160.0,0.00%,F,F)
43:14 H5.19E6 A2.59E7
43:59 H5.21E6 A2.57E7
44:48 H5.02E6 A2.52E7
46:46 H6.43E6 A3.26E7
48:21 H5.97E6 A3.23E7
50:28 H6.26E6 A3.16E7
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9216.0,0.00%,F,F)
43:14 H4.10E6 A2.04E7
43:59 H3.98E6 A1.98E7
44:48 H3.96E6 A1.99E7
46:46 H4.98E6 A2.53E7
48:04 H4.77E6 A2.46E7
50:28 H4.78E6 A2.43E7
100 %
50
0
41:00
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
Time
5.4E3
2.7E3
0.0E0
4.8E3
2.4E3
6.4E6
3.2E6
5.0E6
2.5E6


File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10160.0,0.00%,F,F)
46:06
H6.06E6
A2.99E7
46:22
H4.98E6
A2.48E7
46:46
H6.43E6
A3.26E7
100 %
90
80
70
60
50
40
30
20
10
0
6.4E6
5.8E6
5.2E6
4.5E6
3.9E6
3.2E6
2.6E6
1.9E6
1.3E6
6.4E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9216.0,0.00%,F,F)
46:06
H4.77E6
A2.37E7
46:22
H3.90E6
A1.93E7
46:46
H4.98E6
A2.53E7
100 %
90
80
70
60
50
40
30
20
10
0
5.0E6
4.5E6
4.0E6
3.5E6
3.0E6
2.5E6
2.0E6
1.5E6
1.0E6
5.0E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time

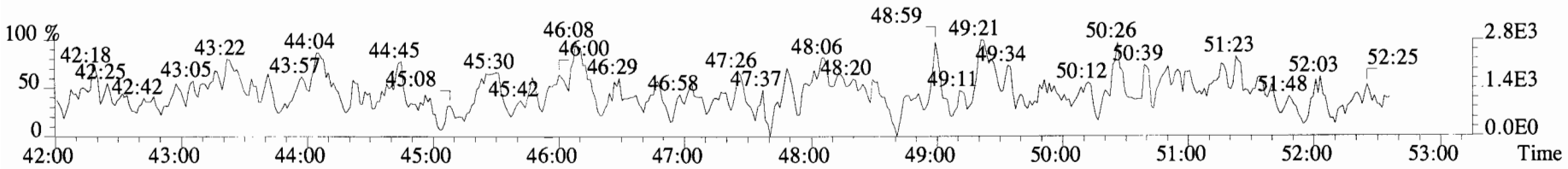
File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10160.0,0.00%,F,F)



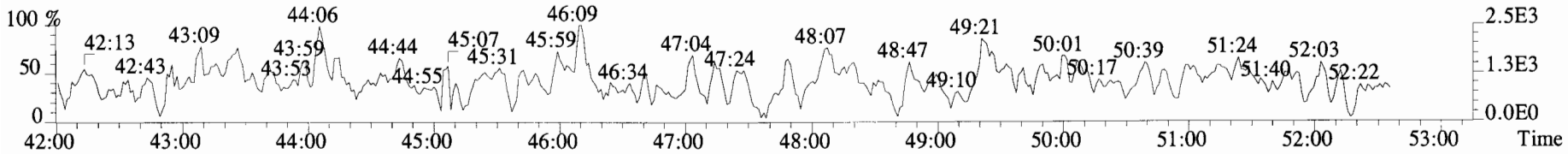
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9216.0,0.00%,F,F)



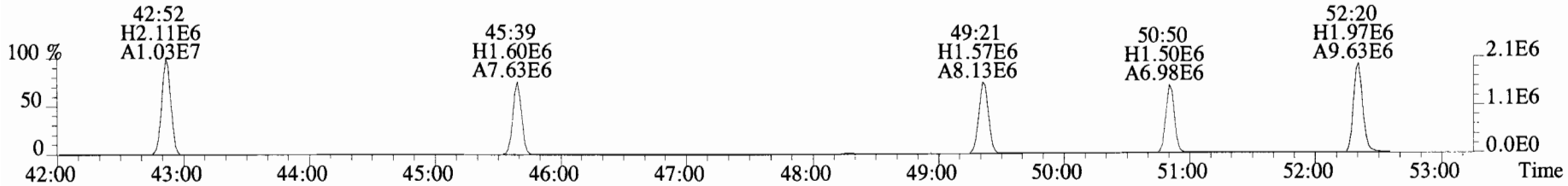
File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1552.0,0.00%,F,F)



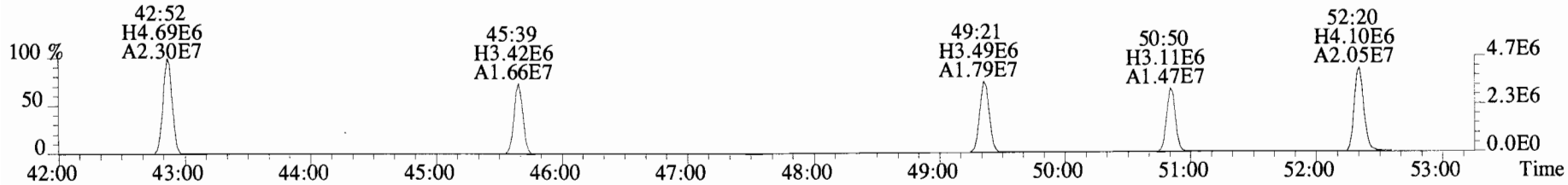
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1368.0,0.00%,F,F)



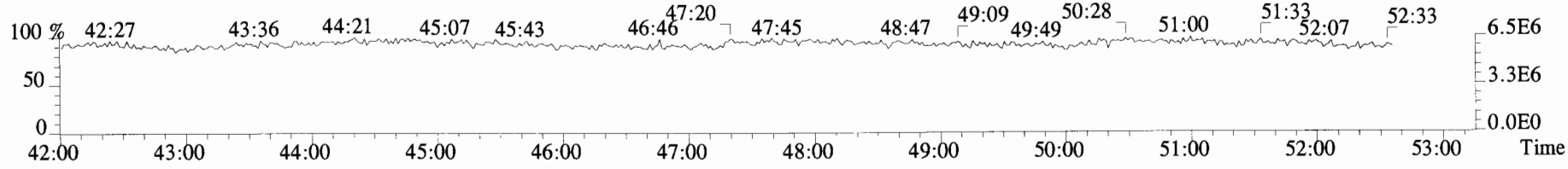
403.8457 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2968.0,0.00%,F,F)



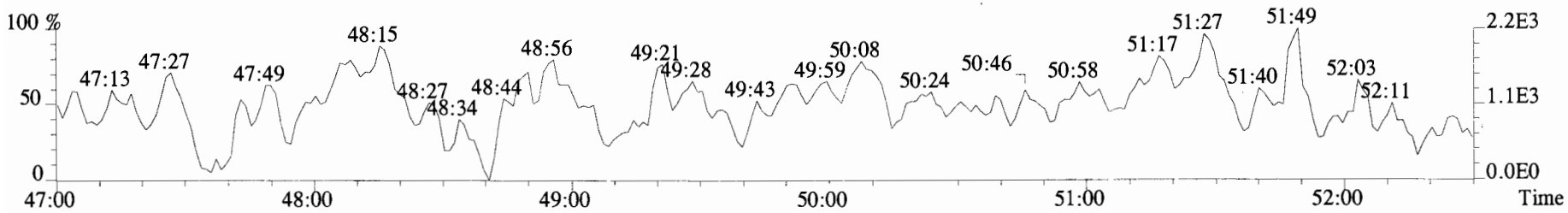
405.8428 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4900.0,0.00%,F,F)



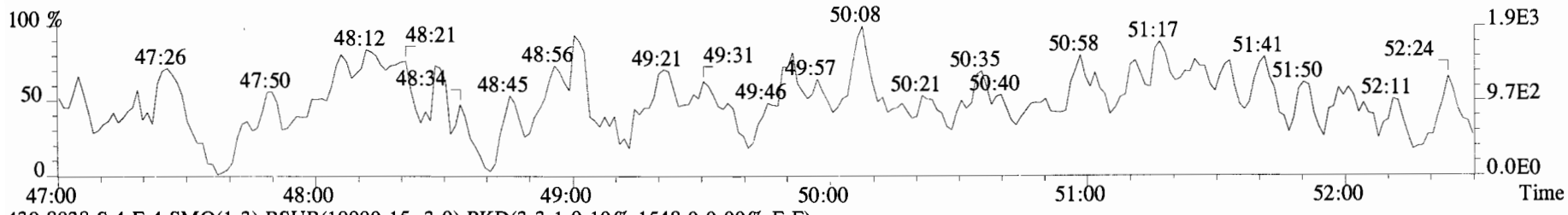
380.9760 S:4 F:4



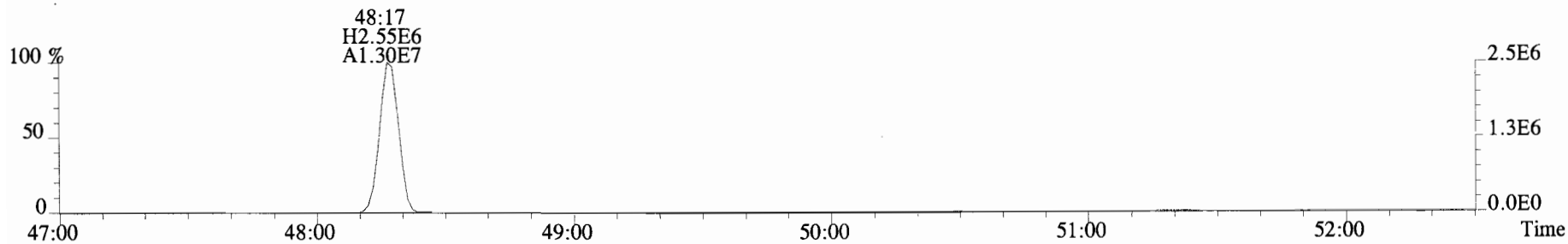
File:141209E2 #1-553 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1424.0,0.00%,F,F)



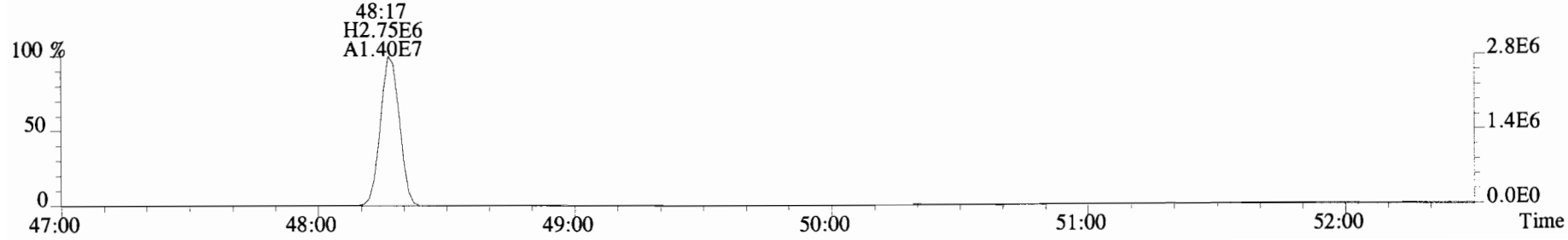
429.7606 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1248.0,0.00%,F,F)



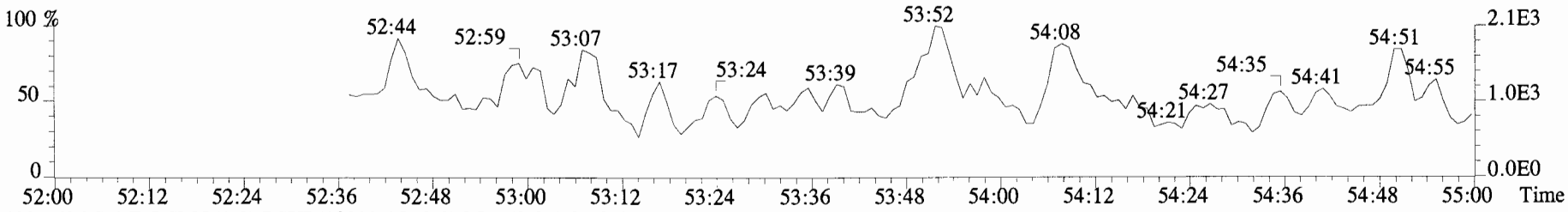
439.8038 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1548.0,0.00%,F,F)



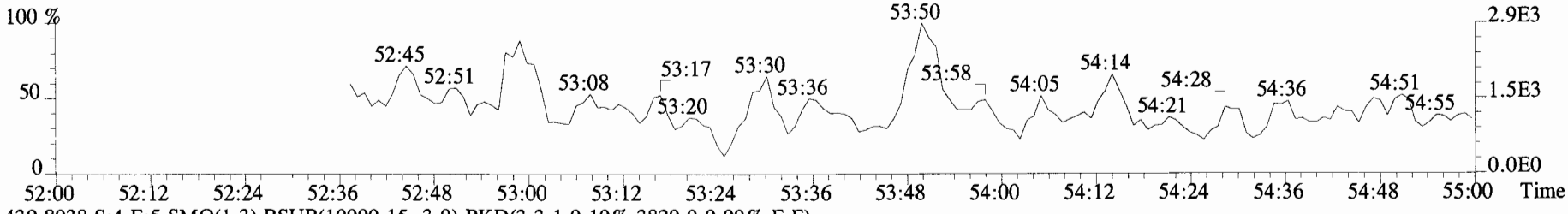
441.8008 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1436.0,0.00%,F,F)



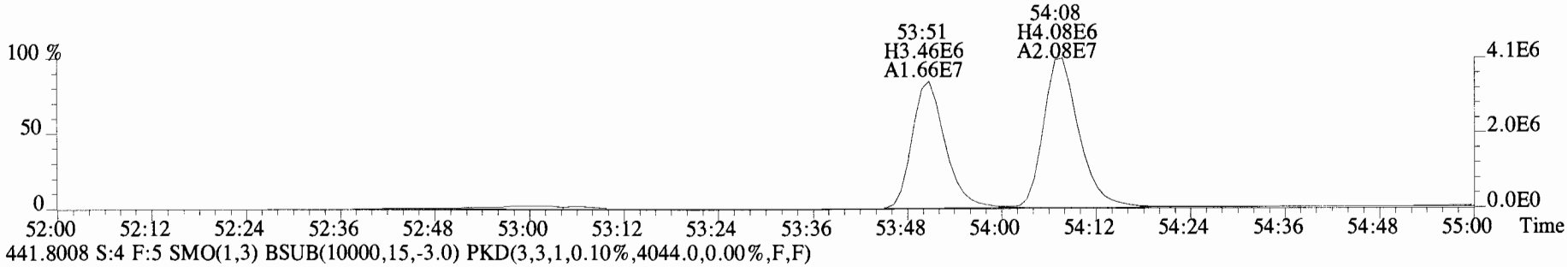
File:141209E2 #1-429 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



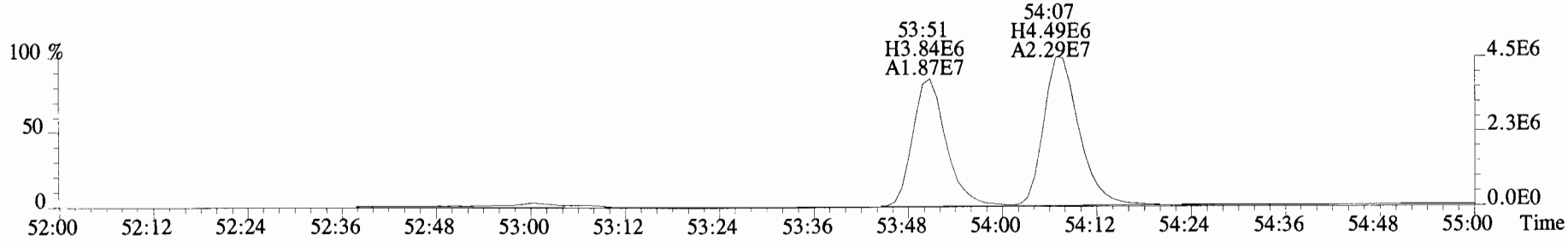
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1424.0,0.00%,F,F)



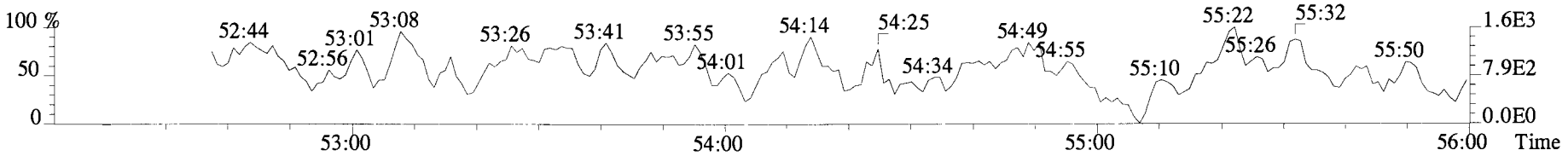
439.8038 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3820.0,0.00%,F,F)



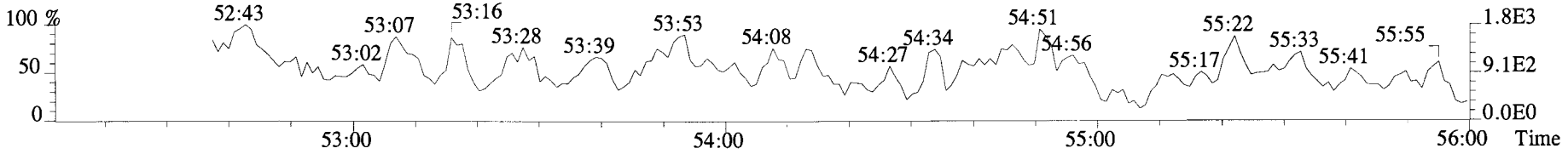
441.8008 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4044.0,0.00%,F,F)



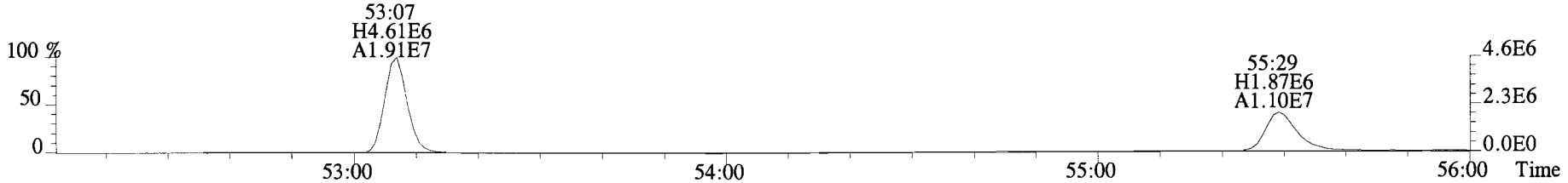
File:141209E2 #1-429 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1164.0,0.00%,F,F)



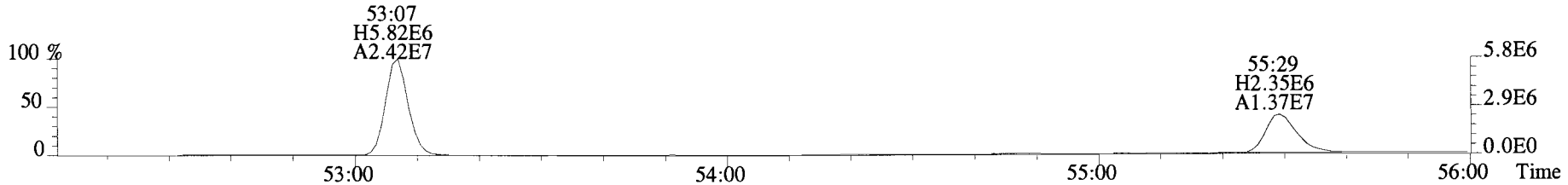
465.7186 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1244.0,0.00%,F,F)



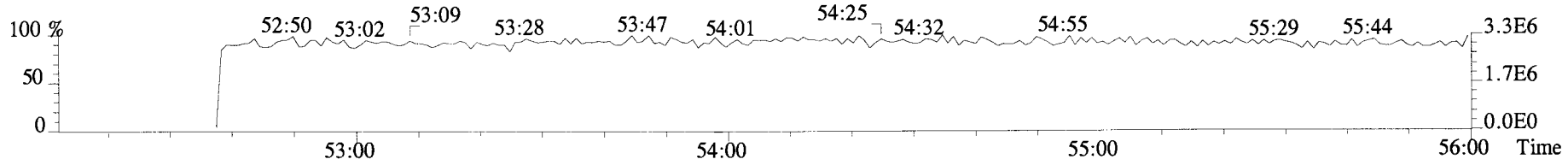
473.7648 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1440.0,0.00%,F,F)



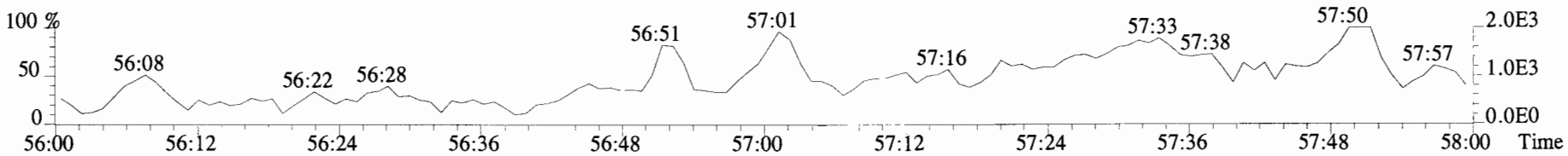
475.7619 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,11448.0,0.00%,F,F)



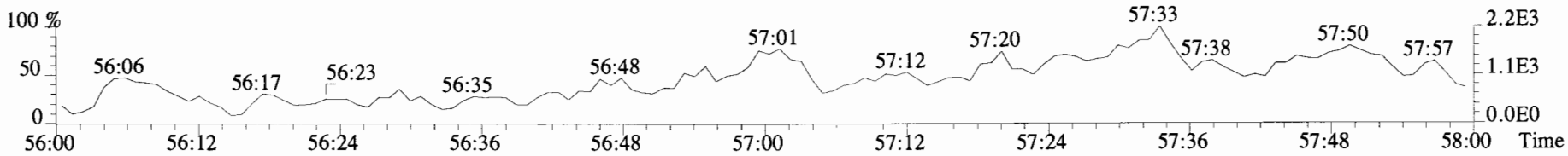
492 9697 S:4 F:5



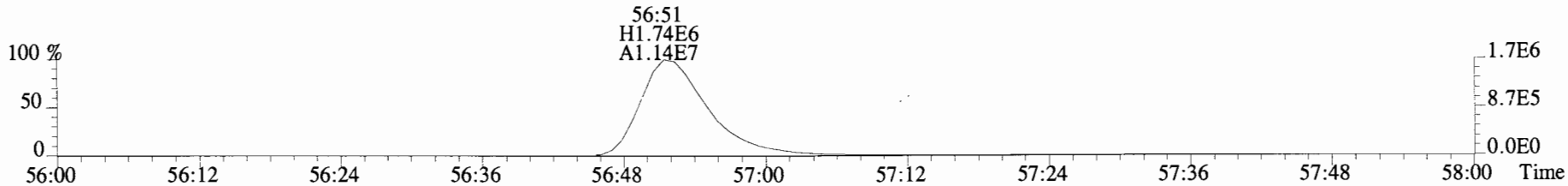
File:141209E2 #1-429 Acq:10-DEC-2014 06:15:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BLK1 Method Blank 1 Exp:PCB_ZB1
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1196.0,0.00%,F,F)



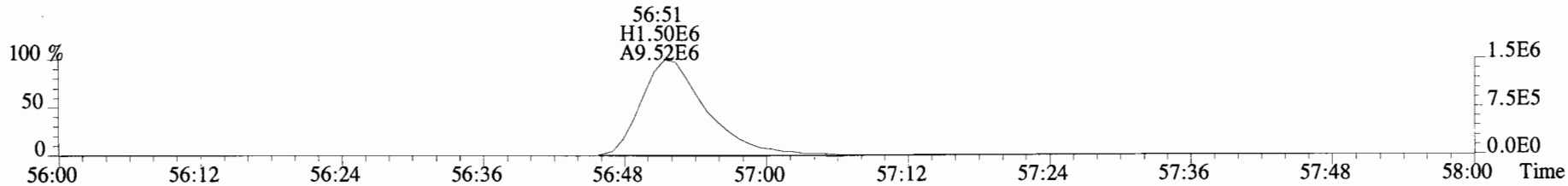
499.6797 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1324.0,0.00%,F,F)



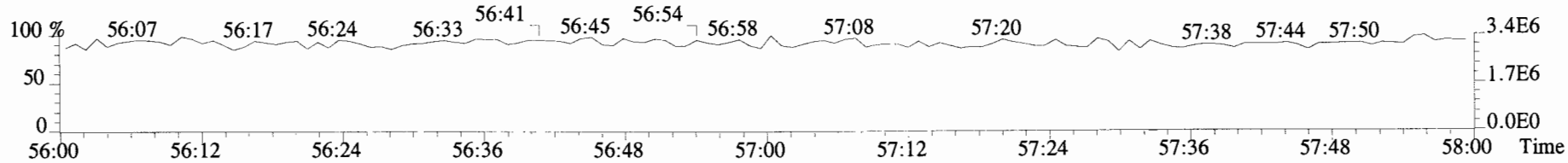
509.7229 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1564.0,0.00%,F,F)



511.7199 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1404.0,0.00%,F,F)



492.9697 S:4 F:5



EPA METHOD 1668C PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B4L0058-BS1

Matrix : AQUEOUS Ext. Date: 12-9-14 Analysis Date: 10-DEC-14 Time: 04:06:50

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	43.4	30.0-67.5	13C-PCB-1	100	85.8	15-145	13C-PCB-79	100	106.7	40-145
PCB-3	50	47.8	30.0-67.5	13C-PCB-3	100	77.8	15-145	13C-PCB-178	100	92.1	40-145
PCB-4/10	200	211.6	120-270	13C-PCB-4	100	81.6	15-145				
PCB-15	100	99.2	60.0-135	13C-PCB-11	100	91.9	15-145				
PCB-19	50	52.3	30.0-67.5	13C-PCB-19	100	76.8	15-145				
PCB-37	50	51.6	30.0-67.5	13C-PCB-37	100	107.7	15-145				
PCB-54	50	51.6	30.0-67.5	13C-PCB-54	100	85.5	15-145				
PCB-81	50	52.8	30.0-67.5	13C-PCB-81	100	103.6	40-145				
PCB-77	50	54.4	30.0-67.5	13C-PCB-77	100	106.7	40-145				
PCB-104	50	55.8	30.0-67.5	13C-PCB-104	100	88.8	40-145				
PCB-123	50	59.2	30.0-67.5	13C-PCB-123	100	102.0	40-145				
PCB-106/118	100	114.6	60.0-135	13C-PCB-118	100	102.0	40-145				
PCB-114	50	55.8	30.0-67.5	13C-PCB-114	100	109.5	40-145				
PCB-105	50	56.0	30.0-67.5	13C-PCB-105	100	111.6	40-145				
PCB-126	50	54.8	30.0-67.5	13C-PCB-126	100	118.4	40-145				
PCB-155	50	58.1	30.0-67.5	13C-PCB-155	100	74.3	40-145				
PCB-167	50	55.8	30.0-67.5	13C-PCB-167	100	108.3	40-145				
PCB-156	50	53.8	30.0-67.5	13C-PCB-156	100	110.9	40-145				
PCB-157	50	55.6	30.0-67.5	13C-PCB-157	100	111.3	40-145				
PCB-169	50	56.9	30.0-67.5	13C-PCB-169	100	114.6	40-145				
PCB-188	50	54.9	30.0-67.5	13C-PCB-188	100	84.3	40-145				
PCB-189	50	58.5	30.0-67.5	13C-PCB-189	100	104.7	40-145				
PCB-202	50	54.3	30.0-67.5	13C-PCB-202	100	79.3	40-145				
PCB-205	50	55.4	30.0-67.5	13C-PCB-194	100	112.5	40-145				
PCB-208	50	54.3	30.0-67.5	13C-PCB-208	100	101.4	40-145				
PCB-206	50	53.8	30.0-67.5	13C-PCB-206	100	95.9	40-145				
PCB-209	50	57.3	30.0-67.5	13C-PCB-209	100	87.4	40-145				

Analyst: [signature]

Date: 12/14/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1
Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	3.74e+07	2.98	y 16:13	1.25	43.4		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	3.93e+07	2.99	y 18:35	1.18	51.3		*	2.5	*	0.988	0.983	0.993
Mono	PCB-3	3.77e+07	2.95	y 18:49	1.22	47.8		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	1.32e+08	1.60	y 20:11	1.55	212		*	2.5	*	1.002	0.998	1.008
Di	PCB-7/9	1.65e+08	1.61	y 21:57	1.27	201		*	2.5	*	0.868	0.865	0.873
Di	PCB-6	8.07e+07	1.61	y 22:36	1.26	98.7		*	2.5	*	0.894	0.890	0.899
Di	PCB-5/8	1.65e+08	1.61	y 23:01	1.23	206		*	2.5	*	0.910	0.906	0.916
Di	PCB-14	9.53e+07	1.63	y 24:06	1.23	99.9		*	2.5	*	0.953	0.949	0.959
Di	PCB-11	8.95e+07	1.65	y 25:18	1.16	99.8		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	1.73e+08	1.61	y 25:41	1.10	203		*	2.5	*	1.016	1.010	1.020
Di	PCB-15	9.28e+07	1.60	y 26:00	1.21	99.2		*	2.5	*	1.028	1.024	1.034
Tri	PCB-19	2.49e+07	1.05	y 24:17	1.30	52.3		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	3.75e+07	1.05	y 25:11	1.83	55.8		*	2.5	*	1.038	1.032	1.042
Tri	PCB-18	2.67e+07	1.06	y 25:56	0.86	52.0		*	2.5	*	0.955	0.949	0.959
Tri	PCB-17	2.85e+07	1.05	y 26:06	0.90	53.0		*	2.5	*	0.961	0.955	0.965
Tri	PCB-24/27	7.56e+07	1.08	y 26:41	1.18	107		*	2.5	*	0.982	0.976	0.986
Tri	PCB-16/32	6.51e+07	1.07	y 27:11	1.03	106		*	2.5	*	1.001	0.995	1.005
Tri	PCB-34	4.57e+07	1.05	y 27:58	1.26	50.0		*	2.5	*	0.960	0.956	0.966
Tri	PCB-23	4.49e+07	1.08	y 28:04	1.31	47.2		*	2.5	*	0.963	0.959	0.969
Tri	PCB-29	4.67e+07	1.06	y 28:19	1.33	48.5		*	2.5	*	0.972	0.967	0.977
Tri	PCB-26	4.53e+07	1.07	y 28:31	1.29	48.3		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	4.75e+07	1.06	y 28:42	1.34	48.8		*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	4.38e+07	1.05	y 29:02	1.42	42.6		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	5.23e+07	1.10	y 29:09	1.38	52.3		*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	1.39e+08	1.06	y 29:45	1.31	147		*	2.5	*	1.021	1.017	1.027
Tri	PCB-22	4.88e+07	1.08	y 30:12	1.32	50.9		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	4.78e+07	1.07	y 30:49	1.38	51.2		*	2.5	*	0.934	0.929	0.939
Tri	PCB-39	5.10e+07	1.05	y 31:17	1.42	53.0		*	2.5	*	0.948	0.943	0.953
Tri	PCB-38	4.77e+07	1.07	y 32:03	1.35	52.0		*	2.5	*	0.972	0.967	0.976
Tri	PCB-35	4.83e+07	1.05	y 32:34	1.38	51.8		*	2.5	*	0.987	0.982	0.992
Tri	PCB-37	4.86e+07	1.04	y 33:01	1.39	51.6		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	3.13e+07	0.77	y 28:02	1.20	51.6		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-50	2.58e+07	0.78	y 29:11	0.97	52.9		*	2.5	*	1.042	1.037	1.047
Tetra	PCB-53	2.67e+07	0.77	y 29:50	1.19	50.2		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	2.76e+07	0.79	y 30:10	1.15	53.5		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	2.28e+07	0.76	y 30:36	0.97	52.7		*	2.5	*	0.970	0.966	0.976
Tetra	PCB-46	2.12e+07	0.77	y 31:06	0.95	49.8		*	2.5	*	0.986	0.982	0.992

Integrations by:

Analyst: [signature]

Date: 12/14/14

Reviewed by: CT

Date: 12/15/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1
Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	6.26e+07	0.76	y	31:34	1.28	109		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	3.19e+07	0.80	y	31:41	1.37	51.9		*	2.5	*	1.005	1.000	1.010
Tetra	PCB-43/49	5.25e+07	0.75	y	31:51	1.11	105		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	2.60e+07	0.77	y	32:03	1.13	48.1		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	6.68e+07	0.77	y	32:09	1.30	107		*	2.5	*	1.004	0.999	1.009
Tetra	PCB-65	3.35e+07	0.75	y	32:27	1.33	52.7		*	2.5	*	1.013	1.007	1.017
Tetra	PCB-62	3.22e+07	0.78	y	32:32	1.29	52.3		*	2.5	*	1.016	1.011	1.021
Tetra	PCB-44	2.37e+07	0.76	y	32:50	0.94	52.8		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	6.17e+07	0.77	y	33:04	1.22	106		*	2.5	*	1.032	1.028	1.038
Tetra	PCB-41/64/71/72	1.38e+08	0.76	y	33:39	1.31	221		*	2.5	*	1.050	1.046	1.056
Tetra	PCB-68	3.93e+07	0.76	y	33:55	1.49	55.5		*	2.5	*	1.059	1.054	1.064
Tetra	PCB-40	2.13e+07	0.75	y	34:08	0.82	54.5		*	2.5	*	1.066	1.061	1.071
Tetra	PCB-57	3.79e+07	0.78	y	34:29	1.11	52.2		*	2.5	*	0.970	0.965	0.975
Tetra	PCB-67	3.93e+07	0.75	y	34:47	1.07	56.2		*	2.5	*	0.978	0.974	0.984
Tetra	PCB-58	3.53e+07	0.77	y	34:54	1.10	49.2		*	2.5	*	0.982	0.977	0.987
Tetra	PCB-63	3.84e+07	0.76	y	35:03	1.12	52.8		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-74	4.28e+07	0.75	y	35:22	1.20	54.5		*	2.5	*	0.995	0.990	1.000
Tetra	PCB-61/70	7.37e+07	0.75	y	35:32	1.08	105		*	2.5	*	1.000	0.994	1.004
Tetra	PCB-76/66	7.84e+07	0.75	y	35:44	1.14	106		*	2.5	*	1.005	1.001	1.011
Tetra	PCB-80	4.48e+07	0.77	y	35:58	1.28	52.5		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-55	3.88e+07	0.76	y	36:18	1.11	52.3		*	2.5	*	1.009	1.005	1.015
Tetra	PCB-56/60	7.74e+07	0.77	y	36:48	1.09	107		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	4.21e+07	0.78	y	37:52	1.12	56.1		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	4.20e+07	0.77	y	38:32	1.24	56.2		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-81	4.41e+07	0.76	y	39:04	1.38	52.8		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-77	4.36e+07	0.80	y	39:39	1.21	54.4		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	2.25e+07	1.59	y	32:43	1.26	55.8		*	2.5	*	1.001	0.996	1.006
Penta	PCB-96	2.04e+07	1.61	y	33:58	1.09	58.2		*	2.5	*	1.039	1.034	1.044
Penta	PCB-103	1.78e+07	1.64	y	34:30	0.93	59.3		*	2.5	*	1.056	1.050	1.060
Penta	PCB-100	1.92e+07	1.58	y	34:52	1.00	59.7		*	2.5	*	1.067	1.061	1.071
Penta	PCB-94	1.56e+07	1.60	y	35:20	1.11	54.8		*	2.5	*	0.986	0.981	0.991
Penta	PCB-95/98/102	5.40e+07	1.71	y	35:49	1.21	172		*	2.5	*	0.999	0.994	1.004
Penta	PCB-93	1.26e+07	1.25	n	35:58	1.13	43.3		*	2.5	*	1.003	0.998	1.008
Penta	PCB-88/91	3.45e+07	1.60	y	36:14	1.02	131		*	2.5	*	1.011	1.006	1.016
Penta	PCB-121	2.36e+07	1.59	y	36:21	1.90	48.1		*	2.5	*	1.014	1.009	1.019
Penta	PCB-84/92	3.29e+07	1.61	y	37:10	1.05	108		*	2.5	*	0.991	0.986	0.996
Penta	PCB-89	1.66e+07	1.62	y	37:22	1.02	56.5		*	2.5	*	0.996	0.991	1.001

Analyst: [signature]

Date: 12/14/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1

Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	3.77e+07	1.58	y 37:32	1.19	110		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	2.31e+07	1.59	y 37:46	1.35	59.3		*	2.5	*	1.007	1.002	1.012
Penta	PCB-99	2.03e+07	1.61	y 37:53	1.29	54.5		*	2.5	*	1.010	1.005	1.015
Penta	PCB-119	2.57e+07	1.62	y 38:20	1.72	57.7		*	2.5	*	0.988	0.982	0.992
Penta	PCB-108/112	3.88e+07	1.63	y 38:29	1.29	116		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	2.28e+07	1.62	y 38:39	1.52	58.0		*	2.5	*	0.996	0.991	1.001
Penta	PCB-97	1.77e+07	1.61	y 38:51	1.25	54.9		*	2.5	*	1.001	0.996	1.006
Penta	PCB-86	1.45e+07	1.61	y 38:59	1.02	55.0		*	2.5	*	1.004	1.000	1.010
Penta	PCB-87/117/125	6.54e+07	1.58	y 39:07	1.56	162		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	4.75e+07	1.59	y 39:16	1.75	105		*	2.5	*	1.012	1.007	1.017
Penta	PCB-85/116	3.96e+07	1.60	y 39:24	1.30	118		*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	2.61e+07	1.63	y 39:38	1.78	56.6		*	2.5	*	1.021	1.016	1.026
Penta	PCB-110	2.46e+07	1.62	y 39:46	1.68	56.5		*	2.5	*	1.024	1.020	1.030
Penta	PCB-82	1.49e+07	1.60	y 40:24	0.74	57.5		*	2.5	*	0.976	0.972	0.982
Penta	PCB-124	2.72e+07	1.59	y 41:05	1.32	58.3		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	5.06e+07	1.60	y 41:14	1.22	118		*	2.5	*	0.996	0.991	1.001
Penta	PCB-123	2.54e+07	1.62	y 41:24	1.22	59.1		*	2.5	*	1.000	0.995	1.005
Penta	PCB-106/118	5.13e+07	1.60	y 41:35	1.22	115		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	4.12e+07	1.55	y 42:14	1.36	55.8		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	3.63e+07	1.62	y 42:22	1.24	53.8		*	2.5	*	1.004	0.999	1.009
Penta	PCB-105	4.09e+07	1.59	y 43:05	1.28	56.0		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	3.98e+07	1.61	y 43:26	1.14	54.6		*	2.5	*	1.000	0.995	1.005
Penta	PCB-126	3.99e+07	1.66	y 45:19	1.28	54.8		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	1.48e+07	1.33	y 37:06	1.14	58.1		*	2.5	*	1.001	0.966	1.006
Hexa	PCB-150	1.48e+07	1.29	y 38:21	1.06	61.9		*	2.5	*	1.035	1.030	1.040
Hexa	PCB-152	1.44e+07	1.30	y 38:49	1.10	58.2		*	2.5	*	1.047	1.043	1.053
Hexa	PCB-145	1.40e+07	1.32	y 39:16	1.09	57.0		*	2.5	*	1.059	1.055	1.065
Hexa	PCB-136	1.54e+07	1.28	y 39:36	1.08	63.1		*	2.5	*	1.068	1.064	1.074
Hexa	PCB-148	9.81e+06	1.31	y 39:42	0.74	58.9		*	2.5	*	1.071	1.066	1.076
Hexa	PCB-154	1.23e+07	1.28	y 40:11	0.88	61.7		*	2.5	*	1.084	1.079	1.089
Hexa	PCB-151	1.07e+07	1.31	y 40:50	0.81	58.7		*	2.5	*	1.102	1.097	1.107
Hexa	PCB-135	1.05e+07	1.30	y 41:02	0.78	60.2		*	2.5	*	1.107	1.101	1.113
Hexa	PCB-144	1.11e+07	1.32	y 41:09	0.82	60.1		*	2.5	*	1.110	1.105	1.116
Hexa	PCB-147	1.18e+07	1.30	y 41:17	0.83	63.2		*	2.5	*	1.114	1.011	1.120
Hexa	PCB-139/149	2.35e+07	1.31	y 41:33	0.84	124		*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	1.09e+07	1.28	y 41:43	0.79	61.7		*	2.5	*	1.125	1.120	1.132
Hexa	PCB-134/143	4.39e+07	1.25	y 42:10	0.93	102		*	2.5	*	0.975	0.970	0.980

Analyst: DMS

Date: 12/15/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1
Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	4.45e+07	1.24	y 42:27	0.95	101		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	2.16e+07	1.24	y 42:37	0.91	51.0		*	2.5	*	0.986	0.981	0.991
Hexa	PCB-146/165	5.64e+07	1.25	y 42:50	1.16	105		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	5.37e+07	1.24	y 43:05	1.11	104		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	3.03e+07	1.22	y 43:14	1.18	55.4		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	3.33e+07	1.24	y 43:27	1.37	52.4		*	2.5	*	1.005	1.000	1.010
Hexa	PCB-141	2.35e+07	1.26	y 43:59	0.97	52.6	R	*	2.5	*	1.000	0.996	1.005
Hexa	PCB-137	2.80e+07	1.26	y 44:21	1.07	56.9		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	2.22e+07	1.25	y 44:28	0.85	57.0		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-138/163/164	9.18e+07	1.24	y 44:50	1.23	167		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-158/160	6.49e+07	1.26	y 45:05	1.29	112		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	2.18e+07	1.27	y 45:19	0.92	52.4		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-166	3.24e+07	1.25	y 45:47	1.12	54.5		*	2.5	*	0.993	0.988	0.998
Hexa	PCB-159	3.34e+07	1.27	y 46:07	1.16	53.8		*	2.5	*	1.001	0.995	1.005
Hexa	PCB-128/162	5.88e+07	1.23	y 46:24	1.02	108		*	2.5	*	1.007	1.002	1.012
Hexa	PCB-167	3.49e+07	1.23	y 46:47	1.06	55.8		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	3.62e+07	1.27	y 48:05	1.18	53.8		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-157	3.62e+07	1.24	y 48:21	1.08	55.6		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	3.62e+07	1.24	y 50:29	1.11	56.9		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-188	2.51e+07	1.08	y 42:53	1.40	54.9		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-184	2.30e+07	1.07	y 43:20	1.24	57.2		*	2.5	*	1.011	1.006	1.016
Hepta	PCB-179	2.50e+07	1.05	y 44:06	1.30	59.0		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	2.64e+07	1.07	y 44:34	1.36	59.5		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	2.44e+07	1.06	y 45:11	1.28	58.7		*	2.5	*	1.054	1.049	1.059
Hepta	PCB-178	1.81e+07	1.05	y 45:40	0.94	59.5		*	2.5	*	1.065	1.061	1.071
Hepta	PCB-175	1.98e+07	1.05	y 46:01	0.97	62.8		*	2.5	*	1.073	1.069	1.079
Hepta	PCB-182/187	4.19e+07	1.05	y 46:11	1.01	127		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	2.12e+07	1.05	y 46:31	1.08	60.2		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	1.95e+07	1.05	y 47:10	1.34	51.6		*	2.5	*	0.956	0.951	0.961
Hepta	PCB-174	2.12e+07	1.05	y 47:32	1.34	56.4		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	1.92e+07	1.07	y 47:39	1.36	50.3		*	2.5	*	0.966	0.961	0.971
Hepta	PCB-177	1.87e+07	1.03	y 47:48	1.24	53.5		*	2.5	*	0.969	0.964	0.974
Hepta	PCB-171	1.91e+07	1.04	y 48:06	1.31	51.7		*	2.5	*	0.975	0.970	0.980
Hepta	PCB-173	1.74e+07	1.05	y 48:32	1.16	53.4		*	2.5	*	0.983	0.979	0.989
Hepta	PCB-172	1.89e+07	1.02	y 48:58	1.22	55.1		*	2.5	*	0.992	0.988	0.998
Hepta	PCB-192	2.41e+07	1.05	y 49:10	1.53	56.2		*	2.5	*	0.996	0.991	1.001
Hepta	PCB-180	2.22e+07	1.05	y 49:22	1.43	55.3		*	2.5	*	1.000	0.995	1.005

Analyst: _____

Date: 12/14/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1
Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST141209E2-2

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	2.56e+07	1.06	y	49:35	1.65	55.1		*	2.5	*	1.005	0.999	1.009
Hepta	PCB-191	2.64e+07	1.02	y	49:50	1.67	56.1		*	2.5	*	1.010	1.004	1.014
Hepta	PCB-170	1.87e+07	1.03	y	50:51	1.50	55.9		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	2.65e+07	1.02	y	51:01	2.02	58.9		*	2.5	*	1.004	0.998	1.008
Hepta	PCB-189	2.78e+07	1.05	y	52:20	1.54	58.5		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	1.54e+07	0.92	y	48:18	1.04	54.3		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	1.78e+07	0.88	y	48:47	1.10	59.4		*	2.5	*	1.010	1.006	1.016
Octa	PCB-204	1.56e+07	0.93	y	48:56	0.99	57.7		*	2.5	*	1.013	1.009	1.019
Octa	PCB-197	1.66e+07	0.90	y	49:15	1.07	56.8		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	1.67e+07	0.89	y	50:07	1.02	60.1		*	2.5	*	1.038	1.032	1.044
Octa	PCB-198	1.19e+07	0.89	y	51:26	0.74	59.0		*	2.5	*	1.065	1.058	1.068
Octa	PCB-199	1.32e+07	0.92	y	51:33	0.73	66.5		*	2.5	*	1.068	1.060	1.070
Octa	PCB-196/203	2.65e+07	0.90	y	51:49	0.77	126		*	2.5	*	1.073	1.066	1.076
Octa	PCB-195	2.50e+07	0.92	y	52:58	1.20	58.3		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	2.46e+07	0.91	y	53:50	1.25	55.2		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	2.80e+07	0.91	y	54:07	1.41	55.4		*	2.5	*	1.006	1.001	1.011
Nona	PCB-208	2.34e+07	1.32	y	53:07	0.96	54.3		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	2.30e+07	1.37	y	53:25	0.92	56.0		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	1.37e+07	1.33	y	55:29	1.03	53.8		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	1.42e+07	1.22	y	56:49	1.18	57.3		*	2.5	*	1.000	0.995	1.005

Analyst: _____

Date: 12/14/14

Client ID: OPR Filename: 141209E2 S:2 Acq:10-DEC-14 04:06:50 ConCal: ST141209E2-1

Lab ID: B4L0058-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: ST141209E2-2

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.86e+07	3.00 y	0.89	16:12	0.623	0.622	0.628	85.8	85.8
13C-PCB-3	6.48e+07	3.29 y	0.93	18:48	0.724	0.721	0.729	77.8	77.8
13C-PCB-4	4.02e+07	1.60 y	0.55	20:08	0.775	0.772	0.780	81.6	81.6
13C-PCB-9	6.49e+07	1.59 y	0.83	21:55	0.843	0.840	0.848	87.5	87.5
13C-PCB-11	7.74e+07	1.56 y	0.94	25:17	0.973	0.968	0.978	91.9	91.9
13C-PCB-19	3.68e+07	1.05 y	0.53	24:16	0.934	0.929	0.939	76.8	76.8
13C-PCB-28	7.25e+07	1.07 y	0.89	29:08	1.004	0.999	1.009	108	108
13C-PCB-32	5.99e+07	1.08 y	0.81	27:10	1.046	1.041	1.051	81.8	81.8
13C-PCB-37	6.77e+07	1.08 y	0.83	32:59	1.137	1.131	1.143	108	108
13C-PCB-47	4.77e+07	0.78 y	0.74	32:02	0.871	0.867	0.875	92.0	92.0
13C-PCB-52	4.48e+07	0.81 y	0.71	31:32	0.857	0.853	0.861	90.8	90.8
13C-PCB-54	5.06e+07	0.80 y	0.85	28:01	0.762	0.758	0.766	85.5	85.5
13C-PCB-70	6.51e+07	0.79 y	0.94	35:33	0.966	0.961	0.971	99.1	99.1
13C-PCB-77	6.64e+07	0.83 y	0.89	39:39	1.078	1.073	1.083	107	107
13C-PCB-80	6.69e+07	0.81 y	0.96	35:58	0.978	0.972	0.982	99.8	99.8
13C-PCB-81	6.04e+07	0.78 y	0.84	39:04	1.062	1.057	1.067	104	104
13C-PCB-95	2.58e+07	1.68 y	0.74	35:51	0.913	0.908	0.918	95.4	95.4
13C-PCB-97	2.59e+07	1.64 y	0.69	38:49	0.989	0.984	0.994	103	103
13C-PCB-101	2.89e+07	1.61 y	0.79	37:31	0.956	0.951	0.961	101	101
13C-PCB-104	3.21e+07	1.60 y	1.00	32:41	0.833	0.829	0.837	88.8	88.8
13C-PCB-105	5.69e+07	1.61 y	1.24	43:05	0.929	0.924	0.934	112	112
13C-PCB-114	5.45e+07	1.60 y	1.21	42:13	0.910	0.905	0.915	109	109
13C-PCB-118	3.65e+07	1.68 y	0.98	41:34	1.059	1.054	1.064	102	102
13C-PCB-123	3.52e+07	1.62 y	0.95	41:23	1.054	1.049	1.059	102	102
13C-PCB-126	5.67e+07	1.57 y	1.16	45:19	0.977	0.972	0.982	118	118
13C-PCB-127	6.40e+07	1.59 y	1.34	43:25	0.936	0.931	0.941	116	116
13C-PCB-138	4.50e+07	1.28 y	1.04	44:49	0.967	0.961	0.971	105	105
13C-PCB-141	4.59e+07	1.29 y	1.07	43:58	0.948	0.943	0.953	104	104
13C-PCB-153	4.64e+07	1.30 y	1.11	43:14	0.932	0.927	0.937	101	101
13C-PCB-155	2.25e+07	1.30 y	0.83	37:04	0.944	0.939	0.949	74.3	74.3
13C-PCB-156	5.69e+07	1.28 y	1.24	48:04	1.037	1.032	1.042	111	111
13C-PCB-157	6.01e+07	1.30 y	1.31	48:20	1.042	1.037	1.047	111	111
13C-PCB-159	5.34e+07	1.25 y	1.20	46:05	0.994	0.989	0.999	108	108
13C-PCB-167	5.90e+07	1.27 y	1.32	46:47	1.009	1.004	1.014	108	108
13C-PCB-169	5.74e+07	1.28 y	1.22	50:28	1.088	1.082	1.092	115	115
13C-PCB-170	2.23e+07	0.48 y	0.54	50:50	1.096	1.089	1.101	101	101
13C-PCB-180	2.81e+07	0.45 y	0.67	49:21	1.064	1.059	1.069	101	101
13C-PCB-188	3.25e+07	0.45 y	0.94	42:52	0.925	0.919	0.929	84.3	84.3
13C-PCB-189	3.09e+07	0.45 y	0.72	52:19	1.128	1.120	1.132	105	105
13C-PCB-194	3.58e+07	0.92 y	0.81	53:49	0.995	0.990	1.000	112	112
13C-PCB-202	2.72e+07	0.94 y	0.83	48:17	1.041	1.036	1.046	79.3	79.3
13C-PCB-206	2.48e+07	0.78 y	0.66	55:28	1.025	1.021	1.031	95.9	95.9
13C-PCB-208	4.47e+07	0.77 y	1.12	53:06	0.982	0.976	0.986	101	101
13C-PCB-209	2.10e+07	1.18 y	0.61	56:48	1.050	1.044	1.054	87.4	87.4

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.47e+07	0.82 y	1.01	37:50	1.029	1.023	1.033	107	107
13C-PCB-178	2.39e+07	0.48 y	0.63	45:39	0.985	0.979	0.989	92.1	92.1

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.47e+07	0.82 y	1.20	37:50	0.968	0.963	0.973	103	103
13C-PCB-178	2.39e+07	0.48 y	0.94	45:39	0.925	0.920	0.930	90.9	90.9

RS

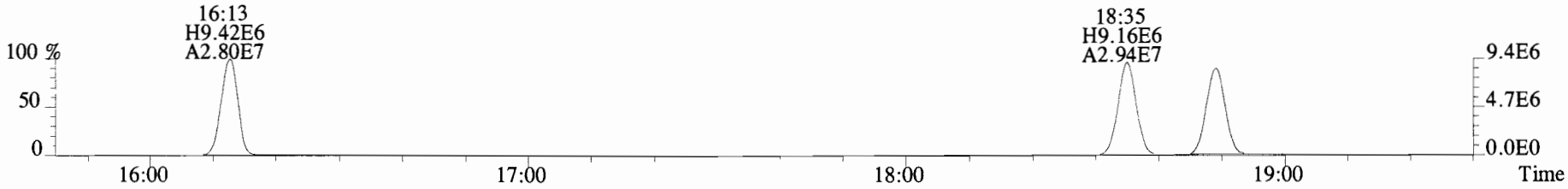
Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	8.99e+07	1.59	y	1.00	25:59	100
13C-PCB-31	7.56e+07	1.04	y	1.00	29:01	100
13C-PCB-60	6.96e+07	0.80	y	1.00	36:47	100
13C-PCB-111	3.64e+07	1.65	y	1.00	39:15	100
13C-PCB-128	4.12e+07	1.26	y	1.00	46:22	100
13C-PCB-205	3.93e+07	0.93	y	1.00	54:06	100

Analyst: _____

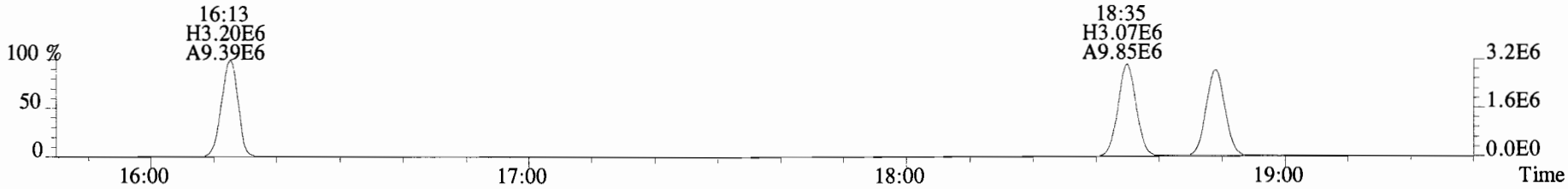
Date: 12/17/14

File:141209E2 #1-729 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1

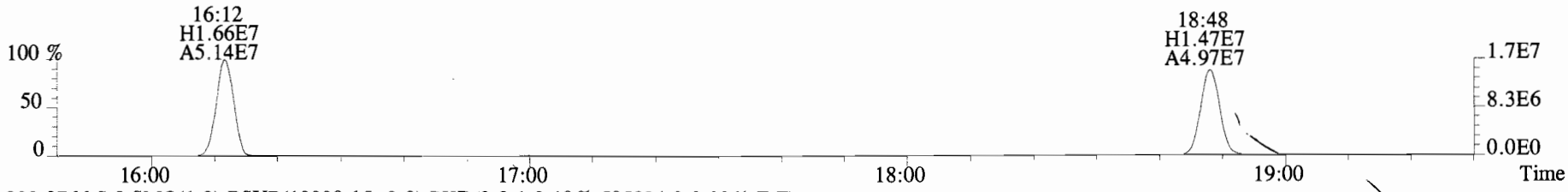
188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3360.0,0.00%,F,F)



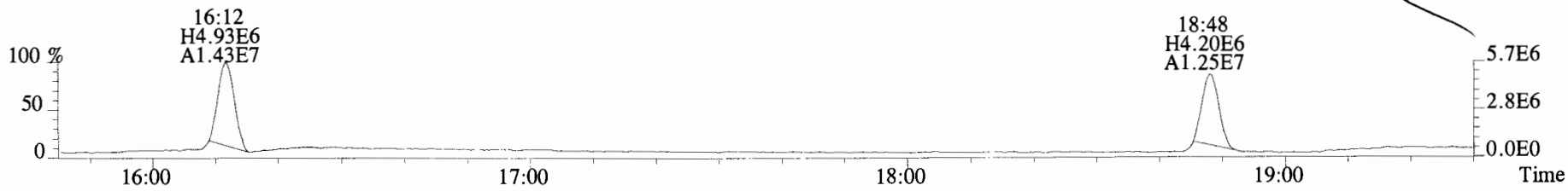
190.0363 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3728.0,0.00%,F,F)



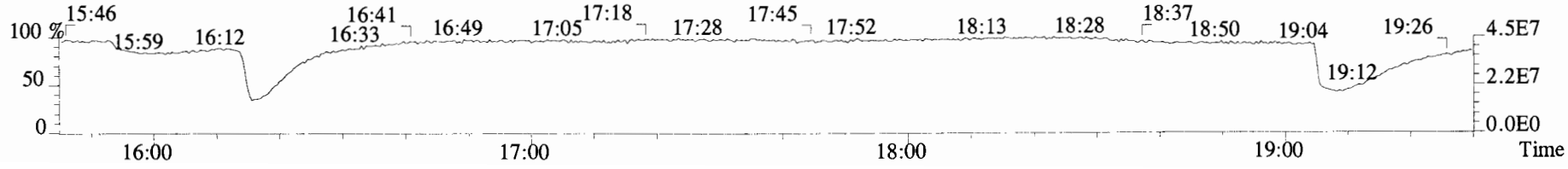
200.0795 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5348.0,0.00%,F,F)



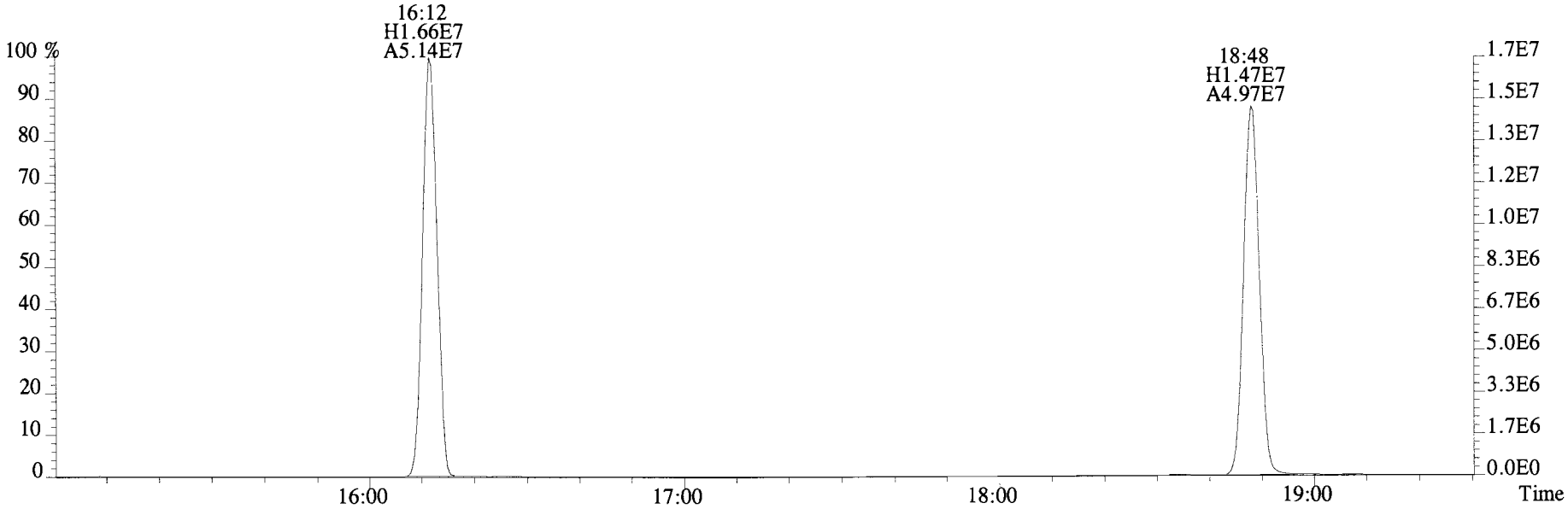
202.0766 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,505924.0,0.00%,F,F)



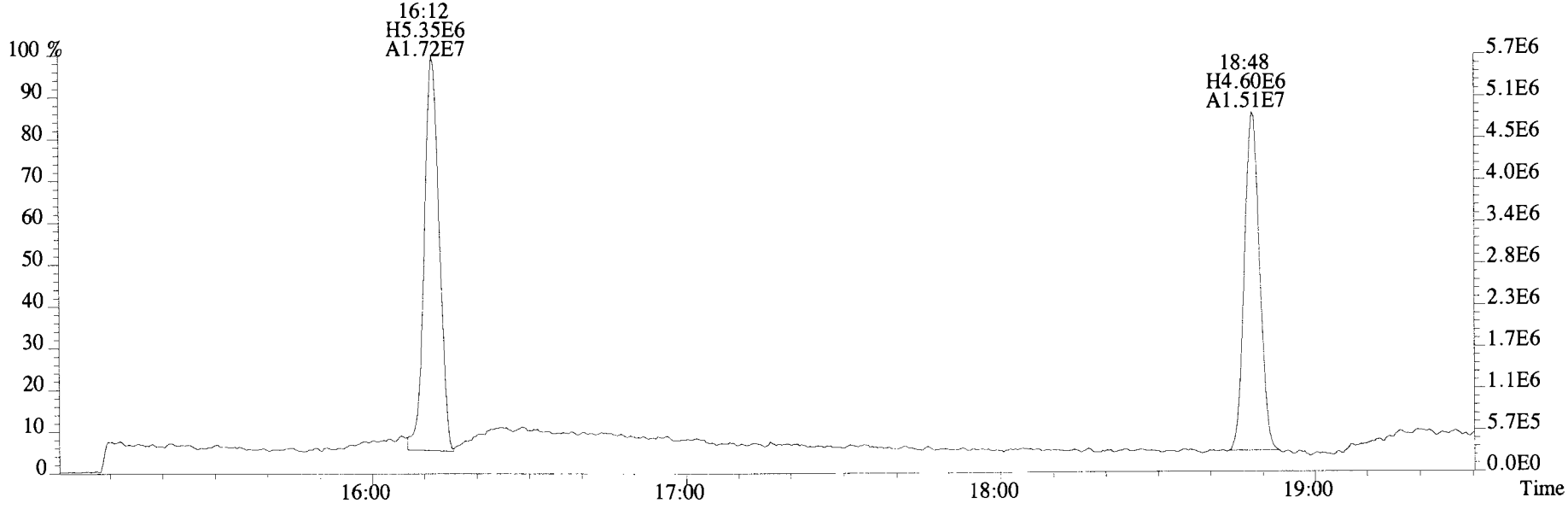
180.9880 S:2



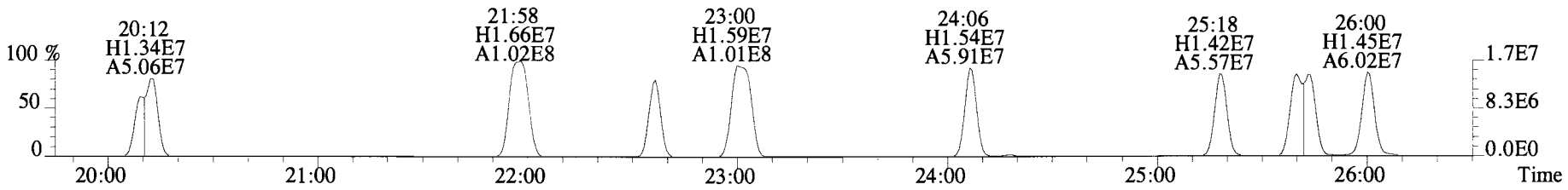
File:141209E2 #1-729 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
200.0795 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5348.0,0.00%,F,F)



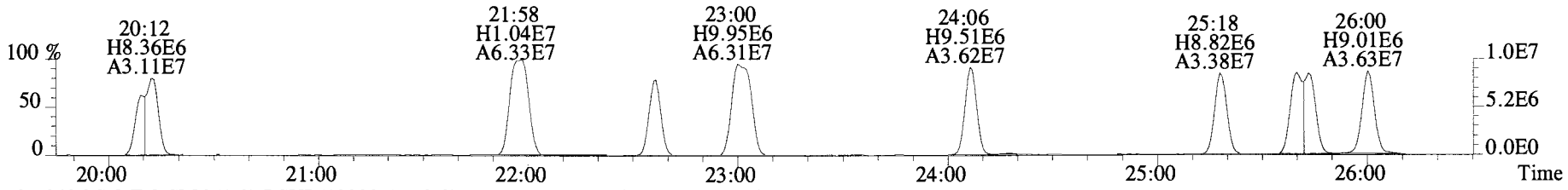
202.0766 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,505924.0,0.00%,F,F)



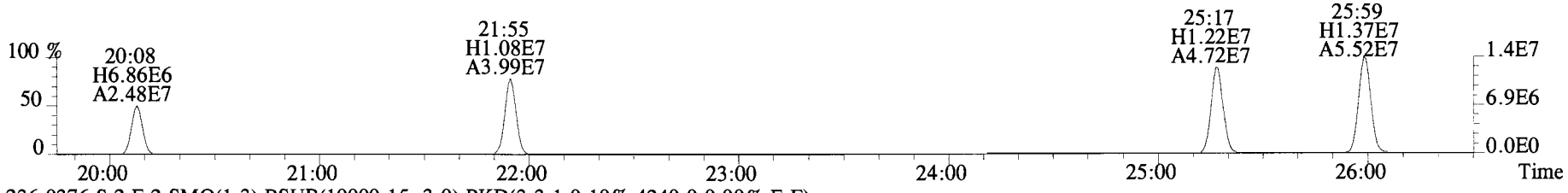
File:141209E2 #1-757 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6636.0,0.00%,F,F)



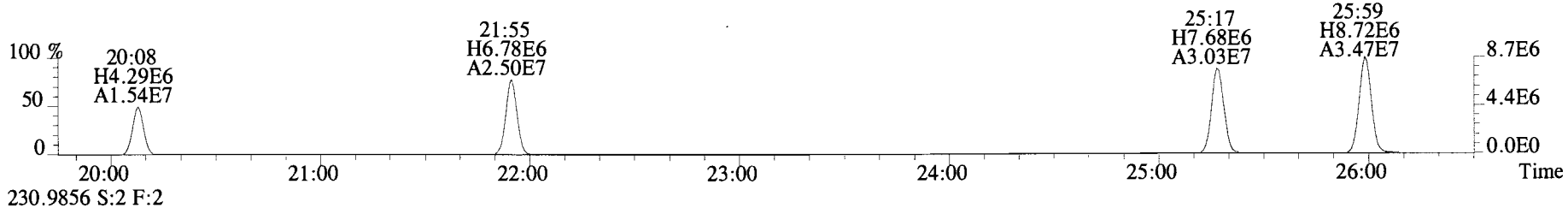
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,37056.0,0.00%,F,F)



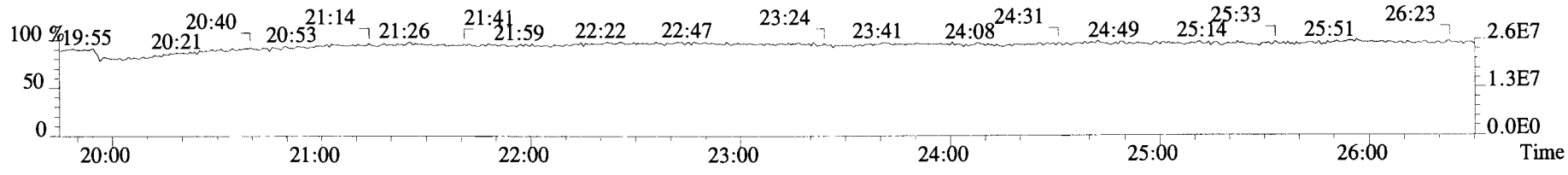
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4424.0,0.00%,F,F)



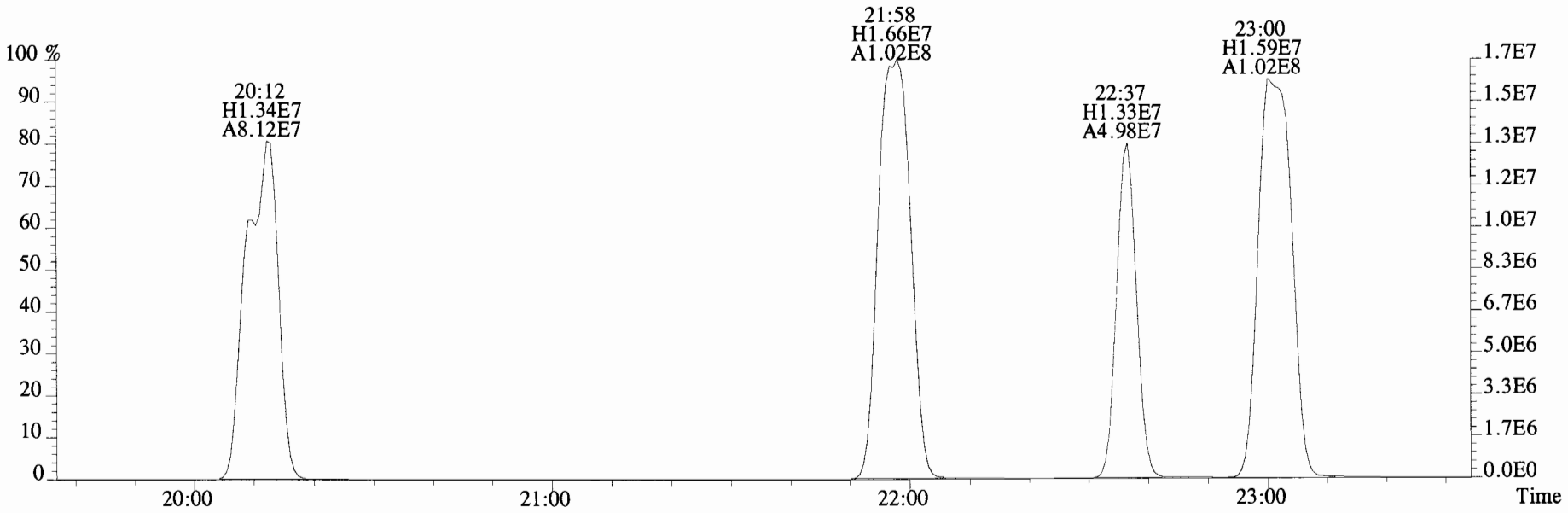
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4240.0,0.00%,F,F)



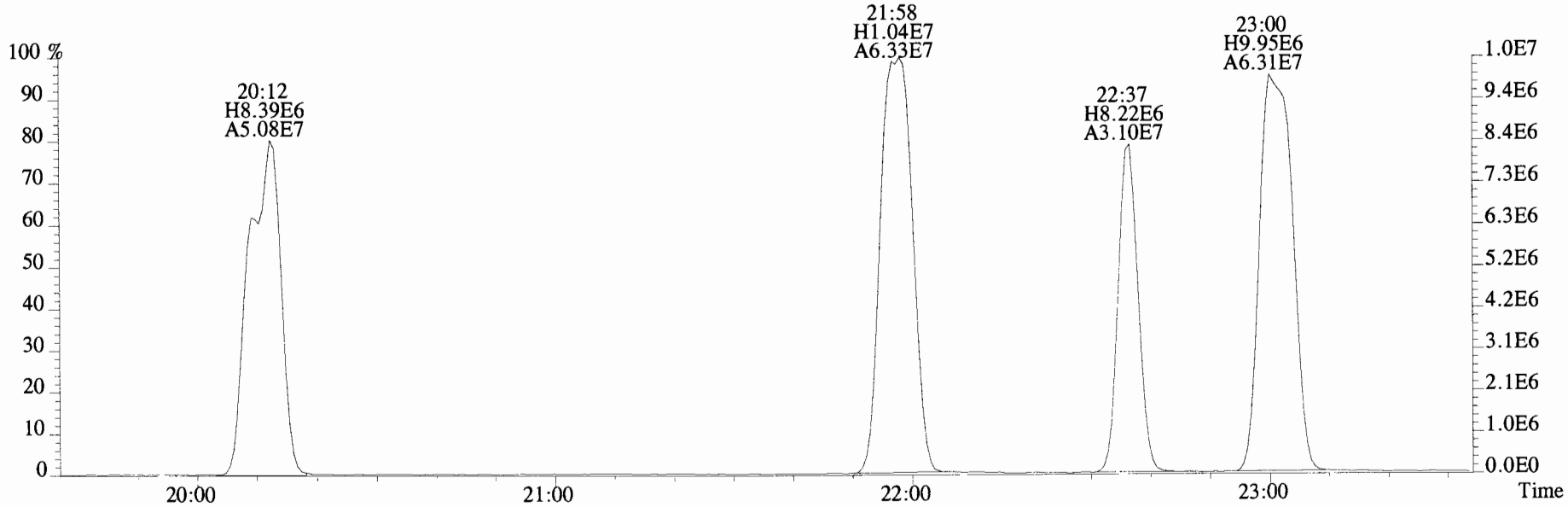
230.9856 S:2 F:2



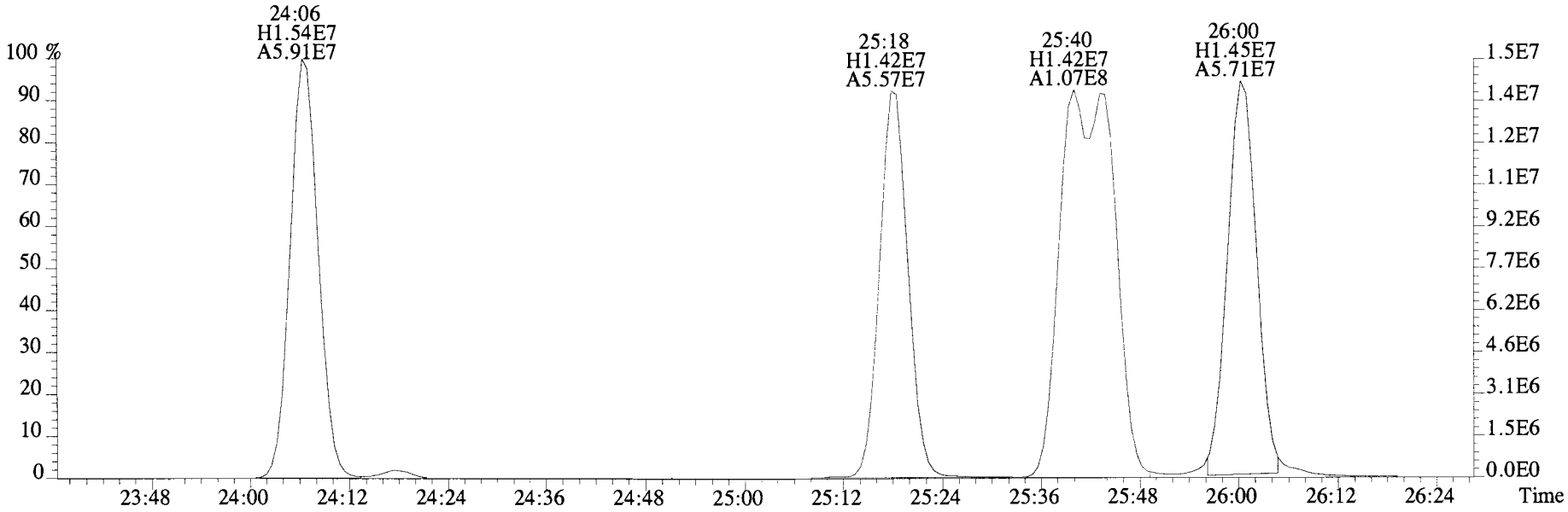
File:141209E2 #1-757 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6636.0,0.00%,F,F)



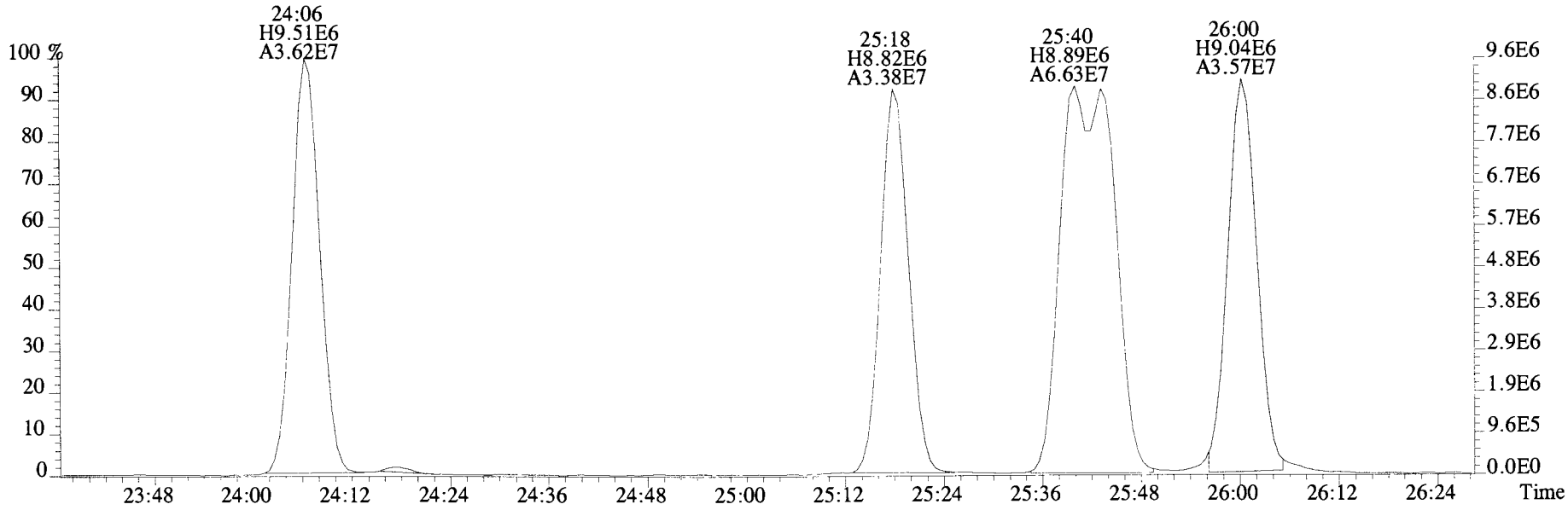
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,37056.0,0.00%,F,F)

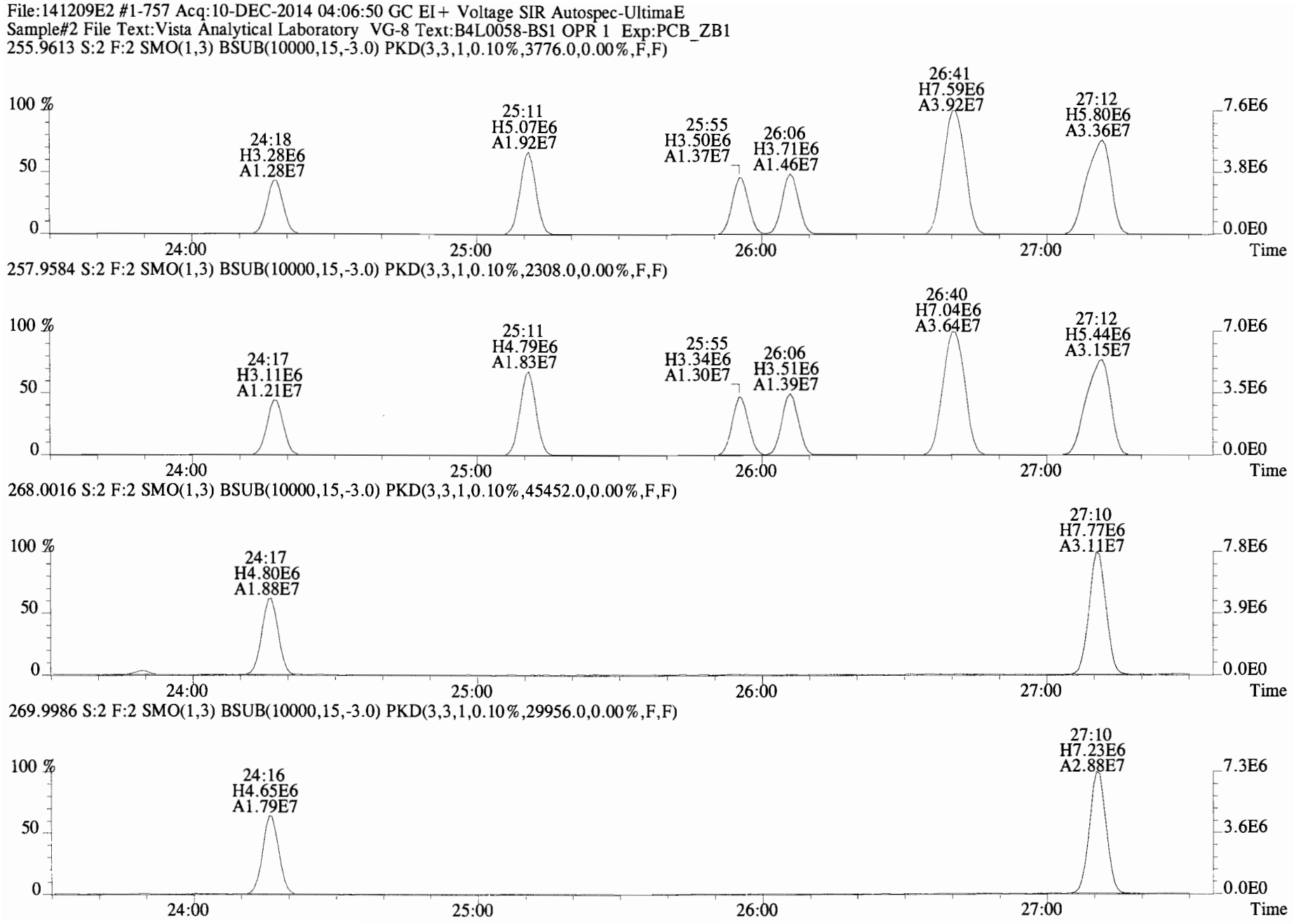


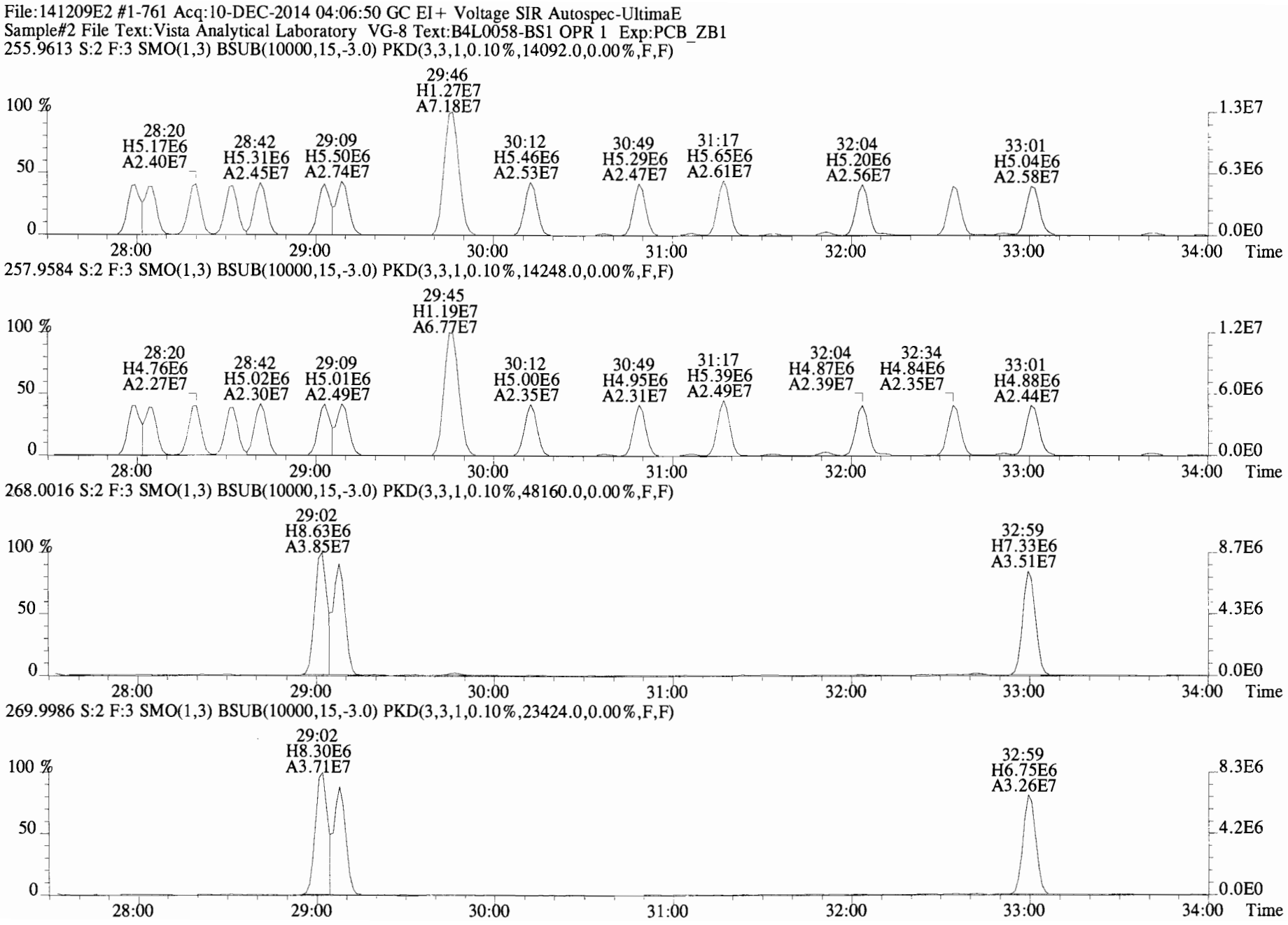
File:141209E2 #1-757 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6636.0,0.00%,F,F)



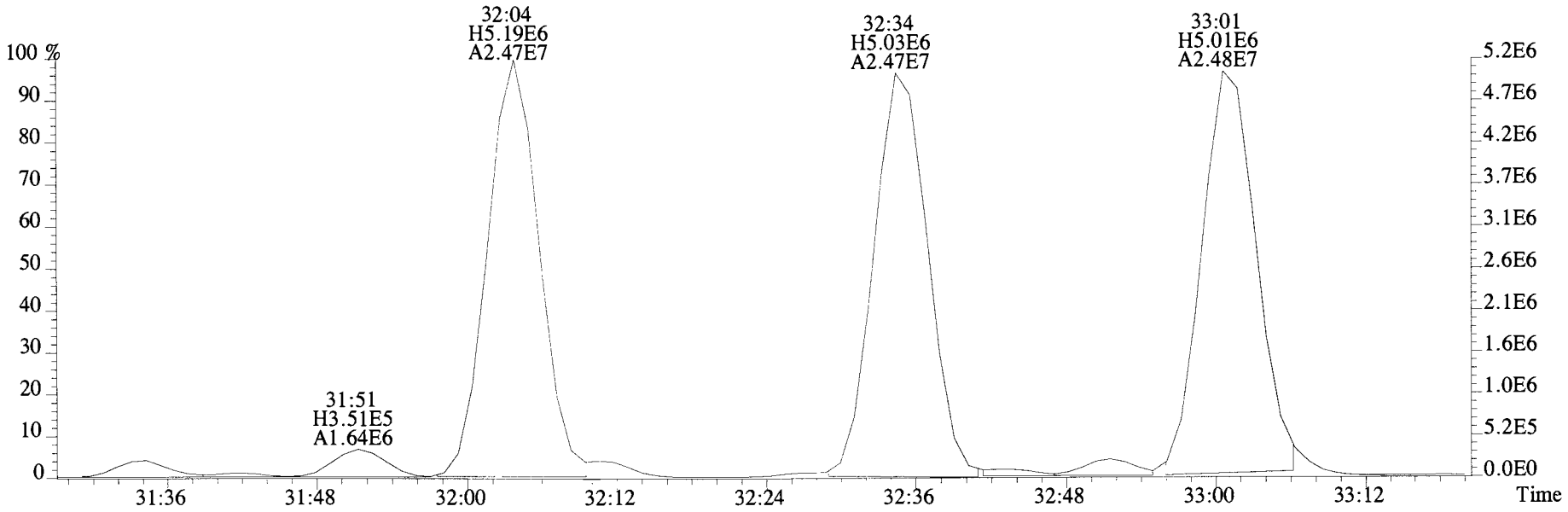
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,37056.0,0.00%,F,F)



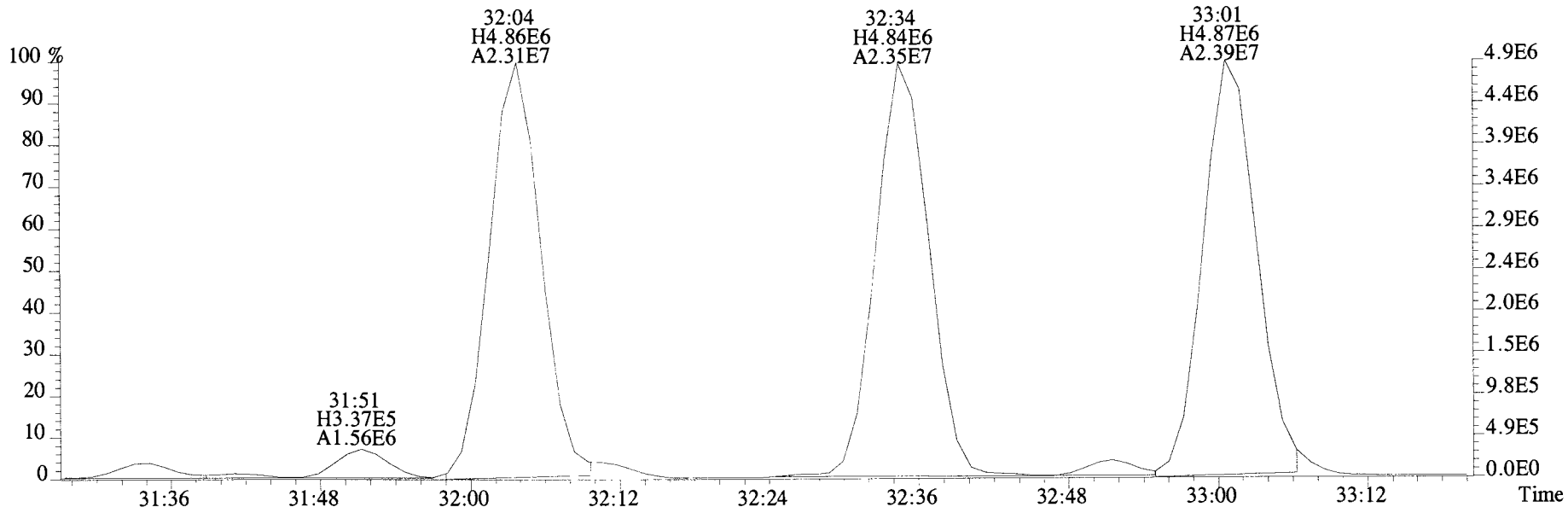

File:141209E2 #1-757 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3776.0,0.00%,F,F)
24:18 H3.28E6 A1.28E7
25:11 H5.07E6 A1.92E7
25:55 H3.50E6 A1.37E7
26:06 H3.71E6 A1.46E7
26:41 H7.59E6 A3.92E7
27:12 H5.80E6 A3.36E7
257.9584 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2308.0,0.00%,F,F)
24:17 H3.11E6 A1.21E7
25:11 H4.79E6 A1.83E7
25:55 H3.34E6 A1.30E7
26:06 H3.51E6 A1.39E7
26:40 H7.04E6 A3.64E7
27:12 H5.44E6 A3.15E7
268.0016 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,45452.0,0.00%,F,F)
24:17 H4.80E6 A1.88E7
27:10 H7.77E6 A3.11E7
269.9986 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29956.0,0.00%,F,F)
24:16 H4.65E6 A1.79E7
27:10 H7.23E6 A2.88E7
100 %
50
0
24:00
25:00
26:00
27:00
Time
7.6E6
3.8E6
0.0E0
7.0E6
3.5E6
0.0E0
7.8E6
3.9E6
0.0E0
7.3E6
3.6E6
0.0E0


File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14092.0,0.00%,F,F)
29:46 H1.27E7 A7.18E7
28:20 H5.17E6 A2.40E7
28:42 H5.31E6 A2.45E7
29:09 H5.50E6 A2.74E7
30:12 H5.46E6 A2.53E7
30:49 H5.29E6 A2.47E7
31:17 H5.65E6 A2.61E7
32:04 H5.20E6 A2.56E7
33:01 H5.04E6 A2.58E7
100 %
50
0
1.3E7
6.3E6
0.0E0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14248.0,0.00%,F,F)
29:45 H1.19E7 A6.77E7
28:20 H4.76E6 A2.27E7
28:42 H5.02E6 A2.30E7
29:09 H5.01E6 A2.49E7
30:12 H5.00E6 A2.35E7
30:49 H4.95E6 A2.31E7
31:17 H5.39E6 A2.49E7
32:04 H4.87E6 A2.39E7
32:34 H4.84E6 A2.35E7
33:01 H4.88E6 A2.44E7
100 %
50
0
1.2E7
6.0E6
0.0E0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,48160.0,0.00%,F,F)
29:02 H8.63E6 A3.85E7
32:59 H7.33E6 A3.51E7
100 %
50
0
8.7E6
4.3E6
0.0E0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23424.0,0.00%,F,F)
29:02 H8.30E6 A3.71E7
32:59 H6.75E6 A3.26E7
100 %
50
0
8.3E6
4.2E6
0.0E0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time

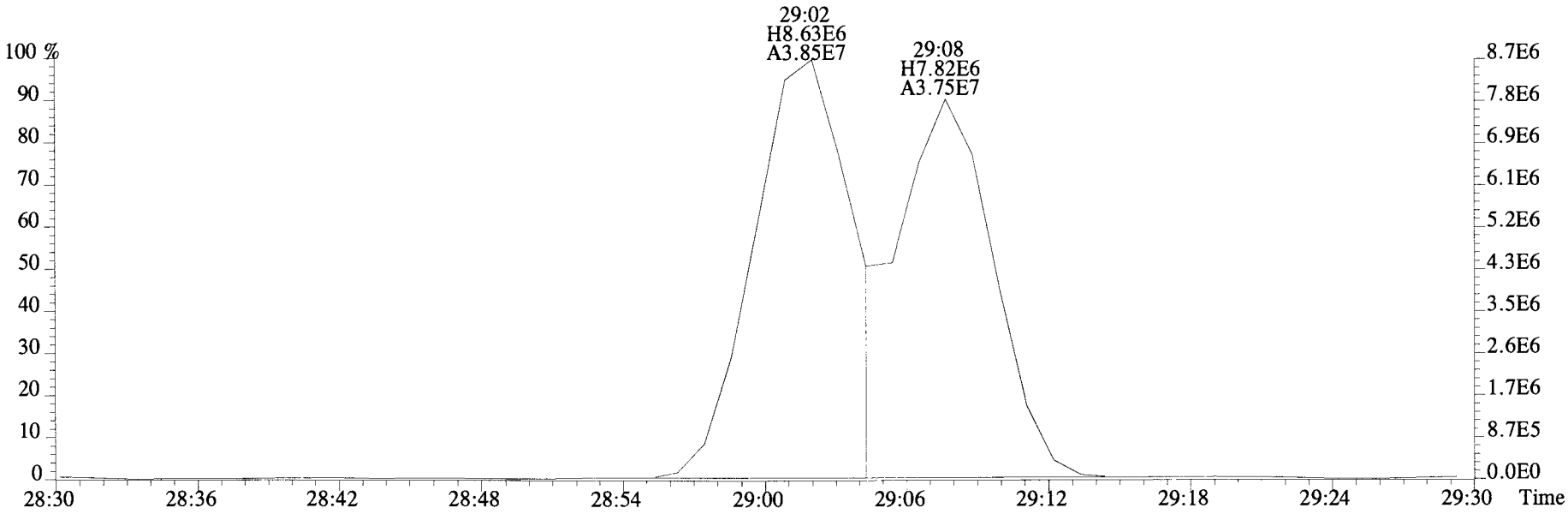
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14092.0,0.00%,F,F)



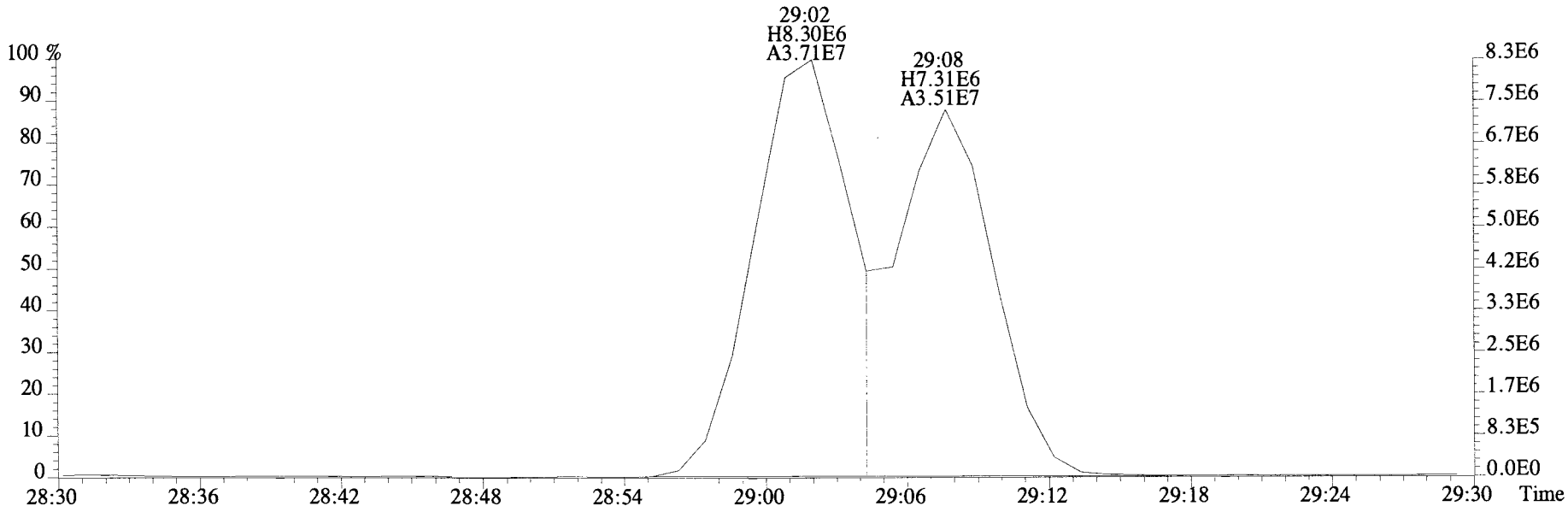
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14248.0,0.00%,F,F)



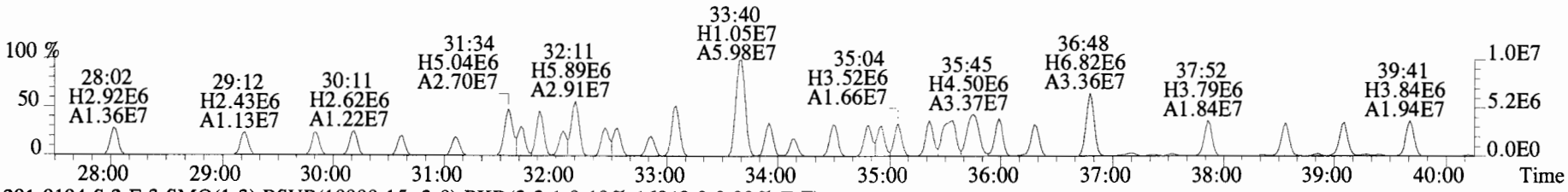
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,48160.0,0.00%,F,F)



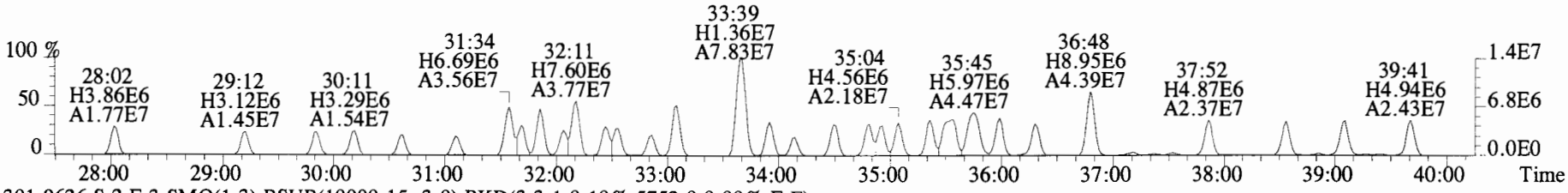
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23424.0,0.00%,F,F)



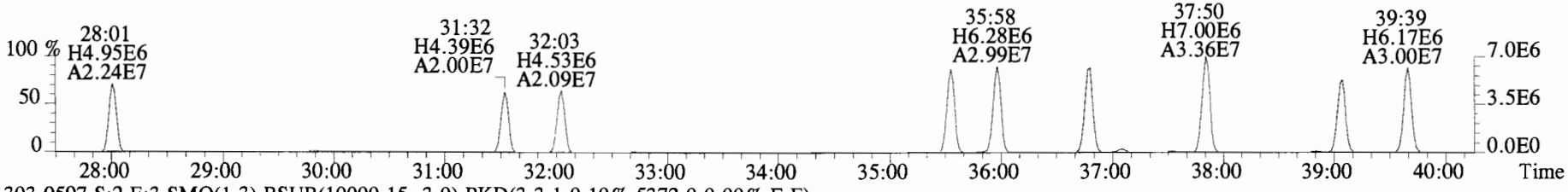
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8156.0,0.00%,F,F)



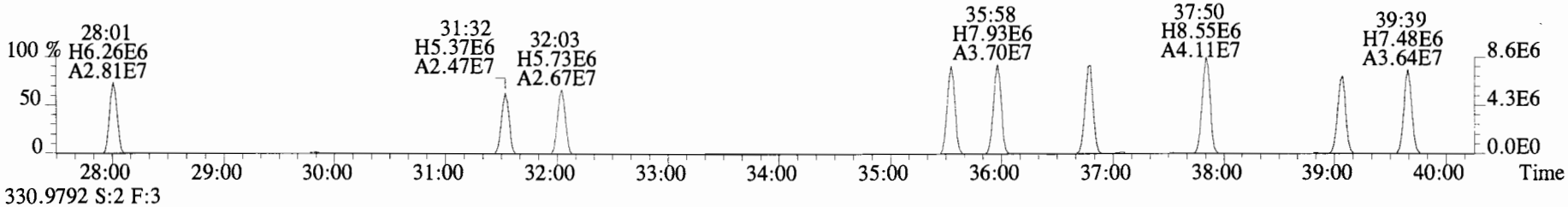
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16948.0,0.00%,F,F)



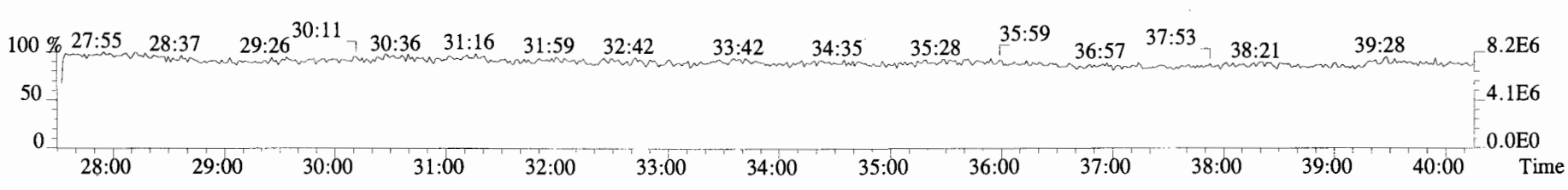
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5752.0,0.00%,F,F)



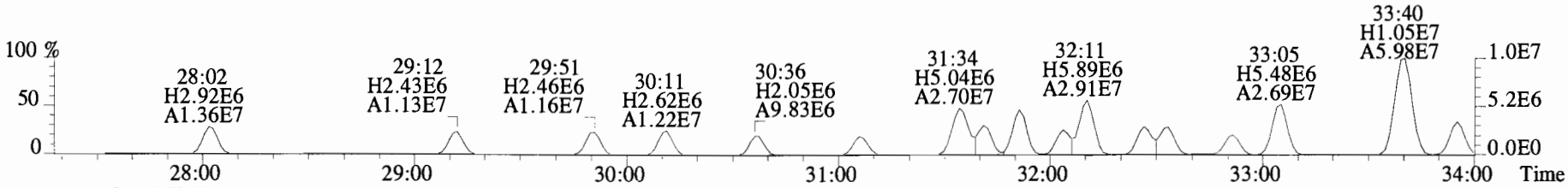
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5372.0,0.00%,F,F)



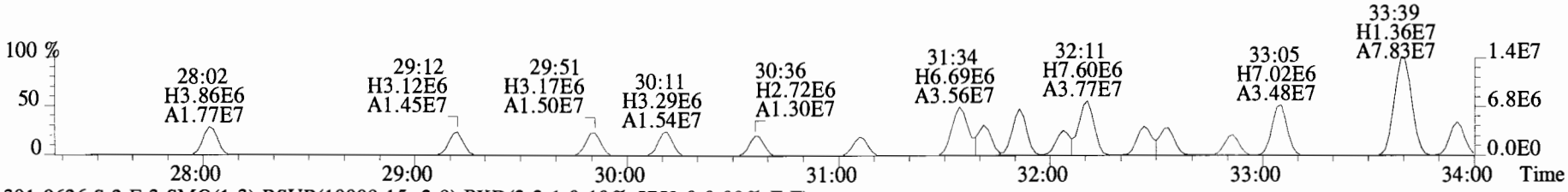
330.9792 S:2 F:3



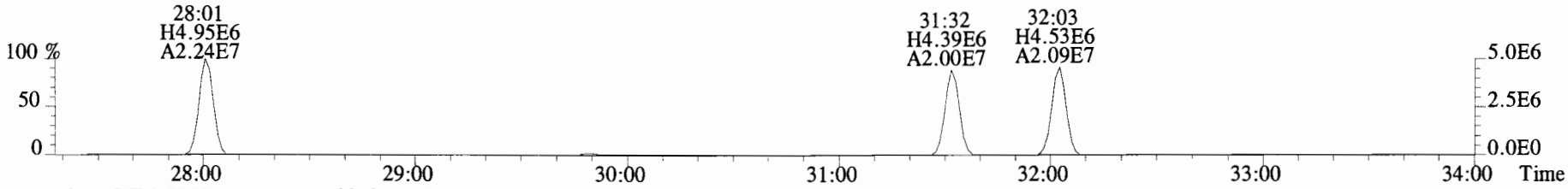
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8156.0,0.00%,F,F)



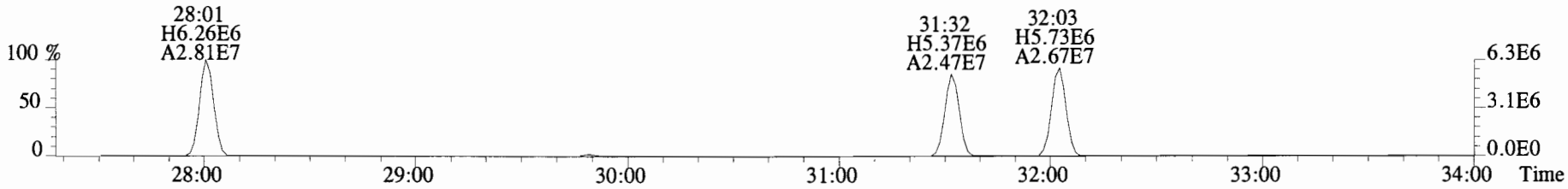
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16948.0,0.00%,F,F)



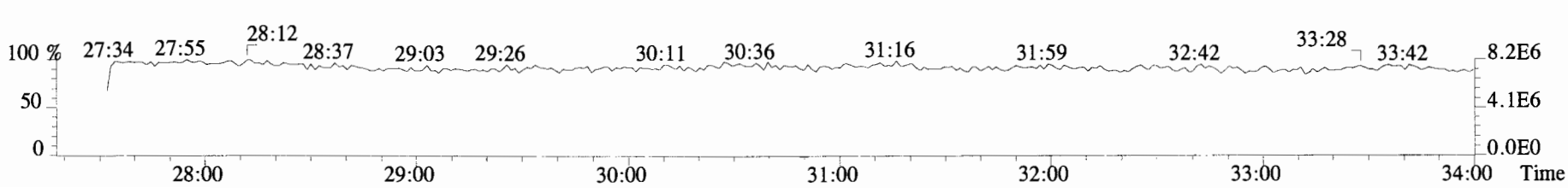
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5752.0,0.00%,F,F)



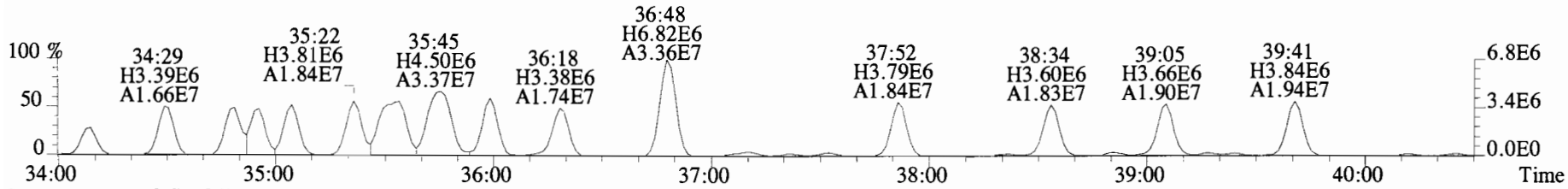
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5372.0,0.00%,F,F)



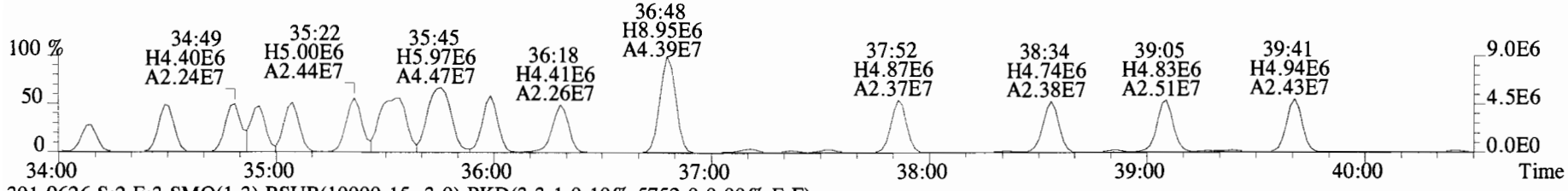
330.9792 S:2 F:3



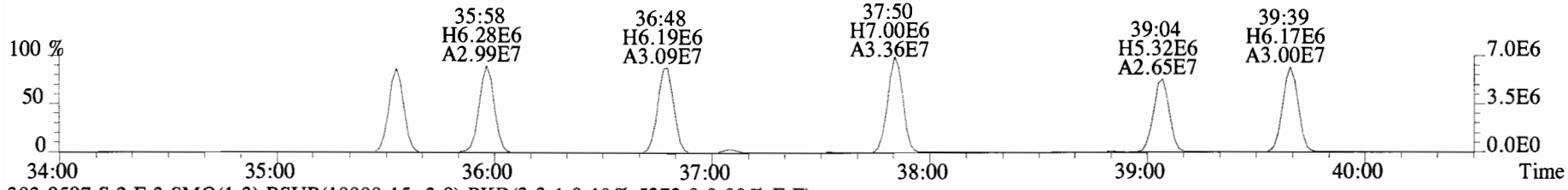
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8156.0,0.00%,F,F)



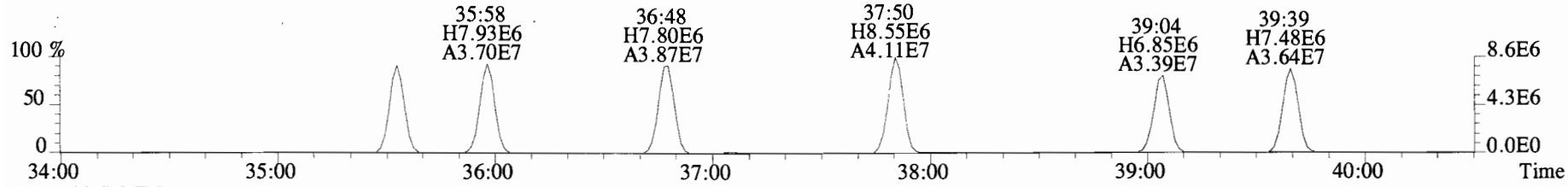
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16948.0,0.00%,F,F)



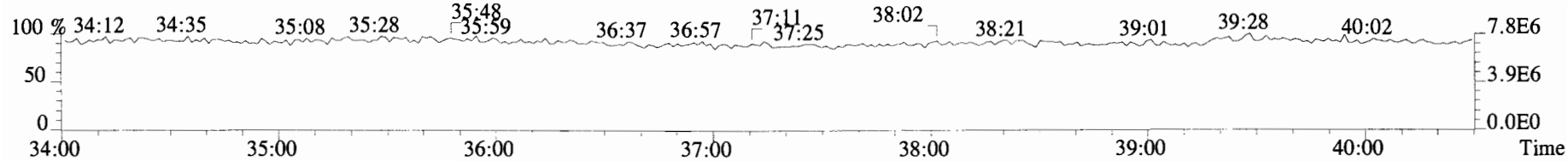
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5752.0,0.00%,F,F)



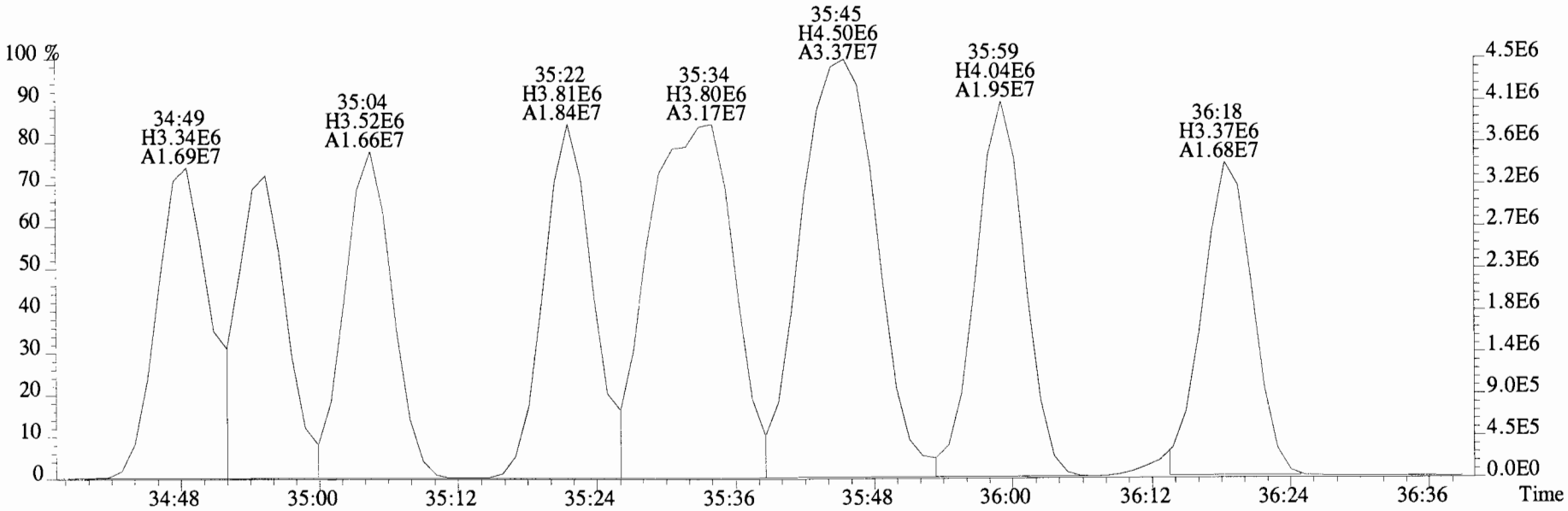
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5372.0,0.00%,F,F)



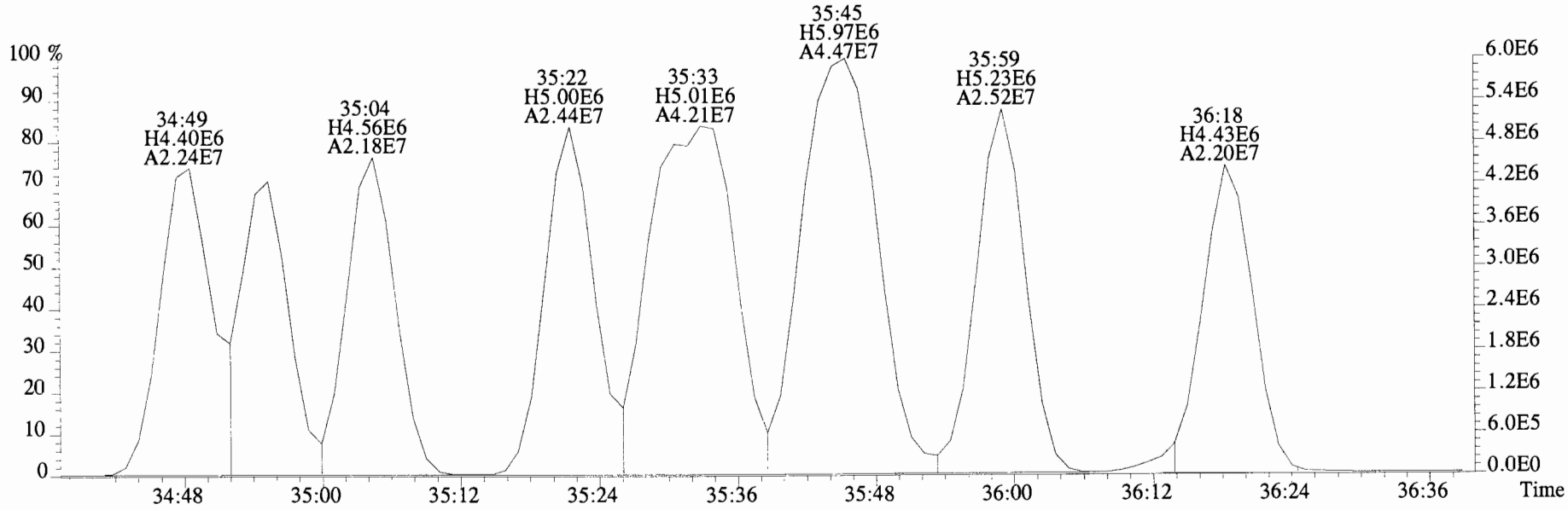
330.9792 S:2 F:3

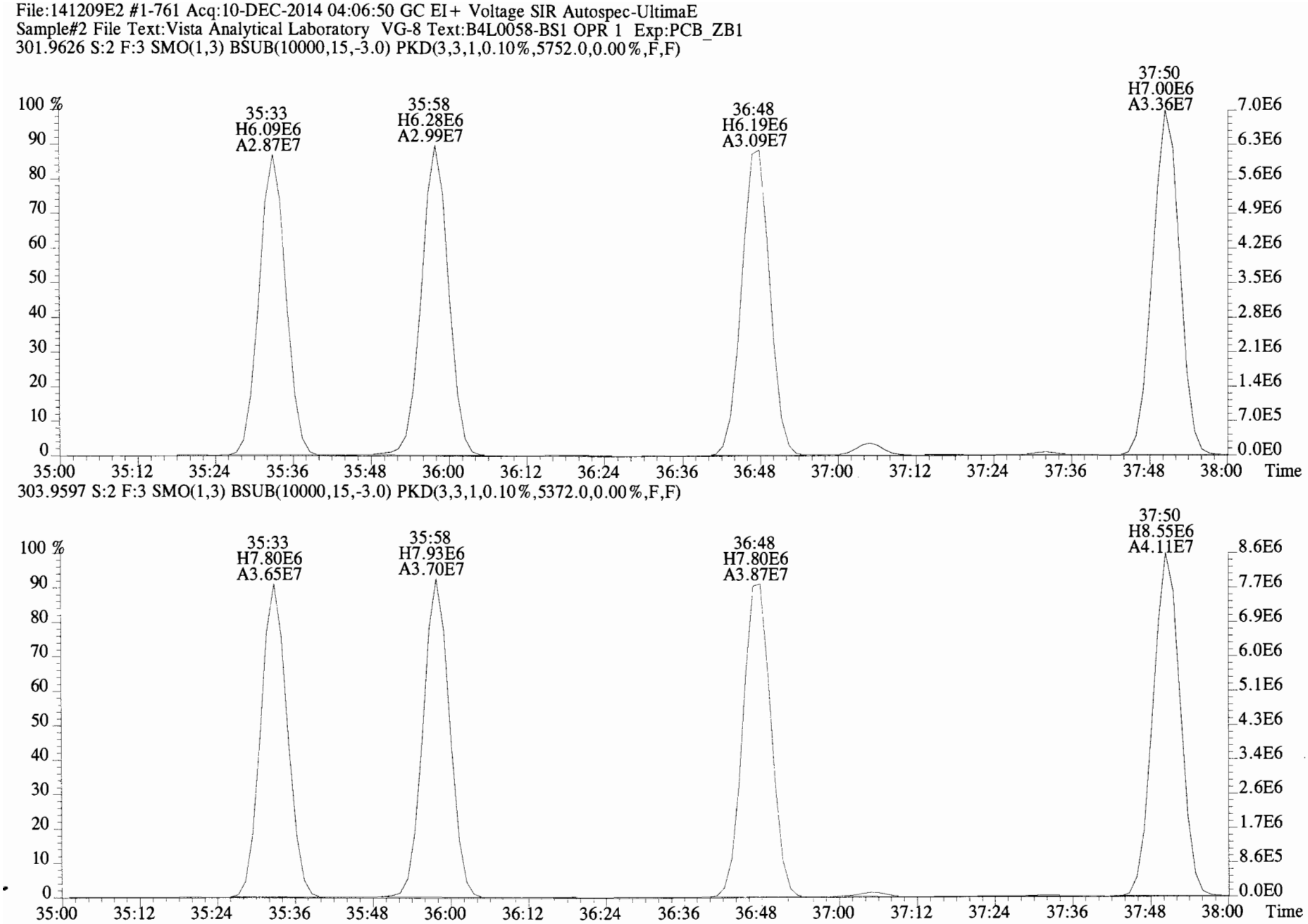


File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8156.0,0.00%,F,F)

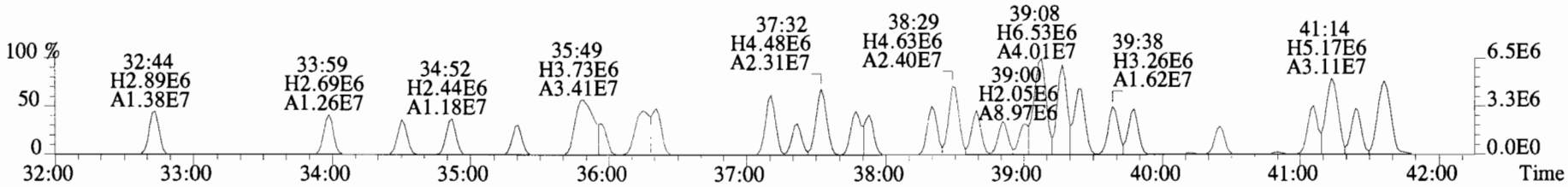


291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16948.0,0.00%,F,F)

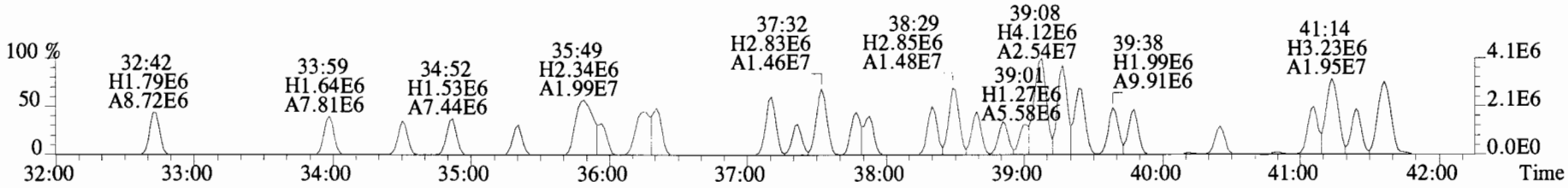



File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5752.0,0.00%,F,F)
35:33 H6.09E6 A2.87E7
35:58 H6.28E6 A2.99E7
36:48 H6.19E6 A3.09E7
37:50 H7.00E6 A3.36E7
100 %
90
80
70
60
50
40
30
20
10
0
7.0E6
6.3E6
5.6E6
4.9E6
4.2E6
3.5E6
2.8E6
2.1E6
1.4E6
7.0E5
0.0E0
35:00 35:12 35:24 35:36 35:48 36:00 36:12 36:24 36:36 36:48 37:00 37:12 37:24 37:36 37:48 38:00 Time
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5372.0,0.00%,F,F)
35:33 H7.80E6 A3.65E7
35:58 H7.93E6 A3.70E7
36:48 H7.80E6 A3.87E7
37:50 H8.55E6 A4.11E7
100 %
90
80
70
60
50
40
30
20
10
0
8.6E6
7.7E6
6.9E6
6.0E6
5.1E6
4.3E6
3.4E6
2.6E6
1.7E6
8.6E5
0.0E0
35:00 35:12 35:24 35:36 35:48 36:00 36:12 36:24 36:36 36:48 37:00 37:12 37:24 37:36 37:48 38:00 Time

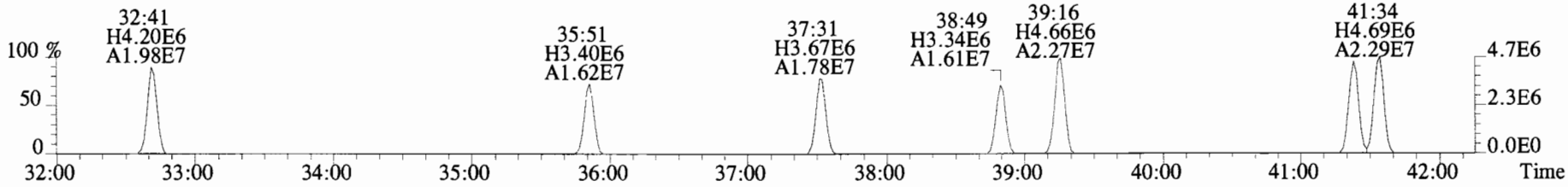
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



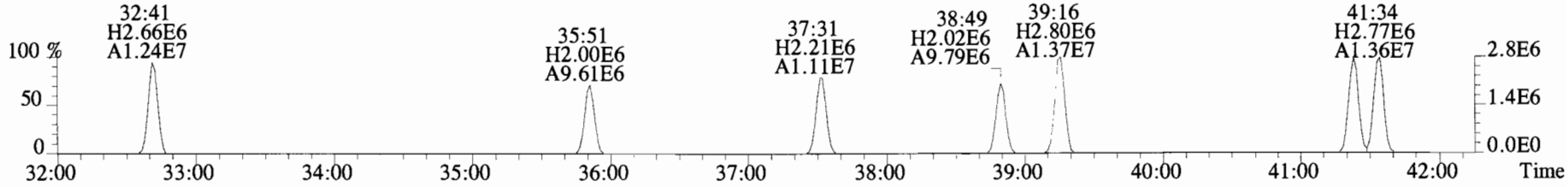
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1408.0,0.00%,F,F)



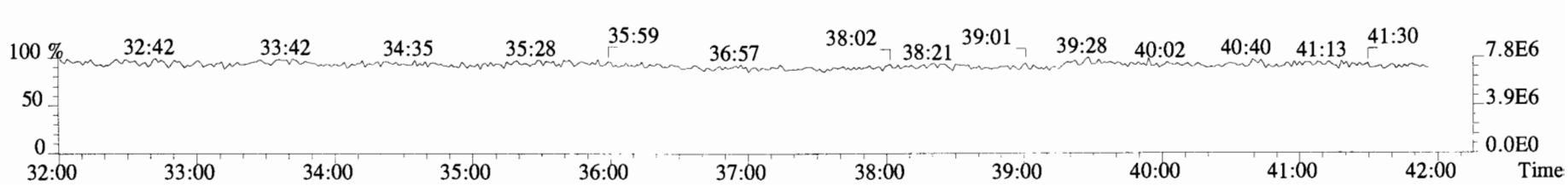
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2348.0,0.00%,F,F)



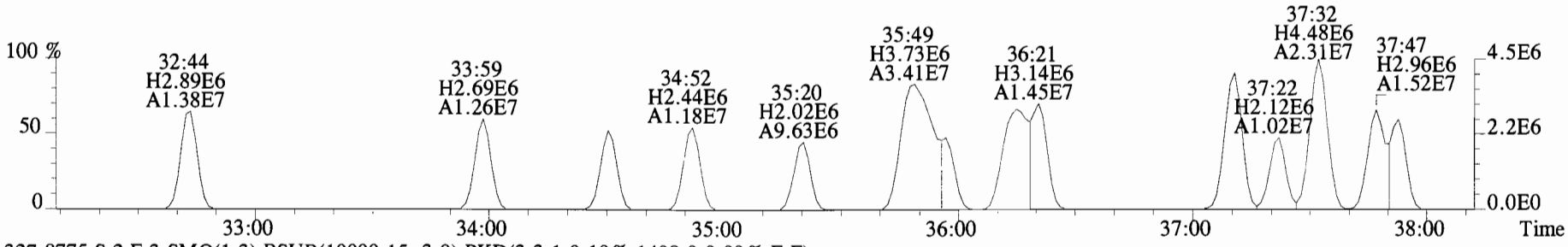
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2316.0,0.00%,F,F)



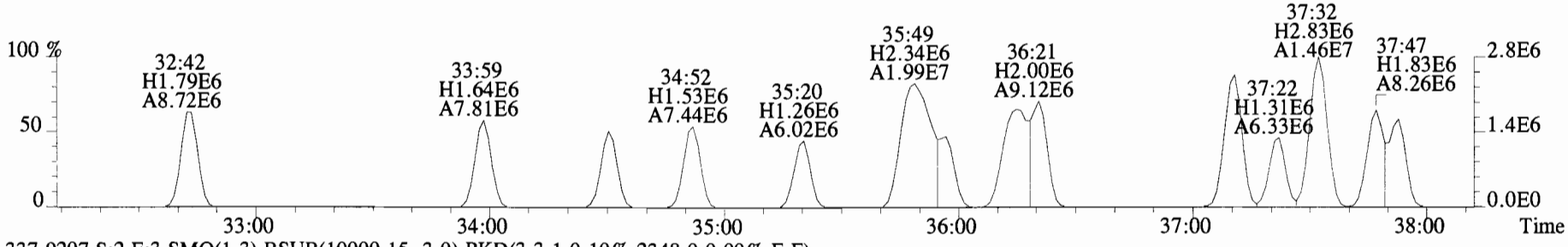
330.9792 S:2 F:3



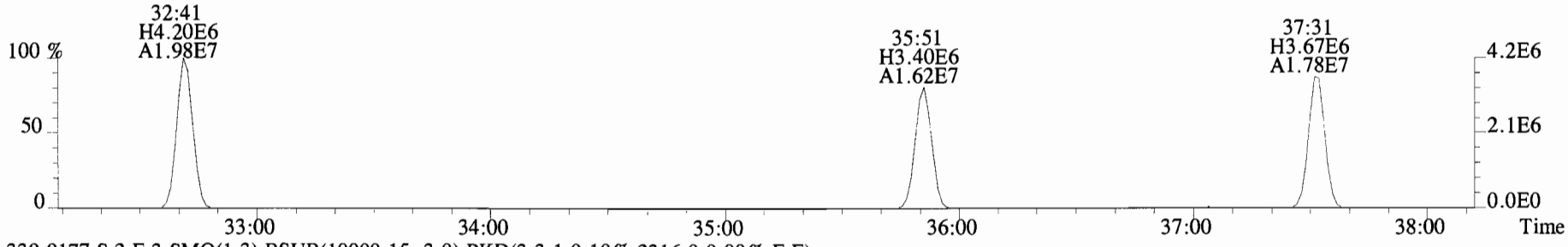
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



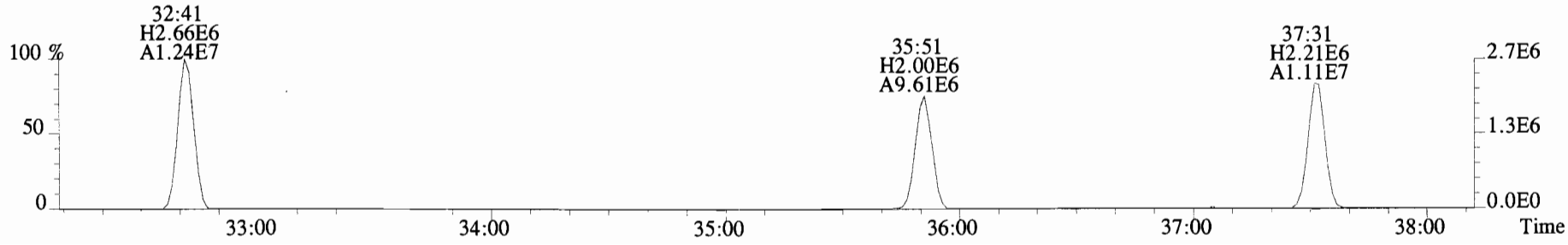
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1408.0,0.00%,F,F)

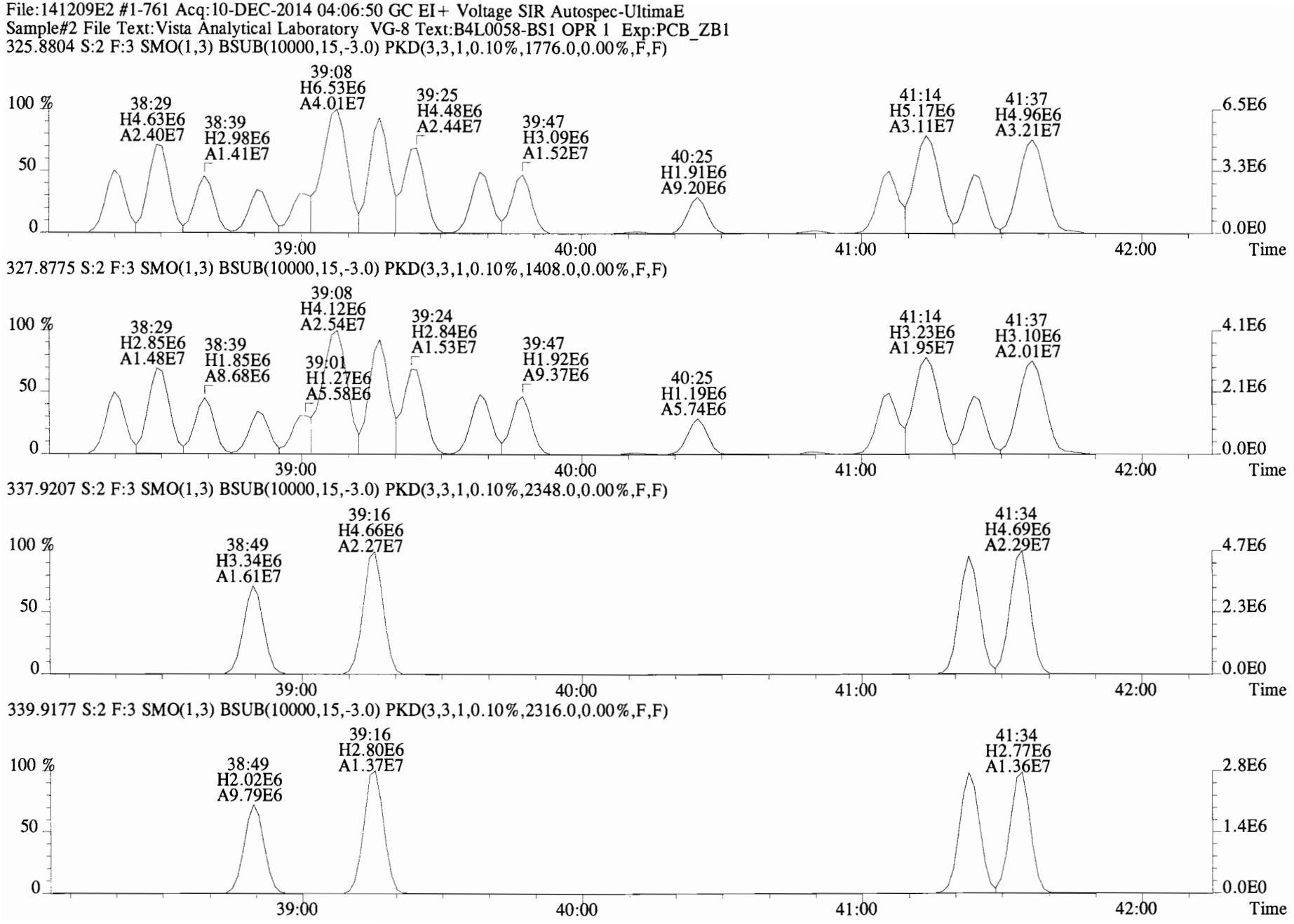


337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2348.0,0.00%,F,F)

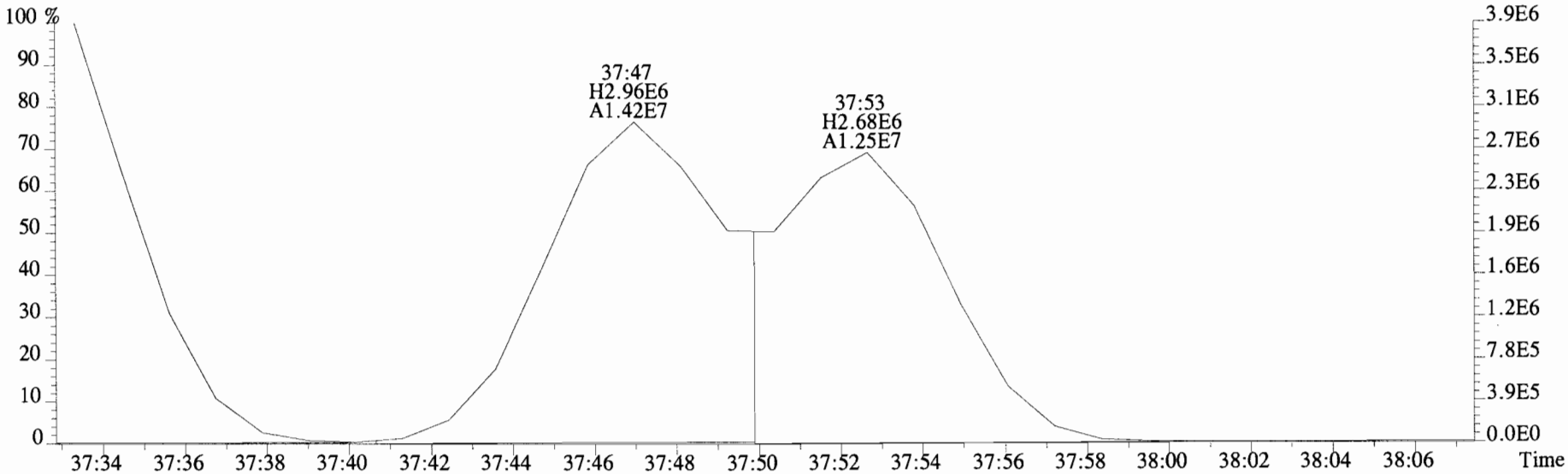


339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2316.0,0.00%,F,F)

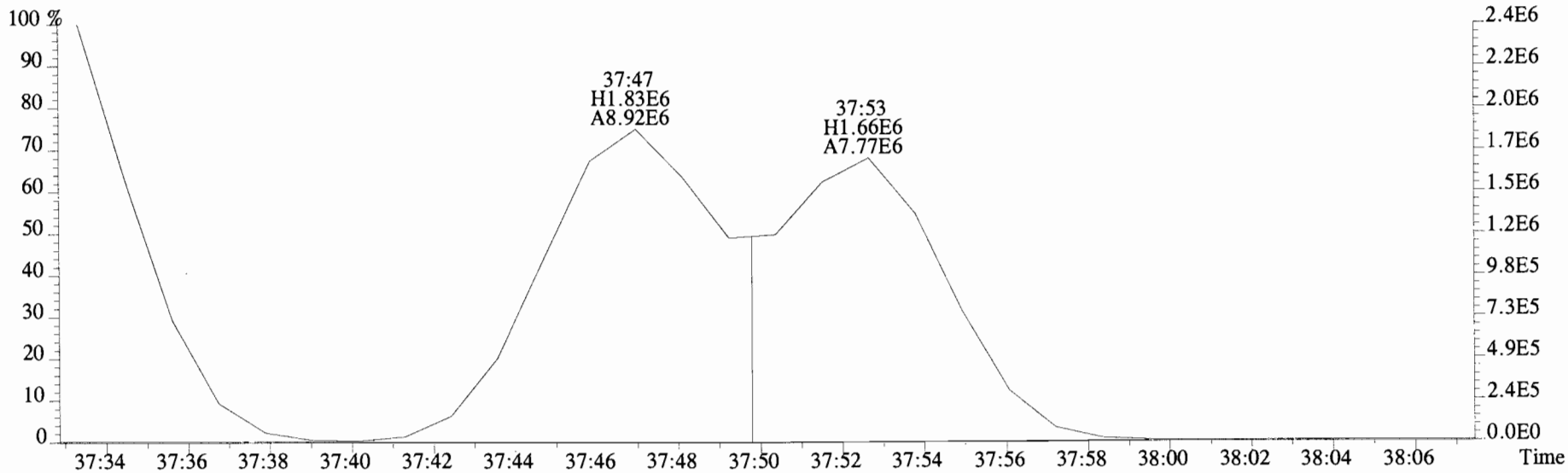



File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)
38:29 H4.63E6 A2.40E7
38:39 H2.98E6 A1.41E7
39:08 H6.53E6 A4.01E7
39:25 H4.48E6 A2.44E7
39:47 H3.09E6 A1.52E7
40:25 H1.91E6 A9.20E6
41:14 H5.17E6 A3.11E7
41:37 H4.96E6 A3.21E7
100 %
50
0
6.5E6
3.3E6
0.0E0
39:00
40:00
41:00
42:00
Time
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1408.0,0.00%,F,F)
38:29 H2.85E6 A1.48E7
38:39 H1.85E6 A8.68E6
39:01 H1.27E6 A5.58E6
39:08 H4.12E6 A2.54E7
39:24 H2.84E6 A1.53E7
39:47 H1.92E6 A9.37E6
40:25 H1.19E6 A5.74E6
41:14 H3.23E6 A1.95E7
41:37 H3.10E6 A2.01E7
100 %
50
0
4.1E6
2.1E6
0.0E0
39:00
40:00
41:00
42:00
Time
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2348.0,0.00%,F,F)
38:49 H3.34E6 A1.61E7
39:16 H4.66E6 A2.27E7
41:34 H4.69E6 A2.29E7
100 %
50
0
4.7E6
2.3E6
0.0E0
39:00
40:00
41:00
42:00
Time
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2316.0,0.00%,F,F)
38:49 H2.02E6 A9.79E6
39:16 H2.80E6 A1.37E7
41:34 H2.77E6 A1.36E7
100 %
50
0
2.8E6
1.4E6
0.0E0
39:00
40:00
41:00
42:00
Time

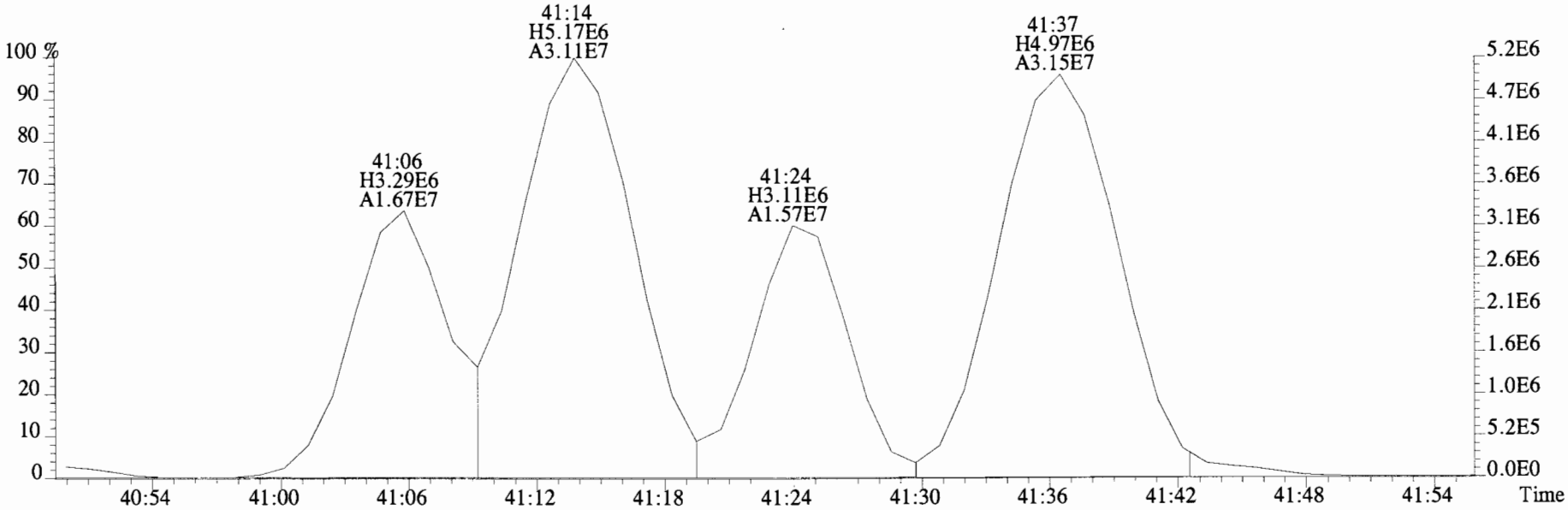
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



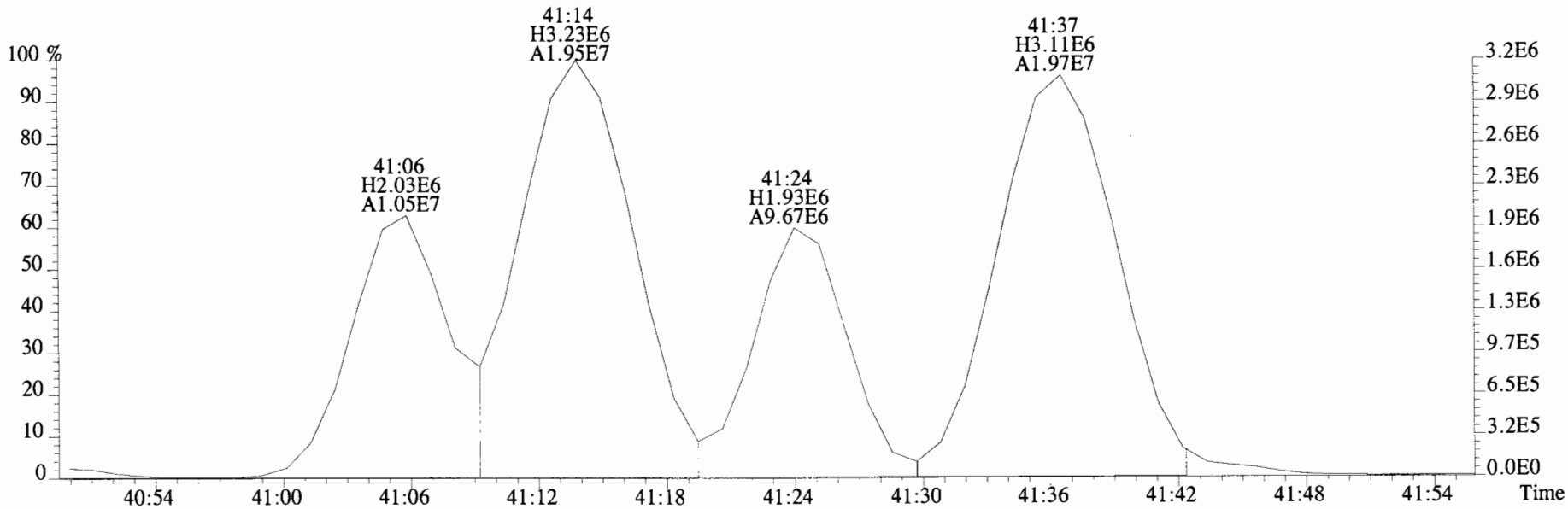
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1408.0,0.00%,F,F)



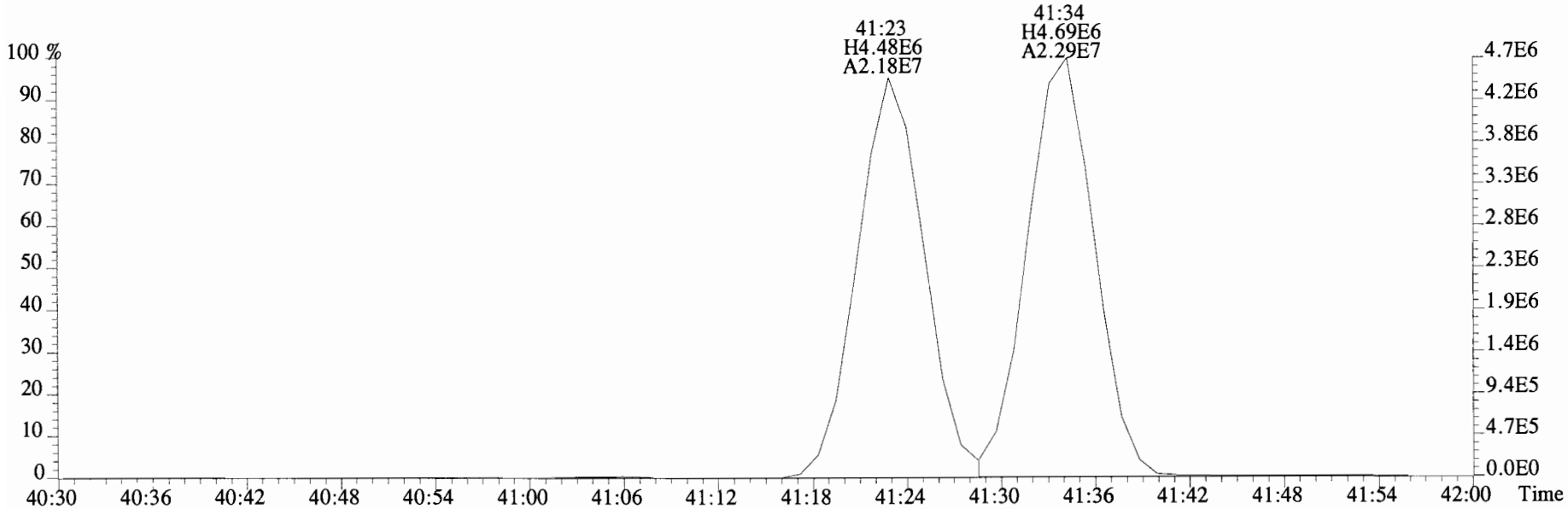
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



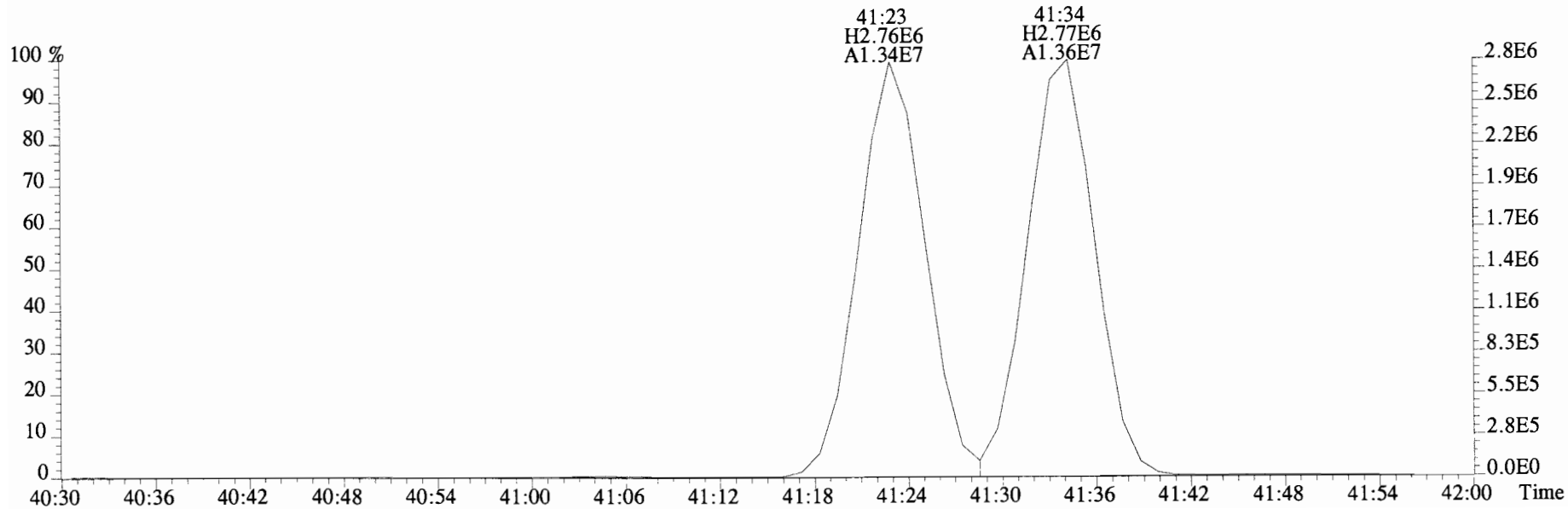
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1408.0,0.00%,F,F)



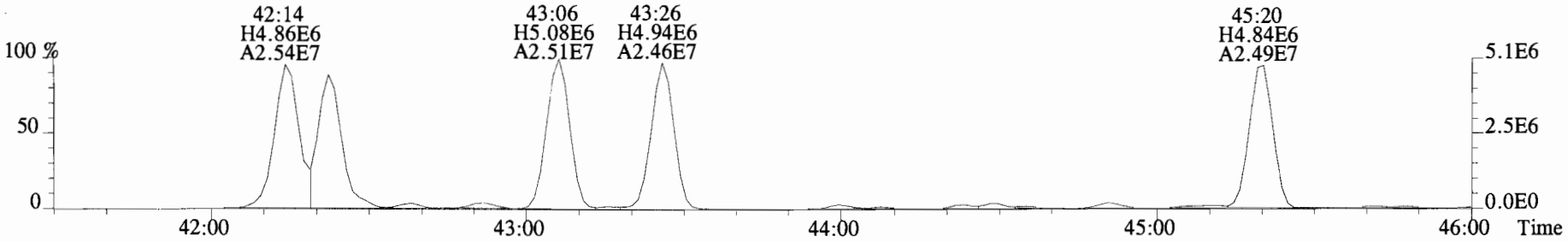
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2348.0,0.00%,F,F)



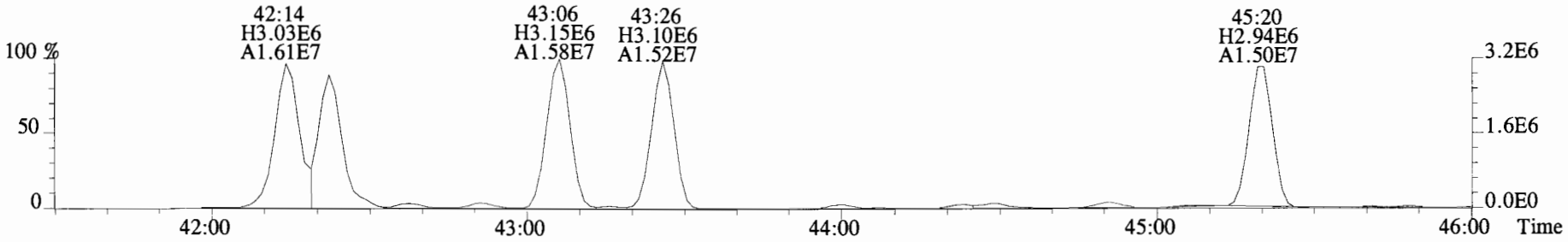
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2316.0,0.00%,F,F)



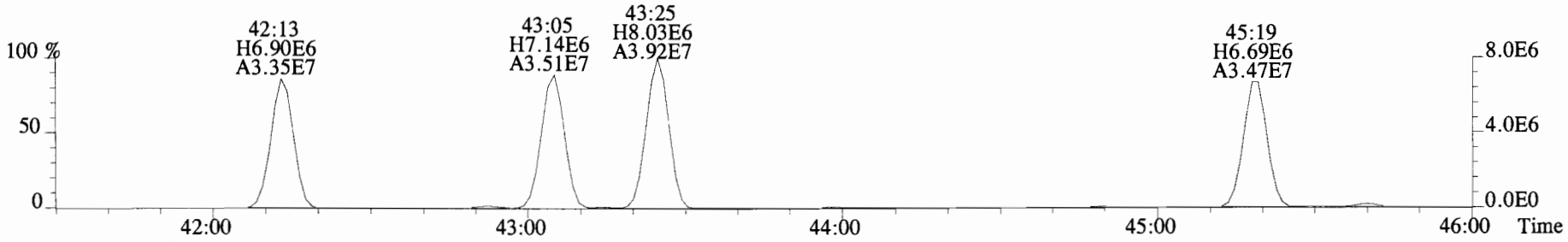
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9296.0,0.00%,F,F)



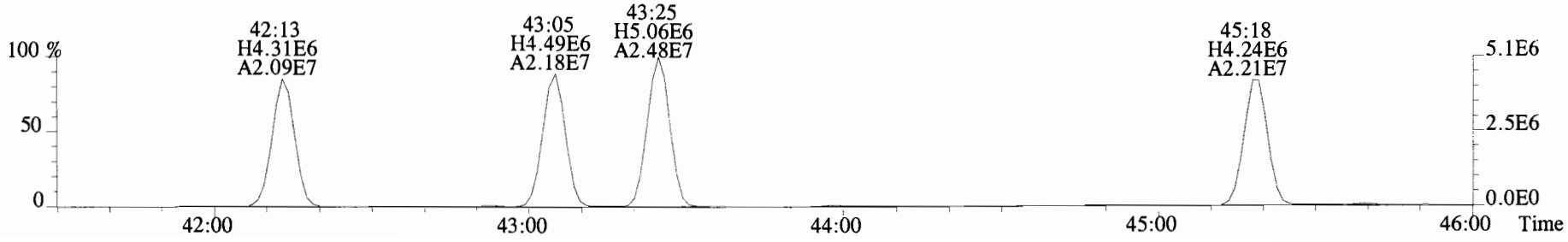
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6356.0,0.00%,F,F)



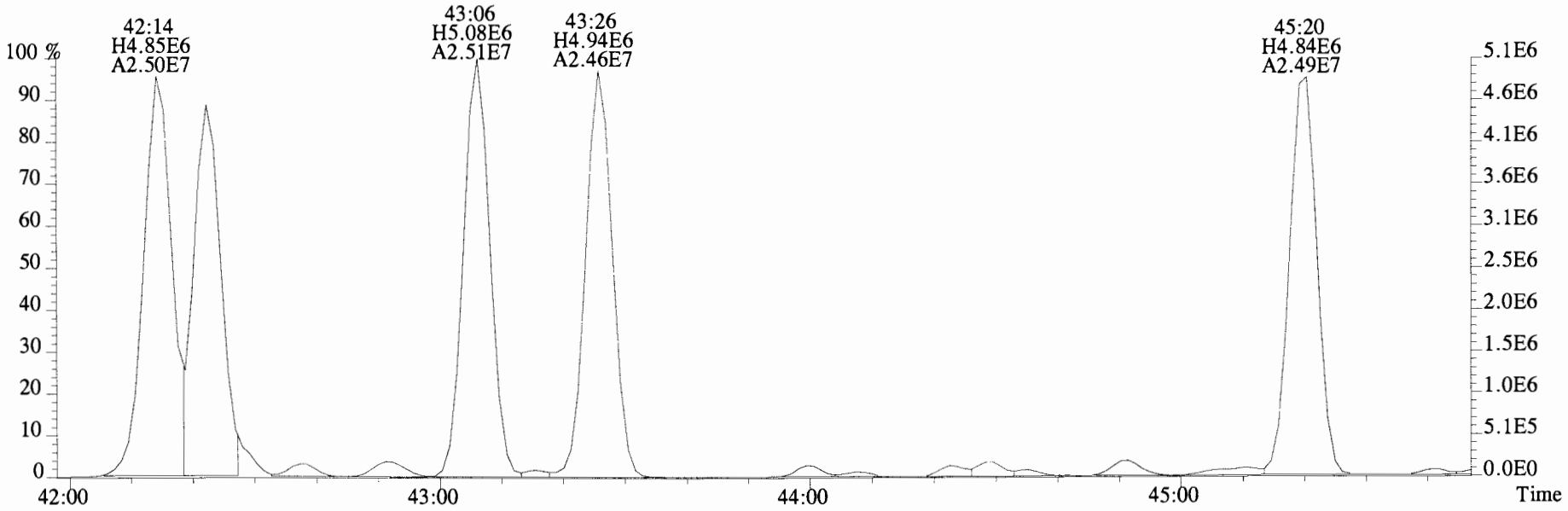
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6480.0,0.00%,F,F)



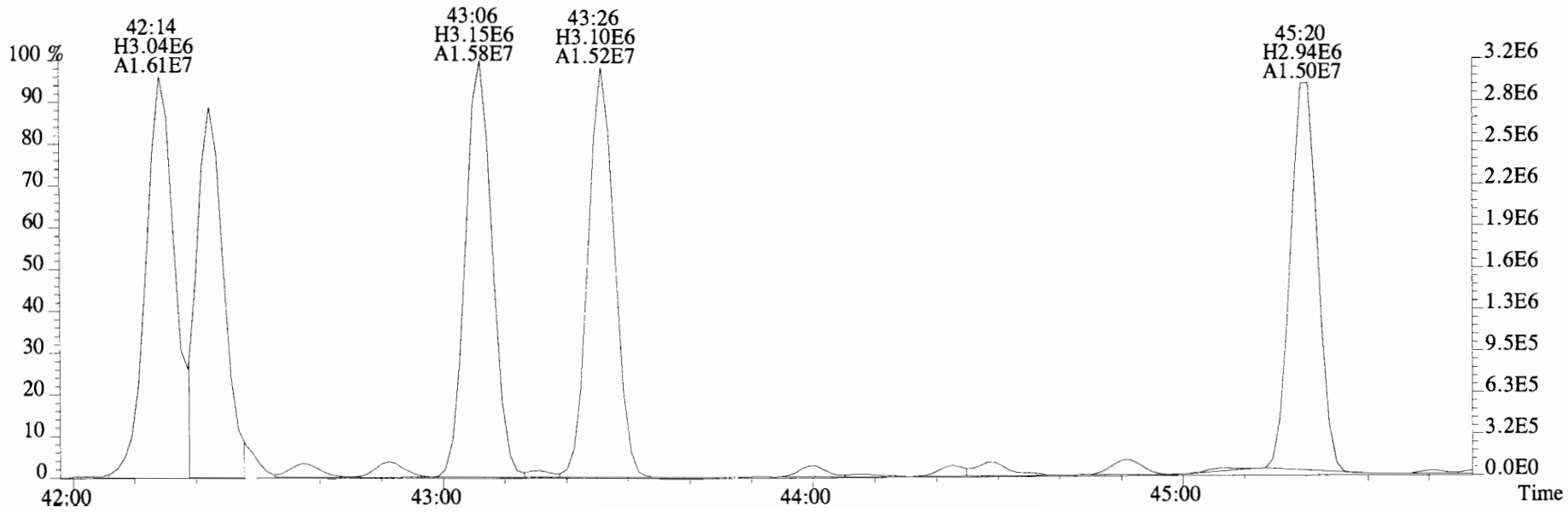
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5192.0,0.00%,F,F)



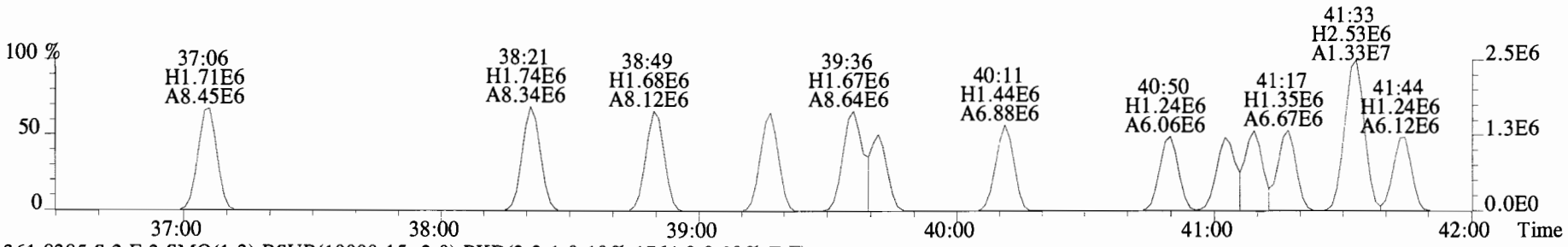
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9296.0,0.00%,F,F)



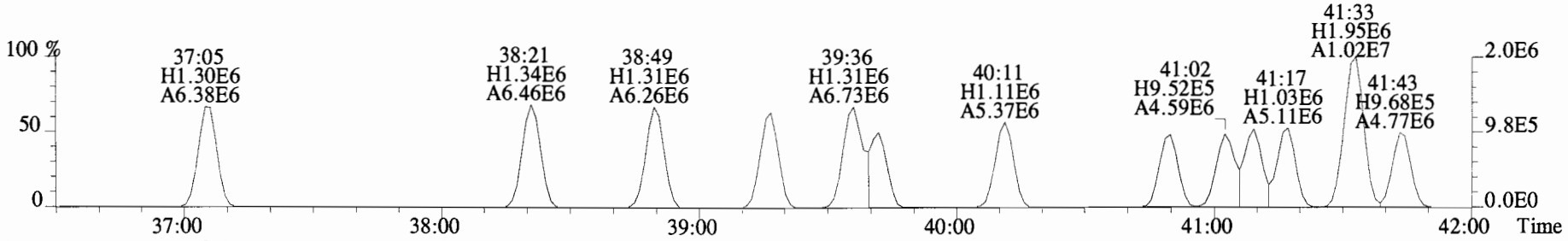
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6356.0,0.00%,F,F)



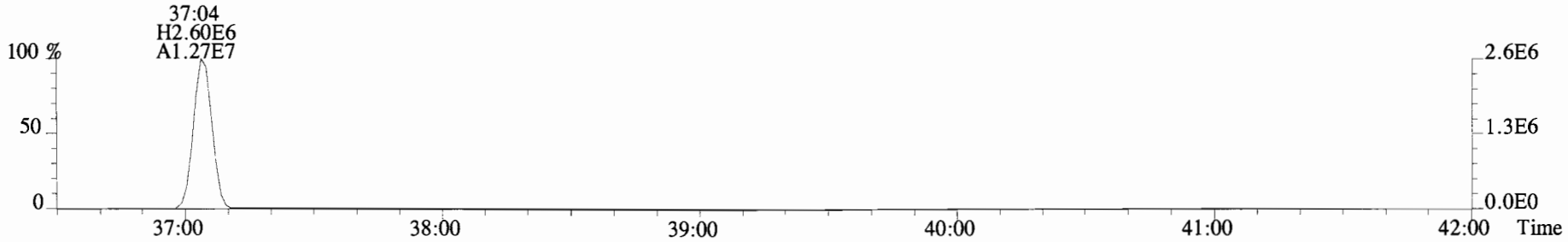
File:141209E2 #1-761 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



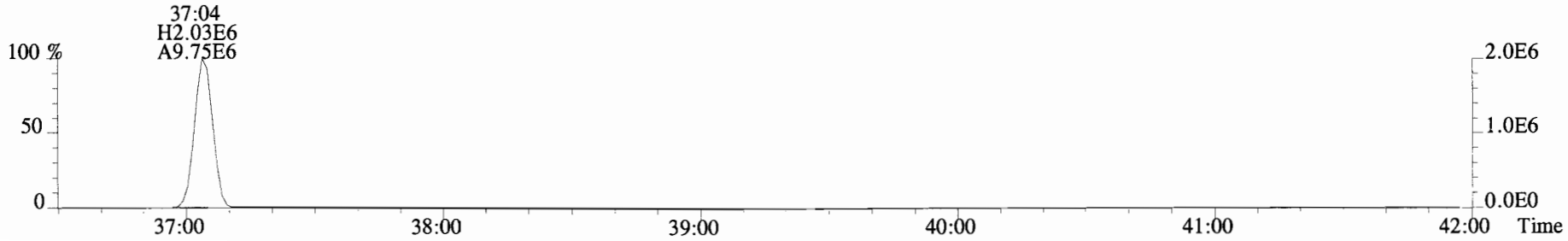
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1764.0,0.00%,F,F)

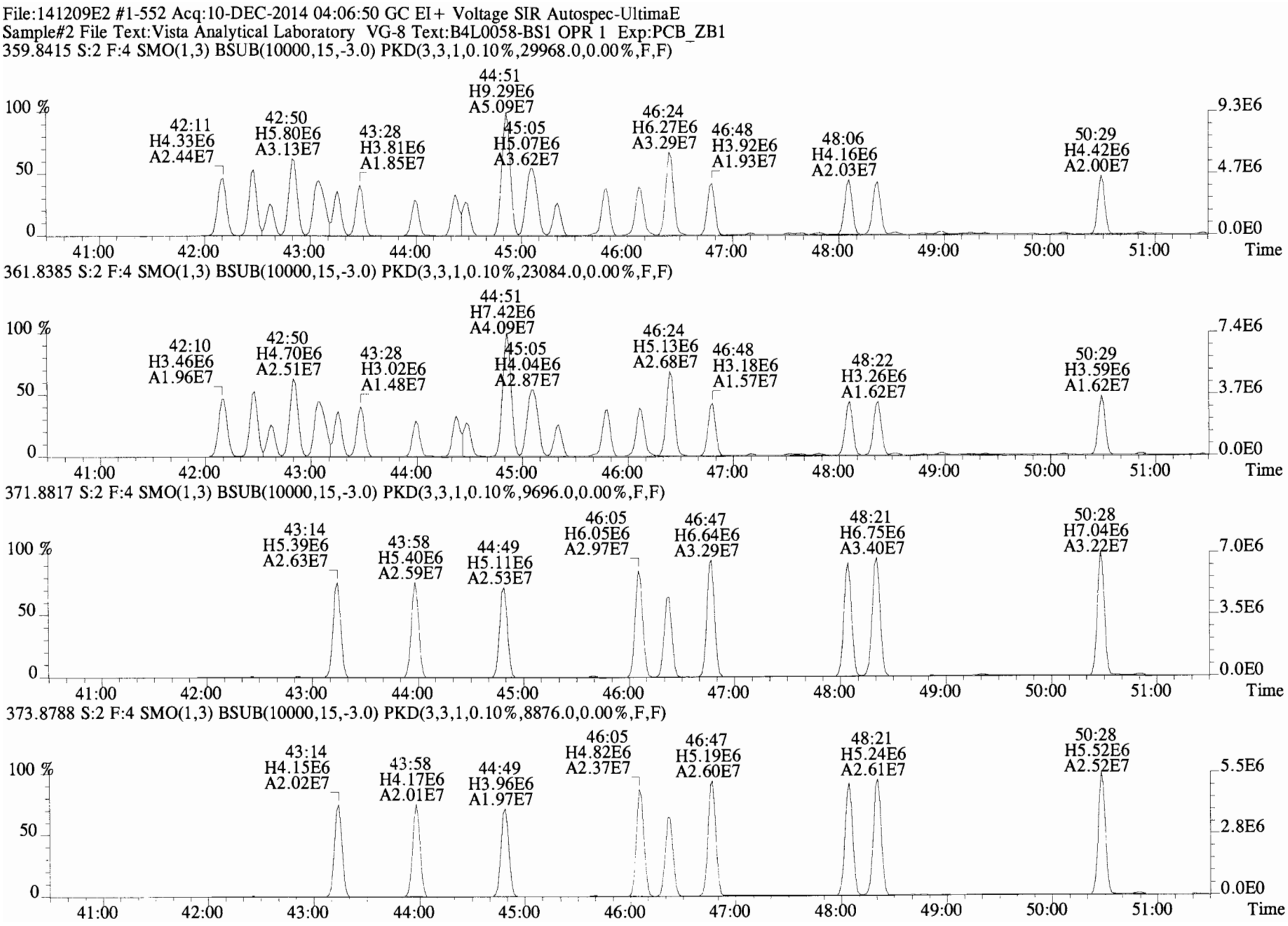


371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2200.0,0.00%,F,F)

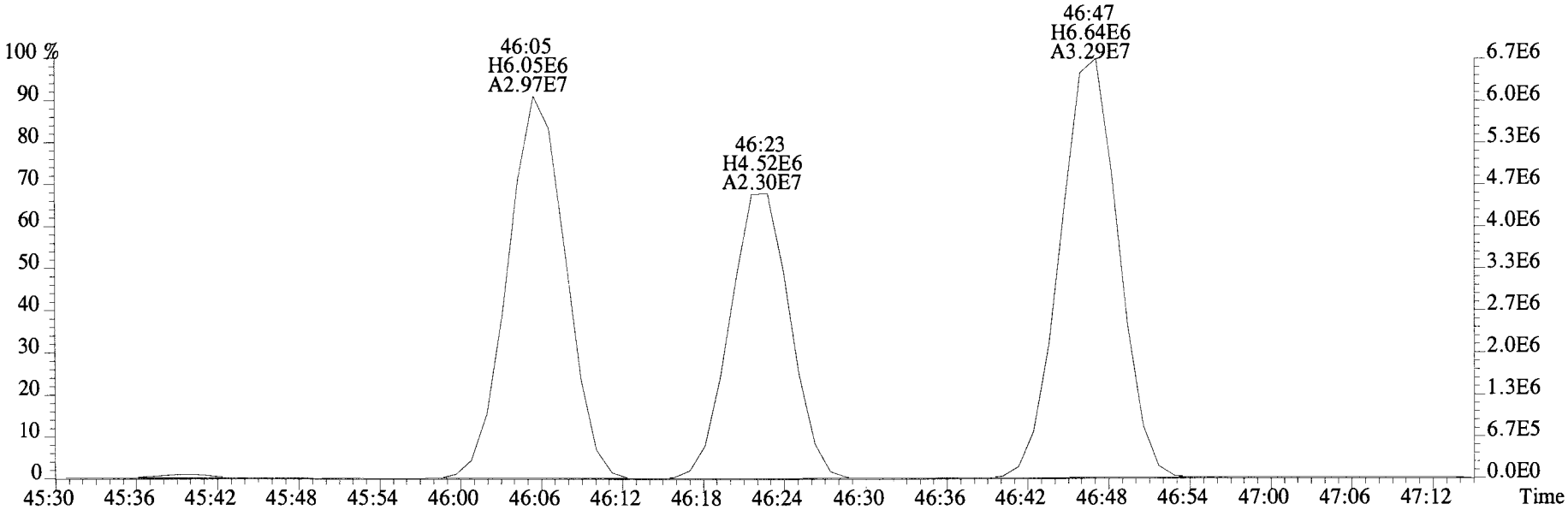


373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2184.0,0.00%,F,F)

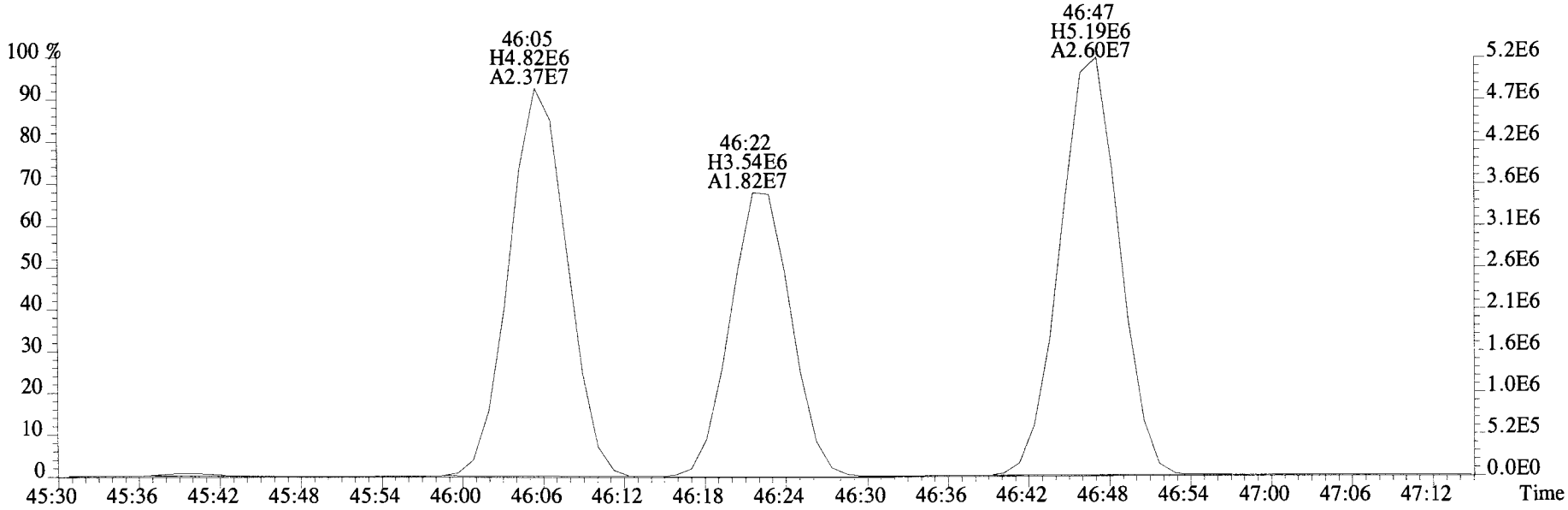



File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29968.0,0.00%,F,F)
42:11 H4.33E6 A2.44E7
42:50 H5.80E6 A3.13E7
43:28 H3.81E6 A1.85E7
44:51 H9.29E6 A5.09E7
45:05 H5.07E6 A3.62E7
46:24 H6.27E6 A3.29E7
46:48 H3.92E6 A1.93E7
48:06 H4.16E6 A2.03E7
50:29 H4.42E6 A2.00E7
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23084.0,0.00%,F,F)
42:10 H3.46E6 A1.96E7
42:50 H4.70E6 A2.51E7
43:28 H3.02E6 A1.48E7
44:51 H7.42E6 A4.09E7
45:05 H4.04E6 A2.87E7
46:24 H5.13E6 A2.68E7
46:48 H3.18E6 A1.57E7
48:22 H3.26E6 A1.62E7
50:29 H3.59E6 A1.62E7
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9696.0,0.00%,F,F)
43:14 H5.39E6 A2.63E7
43:58 H5.40E6 A2.59E7
44:49 H5.11E6 A2.53E7
46:05 H6.05E6 A2.97E7
46:47 H6.64E6 A3.29E7
48:21 H6.75E6 A3.40E7
50:28 H7.04E6 A3.22E7
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8876.0,0.00%,F,F)
43:14 H4.15E6 A2.02E7
43:58 H4.17E6 A2.01E7
44:49 H3.96E6 A1.97E7
46:05 H4.82E6 A2.37E7
46:47 H5.19E6 A2.60E7
48:21 H5.24E6 A2.61E7
50:28 H5.52E6 A2.52E7
100 %
50
0
41:00
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
Time
9.3E6
4.7E6
0.0E0
7.4E6
3.7E6
7.0E6
3.5E6
5.5E6
2.8E6

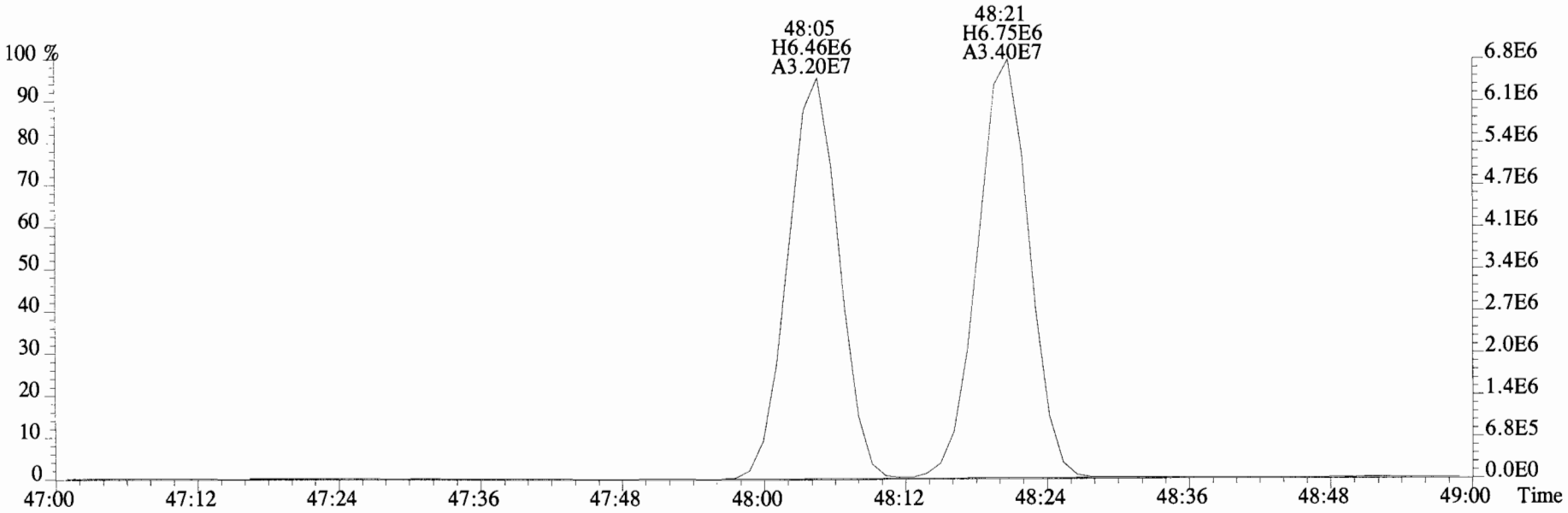
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9696.0,0.00%,F,F)



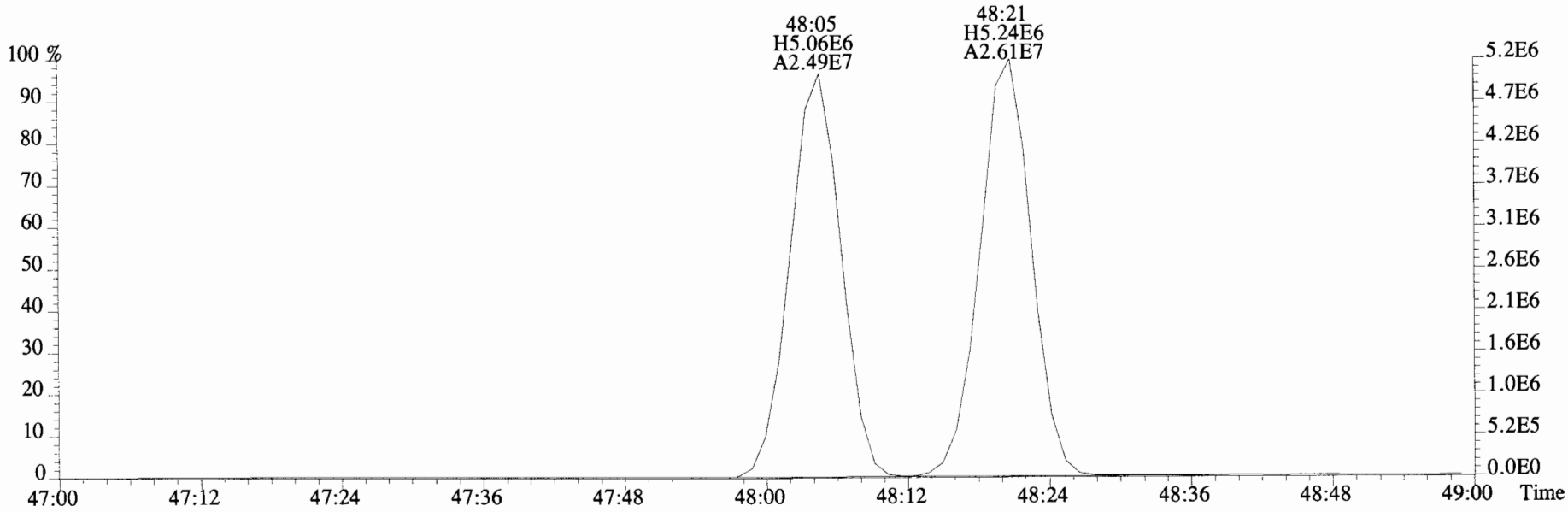
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8876.0,0.00%,F,F)

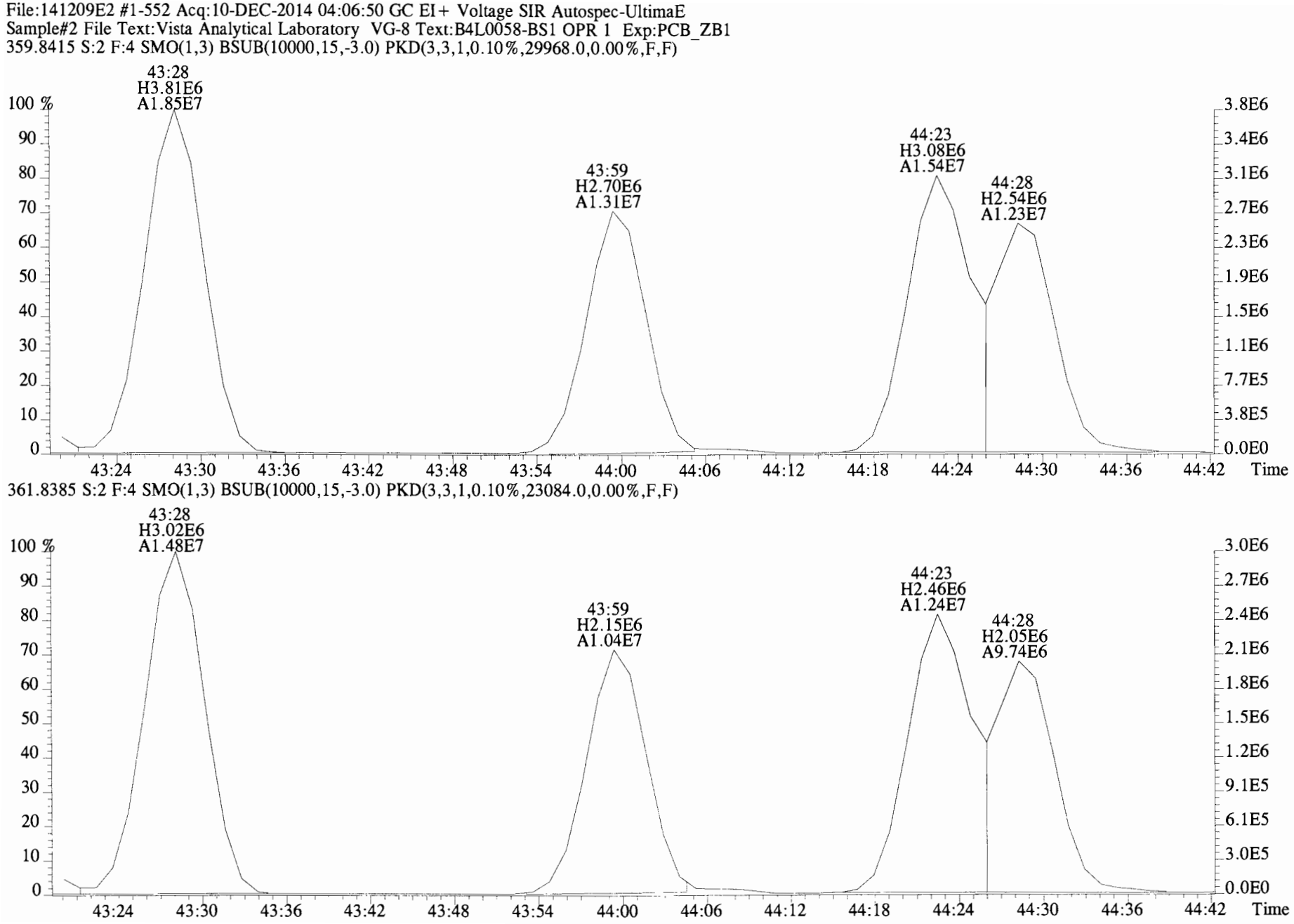


File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9696.0,0.00%,F,F)

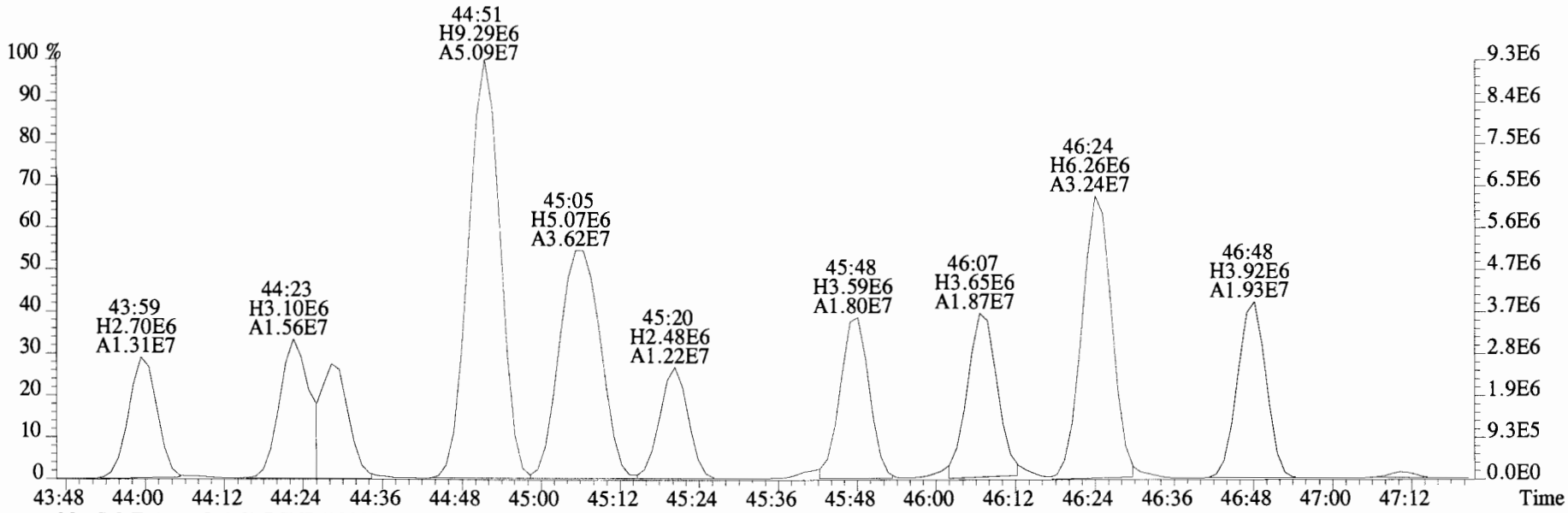


373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8876.0,0.00%,F,F)

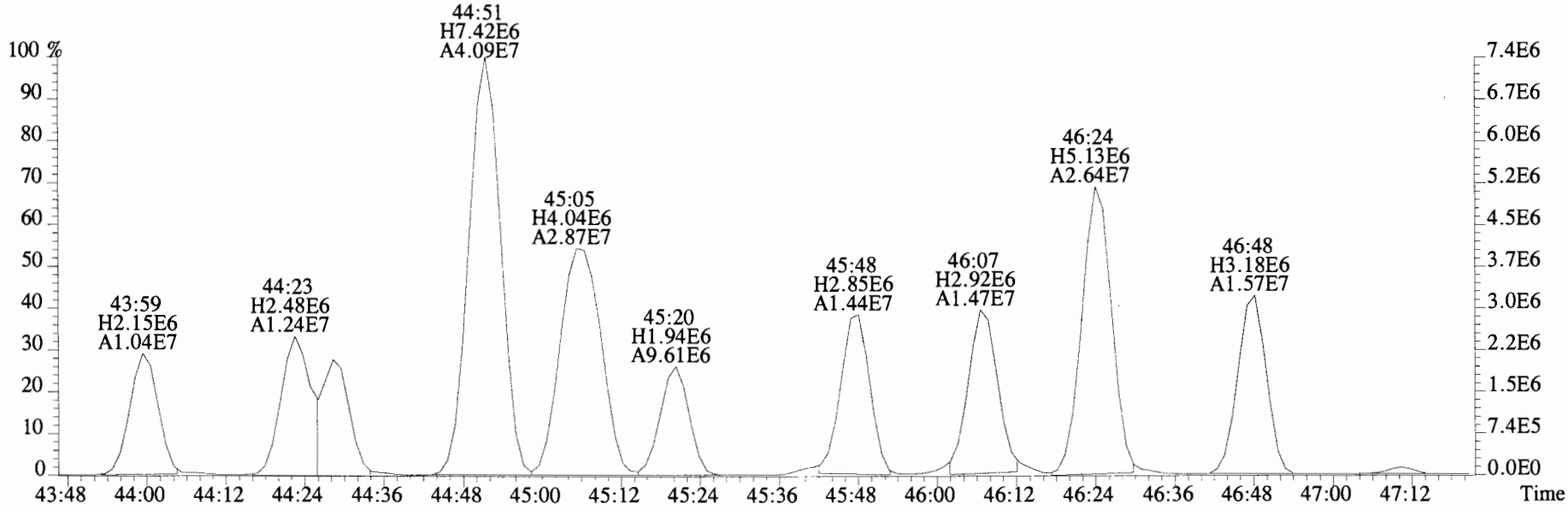



File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29968.0,0.00%,F,F)
43:28
H3.81E6
A1.85E7
43:59
H2.70E6
A1.31E7
44:23
H3.08E6
A1.54E7
44:28
H2.54E6
A1.23E7
100 %
90
80
70
60
50
40
30
20
10
0
3.8E6
3.4E6
3.1E6
2.7E6
2.3E6
1.9E6
1.5E6
1.1E6
7.7E5
3.8E5
0.0E0
43:24
43:30
43:36
43:42
43:48
43:54
44:00
44:06
44:12
44:18
44:24
44:30
44:36
44:42
Time
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23084.0,0.00%,F,F)
43:28
H3.02E6
A1.48E7
43:59
H2.15E6
A1.04E7
44:23
H2.46E6
A1.24E7
44:28
H2.05E6
A9.74E6
100 %
90
80
70
60
50
40
30
20
10
0
3.0E6
2.7E6
2.4E6
2.1E6
1.8E6
1.5E6
1.2E6
9.1E5
6.1E5
3.0E5
0.0E0
43:24
43:30
43:36
43:42
43:48
43:54
44:00
44:06
44:12
44:18
44:24
44:30
44:36
44:42
Time

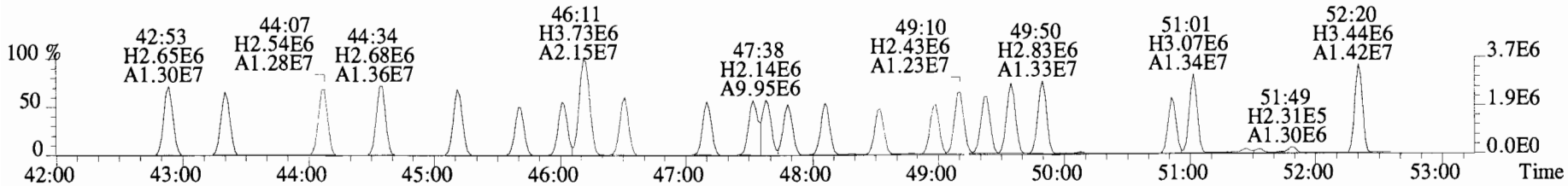
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29968.0,0.00%,F,F)



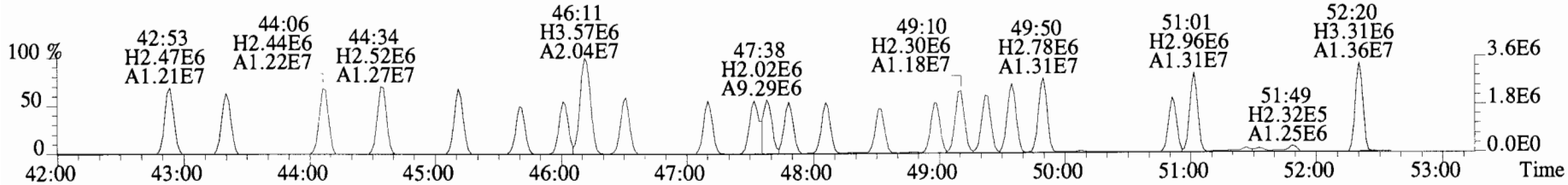
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23084.0,0.00%,F,F)



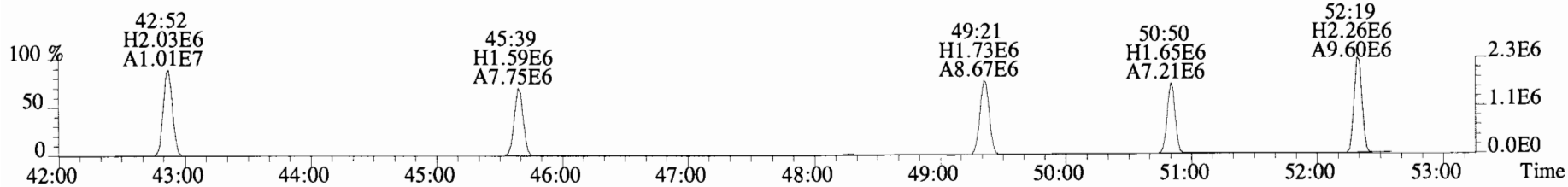
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7148.0,0.00%,F,F)



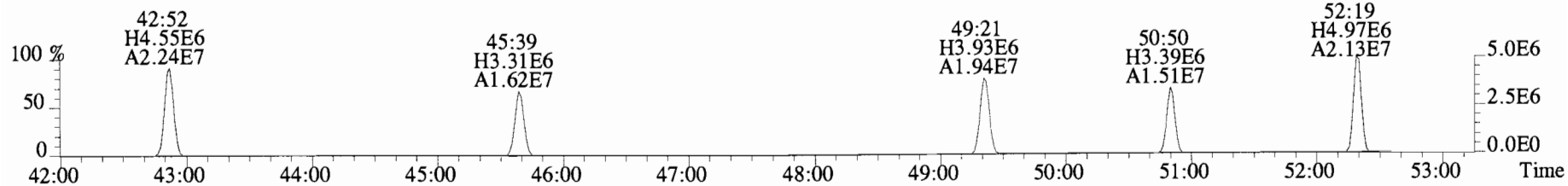
395.7995 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3640.0,0.00%,F,F)



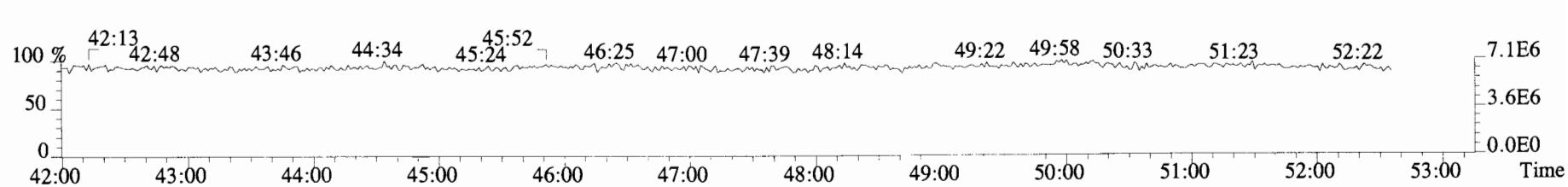
403.8457 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2476.0,0.00%,F,F)



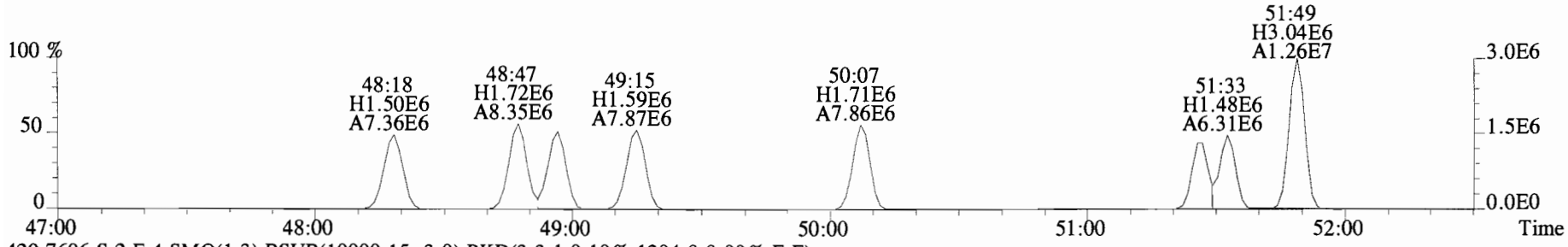
405.8428 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7420.0,0.00%,F,F)



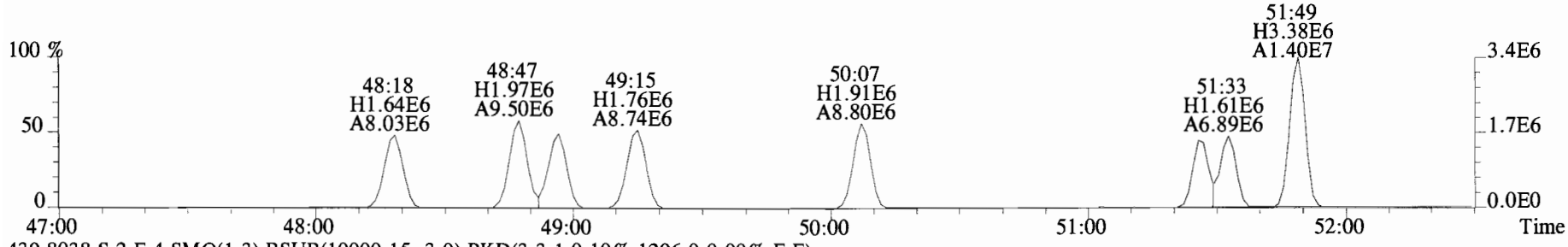
380.9760 S:2 F:4



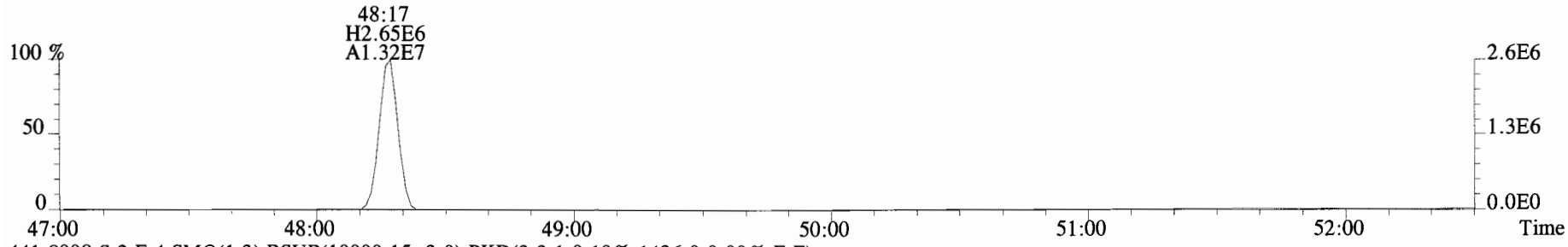
File:141209E2 #1-552 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1204.0,0.00%,F,F)



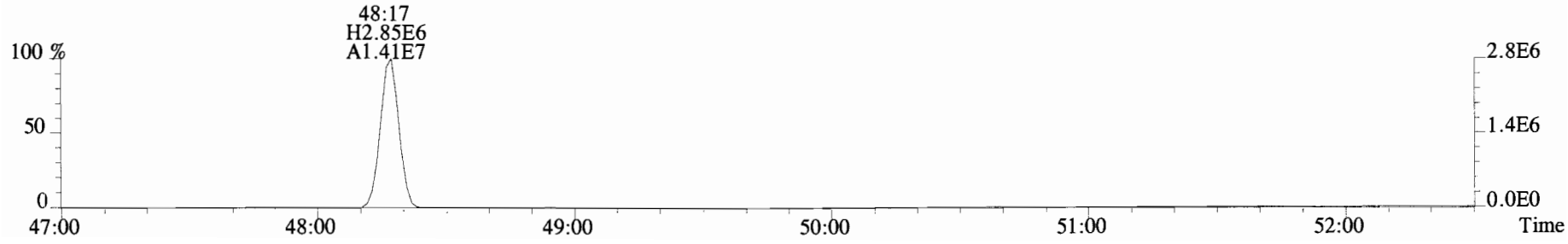
429.7606 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1204.0,0.00%,F,F)

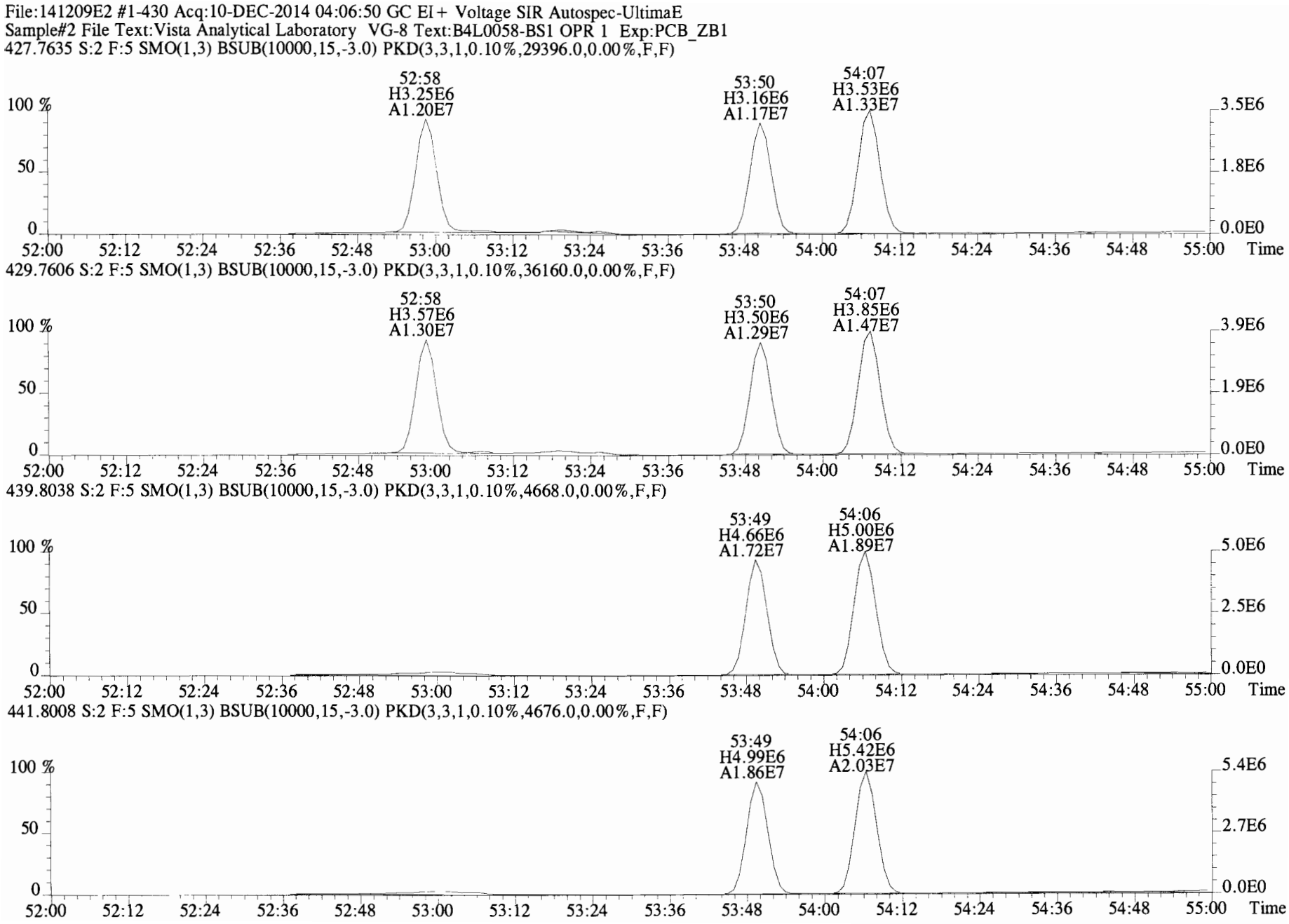


439.8038 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1296.0,0.00%,F,F)



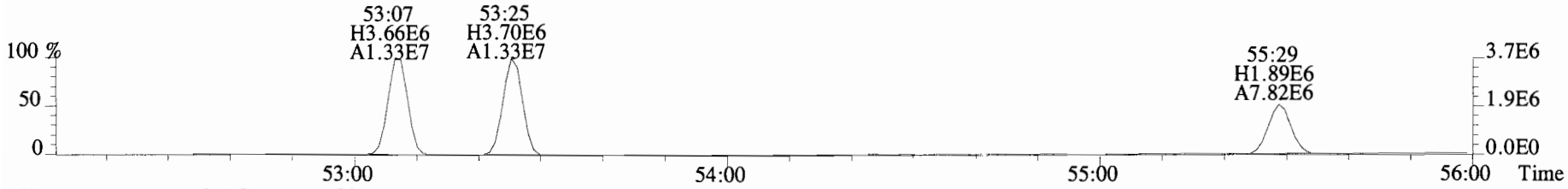
441.8008 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1436.0,0.00%,F,F)



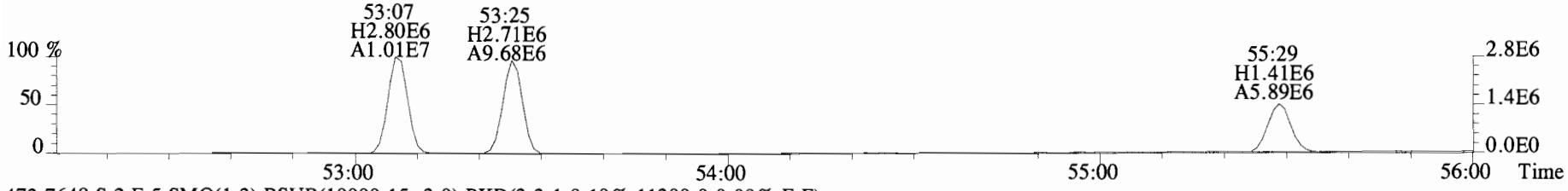

File:141209E2 #1-430 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29396.0,0.00%,F,F)
52:58 H3.25E6 A1.20E7
53:50 H3.16E6 A1.17E7
54:07 H3.53E6 A1.33E7
100 %
50
0
3.5E6
1.8E6
0.0E0
52:00 52:12 52:24 52:36 52:48 53:00 53:12 53:24 53:36 53:48 54:00 54:12 54:24 54:36 54:48 55:00 Time
429.7606 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,36160.0,0.00%,F,F)
52:58 H3.57E6 A1.30E7
53:50 H3.50E6 A1.29E7
54:07 H3.85E6 A1.47E7
100 %
50
0
3.9E6
1.9E6
0.0E0
52:00 52:12 52:24 52:36 52:48 53:00 53:12 53:24 53:36 53:48 54:00 54:12 54:24 54:36 54:48 55:00 Time
439.8038 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4668.0,0.00%,F,F)
53:49 H4.66E6 A1.72E7
54:06 H5.00E6 A1.89E7
100 %
50
0
5.0E6
2.5E6
0.0E0
52:00 52:12 52:24 52:36 52:48 53:00 53:12 53:24 53:36 53:48 54:00 54:12 54:24 54:36 54:48 55:00 Time
441.8008 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4676.0,0.00%,F,F)
53:49 H4.99E6 A1.86E7
54:06 H5.42E6 A2.03E7
100 %
50
0
5.4E6
2.7E6
0.0E0
52:00 52:12 52:24 52:36 52:48 53:00 53:12 53:24 53:36 53:48 54:00 54:12 54:24 54:36 54:48 55:00 Time

File:141209E2 #1-430 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1

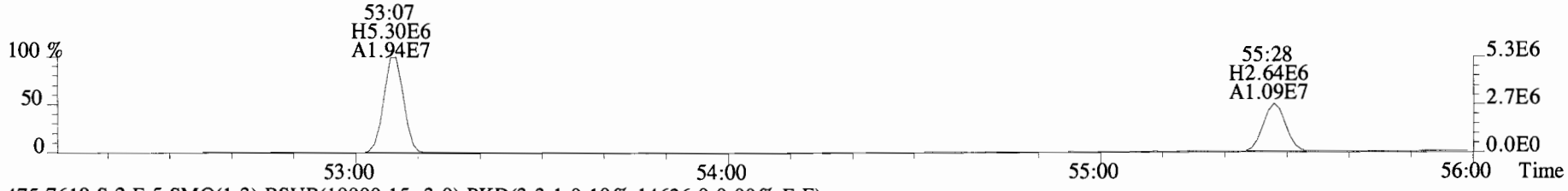
463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10048.0,0.00%,F,F)



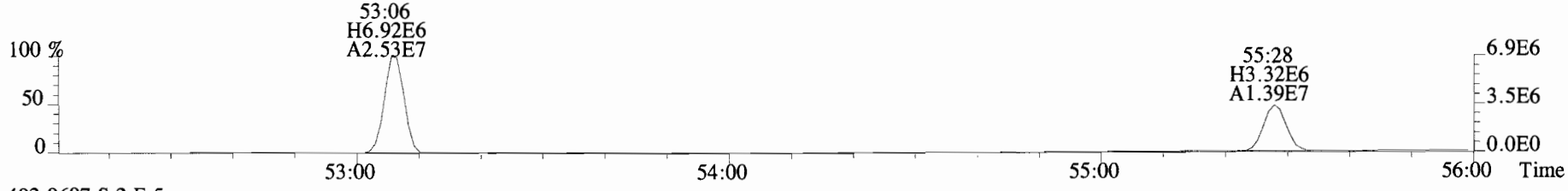
465.7186 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7156.0,0.00%,F,F)



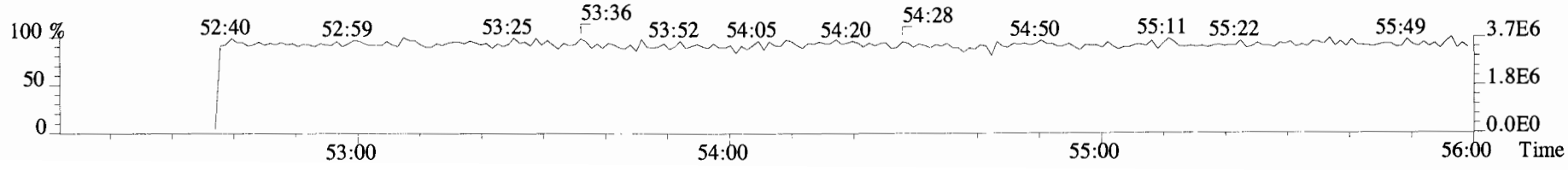
473.7648 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,11300.0,0.00%,F,F)

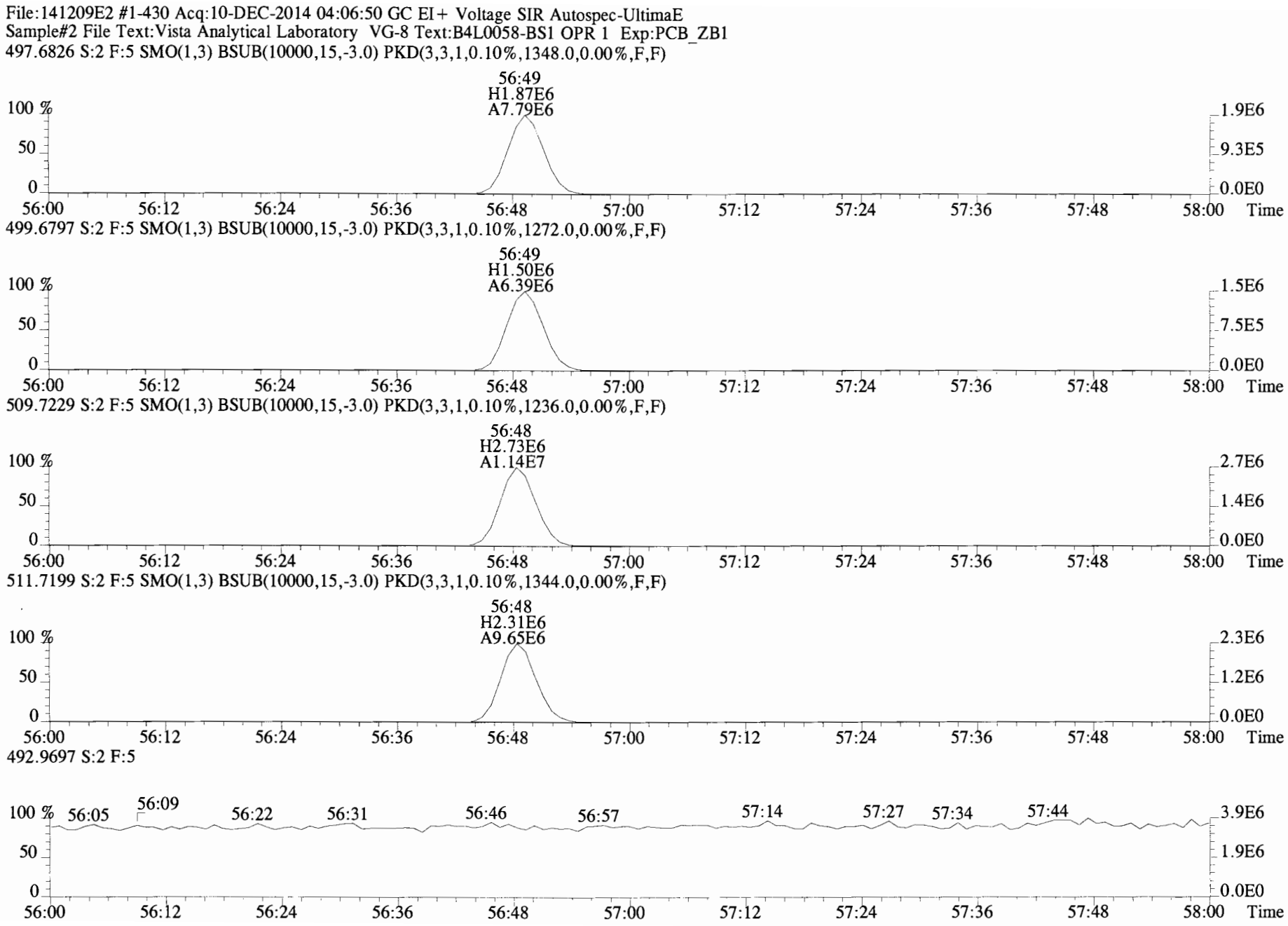


475.7619 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14636.0,0.00%,F,F)



492.9697 S:2 F:5




File:141209E2 #1-430 Acq:10-DEC-2014 04:06:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0058-BS1 OPR 1 Exp:PCB_ZB1
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1348.0,0.00%,F,F)
56:49
H1.87E6
A7.79E6
499.6797 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1272.0,0.00%,F,F)
56:49
H1.50E6
A6.39E6
509.7229 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1236.0,0.00%,F,F)
56:48
H2.73E6
A1.14E7
511.7199 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1344.0,0.00%,F,F)
56:48
H2.31E6
A9.65E6
492.9697 S:2 F:5
56:05
56:09
56:22
56:31
56:46
56:57
57:14
57:27
57:34
57:44
100 %
50
0
1.9E6
9.3E5
0.0E0
1.5E6
7.5E5
2.7E6
1.4E6
2.3E6
1.2E6
3.9E6
56:00
56:12
56:24
56:36
56:48
57:00
57:12
57:24
57:36
57:48
58:00
Time

Client ID: BD-OWS-02-20141203-W Filename: 141209E2 S:5 Acq:10-DEC-14 07:19:49 ConCal: ST141209E2-1
Lab ID: 1400915-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.035 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Mono	PCB-1	3.90e+05	2.98	y	16:12	1.25	13.8		*	2.5	*	1.001	0.996-1.006
Mono	PCB-2	5.82e+04	2.60	n	18:35	1.18	2.01		*	2.5	*	0.989	0.983-0.993
Mono	PCB-3	8.96e+04	2.41	n	18:48	1.22	3.00		*	2.5	*	1.001	0.996-1.006
Di	PCB-4/10	6.02e+06	1.62	y	20:09	1.55	251		*	2.5	*	1.002	0.998-1.008
Di	PCB-7/9	4.92e+05	1.35	y	21:56	1.27	15.4		*	2.5	*	0.868	0.865-0.873
Di	PCB-6	2.96e+06	1.58	y	22:35	1.26	93.5		*	2.5	*	0.893	0.890-0.899
Di	PCB-5/8	4.07e+06	1.58	y	22:59	1.23	131	R	*	2.5	*	0.909	0.906-0.916
Di	PCB-14	*	*	n	NotF┐	1.23	*		*	2.5	*	*	0.949-0.959
Di	PCB-11	1.07e+06	1.25	n	25:17	1.16	29.4		*	2.5	*	1.000	0.996-1.006
Di	PCB-12/13	5.17e+05	1.12	n	25:39	1.10	15.0		*	2.5	*	1.015	1.010-1.020
Di	PCB-15	5.09e+06	1.70	y	26:00	1.21	134		*	2.5	*	1.028	1.024-1.034
Tri	PCB-19	2.86e+06	1.06	y	24:17	1.30	147		*	2.5	*	1.001	0.996-1.006
Tri	PCB-30	*	*	n	NotF┐	1.83	*		*	2.5	*	*	1.032-1.042
Tri	PCB-18	2.21e+07	1.06	y	25:55	0.86	1040		*	2.5	*	0.954	0.949-0.959
Tri	PCB-17	8.27e+06	1.06	y	26:05	0.90	371		*	2.5	*	0.960	0.955-0.965
Tri	PCB-24/27	2.71e+06	1.13	y	26:39	1.18	93.0		*	2.5	*	0.981	0.976-0.986
Tri	PCB-16/32	1.64e+07	1.07	y	27:10	1.03	643		*	2.5	*	1.000	0.995-1.005
Tri	PCB-34	1.63e+05	1.20	n	27:58	1.26	4.28		*	2.5	*	0.961	0.956-0.966
Tri	PCB-23	*	*	n	NotF┐	1.31	*		2010	2.5	1.22	*	0.959-0.969
Tri	PCB-29	1.15e+05	1.42	n	28:19	1.33	2.86		*	2.5	*	0.973	0.967-0.977
Tri	PCB-26	5.42e+06	1.05	y	28:31	1.29	139		*	2.5	*	0.979	0.974-0.984
Tri	PCB-25	2.55e+06	1.06	y	28:40	1.34	63.0		*	2.5	*	0.985	0.980-0.990
Tri	PCB-31	2.80e+07	1.06	y	29:02	1.42	654		*	2.5	*	0.997	0.992-1.002
Tri	PCB-28	4.66e+07	1.06	y	29:08	1.38	1120		*	2.5	*	1.001	0.996-1.006
Tri	PCB-20/21/33	5.60e+06	1.04	y	29:46	1.31	142		*	2.5	*	1.022	1.017-1.027
Tri	PCB-22	1.25e+07	1.03	y	30:11	1.32	313		*	2.5	*	1.037	1.032-1.042
Tri	PCB-36	*	*	n	NotF┐	1.38	*		2010	2.5	1.24	*	0.929-0.939
Tri	PCB-39	*	*	n	NotF┐	1.42	*		2010	2.5	1.20	*	0.943-0.953
Tri	PCB-38	6.19e+05	1.09	y	32:03	1.35	15.6		*	2.5	*	0.972	0.967-0.976
Tri	PCB-35	2.29e+05	1.10	y	32:33	1.38	5.66		*	2.5	*	0.987	0.982-0.992
Tri	PCB-37	1.70e+07	1.03	y	33:01	1.39	417		*	2.5	*	1.001	0.996-1.006
Tetra	PCB-54	1.31e+05	0.93	n	28:01	1.20	4.93		*	2.5	*	1.001	0.996-1.006
Tetra	PCB-50	1.32e+05	0.81	y	29:11	0.97	6.18		*	2.5	*	1.042	1.037-1.047
Tetra	PCB-53	8.16e+06	0.78	y	29:50	1.19	343		*	2.5	*	0.946	0.941-0.951
Tetra	PCB-51	2.42e+06	0.86	y	30:10	1.15	105		*	2.5	*	0.957	0.952-0.962
Tetra	PCB-45	8.14e+06	0.76	y	30:36	0.97	421		*	2.5	*	0.970	0.966-0.976
Tetra	PCB-46	3.28e+06	0.76	y	31:05	0.95	172		*	2.5	*	0.986	0.982-0.992

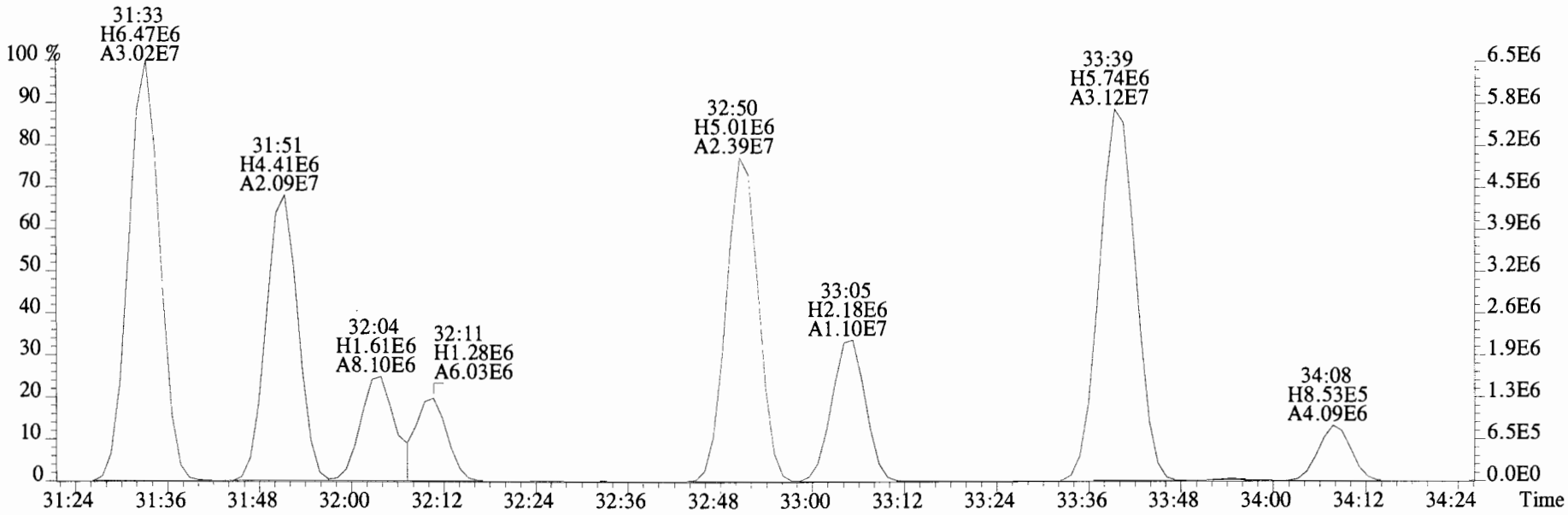
Integrations by:

Analyst:_____

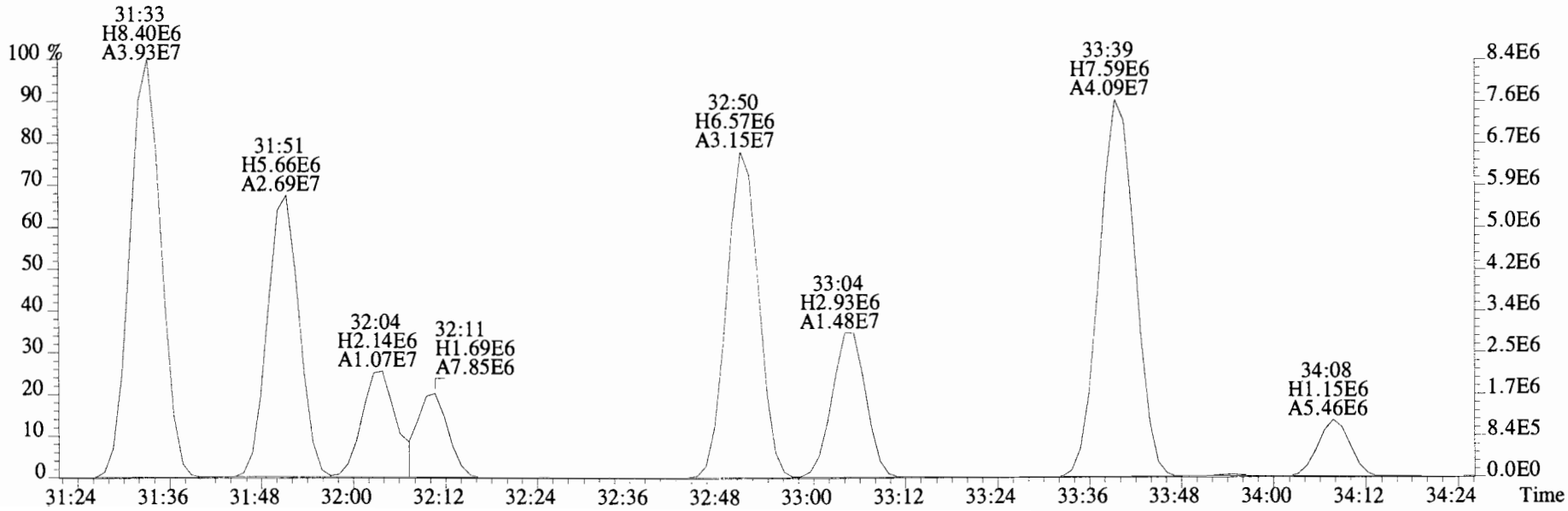
Date:_____

Reviewed by:_____ Date:_____

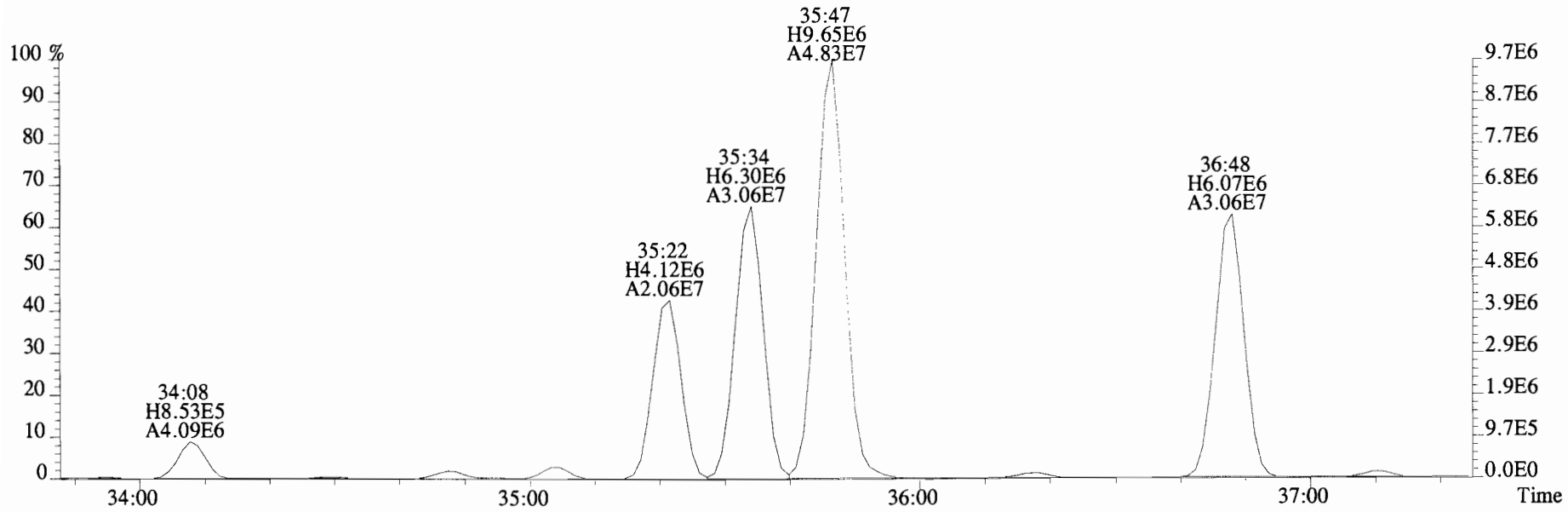
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



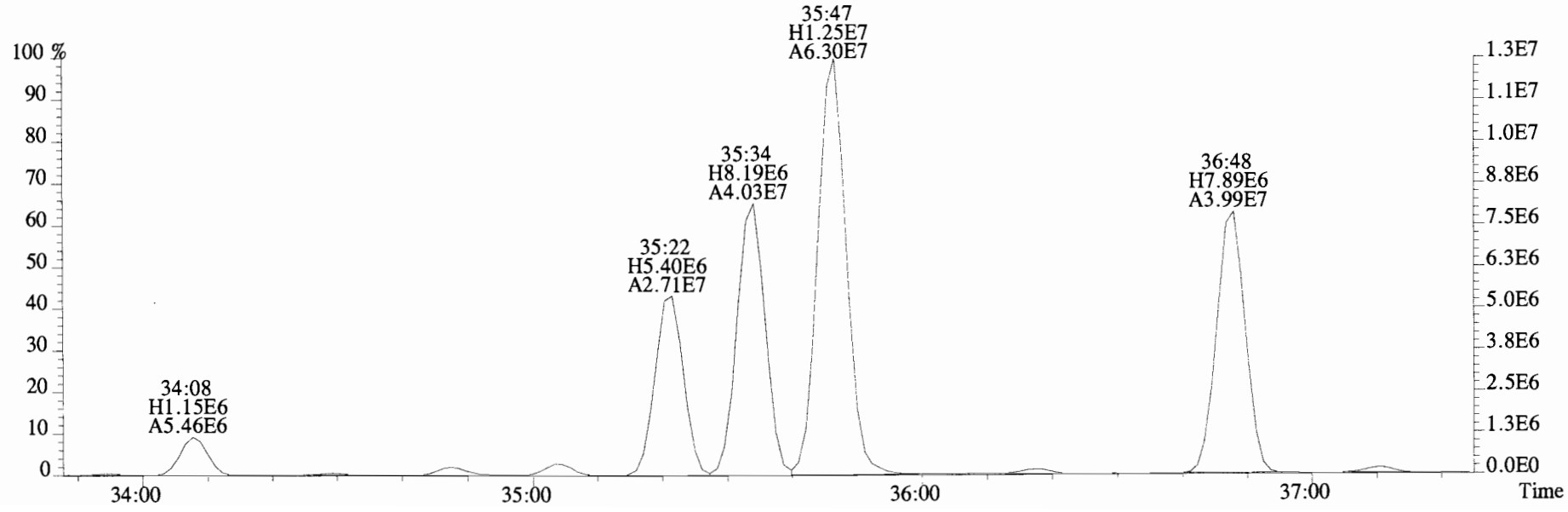
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)

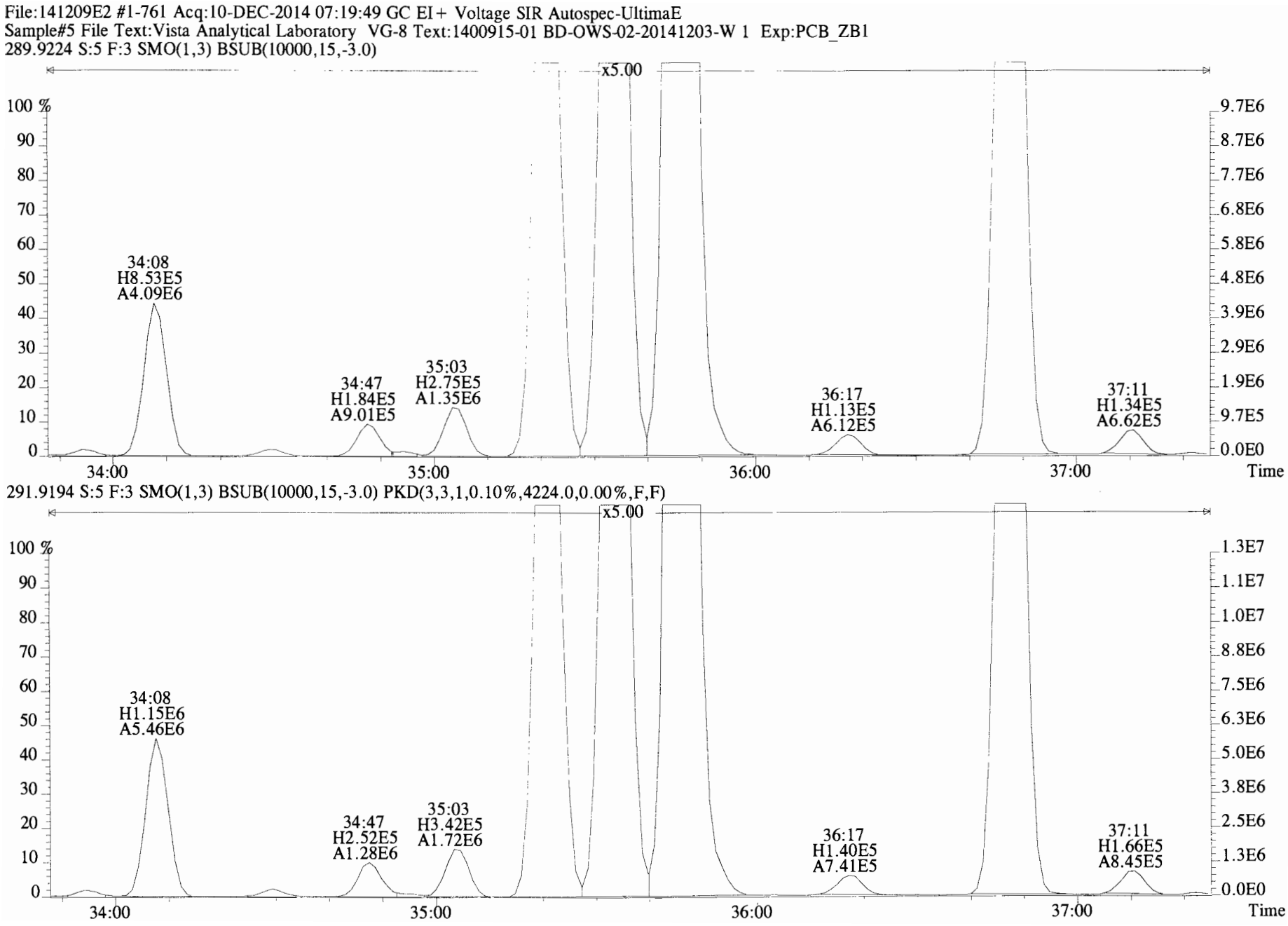


File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)

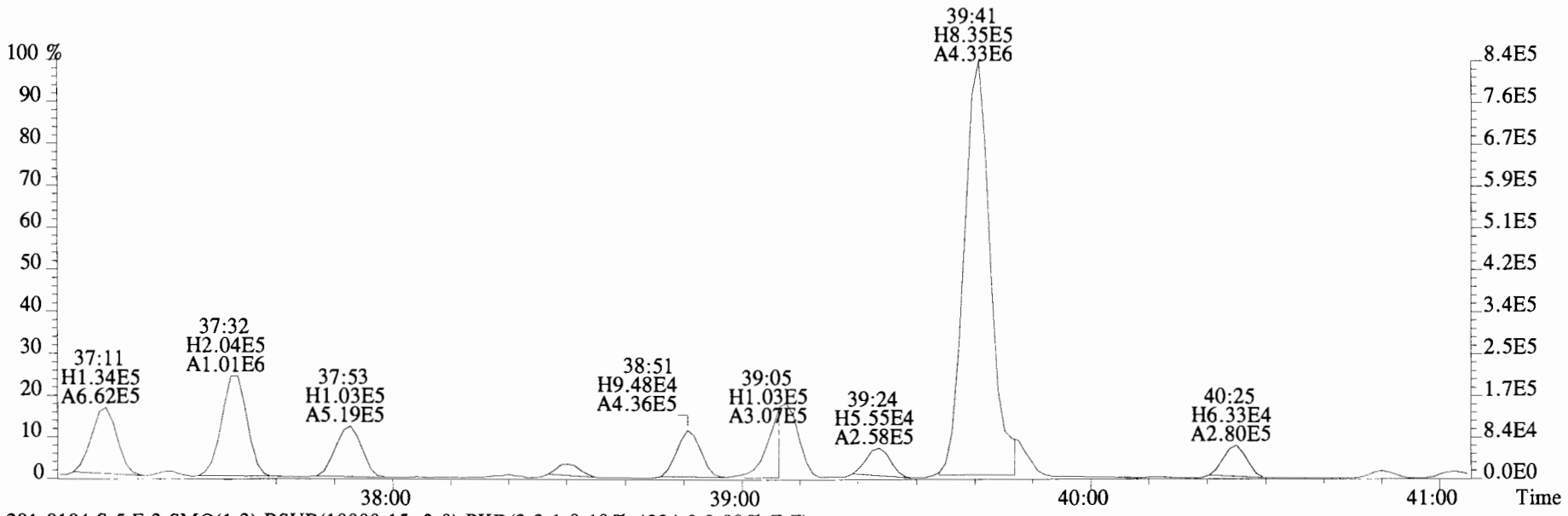


291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)

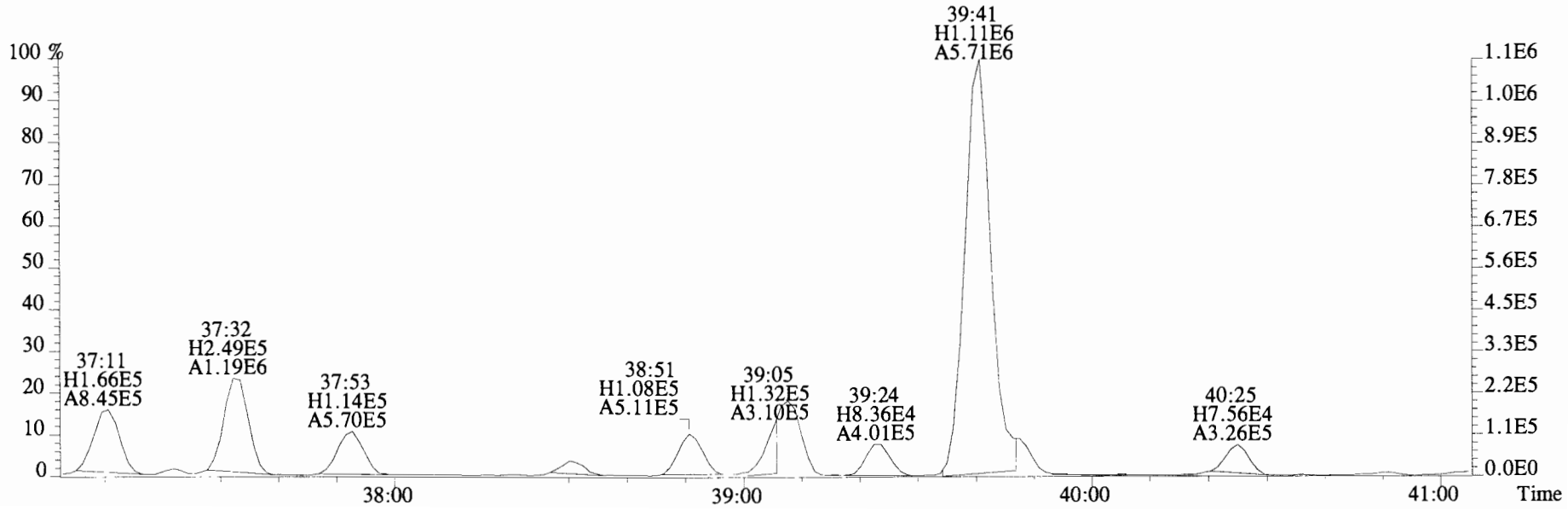



File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
9.7E6
8.7E6
7.7E6
6.8E6
5.8E6
4.8E6
3.9E6
2.9E6
1.9E6
9.7E5
0.0E0
34:08
H8.53E5
A4.09E6
34:47
H1.84E5
A9.01E5
35:03
H2.75E5
A1.35E6
36:17
H1.13E5
A6.12E5
37:11
H1.34E5
A6.62E5
34:00
35:00
36:00
37:00
Time
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
1.3E7
1.1E7
1.0E7
8.8E6
7.5E6
6.3E6
5.0E6
3.8E6
2.5E6
1.3E6
0.0E0
34:08
H1.15E6
A5.46E6
34:47
H2.52E5
A1.28E6
35:03
H3.42E5
A1.72E6
36:17
H1.40E5
A7.41E5
37:11
H1.66E5
A8.45E5
34:00
35:00
36:00
37:00
Time

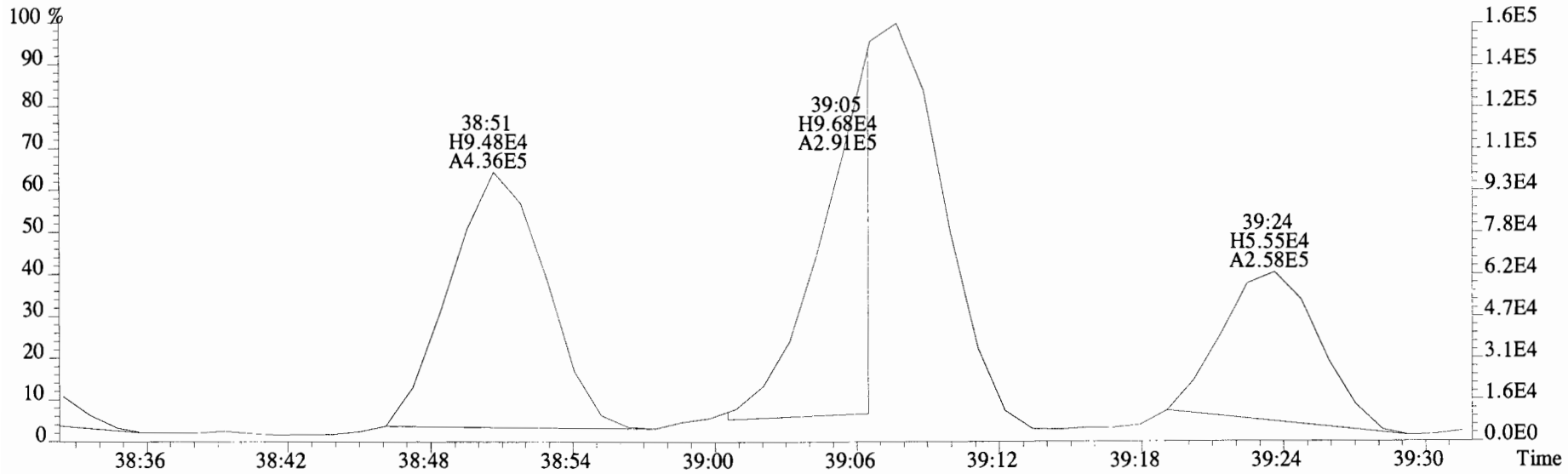
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



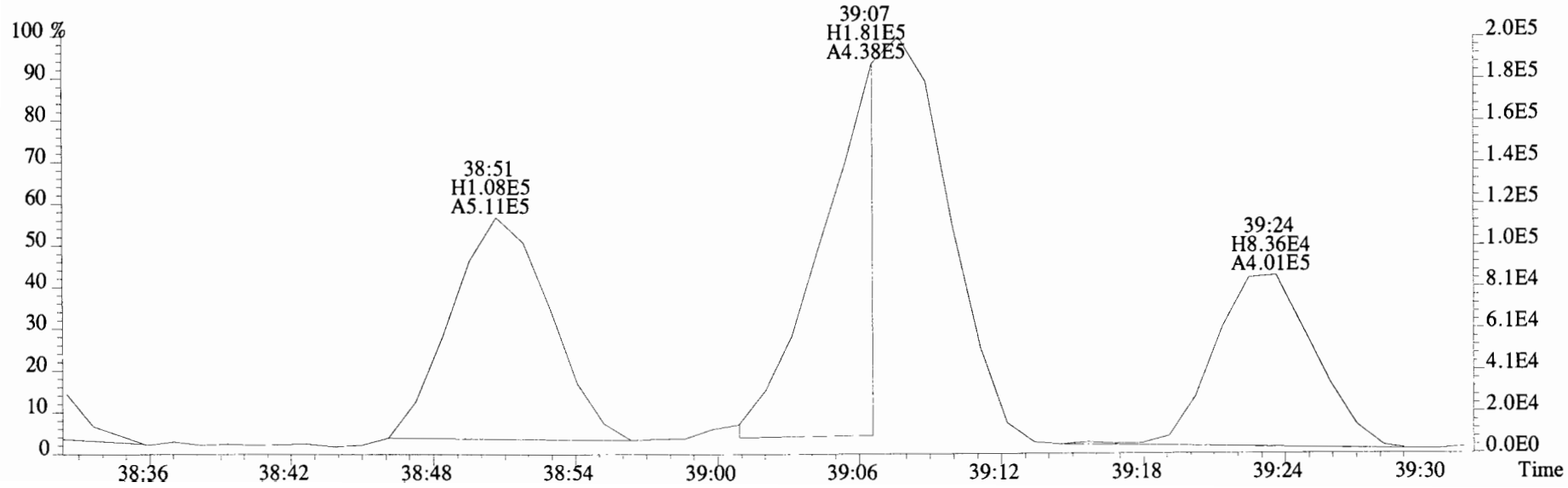
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)



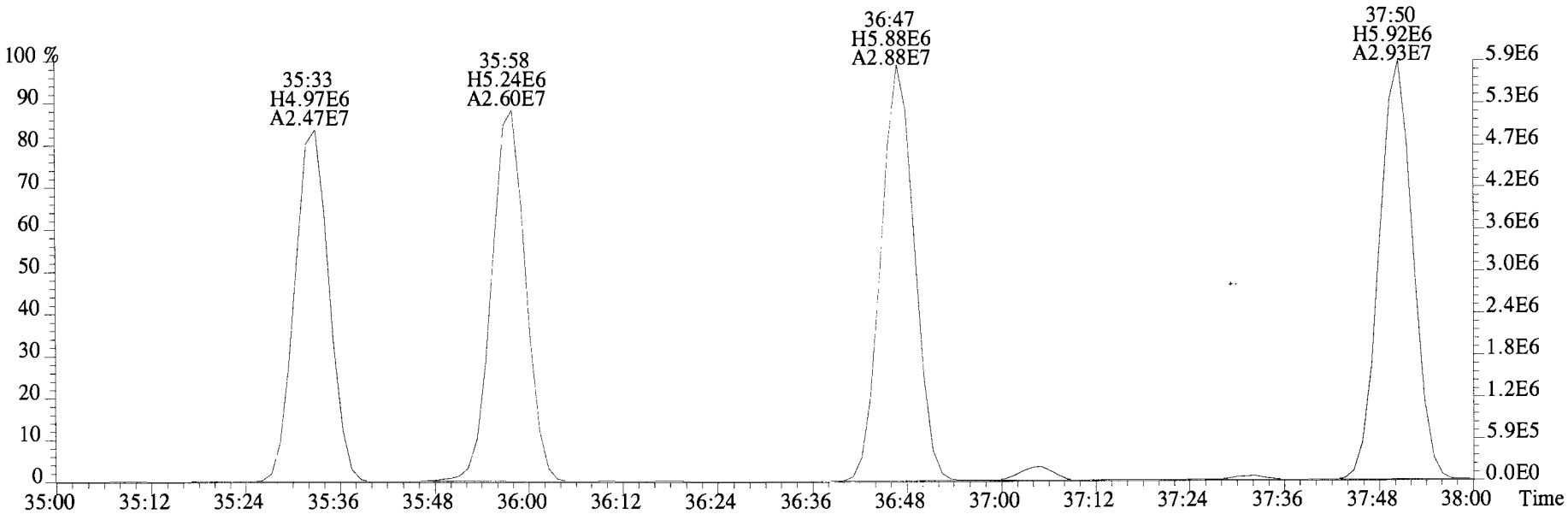
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



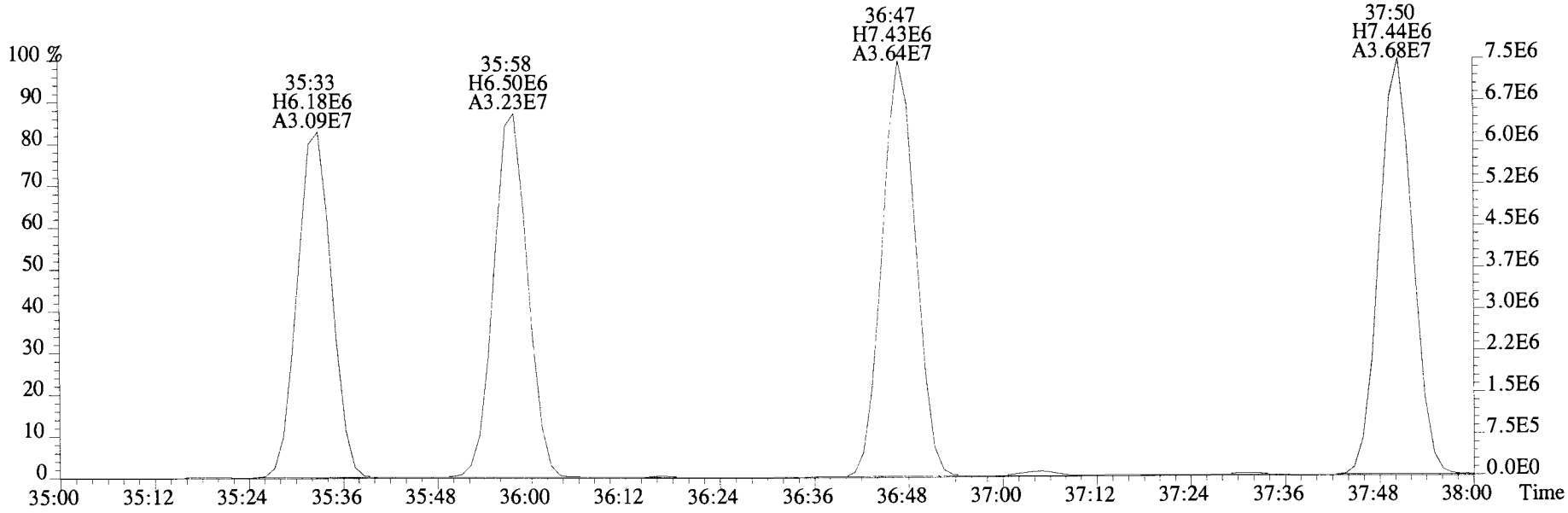
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)



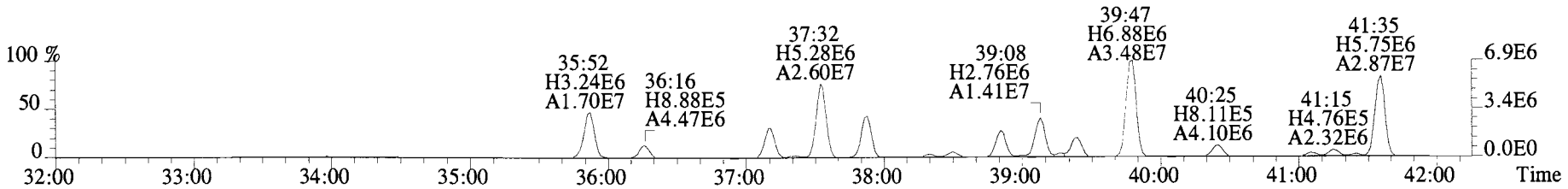
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6884.0,0.00%,F,F)



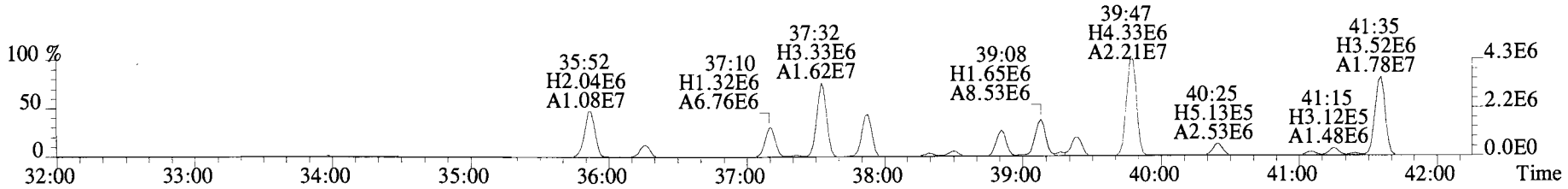
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5252.0,0.00%,F,F)



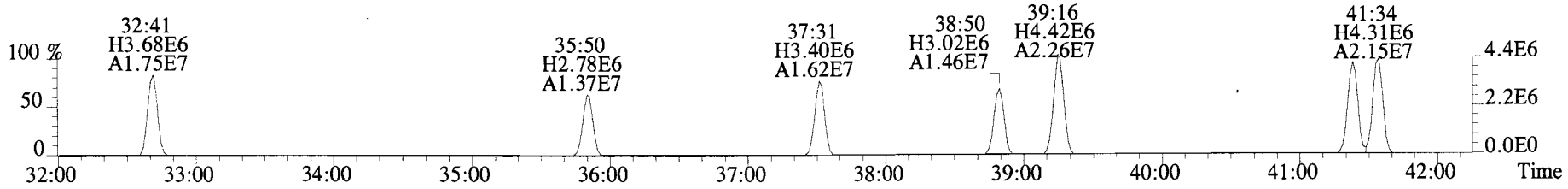
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



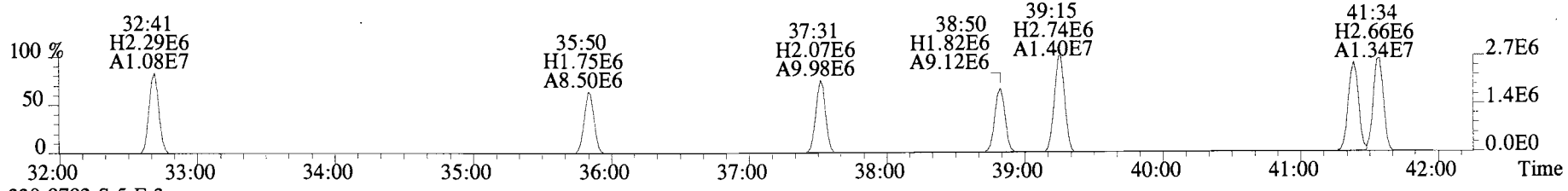
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)



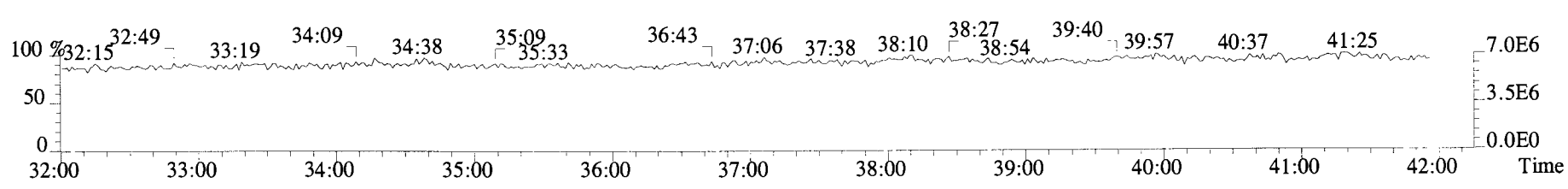
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2184.0,0.00%,F,F)



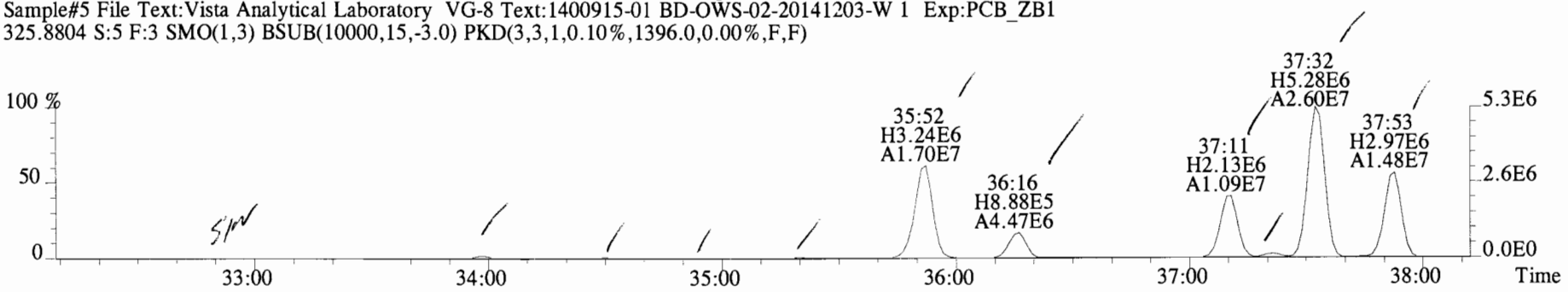
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1896.0,0.00%,F,F)



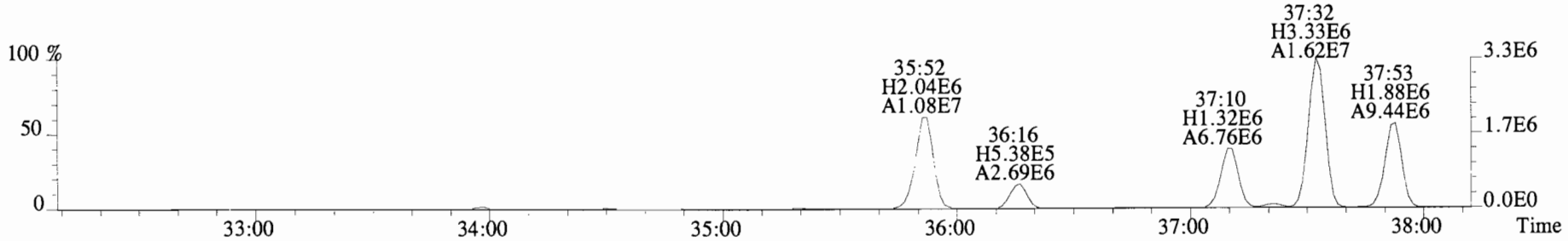
330.9792 S:5 F:3



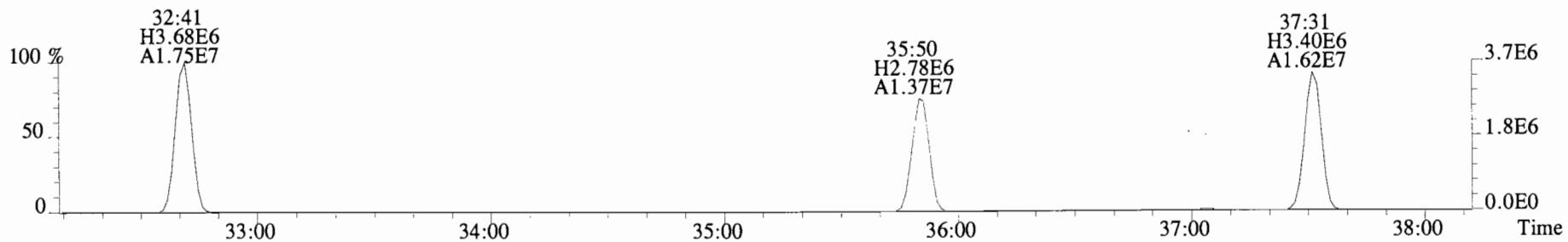
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



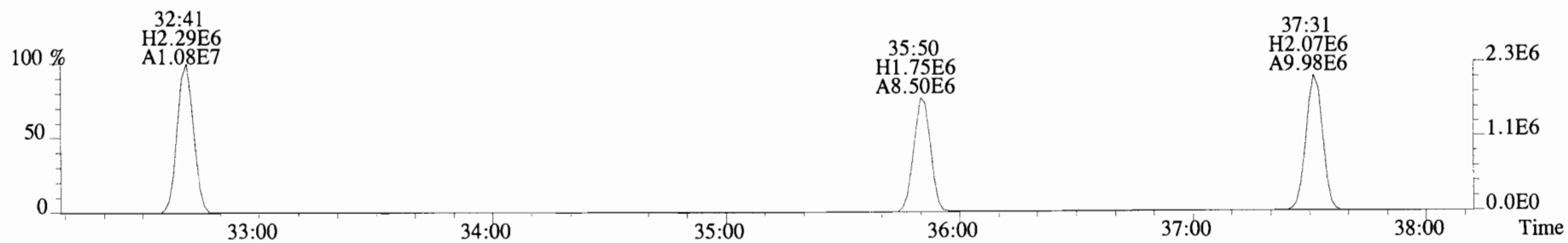
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)



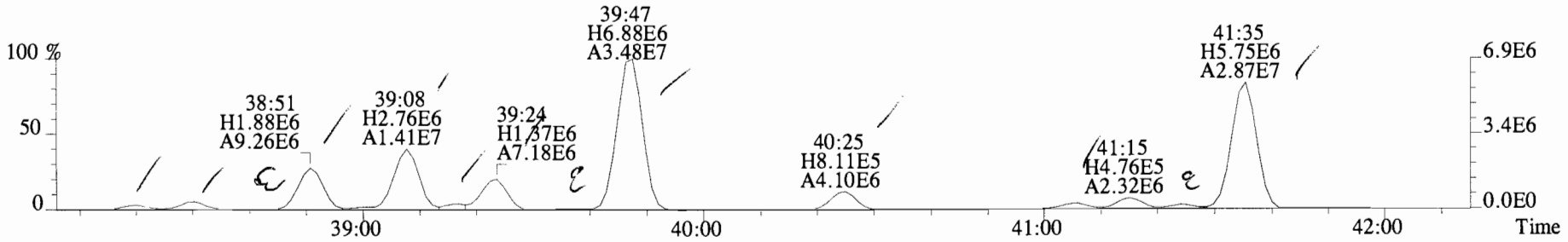
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2184.0,0.00%,F,F)



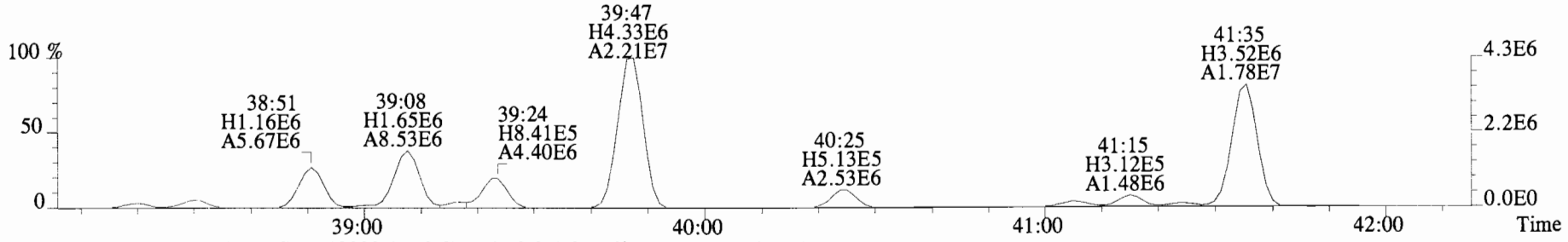
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1896.0,0.00%,F,F)



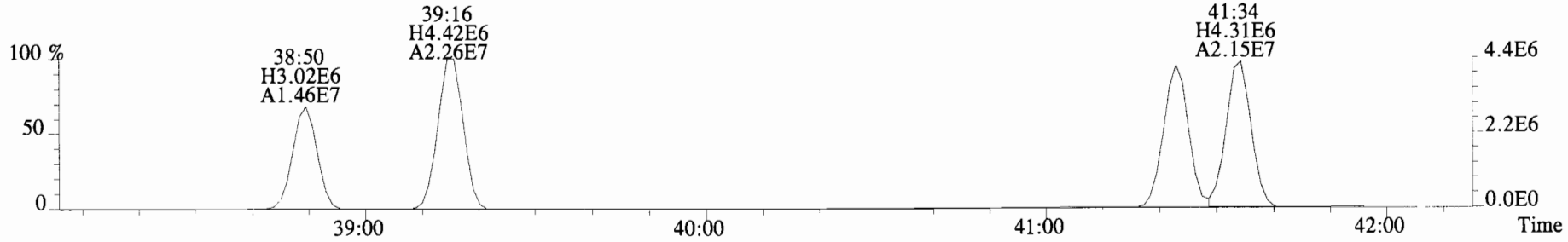
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



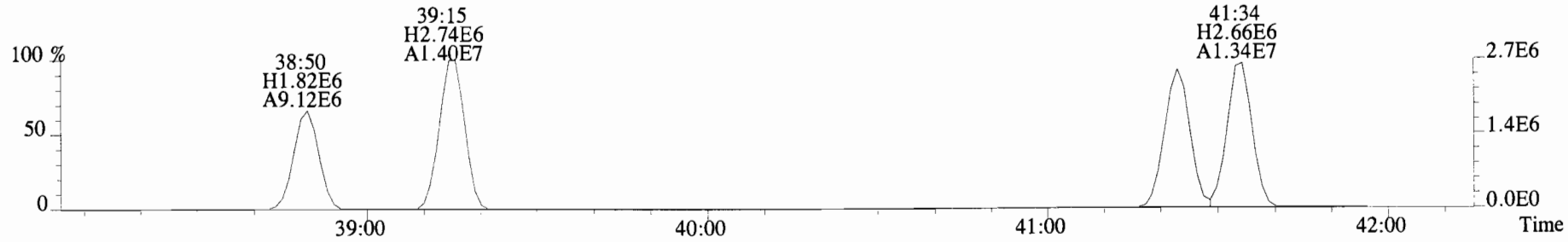
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)



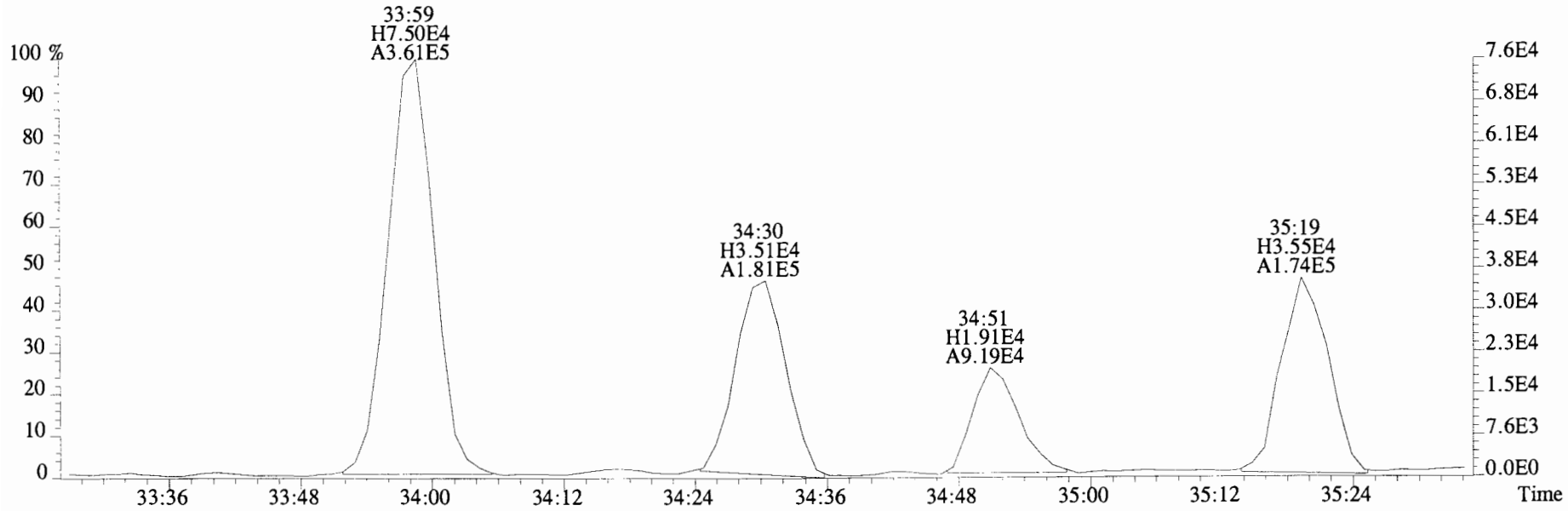
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2184.0,0.00%,F,F)



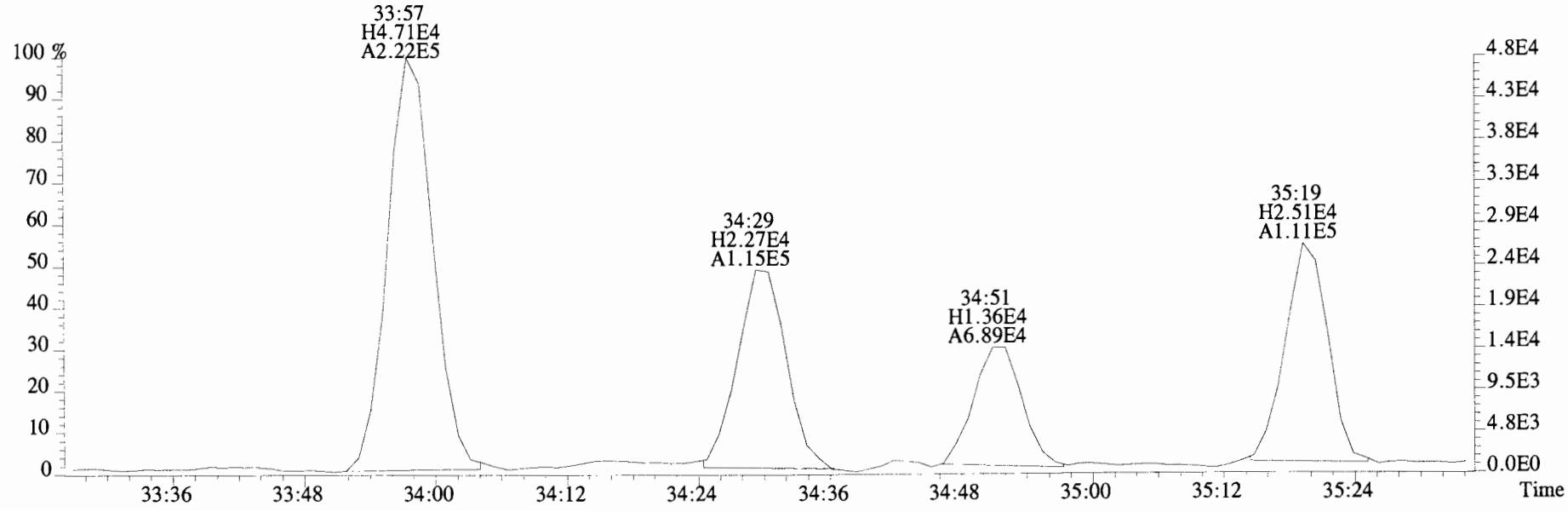
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1896.0,0.00%,F,F)

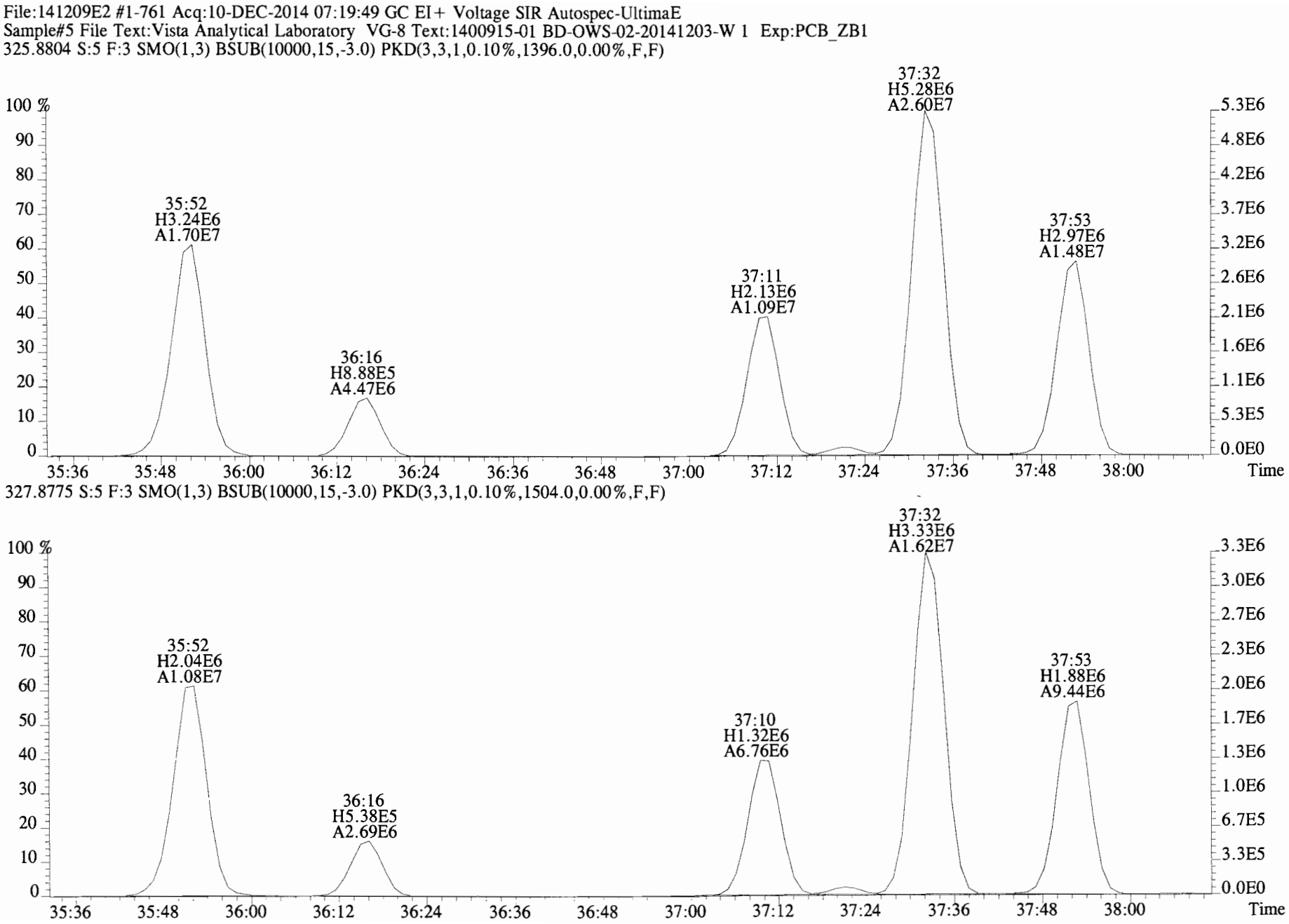


File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)

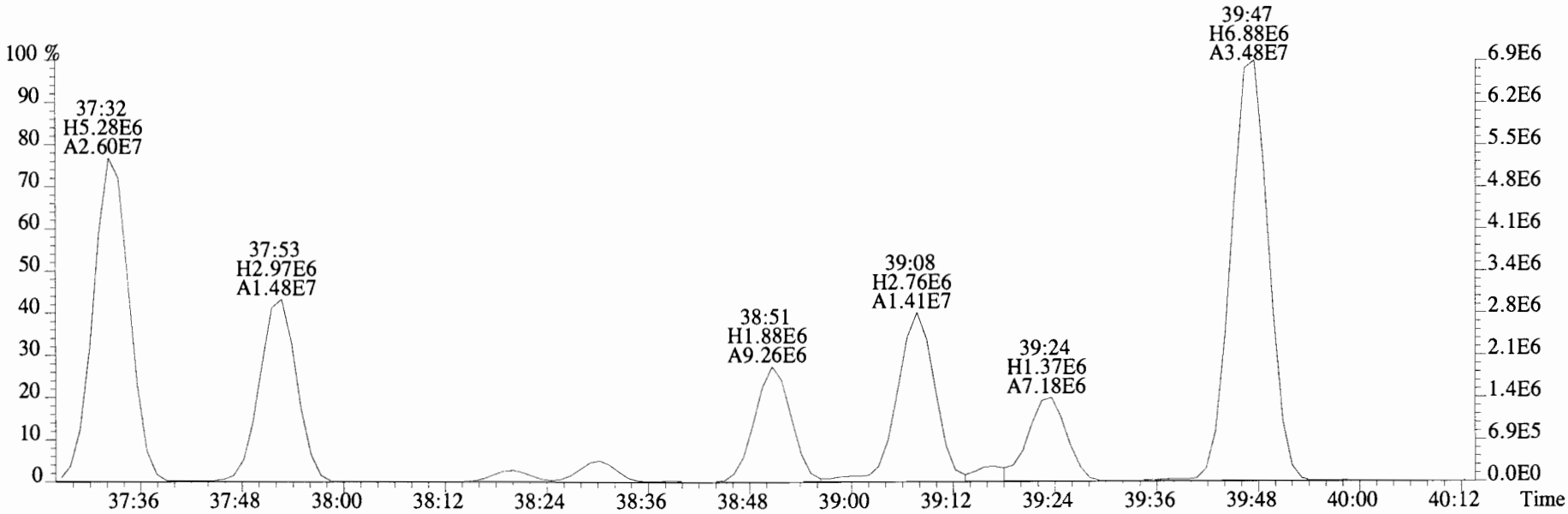


327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)

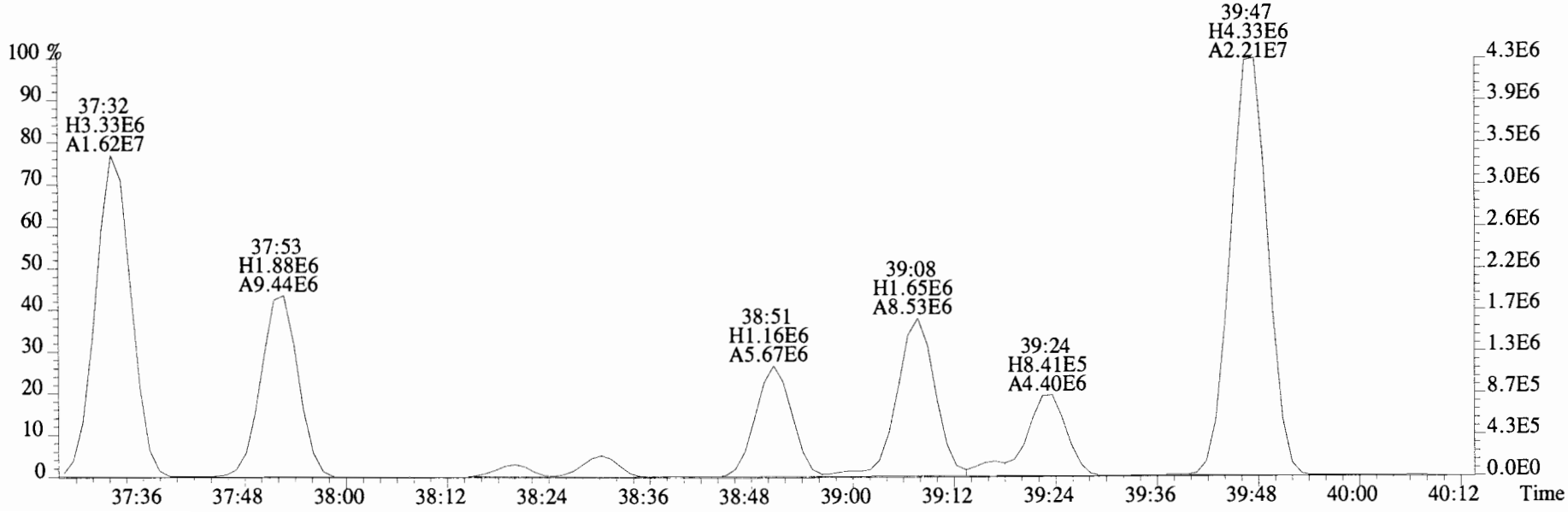


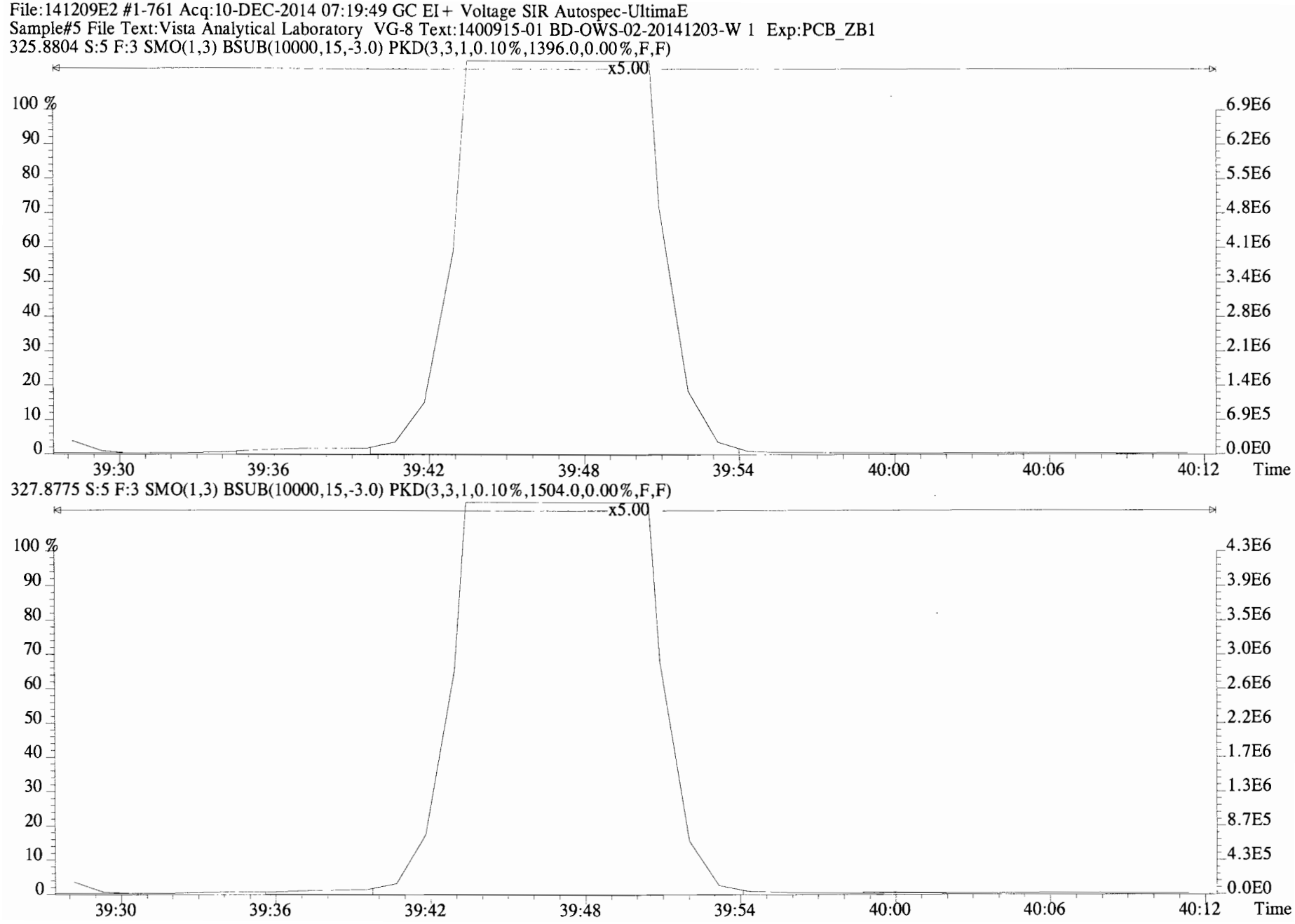

File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)
35:52 H3.24E6 A1.70E7
36:16 H8.88E5 A4.47E6
37:11 H2.13E6 A1.09E7
37:32 H5.28E6 A2.60E7
37:53 H2.97E6 A1.48E7
100 %
Time
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)
35:52 H2.04E6 A1.08E7
36:16 H5.38E5 A2.69E6
37:10 H1.32E6 A6.76E6
37:32 H3.33E6 A1.62E7
37:53 H1.88E6 A9.44E6
100 %
Time

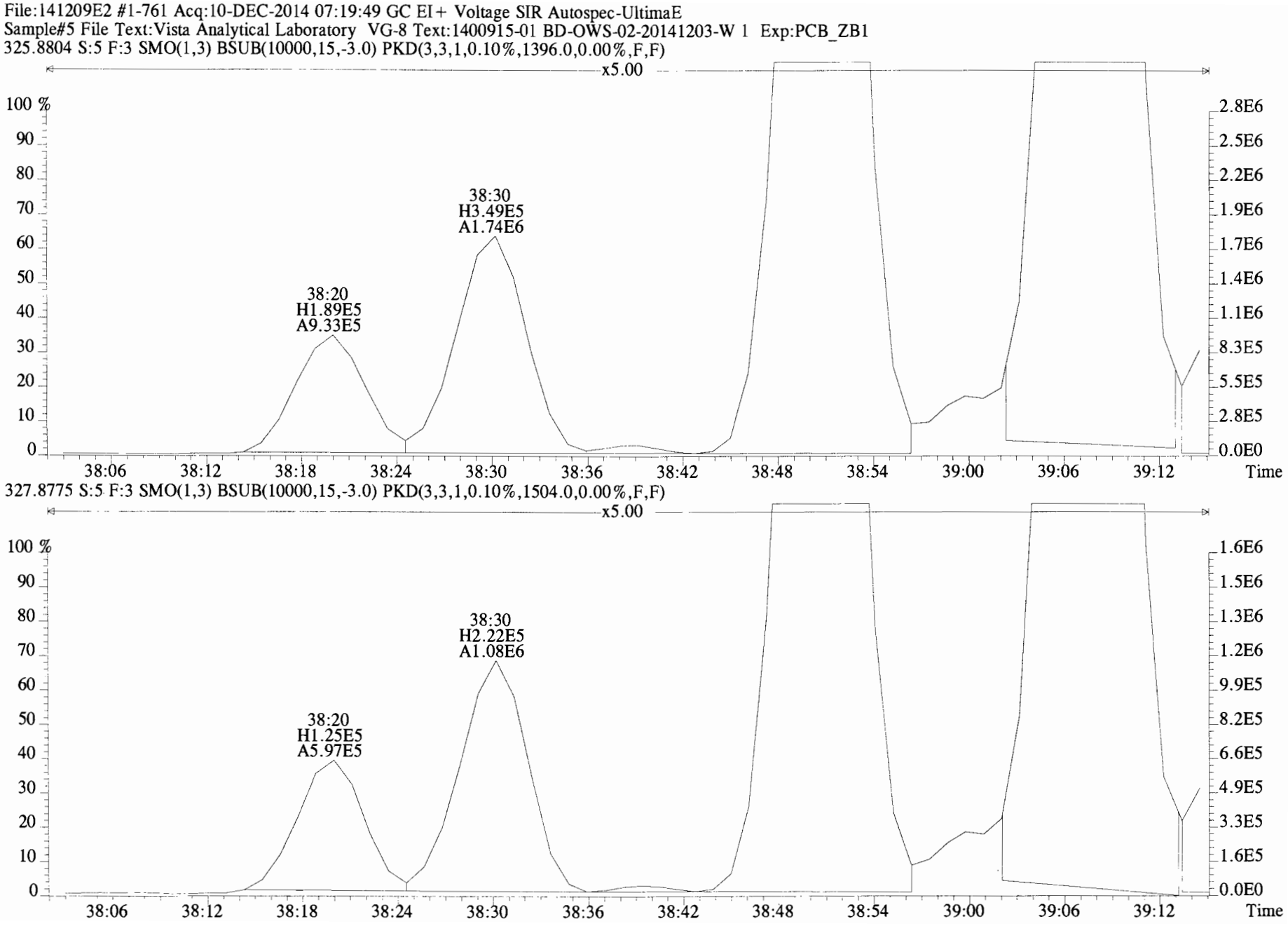
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)

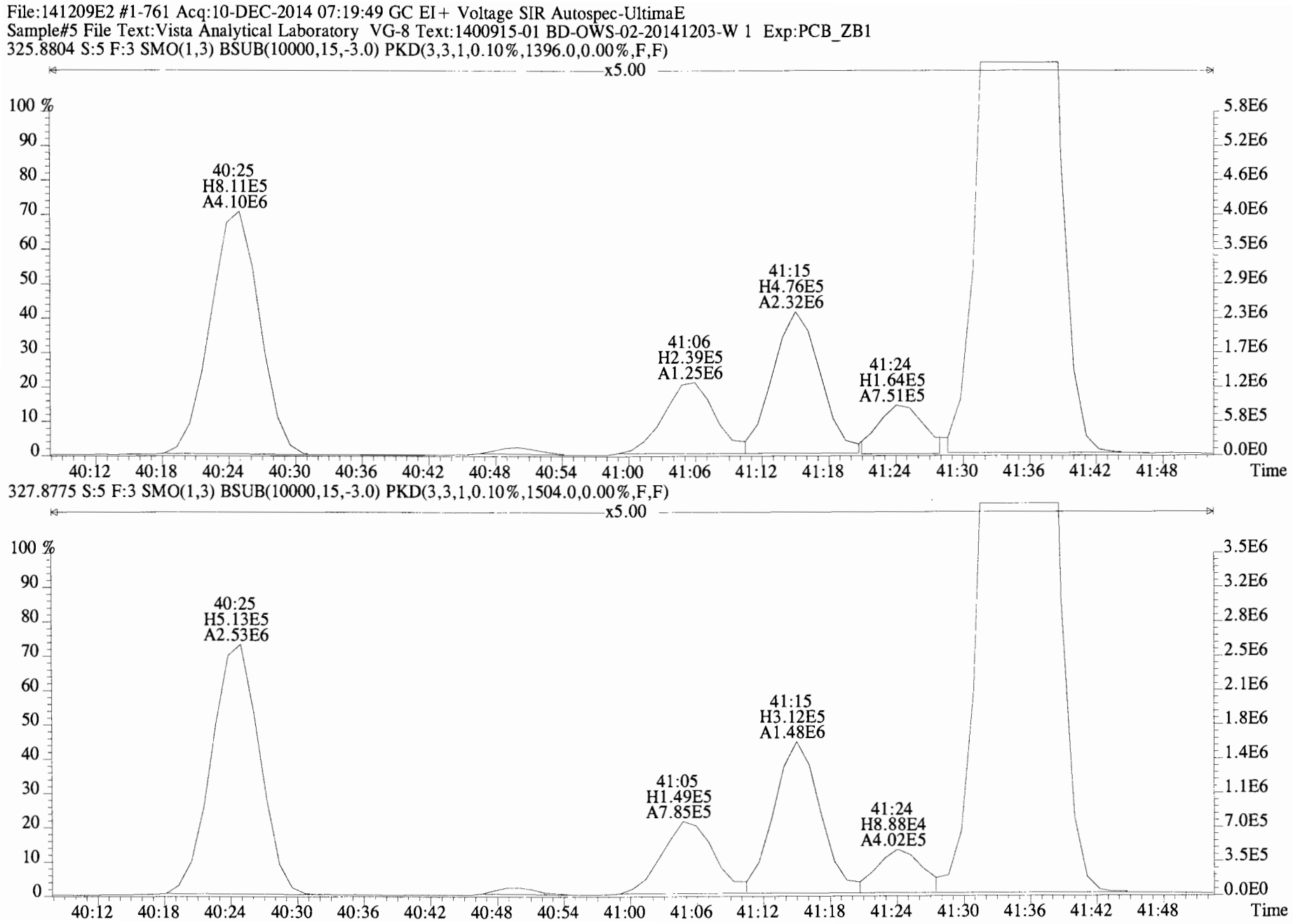


327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)

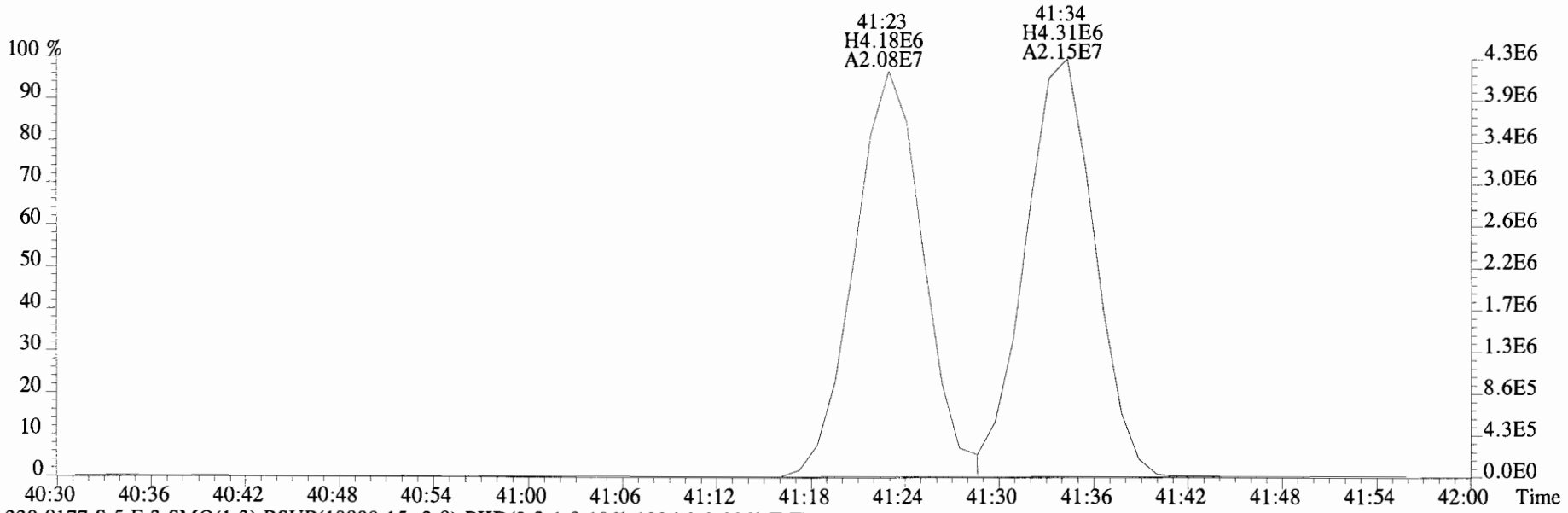



File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
6.9E6
6.2E6
5.5E6
4.8E6
4.1E6
3.4E6
2.8E6
2.1E6
1.4E6
6.9E5
0.0E0
39:30
39:36
39:42
39:48
39:54
40:00
40:06
40:12
Time
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
4.3E6
3.9E6
3.5E6
3.0E6
2.6E6
2.2E6
1.7E6
1.3E6
8.7E5
4.3E5
0.0E0
39:30
39:36
39:42
39:48
39:54
40:00
40:06
40:12
Time

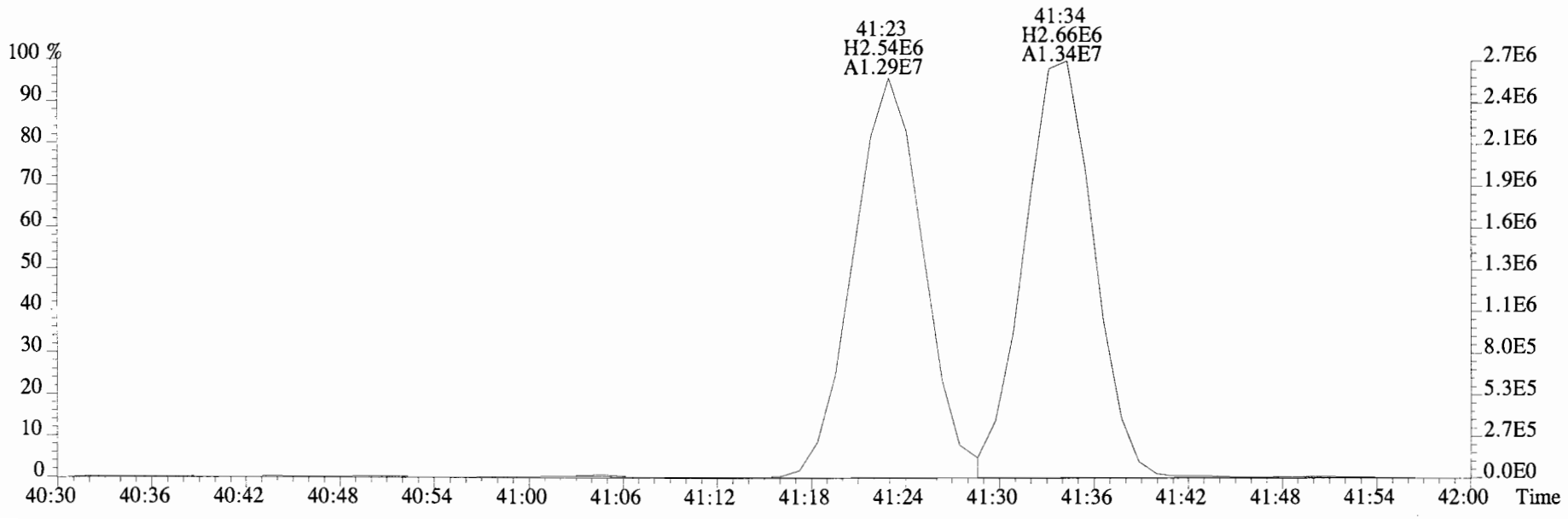

File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)
x5.00
38:20
H1.89E5
A9.33E5
38:30
H3.49E5
A1.74E6
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)
x5.00
38:20
H1.25E5
A5.97E5
38:30
H2.22E5
A1.08E6
Time


File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)
x5.00
40:25
H8.11E5
A4.10E6
41:06
H2.39E5
A1.25E6
41:15
H4.76E5
A2.32E6
41:24
H1.64E5
A7.51E5
Time
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1504.0,0.00%,F,F)
x5.00
40:25
H5.13E5
A2.53E6
41:05
H1.49E5
A7.85E5
41:15
H3.12E5
A1.48E6
41:24
H8.88E4
A4.02E5
Time

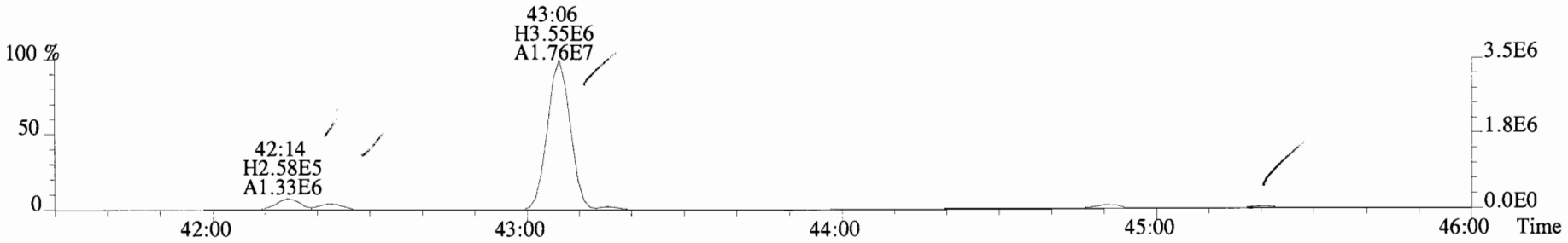
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2184.0,0.00%,F,F)



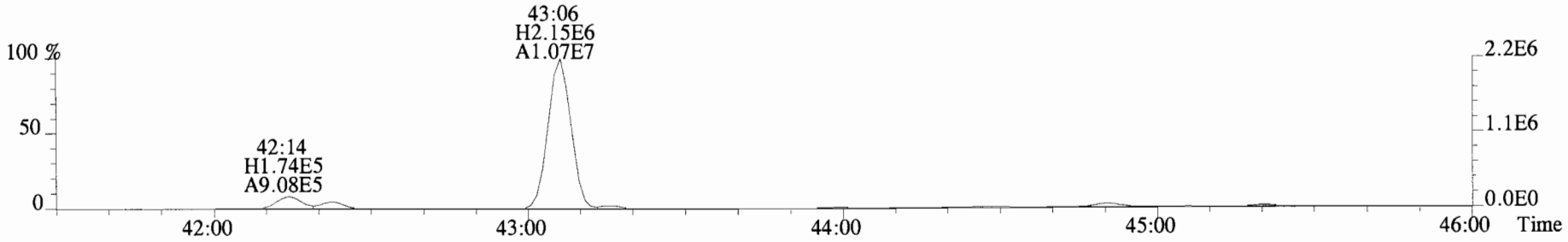
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1896.0,0.00%,F,F)



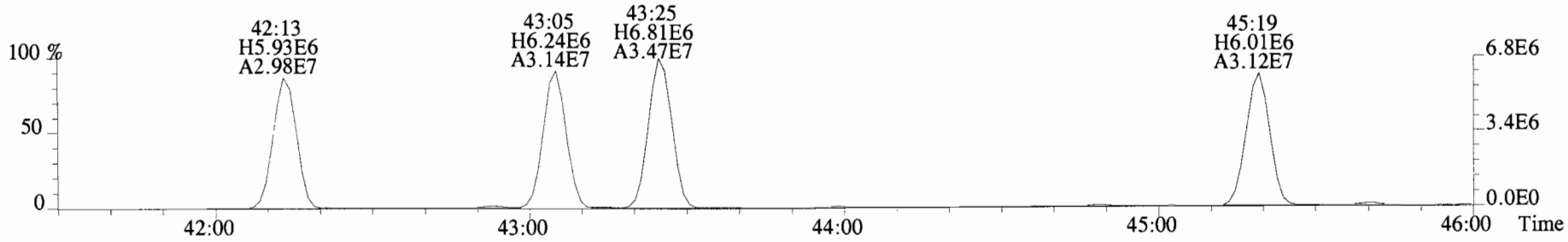
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3168.0,0.00%,F,F)



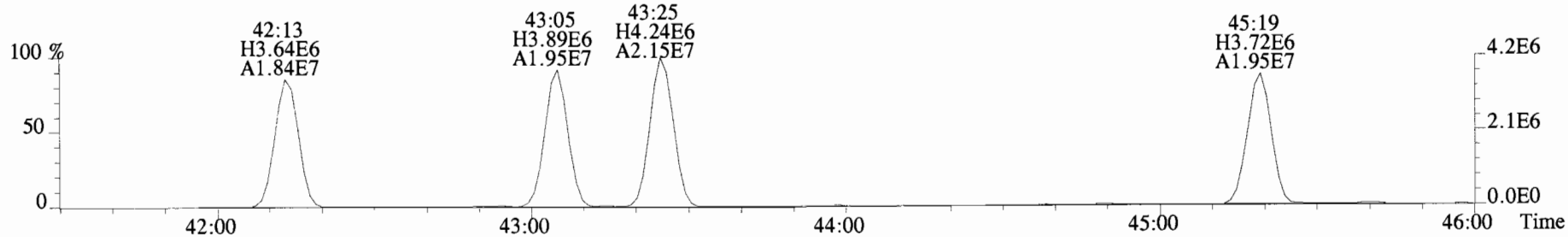
327.8775 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2140.0,0.00%,F,F)

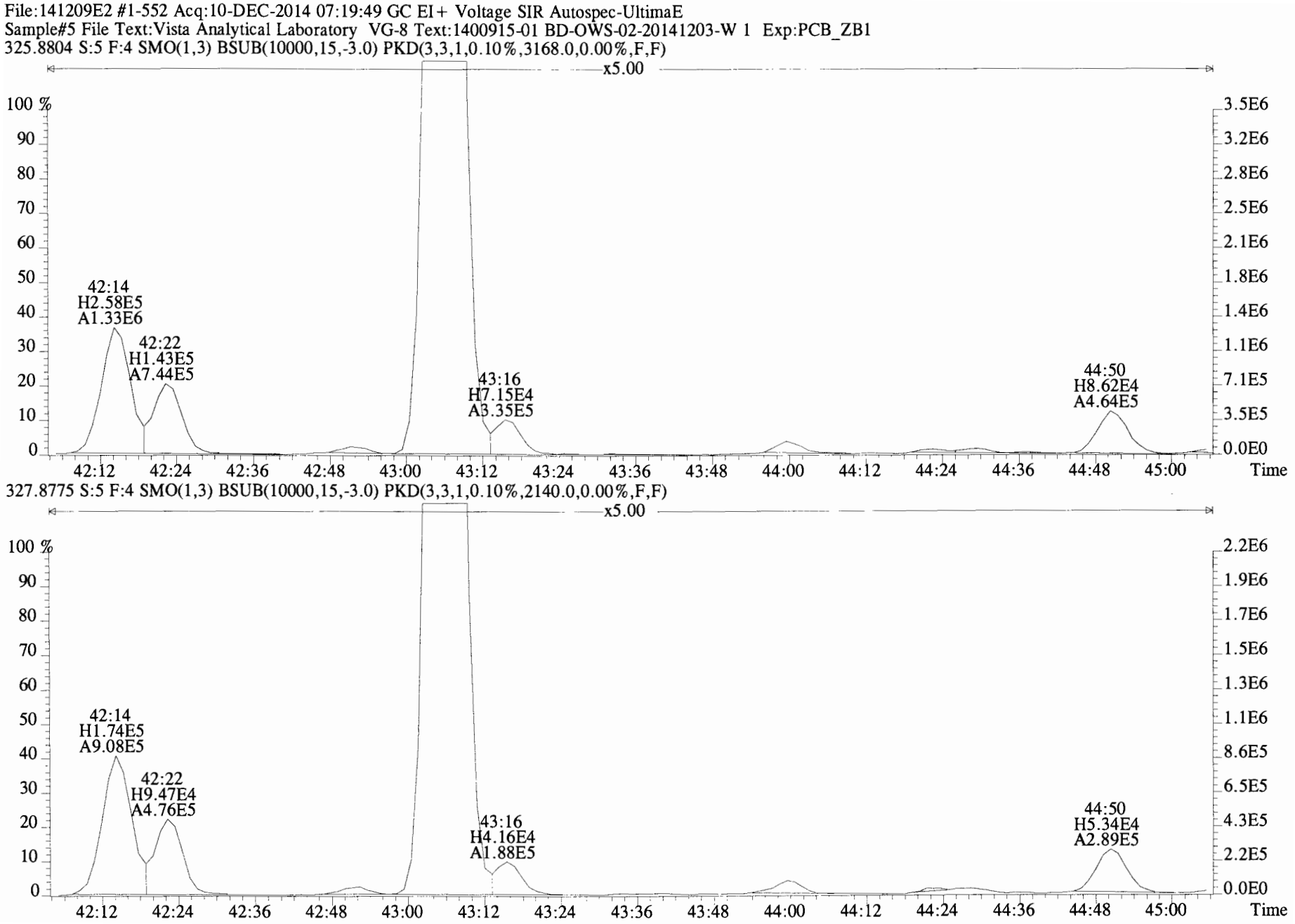


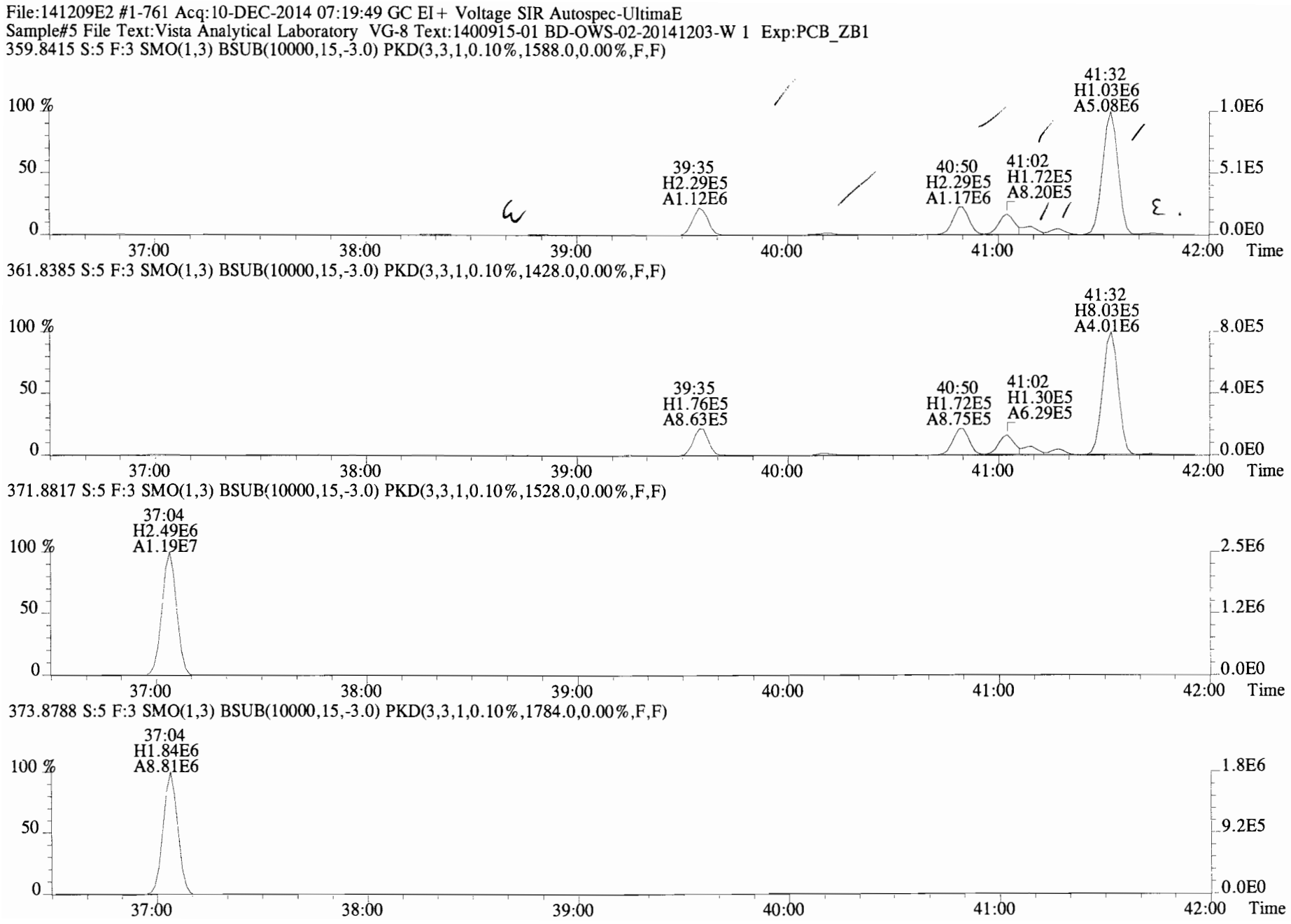
337.9207 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8868.0,0.00%,F,F)



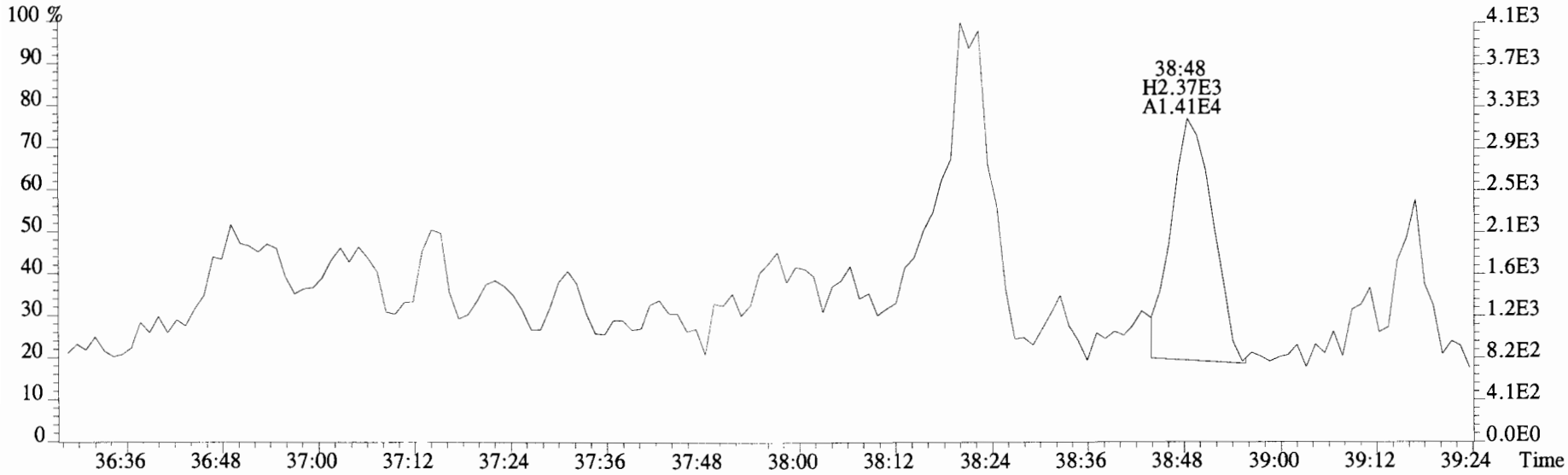
339.9177 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5576.0,0.00%,F,F)



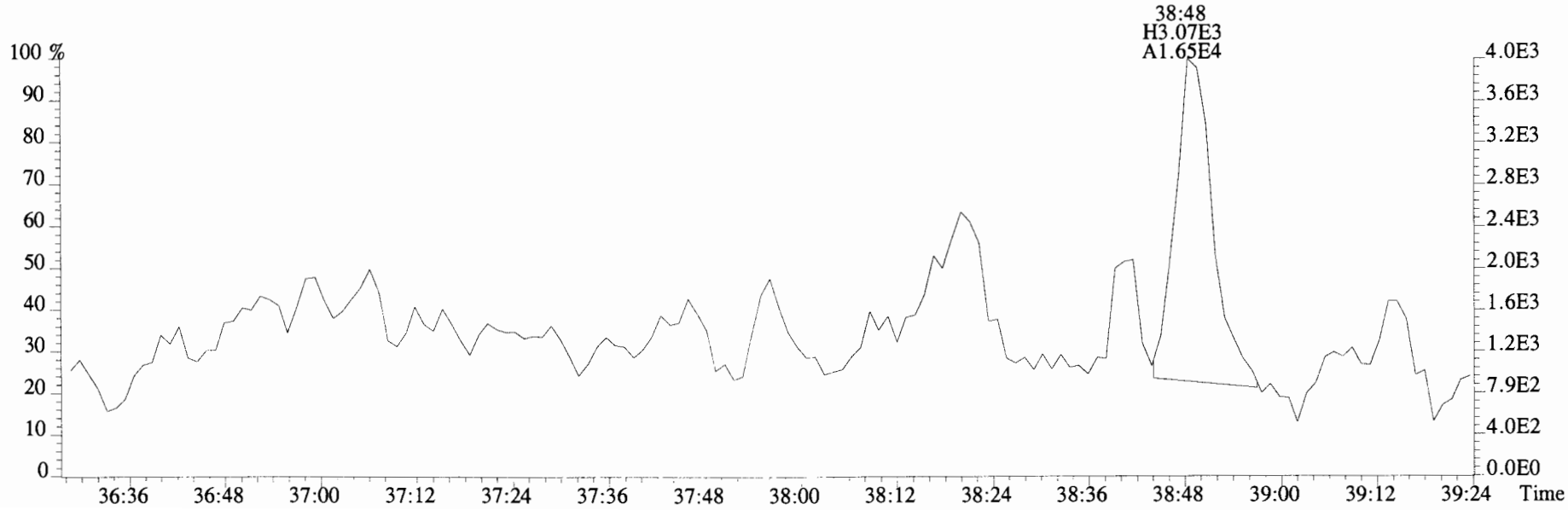

File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3168.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
3.5E6
3.2E6
2.8E6
2.5E6
2.1E6
1.8E6
1.4E6
1.1E6
7.1E5
3.5E5
0.0E0
42:14
H2.58E5
A1.33E6
42:22
H1.43E5
A7.44E5
43:16
H7.15E4
A3.35E5
44:50
H8.62E4
A4.64E5
42:12
42:24
42:36
42:48
43:00
43:12
43:24
43:36
43:48
44:00
44:12
44:24
44:36
44:48
45:00
Time
327.8775 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2140.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
2.2E6
1.9E6
1.7E6
1.5E6
1.3E6
1.1E6
8.6E5
6.5E5
4.3E5
2.2E5
0.0E0
42:14
H1.74E5
A9.08E5
42:22
H9.47E4
A4.76E5
43:16
H4.16E4
A1.88E5
44:50
H5.34E4
A2.89E5
42:12
42:24
42:36
42:48
43:00
43:12
43:24
43:36
43:48
44:00
44:12
44:24
44:36
44:48
45:00
Time


File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1588.0,0.00%,F,F)
41:32
H1.03E6
A5.08E6
39:35
H2.29E5
A1.12E6
40:50
H2.29E5
A1.17E6
41:02
H1.72E5
A8.20E5
100 %
50
0
1.0E6
5.1E5
0.0E0
37:00
38:00
39:00
40:00
41:00
42:00
Time
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1428.0,0.00%,F,F)
41:32
H8.03E5
A4.01E6
39:35
H1.76E5
A8.63E5
40:50
H1.72E5
A8.75E5
41:02
H1.30E5
A6.29E5
100 %
50
0
8.0E5
4.0E5
0.0E0
37:00
38:00
39:00
40:00
41:00
42:00
Time
371.8817 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1528.0,0.00%,F,F)
37:04
H2.49E6
A1.19E7
100 %
50
0
2.5E6
1.2E6
0.0E0
37:00
38:00
39:00
40:00
41:00
42:00
Time
373.8788 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1784.0,0.00%,F,F)
37:04
H1.84E6
A8.81E6
100 %
50
0
1.8E6
9.2E5
0.0E0
37:00
38:00
39:00
40:00
41:00
42:00
Time

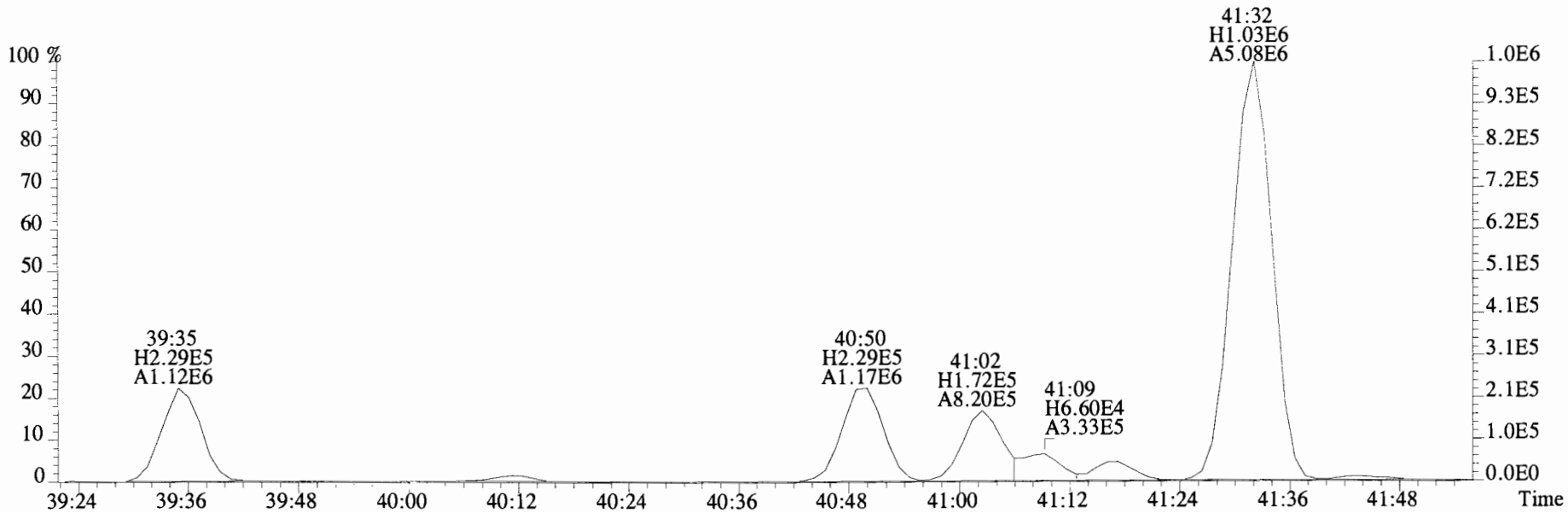
File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1588.0,0.00%,F,F)



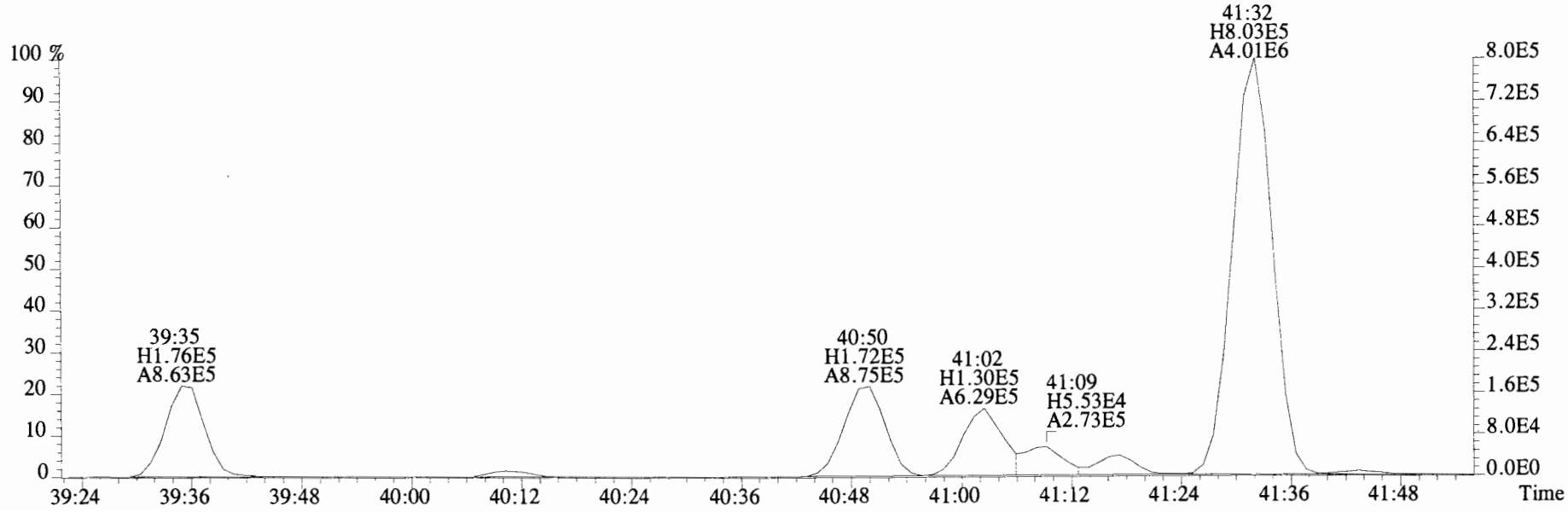
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1428.0,0.00%,F,F)

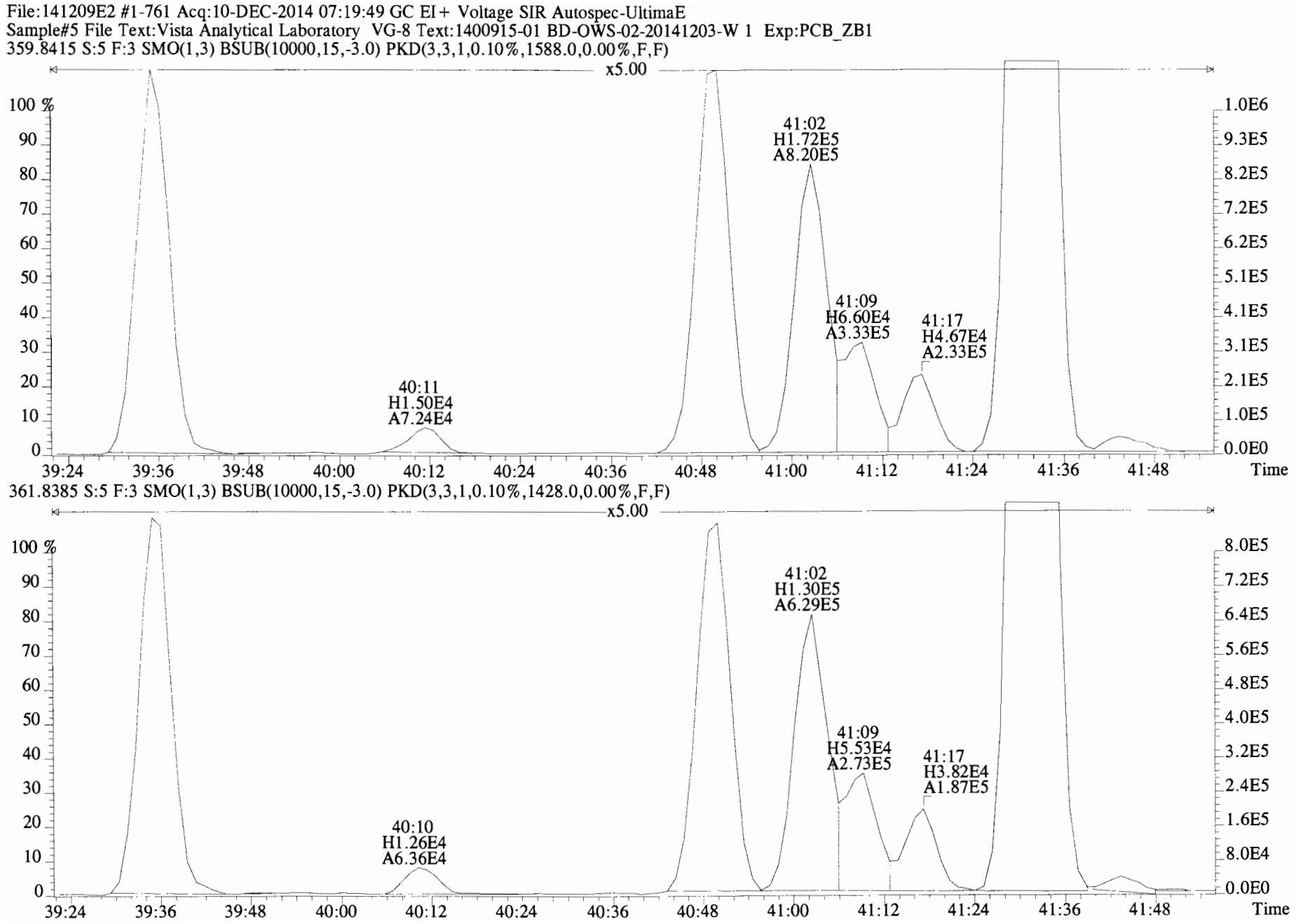


File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1588.0,0.00%,F,F)

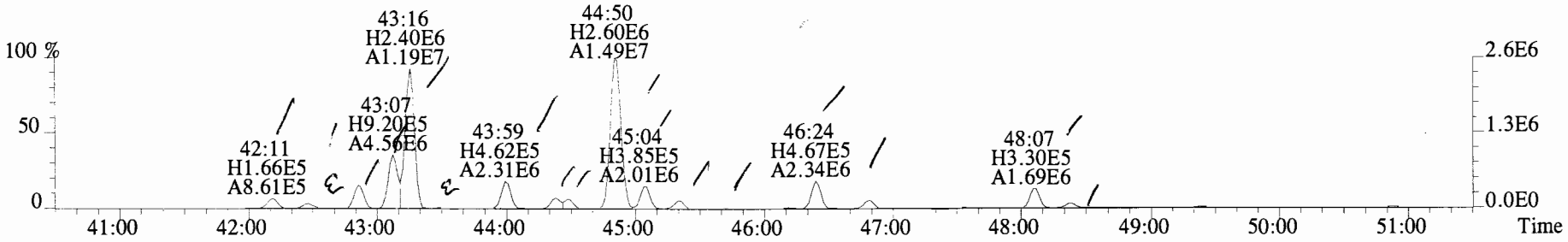


361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1428.0,0.00%,F,F)

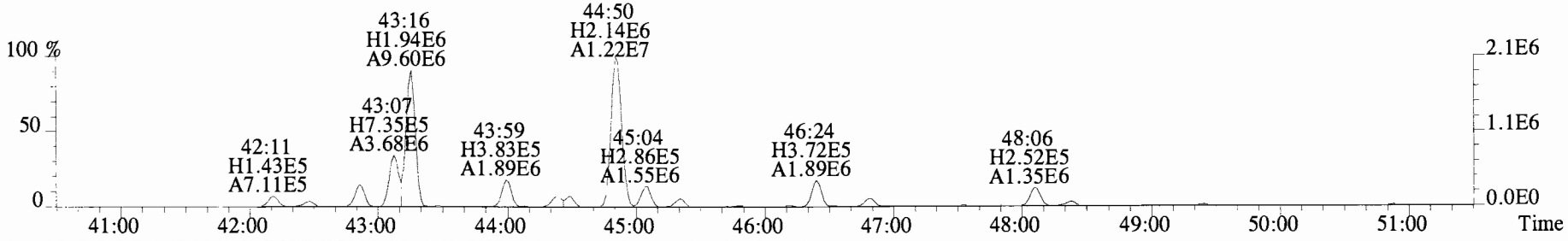



File:141209E2 #1-761 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1588.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
1.0E6
9.3E5
8.2E5
7.2E5
6.2E5
5.1E5
4.1E5
3.1E5
2.1E5
1.0E5
0.0E0
40:11
H1.50E4
A7.24E4
41:02
H1.72E5
A8.20E5
41:09
H6.60E4
A3.33E5
41:17
H4.67E4
A2.33E5
39:24
39:36
39:48
40:00
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
Time
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1428.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
8.0E5
7.2E5
6.4E5
5.6E5
4.8E5
4.0E5
3.2E5
2.4E5
1.6E5
8.0E4
0.0E0
40:10
H1.26E4
A6.36E4
41:02
H1.30E5
A6.29E5
41:09
H5.53E4
A2.73E5
41:17
H3.82E4
A1.87E5
39:24
39:36
39:48
40:00
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
Time

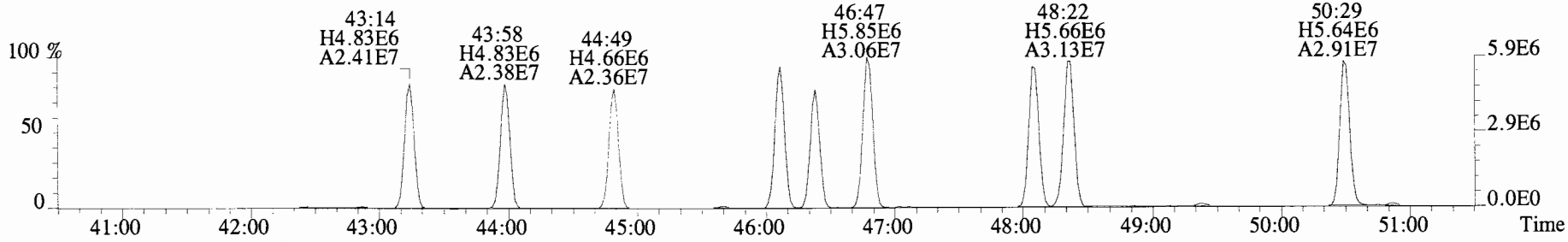
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2740.0,0.00%,F,F)



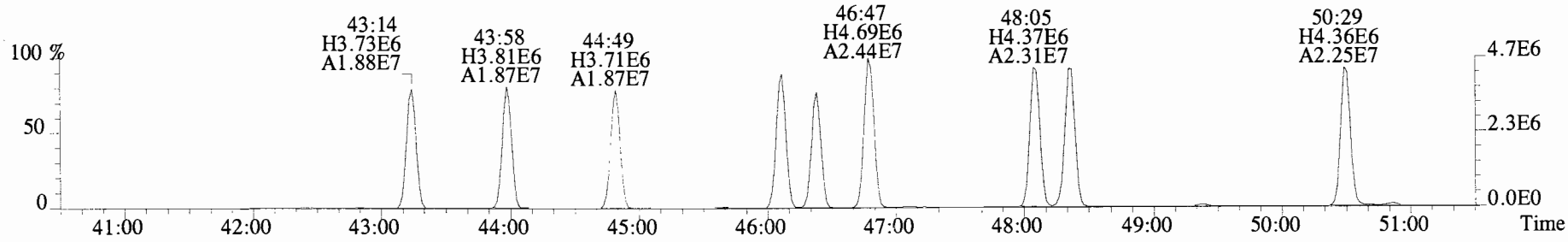
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2372.0,0.00%,F,F)

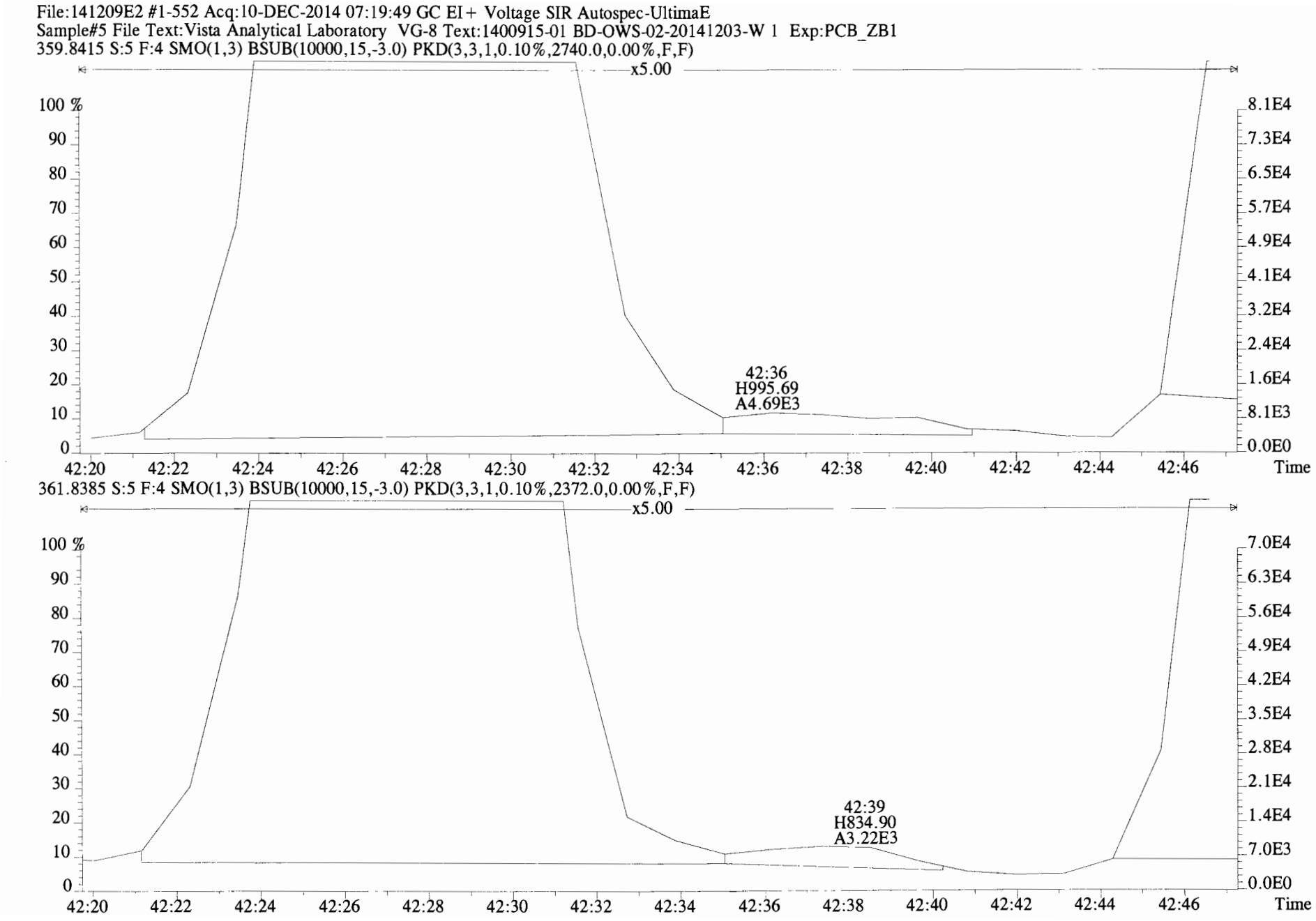


371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9272.0,0.00%,F,F)

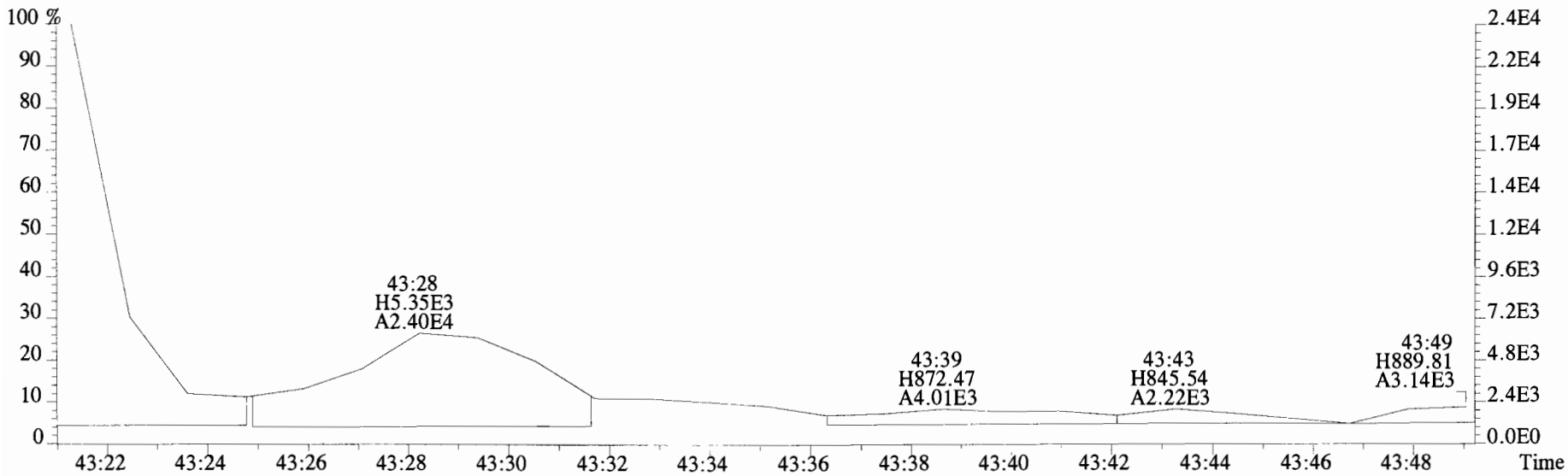


373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6956.0,0.00%,F,F)

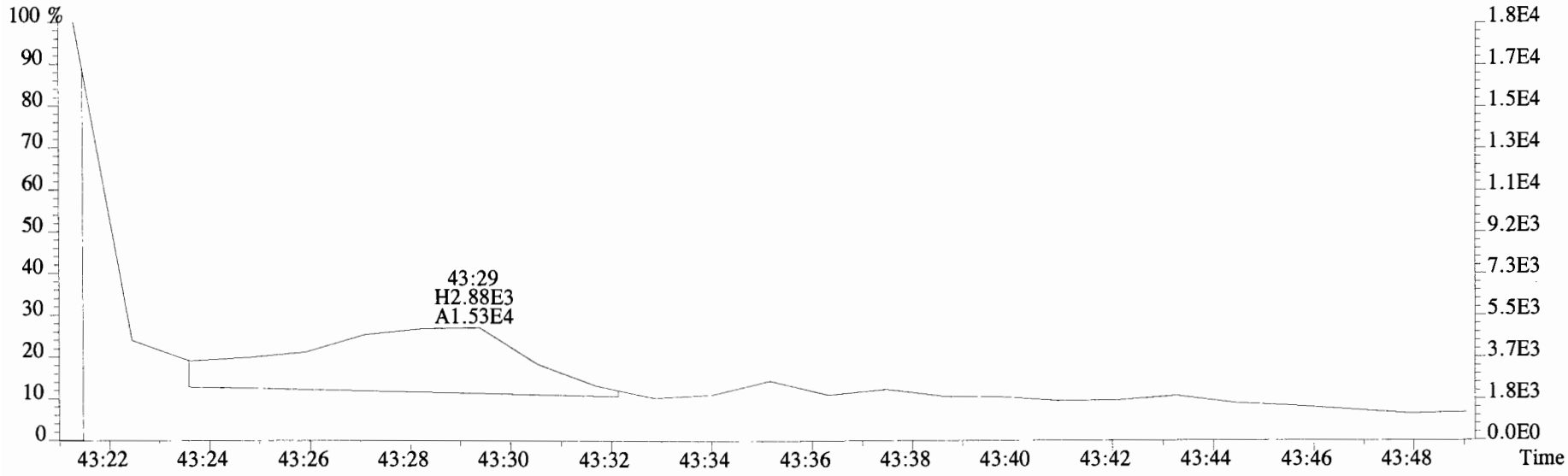



File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2740.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
8.1E4
7.3E4
6.5E4
5.7E4
4.9E4
4.1E4
3.2E4
2.4E4
1.6E4
8.1E3
0.0E0
42:36
H995.69
A4.69E3
42:20
42:22
42:24
42:26
42:28
42:30
42:32
42:34
42:36
42:38
42:40
42:42
42:44
42:46
Time
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2372.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
7.0E4
6.3E4
5.6E4
4.9E4
4.2E4
3.5E4
2.8E4
2.1E4
1.4E4
7.0E3
0.0E0
42:39
H834.90
A3.22E3
42:20
42:22
42:24
42:26
42:28
42:30
42:32
42:34
42:36
42:38
42:40
42:42
42:44
42:46
Time

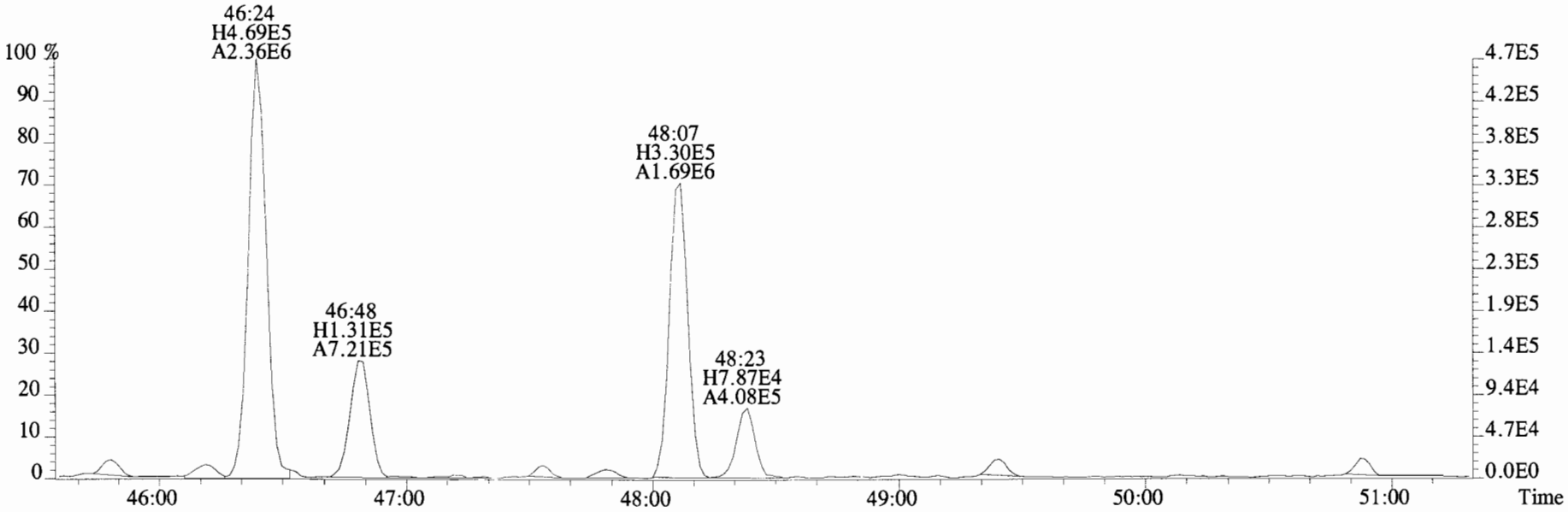
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2740.0,0.00%,F,F)



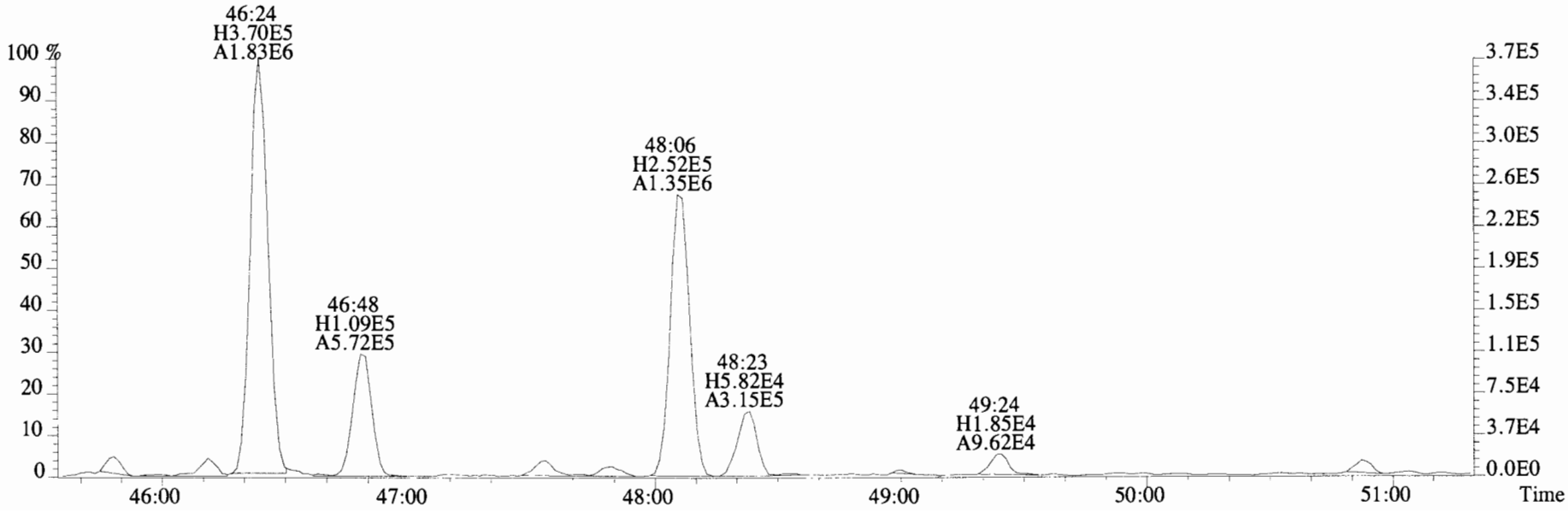
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2372.0,0.00%,F,F)



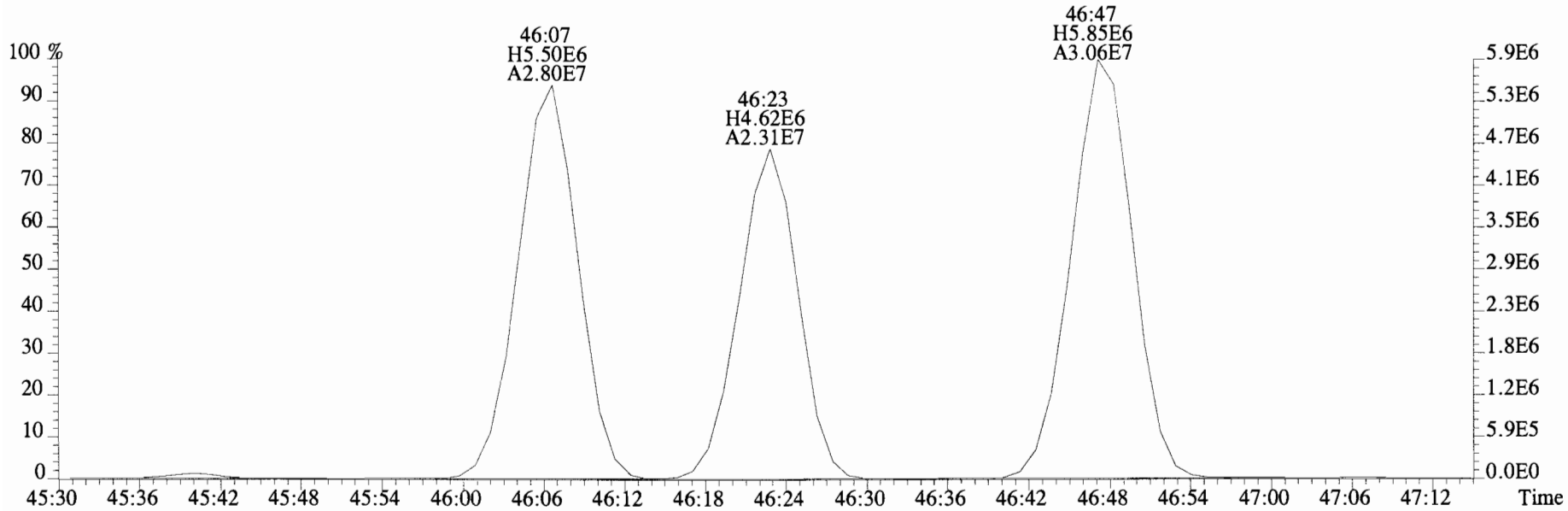
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2740.0,0.00%,F,F)



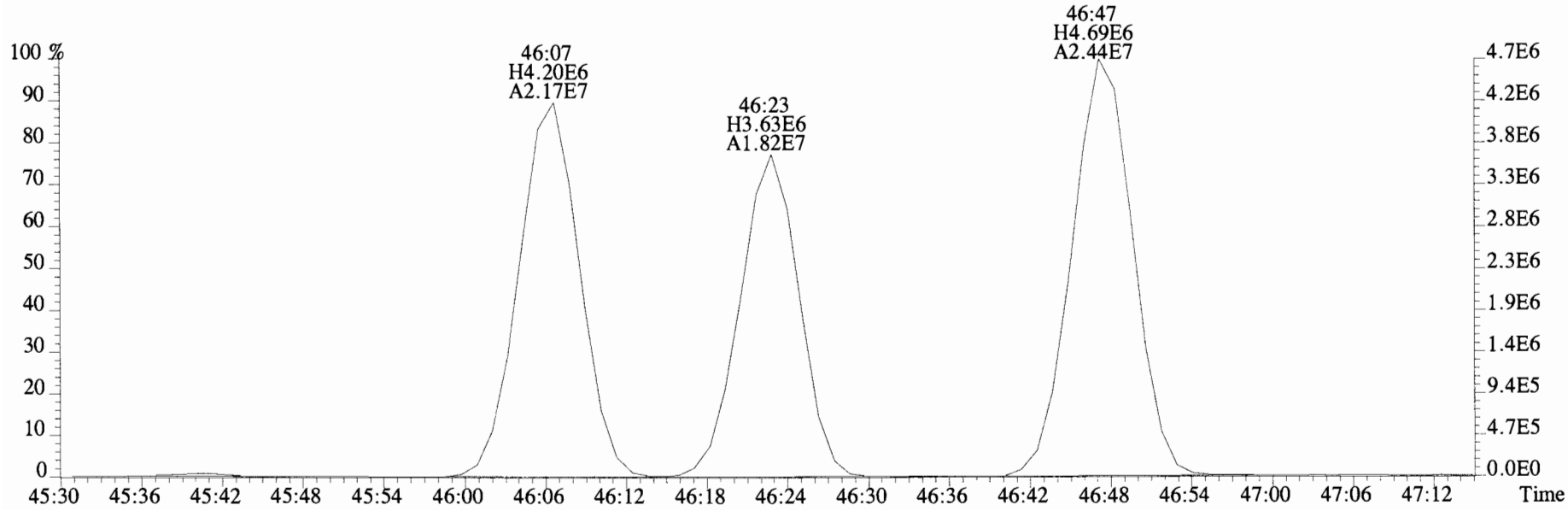
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2372.0,0.00%,F,F)



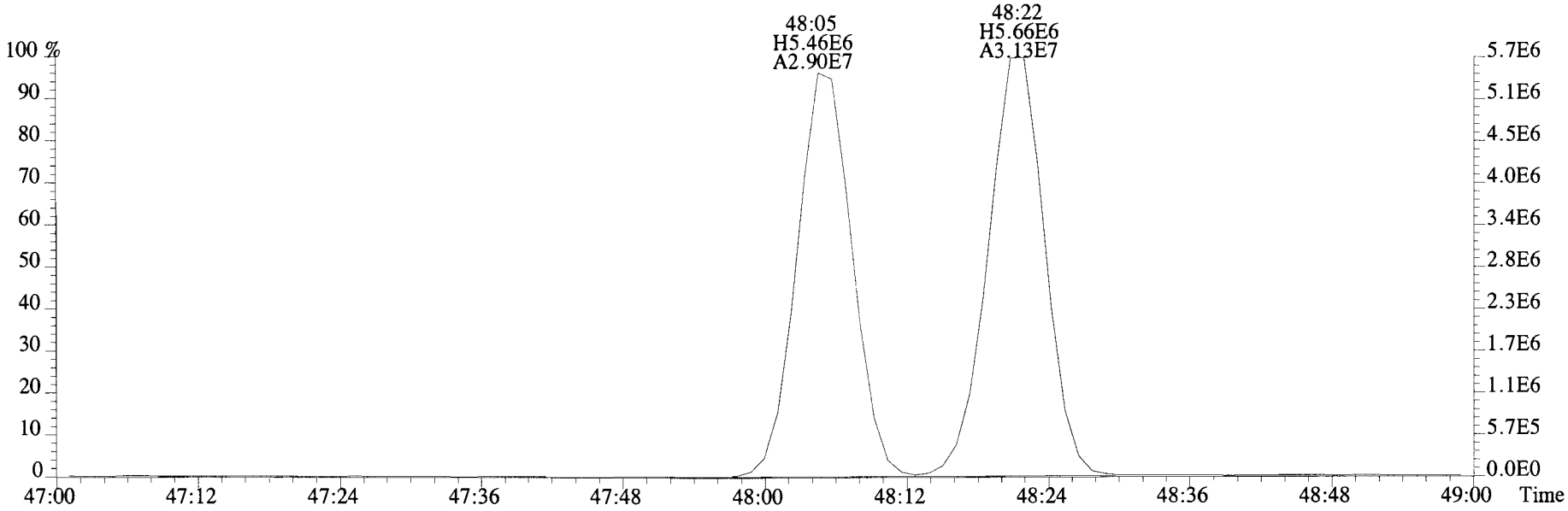
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9272.0,0.00%,F,F)



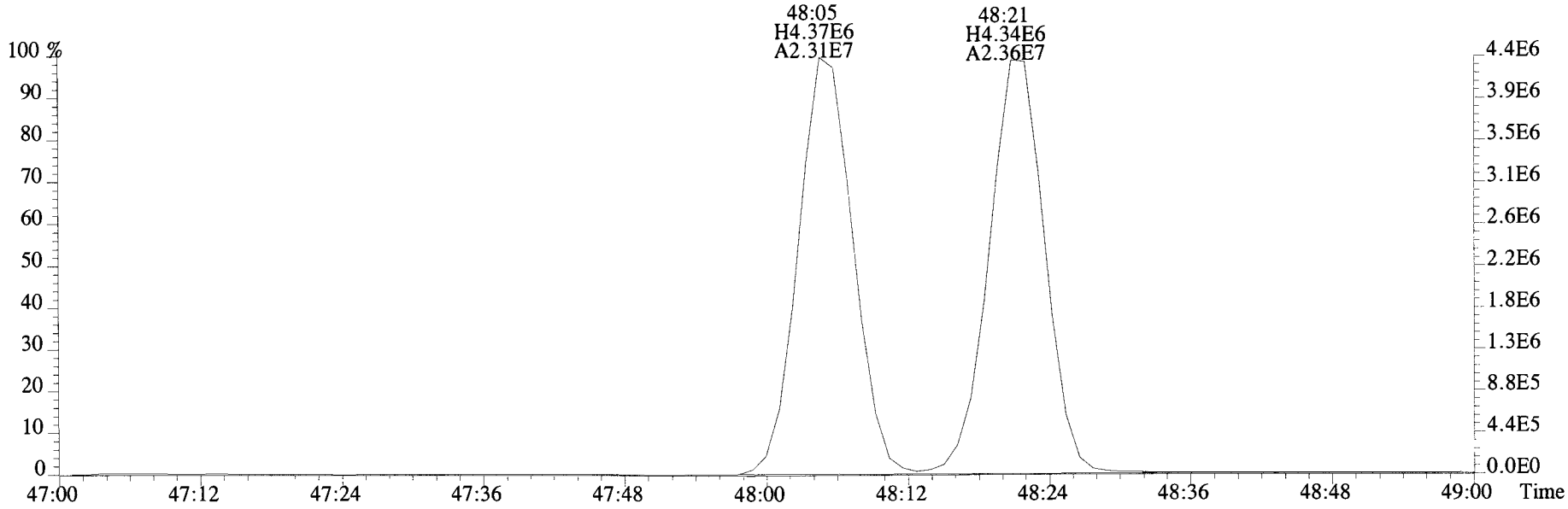
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6956.0,0.00%,F,F)



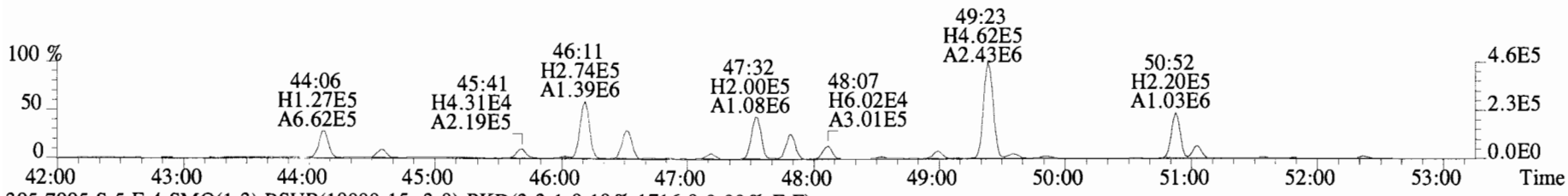
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9272.0,0.00%,F,F)



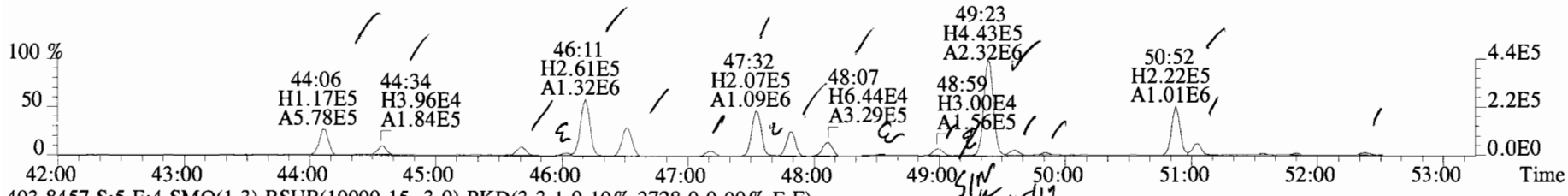
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6956.0,0.00%,F,F)



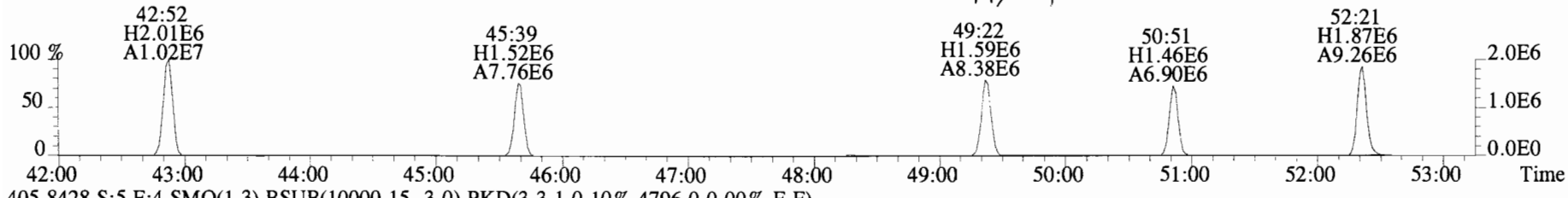
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



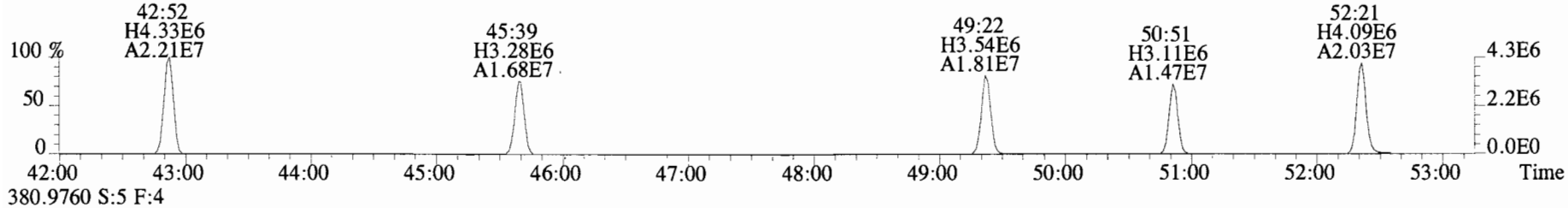
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



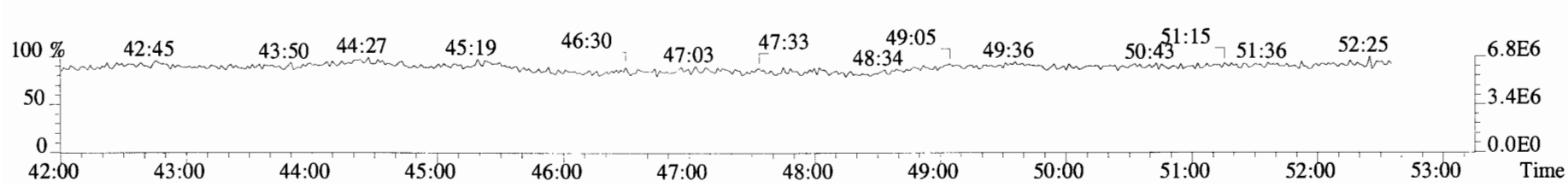
403.8457 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2728.0,0.00%,F,F)

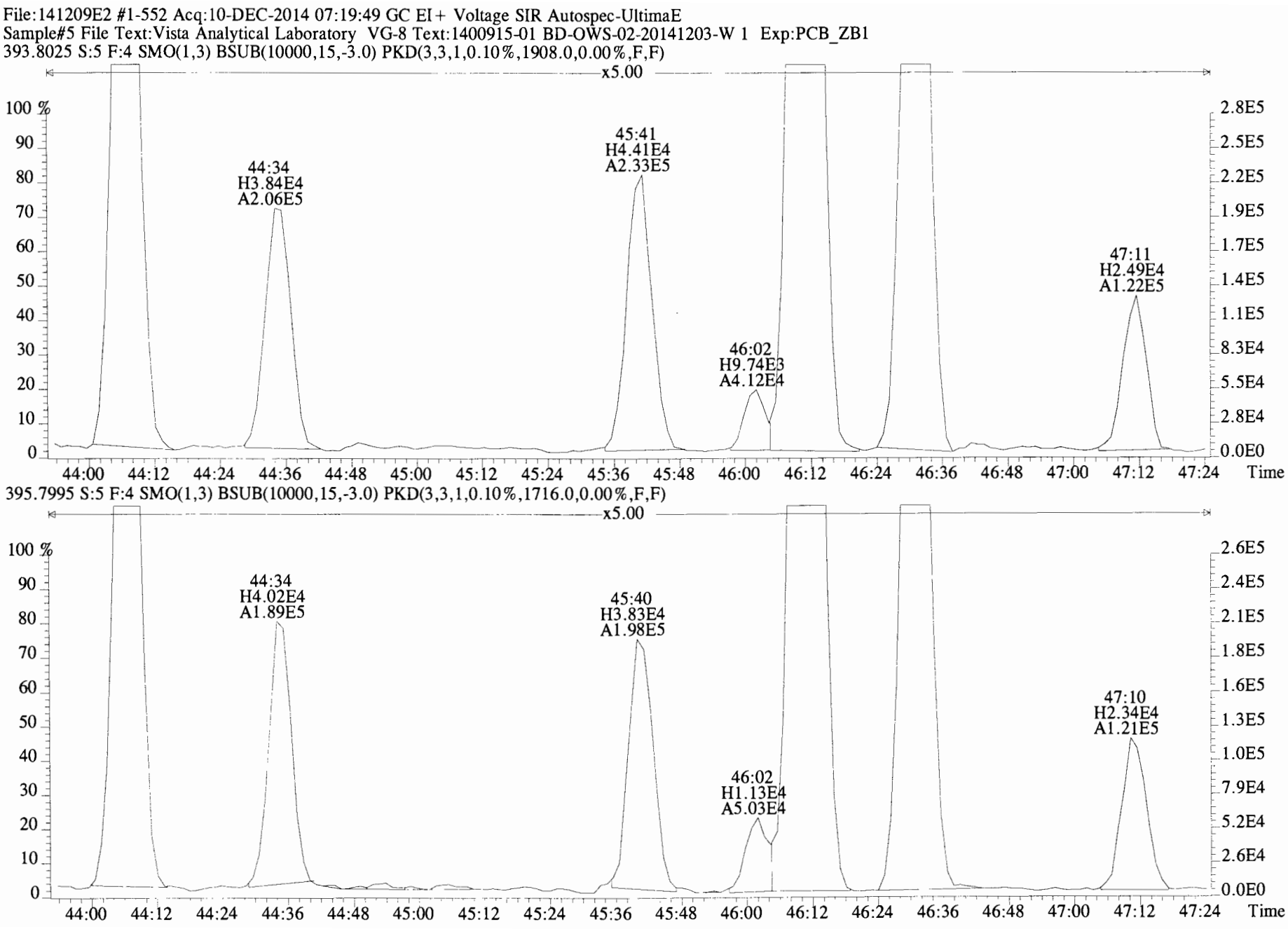


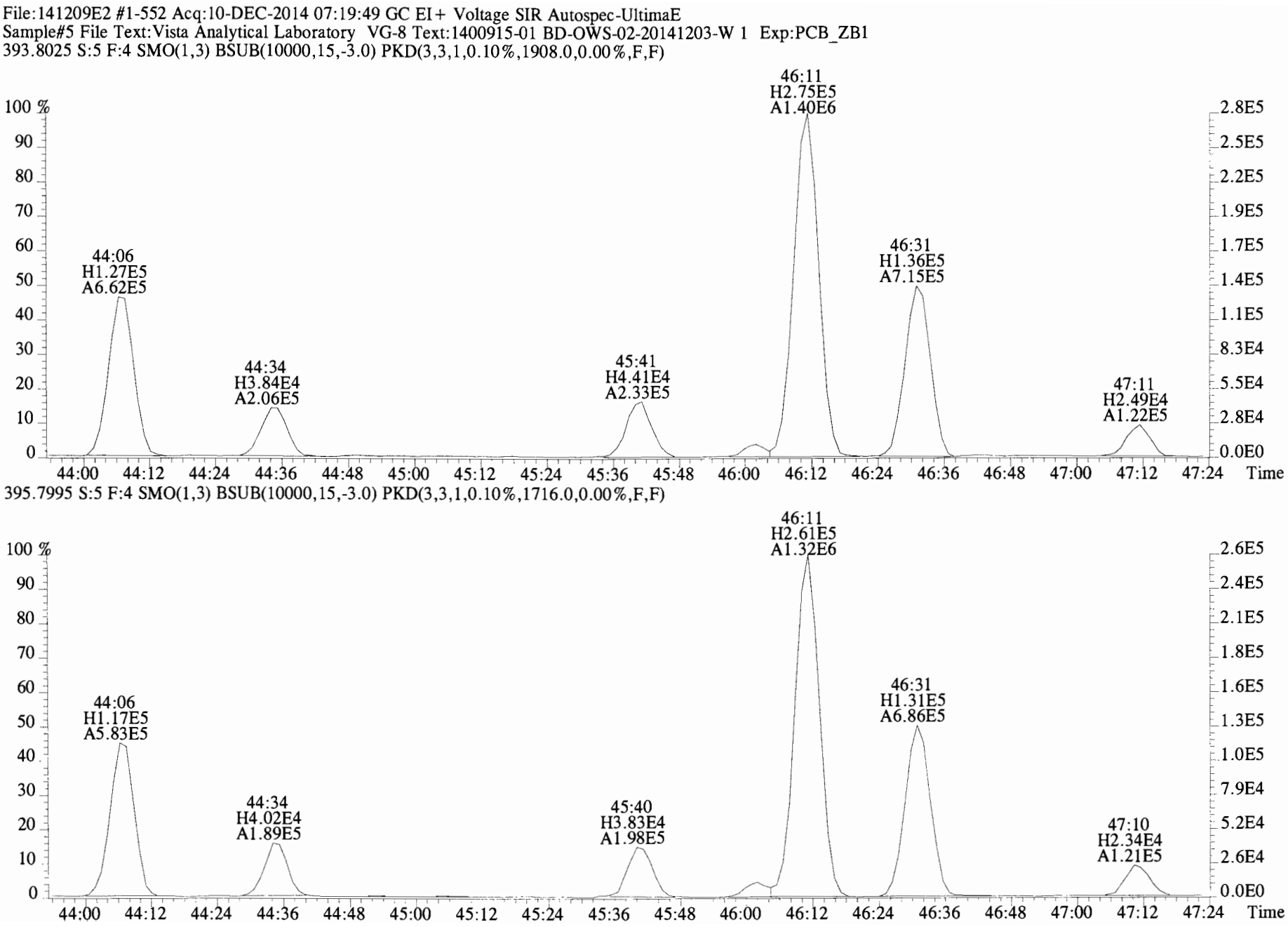
405.8428 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4796.0,0.00%,F,F)



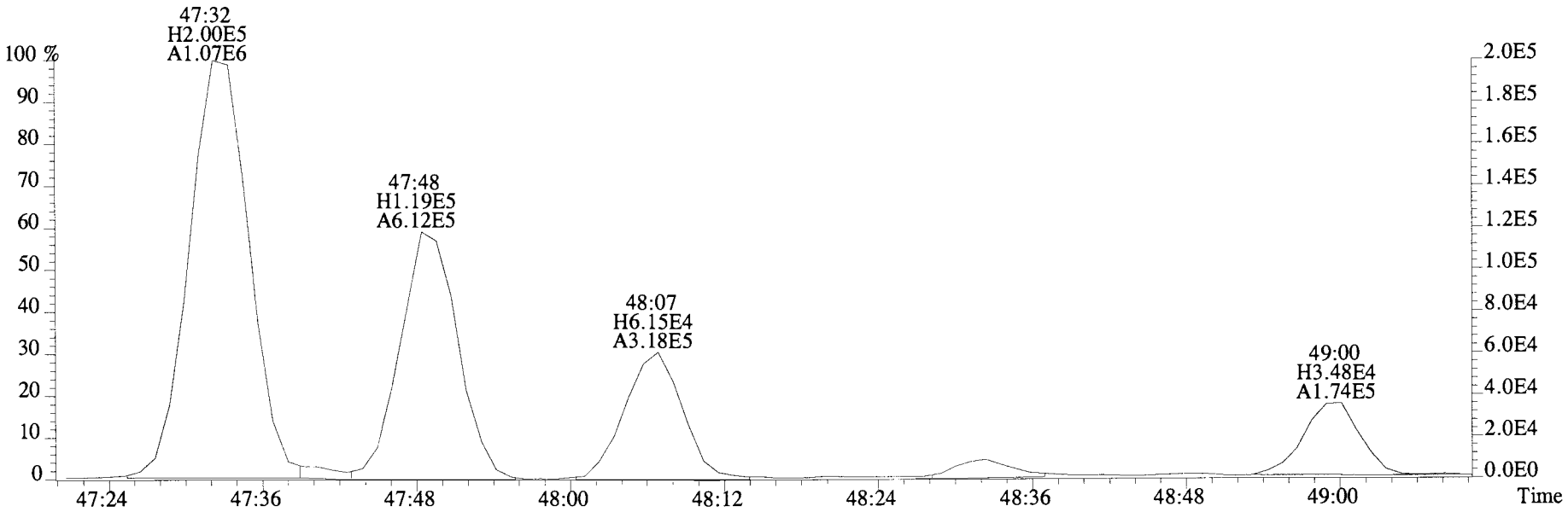
380.9760 S:5 F:4



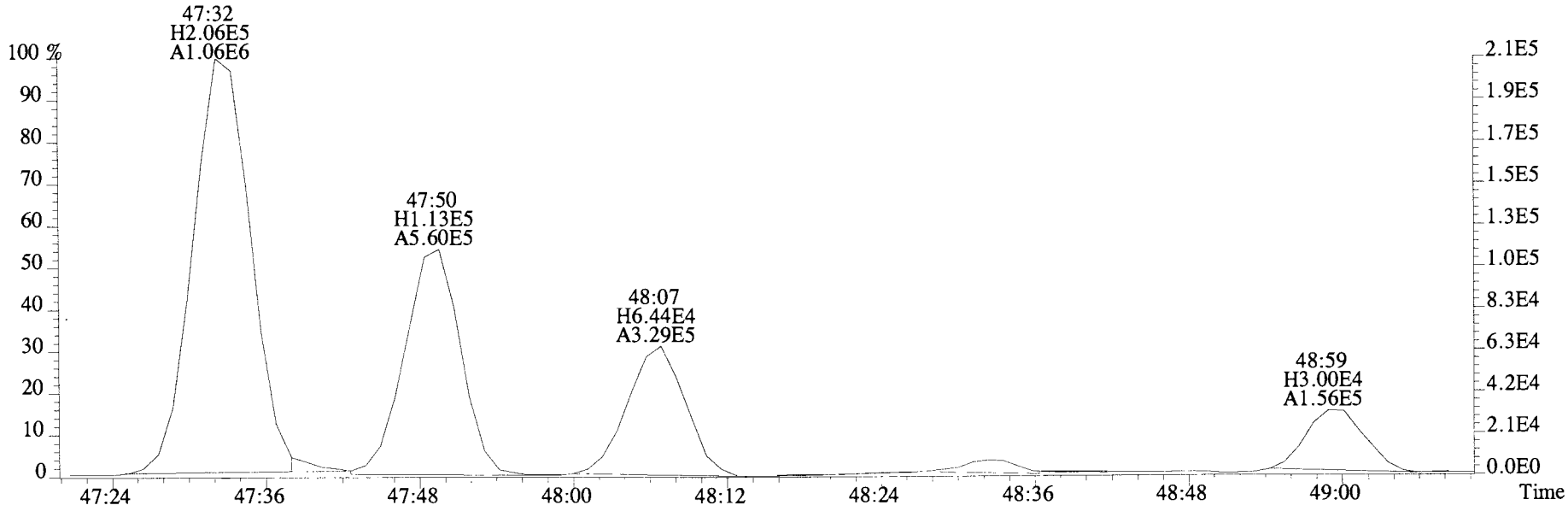

File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)
x5.00
44:34
H3.84E4
A2.06E5
45:41
H4.41E4
A2.33E5
46:02
H9.74E3
A4.12E4
47:11
H2.49E4
A1.22E5
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)
x5.00
44:34
H4.02E4
A1.89E5
45:40
H3.83E4
A1.98E5
46:02
H1.13E4
A5.03E4
47:10
H2.34E4
A1.21E5
Time


File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)
46:11
H2.75E5
A1.40E6
44:06
H1.27E5
A6.62E5
46:31
H1.36E5
A7.15E5
44:34
H3.84E4
A2.06E5
45:41
H4.41E4
A2.33E5
47:11
H2.49E4
A1.22E5
100 %
90
80
70
60
50
40
30
20
10
0
2.8E5
2.5E5
2.2E5
1.9E5
1.7E5
1.4E5
1.1E5
8.3E4
5.5E4
2.8E4
0.0E0
44:00 44:12 44:24 44:36 44:48 45:00 45:12 45:24 45:36 45:48 46:00 46:12 46:24 46:36 46:48 47:00 47:12 47:24 Time
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)
46:11
H2.61E5
A1.32E6
44:06
H1.17E5
A5.83E5
46:31
H1.31E5
A6.86E5
44:34
H4.02E4
A1.89E5
45:40
H3.83E4
A1.98E5
47:10
H2.34E4
A1.21E5
100 %
90
80
70
60
50
40
30
20
10
0
2.6E5
2.4E5
2.1E5
1.8E5
1.6E5
1.3E5
1.0E5
7.9E4
5.2E4
2.6E4
0.0E0
44:00 44:12 44:24 44:36 44:48 45:00 45:12 45:24 45:36 45:48 46:00 46:12 46:24 46:36 46:48 47:00 47:12 47:24 Time

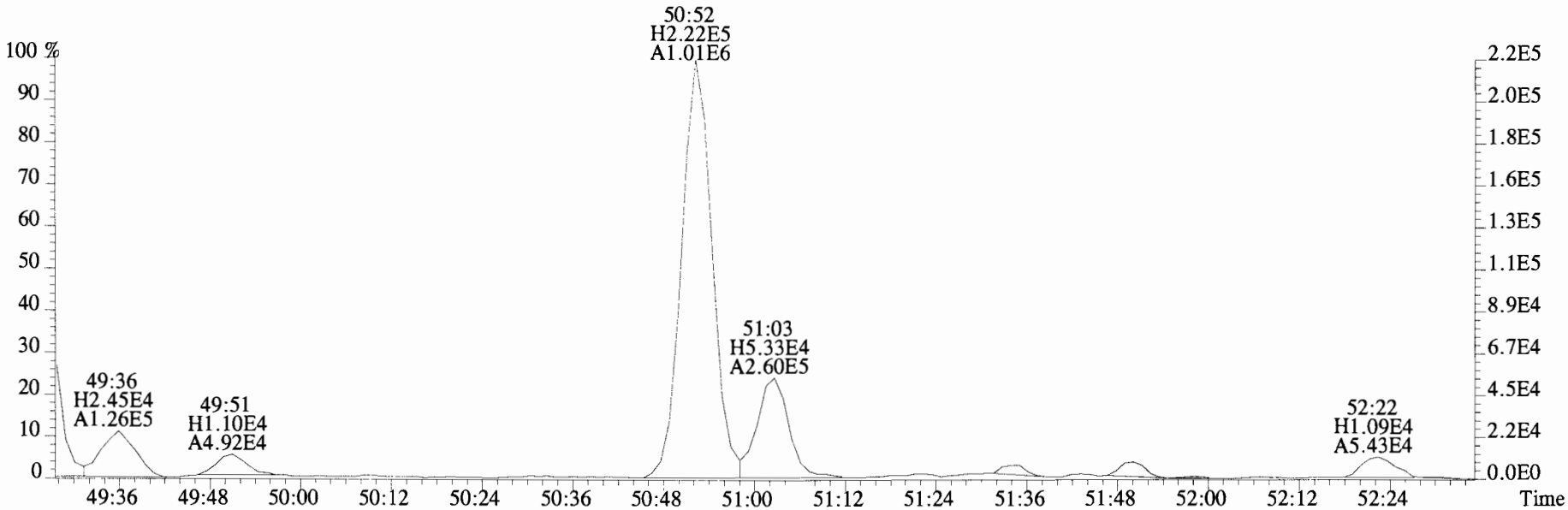
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



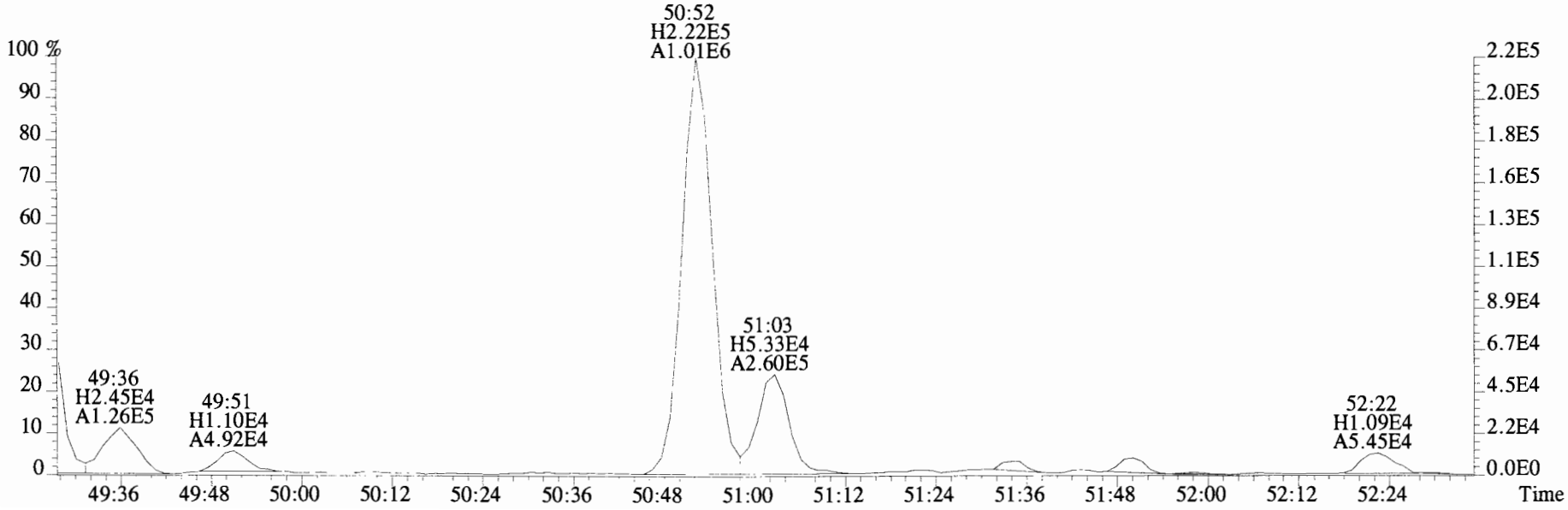
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)

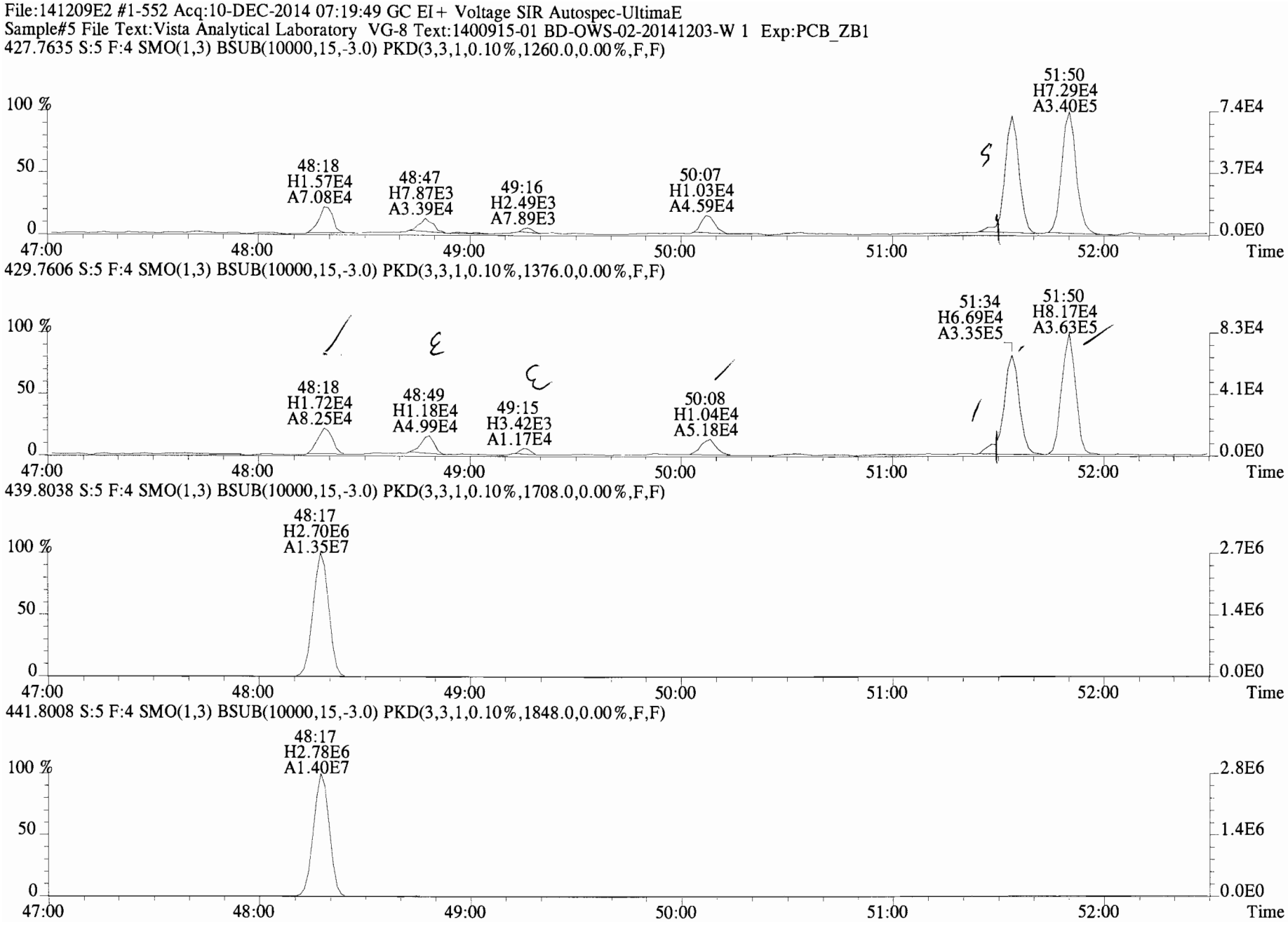


File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0)

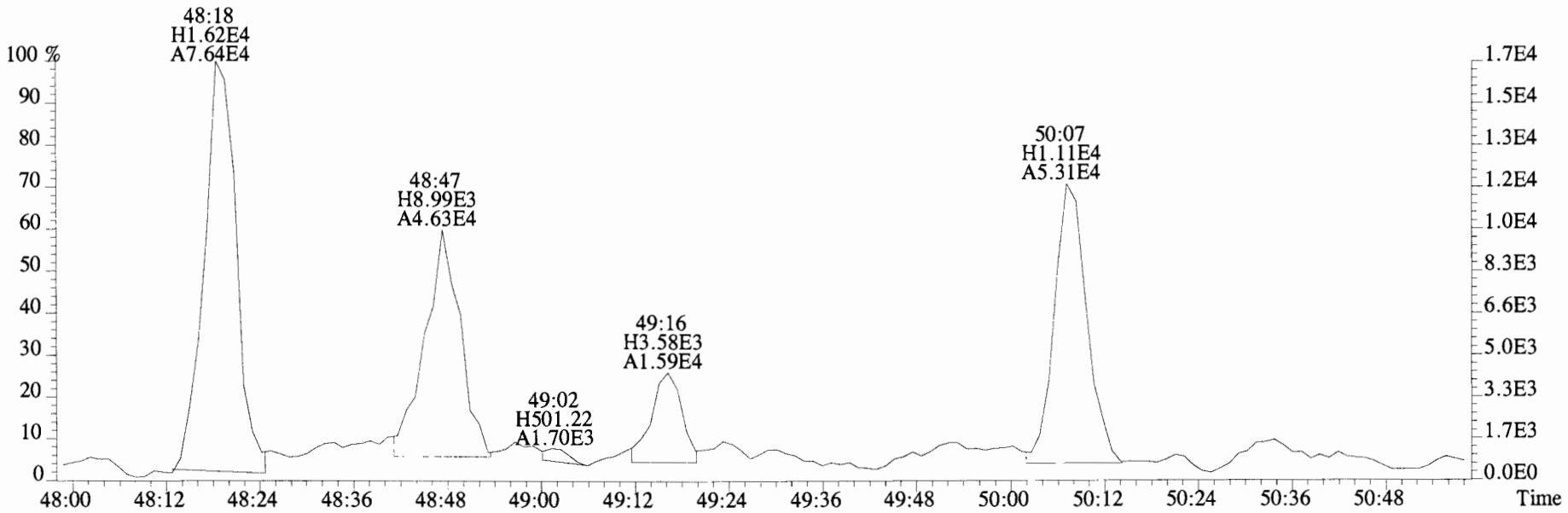


395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)

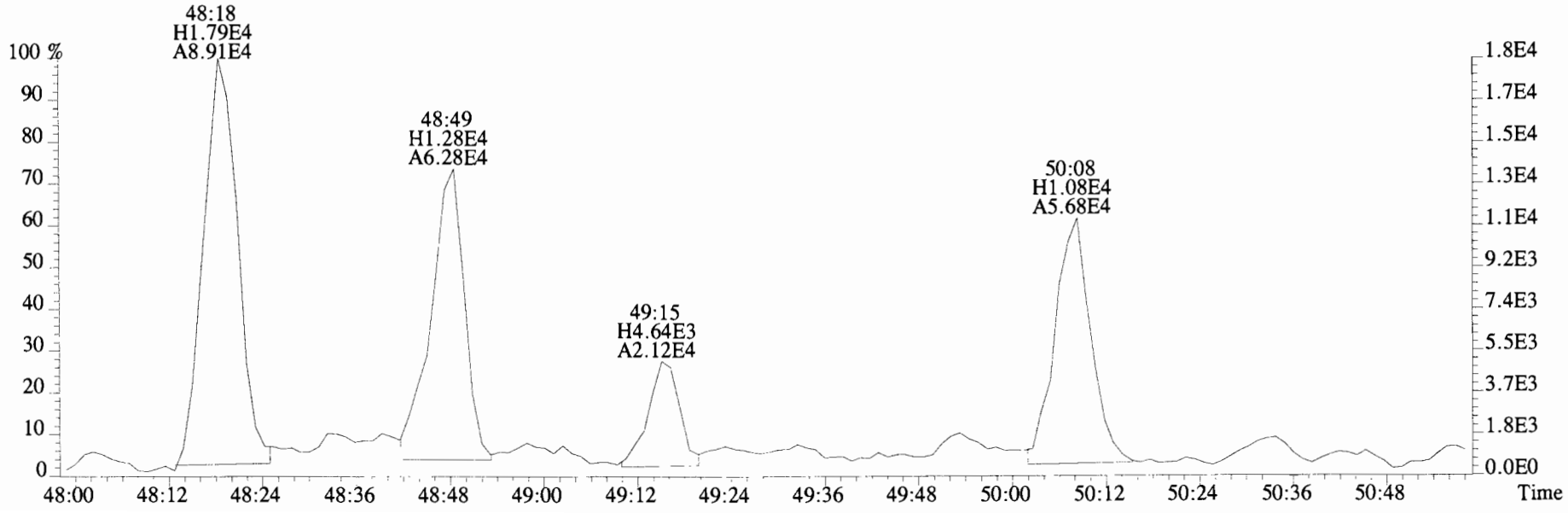



File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1260.0,0.00%,F,F)
48:18 H1.57E4 A7.08E4
48:47 H7.87E3 A3.39E4
49:16 H2.49E3 A7.89E3
50:07 H1.03E4 A4.59E4
51:50 H7.29E4 A3.40E5
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1376.0,0.00%,F,F)
48:18 H1.72E4 A8.25E4
48:49 H1.18E4 A4.99E4
49:15 H3.42E3 A1.17E4
50:08 H1.04E4 A5.18E4
51:34 H6.69E4 A3.35E5
51:50 H8.17E4 A3.63E5
439.8038 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1708.0,0.00%,F,F)
48:17 H2.70E6 A1.35E7
441.8008 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)
48:17 H2.78E6 A1.40E7
100 %
50
0
47:00
48:00
49:00
50:00
51:00
52:00
Time
7.4E4
3.7E4
0.0E0
8.3E4
4.1E4
2.7E6
1.4E6
2.8E6

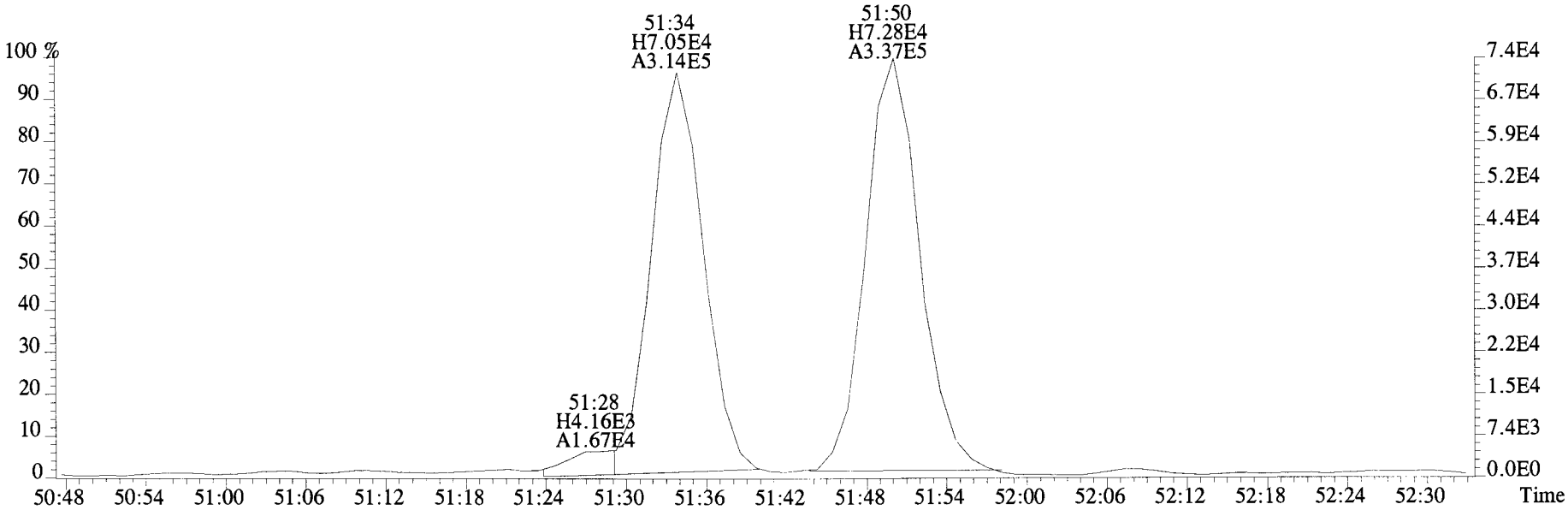
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1260.0,0.00%,F,F)



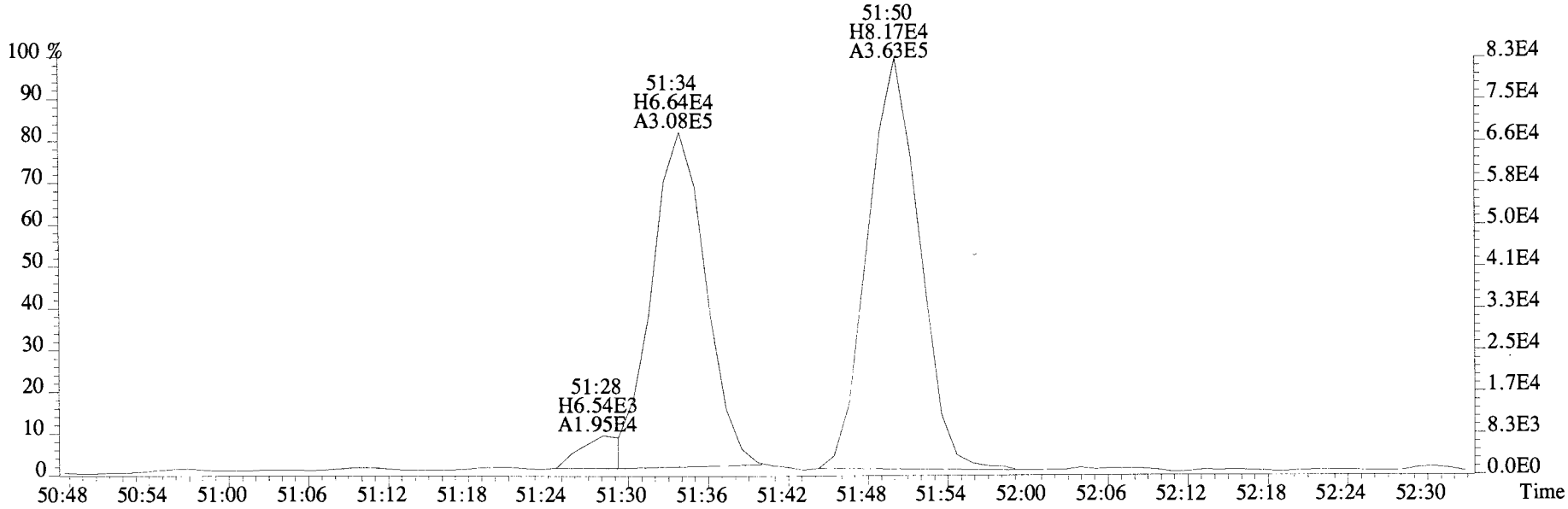
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1376.0,0.00%,F,F)



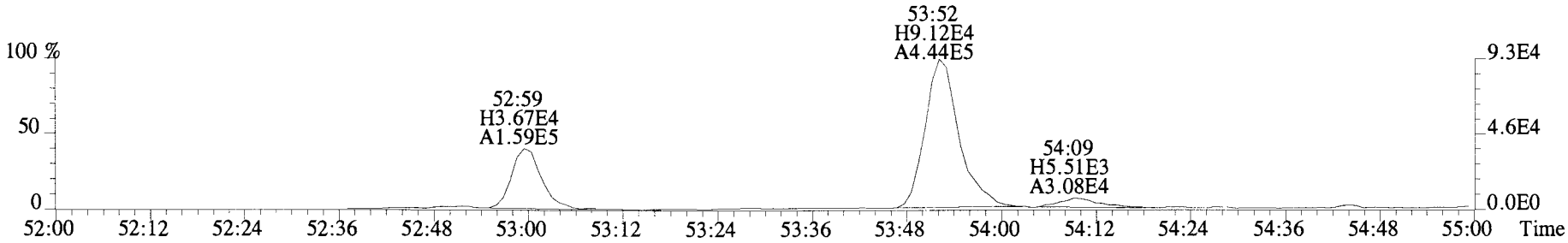
File:141209E2 #1-552 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1260.0,0.00%,F,F)



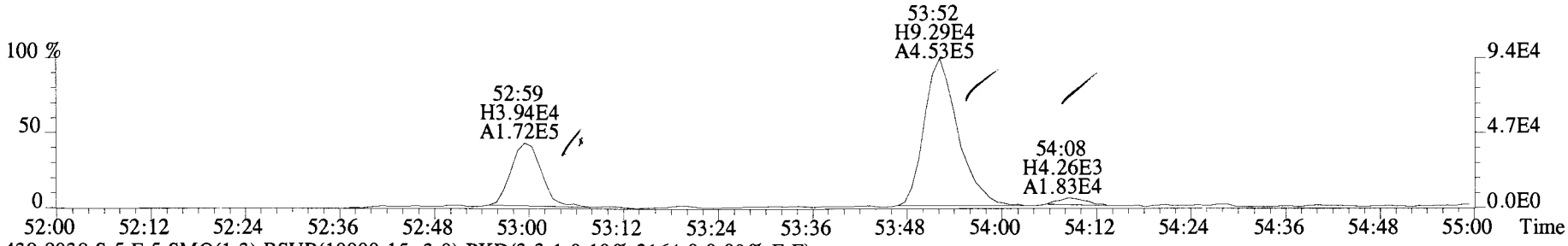
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1376.0,0.00%,F,F)



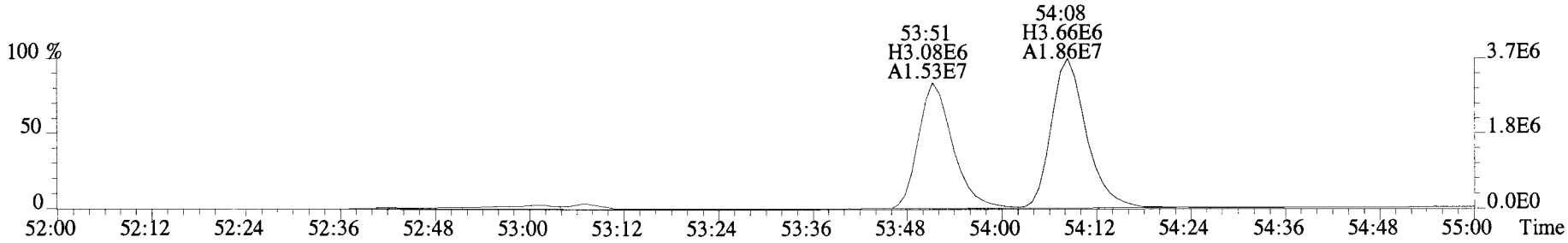
File:141209E2 #1-430 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1480.0,0.00%,F,F)



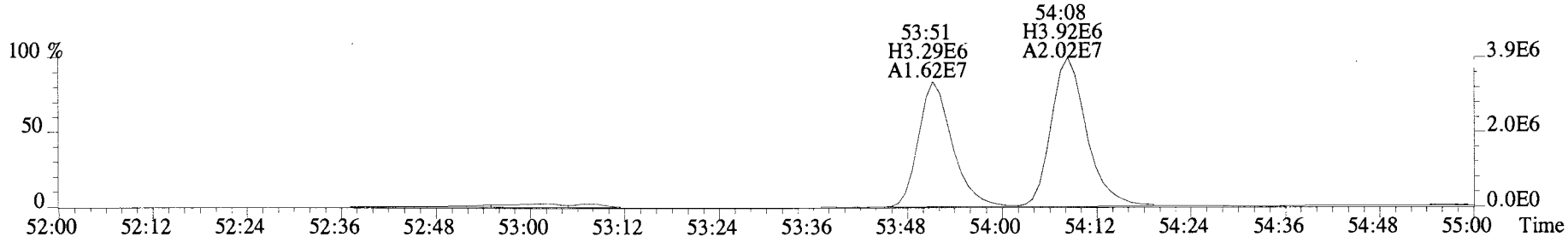
429.7606 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1636.0,0.00%,F,F)



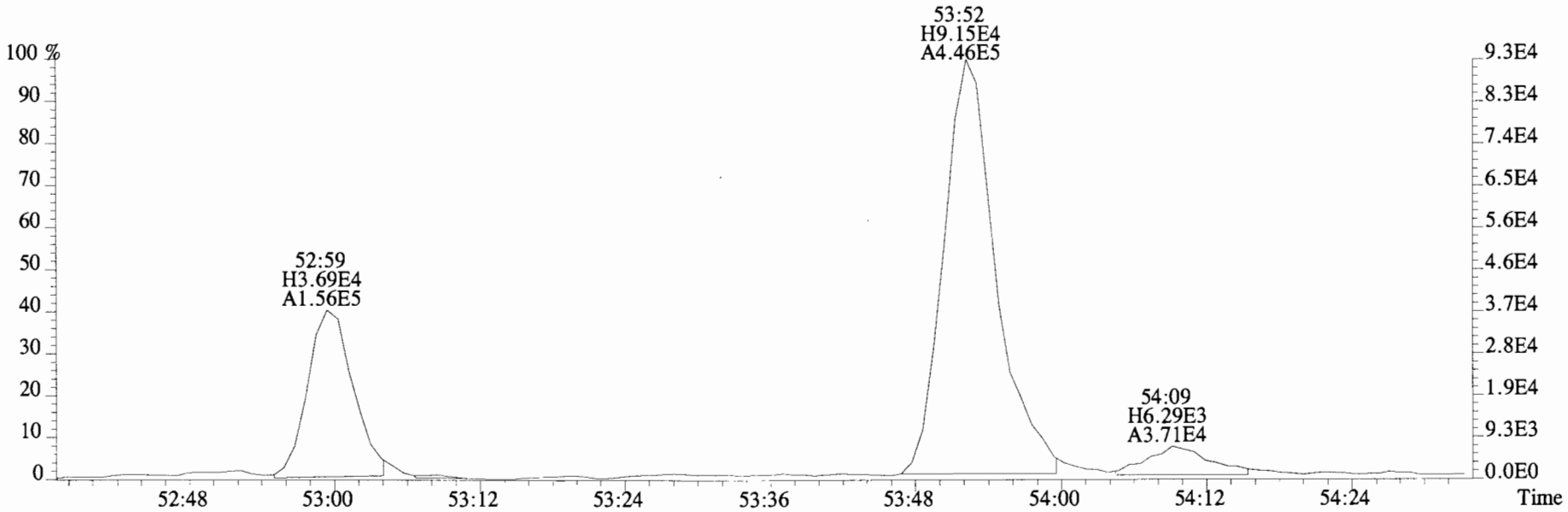
439.8038 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3164.0,0.00%,F,F)



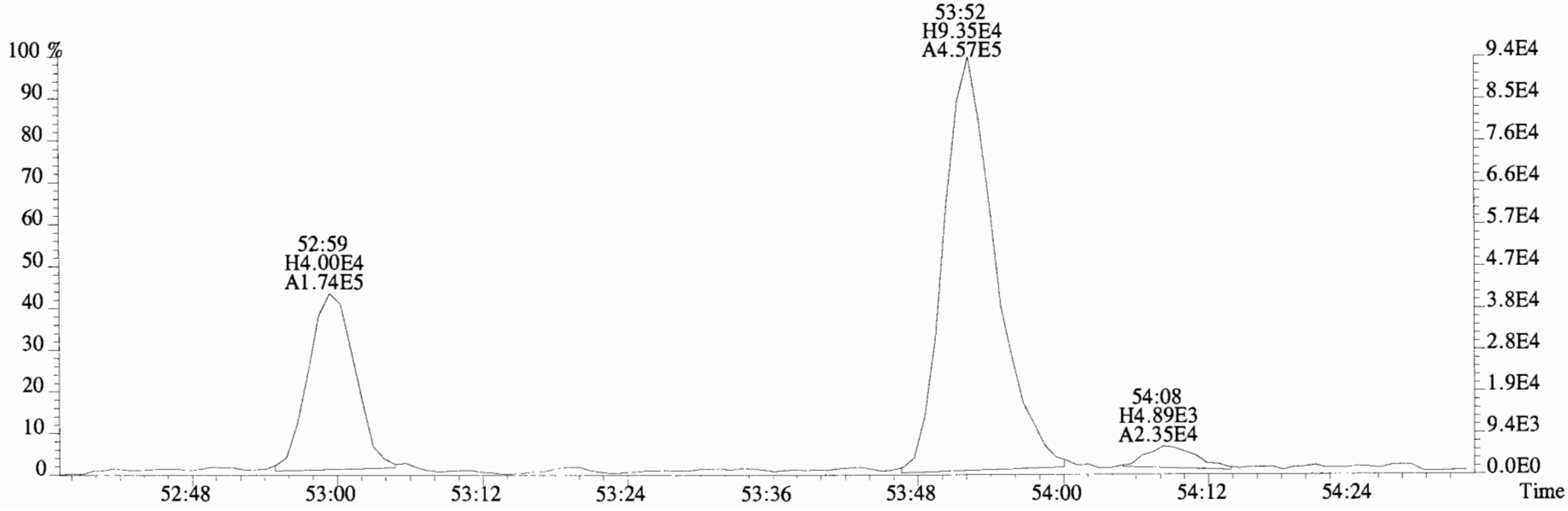
441.8008 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3364.0,0.00%,F,F)



File:141209E2 #1-430 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1480.0,0.00%,F,F)

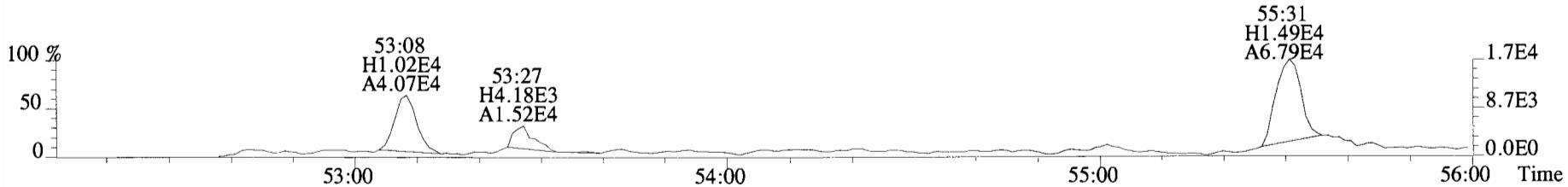


429.7606 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1636.0,0.00%,F,F)

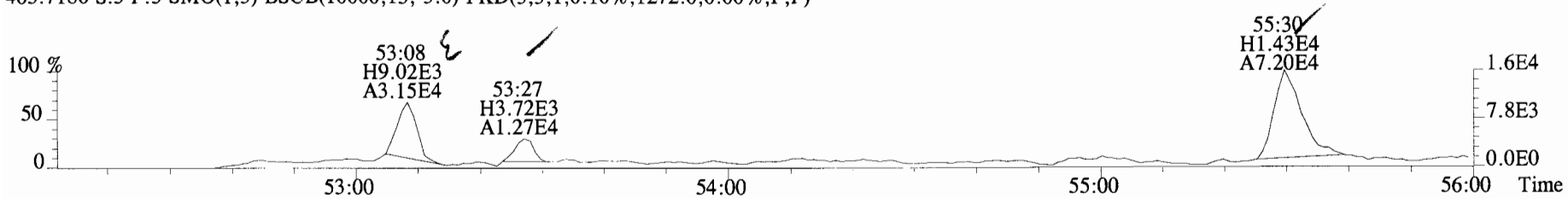


File:141209E2 #1-430 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1

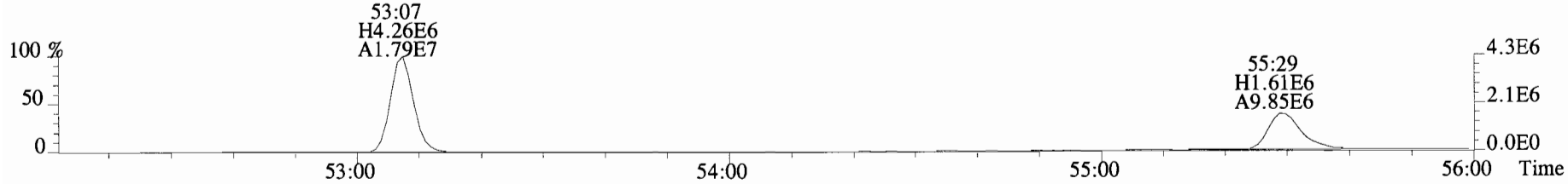
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



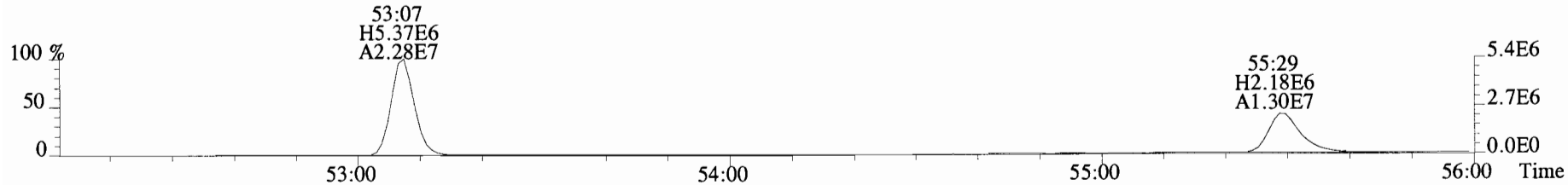
465.7186 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1272.0,0.00%,F,F)



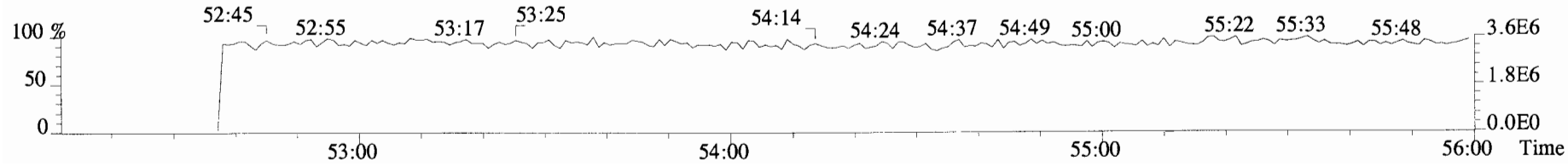
473.7648 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10636.0,0.00%,F,F)



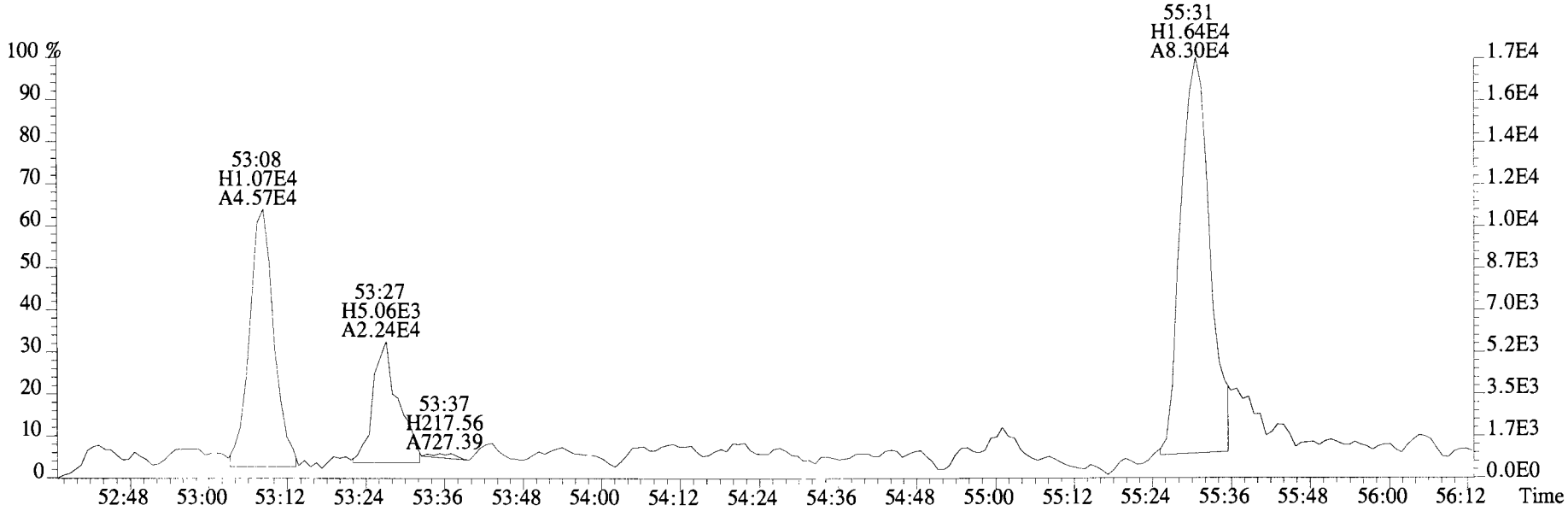
475.7619 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,13432.0,0.00%,F,F)



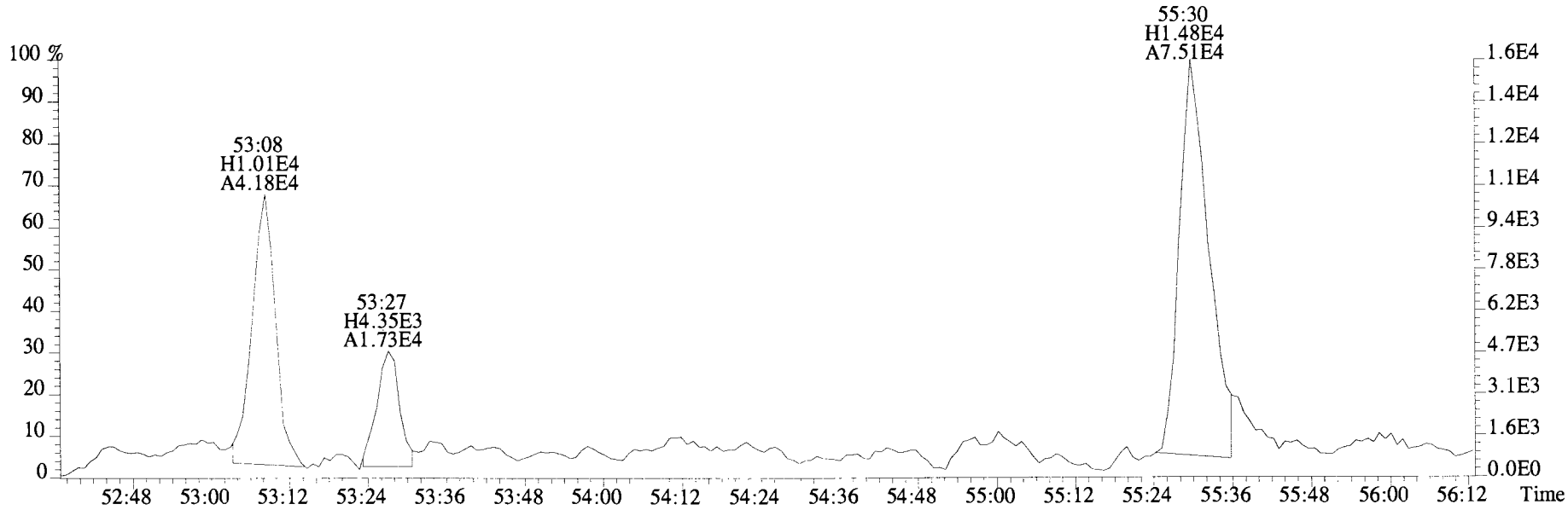
492.9697 S:5 F:5



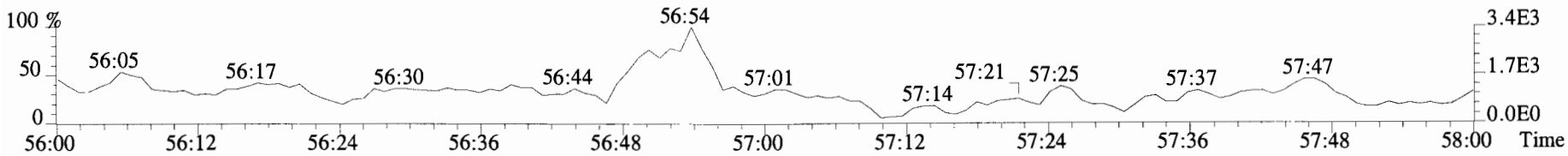
File:141209E2 #1-430 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



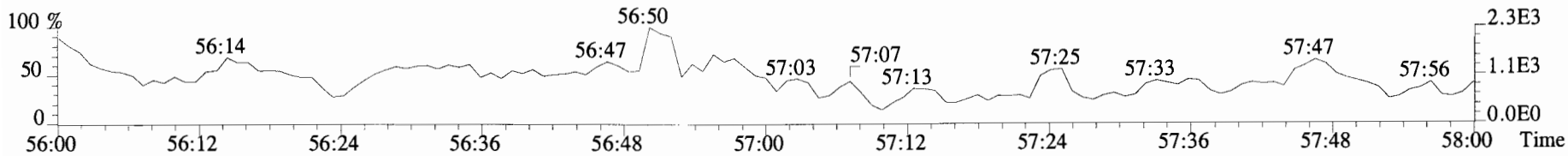
465.7186 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1272.0,0.00%,F,F)



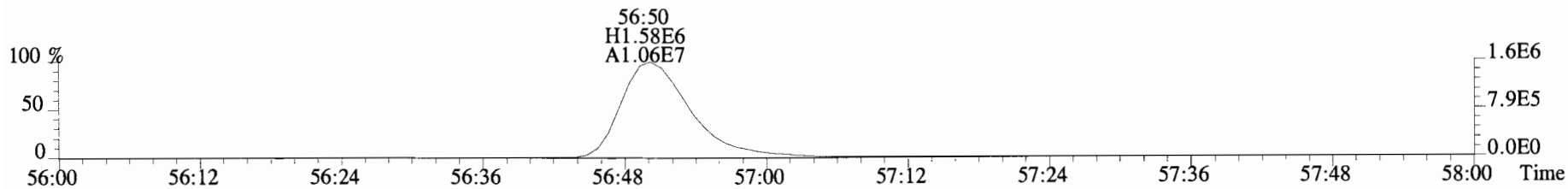
File:141209E2 #1-430 Acq:10-DEC-2014 07:19:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-01 BD-OWS-02-20141203-W 1 Exp:PCB_ZB1
497.6826 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1332.0,0.00%,F,F)



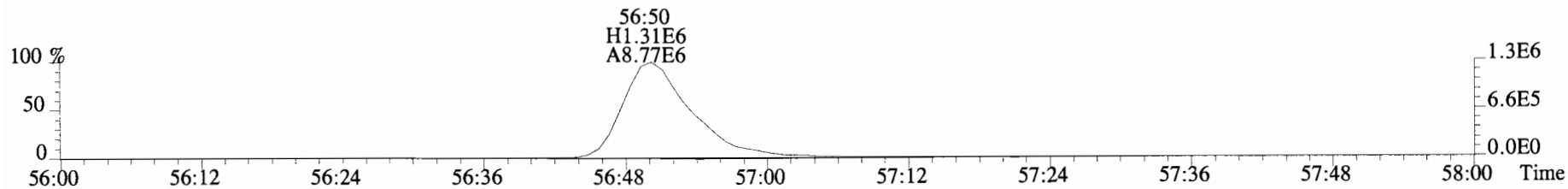
499.6797 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1388.0,0.00%,F,F)



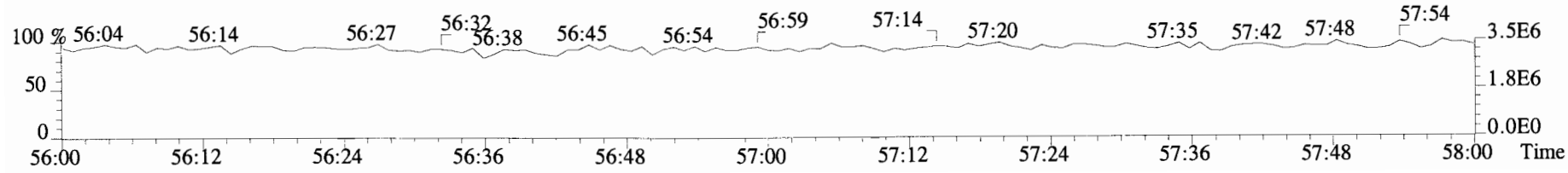
509.7229 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1500.0,0.00%,F,F)



511.7199 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1500.0,0.00%,F,F)



492.9697 S:5 F:5



	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.18	NotFnd	*	*		475	2.5	0.895
	1,2,3,7,8-PeCDD	*	*	n	0.92	NotFnd	*	*		581	2.5	0.907
	1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotFnd	*	*		563	2.5	1.75
	1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotFnd	*	*		563	2.5	1.87
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotFnd	*	*		563	2.5	2.10
	1,2,3,4,6,7,8-HpCDD	1.34e+04	0.75	n	1.12	38:44	1.000	2.2958		*	2.5	*
	OCDD	6.87e+04	0.95	y	0.95	41:60	1.000	16.602		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.08	NotFnd	*	*		574	2.5	0.751
	1,2,3,7,8-PeCDF	*	*	n	1.09	NotFnd	*	*		597	2.5	1.01
	2,3,4,7,8-PeCDF	*	*	n	1.04	NotFnd	*	*		597	2.5	0.994
	1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotFnd	*	*		722	2.5	0.747
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotFnd	*	*		722	2.5	0.873
	2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotFnd	*	*		423	2.5	0.528
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotFnd	*	*		423	2.5	0.864
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotFnd	*	*		894	2.5	1.74
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotFnd	*	*		894	2.5	1.61
	OCDF	*	*	n	1.10	NotFnd	*	*		1460	1.0	2.28
IS	13C-2,3,7,8-TCDD	1.53e+07	0.81	y	1.07	26:53	1.022	1408.7				
IS	13C-1,2,3,7,8-PeCDD	1.68e+07	0.62	y	1.24	31:31	1.198	1333.0				
IS	13C-1,2,3,4,7,8-HxCDD	1.14e+07	1.26	y	0.72	34:50	1.014	1122.0				
IS	13C-1,2,3,6,7,8-HxCDD	1.21e+07	1.24	y	0.74	34:56	1.017	1177.9				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.29	y	0.86	35:14	1.025	1164.4				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.04e+07	1.06	y	0.64	38:44	1.127	1155.5				
IS	13C-OCDD	1.73e+07	0.89	y	0.78	41:60	1.222	1577.9				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.78	y	0.92	26:05	0.992	1481.3				
IS	13C-1,2,3,7,8-PeCDF	2.22e+07	1.59	y	0.95	30:19	1.153	1316.2				
IS	13C-2,3,4,7,8-PeCDF	2.34e+07	1.61	y	0.97	31:14	1.188	1357.8				
IS	13C-1,2,3,4,7,8-HxCDF	1.73e+07	0.52	y	0.99	33:56	0.988	1243.4				
IS	13C-1,2,3,6,7,8-HxCDF	1.76e+07	0.52	y	1.10	34:04	0.992	1142.0				
IS	13C-2,3,4,6,7,8-HxCDF	1.71e+07	0.51	y	1.03	34:40	1.009	1186.5				
IS	13C-1,2,3,7,8,9-HxCDF	1.42e+07	0.52	y	0.86	35:37	1.037	1181.5				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.18e+07	0.45	y	0.71	37:26	1.090	1176.5				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.10e+07	0.42	y	0.71	39:17	1.143	1111.5				
IS	13C-OCDF	2.24e+07	0.89	y	0.87	42:13	1.229	1829.0				
C/Up	37Cl-2,3,7,8-TCDD	9.23e+06			1.21	26:55	1.023	750.22				
RS/RT	13C-1,2,3,4-TCDD	2.02e+07	0.82	y	1.00	26:18	*	1986.9				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.77	y	1.00	24:48	*	1986.9				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.78e+07	0.52	y	1.00	34:21	*	1986.9				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		475	0.895
Total Penta-Dioxins	*	*		1100	1.71
Total Hexa-Dioxins	*	*		840	2.85
Total Hepta-Dioxins	*	4.94		*	*
Total Tetra-Furans	*	*		1100	1.45
Total Penta-Furans	0.0000	0.0000		825	1.38
Total Hexa-Furans	*	*		722	0.966
Total Hepta-Furans	*	*		1190	2.24

	Rec	Qual
IS	70.9	
IS	67.1	
IS	56.5	
IS	59.3	
IS	58.6	
IS	58.2	
IS	39.7	
IS	74.6	
IS	66.2	
IS	68.3	
IS	62.6	
IS	57.5	
IS	59.7	
IS	59.5	
IS	59.2	
IS	55.9	
IS	46.0	
C/Up	94.4	

Integrations by Analyst: MJ Date: 12/19/14

Reviewed by Analyst: Date: 12/19/14

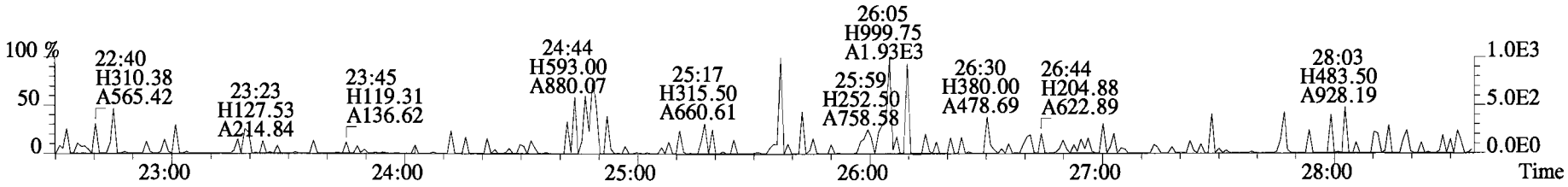
Totals class: HpCDD EMPC Entry #: 25

Run: 18 File: 141217D1 S: 15 I: 1 F: 4
Acquired: 18-DEC-14 02:08:52 Processed: 18-DEC-14 08:29:59

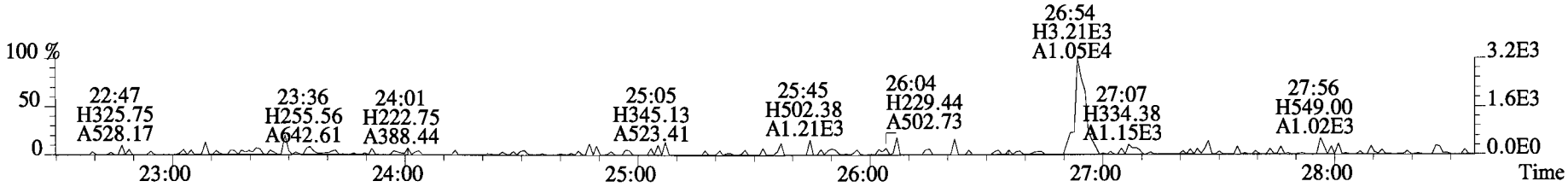
Total Concentration: 4.9428 Unnamed Concentration: 2.647

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:50	9.721e+03	7.588e+03	1.28	n	1.548e+04	2.6469	
38:44	6.845e+03	9.116e+03	0.75	n	1.343e+04	2.2958	1,2,3,4,6,7,8-HpCDD

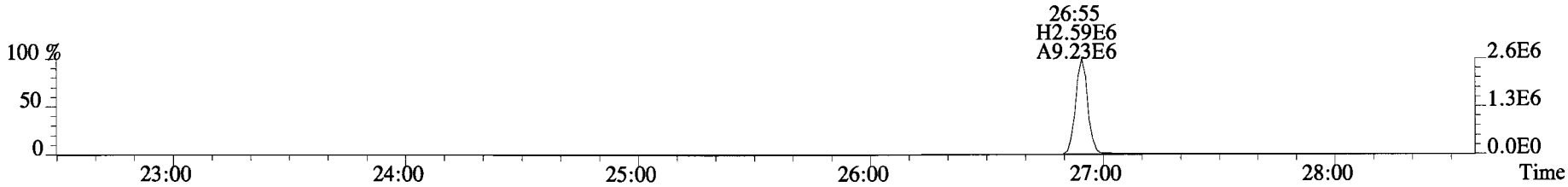
File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



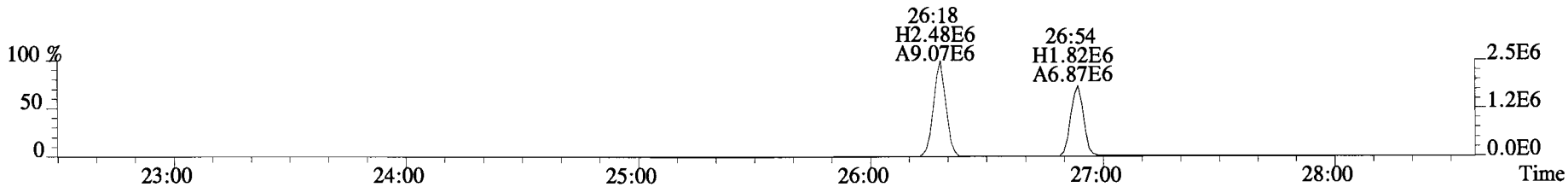
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



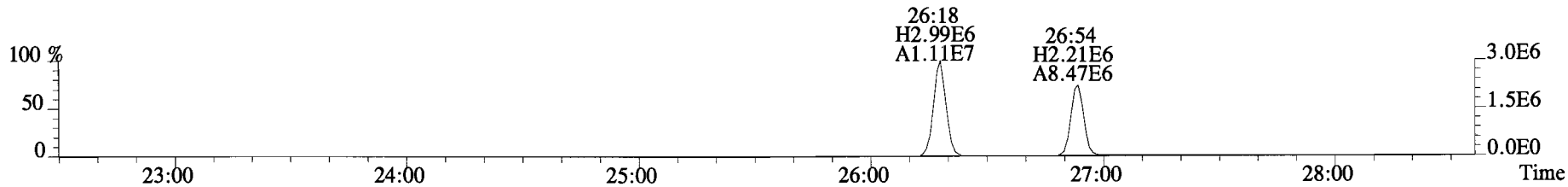
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

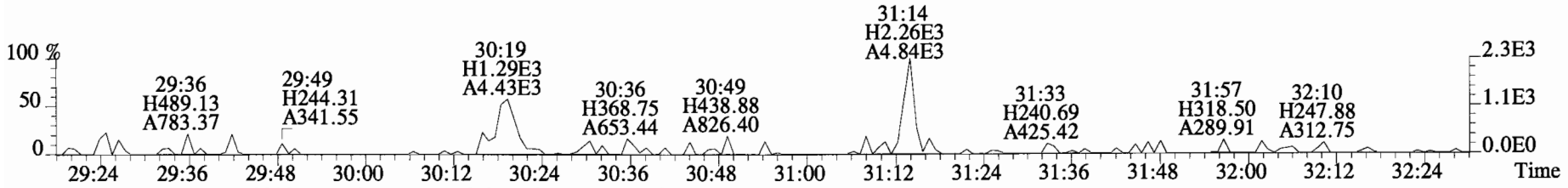


333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

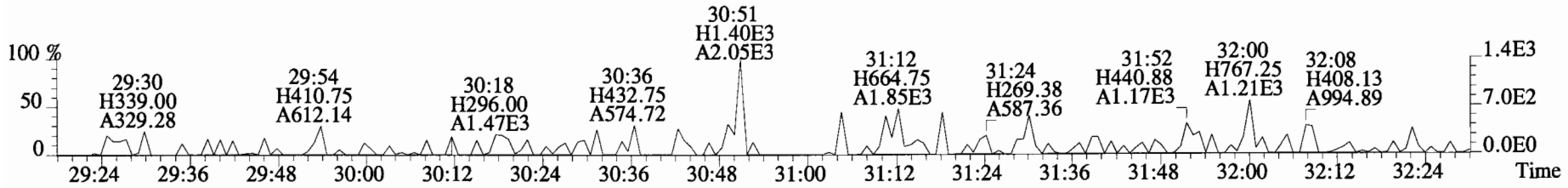


File:141217D1 #1-257 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

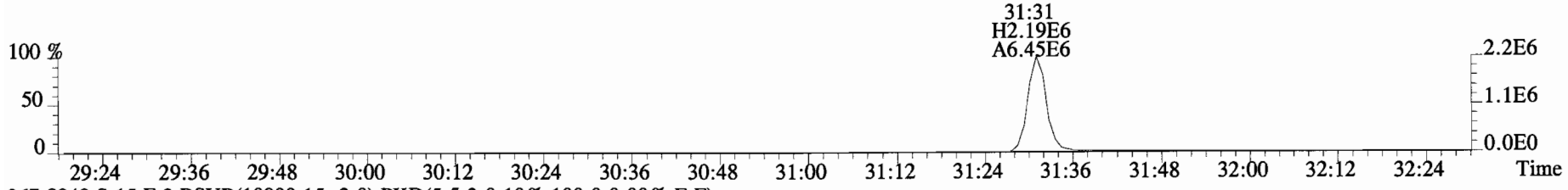
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



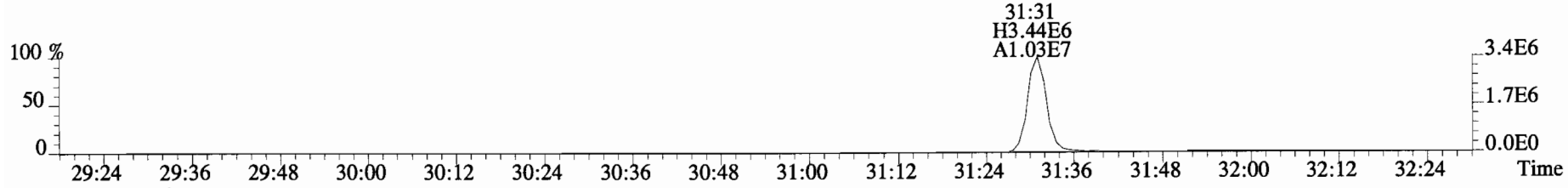
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



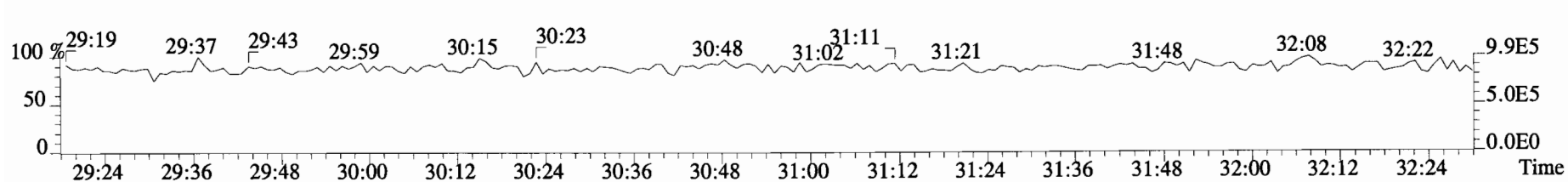
365.8978 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

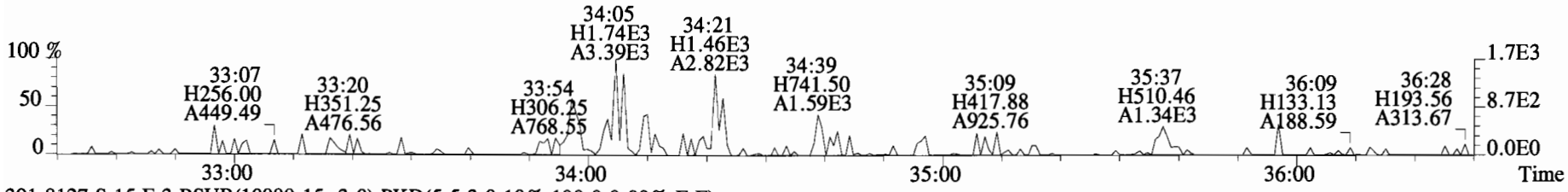


366.9792 S:15 F:2

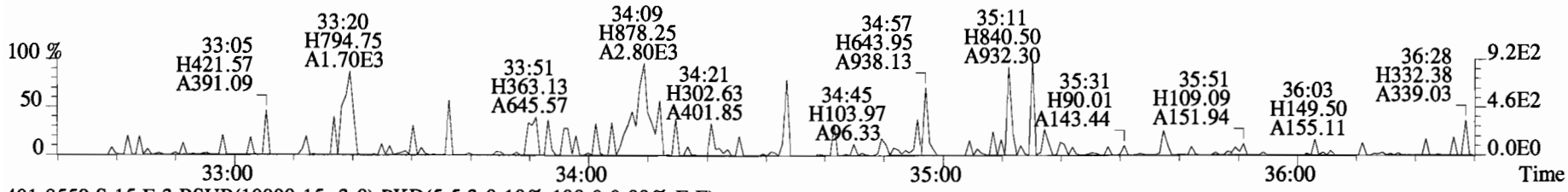


File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

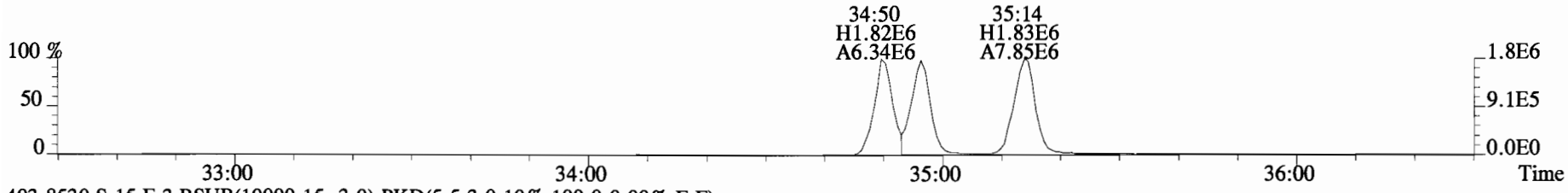
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



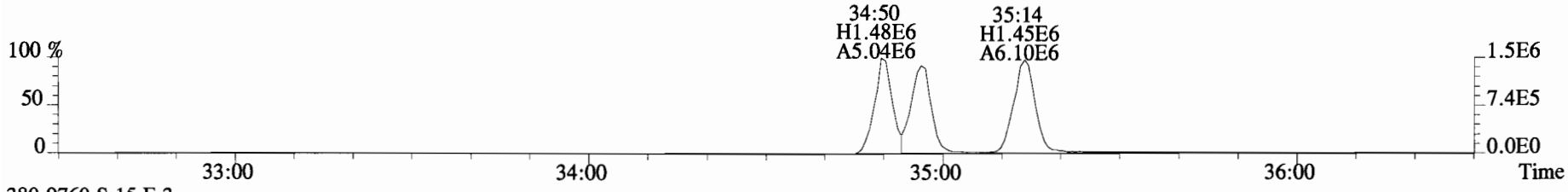
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



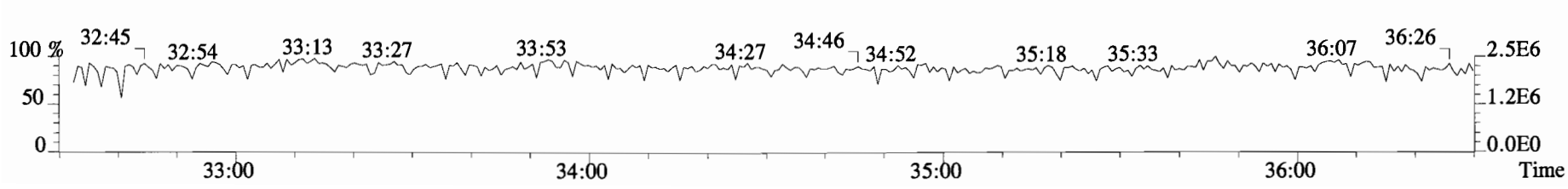
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



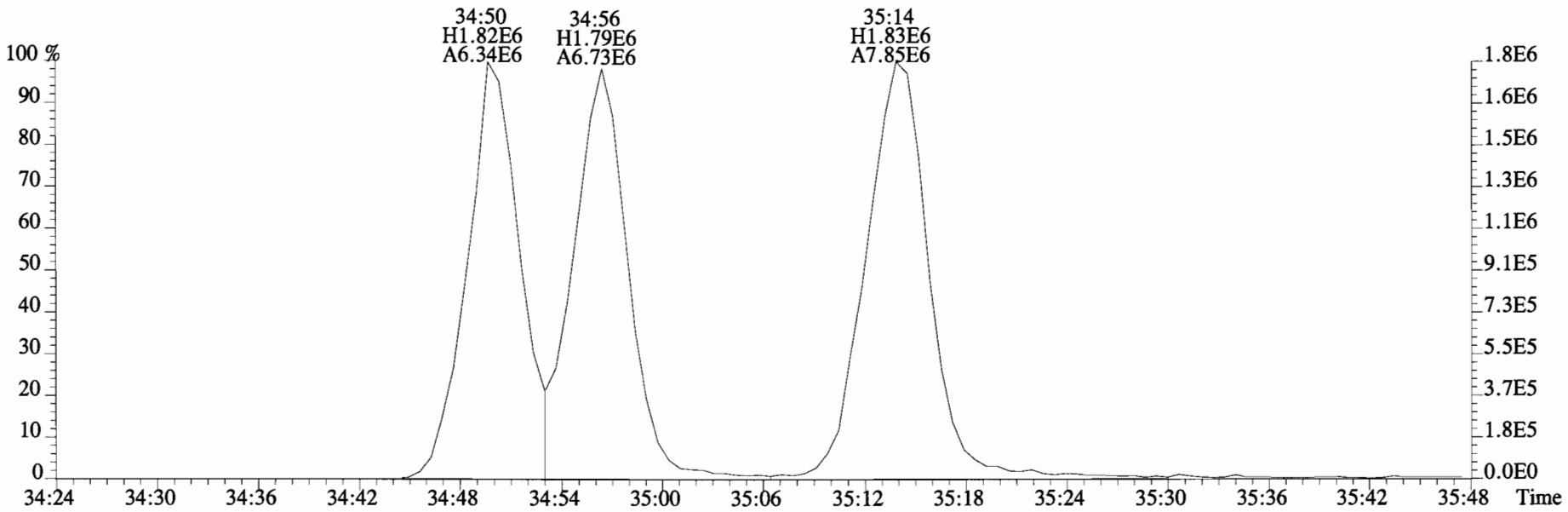
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



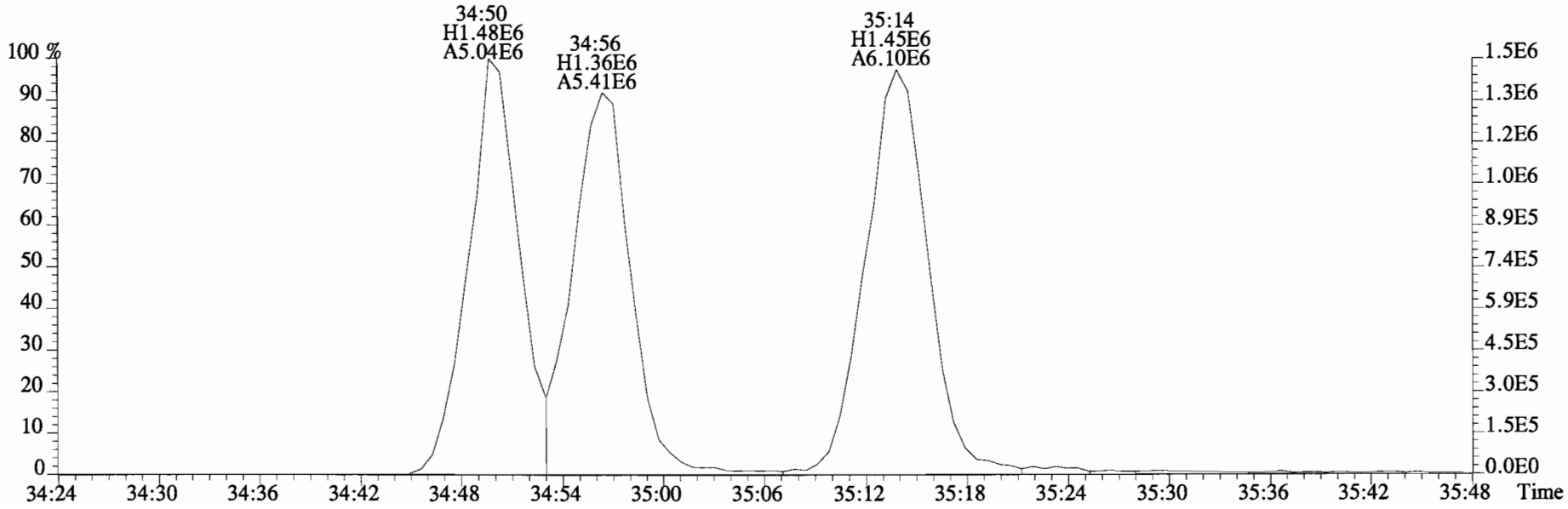
380.9760 S:15 F:3



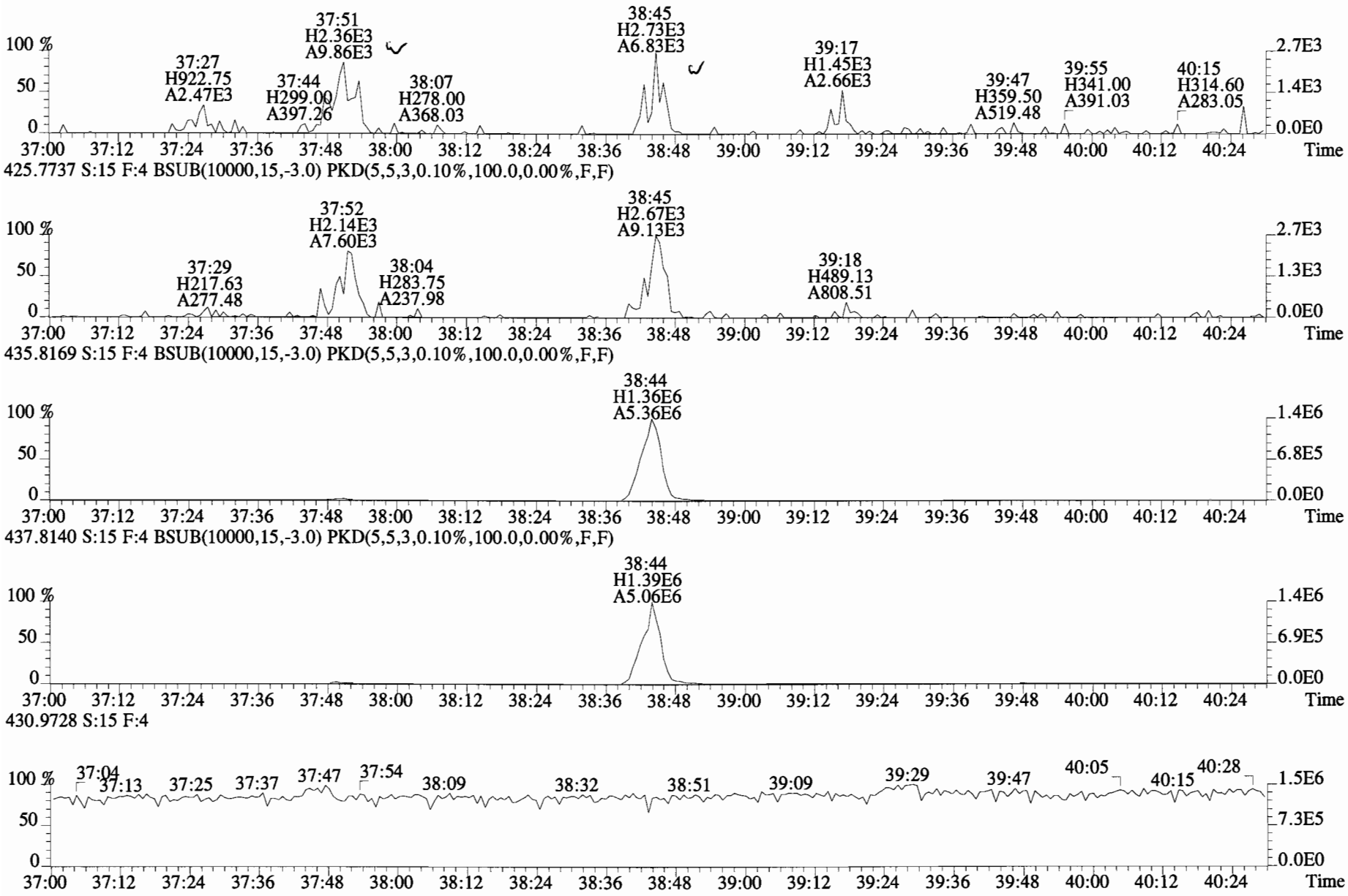
File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



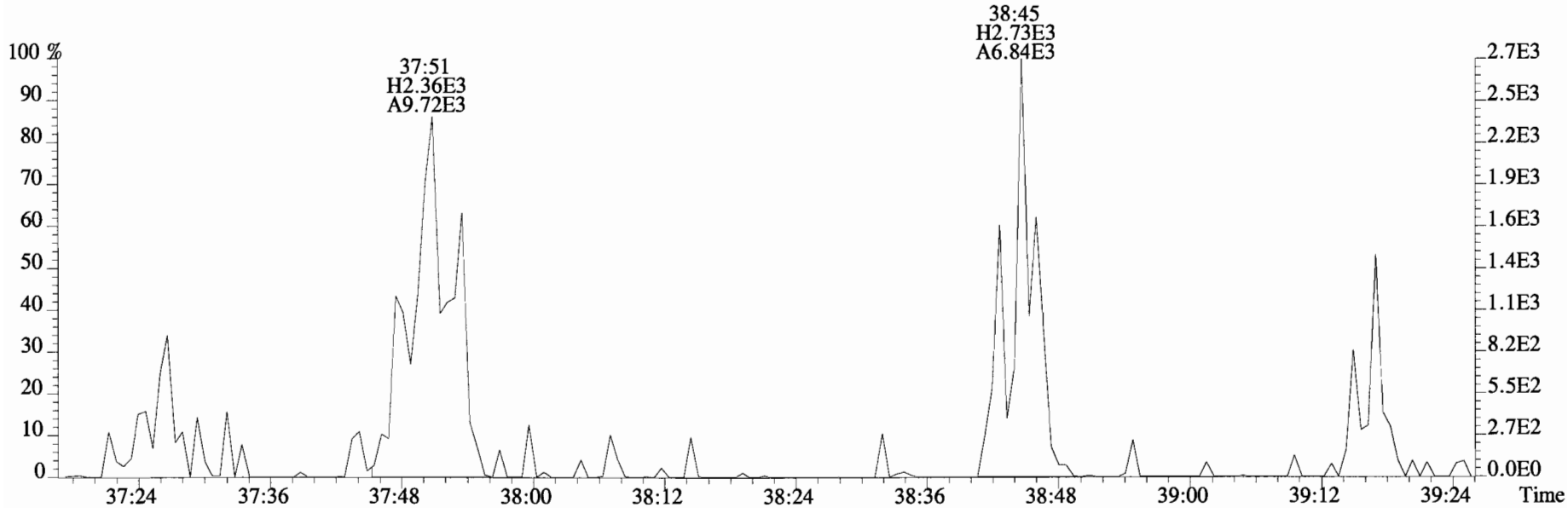
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



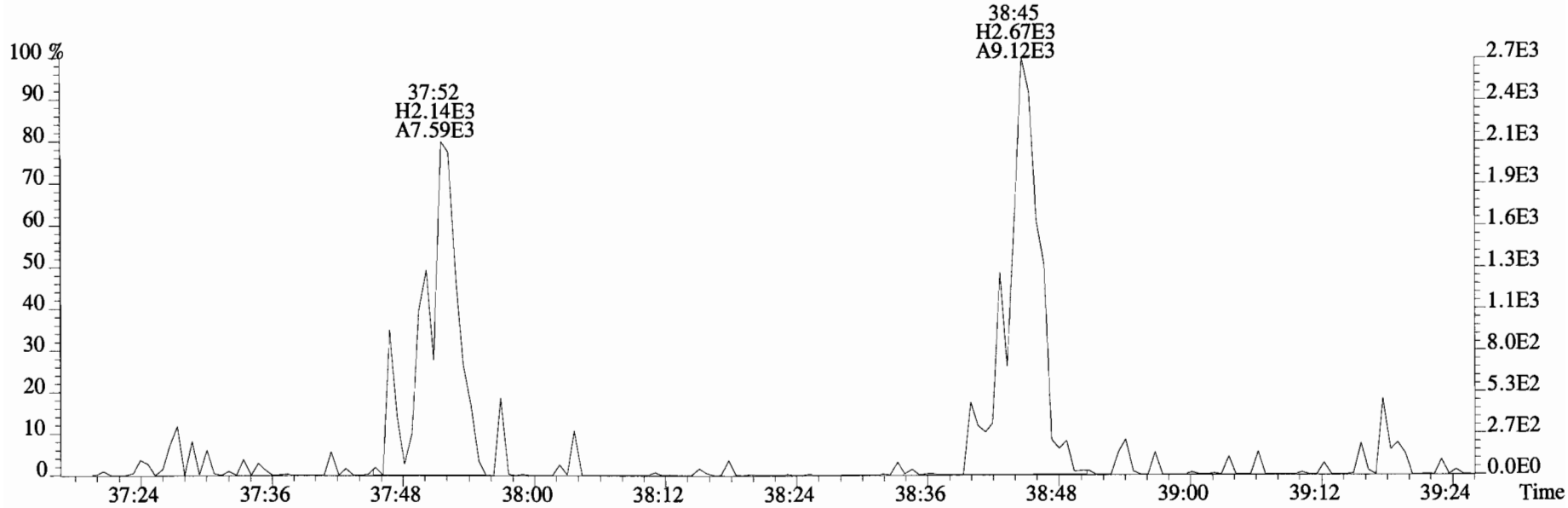
File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5



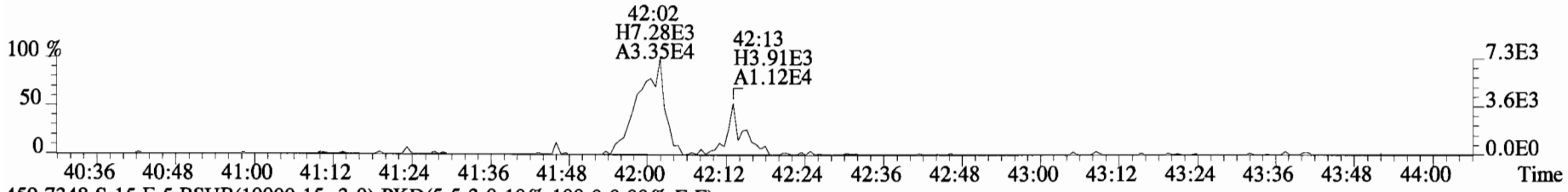
File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



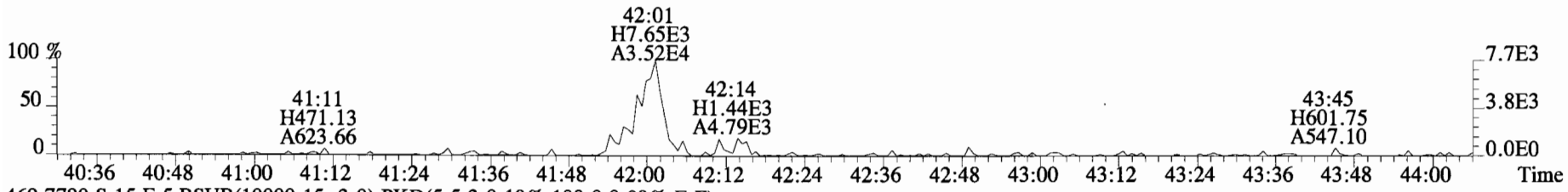
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



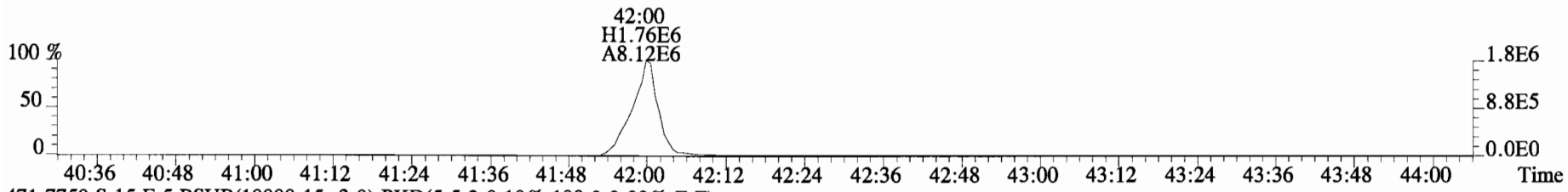
File:141217D1 #1-389 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



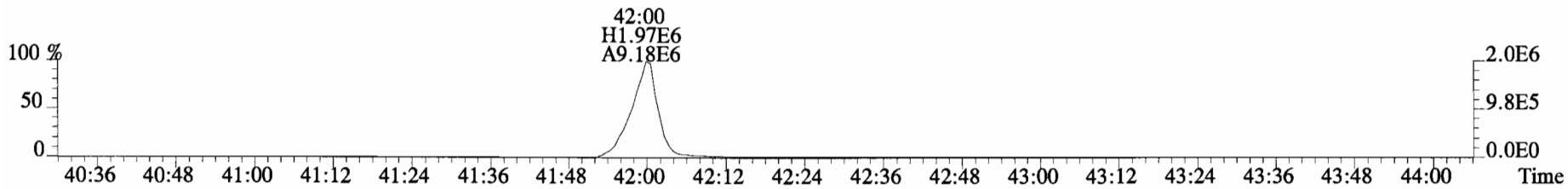
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



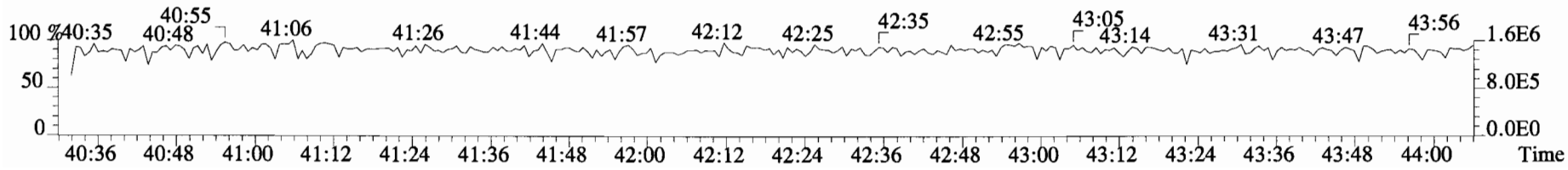
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



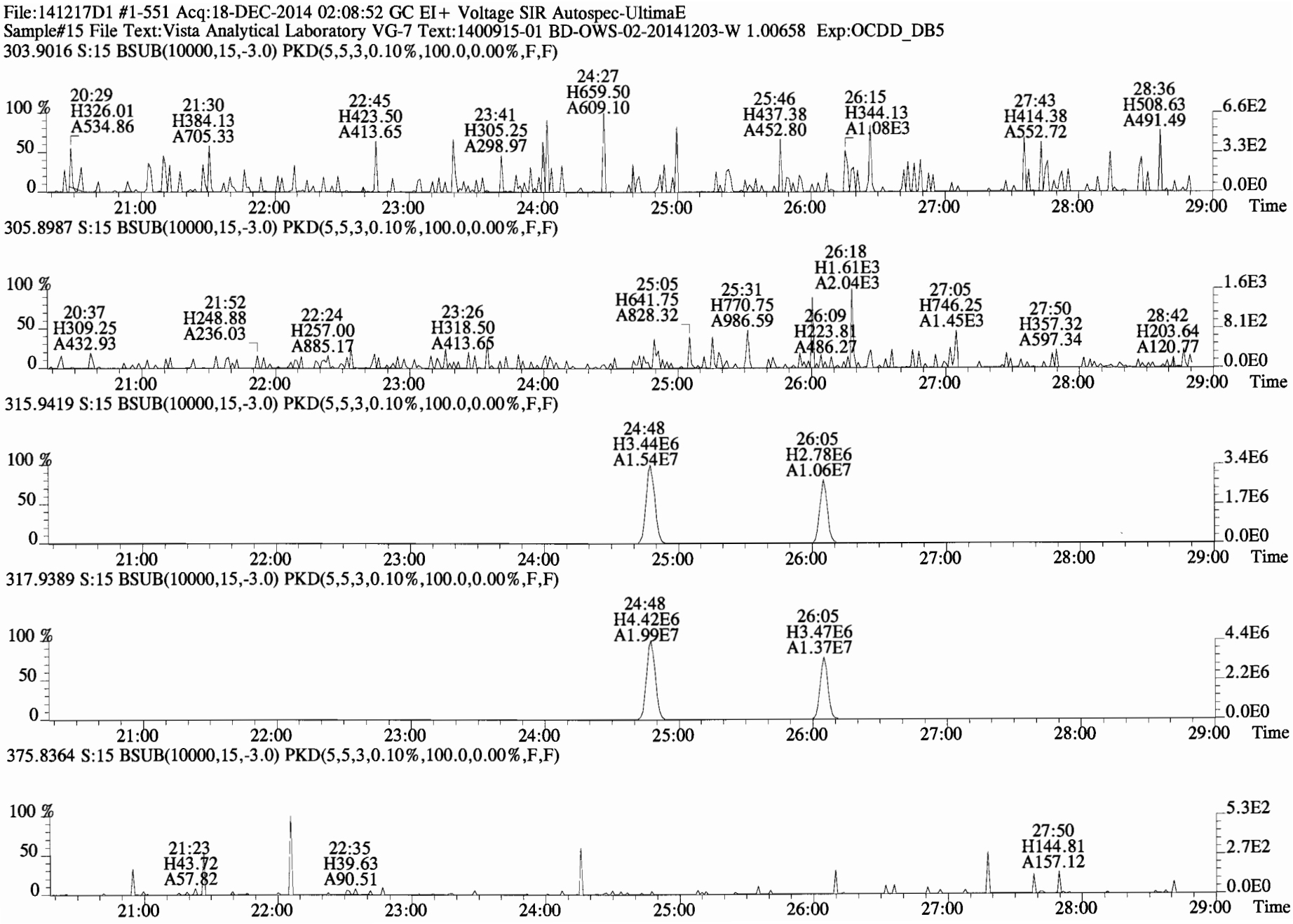
471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

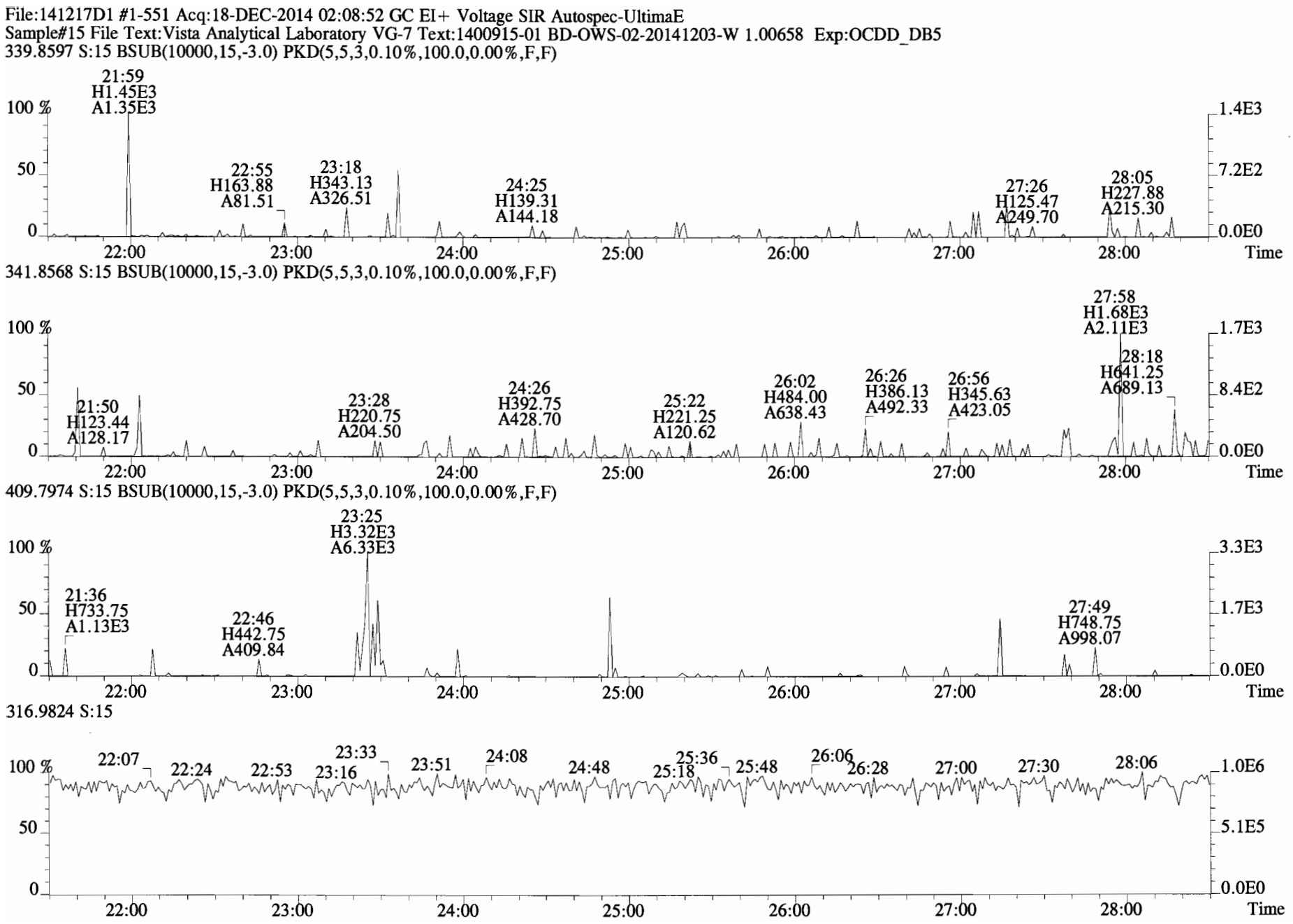


454.9728 S:15 F:5



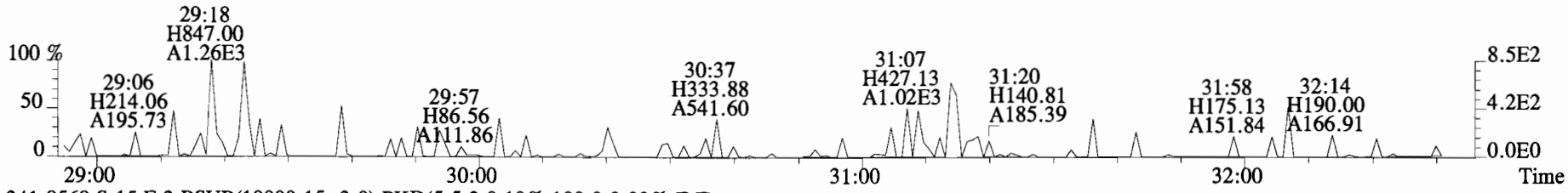
File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5



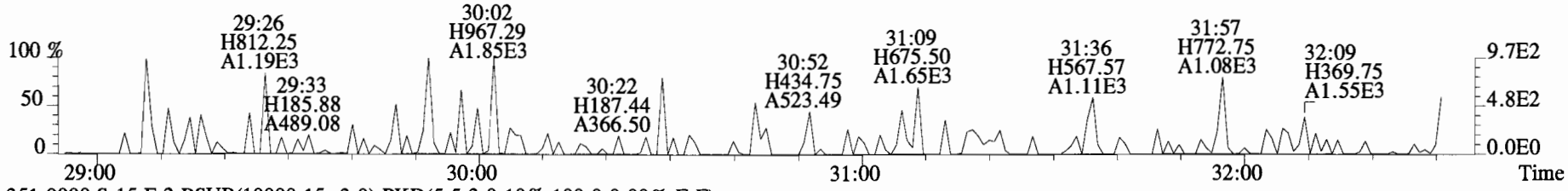

File:141217D1 #1-551 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:59 H1.45E3 A1.35E3
22:55 H163.88 A81.51
23:18 H343.13 A326.51
24:25 H139.31 A144.18
27:26 H125.47 A249.70
28:05 H227.88 A215.30
100 %
50
0
1.4E3
7.2E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:58 H1.68E3 A2.11E3
28:18 H641.25 A689.13
21:50 H123.44 A128.17
23:28 H220.75 A204.50
24:26 H392.75 A428.70
25:22 H221.25 A120.62
26:02 H484.00 A638.43
26:26 H386.13 A492.33
26:56 H345.63 A423.05
100 %
50
0
1.7E3
8.4E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:25 H3.32E3 A6.33E3
21:36 H733.75 A1.13E3
22:46 H442.75 A409.84
27:49 H748.75 A998.07
100 %
50
0
3.3E3
1.7E3
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:15
22:07
22:24
22:53
23:16
23:33
23:51
24:08
24:48
25:18
25:36
25:48
26:06
26:28
27:00
27:30
28:06
100 %
50
0
1.0E6
5.1E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

File:141217D1 #1-257 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

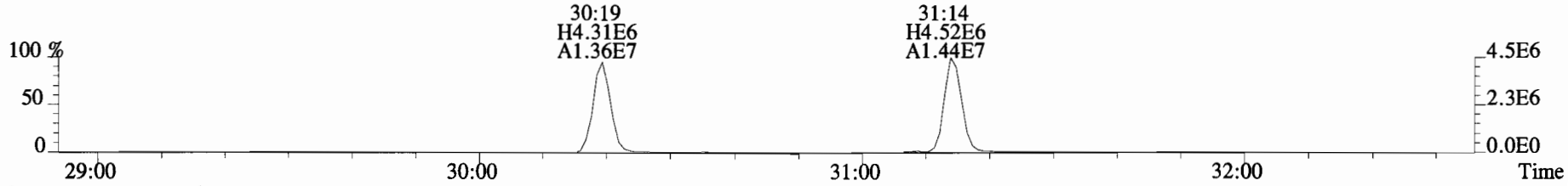
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



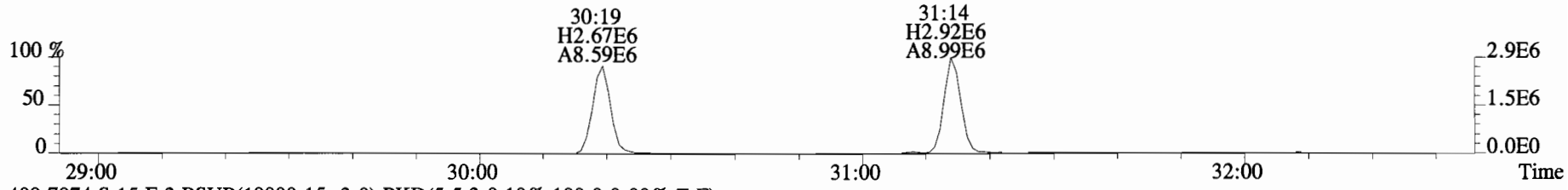
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



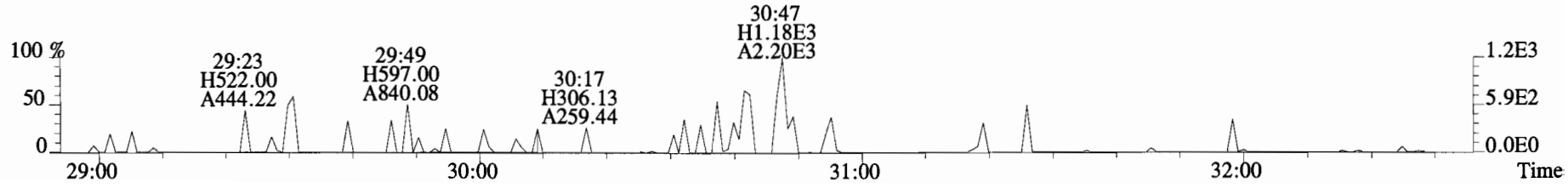
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

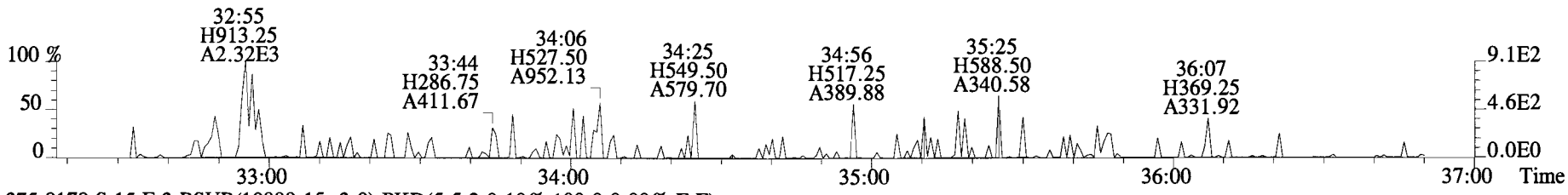


409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

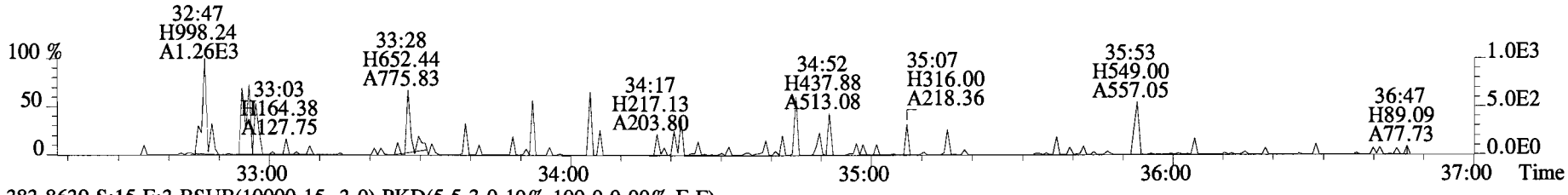


File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

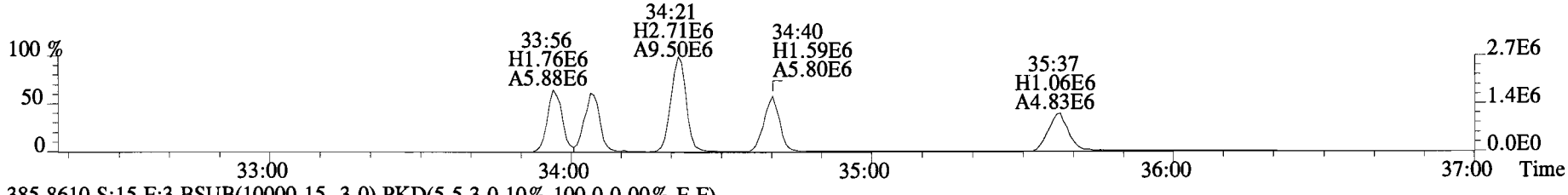
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



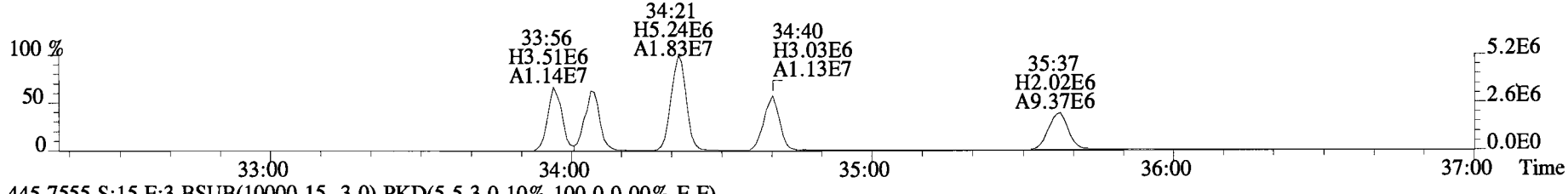
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



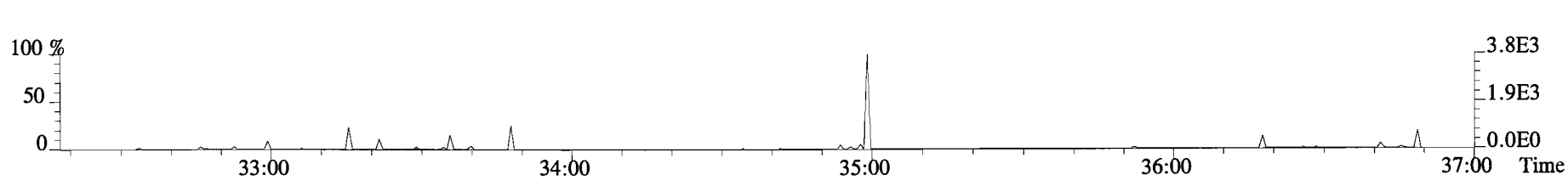
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



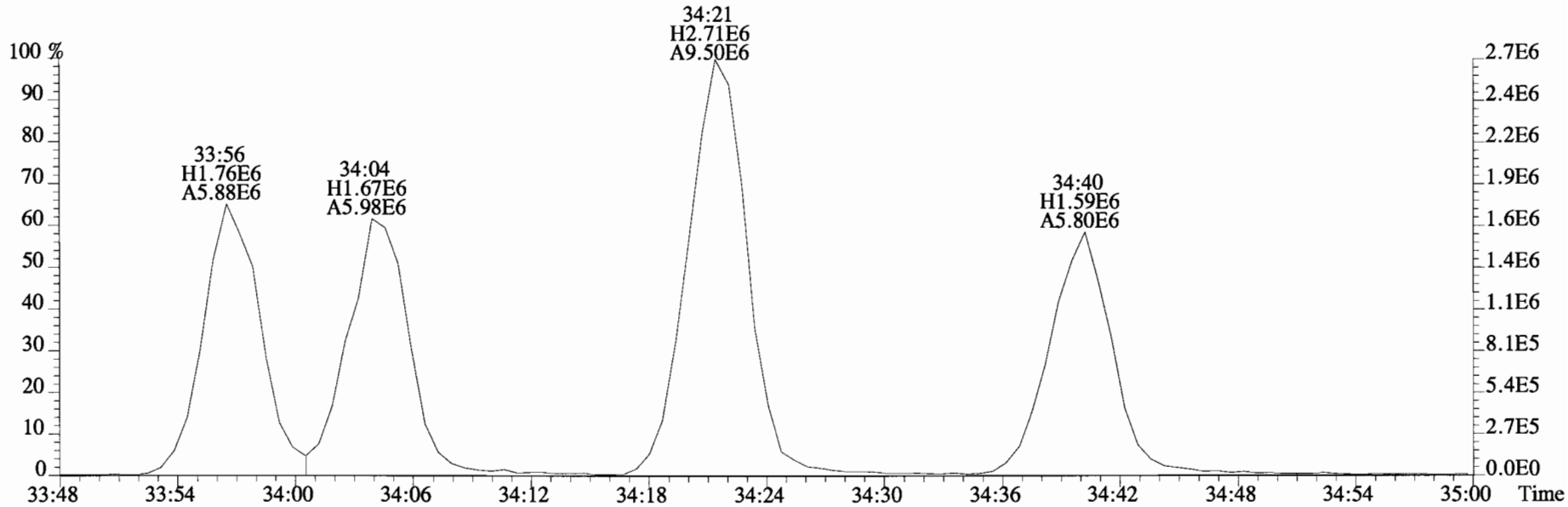
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



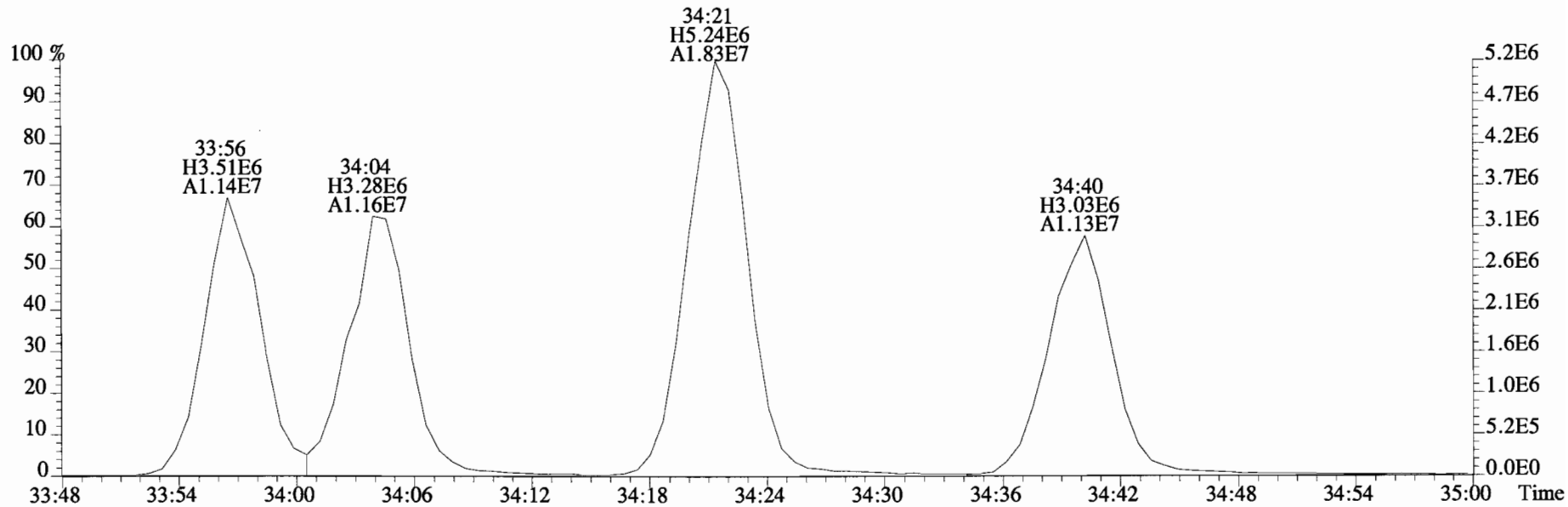
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



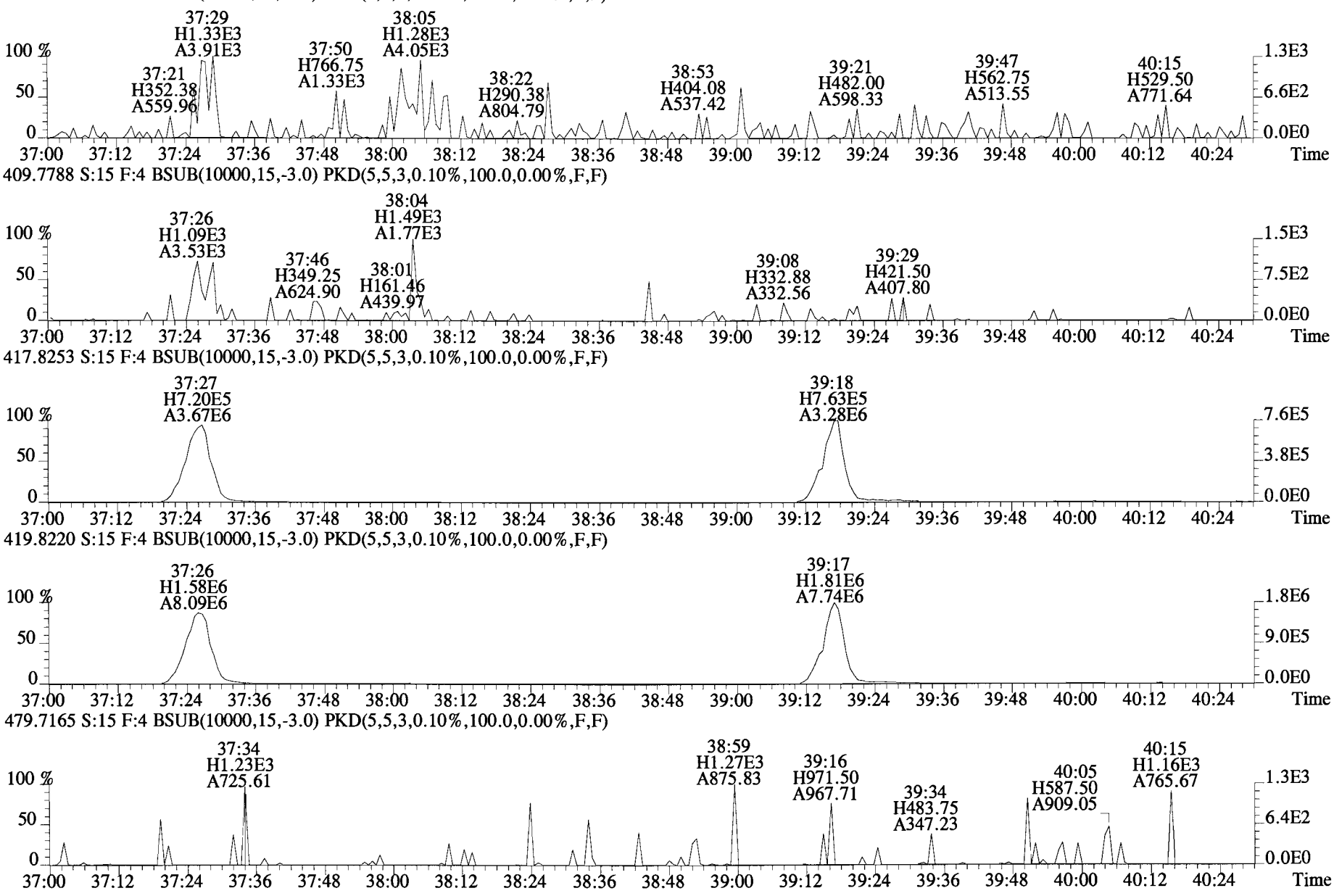
File:141217D1 #1-384 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

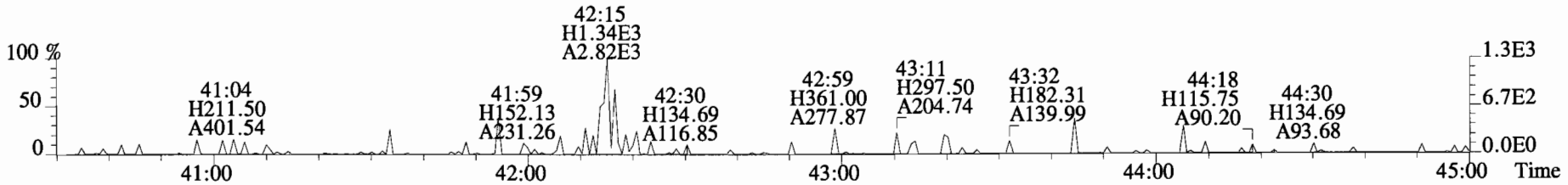


File:141217D1 #1-326 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

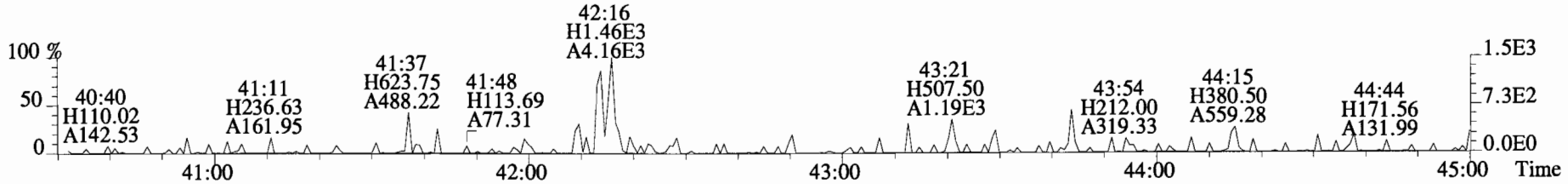


File:141217D1 #1-389 Acq:18-DEC-2014 02:08:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista Analytical Laboratory VG-7 Text:1400915-01 BD-OWS-02-20141203-W 1.00658 Exp:OCDD_DB5

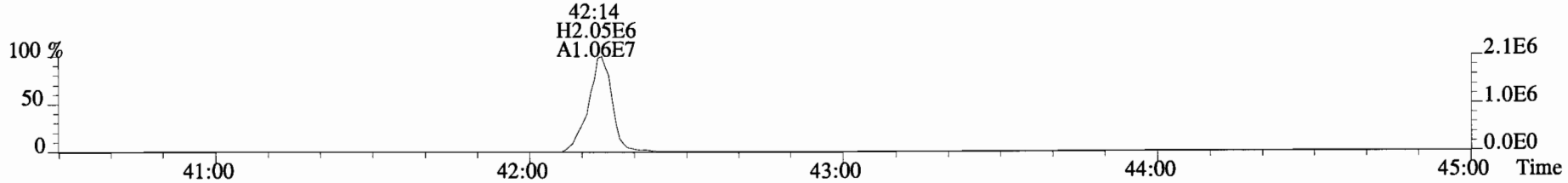
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



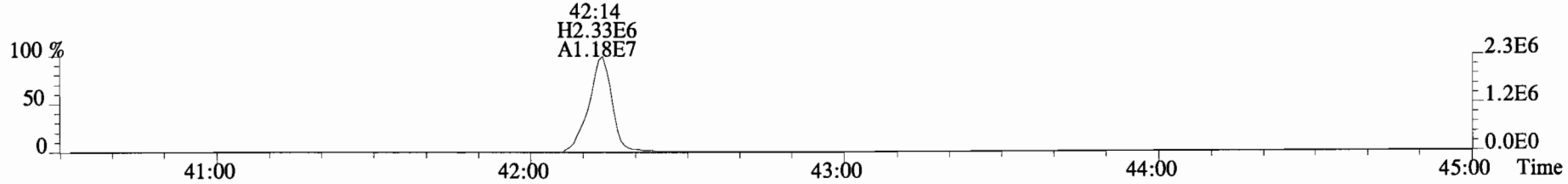
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



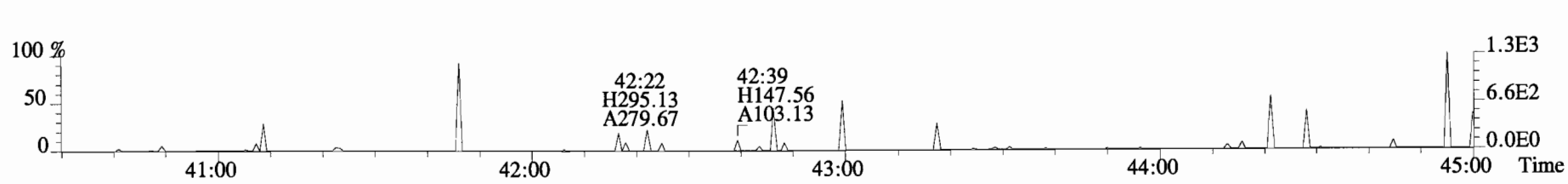
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



CONFIRMATION

Dataset: C:\MassLynx\Default.pro\Results\141217F1\141217F1_4.qld

Last Altered: Thursday, December 18, 2014 08:06:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:10:09 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141217F1_4, Date: 17-Dec-2014, Time: 17:26:56, ID: 1400915-02RE1 BD-MH-9.66-20141203-S CF 14.65, Description: BD-MH-9.66-20141203-S CF

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.48e4	0.80	NO	1.10	10.192	17.35	7.6496		0.157
2	2 13C-2,3,7,8-TCDF	5.78e5	0.79	NO	0.844	10.192	17.32	224.97	115	0.500
3	3 13C-1,2,3,4-TCDF	5.97e5	0.81	NO	1.00	10.192	15.09	196.22	100	0.422

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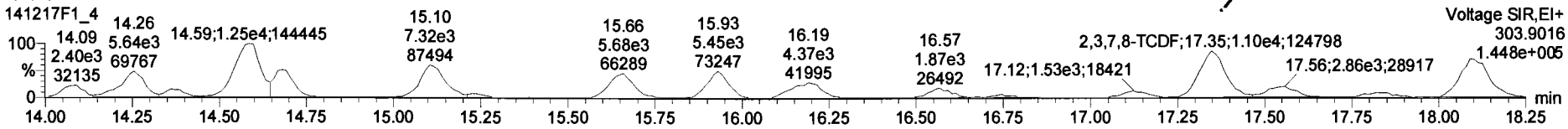
12/12/18/14

Dataset: Untitled

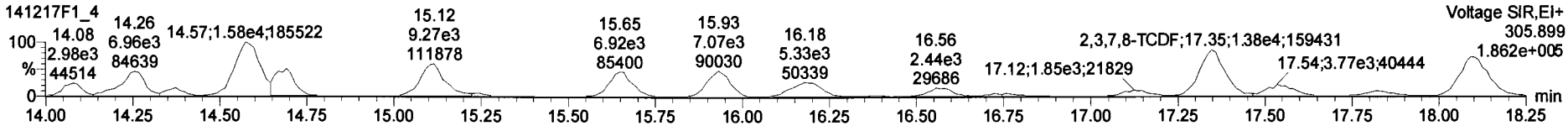
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_4, Date: 17-Dec-2014, Time: 17:26:56, ID: 1400915-02RE1 BD-MH-9.66-20141203-S CF 14.65, Description: BD-MH-9.66-20141203-S CF

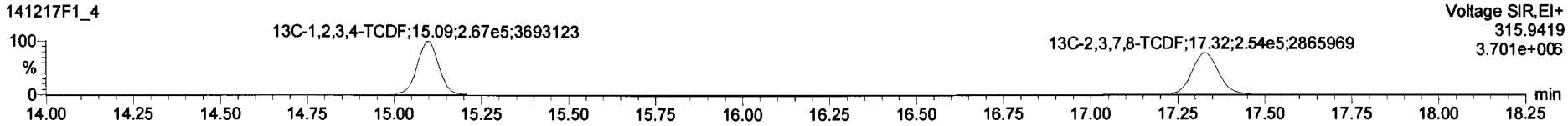
2,3,7,8-TCDF



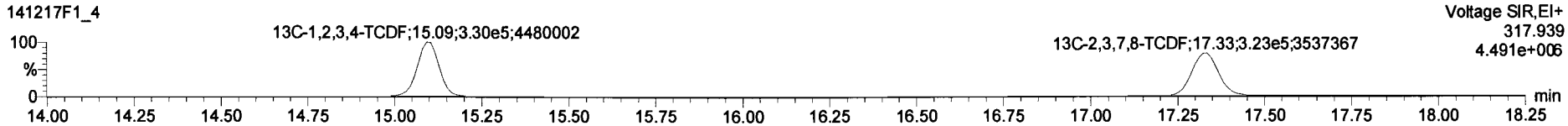
2,3,7,8-TCDF



13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

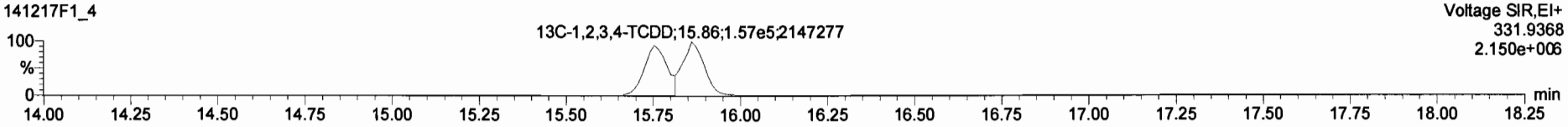


Dataset: Untitled

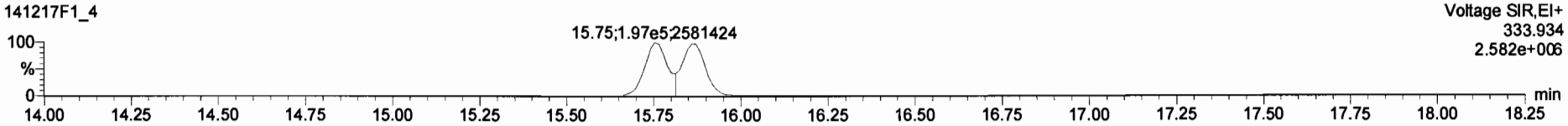
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_4, Date: 17-Dec-2014, Time: 17:26:56, ID: 1400915-02RE1 BD-MH-9.66-20141203-S CF 14.65, Description: BD-MH-9.66-20141203-S CF

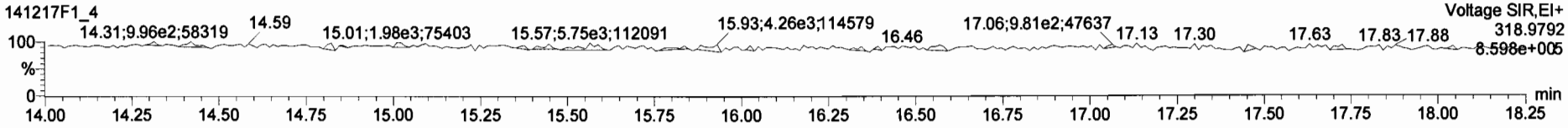
13C-1,2,3,4-TCDD



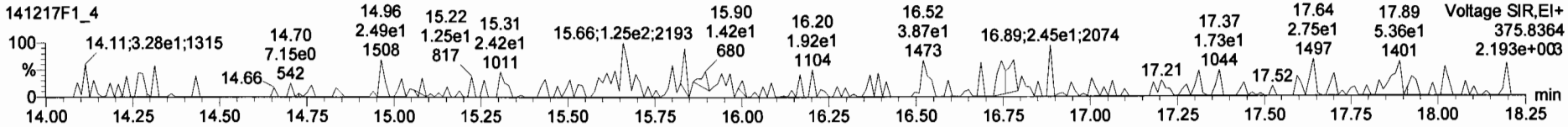
13C-1,2,3,4-TCDD



PFK1



DPE1



Dataset: C:\MassLynx\Default.pro\Results\141217F1\141217F1_6.qld

Last Altered: Thursday, December 18, 2014 08:12:22 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:12:54 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141217F1_6, Date: 17-Dec-2014, Time: 18:31:38, ID: 1400915-03RE2 BD-OWS-15-20141203-S RX CF 5.54, Description: BD-OWS-15-20141203-S RX CF

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.17e3	0.79	NO	1.10	1.000	17.38	7.7911		1.94
2	2 13C-2,3,7,8-TCDF	5.07e5	0.79	NO	0.844	1.000	17.33	1922.9	96.2	5.01
3	3 13C-1,2,3,4-TCDF	6.25e5	0.79	NO	1.00	1.000	15.09	1999.4	100	4.22

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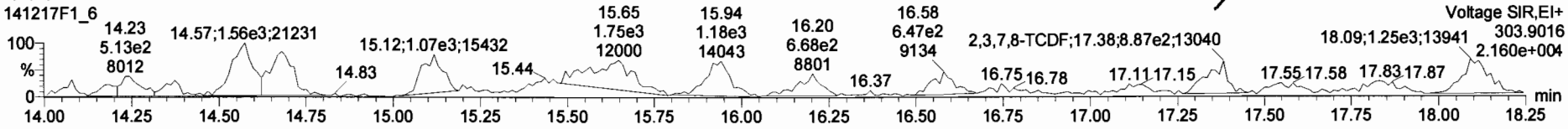
Vista Analytical Laboratory VG-9

Dataset: Untitled

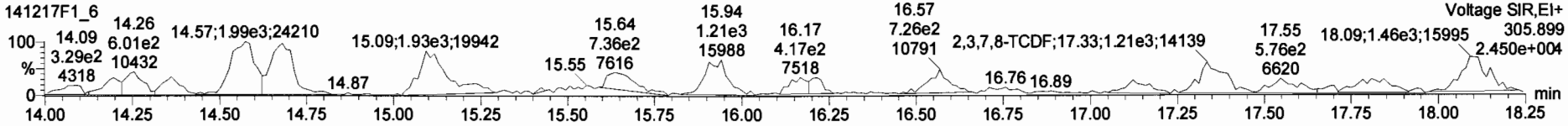
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_6, Date: 17-Dec-2014, Time: 18:31:38, ID: 1400915-03RE2 BD-OWS-15-20141203-S RX CF 5.54, Description: BD-OWS-15-20141203-S RX CF

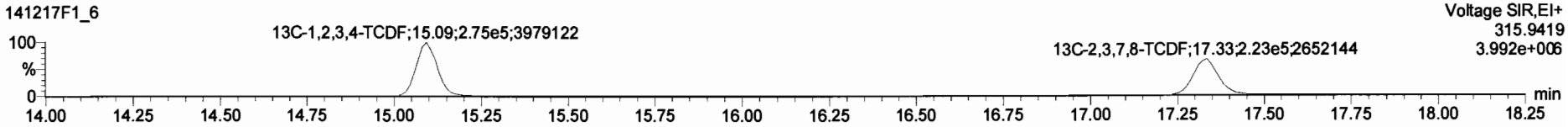
2,3,7,8-TCDF



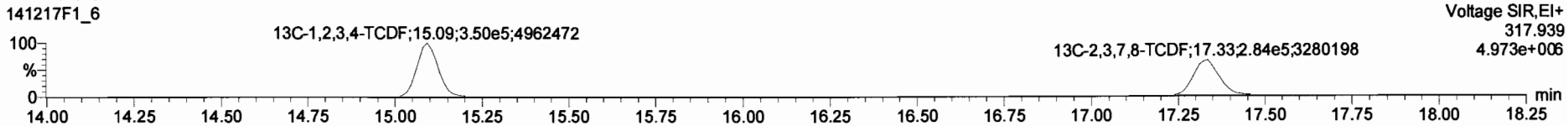
2,3,7,8-TCDF



13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

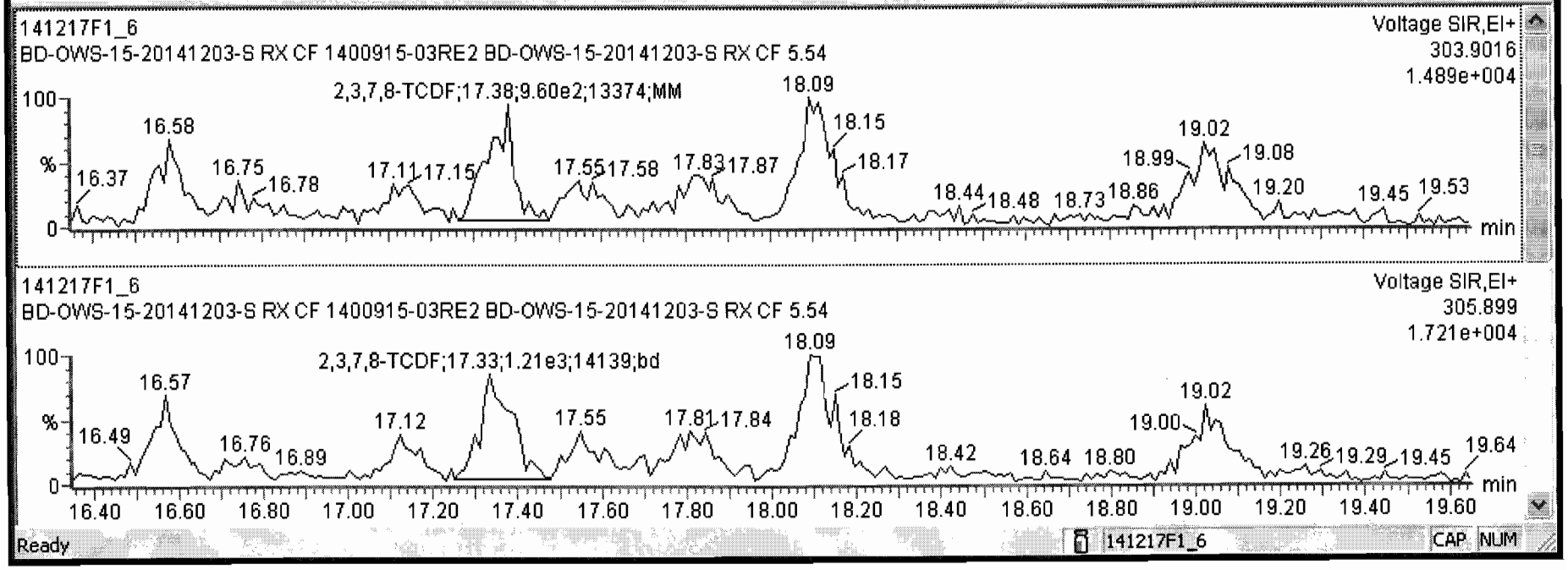


TargetLynx - untitled * - [Chromatogram]

File Edit View Display Processing Window Help

141217F1_6 - 1400915-03RE2 BD-OWS-15-20141203-S RX CF 5.54 - BD-OWS-15-20141203-S RX CF

	#	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	2.17e3	0.79	NO	1.10	1.000	17.38	7.79		1.94
2	2	13C-2,3,7,8-TCDF	5.07e5	0.79	NO	0.84	1.000	17.33	1920	96.2	5.01
3	3	13C-1,2,3,4-TCDF	6.25e5	0.79	NO	1.00	1.000	15.09	2000	100	4.22
4	4	13C-1,2,3,4-TCDD	3.90e5	0.79	NO		1.000	15.87			
5	5	PFK1					1.000				
6	6	DPE1					1.000				



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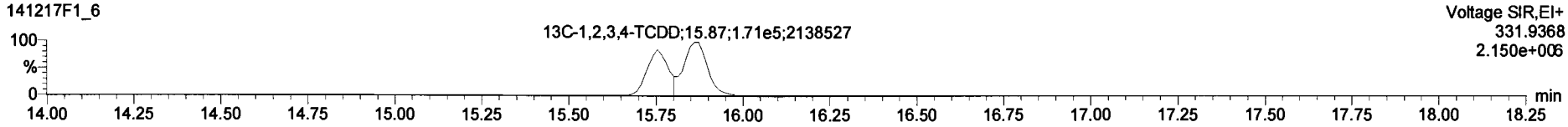
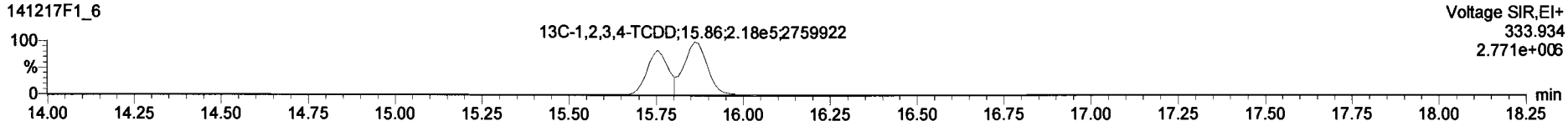
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_6, Date: 17-Dec-2014, Time: 18:31:38, ID: 1400915-03RE2 BD-OWS-15-20141203-S RX CF 5.54, Description: BD-OWS-15-20141203-S RX CF

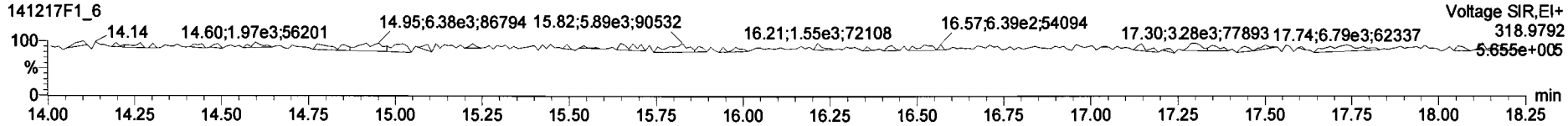
13C-1,2,3,4-TCDD



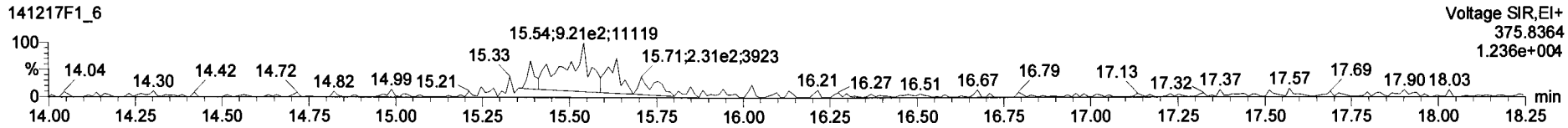
13C-1,2,3,4-TCDD



PFK1



DPE1



Dataset: C:\MassLynx\Default.pro\Results\141217F1\141217F1_5.qld

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Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141217F1_5, Date: 17-Dec-2014, Time: 17:59:17, ID: 1400915-04RE1 BD-MH-10.9-20141203-S CF 30.76, Description: BD-MH-10.9-20141203-S CF

	#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	2.06e5	0.78	NO	1.10	10.117	17.35	81.253		0.311
2	2	13C-2,3,7,8-TCDF	4.56e5	0.79	NO	0.844	10.117	17.32	176.47	89.3	0.520
3	3	13C-1,2,3,4-TCDF	6.06e5	0.79	NO	1.00	10.117	15.09	197.68	100	0.438

CG 12/18/14

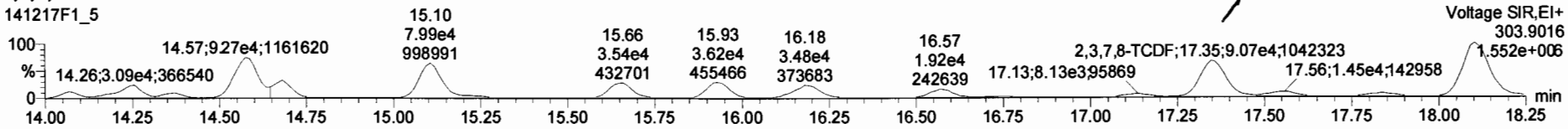
12/18/14

Dataset: Untitled

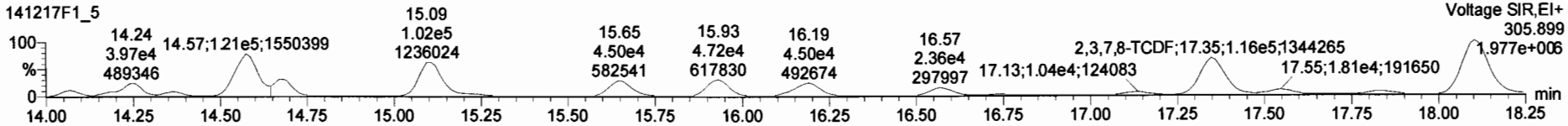
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_5, Date: 17-Dec-2014, Time: 17:59:17, ID: 1400915-04RE1 BD-MH-10.9-20141203-S CF 30.76, Description: BD-MH-10.9-20141203-S CF

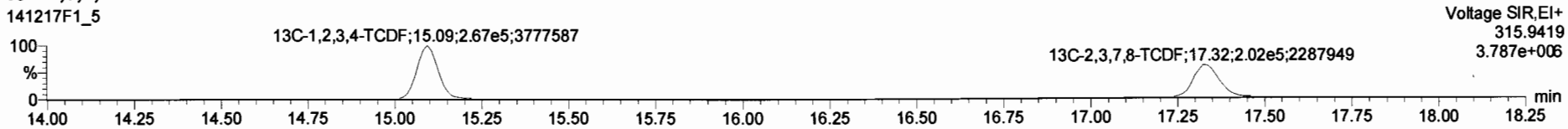
2,3,7,8-TCDF



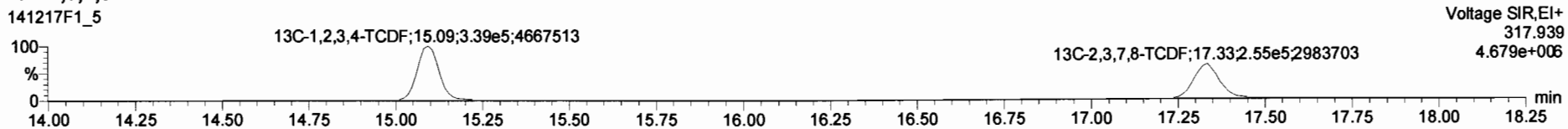
2,3,7,8-TCDF



13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF



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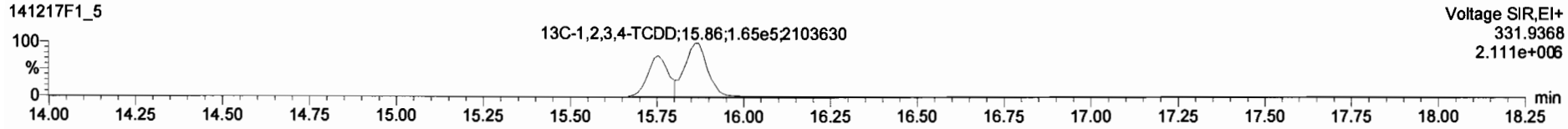
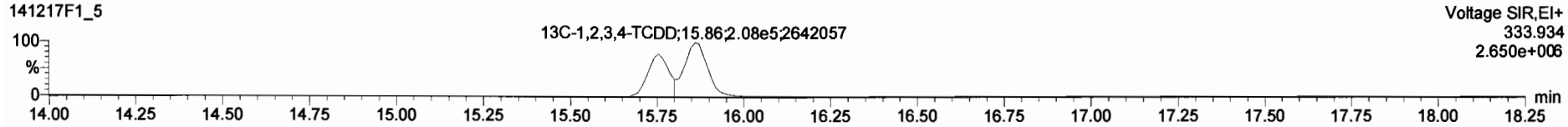
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_5, Date: 17-Dec-2014, Time: 17:59:17, ID: 1400915-04RE1 BD-MH-10.9-20141203-S CF 30.76, Description: BD-MH-10.9-20141203-S CF

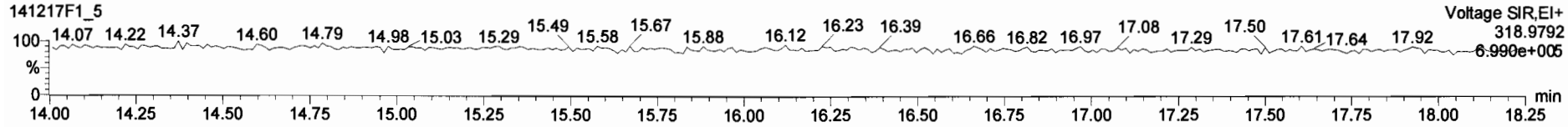
13C-1,2,3,4-TCDD



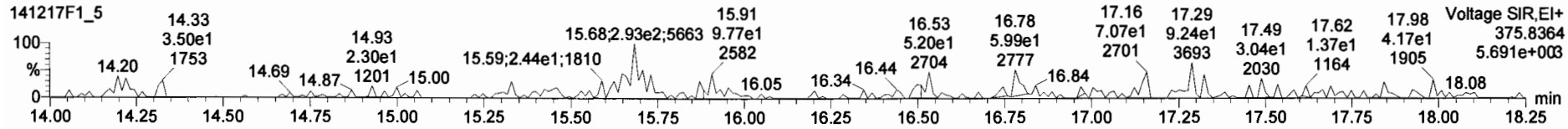
13C-1,2,3,4-TCDD



PFK1



DPE1



Dataset: C:\MassLynx\Default.pro\Results\141217F1\141217F1_7.qld

Last Altered: Thursday, December 18, 2014 08:14:55 Pacific Standard Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141217F1_7, Date: 17-Dec-2014, Time: 19:03:59, ID: 1400915-05RE2 BD-MH-13.43-20141202-S RX CF 2.83, Description: BD-MH-13.43-20141202-S RX CF

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.39e3	0.87	NO	1.10	1.035	17.36	6.9789		1.20
2	2 13C-2,3,7,8-TCDF	6.02e5	0.79	NO	0.844	1.035	17.33	1807.5	93.6	3.76
3	3 13C-1,2,3,4-TCDF	7.63e5	0.80	NO	1.00	1.035	15.10	1931.7	100	3.17

CJ 12/18/14

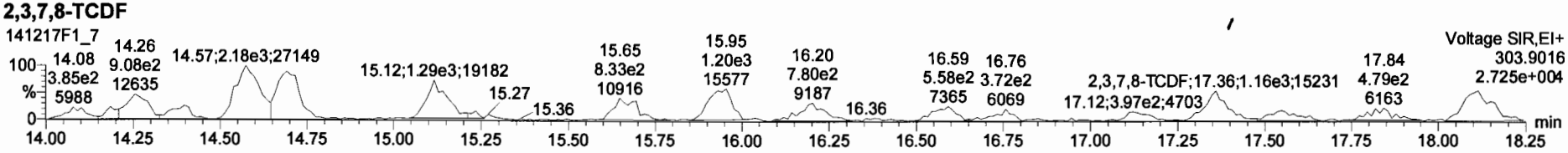
12/18/14

Dataset: Untitled

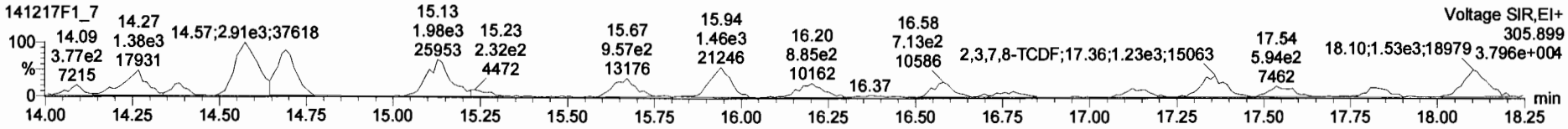
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_7, Date: 17-Dec-2014, Time: 19:03:59, ID: 1400915-05RE2 BD-MH-13.43-20141202-S RX CF 2.83, Description: BD-MH-13.43-20141202-S RX CF

2,3,7,8-TCDF



2,3,7,8-TCDF



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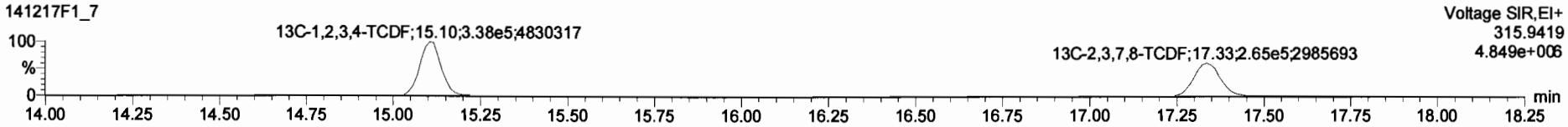
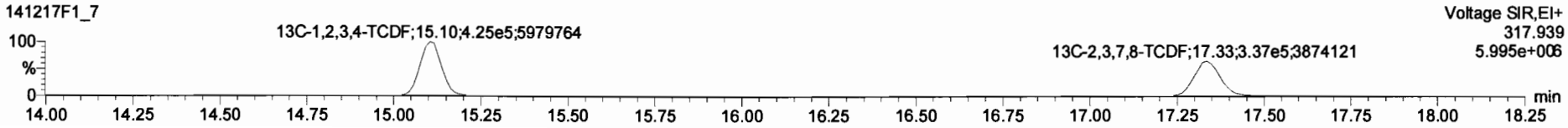


13C-2,3,7,8-TCDF



TargetLynx - untitled * - [Chromatogram]

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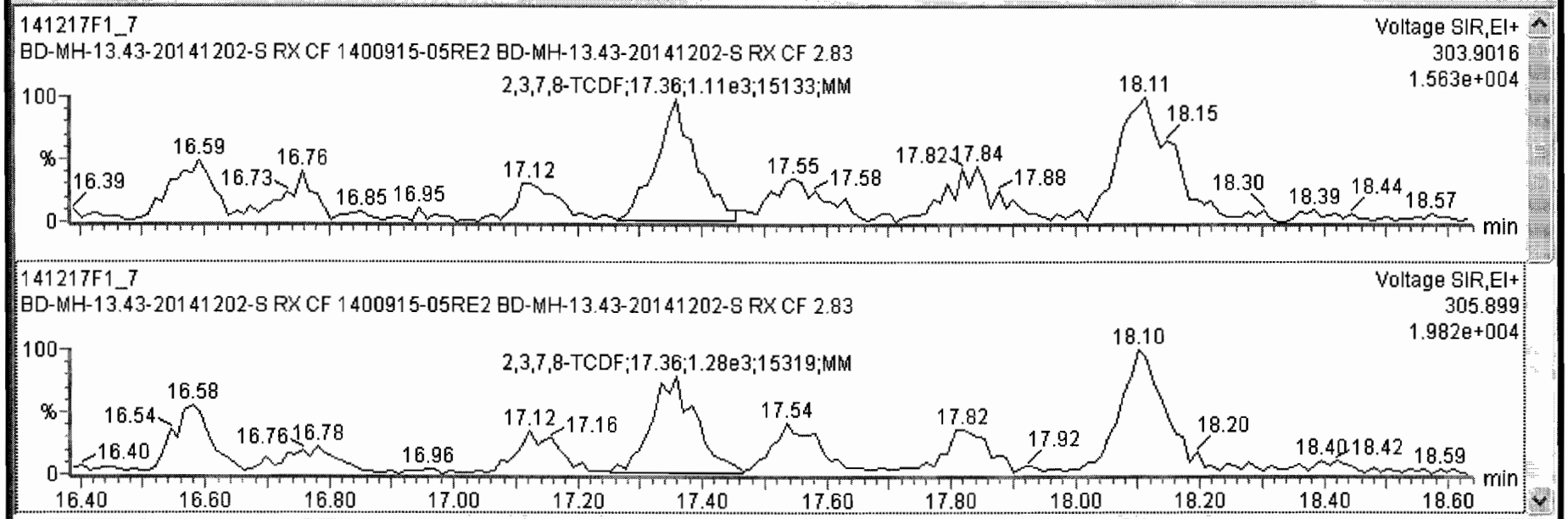
141217F1_7 - 1400915-05RE2 BD-MH-13.43-20141202-S RX CF 2.83 - BD-MH-13.43-20141202-S RX CF

	#	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	2.39e3	0.87	NO	1.10	1.035	17.36	6.98		1.20
2	2	13C-2,3,7,8-TCDF	6.02e5	0.79	NO	0.84	1.035	17.33	1810	93.6	3.76
3	3	13C-1,2,3,4-TCDF	7.63e5	0.80	NO	1.00	1.035	15.10	1930	100	3.17
4	4	13C-1,2,3,4-TCDD	4.76e5	0.78	NO		1.035	15.87			
5	5	PFK1					1.000				
6	6	DPE1					1.000				



Ready 141217F1_7 CAP NUM

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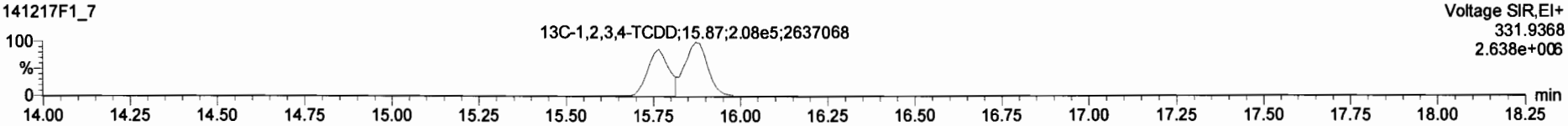
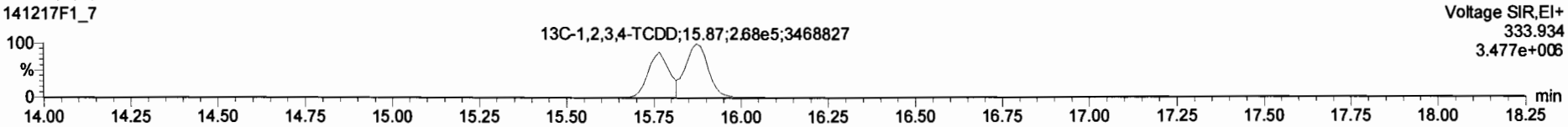
Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:24 Pacific Standard Time

Name: 141217F1_7, Date: 17-Dec-2014, Time: 19:03:59, ID: 1400915-05RE2 BD-MH-13.43-20141202-S RX CF 2.83, Description: BD-MH-13.43-20141202-S RX CF

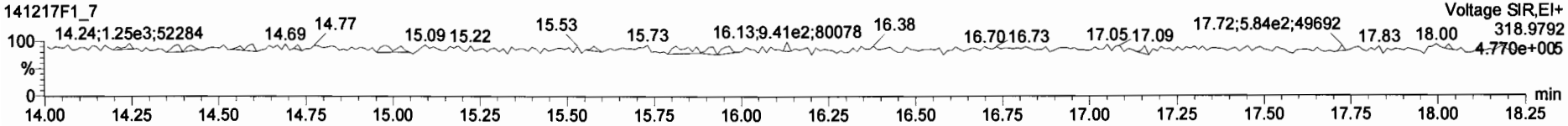
13C-1,2,3,4-TCDD



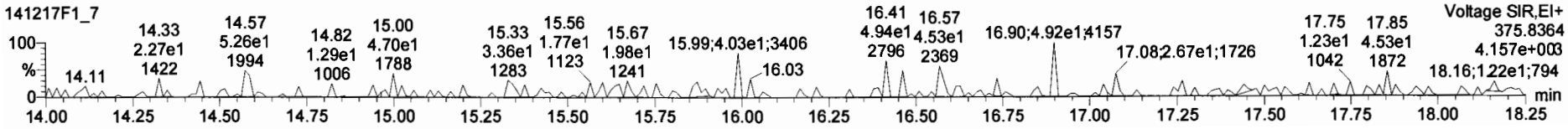
13C-1,2,3,4-TCDD



PFK1



DPE1



CONTINUING CALIBRATION

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.98	2.66-3.60	y	48.7	37.5-62.5
PCB-2	3.00	2.66-3.60	y	50.0	37.5-62.5
PCB-3	2.99	2.66-3.60	y	48.9	37.5-62.5
PCB-4/10	1.61	1.33-1.79	y	215.5	150-250
PCB-7/9	1.61	1.33-1.79	y	207.2	150-250
PCB-6	1.61	1.33-1.79	y	97.9	75.0-125
PCB-5/8	1.62	1.33-1.79	y	210.6	150-250
PCB-14	1.61	1.33-1.79	y	104.5	75.0-125
PCB-11	1.63	1.33-1.79	y	103.7	75.0-125
PCB-12/13	1.61	1.33-1.79	y	213.0	150-250
PCB-15	1.66	1.33-1.79	y	102.9	75.0-125
PCB-19	1.06	0.88-1.20	y	52.8	37.5-62.5
PCB-30	1.06	0.88-1.20	y	56.0	37.5-62.5
PCB-18	1.07	0.88-1.20	y	54.6	37.5-62.5
PCB-17	1.06	0.88-1.20	y	55.5	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	112.8	75.0-125
PCB-16/32	1.06	0.88-1.20	y	108.9	75.0-125
PCB-34	1.06	0.88-1.20	y	53.1	37.5-62.5
PCB-23	1.08	0.88-1.20	y	46.8	37.5-62.5
PCB-29	1.07	0.88-1.20	y	49.9	37.5-62.5
PCB-26	1.09	0.88-1.20	y	49.4	37.5-62.5
PCB-25	1.06	0.88-1.20	y	51.2	37.5-62.5
PCB-31	1.06	0.88-1.20	y	46.5	37.5-62.5
PCB-28	1.08	0.88-1.20	y	53.2	37.5-62.5
PCB-20/21/33	1.06	0.88-1.20	y	148.5	112.5-225
PCB-22	1.07	0.88-1.20	y	49.8	37.5-62.5
PCB-36	1.06	0.88-1.20	y	54.3	37.5-62.5
PCB-39	1.06	0.88-1.20	y	54.2	37.5-62.5
PCB-38	1.07	0.88-1.20	y	54.0	37.5-62.5
PCB-35	1.07	0.88-1.20	y	53.2	37.5-62.5
PCB-37	1.07	0.88-1.20	y	53.7	37.5-62.5
PCB-54	0.76	0.65-0.89	y	53.5	37.5-62.5
PCB-50	0.76	0.65-0.89	y	52.9	37.5-62.5
PCB-53	0.76	0.65-0.89	y	51.5	37.5-62.5
PCB-51	0.77	0.65-0.89	y	53.6	37.5-62.5
PCB-45	0.76	0.65-0.89	y	53.1	37.5-62.5
PCB-46	0.78	0.65-0.89	y	50.3	37.5-62.5
PCB-52/69	0.75	0.65-0.89	y	103.0	75.0-125
PCB-73	0.78	0.65-0.89	y	57.7	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	102.2	75.0-125
PCB-47	0.75	0.65-0.89	y	50.8	37.5-62.5
PCB-48/75	0.76	0.65-0.89	y	108.7	75.0-125
PCB-65	0.77	0.65-0.89	y	56.2	37.5-62.5
PCB-62	0.77	0.65-0.89	y	51.7	37.5-62.5
PCB-44	0.77	0.65-0.89	y	52.2	37.5-62.5
PCB-42/59	0.76	0.65-0.89	y	105.9	75.0-125
PCB-41/64/71/72	0.75	0.65-0.89	y	211.7	150-250
PCB-68	0.77	0.65-0.89	y	54.0	37.5-62.5
PCB-40	0.75	0.65-0.89	y	51.4	37.5-62.5
PCB-57	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-67	0.75	0.65-0.89	y	52.5	37.5-62.5
PCB-58	0.77	0.65-0.89	y	55.7	37.5-62.5
PCB-63	0.75	0.65-0.89	y	55.0	37.5-62.5
PCB-74	0.75	0.65-0.89	y	56.1	37.5-62.5
PCB-61/70	0.76	0.65-0.89	y	106.1	75.0-125
PCB-76/66	0.77	0.65-0.89	y	105.7	75.0-125
PCB-80	0.76	0.65-0.89	y	52.4	37.5-62.5
PCB-55	0.76	0.65-0.89	y	53.2	37.5-62.5
PCB-56/60	0.76	0.65-0.89	y	105.0	75.0-125
PCB-79	0.76	0.65-0.89	y	53.4	37.5-62.5
PCB-78	0.76	0.65-0.89	y	52.4	37.5-62.5
PCB-81	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-77	0.79	0.65-0.89	y	54.0	37.5-62.5
PCB-104	1.56	1.32-1.78	y	56.2	37.5-62.5
PCB-96	1.61	1.32-1.78	y	55.5	37.5-62.5
PCB-103	1.59	1.32-1.78	y	57.7	37.5-62.5
PCB-100	1.58	1.32-1.78	y	59.4	37.5-62.5
PCB-94	1.60	1.32-1.78	y	56.5	37.5-62.5
PCB-95/98/102	1.59	1.32-1.78	y	167.8	112.5-225
PCB-93	1.63	1.32-1.78	y	54.7	37.5-62.5
PCB-88/91	1.60	1.32-1.78	y	129.4	75.0-125
PCB-121	1.60	1.32-1.78	y	46.4	37.5-62.5

Analyst: DMS

Date: 12/10/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.60	1.32-1.78	y	106.3	75.0-125	PCB-140	1.27	1.05-1.43	y	56.5	37.5-62.5
PCB-89	1.58	1.32-1.78	y	54.9	37.5-62.5	PCB-134/143	1.25	1.05-1.43	y	102.0	75.0-125
PCB-90/101	1.59	1.32-1.78	y	111.1	75.0-125	PCB-133/142	1.24	1.05-1.43	y	100.4	75.0-125
PCB-113	1.58	1.32-1.78	y	53.5	37.5-62.5	PCB-131	1.24	1.05-1.43	y	51.9	37.5-62.5
PCB-99	1.63	1.32-1.78	y	57.0	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	105.8	75.0-125
PCB-119	1.62	1.32-1.78	y	55.7	37.5-62.5	PCB-132/161	1.29	1.05-1.43	y	104.6	75.0-125
PCB-108/112	1.60	1.32-1.78	y	112.5	75.0-125	PCB-153	1.15	1.05-1.43	y	53.7	37.5-62.5
PCB-83	1.59	1.32-1.78	y	57.2	37.5-62.5	PCB-168	1.25	1.05-1.43	y	52.7	37.5-62.5
PCB-97	1.59	1.32-1.78	y	56.5	37.5-62.5	PCB-141	1.25	1.05-1.43	y	52.9	37.5-62.5
PCB-86	1.60	1.32-1.78	y	56.6	37.5-62.5	PCB-137	1.21	1.05-1.43	y	52.9	37.5-62.5
PCB-87/117/125	1.58	1.32-1.78	y	163.5	112.5-225	PCB-130	1.29	1.05-1.43	y	55.2	37.5-62.5
PCB-111/115	1.59	1.32-1.78	y	105.4	75.0-125	PCB-138/163/164	1.25	1.05-1.43	y	163.5	112.5-225
PCB-85/116	1.60	1.32-1.78	y	115.2	75.0-125	PCB-158/160	1.25	1.05-1.43	y	110.6	75.0-125
PCB-120	1.59	1.32-1.78	y	55.1	37.5-62.5	PCB-129	1.24	1.05-1.43	y	52.7	37.5-62.5
PCB-110	1.60	1.32-1.78	y	54.4	37.5-62.5	PCB-166	1.26	1.05-1.43	y	53.6	37.5-62.5
PCB-82	1.61	1.32-1.78	y	55.5	37.5-62.5	PCB-159	1.25	1.05-1.43	y	52.8	37.5-62.5
PCB-124	1.57	1.32-1.78	y	56.4	37.5-62.5	PCB-128/162	1.25	1.05-1.43	y	103.8	75.0-125
PCB-107/109	1.61	1.32-1.78	y	111.3	75.0-125	PCB-167	1.25	1.05-1.43	y	53.3	37.5-62.5
PCB-123	1.60	1.32-1.78	y	57.1	37.5-62.5	PCB-156	1.24	1.05-1.43	y	52.8	37.5-62.5
PCB-106/118	1.61	1.32-1.78	y	111.9	75.0-125	PCB-157	1.27	1.05-1.43	y	54.4	37.5-62.5
PCB-114	1.61	1.32-1.78	y	53.6	37.5-62.5	PCB-169	1.24	1.05-1.43	y	53.2	37.5-62.5
PCB-122	1.61	1.32-1.78	y	53.3	37.5-62.5	PCB-188	1.05	0.89-1.21	y	53.5	37.5-62.5
PCB-105	1.60	1.32-1.78	y	55.3	37.5-62.5	PCB-184	1.06	0.89-1.21	y	55.9	37.5-62.5
PCB-127	1.62	1.32-1.78	y	53.6	37.5-62.5	PCB-179	1.05	0.89-1.21	y	55.1	37.5-62.5
PCB-126	1.61	1.32-1.78	y	54.1	37.5-62.5	PCB-176	1.06	0.89-1.21	y	53.5	37.5-62.5
PCB-155	1.30	1.05-1.43	y	58.2	37.5-62.5	PCB-186	1.05	0.89-1.21	y	54.8	37.5-62.5
PCB-150	1.31	1.05-1.43	y	58.7	37.5-62.5	PCB-178	1.04	0.89-1.21	y	55.6	37.5-62.5
PCB-152	1.30	1.05-1.43	y	56.2	37.5-62.5	PCB-175	1.08	0.89-1.21	y	57.6	37.5-62.5
PCB-145	1.30	1.05-1.43	y	55.3	37.5-62.5	PCB-182/187	1.06	0.89-1.21	y	112.6	75.0-125
PCB-136	1.32	1.05-1.43	y	54.2	37.5-62.5	PCB-183	1.04	0.89-1.21	y	53.2	37.5-62.5
PCB-148	1.28	1.05-1.43	y	59.5	37.5-62.5	PCB-185	1.06	0.89-1.21	y	52.9	37.5-62.5
PCB-154	1.27	1.05-1.43	y	57.9	37.5-62.5	PCB-174	1.05	0.89-1.21	y	54.1	37.5-62.5
PCB-151	1.28	1.05-1.43	y	55.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	53.0	37.5-62.5
PCB-135	1.27	1.05-1.43	y	56.8	37.5-62.5	PCB-177	1.06	0.89-1.21	y	54.0	37.5-62.5
PCB-144	1.28	1.05-1.43	y	56.7	37.5-62.5	PCB-171	1.07	0.89-1.21	y	51.7	37.5-62.5
PCB-147	1.34	1.05-1.43	y	57.2	37.5-62.5	PCB-173	1.05	0.89-1.21	y	51.7	37.5-62.5
PCB-139/149	1.29	1.05-1.43	y	113.0	75.0-125	PCB-172	1.06	0.89-1.21	y	54.0	37.5-62.5

Analyst: DmS

Date: 12/10/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	54.3	37.5-62.5
PCB-180	1.04	0.89-1.21	y	52.1	37.5-62.5
PCB-193	1.04	0.89-1.21	y	54.1	37.5-62.5
PCB-191	1.06	0.89-1.21	y	54.8	37.5-62.5
PCB-170	1.06	0.89-1.21	y	53.6	37.5-62.5
PCB-190	1.07	0.89-1.21	y	54.7	37.5-62.5
PCB-189	1.04	0.89-1.21	y	55.1	37.5-62.5
PCB-202	0.90	0.76-1.02	y	53.4	37.5-62.5
PCB-201	0.90	0.76-1.02	y	53.3	37.5-62.5
PCB-204	0.89	0.76-1.02	y	54.5	37.5-62.5
PCB-197	0.92	0.76-1.02	y	54.6	37.5-62.5
PCB-200	0.90	0.76-1.02	y	56.7	37.5-62.5
PCB-198	0.86	0.76-1.02	y	49.5	37.5-62.5
PCB-199	0.92	0.76-1.02	y	61.0	37.5-62.5
PCB-196/203	0.91	0.76-1.02	y	112.5	75.0-125
PCB-195	0.92	0.76-1.02	y	54.7	37.5-62.5
PCB-194	0.91	0.76-1.02	y	52.5	37.5-62.5
PCB-205	0.90	0.76-1.02	y	52.3	37.5-62.5
PCB-208	1.31	1.14-1.54	y	51.2	37.5-62.5
PCB-207	1.34	1.14-1.54	y	53.8	37.5-62.5
PCB-206	1.32	1.14-1.54	y	51.7	37.5-62.5
PCB-209	1.19	0.99-1.33	y	54.3	37.5-62.5

Analyst: DMS

Date: 12/10/14

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.32	2.66-3.60	y	104.2	50.0-145	13C-PCB-169	1.27	1.05-1.43	y	103.9	50 - 145
13C-PCB-3	3.33	2.66-3.60	y	102.5	50.0-145	13C-PCB-188	0.47	0.38-0.52	y	86.9	50 - 145
13C-PCB-4	1.57	1.33-1.79	y	98.1	50.0-145	13C-PCB-180	0.46	0.38-0.52	y	90.8	50 - 145
13C-PCB-9	1.58	1.33-1.79	y	99.9	50.0-145	13C-PCB-170	0.46	0.38-0.52	y	91.2	50 - 145
13C-PCB-11	1.58	1.33-1.79	y	98.0	50.0-145	13C-PCB-189	0.46	0.38-0.52	y	93.8	50 - 145
13C-PCB-19	1.05	0.88-1.20	y	86.9	50.0-145	13C-PCB-202	0.92	0.76-1.02	y	75.7	50 - 145
13C-PCB-32	1.08	0.88-1.20	y	86.1	50.0-145	13C-PCB-194	0.95	0.76-1.02	y	100.4	50 - 145
13C-PCB-28	1.05	0.88-1.20	y	104.7	50.0-145	13C-PCB-208	0.79	0.65-0.89	y	91.0	50 - 145
13C-PCB-37	1.07	0.88-1.20	y	97.5	50.0-145	13C-PCB-206	0.79	0.65-0.89	y	86.8	50 - 145
13C-PCB-54	0.80	0.65-0.89	y	92.9	50.0-145	13C-PCB-209	1.18	0.99-1.33	y	78.7	50 - 145
13C-PCB-52	0.79	0.65-0.89	y	94.4	50.0-145						
13C-PCB-47	0.78	0.65-0.89	y	94.9	50.0-145						
13C-PCB-70	0.80	0.65-0.89	y	97.4	50.0-145						
13C-PCB-80	0.79	0.65-0.89	y	98.0	50.0-145						
13C-PCB-81	0.81	0.65-0.89	y	101.6	50.0-145						
13C-PCB-77	0.80	0.65-0.89	y	98.1	50.0-145						
13C-PCB-104	1.65	1.32-1.78	y	92.3	50.0-145						
13C-PCB-95	1.66	1.32-1.78	y	94.4	50.0-145						
13C-PCB-101	1.61	1.32-1.78	y	99.2	50.0-145	CRS vs. RS					
13C-PCB-97	1.66	1.32-1.78	y	101.0	50.0-145						
13C-PCB-123	1.64	1.32-1.78	y	99.4	50.0-145	13C-PCB-79	0.80	0.65-0.89	y	100.1	75 - 125
13C-PCB-118	1.64	1.32-1.78	y	97.5	50.0-145	13C-PCB-178	0.48	0.38-0.52	y	89.5	75 - 125
13C-PCB-114	1.59	1.32-1.78	y	107.0	50.0-145						
13C-PCB-105	1.57	1.32-1.78	y	107.0	50.0-145						
13C-PCB-127	1.59	1.32-1.78	y	110.6	50.0-145						
13C-PCB-126	1.60	1.32-1.78	y	112.7	50.0-145						
13C-PCB-155	1.28	1.05-1.43	y	77.4	50.0-145						
13C-PCB-153	1.29	1.05-1.43	y	97.9	50.0-145						
13C-PCB-141	1.30	1.05-1.43	y	100.1	50.0-145						
13C-PCB-138	1.29	1.05-1.43	y	99.5	50.0-145						
13C-PCB-159	1.30	1.05-1.43	y	102.8	50.0-145						
13C-PCB-167	1.30	1.05-1.43	y	102.1	50.0-145						
13C-PCB-156	1.28	1.05-1.43	y	102.0	50.0-145						
13C-PCB-157	1.27	1.05-1.43	y	101.3	50.0-145						

Analyst: DmS

Date: 12/10/14

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.98	2.66-3.60	y	48.7	35.0-65.0
PCB-2	3.00	2.66-3.60	y	50.0	35.0-65.0
PCB-3	2.99	2.66-3.60	y	48.9	35.0-65.0
PCB-4/10	1.61	1.33-1.79	y	215.5	140-260
PCB-7/9	1.61	1.33-1.79	y	207.2	140-260
PCB-6	1.61	1.33-1.79	y	97.9	70.0-130
PCB-5/8	1.62	1.33-1.79	y	210.6	140-260
PCB-14	1.61	1.33-1.79	y	104.5	70.0-130
PCB-11	1.63	1.33-1.79	y	103.7	70.0-130
PCB-12/13	1.61	1.33-1.79	y	213.0	140-260
PCB-15	1.66	1.33-1.79	y	102.9	70.0-130
PCB-19	1.06	0.88-1.20	y	52.8	35.0-65.0
PCB-30	1.06	0.88-1.20	y	56.0	35.0-65.0
PCB-18	1.07	0.88-1.20	y	54.6	35.0-65.0
PCB-17	1.06	0.88-1.20	y	55.5	35.0-65.0
PCB-24/27	1.06	0.88-1.20	y	112.8	70.0-130
PCB-16/32	1.06	0.88-1.20	y	108.9	70.0-130
PCB-34	1.06	0.88-1.20	y	53.1	35.0-65.0
PCB-23	1.08	0.88-1.20	y	46.8	35.0-65.0
PCB-29	1.07	0.88-1.20	y	49.9	35.0-65.0
PCB-26	1.09	0.88-1.20	y	49.4	35.0-65.0
PCB-25	1.06	0.88-1.20	y	51.2	35.0-65.0
PCB-31	1.06	0.88-1.20	y	46.5	35.0-65.0
PCB-28	1.08	0.88-1.20	y	53.2	35.0-65.0
PCB-20/21/33	1.06	0.88-1.20	y	148.5	105-195
PCB-22	1.07	0.88-1.20	y	49.8	35.0-65.0
PCB-36	1.06	0.88-1.20	y	54.3	35.0-65.0
PCB-39	1.06	0.88-1.20	y	54.2	35.0-65.0
PCB-38	1.07	0.88-1.20	y	54.0	35.0-65.0
PCB-35	1.07	0.88-1.20	y	53.2	35.0-65.0
PCB-37	1.07	0.88-1.20	y	53.7	35.0-65.0
PCB-54	0.76	0.65-0.89	y	53.5	35.0-65.0
PCB-50	0.76	0.65-0.89	y	52.9	35.0-65.0
PCB-53	0.76	0.65-0.89	y	51.5	35.0-65.0
PCB-51	0.77	0.65-0.89	y	53.6	35.0-65.0
PCB-45	0.76	0.65-0.89	y	53.1	35.0-65.0
PCB-46	0.78	0.65-0.89	y	50.3	35.0-65.0
PCB-52/69	0.75	0.65-0.89	y	103.0	70.0-130
PCB-73	0.78	0.65-0.89	y	57.7	35.0-65.0
PCB-43/49	0.77	0.65-0.89	y	102.2	70.0-130
PCB-47	0.75	0.65-0.89	y	50.8	35.0-65.0
PCB-48/75	0.76	0.65-0.89	y	108.7	70.0-130
PCB-65	0.77	0.65-0.89	y	56.2	35.0-65.0
PCB-62	0.77	0.65-0.89	y	51.7	35.0-65.0
PCB-44	0.77	0.65-0.89	y	52.2	35.0-65.0
PCB-42/59	0.76	0.65-0.89	y	105.9	70.0-130
PCB-41/64/71/72	0.75	0.65-0.89	y	211.7	140-260
PCB-68	0.77	0.65-0.89	y	54.0	35.0-65.0
PCB-40	0.75	0.65-0.89	y	51.4	35.0-65.0
PCB-57	0.77	0.65-0.89	y	53.3	35.0-65.0
PCB-67	0.75	0.65-0.89	y	52.5	35.0-65.0
PCB-58	0.77	0.65-0.89	y	55.7	35.0-65.0
PCB-63	0.75	0.65-0.89	y	55.0	35.0-65.0
PCB-74	0.75	0.65-0.89	y	56.1	35.0-65.0
PCB-61/70	0.76	0.65-0.89	y	106.1	70.0-130
PCB-76/66	0.77	0.65-0.89	y	105.7	70.0-130
PCB-80	0.76	0.65-0.89	y	52.4	35.0-65.0
PCB-55	0.76	0.65-0.89	y	53.2	35.0-65.0
PCB-56/60	0.76	0.65-0.89	y	105.0	70.0-130
PCB-79	0.76	0.65-0.89	y	53.4	35.0-65.0
PCB-78	0.76	0.65-0.89	y	52.4	35.0-65.0
PCB-81	0.77	0.65-0.89	y	51.8	35.0-65.0
PCB-77	0.79	0.65-0.89	y	54.0	35.0-65.0
PCB-104	1.56	1.32-1.78	y	56.2	35.0-65.0
PCB-96	1.61	1.32-1.78	y	55.5	35.0-65.0
PCB-103	1.59	1.32-1.78	y	57.7	35.0-65.0
PCB-100	1.58	1.32-1.78	y	59.4	35.0-65.0
PCB-94	1.60	1.32-1.78	y	56.5	35.0-65.0
PCB-95/98/102	1.59	1.32-1.78	y	167.8	105-195
PCB-93	1.63	1.32-1.78	y	54.7	35.0-65.0
PCB-88/91	1.60	1.32-1.78	y	129.4	70.0-130
PCB-121	1.60	1.32-1.78	y	46.4	35.0-65.0

Analyst: DMS

Date: 12/10/14

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.60	1.32-1.78	y	106.3	70.0-130	PCB-140	1.27	1.05-1.43	y	56.5	35.0-65.0
PCB-89	1.58	1.32-1.78	y	54.9	35.0-65.0	PCB-134/143	1.25	1.05-1.43	y	102.0	70.0-130
PCB-90/101	1.59	1.32-1.78	y	111.1	70.0-130	PCB-133/142	1.24	1.05-1.43	y	100.4	70.0-130
PCB-113	1.58	1.32-1.78	y	53.5	35.0-65.0	PCB-131	1.24	1.05-1.43	y	51.9	35.0-65.0
PCB-99	1.63	1.32-1.78	y	57.0	35.0-65.0	PCB-146/165	1.24	1.05-1.43	y	105.8	70.0-130
PCB-119	1.62	1.32-1.78	y	55.7	35.0-65.0	PCB-132/161	1.29	1.05-1.43	y	104.6	70.0-130
PCB-108/112	1.60	1.32-1.78	y	112.5	70.0-130	PCB-153	1.15	1.05-1.43	y	53.7	35.0-65.0
PCB-83	1.59	1.32-1.78	y	57.2	35.0-65.0	PCB-168	1.25	1.05-1.43	y	52.7	35.0-65.0
PCB-97	1.59	1.32-1.78	y	56.5	35.0-65.0	PCB-141	1.25	1.05-1.43	y	52.9	35.0-65.0
PCB-86	1.60	1.32-1.78	y	56.6	35.0-65.0	PCB-137	1.21	1.05-1.43	y	52.9	35.0-65.0
PCB-87/117/125	1.58	1.32-1.78	y	163.5	105-195	PCB-130	1.29	1.05-1.43	y	55.2	35.0-65.0
PCB-111/115	1.59	1.32-1.78	y	105.4	70.0-130	PCB-138/163/164	1.25	1.05-1.43	y	163.5	105-195
PCB-85/116	1.60	1.32-1.78	y	115.2	70.0-130	PCB-158/160	1.25	1.05-1.43	y	110.6	70.0-130
PCB-120	1.59	1.32-1.78	y	55.1	35.0-65.0	PCB-129	1.24	1.05-1.43	y	52.7	35.0-65.0
PCB-110	1.60	1.32-1.78	y	54.4	35.0-65.0	PCB-166	1.26	1.05-1.43	y	53.6	35.0-65.0
PCB-82	1.61	1.32-1.78	y	55.5	35.0-65.0	PCB-159	1.25	1.05-1.43	y	52.8	35.0-65.0
PCB-124	1.57	1.32-1.78	y	56.4	35.0-65.0	PCB-128/162	1.25	1.05-1.43	y	103.8	70.0-130
PCB-107/109	1.61	1.32-1.78	y	111.3	70.0-130	PCB-167	1.25	1.05-1.43	y	53.3	35.0-65.0
PCB-123	1.60	1.32-1.78	y	57.1	35.0-65.0	PCB-156	1.24	1.05-1.43	y	52.8	35.0-65.0
PCB-106/118	1.61	1.32-1.78	y	111.9	70.0-130	PCB-157	1.27	1.05-1.43	y	54.4	35.0-65.0
PCB-114	1.61	1.32-1.78	y	53.6	35.0-65.0	PCB-169	1.24	1.05-1.43	y	53.2	35.0-65.0
PCB-122	1.61	1.32-1.78	y	53.3	35.0-65.0	PCB-188	1.05	0.89-1.21	y	53.5	35.0-65.0
PCB-105	1.60	1.32-1.78	y	55.3	35.0-65.0	PCB-184	1.06	0.89-1.21	y	55.9	35.0-65.0
PCB-127	1.62	1.32-1.78	y	53.6	35.0-65.0	PCB-179	1.05	0.89-1.21	y	55.1	35.0-65.0
PCB-126	1.61	1.32-1.78	y	54.1	35.0-65.0	PCB-176	1.06	0.89-1.21	y	53.5	35.0-65.0
PCB-155	1.30	1.05-1.43	y	58.2	35.0-65.0	PCB-186	1.05	0.89-1.21	y	54.8	35.0-65.0
PCB-150	1.31	1.05-1.43	y	58.7	35.0-65.0	PCB-178	1.04	0.89-1.21	y	55.6	35.0-65.0
PCB-152	1.30	1.05-1.43	y	56.2	35.0-65.0	PCB-175	1.08	0.89-1.21	y	57.6	35.0-65.0
PCB-145	1.30	1.05-1.43	y	55.3	35.0-65.0	PCB-182/187	1.06	0.89-1.21	y	112.6	70.0-130
PCB-136	1.32	1.05-1.43	y	54.2	35.0-65.0	PCB-183	1.04	0.89-1.21	y	53.2	35.0-65.0
PCB-148	1.28	1.05-1.43	y	59.5	35.0-65.0	PCB-185	1.06	0.89-1.21	y	52.9	35.0-65.0
PCB-154	1.27	1.05-1.43	y	57.9	35.0-65.0	PCB-174	1.05	0.89-1.21	y	54.1	35.0-65.0
PCB-151	1.28	1.05-1.43	y	55.9	35.0-65.0	PCB-181	1.06	0.89-1.21	y	53.0	35.0-65.0
PCB-135	1.27	1.05-1.43	y	56.8	35.0-65.0	PCB-177	1.06	0.89-1.21	y	54.0	35.0-65.0
PCB-144	1.28	1.05-1.43	y	56.7	35.0-65.0	PCB-171	1.07	0.89-1.21	y	51.7	35.0-65.0
PCB-147	1.34	1.05-1.43	y	57.2	35.0-65.0	PCB-173	1.05	0.89-1.21	y	51.7	35.0-65.0
PCB-139/149	1.29	1.05-1.43	y	113.0	70.0-130	PCB-172	1.06	0.89-1.21	y	54.0	35.0-65.0

Analyst: DMS

Date: 12/10/14

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	54.3	35.0-65.0
PCB-180	1.04	0.89-1.21	y	52.1	35.0-65.0
PCB-193	1.04	0.89-1.21	y	54.1	35.0-65.0
PCB-191	1.06	0.89-1.21	y	54.8	35.0-65.0
PCB-170	1.06	0.89-1.21	y	53.6	35.0-65.0
PCB-190	1.07	0.89-1.21	y	54.7	35.0-65.0
PCB-189	1.04	0.89-1.21	y	55.1	35.0-65.0
PCB-202	0.90	0.76-1.02	y	53.4	35.0-65.0
PCB-201	0.90	0.76-1.02	y	53.3	35.0-65.0
PCB-204	0.89	0.76-1.02	y	54.5	35.0-65.0
PCB-197	0.92	0.76-1.02	y	54.6	35.0-65.0
PCB-200	0.90	0.76-1.02	y	56.7	35.0-65.0
PCB-198	0.86	0.76-1.02	y	49.5	35.0-65.0
PCB-199	0.92	0.76-1.02	y	61.0	35.0-65.0
PCB-196/203	0.91	0.76-1.02	y	112.5	70.0-130
PCB-195	0.92	0.76-1.02	y	54.7	35.0-65.0
PCB-194	0.91	0.76-1.02	y	52.5	35.0-65.0
PCB-205	0.90	0.76-1.02	y	52.3	35.0-65.0
PCB-208	1.31	1.14-1.54	y	51.2	35.0-65.0
PCB-207	1.34	1.14-1.54	y	53.8	35.0-65.0
PCB-206	1.32	1.14-1.54	y	51.7	35.0-65.0
PCB-209	1.19	0.99-1.34	y	54.3	35.0-65.0

Analyst: DMS

Date: 12/10/14

LABELED 1668A CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141209E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141209E2 S#1 Analysis Date: 10-DEC-14 Time: 03:02:32

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.32	2.66-3.60	y	104.2	50.0-150
13C-PCB-3	3.33	2.66-3.60	y	102.5	50.0-150
13C-PCB-4	1.57	1.33-1.79	y	98.1	50.0-150
13C-PCB-9	1.58	1.33-1.79	y	99.9	50.0-150
13C-PCB-11	1.58	1.33-1.79	y	98.0	50.0-150
13C-PCB-19	1.05	0.88-1.20	y	86.9	50.0-150
13C-PCB-32	1.08	0.88-1.20	y	86.1	50.0-150
13C-PCB-28	1.05	0.88-1.20	y	104.7	50.0-150
13C-PCB-37	1.07	0.88-1.20	y	97.5	50.0-150
13C-PCB-54	0.80	0.65-0.89	y	92.9	50.0-150
13C-PCB-52	0.79	0.65-0.89	y	94.4	50.0-150
13C-PCB-47	0.78	0.65-0.89	y	94.9	50.0-150
13C-PCB-70	0.80	0.65-0.89	y	97.4	50.0-150
13C-PCB-80	0.79	0.65-0.89	y	98.0	50.0-150
13C-PCB-81	0.81	0.65-0.89	y	101.6	50.0-150
13C-PCB-77	0.80	0.65-0.89	y	98.1	50.0-150
13C-PCB-104	1.65	1.32-1.78	y	92.3	50.0-150
13C-PCB-95	1.66	1.32-1.78	y	94.4	50.0-150
13C-PCB-101	1.61	1.32-1.78	y	99.2	50.0-150
13C-PCB-97	1.66	1.32-1.78	y	101.0	50.0-150
13C-PCB-123	1.64	1.32-1.78	y	99.4	50.0-150
13C-PCB-118	1.64	1.32-1.78	y	97.5	50.0-150
13C-PCB-114	1.59	1.32-1.78	y	107.0	50.0-150
13C-PCB-105	1.57	1.32-1.78	y	107.0	50.0-150
13C-PCB-127	1.59	1.32-1.78	y	110.6	50.0-150
13C-PCB-126	1.60	1.32-1.78	y	112.7	50.0-150
13C-PCB-155	1.28	1.05-1.43	y	77.4	50.0-150
13C-PCB-153	1.29	1.05-1.43	y	97.9	50.0-150
13C-PCB-141	1.30	1.05-1.43	y	100.1	50.0-150
13C-PCB-138	1.29	1.05-1.43	y	99.5	50.0-150
13C-PCB-159	1.30	1.05-1.43	y	102.8	50.0-150
13C-PCB-167	1.30	1.05-1.43	y	102.1	50.0-150
13C-PCB-156	1.28	1.05-1.43	y	102.0	50.0-150
13C-PCB-157	1.27	1.05-1.43	y	101.3	50.0-150
13C-PCB-169	1.27	1.05-1.43	y	103.9	50 - 150
13C-PCB-188	0.47	0.38-0.52	y	86.9	50 - 150
13C-PCB-180	0.46	0.38-0.52	y	90.8	50 - 150
13C-PCB-170	0.46	0.38-0.52	y	91.2	50 - 150
13C-PCB-189	0.46	0.38-0.52	y	93.8	50 - 150
13C-PCB-202	0.92	0.76-1.02	y	75.7	50 - 150
13C-PCB-194	0.95	0.76-1.02	y	100.4	50 - 150
13C-PCB-208	0.79	0.65-0.89	y	91.0	50 - 150
13C-PCB-206	0.79	0.65-0.89	y	86.8	50 - 150
13C-PCB-209	1.18	0.99-1.33	y	78.7	50 - 150

CRS vs. RS

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-79	0.80	0.65-0.89	y	100.1	60 - 130
13C-PCB-178	0.48	0.38-0.52	y	89.5	60 - 130

PS vs. IS

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-79	0.80	0.65-0.89	y	98.4	60 - 130
13C-PCB-178	0.48	0.38-0.52	y	98.5	60 - 130

Analyst: DMS

Date: 12/10/14

Client ID: PCB CS3 14I1807 Filename: 141209E2 S:1 Acq:10-DEC-14 03:02:32 ConCal: ST141209E2-1

Lab ID: ST141209E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST141209E2-2

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	5.95e+07	2.98	y	1.25	16:11	1.001	0.996	1.006	48.7146
	PCB-2	5.90e+07	3.00	y	1.18	18:33	0.988	0.983	0.993	50.0457
	PCB-3	5.95e+07	2.99	y	1.22	18:47	1.000	0.996	1.006	48.9326
	PCB-4/10	1.89e+08	1.61	y	1.55	20:10	1.003	0.998	1.008	215.483
	PCB-7/9	2.27e+08	1.61	y	1.27	21:56	0.868	0.865	0.873	207.196
	PCB-6	1.07e+08	1.61	y	1.26	22:35	0.894	0.890	0.899	97.9239
	PCB-5/8	2.25e+08	1.62	y	1.23	23:00	0.910	0.906	0.916	210.649
	PCB-14	1.24e+08	1.61	y	1.23	24:05	0.953	0.949	0.959	104.538
	PCB-11	1.16e+08	1.63	y	1.16	25:17	1.001	0.996	1.006	103.713
	PCB-12/13	2.26e+08	1.61	y	1.10	25:40	1.016	1.010	1.020	213.034
	PCB-15	1.20e+08	1.66	y	1.21	25:59	1.028	1.024	1.034	102.945
	PCB-19	3.32e+07	1.06	y	1.30	24:16	1.001	0.996	1.006	52.8201
	PCB-30	4.97e+07	1.06	y	1.83	25:09	1.037	1.032	1.042	55.9909
	PCB-18	3.44e+07	1.07	y	0.86	25:54	0.953	0.949	0.959	54.5769
	PCB-17	3.67e+07	1.06	y	0.90	26:05	0.960	0.955	0.965	55.5260
	PCB-24/27	9.75e+07	1.06	y	1.18	26:39	0.981	0.976	0.986	112.829
-	PCB-16/32	8.24e+07	1.06	y	1.03	27:10	1.000	0.995	1.005	108.902
-	PCB-34	5.89e+07	1.06	y	1.26	27:58	0.961	0.956	0.966	53.0604
	PCB-23	5.40e+07	1.08	y	1.31	28:03	0.963	0.959	0.969	46.8241
	PCB-29	5.83e+07	1.07	y	1.33	28:18	0.972	0.967	0.977	49.8719
	PCB-26	5.62e+07	1.09	y	1.29	28:31	0.979	0.974	0.984	49.4118
	PCB-25	6.06e+07	1.06	y	1.34	28:40	0.985	0.980	0.990	51.2468
	PCB-31	5.80e+07	1.06	y	1.42	29:01	0.997	0.992	1.002	46.4565
	PCB-28	6.45e+07	1.08	y	1.38	29:08	1.001	0.996	1.006	53.2079
	PCB-20/21/33	1.71e+08	1.06	y	1.31	29:44	1.021	1.017	1.027	148.462
	PCB-22	5.79e+07	1.07	y	1.32	30:11	1.037	1.032	1.042	49.7567
	PCB-36	5.74e+07	1.06	y	1.38	30:48	0.934	0.929	0.939	54.3281
	PCB-39	5.90e+07	1.06	y	1.42	31:15	0.947	0.943	0.953	54.1910
	PCB-38	5.61e+07	1.07	y	1.35	32:02	0.971	0.967	0.976	53.9640
	PCB-35	5.62e+07	1.07	y	1.38	32:34	0.987	0.982	0.992	53.1788
	PCB-37	5.73e+07	1.07	y	1.39	33:00	1.001	0.996	1.006	53.7173
	PCB-54	4.08e+07	0.76	y	1.20	28:01	1.001	0.996	1.006	53.5146
	PCB-50	3.25e+07	0.76	y	0.97	29:10	1.042	1.037	1.047	52.8583
	PCB-53	3.30e+07	0.76	y	1.19	29:49	0.946	0.941	0.951	51.5356
	PCB-51	3.33e+07	0.77	y	1.15	30:09	0.957	0.952	0.962	53.6172
	PCB-45	2.76e+07	0.76	y	0.97	30:36	0.971	0.966	0.976	53.0870
	PCB-46	2.58e+07	0.78	y	0.95	31:05	0.986	0.982	0.992	50.3028

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	7.09e+07	0.75	y	1.28	31:33	1.001	0.996	1.006	102.971
	PCB-73	4.27e+07	0.78	y	1.37	31:40	1.005	1.000	1.010	57.7279
	PCB-43/49	6.13e+07	0.77	y	1.11	31:50	1.010	1.005	1.015	102.165
	PCB-47	3.28e+07	0.75	y	1.13	32:03	1.001	0.996	1.006	50.7890
	PCB-48/75	8.08e+07	0.76	y	1.30	32:09	1.004	0.999	1.009	108.743
	PCB-65	4.27e+07	0.77	y	1.33	32:26	1.012	1.007	1.017	56.1628
	PCB-62	3.80e+07	0.77	y	1.29	32:32	1.016	1.011	1.021	51.6822
	PCB-44	2.80e+07	0.77	y	0.94	32:50	1.025	1.020	1.030	52.2270
	PCB-42/59	7.34e+07	0.76	y	1.22	33:04	1.032	1.028	1.038	105.904
	PCB-41/64/71/72	1.58e+08	0.75	y	1.31	33:39	1.050	1.046	1.056	211.661
	PCB-68	4.57e+07	0.77	y	1.49	33:54	1.058	1.054	1.064	53.9887
	PCB-40	2.40e+07	0.75	y	0.82	34:08	1.066	1.061	1.071	51.3959
	PCB-57	4.41e+07	0.77	y	1.11	34:29	0.970	0.965	0.975	53.3008
	PCB-67	4.18e+07	0.75	y	1.07	34:47	0.979	0.974	0.984	52.5237
	PCB-58	4.55e+07	0.77	y	1.10	34:54	0.982	0.977	0.987	55.6993
	PCB-63	4.56e+07	0.75	y	1.12	35:04	0.987	0.982	0.992	54.9554
	PCB-74	5.01e+07	0.75	y	1.20	35:21	0.995	0.990	1.000	56.1254
	PCB-61/70	8.50e+07	0.76	y	1.08	35:31	1.000	0.994	1.004	106.098
	PCB-76/66	8.91e+07	0.77	y	1.14	35:44	1.006	1.001	1.011	105.709
	PCB-80	5.09e+07	0.76	y	1.28	35:58	1.000	0.996	1.006	52.4276
	PCB-55	4.49e+07	0.76	y	1.11	36:18	1.010	1.005	1.015	53.2440
	PCB-56/60	8.68e+07	0.76	y	1.09	36:47	1.023	1.018	1.028	105.001
	PCB-79	4.57e+07	0.76	y	1.12	37:51	1.053	1.048	1.058	53.4422
	PCB-78	4.45e+07	0.76	y	1.24	38:33	0.987	0.982	0.992	52.3520
	PCB-81	4.92e+07	0.77	y	1.38	39:04	1.000	0.995	1.005	51.8184
	PCB-77	4.61e+07	0.79	y	1.21	39:40	1.000	0.995	1.005	54.0051
	PCB-104	2.74e+07	1.56	y	1.26	32:42	1.001	0.996	1.006	56.1614
	PCB-96	2.35e+07	1.61	y	1.09	33:57	1.039	1.034	1.044	55.5404
	PCB-103	2.09e+07	1.59	y	0.93	34:30	1.056	1.050	1.060	57.7238
	PCB-100	2.31e+07	1.58	y	1.00	34:50	1.066	1.061	1.071	59.3537
	PCB-94	1.85e+07	1.60	y	1.11	35:19	0.986	0.981	0.991	56.5065
	PCB-95/98/102	6.04e+07	1.59	y	1.21	35:48	0.999	0.994	1.004	167.846
	PCB-93	1.83e+07	1.63	y	1.13	35:56	1.003	0.998	1.008	54.7022
	PCB-88/91	3.91e+07	1.60	y	1.02	36:13	1.011	1.006	1.016	129.351
	PCB-121	2.61e+07	1.60	y	1.90	36:20	1.014	1.009	1.019	46.3545
	PCB-84/92	3.68e+07	1.60	y	1.05	37:09	0.991	0.986	0.996	106.281
	PCB-89	1.84e+07	1.58	y	1.02	37:20	0.996	0.991	1.001	54.8709

RL: MONO, TRI - DECA: —

RL: DI : —

Integrations by Analyst: DMS Date: 12/10/14

Reviewed by Analyst: CJS Date: 12/10/14

Client ID: PCB CS3 14I1807 Filename: 141209E2 S:1 Acq:10-DEC-14 03:02:32 ConCal: ST141209E2-1

Lab ID: ST141209E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST141209E2-2

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	4.35e+07	1.59	y	1.19	37:30	1.000	0.996	1.006	111.092
	PCB-113	2.38e+07	1.58	y	1.35	37:45	1.007	1.002	1.012	53.4698
	PCB-99	2.42e+07	1.63	y	1.29	37:51	1.009	1.005	1.015	57.0247
	PCB-119	2.82e+07	1.62	y	1.72	38:19	0.987	0.982	0.992	55.6884
	PCB-108/112	4.25e+07	1.60	y	1.29	38:28	0.991	0.986	0.996	112.461
	PCB-83	2.56e+07	1.59	y	1.52	38:37	0.995	0.991	1.001	57.2220
	PCB-97	2.07e+07	1.59	y	1.25	38:50	1.000	0.996	1.006	56.5032
	PCB-86	1.70e+07	1.60	y	1.02	38:58	1.004	1.000	1.010	56.5507
	B-87/117/125	7.49e+07	1.58	y	1.56	39:06	1.007	1.002	1.012	163.508
	PCB-111/115	5.42e+07	1.59	y	1.75	39:15	1.011	1.007	1.017	105.356
	PCB-85/116	4.40e+07	1.60	y	1.30	39:23	1.015	1.010	1.020	115.194
	PCB-120	2.88e+07	1.59	y	1.78	39:38	1.021	1.016	1.026	55.1007
	PCB-110	2.69e+07	1.60	y	1.68	39:46	1.024	1.020	1.030	54.4239
	PCB-82	1.63e+07	1.61	y	0.74	40:23	0.976	0.972	0.982	55.4698
	PCB-124	2.97e+07	1.57	y	1.32	41:04	0.993	0.988	0.998	56.3557
	PCB-107/109	5.41e+07	1.61	y	1.22	41:13	0.996	0.991	1.001	111.338
	PCB-123	2.77e+07	1.60	y	1.22	41:23	1.000	0.995	1.005	57.0725
-	PCB-106/118	5.55e+07	1.61	y	1.22	41:35	1.001	0.996	1.006	111.878
-	PCB-114	4.41e+07	1.61	y	1.36	42:13	1.000	0.995	1.005	53.5547
	PCB-122	4.01e+07	1.61	y	1.24	42:22	1.004	0.999	1.009	53.3344
	PCB-105	4.43e+07	1.60	y	1.28	43:06	1.001	0.995	1.005	55.2637
	PCB-127	4.27e+07	1.62	y	1.14	43:25	1.000	0.995	1.005	53.5781
	PCB-126	4.28e+07	1.61	y	1.28	45:18	1.000	0.995	1.005	54.0668
	PCB-155	1.79e+07	1.30	y	1.14	37:04	1.000	0.966	1.006	58.1511
	PCB-150	1.70e+07	1.31	y	1.06	38:20	1.035	1.030	1.040	58.7185
	PCB-152	1.68e+07	1.30	y	1.10	38:49	1.048	1.043	1.053	56.1634
	PCB-145	1.64e+07	1.30	y	1.09	39:15	1.059	1.055	1.065	55.2506
	PCB-136	1.60e+07	1.32	y	1.08	39:34	1.068	1.064	1.074	54.2340
	PCB-148	1.20e+07	1.28	y	0.74	39:41	1.071	1.066	1.076	59.5137
	PCB-154	1.39e+07	1.27	y	0.88	40:09	1.084	1.079	1.089	57.8782
	PCB-151	1.23e+07	1.28	y	0.81	40:48	1.101	1.097	1.107	55.9318
	PCB-135	1.20e+07	1.27	y	0.78	41:02	1.108	1.101	1.113	56.7766
	PCB-144	1.26e+07	1.28	y	0.82	41:07	1.110	1.105	1.116	56.7101
	PCB-147	1.29e+07	1.34	y	0.83	41:15	1.113	1.011	1.120	57.1549
	PCB-139/149	2.59e+07	1.29	y	0.84	41:31	1.121	1.115	1.127	113.019
-	PCB-140	1.21e+07	1.27	y	0.79	41:43	1.126	1.120	1.132	56.4591
-	PCB-134/143	4.85e+07	1.25	y	0.93	42:09	0.975	0.970	0.980	101.973

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	4.87e+07	1.24	y	0.95	42:26	0.982	0.977	0.987	100.435
PCB-131	2.43e+07	1.24	y	0.91	42:37	0.986	0.981	0.991	51.9051
PCB-146/165	6.28e+07	1.24	y	1.16	42:49	0.991	0.986	0.996	105.837
PCB-132/161	5.98e+07	1.29	y	1.11	43:04	0.997	0.992	1.002	104.616
PCB-153	3.25e+07	1.15	y	1.18	43:15	1.001	0.995	1.005	53.7251
PCB-168	3.70e+07	1.25	y	1.37	43:27	1.005	1.000	1.010	52.6635
PCB-141	2.60e+07	1.25	y	0.97	43:59	1.000	0.996	1.005	52.8787
PCB-137	2.86e+07	1.21	y	1.07	44:22	1.009	1.004	1.014	52.9340
PCB-130	2.36e+07	1.29	y	0.85	44:28	1.011	1.007	1.017	55.2164
PCB-138/163/164	9.79e+07	1.25	y	1.23	44:51	1.001	0.996	1.006	163.471
PCB-158/160	6.97e+07	1.25	y	1.29	45:05	1.006	1.001	1.011	110.561
PCB-129	2.38e+07	1.24	y	0.92	45:20	1.012	1.007	1.017	52.7436
PCB-166	3.47e+07	1.26	y	1.12	45:46	0.993	0.988	0.998	53.5624
PCB-159	3.57e+07	1.25	y	1.16	46:06	1.000	0.995	1.005	52.7668
PCB-128/162	6.15e+07	1.25	y	1.02	46:23	1.007	1.002	1.012	103.843
PCB-167	3.59e+07	1.25	y	1.06	46:46	1.000	0.995	1.005	53.2617
PCB-156	3.73e+07	1.24	y	1.18	48:05	1.000	0.995	1.005	52.7952
PCB-157	3.69e+07	1.27	y	1.08	48:20	1.000	0.995	1.005	54.3976
PCB-169	3.51e+07	1.24	y	1.11	50:28	1.000	0.995	1.005	53.2350
PCB-188	2.88e+07	1.05	y	1.40	42:53	1.001	0.995	1.005	53.5211
PCB-184	2.65e+07	1.06	y	1.24	43:19	1.011	1.006	1.016	55.8795
PCB-179	2.75e+07	1.05	y	1.30	44:06	1.029	1.024	1.034	55.1220
PCB-176	2.79e+07	1.06	y	1.36	44:34	1.040	1.035	1.045	53.4835
PCB-186	2.68e+07	1.05	y	1.28	45:10	1.054	1.049	1.059	54.8348
PCB-178	2.00e+07	1.04	y	0.94	45:40	1.066	1.061	1.071	55.6052
PCB-175	2.14e+07	1.08	y	0.97	46:01	1.074	1.069	1.079	57.6239
PCB-182/187	4.38e+07	1.06	y	1.01	46:11	1.078	1.073	1.083	112.599
PCB-183	2.20e+07	1.04	y	1.08	46:30	1.085	1.080	1.090	53.1661
PCB-185	2.05e+07	1.06	y	1.34	47:09	0.956	0.951	0.961	52.9010
PCB-174	2.08e+07	1.05	y	1.34	47:31	0.963	0.958	0.968	54.1126
PCB-181	2.08e+07	1.06	y	1.36	47:38	0.966	0.961	0.971	53.0036
PCB-177	1.93e+07	1.06	y	1.24	47:48	0.969	0.964	0.974	53.9664
PCB-171	1.96e+07	1.07	y	1.31	48:06	0.975	0.970	0.980	51.7038
PCB-173	1.73e+07	1.05	y	1.16	48:30	0.983	0.979	0.989	51.6680
PCB-172	1.90e+07	1.06	y	1.22	48:58	0.993	0.988	0.998	53.9923
PCB-192	2.39e+07	1.05	y	1.53	49:09	0.996	0.991	1.001	54.2502
PCB-180	2.14e+07	1.04	y	1.43	49:22	1.001	0.995	1.005	52.0642

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 12/10/14

Client ID: PCB CS3 14I1807 Filename: 141209E2 S:1 Acq:10-DEC-14 03:02:32 ConCal: ST141209E2-1
Lab ID: ST141209E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST141209E2-2

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	2.58e+07	1.04	y	1.65	49:34	1.005	0.999	1.009	54.0806
	PCB-191	2.64e+07	1.06	y	1.67	49:49	1.010	1.004	1.014	54.8237
	PCB-170	1.85e+07	1.06	y	1.50	50:50	1.000	0.995	1.005	53.6026
	PCB-190	2.54e+07	1.07	y	2.02	51:01	1.004	0.998	1.008	54.6638
	PCB-189	2.69e+07	1.04	y	1.54	52:19	1.000	0.995	1.005	55.1194
	PCB-202	1.65e+07	0.90	y	1.04	48:18	1.001	0.995	1.005	53.3577
	PCB-201	1.75e+07	0.90	y	1.10	48:47	1.011	1.006	1.016	53.3060
	PCB-204	1.61e+07	0.89	y	0.99	48:56	1.014	1.009	1.019	54.4915
	PCB-197	1.74e+07	0.92	y	1.07	49:14	1.020	1.015	1.025	54.5866
	PCB-200	1.71e+07	0.90	y	1.02	50:06	1.038	1.032	1.044	56.6606
	PCB-198	1.09e+07	0.86	y	0.74	51:26	1.066	1.058	1.068	49.4576
	PCB-199	1.32e+07	0.92	y	0.73	51:32	1.068	1.060	1.070	61.0364
-	PCB-196/203	2.58e+07	0.91	y	0.77	51:48	1.073	1.066	1.076	112.538
-	PCB-195	2.45e+07	0.92	y	1.20	52:58	0.984	0.979	0.989	54.6654
	PCB-194	2.45e+07	0.91	y	1.25	53:50	1.000	0.995	1.005	52.5064
	PCB-205	2.76e+07	0.90	y	1.41	54:07	1.006	1.001	1.011	52.2760
	PCB-208	2.32e+07	1.31	y	0.96	53:06	1.000	0.995	1.005	51.1808
	PCB-207	2.32e+07	1.34	y	0.92	53:25	1.006	1.001	1.011	53.8327
	PCB-206	1.40e+07	1.32	y	1.03	55:29	1.000	0.995	1.005	51.6774
	PCB-209	1.42e+07	1.19	y	1.18	56:50	1.000	0.995	1.005	54.3466

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.78e+08	2.98	y	16:11	1.22	147.693	
Total Di-PCB	1.33e+09	1.61	y	20:10	1.21	1255.48	
Total Tri-PCB	3.34e+08	1.06	y	24:16	1.16	440.645	
Total Tri-PCB	9.39e+08	1.06	y	27:58	1.35	829.456	Sum:1270.10
Total Tetra-PCB	1.67e+09	0.76	y	28:01	1.17	2239.56	
Total Penta-PCB	9.52e+08	1.56	y	32:42	1.21	2295.37	
Total Penta-PCB	2.26e+08	1.61	y	42:13	1.26	285.006	Sum:2580.38
Total Hexa-PCB	1.98e+08	1.30	y	37:04	0.92	795.961	
Total Hexa-PCB	8.67e+08	1.25	y	42:09	1.08	1493.66	Sum:2289.63
Total Hepta-PCB	5.51e+08	1.05	y	42:53	1.27	1303.71	
Total Octa-PCB	1.35e+08	0.90	y	48:18	0.92	495.434	
Total Octa-PCB	7.77e+07	0.92	y	52:58	1.29	161.533	Sum:656.967
Total Nona-PCB	6.03e+07	1.31	y	53:06	0.96	156.691	
Total Deca-PCB	1.42e+07	1.19	y	56:50	1.18	54.3466	

Total PCB Conc:11895.2173950

RL: MONO, TRI - DECA: ——

Integrations by Analyst DMS

Date: 12/10/14

Client ID: PCB CS3 14I1807 Filename: 141209E2 S:1 Acq:10-DEC-14 03:02:32 ConCal: ST141209E2-1
Lab ID: ST141209E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: ST141209E2-2

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	9.73e+07	3.32 y	0.89	16:10	0.623	0.622	0.628	104	104
13C-PCB-3	9.97e+07	3.33 y	0.93	18:47	0.723	0.721	0.729	103	103
13C-PCB-4	5.63e+07	1.57 y	0.55	20:06	0.774	0.772	0.780	98.1	98.1
13C-PCB-9	8.66e+07	1.58 y	0.83	21:53	0.843	0.840	0.848	99.9	99.9
13C-PCB-11	9.64e+07	1.58 y	0.94	25:16	0.973	0.968	0.978	98.0	98.0
13C-PCB-19	4.85e+07	1.05 y	0.53	24:15	0.934	0.929	0.939	86.9	86.9
13C-PCB-28	8.80e+07	1.05 y	0.89	29:07	1.004	0.999	1.009	105	105
13C-PCB-32	7.35e+07	1.08 y	0.81	27:10	1.046	1.041	1.051	86.1	86.1
13C-PCB-37	7.67e+07	1.07 y	0.83	32:59	1.137	1.131	1.143	97.5	97.5
13C-PCB-47	5.70e+07	0.78 y	0.74	32:02	0.871	0.867	0.875	94.9	94.9
13C-PCB-52	5.39e+07	0.79 y	0.71	31:31	0.857	0.853	0.861	94.4	94.4
13C-PCB-54	6.37e+07	0.80 y	0.85	28:00	0.762	0.758	0.766	92.9	92.9
13C-PCB-70	7.42e+07	0.80 y	0.94	35:32	0.966	0.961	0.971	97.4	97.4
13C-PCB-77	7.07e+07	0.80 y	0.89	39:39	1.078	1.073	1.083	98.1	98.1
13C-PCB-80	7.61e+07	0.79 y	0.96	35:57	0.978	0.972	0.982	98.0	98.0
13C-PCB-81	6.87e+07	0.81 y	0.84	39:03	1.062	1.057	1.067	102	102
13C-PCB-95	2.96e+07	1.66 y	0.74	35:50	0.913	0.908	0.918	94.4	94.4
13C-PCB-97	2.94e+07	1.66 y	0.69	38:49	0.989	0.984	0.994	101	101
13C-PCB-101	3.29e+07	1.61 y	0.79	37:30	0.956	0.951	0.961	99.2	99.2
13C-PCB-104	3.88e+07	1.65 y	1.00	32:41	0.833	0.829	0.837	92.3	92.3
13C-PCB-105	6.24e+07	1.57 y	1.24	43:04	0.929	0.924	0.934	107	107
13C-PCB-114	6.08e+07	1.59 y	1.21	42:12	0.910	0.905	0.915	107	107
13C-PCB-118	4.05e+07	1.64 y	0.98	41:33	1.059	1.054	1.064	97.5	97.5
13C-PCB-123	3.98e+07	1.64 y	0.95	41:22	1.054	1.049	1.059	99.4	99.4
13C-PCB-126	6.17e+07	1.60 y	1.16	45:18	0.977	0.972	0.982	113	113
13C-PCB-127	6.99e+07	1.59 y	1.34	43:24	0.936	0.931	0.941	111	111
13C-PCB-138	4.89e+07	1.29 y	1.04	44:48	0.966	0.961	0.971	99.5	99.5
13C-PCB-141	5.05e+07	1.30 y	1.07	43:58	0.948	0.943	0.953	100	100
13C-PCB-153	5.13e+07	1.29 y	1.11	43:13	0.932	0.927	0.937	97.9	97.9
13C-PCB-155	2.72e+07	1.28 y	0.83	37:03	0.944	0.939	0.949	77.4	77.4
13C-PCB-156	5.98e+07	1.28 y	1.24	48:04	1.037	1.032	1.042	102	102
13C-PCB-157	6.26e+07	1.27 y	1.31	48:20	1.042	1.037	1.047	101	101
13C-PCB-159	5.81e+07	1.30 y	1.20	46:05	0.994	0.989	0.999	103	103
13C-PCB-167	6.35e+07	1.30 y	1.32	46:46	1.009	1.004	1.014	102	102
13C-PCB-169	5.94e+07	1.27 y	1.22	50:28	1.088	1.082	1.092	104	104
13C-PCB-170	2.30e+07	0.46 y	0.54	50:49	1.096	1.089	1.101	91.2	91.3
13C-PCB-180	2.88e+07	0.46 y	0.67	49:20	1.064	1.059	1.069	90.8	90.8
13C-PCB-188	3.83e+07	0.47 y	0.94	42:51	0.924	0.919	0.929	86.9	86.9
13C-PCB-189	3.16e+07	0.46 y	0.72	52:19	1.128	1.120	1.132	93.8	93.8
13C-PCB-194	3.74e+07	0.95 y	0.81	53:49	0.995	0.990	1.000	100	100
13C-PCB-202	2.97e+07	0.92 y	0.83	48:16	1.041	1.036	1.046	75.7	75.7
13C-PCB-206	2.63e+07	0.79 y	0.66	55:28	1.025	1.021	1.031	86.8	86.8
13C-PCB-208	4.70e+07	0.79 y	1.12	53:05	0.981	0.976	0.986	91.0	91.0
13C-PCB-209	2.22e+07	1.18 y	0.61	56:50	1.051	1.044	1.054	78.7	78.7

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.11e+07	0.80 y	1.01	37:50	1.029	1.023	1.033	100	100
13C-PCB-178	2.66e+07	0.48 y	0.63	45:38	0.984	0.979	0.989	89.5	89.5

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.11e+07	0.80 y	1.20	37:50	0.969	0.963	0.973	98.4	98.4
13C-PCB-178	2.66e+07	0.48 y	0.94	45:38	0.925	0.920	0.930	98.5	98.5

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.05e+08	1.59	y	1.00	25:58	100
13C-PCB-31	9.47e+07	1.06	y	1.00	29:00	100
13C-PCB-60	8.07e+07	0.80	y	1.00	36:46	100
13C-PCB-111	4.22e+07	1.66	y	1.00	39:14	100
13C-PCB-128	4.71e+07	1.24	y	1.00	46:22	100
13C-PCB-205	4.60e+07	0.91	y	1.00	54:06	100

Analyst: DMS

Date: 12/10/14

Vista Analytical Laboratory - Injection Log Run file: 141209E2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141209E2	1	ST141209E2-1	DMS	10-DEC-14	03:02:32	ST141209E2-1	ST141209E2-2
141209E2	2	B4L0058-BS1	DMS	10-DEC-14	04:06:50	ST141209E2-1	ST141209E2-2
141209E2	3	SOLVENT BLANK	DMS	10-DEC-14	05:11:11	ST141209E2-1	NA
141209E2	4	B4L0058-BLK1	DMS	10-DEC-14	06:15:30	ST141209E2-1	ST141209E2-2
141209E2	5	1400915-01	DMS	10-DEC-14	07:19:49	ST141209E2-1	NA
141209E2	6	1400916-01	DMS	10-DEC-14	08:24:07	ST141209E2-1	ST141209E2-2
141209E2	7	1400917-01	DMS	10-DEC-14	09:28:30	ST141209E2-1	ST141209E2-2
141209E2	8 *	1400918-01	DMS	10-DEC-14	10:32:53	ST141209E2-1	NA
141209E2	10	SOLVENT BLANK	DMS	10-DEC-14	11:38:43	ST141209E2-1	NA
141209E2	11	ST141209E2-2	DMS	10-DEC-14	12:43:00	ST141209E2-1	ST141209E2-2

* Sample #9 Skipped
DMS 12/10/14

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141209E2-1 End Calibration ID: ST141209E2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	N/A	N/A
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	N/A	N/A
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		N/A
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: CJ 12/10/14
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141212D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	9.60	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	y	48.6	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	53.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	56.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.31	1.05-1.43	y	55.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	51.1	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	9.39	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	50.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	52.6	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.33	1.05-1.43	y	50.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	51.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	52.1	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.09	0.88-1.20	y	50.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.11	0.88-1.20	y	52.3	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	103	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MJ

Date: 12/12/14

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	93.4	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	74.2	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	88.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	87.1	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	86.9	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	98.7	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	156	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.78	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	80.2	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	79.6	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	90.2	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	89.9	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	91.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	95.1	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	103	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	90.7	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	156	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.4	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: M

Date: 12/12/14

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-16-14

RT Window Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

ZB-5MS IS Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:17	1,3,6,8-TCDF (F)	21:04
1,2,8,9-TCDD (L)	27:47	1,2,8,9-TCDF (L)	27:57
1,2,4,7,9-PeCDD (F)	29:27	1,3,4,6,8-PeCDF (F)	27:54
1,2,3,8,9-PeCDD (L)	31:54	1,2,3,8,9-PeCDF (L)	32:09
1,2,4,6,7,9-HxCDD (F)	33:19	1,2,3,4,6,8-HxCDF (F)	32:47
1,2,3,7,8,9-HxCDD (L)	35:16	1,2,3,7,8,9-HxCDF (L)	35:39
1,2,3,4,6,7,9-HpCDD (F)	37:52	1,2,3,4,6,7,8-HpCDF (F)	37:28
1,2,3,4,6,7,8-HpCDD (L)	38:45	1,2,3,4,7,8,9-HpCDF (L)	39:18

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 12/12/14

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.199	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.188	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MJ

Date: 12/12/14

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141212D1 S#1 Analysis Date: 12-DEC-14 Time: 13:56:02

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.090	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: M

Date: 12/12/14

Client ID: 1613 CS3 14I1102 Filename: 141212D1 S:1 Acq:12-DEC-14 13:56:02 ConCal: ST141212D1-1

Lab ID: ST141212D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	3.09e+06	0.78 y	1.18	26:54	1.001	9.6003		*	2.5	*
	1,2,3,7,8-PeCDD	1.11e+07	0.60 y	0.92	31:32	1.000	48.615		*	2.5	*
	1,2,3,4,7,8-HxCDD	1.04e+07	1.28 y	1.09	34:51	1.000	53.654		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.06e+07	1.27 y	1.07	34:58	1.000	55.959		*	2.5	*
	1,2,3,7,8,9-HxCDD	1.07e+07	1.31 y	0.93	35:16	1.000	55.479		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.00e+07	1.04 y	1.12	38:45	1.000	51.065		*	2.5	*
	OCDD	1.65e+07	0.89 y	0.95	42:02	1.000	102.78		*	2.5	*
	2,3,7,8-TCDF	4.04e+06	0.78 y	1.08	26:06	1.001	9.3854		*	2.5	*
	1,2,3,7,8-PeCDF	1.78e+07	1.63 y	1.09	30:20	1.001	50.668		*	2.5	*
	2,3,4,7,8-PeCDF	1.79e+07	1.65 y	1.04	31:15	1.000	52.605		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.75e+07	1.33 y	1.39	33:58	1.000	50.881		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.78e+07	1.30 y	1.26	34:06	1.001	51.345		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.71e+07	1.29 y	1.30	34:42	1.001	50.005		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.41e+07	1.29 y	1.19	35:39	1.001	52.135		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.68e+07	1.09 y	1.62	37:28	1.000	50.735		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.42e+07	1.11 y	1.53	39:18	1.000	52.288		*	2.5	*
	OCDF	2.15e+07	0.93 y	1.10	42:15	1.000	103.01		*	2.5	*
IS	13C-2,3,7,8-TCDD	2.72e+07	0.79 y	1.07	26:53	1.023	93.436				
IS	13C-1,2,3,7,8-PeCDD	2.49e+07	0.61 y	1.24	31:31	1.199	74.204				
IS	13C-1,2,3,4,7,8-HxCDD	1.78e+07	1.25 y	0.72	34:51	1.014	88.663				
IS	13C-1,2,3,6,7,8-HxCDD	1.78e+07	1.24 y	0.74	34:57	1.017	87.060				
IS	13C-1,2,3,7,8,9-HxCDD	2.06e+07	1.24 y	0.86	35:15	1.025	86.950				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.76e+07	1.08 y	0.64	38:44	1.127	98.745				
IS	13C-OCDD	3.38e+07	0.88 y	0.78	42:01	1.222	155.73				
IS	13C-2,3,7,8-TCDF	3.99e+07	0.78 y	0.92	26:04	0.992	102.02				
IS	13C-1,2,3,7,8-PeCDF	3.23e+07	1.54 y	0.95	30:20	1.154	80.211				
IS	13C-2,3,4,7,8-PeCDF	3.27e+07	1.57 y	0.97	31:14	1.188	79.571				
IS	13C-1,2,3,4,7,8-HxCDF	2.48e+07	0.52 y	0.99	33:57	0.988	90.206				
IS	13C-1,2,3,6,7,8-HxCDF	2.74e+07	0.51 y	1.10	34:05	0.992	89.942				
IS	13C-2,3,4,6,7,8-HxCDF	2.63e+07	0.53 y	1.03	34:41	1.009	91.851				
IS	13C-1,2,3,7,8,9-HxCDF	2.27e+07	0.51 y	0.86	35:38	1.037	95.122				
IS	13C-1,2,3,4,6,7,8-HpCDF	2.05e+07	0.45 y	0.71	37:27	1.090	103.28				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.78e+07	0.44 y	0.71	39:17	1.143	90.663				
IS	13C-OCDF	3.79e+07	0.89 y	0.87	42:14	1.229	156.22				
C/Up	37Cl-2,3,7,8-TCDD	3.42e+06		1.21	26:54	1.023	10.423				
RS/RT	13C-1,2,3,4-TCDD	2.71e+07	0.80 y	1.00	26:17	*	100.00				
RS	13C-1,2,3,4-TCDF	4.24e+07	0.75 y	1.00	24:46	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.78e+07	0.52 y	1.00	34:22	*	100.00				

	Rec	Qual
IS	93.4	
IS	74.2	
IS	88.7	
IS	87.1	
IS	86.9	
IS	98.7	
IS	77.9	
IS	102	
IS	80.2	
IS	79.6	
IS	90.2	
IS	89.9	
IS	91.9	
IS	95.1	
IS	103	
IS	90.7	
IS	78.1	
C/Up	26.1	

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	56.3	56.6		*	*
Total Penta-Dioxins	156	156		*	*
Total Hexa-Dioxins	214	215		*	*
Total Hepta-Dioxins	127	128		*	*
Total Tetra-Furans	29.4	29.6		*	*
Total Penta-Furans	211.85	212.12		*	*
Total Hexa-Furans	256	258		*	*
Total Hepta-Furans	103	104		*	*

Integrations by Analyst: MJ Date: 12/12/14

Reviewed by Analyst: [illegible] Date: 12/13/14

Vista Analytical Laboratory - Injection Log Run file: 141212D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141212D1	1	ST141212D1-1	MAS	12-DEC-14	13:56:02	ST141212D1-1	NA
141212D1	2	SOLVENT BLANK	MAS	12-DEC-14	14:44:44	ST141212D1-1	NA
141212D1	3	B4L0068-BS1	MAS	12-DEC-14	15:33:28	ST141212D1-1	NA
141212D1	4	SOLVENT BLANK	MAS	12-DEC-14	16:22:11	ST141212D1-1	NA
141212D1	5	B4L0068-BLK1	MAS	12-DEC-14	17:10:54	ST141212D1-1	NA
141212D1	6	1400918-02	MAS	12-DEC-14	17:59:36	ST141212D1-1	NA
141212D1	7	1400915-02D 1:10	MAS	12-DEC-14	18:48:14	ST141212D1-1	NA
141212D1	8	1400915-03D 1:10	MAS	12-DEC-14	19:36:52	ST141212D1-1	NA
141212D1	9	1400915-04D 1:10	MAS	12-DEC-14	20:25:30	ST141212D1-1	NA
141212D1	10	1400915-05D 1:10	MAS	12-DEC-14	21:14:08	ST141212D1-1	NA
141212D1	11	1400915-02	MAS	12-DEC-14	22:02:45	ST141212D1-1	NA
141212D1	12	1400915-03	MAS	12-DEC-14	22:51:21	ST141212D1-1	NA
141212D1	13	1400915-04	MAS	12-DEC-14	23:40:03	ST141212D1-1	NA
141212D1	14	1400915-05	MAS	13-DEC-14	00:28:44	ST141212D1-1	NA
141212D1	15	SOLVENT BLANK	MAS	13-DEC-14	01:17:26	ST141212D1-1	NA
141212D1	16	SOLVENT BLANK	MAS	13-DEC-14	02:06:10	ST141212D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141212D1-1 End Calibration ID: N/A

	Beg.	End
Ion abundance within QC limits?	✓	N/A
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution ≥ 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	N/A
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: ✓ 12/13/14
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141216D1-2

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	9.44	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	50.8	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	52.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.2	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	49.7	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	104	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	9.48	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	48.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	50.1	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	51.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	50.9	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.33	1.05-1.43	y	51.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	50.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	51.2	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	102	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: M)

Date: 12/17/14

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	97.5	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	81.1	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	95.0	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.0	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	96.7	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	161	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	91.7	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	89.6	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.2	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	92.3	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	92.0	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	96.2	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	98.8	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	92.6	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	162	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.6	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: M

Date: 12/17/14

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-16-14

RT Window Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

ZB-5MS IS Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:24	1,3,6,8-TCDF (F)	21:11
1,2,8,9-TCDD (L)	27:51	1,2,8,9-TCDF (L)	28:01
1,2,4,7,9-PeCDD (F)	29:29	1,3,4,6,8-PeCDF (F)	27:57
1,2,3,8,9-PeCDD (L)	31:57	1,2,3,8,9-PeCDF (L)	32:12
1,2,4,6,7,9-HxCDD (F)	33:22	1,2,3,4,6,8-HxCDF (F)	32:50
1,2,3,7,8,9-HxCDD (L)	35:18	1,2,3,7,8,9-HxCDF (L)	35:41
1,2,3,4,6,7,9-HpCDD (F)	37:54	1,2,3,4,6,7,8-HpCDF (F)	37:30
1,2,3,4,6,7,8-HpCDD (L)	38:47	1,2,3,4,7,8,9-HpCDF (L)	39:20

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 12/17/14

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.198	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.152	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.187	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: M

Date: 12/17/14

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141216D1 S#2 Analysis Date: 16-DEC-14 Time: 15:30:33

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MM

Date: 12/17/14

Client ID: 1613 CS3 14I1102 Filename: 141216D1 S:2 Acq:16-DEC-14 15:30:33 ConCal: ST141216D1-2

Lab ID: ST141216D1-2 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.93e+06	0.74 y	1.18	26:58	1.001	9.4435		*	2.5	*
	1,2,3,7,8-PeCDD	1.17e+07	0.62 y	0.92	31:35	1.001	50.791		*	2.5	*
	1,2,3,4,7,8-HxCDD	1.06e+07	1.26 y	1.09	34:53	1.000	50.241		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.10e+07	1.26 y	1.07	35:00	1.000	51.967		*	2.5	*
	1,2,3,7,8,9-HxCDD	1.09e+07	1.27 y	0.93	35:18	1.001	51.172		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	9.79e+06	1.04 y	1.12	38:47	1.000	49.747		*	2.5	*
	OCDD	1.77e+07	0.88 y	0.95	42:03	1.000	104.24		*	2.5	*
	2,3,7,8-TCDF	3.87e+06	0.78 y	1.08	26:10	1.001	9.4813		*	2.5	*
	1,2,3,7,8-PeCDF	1.87e+07	1.58 y	1.09	30:23	1.000	48.701		*	2.5	*
	2,3,4,7,8-PeCDF	1.83e+07	1.58 y	1.04	31:18	1.000	50.068		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.86e+07	1.29 y	1.39	34:00	1.000	50.578		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.87e+07	1.30 y	1.26	34:08	1.001	51.592		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.78e+07	1.28 y	1.30	34:44	1.000	50.870		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.44e+07	1.33 y	1.19	35:41	1.000	51.522		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.63e+07	1.06 y	1.62	37:30	1.001	50.517		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.45e+07	1.10 y	1.53	39:20	1.000	51.230		*	2.5	*
	OCDF	2.25e+07	0.92 y	1.10	42:17	1.000	102.04		*	2.5	*
IS	13C-2,3,7,8-TCDD	2.62e+07	0.80 y	1.07	26:57	1.022	97.541				
IS	13C-1,2,3,7,8-PeCDD	2.52e+07	0.62 y	1.24	31:34	1.198	81.070				
IS	13C-1,2,3,4,7,8-HxCDD	1.94e+07	1.26 y	0.72	34:53	1.014	94.653				
IS	13C-1,2,3,6,7,8-HxCDD	1.98e+07	1.22 y	0.74	34:59	1.017	95.013				
IS	13C-1,2,3,7,8,9-HxCDD	2.28e+07	1.26 y	0.86	35:17	1.025	94.033				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.77e+07	1.05 y	0.64	38:46	1.127	96.670				
IS	13C-OCDD	3.57e+07	0.89 y	0.78	42:02	1.222	161.00				
IS	13C-2,3,7,8-TCDF	3.79e+07	0.77 y	0.92	26:09	0.992	101.74				
IS	13C-1,2,3,7,8-PeCDF	3.52e+07	1.58 y	0.95	30:22	1.152	91.733				
IS	13C-2,3,4,7,8-PeCDF	3.51e+07	1.61 y	0.97	31:17	1.187	89.624				
IS	13C-1,2,3,4,7,8-HxCDF	2.65e+07	0.51 y	0.99	33:60	0.988	94.192				
IS	13C-1,2,3,6,7,8-HxCDF	2.87e+07	0.53 y	1.10	34:07	0.992	92.338				
IS	13C-2,3,4,6,7,8-HxCDF	2.69e+07	0.52 y	1.03	34:43	1.009	92.005				
IS	13C-1,2,3,7,8,9-HxCDF	2.34e+07	0.53 y	0.86	35:40	1.037	96.162				
IS	13C-1,2,3,4,6,7,8-HpCDF	2.00e+07	0.44 y	0.71	37:29	1.089	98.754				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.86e+07	0.44 y	0.71	39:19	1.143	92.594				
IS	13C-OCDF	4.00e+07	0.88 y	0.87	42:16	1.229	161.52				
C/Up	37Cl-2,3,7,8-TCDD	3.22e+06		1.21	26:58	1.023	10.625				
RS/RT	13C-1,2,3,4-TCDD	2.50e+07	0.81 y	1.00	26:22	*	100.00				
RS	13C-1,2,3,4-TCDF	4.04e+07	0.78 y	1.00	24:52	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.84e+07	0.51 y	1.00	34:24	*	100.00				

	Rec	Qual
IS	97.5	
IS	81.1	
IS	94.7	
IS	95.0	
IS	94.0	
IS	96.7	
IS	80.5	
IS	102	
IS	91.7	
IS	89.6	
IS	94.2	
IS	92.3	
IS	92.0	
IS	96.2	
IS	98.8	
IS	92.6	
IS	80.8	
C/Up	26.6	
RS/RT		
RS		
RS/RT		

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	54.1	54.4		*	*
Total Penta-Dioxins	160	160		*	*
Total Hexa-Dioxins	199	200		*	*
Total Hepta-Dioxins	125	125		*	*
Total Tetra-Furans	30.2	30.6		*	*
Total Penta-Furans	202.05	202.46		*	*
Total Hexa-Furans	255	256		*	*
Total Hepta-Furans	102	102		*	*

Integrations by Analyst: [signature] Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/17/14

Vista Analytical Laboratory - Injection Log Run file: 141216D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141216D1	1	ST141216D1-1	MAS	16-DEC-14	14:41:55	ST141216D1-1	NA
141216D1	2	ST141216D1-2	MAS	16-DEC-14	15:30:33	ST141216D1-2	NA
141216D1	3	SOLVENT BLANK	MAS	16-DEC-14	16:19:12	NA	NA
141216D1	4	B4L0086-BS1	MAS	16-DEC-14	17:07:51	ST141216D1-2	NA
141216D1	5	B4L0078-BS1	MAS	16-DEC-14	17:56:35	ST141216D1-1	NA
141216D1	6	SOLVENT BLANK	MAS	16-DEC-14	18:45:14	NA	NA
141216D1	7	B4L0086-BLK1	MAS	16-DEC-14	19:33:52	ST141216D1-2	NA
141216D1	8	B4L0078-BLK1	MAS	16-DEC-14	20:22:36	ST141216D1-1	NA
141216D1	9	1400870-04	MAS	16-DEC-14	21:11:15	ST141216D1-1	NA
141216D1	10	1400870-02	MAS	16-DEC-14	21:59:53	ST141216D1-1	NA
141216D1	11	1400870-01	MAS	16-DEC-14	22:48:35	ST141216D1-1	NA
141216D1	12	1400870-03	MAS	16-DEC-14	23:37:16	ST141216D1-1	NA
141216D1	13	1400913-01	MAS	17-DEC-14	00:25:58	ST141216D1-2	NA
141216D1	14	1400913-02	MAS	17-DEC-14	01:14:39	ST141216D1-2	NA
141216D1	15	1400915-03RE1	MAS	17-DEC-14	02:03:21	ST141216D1-2	NA
141216D1	16	1400915-05RE1	MAS	17-DEC-14	02:52:03	ST141216D1-2	NA
141216D1	17	SOLVENT BLANK	MAS	17-DEC-14	03:40:47	NA	NA
141216D1	18	SOLVENT BLANK	MAS	17-DEC-14	04:29:31	NA	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141216 01-2 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	(y) ✓ n	

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MH 12/17/14
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141217D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	9.56	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	50.2	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	52.3	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	51.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	51.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	48.5	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	105	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	9.19	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	49.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	50.8	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.4	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	50.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	50.1	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	52.0	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MJ

Date: 12/17/14

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	93.7	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	81.0	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	97.6	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	104	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	100	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	108	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	164	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	98.6	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	84.9	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	85.3	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	101	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	98.0	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	102	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	104	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	92.1	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	174	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.87	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: MJ

Date: 12/17/14

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-16-14

RT Window Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

ZB-5MS IS Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:15	1,3,6,8-TCDF (F)	21:02
1,2,8,9-TCDD (L)	27:46	1,2,8,9-TCDF (L)	27:56
1,2,4,7,9-PeCDD (F)	29:26	1,3,4,6,8-PeCDF (F)	27:53
1,2,3,8,9-PeCDD (L)	31:54	1,2,3,8,9-PeCDF (L)	32:08
1,2,4,6,7,9-HxCDD (F)	33:18	1,2,3,4,6,8-HxCDF (F)	32:47
1,2,3,7,8,9-HxCDD (L)	35:15	1,2,3,7,8,9-HxCDF (L)	35:38
1,2,3,4,6,7,9-HpCDD (F)	37:51	1,2,3,4,6,7,8-HpCDF (F)	37:27
1,2,3,4,6,7,8-HpCDD (L)	38:45	1,2,3,4,7,8,9-HpCDF (L)	39:17

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 12/18/14

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.200	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MJ

Date: 12/17/14

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141217D1 S#1 Analysis Date: 17-DEC-14 Time: 14:47:55

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

Analyst: MV

Date: 12/17/14

Client ID: 1613 CS3 14I1102 Filename: 141217D1 S:1 Acq:17-DEC-14 14:47:55 ConCal: ST141217D1-1

Lab ID: ST141217D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.47e+06	0.77 y	1.18	26:53	1.001	9.5620		*	2.5	*
	1,2,3,7,8-PeCDD	1.00e+07	0.62 y	0.92	31:32	1.000	50.208		*	2.5	*
	1,2,3,4,7,8-HxCDD	9.16e+06	1.29 y	1.09	34:51	1.000	52.315		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.45e+06	1.21 y	1.07	34:57	1.001	51.012		*	2.5	*
	1,2,3,7,8,9-HxCDD	9.38e+06	1.23 y	0.93	35:15	1.000	51.502		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	8.55e+06	1.07 y	1.12	38:45	1.000	48.524		*	2.5	*
	OCDD	1.46e+07	0.89 y	0.95	42:00	1.000	104.51		*	2.5	*
	2,3,7,8-TCDF	3.20e+06	0.78 y	1.08	26:05	1.001	9.1882		*	2.5	*
	1,2,3,7,8-PeCDF	1.56e+07	1.60 y	1.09	30:20	1.000	49.948		*	2.5	*
	2,3,4,7,8-PeCDF	1.55e+07	1.60 y	1.04	31:14	1.000	50.774		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.56e+07	1.29 y	1.39	33:57	1.000	49.403		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.56e+07	1.29 y	1.26	34:05	1.000	50.465		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.47e+07	1.31 y	1.30	34:41	1.000	50.800		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.20e+07	1.27 y	1.19	35:38	1.000	50.436		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.38e+07	1.10 y	1.62	37:27	1.001	50.143		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.18e+07	1.05 y	1.53	39:17	1.000	51.997		*	2.5	*
	OCDF	1.93e+07	0.91 y	1.10	42:14	1.000	101.14		*	2.5	*
IS	13C-2,3,7,8-TCDD	2.18e+07	0.78 y	1.07	26:52	1.023	93.676				
IS	13C-1,2,3,7,8-PeCDD	2.18e+07	0.63 y	1.24	31:31	1.200	80.959				
IS	13C-1,2,3,4,7,8-HxCDD	1.61e+07	1.24 y	0.72	34:50	1.014	97.570				
IS	13C-1,2,3,6,7,8-HxCDD	1.74e+07	1.23 y	0.74	34:56	1.017	103.61				
IS	13C-1,2,3,7,8,9-HxCDD	1.96e+07	1.23 y	0.86	35:14	1.025	100.49				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.58e+07	1.07 y	0.64	38:44	1.127	107.72				
IS	13C-OCDD	2.93e+07	0.89 y	0.78	41:60	1.222	164.44				
IS	13C-2,3,7,8-TCDF	3.23e+07	0.77 y	0.92	26:03	0.992	98.622				
IS	13C-1,2,3,7,8-PeCDF	2.86e+07	1.60 y	0.95	30:19	1.154	84.870				
IS	13C-2,3,4,7,8-PeCDF	2.94e+07	1.64 y	0.97	31:14	1.189	85.263				
IS	13C-1,2,3,4,7,8-HxCDF	2.27e+07	0.52 y	0.99	33:57	0.988	100.51				
IS	13C-1,2,3,6,7,8-HxCDF	2.45e+07	0.52 y	1.10	34:04	0.992	98.005				
IS	13C-2,3,4,6,7,8-HxCDF	2.23e+07	0.52 y	1.03	34:40	1.009	94.926				
IS	13C-1,2,3,7,8,9-HxCDF	1.99e+07	0.51 y	0.86	35:37	1.037	101.81				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.70e+07	0.43 y	0.71	37:26	1.089	104.48				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.48e+07	0.43 y	0.71	39:17	1.143	92.079				
IS	13C-OCDF	3.47e+07	0.91 y	0.87	42:13	1.229	174.33				
C/Up	37Cl-2,3,7,8-TCDD	2.60e+06		1.21	26:53	1.024	9.8714				
RS/RT	13C-1,2,3,4-TCDD	2.17e+07	0.81 y	1.00	26:16	*	100.00				
RS	13C-1,2,3,4-TCDF	3.55e+07	0.77 y	1.00	24:45	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.28e+07	0.52 y	1.00	34:21	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	55.5	56.0		*	*
Total Penta-Dioxins	156	157		*	*
Total Hexa-Dioxins	201	202		*	*
Total Hepta-Dioxins	126	127		*	*
Total Tetra-Furans	29.1	29.3		*	*
Total Penta-Furans	207.53	208.21		*	*
Total Hexa-Furans	249	250		*	*
Total Hepta-Furans	102	104		*	*

		Rec	Qual
IS	13C-2,3,7,8-TCDD	93.7	
IS	13C-1,2,3,7,8-PeCDD	81.0	
IS	13C-1,2,3,4,7,8-HxCDD	97.6	
IS	13C-1,2,3,6,7,8-HxCDD	104	
IS	13C-1,2,3,7,8,9-HxCDD	100	
IS	13C-1,2,3,4,6,7,8-HpCDD	108	
IS	13C-OCDD	82.2	
IS	13C-2,3,7,8-TCDF	98.6	
IS	13C-1,2,3,7,8-PeCDF	84.9	
IS	13C-2,3,4,7,8-PeCDF	85.3	
IS	13C-1,2,3,4,7,8-HxCDF	101	
IS	13C-1,2,3,6,7,8-HxCDF	98.0	
IS	13C-2,3,4,6,7,8-HxCDF	94.9	
IS	13C-1,2,3,7,8,9-HxCDF	102	
IS	13C-1,2,3,4,6,7,8-HpCDF	104	
IS	13C-1,2,3,4,7,8,9-HpCDF	92.1	
IS	13C-OCDF	87.2	
C/Up	37Cl-2,3,7,8-TCDD	24.7	

Integrations by Analyst: MJ Date: 12/17/14

Reviewed by Analyst: [signature] Date: 12/18/14

Vista Analytical Laboratory - Injection Log Run file: 141217D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141217D1	1	ST141217D1-1	MAS	17-DEC-14	14:47:55	ST141217D1-1	NA
141217D1	2	SOLVENT BLANK	MAS	17-DEC-14	15:36:33	ST141217D1-1	NA
141217D1	3	SOLVENT BLANK	MAS	17-DEC-14	16:25:12	ST141217D1-1	NA
141217D1	4	B4L0090-BS1	MAS	17-DEC-14	17:13:51	ST141217D1-1	NA
141217D1	5	SOLVENT BLANK	MAS	17-DEC-14	18:02:30	ST141217D1-1	NA
141217D1	6	B4L0090-BLK1	MAS	17-DEC-14	18:51:09	ST141217D1-1	NA
141217D1	7	1400930-01	MAS	17-DEC-14	19:39:48	ST141217D1-1	NA
141217D1	8	1400931-01	MAS	17-DEC-14	20:28:27	ST141217D1-1	NA
141217D1	9	1400932-01	MAS	17-DEC-14	21:17:04	ST141217D1-1	NA
141217D1	10	1400925-01	MAS	17-DEC-14	22:05:43	ST141217D1-1	NA
141217D1	11	1400925-02	MAS	17-DEC-14	22:54:21	ST141217D1-1	NA
141217D1	12	1400925-03	MAS	17-DEC-14	23:42:57	ST141217D1-1	NA
141217D1	13	1400925-04	MAS	18-DEC-14	00:31:39	ST141217D1-1	NA
141217D1	14	1400928-01	MAS	18-DEC-14	01:20:15	ST141217D1-1	NA
141217D1	15	1400915-01	MAS	18-DEC-14	02:08:52	ST141217D1-1	NA
141217D1	16	SOLVENT BLANK	MAS	18-DEC-14	02:57:30	ST141217D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST14121701-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution ≥ 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MZ 12/18/14
Initials & Date

** Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST141217F1-1
Initial Calibration Date: 11/13/2014
Instrument ID: VG-9
GC Column ID: DB-225
VER Data file name: 141217F1_2
Analysis Date: 17-Dec-14
Analysis Time: 16:22:12

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	9.33	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: CJS
Date: 12/18/14

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory — CCAL ID: ST141217F1-1
Initial Calibration Date: 11/13/2014
Instrument ID: VG-9 — GC Column ID: DB-225
VER Data file name: 141217F1_2 — Analysis Date: 17-Dec-14 — Analysis Time: 16:22:12

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	103	71.0 76.0	140.0 131.0 (5)	Yes	70.0	130.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: CJS
Date: 12/18/14

Dataset: C:\MassLynx\Default.pro\Results\141217F1\141217F1_2.qld

Last Altered: Thursday, December 18, 2014 08:03:51 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:04:52 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141217F1_2, Date: 17-Dec-2014, Time: 16:22:12, ID: ST141217F1-1 1613 CS3 14I1102, Description: 1613 CS3 14I1102

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	4.08e4	0.79	NO	1.10	1.000	17.35	9.3269	93.3	0.0908
2	2 13C-2,3,7,8-TCDF	3.98e5	0.79	NO	0.844	1.000	17.33	102.71	103	0.294
3	3 13C-1,2,3,4-TCDF	4.59e5	0.79	NO	1.00	1.000	15.09	100.00	100	0.248
4	4 13C-1,2,3,4-TCDD	2.65e5	0.77	NO		1.000	15.87			

CJ 12/18/14

Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Thursday, December 18, 2014 08:03:05 Pacific Standard Time
Printed: Thursday, December 18, 2014 08:03:44 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 18 Dec 2014 08:02:59
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	141217F1_1	CP141217F1-1 DB-225 CPSM	17-Dec-14	15:51:50
2	141217F1_2	ST141217F1-1 1613 CS3 14I1102	17-Dec-14	16:22:12
3	141217F1_3	SOLVENT BLANK	17-Dec-14	16:54:33
4	141217F1_4	1400915-02RE1 BD-MH-9.66-20141203-S CF...	17-Dec-14	17:26:56
5	141217F1_5	1400915-04RE1 BD-MH-10.9-20141203-S CF...	17-Dec-14	17:59:17
6	141217F1_6	1400915-03RE2 BD-OWS-15-20141203-S RX...	17-Dec-14	18:31:38
7	141217F1_7	1400915-05RE2 BD-MH-13.43-20141202-S R...	17-Dec-14	19:03:59
8	141217F1_8	1400913-01RE1 Ferric Sulfate FC CF 7.07	17-Dec-14	19:36:20
9	141217F1_9	1400913-02RE1 Ferric Chloride FC CF 9.12	17-Dec-14	20:08:40
10	141217F1_10	SOLVENT BLANK	17-Dec-14	20:41:01

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141217F1-1

End Calibration ID: N/A

	Beg.	End
Ion abundance within QC limits?	✓	N/A
Concentration within range?	✓	
First and last eluters present?	N/A	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	N/A
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: CP 12/18/14

Initials & Date

* *Ending standard criteria applicable to 8290 only.*

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Inst. ID. VG-7

Data filename: 141016D1

			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7
			10	0.25	0.50	2.0	40	200
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
1,2,3,7,8-PeCDD	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
1,2,3,4,7,8-HxCDD	1.09	5.48 %	1.08	1.18	1.07	1.00	1.08	1.12
1,2,3,6,7,8-HxCDD	1.07	5.59 %	1.06	1.06	1.07	0.96	1.13	1.12
1,2,3,7,8,9-HxCDD	0.93	4.12 %	0.92	0.98	0.95	0.86	0.93	0.94
1,2,3,4,6,7,8-HpCDD	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
OCDD	0.95	4.99 %	0.97	0.96	0.97	0.85	0.97	0.98
2,3,7,8-TCDF	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
1,2,3,7,8-PeCDF	1.09	5.09 %	1.10	1.13	1.05	1.00	1.11	1.14
2,3,4,7,8-PeCDF	1.04	3.90 %	1.05	1.04	1.06	0.96	1.07	1.08
1,2,3,4,7,8-HxCDF	1.39	3.27 %	1.40	1.42	1.37	1.31	1.42	1.42
1,2,3,6,7,8-HxCDF	1.26	5.39 %	1.26	1.34	1.29	1.14	1.26	1.30
2,3,4,6,7,8-HxCDF	1.30	4.20 %	1.28	1.30	1.33	1.20	1.34	1.35
1,2,3,7,8,9-HxCDF	1.19	3.60 %	1.16	1.25	1.18	1.13	1.20	1.23
1,2,3,4,6,7,8-HpCDF	1.62	4.07 %	1.59	1.67	1.66	1.49	1.64	1.64
1,2,3,4,7,8,9-HpCDF	1.53	4.58 %	1.54	1.58	1.55	1.39	1.53	1.57
OCDF	1.10	4.20 %	1.11	1.09	1.13	1.01	1.13	1.14
13C-2,3,7,8-TCDD	1.07	5.97 %	1.05	1.00	1.07	1.04	1.10	1.18
13C-1,2,3,7,8-PeCDD	1.24	12.79 %	1.06	1.09	1.23	1.23	1.34	1.49
13C-1,2,3,4,7,8-HxCDD	0.72	7.50 %	0.70	0.69	0.70	0.70	0.73	0.83
13C-1,2,3,6,7,8-HxCDD	0.74	6.26 %	0.72	0.71	0.71	0.71	0.73	0.83
13C-1,2,3,7,8,9-HxCDD	0.86	6.66 %	0.83	0.81	0.83	0.83	0.86	0.97
13C-1,2,3,4,6,7,8-HpCDD	0.64	7.66 %	0.63	0.61	0.61	0.62	0.66	0.74
13C-OCDD	0.78	10.54 %	0.70	0.73	0.76	0.77	0.79	0.94
13C-2,3,7,8-TCDF	0.92	3.07 %	0.93	0.89	0.91	0.91	0.94	0.97
13C-1,2,3,7,8-PeCDF	0.95	10.44 %	0.86	0.87	0.90	0.95	1.01	1.12
13C-2,3,4,7,8-PeCDF	0.97	10.58 %	0.89	0.89	0.91	0.96	1.02	1.15
13C-1,2,3,4,7,8-HxCDF	0.99	7.56 %	0.92	0.94	0.96	0.98	1.01	1.13
13C-1,2,3,6,7,8-HxCDF	1.10	7.86 %	1.07	1.00	1.05	1.09	1.12	1.25
13C-2,3,4,6,7,8-HxCDF	1.03	5.39 %	0.97	1.00	1.02	1.01	1.04	1.13
13C-1,2,3,7,8,9-HxCDF	0.86	7.21 %	0.84	0.82	0.82	0.83	0.87	0.98
13C-1,2,3,4,6,7,8-HpCDF	0.71	7.44 %	0.70	0.69	0.67	0.69	0.72	0.82
13C-1,2,3,4,7,8,9-HpCDF	0.71	9.22 %	0.65	0.69	0.67	0.67	0.74	0.83
13C-OCDF	0.87	11.25 %	0.82	0.80	0.83	0.85	0.88	1.06
37Cl-2,3,7,8-TCDD	1.21	11.67 %	1.22	1.08	1.03	1.24	1.27	1.43
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

ms 10/17/14
CG 10/17/14

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	2.08e+06	0.73 y	26:60	-	1.11
2	Unk	1,2,3,7,8-PeCDD	50.00	8.78e+06	0.61 y	31:30	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	50.00	7.82e+06	1.26 y	34:50	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.94e+06	1.25 y	34:57	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	50.00	7.97e+06	1.24 y	35:15	-	0.92
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	7.29e+06	1.04 y	38:42	-	1.12
7	Unk	OCDD	100.00	1.40e+07	0.89 y	42:02	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.78e+06	0.80 y	26:13	-	1.00
9	Unk	1,2,3,7,8-PeCDF	50.00	1.40e+07	1.59 y	30:20	-	1.10
10	Unk	2,3,4,7,8-PeCDF	50.00	1.38e+07	1.59 y	31:14	-	1.05
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.34e+07	1.29 y	33:56	-	1.40
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.40e+07	1.29 y	34:04	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.29e+07	1.31 y	34:40	-	1.28
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.01e+07	1.27 y	35:39	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.16e+07	1.08 y	37:30	-	1.59
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.04e+07	1.07 y	39:16	-	1.54
17	Unk	OCDF	100.00	1.88e+07	0.91 y	42:16	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	1.87e+07	0.79 y	26:58	-	1.05
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.90e+07	0.63 y	31:29	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.44e+07	1.25 y	34:49	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.50e+07	1.25 y	34:56	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.72e+07	1.23 y	35:14	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.30e+07	1.07 y	38:42	-	0.63
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:02	-	0.70
43	IS	13C-2,3,7,8-TCDF	100.00	2.77e+07	0.74 y	26:12	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.54e+07	1.55 y	30:19	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.61 y	31:13	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.92e+07	0.51 y	33:55	-	0.92
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.23e+07	0.50 y	34:03	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	34:39	-	0.97
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.73e+07	0.51 y	35:38	-	0.84
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.46e+07	0.43 y	37:29	-	0.70
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.35e+07	0.45 y	39:15	-	0.65
52	IS	13C-OCDF	200.00	3.39e+07	0.92 y	42:15	-	0.82
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.18e+06		26:59	-	1.22
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.79e+07	0.80 y	26:24	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.97e+07	0.78 y	24:58	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.08e+07	0.51 y	34:21	-	1.00

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	5.01e+04	0.71	y	27:03	-	1.36
2	Unk	1,2,3,7,8-PeCDD	1.25	1.89e+05	0.58	y	31:32	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.80e+05	1.38	y	34:52	-	1.18
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.66e+05	1.38	y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.76e+05	1.42	y	35:17	-	0.98
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.40e+05	0.92	y	38:44	-	1.04
7	Unk	OCDD	2.50	3.13e+05	0.92	y	42:04	-	0.96
8	Unk	2,3,7,8-TCDF	0.25	6.52e+04	0.82	y	26:17	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1.25	3.11e+05	1.49	y	30:22	-	1.13
10	Unk	2,3,4,7,8-PeCDF	1.25	2.91e+05	1.54	y	31:15	-	1.04
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.95e+05	1.36	y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.95e+05	1.26	y	34:06	-	1.34
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.89e+05	1.31	y	34:43	-	1.30
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.25e+05	1.36	y	35:41	-	1.25
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.54e+05	1.14	y	37:32	-	1.67
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.39e+05	1.08	y	39:18	-	1.58
17	Unk	OCDF	2.50	3.84e+05	0.91	y	42:18	-	1.09
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79	y	27:02	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.61e+07	0.64	y	31:32	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.24	y	34:51	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.31	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.44e+07	1.29	y	35:16	-	0.81
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.07e+07	1.03	y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.60e+07	0.89	y	42:03	-	0.73
43	IS	13C-2,3,7,8-TCDF	100.00	2.24e+07	0.75	y	26:16	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.20e+07	1.59	y	30:21	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.24e+07	1.61	y	31:15	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.66e+07	0.52	y	33:57	-	0.94
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.77e+07	0.51	y	34:05	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.77e+07	0.51	y	34:42	-	1.00
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.45e+07	0.52	y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.22e+07	0.44	y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.21e+07	0.43	y	39:17	-	0.69
52	IS	13C-OCDF	200.00	2.81e+07	0.92	y	42:17	-	0.80
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	4.00e+04			27:03	-	1.08
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.48e+07	0.80	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.52e+07	0.78	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.77e+07	0.53	y	34:23	-	1.00

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	9.47e+04	0.71	y	27:03	-	1.22
2	Unk	1,2,3,7,8-PeCDD	2.50	4.17e+05	0.58	y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.52e+05	1.23	y	34:52	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.60e+05	1.19	y	34:59	-	1.07
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.72e+05	1.18	y	35:16	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.28e+05	1.04	y	38:44	-	1.14
7	Unk	OCDD	5.00	7.00e+05	0.91	y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	0.50	1.35e+05	0.76	y	26:17	-	1.15
9	Unk	1,2,3,7,8-PeCDF	2.50	6.14e+05	1.75	y	30:22	-	1.05
10	Unk	2,3,4,7,8-PeCDF	2.50	6.26e+05	1.44	y	31:15	-	1.06
11	Unk	1,2,3,4,7,8-HxCDF	2.50	6.24e+05	1.23	y	33:58	-	1.37
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.42e+05	1.32	y	34:06	-	1.29
13	Unk	2,3,4,6,7,8-HxCDF	2.50	6.41e+05	1.24	y	34:42	-	1.33
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.56e+05	1.22	y	35:40	-	1.18
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.07	y	37:32	-	1.66
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.91e+05	1.14	y	39:17	-	1.55
17	Unk	OCDF	5.00	8.91e+05	0.93	y	42:17	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.56e+07	0.78	y	27:02	-	1.07
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.79e+07	0.63	y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.32e+07	1.27	y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.35e+07	1.26	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.56e+07	1.27	y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.05	y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.89e+07	0.89	y	42:03	-	0.76
43	IS	13C-2,3,7,8-TCDF	100.00	2.36e+07	0.78	y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.34e+07	1.58	y	30:21	-	0.90
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.37e+07	1.54	y	31:14	-	0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.82e+07	0.52	y	33:57	-	0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.99e+07	0.52	y	34:05	-	1.05
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.93e+07	0.52	y	34:41	-	1.02
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.55e+07	0.53	y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.26e+07	0.43	y	37:31	-	0.67
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44	y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.15e+07	0.89	y	42:17	-	0.83
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	7.54e+04			27:03	-	1.03
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.46e+07	0.79	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.60e+07	0.77	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.89e+07	0.52	y	34:22	-	1.00

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.13e+05	0.82	y	27:03	-	1.06
2	Unk	1,2,3,7,8-PeCDD	10.00	1.47e+06	0.59	y	31:32	-	0.84
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.26e+06	1.28	y	34:52	-	1.00
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.24e+06	1.26	y	34:59	-	0.96
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.30e+06	1.28	y	35:17	-	0.86
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.04	y	38:44	-	1.07
7	Unk	OCDD	20.00	2.38e+06	0.87	y	42:03	-	0.85
8	Unk	2,3,7,8-TCDF	2.00	4.47e+05	0.78	y	26:17	-	0.99
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.55	y	30:22	-	1.00
10	Unk	2,3,4,7,8-PeCDF	10.00	2.32e+06	1.57	y	31:15	-	0.96
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.31e+06	1.29	y	33:58	-	1.31
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.24e+06	1.28	y	34:06	-	1.14
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.19e+06	1.30	y	34:42	-	1.20
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.69e+06	1.33	y	35:41	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.86e+06	1.10	y	37:32	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.69e+06	1.09	y	39:17	-	1.39
17	Unk	OCDF	20.00	3.11e+06	0.93	y	42:17	-	1.01
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79	y	27:02	-	1.04
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.74e+07	0.63	y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.26e+07	1.28	y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.29e+07	1.24	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.51e+07	1.23	y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.13e+07	1.05	y	38:43	-	0.62
42	IS	13C-OCDD	200.00	2.79e+07	0.88	y	42:03	-	0.77
43	IS	13C-2,3,7,8-TCDF	100.00	2.26e+07	0.77	y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.36e+07	1.54	y	30:21	-	0.95
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.40e+07	1.57	y	31:14	-	0.96
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.77e+07	0.50	y	33:57	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.97e+07	0.51	y	34:05	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52	y	34:41	-	1.01
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.50e+07	0.52	y	35:40	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.24e+07	0.43	y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.22e+07	0.43	y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.07e+07	0.90	y	42:17	-	0.85
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.51e+05			27:03	-	1.24
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.49e+07	0.77	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.80e+07	0.52	y	34:22	-	1.00

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	6.36e+06	0.79 y	27:03	-	1.16
2	Unk	1,2,3,7,8-PeCDD	200.00	3.08e+07	0.61 y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	200.00	2.57e+07	1.25 y	34:52	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	200.00	2.66e+07	1.26 y	34:59	-	1.13
5	Unk	1,2,3,7,8,9-HxCDD	200.00	2.59e+07	1.24 y	35:17	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.46e+07	1.04 y	38:44	-	1.14
7	Unk	OCDD	400.00	5.00e+07	0.89 y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	40.00	8.92e+06	0.77 y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	200.00	4.90e+07	1.58 y	30:22	-	1.11
10	Unk	2,3,4,7,8-PeCDF	200.00	4.76e+07	1.60 y	31:15	-	1.07
11	Unk	1,2,3,4,7,8-HxCDF	200.00	4.66e+07	1.28 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	200.00	4.56e+07	1.28 y	34:06	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	200.00	4.54e+07	1.26 y	34:42	-	1.34
14	Unk	1,2,3,7,8,9-HxCDF	200.00	3.40e+07	1.28 y	35:40	-	1.20
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.84e+07	1.09 y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.69e+07	1.08 y	39:17	-	1.53
17	Unk	OCDF	400.00	6.50e+07	0.92 y	42:18	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.37e+07	0.81 y	27:02	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.63 y	31:31	-	1.34
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.19e+07	1.25 y	34:51	-	0.73
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.18e+07	1.26 y	34:58	-	0.73
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.40e+07	1.24 y	35:16	-	0.86
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.08e+07	1.07 y	38:43	-	0.66
42	IS	13C-OCDD	200.00	2.58e+07	0.89 y	42:03	-	0.79
43	IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.77 y	26:16	-	0.94
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.21e+07	1.61 y	30:21	-	1.01
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.23e+07	1.57 y	31:14	-	1.02
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.64e+07	0.51 y	33:57	-	1.01
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.82e+07	0.50 y	34:05	-	1.12
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.69e+07	0.51 y	34:41	-	1.04
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.52 y	35:40	-	0.87
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.45 y	37:31	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.20e+07	0.44 y	39:16	-	0.74
52	IS	13C-OCDF	200.00	2.87e+07	0.89 y	42:17	-	0.88
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	6.31e+06		27:03	-	1.27
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.24e+07	0.82 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.19e+07	0.79 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.63e+07	0.51 y	34:22	-	1.00

Filename: 141016D1 S: 7 Acquired: 16-OCT-14 15:56:26
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-6 1613 CS5 14I1823

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	200.00	3.39e+07	0.77 y	27:03	-	1.20
2	Unk	1,2,3,7,8-PeCDD	1000.00	1.69e+08	0.62 y	31:32	-	0.95
3	Unk	1,2,3,4,7,8-HxCDD	1000.00	1.51e+08	1.26 y	34:52	-	1.12
4	Unk	1,2,3,6,7,8-HxCDD	1000.00	1.51e+08	1.26 y	34:59	-	1.12
5	Unk	1,2,3,7,8,9-HxCDD	1000.00	1.48e+08	1.26 y	35:17	-	0.94
6	Unk	1,2,3,4,6,7,8-HpCDD	1000.00	1.39e+08	1.04 y	38:43	-	1.17
7	Unk	OCDD	2000.00	2.98e+08	0.90 y	42:03	-	0.98
8	Unk	2,3,7,8-TCDF	200.00	4.44e+07	0.78 y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	1000.00	2.73e+08	1.58 y	30:22	-	1.14
10	Unk	2,3,4,7,8-PeCDF	1000.00	2.66e+08	1.60 y	31:15	-	1.08
11	Unk	1,2,3,4,7,8-HxCDF	1000.00	2.60e+08	1.27 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1000.00	2.64e+08	1.27 y	34:06	-	1.30
13	Unk	2,3,4,6,7,8-HxCDF	1000.00	2.48e+08	1.29 y	34:42	-	1.35
14	Unk	1,2,3,7,8,9-HxCDF	1000.00	1.95e+08	1.28 y	35:40	-	1.23
15	Unk	1,2,3,4,6,7,8-HpCDF	1000.00	2.17e+08	1.09 y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	1000.00	2.10e+08	1.10 y	39:17	-	1.57
17	Unk	OCDF	2000.00	3.92e+08	0.91 y	42:17	-	1.14
36	IS	13C-2,3,7,8-TCDD	100.00	1.41e+07	0.77 y	27:02	-	1.18
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.78e+07	0.65 y	31:31	-	1.49
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.35e+07	1.26 y	34:51	-	0.83
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.34e+07	1.26 y	34:58	-	0.83
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.57e+07	1.27 y	35:15	-	0.97
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.19e+07	1.05 y	38:43	-	0.74
42	IS	13C-OCDD	200.00	3.03e+07	0.87 y	42:03	-	0.94
43	IS	13C-2,3,7,8-TCDF	100.00	2.06e+07	0.74 y	26:15	-	0.97
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.39e+07	1.59 y	30:21	-	1.12
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.46e+07	1.62 y	31:14	-	1.15
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.83e+07	0.52 y	33:57	-	1.13
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.03e+07	0.52 y	34:05	-	1.25
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.84e+07	0.51 y	34:41	-	1.13
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.59e+07	0.51 y	35:39	-	0.98
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.32e+07	0.43 y	37:31	-	0.82
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.34e+07	0.44 y	39:16	-	0.83
52	IS	13C-OCDF	200.00	3.45e+07	0.89 y	42:17	-	1.06
53	C/Up	37Cl-2,3,7,8-TCDD	200.00	3.41e+07		27:03	-	1.43
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.19e+07	0.82 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.14e+07	0.76 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.62e+07	0.52 y	34:22	-	1.00

Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Inst. ID. VG-7

Data filename: 141016D1			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7
			10	0.25	0.50	2.0	40	200
	RRT Limits							
Name	Lower	Upper	RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.000	1.000
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.001	1.000	1.000	1.000	1.000
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.001	1.000	1.001	1.001	1.001	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.001	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.001	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.021	1.021	1.021	1.021	1.021	1.021
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.192	1.191	1.191	1.191	1.191	1.191
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.026	1.026	1.026	1.026	1.026	1.026
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.126	1.126	1.126	1.126	1.126
13C-OCDD	1.085	-1.365	1.224	1.223	1.223	1.223	1.223	1.223
13C-2,3,7,8-TCDF	0.923	-1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.148	1.147	1.147	1.147	1.147	1.147
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.182	1.181	1.180	1.180	1.180	1.181
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.037	1.037	1.038	1.038	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.091	1.091	1.091	1.091	1.091	1.091
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.143	1.142	1.143	1.143	1.143	1.142
13C-OCDF	1.091	-1.371	1.230	1.230	1.230	1.230	1.230	1.230
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.022	1.022	1.022	1.022	1.022
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.11
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.11
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.02
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.02
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.12
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.12
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.00
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.00
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	1.07
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	1.07
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	1.07
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	1.07
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.28
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.28
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.57
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.57

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.36
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.36
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.94
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.94
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.07
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.07
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.04
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.04
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.16
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.16
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.08
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.08
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.08
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.08
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.33
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.33
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.62
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.62

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.22
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.22
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.03
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.03
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.14
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.14
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.15
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.15
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.05
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.05
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.05
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.05
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.30
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.30
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.60
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.60

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.06
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.06
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.84
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.84
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	0.94
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	0.94
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.07
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.07
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	0.99
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	0.99
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	0.98
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	0.98
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	0.98
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	0.98
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.19
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.19
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.44
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.44

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.16
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.16
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.04
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.04
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.14
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.14
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.08
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.08
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.09
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.09
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.09
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.09
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.31
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.31
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.59
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.59

Filename: 141016D1 S: 7 Acquired: 16-OCT-14 15:56:26
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-6 1613 CS5 14I1823

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.20
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.20
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.95
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.95
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.06
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.06
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.17
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.17
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.08
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.08
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.11
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.11
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.11
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.11
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.32
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.32
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.60
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.60

Run: 141016D1 Analyte: Cal: 1613VG7-10-16-7 Inst. ID. VG-7

Data filename: 141016D1

Name	Mean RRF	%RSD	Samp# 1 10 RRF#1	Samp# 3 0.25 RRF#2	Samp# 4 0.50 RRF#3	Samp# 5 2.0 RRF#4	Samp# 6 40 RRF#5	Samp# 7 200 RRF#6
Total Tetra-Dioxins	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
TCDD EMPC	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
Total Penta-Dioxins	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
PeCDD EMPC	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
Total Hexa-Dioxins	1.02	4.51 %	1.02	1.07	1.03	0.94	1.04	1.06
HxCDD EMPC	1.02	4.51 %	1.02	1.07	1.03	0.94	1.04	1.06
Total Hepta-Dioxins	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
HpCDD EMPC	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
Total Tetra-Furans	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
TCDF EMPC	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
1st Func. Penta-Furans	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
1st Func. PeCDF EMPC	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
Total Penta-Furans	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
PeCDF EMPC	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
Total Hexa-Furans	1.29	3.86 %	1.28	1.33	1.30	1.19	1.31	1.32
HxCDF EMPC	1.29	3.86 %	1.28	1.33	1.30	1.19	1.31	1.32
Total Hepta-Furans	1.57	4.23 %	1.57	1.62	1.60	1.44	1.59	1.60
HpCDF EMPC	1.57	4.23 %	1.57	1.62	1.60	1.44	1.59	1.60

Vista Analytical Laboratory - Injection Log Run file: 141016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141016D1	1	ST141016D1-1	MAS	16-OCT-14	11:05:57	ST141016D1-1	NA
141016D1	2	SOLVENT BLANK	MAS	16-OCT-14	11:54:17	ST141016D1-1	NA
141016D1	3	ST141016D1-2	MAS	16-OCT-14	12:42:43	ST141016D1-1	NA
141016D1	4	ST141016D1-3	MAS	16-OCT-14	13:31:08	ST141016D1-1	NA
141016D1	5	ST141016D1-4	MAS	16-OCT-14	14:19:34	ST141016D1-1	NA
141016D1	6	ST141016D1-5	MAS	16-OCT-14	15:08:00	ST141016D1-1	NA
141016D1	7	ST141016D1-6	MAS	16-OCT-14	15:56:26	ST141016D1-1	NA
141016D1	8	SOLVENT BLANK	MAS	16-OCT-14	16:44:52	ST141016D1-1	NA
141016D1	9	SS141016D1-1	MAS	16-OCT-14	17:33:17	ST141016D1-1	NA
141016D1	10	SOLVENT BLANK	MAS	16-OCT-14	18:21:38	ST141016D1-1	NA

Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time
Printed: Friday, November 14, 2014 08:18:43 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF
Response Factor: 1.10023
RRF SD: 0.100726, Relative SD: 9.15499
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1	141113F1_2	0.250	0.76	NO	17.52	2.58e3	9.20e5	0.255	1.12
2	2	141113F1_3	0.500	0.88	NO	17.54	5.25e3	1.05e6	0.455	1.00
3	3	141113F1_4	2.00	0.76	NO	17.52	2.24e4	1.16e6	1.76	0.968
4	4	141113F1_5	40.0	0.78	NO	17.52	5.36e5	1.16e6	41.8	1.15
5	5	141113F1_6	200	0.80	NO	17.52	3.07e6	1.24e6	226	1.24
6	6	141113F1_7	10.0	0.86	NO	17.55	1.30e5	1.16e6	10.2	1.12

CB 11/14/14

11/14/14

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.843843
RRF SD: 0.0230178, Relative SD: 2.72774
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1	141113F1_2	100	0.79	NO	17.51	9.20e5	1.11e6	98.2	0.829
2	2	141113F1_3	100	0.79	NO	17.51	1.05e6	1.28e6	97.4	0.822
3	3	141113F1_4	100	0.79	NO	17.51	1.16e6	1.37e6	99.6	0.840
4	4	141113F1_5	100	0.80	NO	17.51	1.16e6	1.31e6	105	0.885
5	5	141113F1_6	100	0.81	NO	17.51	1.24e6	1.45e6	101	0.853
6	6	141113F1_7	100	0.81	NO	17.52	1.16e6	1.39e6	98.8	0.833

Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time
Printed: Friday, November 14, 2014 08:18:43 Pacific Standard Time

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

	#-Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	100	0.81	NO	15.25	1.11e6	1.11e6	100	1.00
2	2 141113F1_3	100	0.81	NO	15.23	1.28e6	1.28e6	100	1.00
3	3 141113F1_4	100	0.80	NO	15.23	1.37e6	1.37e6	100	1.00
4	4 141113F1_5	100	0.80	NO	15.23	1.31e6	1.31e6	100	1.00
5	5 141113F1_6	100	0.82	NO	15.23	1.45e6	1.45e6	100	1.00
6	6 141113F1_7	100	0.81	NO	15.25	1.39e6	1.39e6	100	1.00

Compound name: 13C-1,2,3,4-TCDD
No Calibration
Response type: External Std, Area
Curve type: RF

	#-Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	0.000	0.80	NO	16.00	7.79e5			0.000
2	2 141113F1_3	0.000	0.78	NO	16.00	9.07e5			0.000
3	3 141113F1_4	0.000	0.80	NO	16.00	9.36e5			0.000
4	4 141113F1_5	0.000	0.80	NO	16.00	9.46e5			0.000
5	5 141113F1_6	0.000	0.79	NO	16.00	1.03e6			0.000
6	6 141113F1_7	0.000	0.79	NO	16.00	9.83e5			0.000

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time
Printed: Friday, November 14, 2014 08:16:25 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141113F1_7, Date: 13-Nov-2014, Time: 17:16:30, ID: ST141113F1-6 1613 CS3 14I1102, Description: 1613 CS3 14I1102

	#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	1.30e5	0.86	NO	1.10	1.000	17.55	10.185	102	0.217
2	2	13C-2,3,7,8-TCDF	1.16e6	0.81	NO	0.844	1.000	17.52	98.766	98.8	0.302
3	3	13C-1,2,3,4-TCDF	1.39e6	0.81	NO	1.00	1.000	15.25	100.00	100	0.255
4	4	13C-1,2,3,4-TCDD	9.83e5	0.79	NO		1.000	16.00			

CG 11/14/14

Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Friday, November 14, 2014 07:58:55 Pacific Standard Time
Printed: Friday, November 14, 2014 08:07:25 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\11-13-TEST.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	141113F1_1	CP141113F1-1 DB-225 CPSM	13-Nov-14	14:06:21
2	141113F1_2	ST141113F1-1 1613 CS0 14I1819	13-Nov-14	14:37:32
3	141113F1_3	ST141113F1-2 1613 CS1 14I1820	13-Nov-14	15:09:19
4	141113F1_4	ST141113F1-3 1613 CS2 14I1821	13-Nov-14	15:41:06
5	141113F1_5	ST141113F1-4 1613 CS4 14I1822	13-Nov-14	16:12:54
6	141113F1_6	ST141113F1-5 1613 CS5 14I1823	13-Nov-14	16:44:42
7	141113F1_7	ST141113F1-6 1613 CS3 14I1102	13-Nov-14	17:16:30
8	141113F1_8	SOLVENT BLANK	13-Nov-14	17:48:17
9	141113F1_9	SS141113F1-1 1613 SSS 13J3107	13-Nov-14	18:20:05
10	141113F1_10	SOLVENT BLANK	13-Nov-14	18:53:47
11	141113F1_11	1400819-01RE1 DP-1 CF 0.93853	13-Nov-14	19:23:48
12	141113F1_12	1400819-02RE1 RP-4 CF 0.95774	13-Nov-14	19:55:36
13	141113F1_13	1400824-02RE1 Secondary Sludge CF 19.78	13-Nov-14	20:27:24
14	141113F1_14	1400785-01RE1 DU1SU2 CF 29.92	13-Nov-14	20:59:12
15	141113F1_15	1400785-02RE1 DU1SU4 CF 31.78	13-Nov-14	21:31:00
16	141113F1_16	1400789-01RE1 DU1SU5 CF 33.89	13-Nov-14	22:02:48
17	141113F1_17	1400789-02RE1 DU2SU17 CF 30.06	13-Nov-14	22:34:35
18	141113F1_18	1400789-03RE1 DU2SU9 CF 29.99	13-Nov-14	23:06:23
19	141113F1_19	1400789-04RE1 DU2SU10 CF 30.04	13-Nov-14	23:38:10
20	141113F1_20	SOLVENT BLANK	14-Nov-14	00:09:58
21	141113F1_21	1400798-01RE1 DU2SU19 CF 31.55	14-Nov-14	00:43:33
22	141113F1_22	1400798-02RE1 DU2SU28 CF 33.04	14-Nov-14	01:13:41
23	141113F1_23	1400798-03RE1 DU2SU36 CF 30.86	14-Nov-14	01:45:28
24	141113F1_24	1400798-04RE1 DU2SU30-1 CF 32.41	14-Nov-14	02:17:16
25	141113F1_25	1400798-05RE1 DU2SU30-2 CF 33.37	14-Nov-14	02:49:03
26	141113F1_26	1400798-06RE1 DU2SU30-3 CF 30.24	14-Nov-14	03:20:52
27	141113F1_27	SOLVENT BLANK	14-Nov-14	03:52:41
28	141113F1_28	SOLVENT BLANK	14-Nov-14	04:24:29
29	141113F1_29	SOLVENT BLANK	14-Nov-14	04:56:17

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1_9.qld

Last Altered: Friday, November 14, 2014 08:14:45 Pacific Standard Time
Printed: Friday, November 14, 2014 08:22:47 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141113F1_9, Date: 13-Nov-2014, Time: 18:20:05, ID: SS141113F1-1 1613 SSS 13J3107, Description: 1613 SSS 13J3107

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.48e5	0.81	NO	1.10	1.000	17.54	8.9493	89.5	0.0832
2	2 13C-2,3,7,8-TCDF	1.51e6	0.81	NO	0.844	1.000	17.52	109.62	110	0.171
3	3 13C-1,2,3,4-TCDF	1.63e6	0.81	NO	1.00	1.000	15.25	100.00	100	0.145
4	4 13C-1,2,3,4-TCDD	1.29e6	0.78	NO		1.000	16.00			

11/14/14

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 140620E1 Analyte: Cal: PCBVG8-6-20-14 Inst. ID. VG-8

Data filename: 140620E1

			Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
			0.25	1.0	2.5	50	400	750
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
PCB-1	1.25	8.70 %	1.37	1.26	1.26	1.31	1.05	1.27
PCB-2	1.18	8.61 %	1.27	1.26	1.14	1.24	1.00	1.18
PCB-3	1.22	8.48 %	1.31	1.29	1.23	1.26	1.02	1.20
PCB-4/10	1.55	8.01 %	1.67	1.64	1.55	1.61	1.32	1.54
PCB-7/9	1.27	8.90 %	1.43	1.30	1.26	1.30	1.08	1.25
PCB-6	1.26	11.24 %	1.49	1.29	1.26	1.26	1.06	1.20
PCB-5/8	1.23	6.34 %	1.29	1.29	1.23	1.28	1.08	1.23
PCB-14	1.23	11.07 %	1.45	1.24	1.21	1.27	1.03	1.20
PCB-11	1.16	9.82 %	1.33	1.19	1.16	1.18	0.97	1.13
PCB-12/13	1.10	7.82 %	1.20	1.12	1.10	1.14	0.94	1.09
PCB-15	1.21	10.03 %	1.40	1.19	1.22	1.24	1.02	1.18
PCB-19	1.30	14.66 %	1.63	1.31	1.26	1.28	1.05	1.23
PCB-30	1.83	9.12 %	2.06	1.88	1.82	1.87	1.54	1.82
PCB-18	0.86	12.65 %	1.03	0.90	0.85	0.87	0.70	0.81
PCB-17	0.90	11.34 %	1.04	0.96	0.89	0.92	0.74	0.86
PCB-24/27	1.18	9.77 %	1.33	1.20	1.18	1.22	0.98	1.15
PCB-16/32	1.03	12.28 %	1.23	1.08	1.02	1.03	0.84	0.98
PCB-34	1.26	11.67 %	1.47	1.39	1.25	1.23	1.07	1.16
PCB-23	1.31	14.20 %	1.54	1.27	1.41	1.44	1.02	1.19
PCB-29	1.33	17.31 %	1.74	1.32	1.32	1.36	1.06	1.18
PCB-26	1.29	15.40 %	1.62	1.31	1.32	1.31	1.03	1.16
PCB-25	1.34	13.58 %	1.63	1.37	1.36	1.38	1.09	1.21
PCB-31	1.42	18.76 %	1.87	1.40	1.46	1.41	1.05	1.32
PCB-28	1.38	11.74 %	1.60	1.43	1.41	1.45	1.18	1.20
PCB-20/21/33	1.31	12.96 %	1.59	1.33	1.32	1.34	1.08	1.21
PCB-22	1.32	10.73 %	1.50	1.38	1.35	1.39	1.09	1.23
PCB-36	1.38	8.85 %	1.47	1.49	1.38	1.43	1.16	1.32
PCB-39	1.42	9.22 %	1.58	1.49	1.41	1.46	1.19	1.39
PCB-38	1.35	7.47 %	1.39	1.45	1.36	1.41	1.16	1.35
PCB-35	1.38	8.01 %	1.52	1.38	1.35	1.44	1.19	1.38
PCB-37	1.39	9.07 %	1.58	1.40	1.39	1.41	1.18	1.39
PCB-54	1.20	8.53 %	1.29	1.28	1.18	1.24	1.01	1.18
PCB-50	0.97	9.30 %	1.08	1.01	0.96	0.99	0.81	0.95
PCB-53	1.19	11.55 %	1.42	1.24	1.14	1.19	1.00	1.14
PCB-51	1.15	7.40 %	1.21	1.18	1.17	1.23	0.99	1.14
PCB-45	0.97	8.59 %	1.04	0.99	1.00	1.02	0.81	0.93
PCB-46	0.95	15.50 %	1.21	0.98	0.90	0.95	0.77	0.88
PCB-52/69	1.28	8.47 %	1.35	1.33	1.33	1.35	1.07	1.23
PCB-73	1.37	6.52 %	1.42	1.39	1.31	1.43	1.22	1.45
PCB-43/49	1.11	10.59 %	1.30	1.13	1.10	1.13	0.94	1.08
PCB-47	1.13	11.84 %	1.34	1.18	1.04	1.20	0.96	1.07

DMS 6/23/14

6/23/14

PCB-48/75	1.30	10.70 %	1.52	1.28	1.33	1.31	1.08	1.30
PCB-65	1.33	13.12 %	1.67	1.30	1.28	1.32	1.15	1.30
PCB-62	1.29	10.74 %	1.39	1.40	1.30	1.38	1.03	1.25
PCB-44	0.94	10.79 %	1.08	0.90	0.98	0.98	0.78	0.92
PCB-42/59	1.22	9.45 %	1.36	1.25	1.21	1.26	1.01	1.21
PCB-41/64/71/72	1.31	8.83 %	1.48	1.32	1.28	1.35	1.12	1.33
PCB-68	1.49	9.40 %	1.63	1.59	1.48	1.51	1.23	1.46
PCB-40	0.82	12.75 %	0.99	0.83	0.82	0.83	0.67	0.78
PCB-57	1.11	10.20 %	1.26	1.18	1.11	1.15	0.92	1.07
PCB-67	1.07	9.89 %	1.05	1.20	1.12	1.15	0.90	1.03
PCB-58	1.10	11.05 %	1.29	1.13	1.12	1.09	0.91	1.07

PCB-63	1.12	7.49 %	1.17	1.17	1.14	1.16	0.95	1.12
PCB-74	1.20	8.89 %	1.31	1.27	1.22	1.25	1.00	1.18
PCB-61/70	1.08	8.22 %	1.18	1.13	1.08	1.10	0.92	1.06
PCB-76/66	1.14	10.54 %	1.31	1.18	1.12	1.17	0.94	1.10
PCB-80	1.28	9.96 %	1.46	1.33	1.28	1.28	1.07	1.24
PCB-55	1.11	7.19 %	1.16	1.17	1.10	1.14	0.96	1.12
PCB-56/60	1.09	10.58 %	1.26	1.12	1.07	1.09	0.91	1.07
PCB-79	1.12	8.90 %	1.26	1.11	1.12	1.15	0.95	1.13
PCB-78	1.24	11.08 %	1.43	1.32	1.20	1.27	1.02	1.18
PCB-81	1.38	9.94 %	1.51	1.50	1.41	1.41	1.14	1.31
PCB-77	1.21	8.98 %	1.33	1.26	1.22	1.25	1.02	1.17
PCB-104	1.26	10.21 %	1.42	1.31	1.28	1.27	1.03	1.22
PCB-96	1.09	9.49 %	1.24	1.12	1.08	1.10	0.92	1.10
PCB-103	0.93	8.17 %	1.00	0.98	0.89	0.95	0.80	0.98
PCB-100	1.00	7.45 %	1.03	1.08	0.97	1.01	0.87	1.05
PCB-94	1.11	11.35 %	1.31	1.11	1.11	1.13	0.91	1.08
PCB-95/98/102	1.21	9.28 %	1.36	1.25	1.18	1.30	1.04	1.17
PCB-93	1.13	18.48 %	1.36	1.34	1.21	0.95	0.84	1.08
PCB-88/91	1.02	8.29 %	1.00	1.06	1.02	1.15	0.89	1.00
PCB-121	1.90	16.11 %	2.27	2.21	1.94	1.69	1.46	1.85
PCB-84/92	1.05	9.56 %	1.15	1.13	1.05	1.09	0.87	1.02
PCB-89	1.02	10.73 %	1.15	1.04	1.02	1.08	0.83	0.98
PCB-90/101	1.19	9.91 %	1.34	1.26	1.19	1.21	0.99	1.15
PCB-113	1.35	10.72 %	1.54	1.26	1.32	1.51	1.16	1.33
PCB-99	1.29	12.88 %	1.43	1.48	1.35	1.20	1.03	1.24
PCB-119	1.72	7.60 %	1.78	1.88	1.72	1.73	1.48	1.73
PCB-108/112	1.29	7.44 %	1.31	1.39	1.29	1.33	1.10	1.30
PCB-83	1.52	7.96 %	1.66	1.53	1.51	1.58	1.30	1.54
PCB-97	1.25	8.07 %	1.35	1.26	1.27	1.32	1.06	1.23
PCB-86	1.02	10.03 %	1.19	0.96	1.05	0.98	0.90	1.06
PCB-87/117/125	1.56	6.32 %	1.67	1.60	1.55	1.59	1.37	1.57
PCB-111/115	1.75	13.48 %	2.16	1.80	1.69	1.76	1.43	1.66
PCB-85/116	1.30	6.67 %	1.30	1.35	1.33	1.34	1.13	1.35
PCB-120	1.78	10.02 %	2.08	1.80	1.76	1.75	1.52	1.77
PCB-110	1.68	10.37 %	1.90	1.78	1.65	1.72	1.38	1.64
PCB-82	0.74	11.58 %	0.83	0.83	0.73	0.73	0.60	0.71
PCB-124	1.32	11.30 %	1.54	1.34	1.33	1.32	1.07	1.33
PCB-107/109	1.22	8.01 %	1.35	1.31	1.18	1.24	1.08	1.17
PCB-123	1.22	9.00 %	1.30	1.30	1.23	1.28	1.01	1.20
PCB-106/118	1.22	9.57 %	1.37	1.27	1.25	1.26	1.01	1.19
PCB-114	1.36	10.69 %	1.57	1.37	1.36	1.37	1.11	1.35
PCB-122	1.24	10.69 %	1.41	1.32	1.20	1.25	1.02	1.22
PCB-105	1.28	7.83 %	1.36	1.29	1.33	1.34	1.09	1.28
PCB-127	1.14	11.20 %	1.33	1.18	1.14	1.16	0.94	1.09
PCB-126	1.28	9.08 %	1.46	1.28	1.28	1.32	1.10	1.27
PCB-155	1.14	7.40 %	1.11	1.20	1.18	1.20	0.98	1.15
PCB-150	1.06	7.11 %	1.15	1.04	1.05	1.11	0.94	1.10
PCB-152	1.10	11.78 %	1.32	1.08	1.06	1.12	0.92	1.09
PCB-145	1.09	12.69 %	1.35	1.06	1.05	1.11	0.92	1.08
PCB-136	1.08	11.65 %	1.25	1.02	1.08	1.14	0.88	1.14

PCB-148	0.74	7.71 %	0.84	0.75	0.68	0.75	0.70	0.72
PCB-154	0.88	8.65 %	0.96	0.88	0.88	0.93	0.74	0.91
PCB-151	0.81	9.63 %	0.91	0.82	0.78	0.86	0.68	0.81
PCB-135	0.78	6.32 %	0.83	0.75	0.76	0.81	0.70	0.82
PCB-144	0.82	10.98 %	0.93	0.81	0.78	0.90	0.68	0.82
PCB 147	0.83	12.38 %	1.00	0.76	0.78	0.88	0.70	0.85
PCB-139/149	0.84	7.77 %	0.91	0.82	0.83	0.91	0.73	0.86
PCB-140	0.79	11.18 %	0.91	0.73	0.76	0.86	0.66	0.80
PCB-134/143	0.93	12.49 %	1.13	0.94	0.90	0.94	0.78	0.87
PCB-133/142	0.95	11.69 %	1.12	0.98	0.91	0.96	0.79	0.90
PCB-131	0.91	13.39 %	1.11	0.96	0.90	0.90	0.74	0.87

PCB-146/165	1.16	9.91 %	1.33	1.19	1.14	1.16	0.97	1.13
PCB-132/161	1.11	10.87 %	1.31	1.14	1.09	1.13	0.93	1.07
PCB-153	1.18	8.19 %	1.21	1.24	1.26	1.18	0.99	1.18
PCB-168	1.37	10.18 %	1.56	1.44	1.37	1.37	1.14	1.35
PCB-141	0.97	8.49 %	1.08	1.00	0.97	0.99	0.83	0.99
PCB-137	1.07	6.76 %	1.12	1.16	1.05	1.03	0.96	1.11
PCB-130	0.85	9.16 %	0.85	0.83	0.87	0.94	0.71	0.89
PCB-138/163/164	1.23	7.23 %	1.30	1.28	1.22	1.26	1.05	1.24
PCB-158/160	1.29	7.06 %	1.37	1.33	1.29	1.34	1.11	1.29
PCB-129	0.92	10.90 %	1.06	0.98	0.93	0.93	0.76	0.88
PCB-166	1.12	8.09 %	1.17	1.21	1.11	1.13	0.94	1.13
PCB-159	1.16	9.05 %	1.24	1.24	1.18	1.17	0.96	1.20
PCB-128/162	1.02	8.78 %	1.10	1.03	1.04	1.07	0.85	1.03
PCB-167	1.06	9.67 %	1.20	1.04	1.10	1.09	0.88	1.05
PCB-156	1.18	12.60 %	1.44	1.20	1.18	1.17	0.98	1.12
PCB-157	1.08	8.46 %	1.17	1.12	1.13	1.11	0.91	1.06
PCB-169	1.11	8.78 %	1.24	1.15	1.12	1.11	0.94	1.09
PCB-188	1.40	9.77 %	1.59	1.44	1.43	1.43	1.17	1.37
PCB-184	1.24	9.34 %	1.35	1.30	1.25	1.28	1.02	1.23
PCB-179	1.30	11.40 %	1.50	1.37	1.32	1.31	1.05	1.28
PCB-176	1.36	12.01 %	1.55	1.47	1.35	1.38	1.07	1.34
PCB-186	1.28	10.58 %	1.46	1.30	1.25	1.31	1.05	1.29
PCB-178	0.94	10.89 %	0.99	1.05	0.96	0.96	0.75	0.92
PCB-175	0.97	9.63 %	1.03	1.01	0.98	1.02	0.78	0.99
PCB-182/187	1.01	8.25 %	1.07	1.03	1.01	1.06	0.85	1.07
PCB-183	1.08	11.32 %	1.18	1.17	1.08	1.10	0.85	1.12
PCB-185	1.34	11.43 %	1.58	1.37	1.30	1.36	1.10	1.35
PCB-174	1.34	6.35 %	1.41	1.36	1.36	1.32	1.18	1.40
PCB-181	1.36	12.64 %	1.56	1.48	1.28	1.43	1.08	1.33
PCB-177	1.24	12.38 %	1.50	1.23	1.20	1.28	1.03	1.21
PCB-171	1.31	10.27 %	1.52	1.33	1.34	1.31	1.10	1.28
PCB-173	1.16	12.99 %	1.43	1.13	1.15	1.17	0.97	1.11
PCB-172	1.22	11.23 %	1.47	1.18	1.22	1.24	1.05	1.18
PCB-192	1.53	7.91 %	1.69	1.58	1.49	1.56	1.33	1.51
PCB-180	1.43	12.38 %	1.72	1.48	1.44	1.42	1.18	1.34
PCB-193	1.65	9.91 %	1.90	1.71	1.65	1.68	1.40	1.59
PCB-191	1.67	12.03 %	2.04	1.63	1.65	1.68	1.43	1.61
PCB-170	1.50	10.78 %	1.66	1.67	1.51	1.50	1.23	1.44
PCB-190	2.02	10.04 %	2.33	2.09	1.97	2.04	1.70	1.98
PCB-189	1.54	8.43 %	1.70	1.58	1.55	1.59	1.30	1.54
PCB-202	1.04	12.36 %	1.24	1.11	1.01	1.04	0.85	0.99
PCB-201	1.10	11.84 %	1.33	1.11	1.06	1.11	0.92	1.09
PCB-204	0.99	8.55 %	1.10	0.99	0.99	1.04	0.84	1.00
PCB-197	1.07	11.41 %	1.28	1.04	1.04	1.12	0.90	1.06
PCB-200	1.02	8.06 %	1.11	1.02	1.02	1.07	0.87	1.02
PCB-198	0.74	13.95 %	0.90	0.81	0.69	0.77	0.60	0.70
PCB-199	0.73	6.67 %	0.75	0.75	0.73	0.77	0.63	0.74
PCB-196/203	0.77	7.49 %	0.82	0.80	0.75	0.81	0.67	0.79
PCB-195	1.20	7.95 %	1.32	1.23	1.17	1.25	1.04	1.19
PCB-194	1.25	15.62 %	1.61	1.21	1.22	1.24	1.02	1.17

PCB-205	1.41	12.03 %	1.70	1.44	1.41	1.41	1.17	1.36
PCB-208	0.96	16.01 %	1.25	0.95	0.93	0.95	0.78	0.91
PCB-207	0.92	8.32 %	0.99	0.97	0.91	0.93	0.78	0.91
PCB-206	1.03	12.39 %	1.24	1.05	1.03	1.02	0.84	0.98
PCB-209	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
Total Mono-PCB	1.22	8.44 %	1.32	1.27	1.21	1.27	1.02	1.22
Total Di-PCB	1.21	8.72 %	1.35	1.24	1.21	1.25	1.03	1.19
Total Tri-PCB	1.16	11.17 %	1.36	1.20	1.15	1.18	0.96	1.12

Total Tri-PCB	1.35	11.56 %	1.58	1.38	1.36	1.39	1.11	1.26
Total Tetra-PCB	1.17	9.20 %	1.32	1.21	1.17	1.21	0.99	1.15
Total Penta-PCB	1.21	8.50 %	1.33	1.27	1.21	1.24	1.03	1.21
Total Penta-PCB	1.26	9.64 %	1.42	1.29	1.26	1.29	1.05	1.24
Total Hexa-PCB	0.92	8.86 %	1.03	0.90	0.89	0.96	0.78	0.93
Total Hexa-PCB	1.08	8.82 %	1.20	1.12	1.08	1.10	0.91	1.07
Total Hepta-PCB	1.27	10.02 %	1.44	1.31	1.27	1.30	1.05	1.26
Total Octa-PCB	0.92	9.46 %	1.04	0.94	0.89	0.95	0.77	0.91
Total Octa-PCB	1.29	11.68 %	1.54	1.29	1.26	1.30	1.08	1.24
Total Nona-PCB	0.96	11.85 %	1.15	0.98	0.94	0.96	0.79	0.93
Total Deca-PCB	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
13C-PCB-1	0.89	8.16 %	0.97	0.94	0.91	0.88	0.88	0.76
13C-PCB-3	0.93	4.27 %	0.98	0.94	0.94	0.93	0.91	0.86
13C-PCB-4	0.55	3.55 %	0.56	0.57	0.56	0.55	0.53	0.52
13C-PCB-9	0.83	2.91 %	0.84	0.85	0.84	0.82	0.80	0.79
13C-PCB-11	0.94	1.99 %	0.94	0.96	0.96	0.92	0.93	0.91
13C-PCB-19	0.53	4.01 %	0.55	0.55	0.55	0.53	0.52	0.50
13C-PCB-32	0.81	1.81 %	0.83	0.82	0.83	0.81	0.81	0.79
13C-PCB-28	0.89	8.44 %	0.79	0.91	0.83	0.85	0.96	0.98
13C-PCB-37	0.83	4.85 %	0.80	0.83	0.80	0.80	0.87	0.89
13C-PCB-54	0.85	5.64 %	0.86	0.89	0.91	0.84	0.83	0.77
13C-PCB-52	0.71	4.89 %	0.72	0.74	0.75	0.70	0.68	0.66
13C-PCB-47	0.74	4.31 %	0.74	0.78	0.78	0.73	0.73	0.70
13C-PCB-70	0.94	2.25 %	0.96	0.97	0.96	0.93	0.94	0.91
13C-PCB-80	0.96	2.89 %	0.96	1.00	0.99	0.95	0.95	0.92
13C-PCB-81	0.84	2.20 %	0.83	0.82	0.84	0.82	0.86	0.86
13C-PCB-77	0.89	1.89 %	0.88	0.87	0.90	0.88	0.91	0.91
13C-PCB-104	1.00	6.42 %	0.99	1.06	1.07	0.98	0.96	0.90
13C-PCB-95	0.74	2.70 %	0.74	0.78	0.75	0.73	0.74	0.72
13C-PCB-101	0.79	2.14 %	0.79	0.81	0.79	0.77	0.78	0.77
13C-PCB-97	0.69	1.41 %	0.70	0.69	0.70	0.69	0.69	0.67
13C-PCB-123	0.95	4.62 %	0.88	0.92	0.98	1.00	0.95	0.97
13C-PCB-118	0.98	3.93 %	0.92	0.95	0.99	1.03	1.01	0.99
13C-PCB-114	1.21	3.28 %	1.26	1.20	1.21	1.18	1.25	1.15
13C-PCB-105	1.24	3.05 %	1.26	1.24	1.25	1.20	1.29	1.19
13C-PCB-127	1.34	2.73 %	1.37	1.34	1.38	1.29	1.36	1.30
13C-PCB-126	1.16	2.72 %	1.16	1.17	1.20	1.12	1.19	1.14
13C-PCB-155	0.83	3.93 %	0.86	0.87	0.84	0.83	0.81	0.78
13C-PCB-153	1.11	2.81 %	1.14	1.11	1.13	1.10	1.15	1.06
13C-PCB-141	1.07	3.72 %	1.13	1.09	1.09	1.06	1.06	1.01
13C-PCB-138	1.04	2.24 %	1.06	1.05	1.06	1.02	1.06	1.01
13C-PCB-159	1.20	1.72 %	1.21	1.19	1.22	1.17	1.22	1.19
13C-PCB-167	1.32	1.88 %	1.32	1.33	1.36	1.29	1.32	1.31
13C-PCB-156	1.24	1.98 %	1.23	1.25	1.28	1.21	1.26	1.24
13C-PCB-157	1.31	1.61 %	1.31	1.31	1.34	1.28	1.33	1.29
13C-PCB-169	1.22	1.81 %	1.22	1.21	1.25	1.19	1.22	1.20
13C-PCB-188	0.94	3.81 %	0.97	0.93	0.93	0.93	0.98	0.88
13C-PCB-180	0.67	2.62 %	0.71	0.67	0.67	0.67	0.67	0.65
13C-PCB-170	0.54	1.49 %	0.55	0.54	0.54	0.53	0.54	0.52
13C-PCB-189	0.72	1.73 %	0.72	0.70	0.73	0.73	0.71	0.70
13C-PCB-202	0.83	2.31 %	0.86	0.83	0.83	0.84	0.84	0.80

13C-PCB-194	0.81	1.33 %	0.82	0.82	0.82	0.80	0.81	0.79
13C-PCB-208	1.12	2.11 %	1.10	1.14	1.13	1.14	1.14	1.09
13C-PCB-206	0.66	3.31 %	0.63	0.65	0.66	0.70	0.65	0.65
13C-PCB-209	0.61	2.62 %	0.59	0.60	0.62	0.64	0.61	0.62
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.01	4.78 %	0.97	0.97	0.99	1.09	0.99	1.02
13C-PCB-178	0.63	4.30 %	0.62	0.61	0.62	0.69	0.62	0.62
13C-PCB-79	1.20	5.38 %	1.18	1.18	1.17	1.33	1.15	1.19
13C-PCB-178	0.94	5.01 %	0.88	0.91	0.92	1.02	0.93	0.96

Filename: 140620E1 S: 1 Acquired: 20-JUN-14 09:31:44
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-1 PCB CS0 13H1202

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	4.35e+05	2.82 y	16:14	-	1.37
2	Mono	PCB-2	0.25	4.10e+05	3.17 y	18:35	-	1.27
3	Mono	PCB-3	0.25	4.22e+05	2.92 y	18:49	-	1.31
4	Di	PCB-4/10	1.00	1.23e+06	1.61 y	20:10	-	1.67
5	Di	PCB-7/9	1.00	1.58e+06	1.70 y	21:56	-	1.43
6	Di	PCB-6	0.50	8.23e+05	1.36 y	22:35	-	1.49
7	Di	PCB-5/8	1.00	1.42e+06	1.76 y	23:00	-	1.29
8	Di	PCB-14	0.50	8.96e+05	1.59 y	24:05	-	1.45
9	Di	PCB-11	0.50	8.18e+05	1.39 y	25:16	-	1.33
10	Di	PCB-12/13	1.00	1.48e+06	1.71 y	25:40	-	1.20
11	Di	PCB-15	0.50	8.65e+05	1.43 y	25:58	-	1.40
12	Tri	PCB-19	0.25	2.94e+05	1.11 y	24:16	-	1.63
13	Tri	PCB-30	0.25	3.70e+05	0.89 y	25:09	-	2.06
14	Tri	PCB-18	0.25	2.78e+05	1.19 y	25:54	-	1.03
15	Tri	PCB-17	0.25	2.82e+05	0.94 y	26:04	-	1.04
16	Tri	PCB-24/27	0.50	7.21e+05	1.01 y	26:38	-	1.33
17	Tri	PCB-16/32	0.50	6.64e+05	1.06 y	27:09	-	1.23
18	Tri	PCB-34	0.25	3.70e+05	1.06 y	27:56	-	1.47
19	Tri	PCB-23	0.25	3.85e+05	1.19 y	28:02	-	1.54
20	Tri	PCB-29	0.25	4.36e+05	1.18 y	28:17	-	1.74
21	Tri	PCB-26	0.25	4.07e+05	0.97 y	28:29	-	1.62
22	Tri	PCB-25	0.25	4.10e+05	1.07 y	28:39	-	1.63
23	Tri	PCB-31	0.25	4.70e+05	1.15 y	29:00	-	1.87
24	Tri	PCB-28	0.25	4.03e+05	1.12 y	29:07	-	1.60
25	Tri	PCB-20/21/33	0.75	1.20e+06	1.11 y	29:43	-	1.59
26	Tri	PCB-22	0.25	3.76e+05	1.05 y	30:10	-	1.50
27	Tri	PCB-36	0.25	3.74e+05	1.12 y	30:47	-	1.47
28	Tri	PCB-39	0.25	3.99e+05	1.02 y	31:14	-	1.58
29	Tri	PCB-38	0.25	3.51e+05	1.20 y	32:00	-	1.39
30	Tri	PCB-35	0.25	3.85e+05	1.07 y	32:32	-	1.52
31	Tri	PCB-37	0.25	4.00e+05	0.99 y	32:58	-	1.58
32	Tetra	PCB-54	0.25	3.02e+05	0.84 y	27:59	-	1.29
33	Tetra	PCB-50	0.25	2.51e+05	0.85 y	29:09	-	1.08
34	Tetra	PCB-53	0.25	2.75e+05	0.70 y	29:47	-	1.42
35	Tetra	PCB-51	0.25	2.35e+05	0.68 y	30:08	-	1.21
36	Tetra	PCB-45	0.25	2.02e+05	0.82 y	30:34	-	1.04
37	Tetra	PCB-46	0.25	2.36e+05	0.75 y	31:04	-	1.21
38	Tetra	PCB-52/69	0.50	5.24e+05	0.82 y	31:32	-	1.35
39	Tetra	PCB-73	0.25	2.76e+05	0.88 y	31:39	-	1.42
40	Tetra	PCB-43/49	0.50	5.07e+05	0.72 y	31:49	-	1.30

41	Tetra	PCB-47	0.25	2.69e+05	0.78 y	32:00	-	1.34
42	Tetra	PCB-48/75	0.50	6.11e+05	0.75 y	32:07	-	1.52
43	Tetra	PCB-65	0.25	3.35e+05	0.81 y	32:23	-	1.67
44	Tetra	PCB-62	0.25	2.78e+05	0.66 y	32:30	-	1.39
45	Tetra	PCB-44	0.25	2.18e+05	0.67 y	32:48	-	1.08
46	Tetra	PCB-42/59	0.50	5.48e+05	0.72 y	33:02	-	1.36
47	Tetra	PCB-41/64/71/72	1.00	1.19e+06	0.71 y	33:37	-	1.48
48	Tetra	PCB-68	0.25	3.28e+05	0.80 y	33:52	-	1.63
49	Tetra	PCB-40	0.25	1.99e+05	0.82 y	34:05	-	0.99
50	Tetra	PCB-57	0.25	3.26e+05	0.66 y	34:27	-	1.26
51	Tetra	PCB-67	0.25	2.73e+05	0.74 y	34:45	-	1.05

52	Tetra	PCB-58	0.25	3.35e+05	0.79	y	34:52	-	1.29
53	Tetra	PCB-63	0.25	3.04e+05	0.78	y	35:01	-	1.17
54	Tetra	PCB-74	0.25	3.39e+05	0.76	y	35:18	-	1.31
55	Tetra	PCB-61/70	0.50	6.13e+05	0.75	y	35:29	-	1.18
56	Tetra	PCB-76/66	0.50	6.79e+05	0.81	y	35:42	-	1.31
57	Tetra	PCB-80	0.25	3.81e+05	0.73	y	35:56	-	1.46
58	Tetra	PCB-55	0.25	3.04e+05	0.81	y	36:16	-	1.16
59	Tetra	PCB-56/60	0.50	6.61e+05	0.75	y	36:46	-	1.26
60	Tetra	PCB-79	0.25	3.31e+05	0.86	y	37:48	-	1.26
61	Tetra	PCB-78	0.25	3.20e+05	0.80	y	38:30	-	1.43
62	Tetra	PCB-81	0.25	3.39e+05	0.75	y	39:02	-	1.51
63	Tetra	PCB-77	0.25	3.19e+05	0.68	y	39:38	-	1.33
64	Penta	PCB-104	0.25	2.39e+05	1.52	y	32:40	-	1.42
65	Penta	PCB-96	0.25	2.08e+05	1.62	y	33:56	-	1.24
66	Penta	PCB-103	0.25	1.68e+05	1.38	y	34:27	-	1.00
67	Penta	PCB-100	0.25	1.73e+05	1.61	y	34:49	-	1.03
68	Penta	PCB-94	0.25	1.64e+05	1.42	y	35:17	-	1.31
69	Penta	PCB-95/98/102	0.75	5.11e+05	1.73	y	35:45	-	1.36
70	Penta	PCB-93	0.25	1.71e+05	1.64	y	35:54	-	1.36
71	Penta	PCB-88/91	0.50	2.51e+05	1.76	y	36:10	-	1.00
72	Penta	PCB-121	0.25	2.86e+05	1.39	y	36:17	-	2.27
73	Penta	PCB-84/92	0.50	3.08e+05	1.45	y	37:07	-	1.15
74	Penta	PCB-89	0.25	1.54e+05	1.32	y	37:19	-	1.15
75	Penta	PCB-90/101	0.50	3.59e+05	1.43	y	37:29	-	1.34
76	Penta	PCB-113	0.25	2.06e+05	1.63	y	37:44	-	1.54
77	Penta	PCB-99	0.25	1.92e+05	1.34	y	37:49	-	1.43
78	Penta	PCB-119	0.25	2.11e+05	1.49	y	38:18	-	1.78
79	Penta	PCB-108/112	0.50	3.11e+05	1.68	y	38:27	-	1.31
80	Penta	PCB-83	0.25	1.96e+05	1.33	y	38:37	-	1.66
81	Penta	PCB-97	0.25	1.60e+05	1.69	y	38:48	-	1.35
82	Penta	PCB-86	0.25	1.41e+05	1.52	y	38:56	-	1.19
83	Penta	PCB-87/117/125	0.75	5.92e+05	1.55	y	39:04	-	1.67
84	Penta	PCB-111/115	0.50	5.11e+05	1.55	y	39:14	-	2.16
85	Penta	PCB-85/116	0.50	3.09e+05	1.69	y	39:22	-	1.30
86	Penta	PCB-120	0.25	2.47e+05	1.58	y	39:35	-	2.08
87	Penta	PCB-110	0.25	2.26e+05	1.34	y	39:44	-	1.90
88	Penta	PCB-82	0.25	1.23e+05	1.66	y	40:23	-	0.83
89	Penta	PCB-124	0.25	2.30e+05	1.74	y	41:02	-	1.54
90	Penta	PCB-107/109	0.50	4.02e+05	1.57	y	41:12	-	1.35
91	Penta	PCB-123	0.25	1.93e+05	1.66	y	41:22	-	1.30
92	Penta	PCB-106/118	0.50	4.29e+05	1.45	y	41:33	-	1.37
93	Penta	PCB-114	0.25	2.76e+05	1.56	y	42:12	-	1.57
94	Penta	PCB-122	0.25	2.48e+05	1.55	y	42:20	-	1.41
95	Penta	PCB-105	0.25	2.42e+05	1.73	y	43:04	-	1.36
96	Penta	PCB-127	0.25	2.56e+05	1.65	y	43:24	-	1.33
97	Penta	PCB-126	0.25	2.38e+05	1.59	y	45:17	-	1.46
98	Hexa	PCB-155	0.25	1.62e+05	1.06	y	37:03	-	1.11
99	Hexa	PCB-150	0.25	1.67e+05	1.15	y	38:19	-	1.15
100	Hexa	PCB-152	0.25	1.92e+05	1.35	y	38:47	-	1.32
101	Hexa	PCB-145	0.25	1.95e+05	1.19	y	39:13	-	1.35

102	Hexa	PCB-136	0.25	1.82e+05	1.10 y	39:34	-	1.25
103	Hexa	PCB-148	0.25	1.22e+05	1.18 y	39:39	-	0.84
104	Hexa	PCB-154	0.25	1.40e+05	1.29 y	40:09	-	0.96
105	Hexa	PCB-151	0.25	1.32e+05	1.38 y	40:47	-	0.91
106	Hexa	PCB-135	0.25	1.21e+05	1.08 y	40:59	-	0.83
107	Hexa	PCB-144	0.25	1.35e+05	1.36 y	41:07	-	0.93
108	Hexa	PCB-147	0.25	1.45e+05	1.24 y	41:14	-	1.00
109	Hexa	PCB-139/149	0.50	2.63e+05	1.42 y	41:30	-	0.91
110	Hexa	PCB-140	0.25	1.32e+05	1.26 y	41:41	-	0.91
111	Hexa	PCB-134/143	0.50	3.60e+05	1.29 y	42:07	-	1.13
112	Hexa	PCB-133/142	0.50	3.59e+05	1.27 y	42:25	-	1.12

113	Hexa	PCB-131	0.25	1.78e-05	1.22 y	42:35	-	1.11
114	Hexa	PCB-146/165	0.50	4.25e+05	1.38 y	42:48	-	1.33
115	Hexa	PCB-132/161	0.50	4.18e+05	1.33 y	43:03	-	1.31
116	Hexa	PCB-153	0.25	1.94e+05	1.33 y	43:13	-	1.21
117	Hexa	PCB-168	0.25	2.50e+05	1.10 y	43:25	-	1.56
118	Hexa	PCB-141	0.25	1.70e+05	1.16 y	43:57	-	1.08
119	Hexa	PCB-137	0.25	1.76e+05	1.34 y	44:20	-	1.12
120	Hexa	PCB-130	0.25	1.34e+05	1.41 y	44:26	-	0.85
121	Hexa	PCB-138/163/164	0.75	5.80e+05	1.22 y	44:49	-	1.30
122	Hexa	PCB-158/160	0.50	4.07e+05	1.26 y	45:04	-	1.37
123	Hexa	PCB-129	0.25	1.58e+05	1.11 y	45:18	-	1.06
124	Hexa	PCB-166	0.25	1.98e+05	1.26 y	45:46	-	1.17
125	Hexa	PCB-159	0.25	2.11e+05	1.18 y	46:04	-	1.24
126	Hexa	PCB-128/162	0.50	3.74e+05	1.26 y	46:22	-	1.10
127	Hexa	PCB-167	0.25	2.22e+05	1.41 y	46:46	-	1.20
128	Hexa	PCB-156	0.25	2.47e+05	1.24 y	48:03	-	1.44
129	Hexa	PCB-157	0.25	2.16e+05	1.36 y	48:20	-	1.17
130	Hexa	PCB-169	0.25	2.12e+05	1.07 y	50:23	-	1.24
131	Hepta	PCB-188	0.25	2.17e+05	1.02 y	42:51	-	1.59
132	Hepta	PCB-184	0.25	1.84e+05	0.94 y	43:18	-	1.35
133	Hepta	PCB-179	0.25	2.05e+05	1.05 y	44:04	-	1.50
134	Hepta	PCB-176	0.25	2.12e+05	1.04 y	44:32	-	1.55
135	Hepta	PCB-186	0.25	2.00e+05	0.97 y	45:09	-	1.46
136	Hepta	PCB-178	0.25	1.35e+05	0.98 y	45:38	-	0.99
137	Hepta	PCB-175	0.25	1.41e+05	1.08 y	45:58	-	1.03
138	Hepta	PCB-182/187	0.50	2.91e+05	0.90 y	46:09	-	1.07
139	Hepta	PCB-183	0.25	1.61e+05	0.95 y	46:29	-	1.18
140	Hepta	PCB-185	0.25	1.56e+05	0.97 y	47:08	-	1.58
141	Hepta	PCB-174	0.25	1.40e+05	1.03 y	47:30	-	1.41
142	Hepta	PCB-181	0.25	1.55e+05	1.17 y	47:37	-	1.56
143	Hepta	PCB-177	0.25	1.49e+05	1.09 y	47:46	-	1.50
144	Hepta	PCB-171	0.25	1.51e+05	0.93 y	48:05	-	1.52
145	Hepta	PCB-173	0.25	1.42e+05	0.96 y	48:30	-	1.43
146	Hepta	PCB-172	0.25	1.45e+05	1.13 y	48:55	-	1.47
147	Hepta	PCB-192	0.25	1.68e+05	0.90 y	49:08	-	1.69
148	Hepta	PCB-180	0.25	1.70e+05	0.97 y	49:20	-	1.72
149	Hepta	PCB-193	0.25	1.88e+05	1.13 y	49:31	-	1.90
150	Hepta	PCB-191	0.25	2.02e+05	1.05 y	49:45	-	2.04
151	Hepta	PCB-170	0.25	1.27e+05	1.19 y	50:44	-	1.66
152	Hepta	PCB-190	0.25	1.78e+05	0.91 y	50:55	-	2.33
153	Hepta	PCB-189	0.25	1.70e+05	1.20 y	52:11	-	1.70
154	Octa	PCB-202	0.25	1.49e+05	0.98 y	48:16	-	1.24
155	Octa	PCB-201	0.25	1.60e+05	1.02 y	48:45	-	1.33
156	Octa	PCB-204	0.25	1.33e+05	0.77 y	48:54	-	1.10
157	Octa	PCB-197	0.25	1.54e+05	0.92 y	49:13	-	1.28
158	Octa	PCB-200	0.25	1.34e+05	1.01 y	50:02	-	1.11
159	Octa	PCB-198	0.25	1.08e+05	0.88 y	51:19	-	0.90
160	Octa	PCB-199	0.25	9.08e+04	0.94 y	51:25	-	0.75
161	Octa	PCB-196/203	0.50	1.98e+05	0.81 y	51:40	-	0.82
162	Octa	PCB-195	0.25	1.39e+05	0.81 y	52:48	-	1.32

163	Octa		PCB-194	0.25	1.70e+05	0.85	y	53:40	- 1.61
164	Octa		PCB-205	0.25	1.79e+05	0.98	y	53:57	- 1.70
165	Nona		PCB-208	0.25	1.78e+05	1.17	y	52:57	- 1.25
166	Nona		PCB-207	0.25	1.41e+05	1.37	y	53:14	- 0.99
167	Nona		PCB-206	0.25	1.02e+05	1.41	y	55:20	- 1.24
168	Deca		PCB-209	0.25	9.69e+04	1.15	y	56:37	- 1.27
169	Tot Σ	Total Mono-PCB		0.00	-	-	n	-	- 1.32
170	Tot Σ	Total Di-PCB		0.00	-	-	n	-	- 1.35

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.36
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.58
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.32
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.33
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.42
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.03
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.20
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.44
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.04
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.54
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.15
182	Tot ╗	Total Deca-PCB	0.25	9.69e+04	1.15	y	56:37	-	1.27
183	Mono╗	13C-PCB-1	100.00	1.27e+08	3.28	y	16:13	-	0.97
184	Mono╗	13C-PCB-3	100.00	1.29e+08	3.32	y	18:48	-	0.98
185	Di-IS	13C-PCB-4	100.00	7.37e+07	1.59	y	20:07	-	0.56
186	Di-IS	13C-PCB-9	100.00	1.10e+08	1.57	y	21:53	-	0.84
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.57	y	25:15	-	0.94
188	Tri-╗	13C-PCB-19	100.00	7.18e+07	1.06	y	24:15	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.08e+08	1.08	y	27:09	-	0.83
190	Tri-╗	13C-PCB-28	100.00	1.00e+08	1.05	y	29:05	-	0.79
191	Tri-╗	13C-PCB-37	100.00	1.01e+08	1.07	y	32:57	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.33e+07	0.80	y	27:59	-	0.86
193	Tetr╗	13C-PCB-52	100.00	7.77e+07	0.81	y	31:30	-	0.72
194	Tetr╗	13C-PCB-47	100.00	8.03e+07	0.78	y	32:00	-	0.74
195	Tetr╗	13C-PCB-70	100.00	1.04e+08	0.80	y	35:31	-	0.96
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:55	-	0.96
197	Tetr╗	13C-PCB-81	100.00	8.95e+07	0.80	y	39:02	-	0.83
198	Tetr╗	13C-PCB-77	100.00	9.58e+07	0.80	y	39:37	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.72e+07	1.63	y	32:39	-	0.99
200	Pent╗	13C-PCB-95	100.00	5.03e+07	1.61	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	5.37e+07	1.61	y	37:29	-	0.79
202	Pent╗	13C-PCB-97	100.00	4.74e+07	1.63	y	38:47	-	0.70
203	Pent╗	13C-PCB-123	100.00	5.97e+07	1.63	y	41:21	-	0.88
204	Pent╗	13C-PCB-118	100.00	6.28e+07	1.61	y	41:32	-	0.92
205	Pent╗	13C-PCB-114	100.00	7.04e+07	1.59	y	42:11	-	1.26
206	Pent╗	13C-PCB-105	100.00	7.09e+07	1.60	y	43:03	-	1.26
207	Pent╗	13C-PCB-127	100.00	7.69e+07	1.57	y	43:22	-	1.37
208	Pent╗	13C-PCB-126	100.00	6.51e+07	1.55	y	45:17	-	1.16
209	Hexa╗	13C-PCB-155	100.00	5.81e+07	1.27	y	37:02	-	0.86
210	Hexa╗	13C-PCB-153	100.00	6.40e+07	1.30	y	43:12	-	1.14
211	Hexa╗	13C-PCB-141	100.00	6.31e+07	1.28	y	43:56	-	1.13
212	Hexa	13C-PCB-138	100.00	5.96e+07	1.29	y	44:47	-	1.06
213	Hexa╗	13C-PCB-159	100.00	6.79e+07	1.28	y	46:04	-	1.21
214	Hexa╗	13C-PCB-167	100.00	7.42e+07	1.28	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	6.87e+07	1.28	y	48:02	-	1.23
216	Hexa╗	13C-PCB-157	100.00	7.37e+07	1.28	y	48:18	-	1.31
217	Hexa╗	13C-PCB-169	100.00	6.83e+07	1.27	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	5.45e+07	0.46	y	42:50	-	0.97
219	Hept╗	13C-PCB-180	100.00	3.96e+07	0.47	y	49:19	-	0.71
220	Hept╗	13C-PCB-170	100.00	3.06e+07	0.46	y	50:44	-	0.55
221	Hept╗	13C-PCB-189	100.00	4.02e+07	0.46	y	52:11	-	0.72

222	Octa¶	13C-PCB-202	100.00	4.83e+07	0.91 y	48:15	-	0.86
223	Octa¶	13C-PCB-194	100.00	4.22e+07	0.90 y	53:39	-	0.82
224	Nona¶	13C-PCB-208	100.00	5.69e+07	0.78 y	52:56	-	1.10
225	Nona¶	13C-PCB-206	100.00	3.28e+07	0.79 y	55:19	-	0.63
226	Deca¶	13C-PCB-209	100.00	3.05e+07	1.17 y	56:36	-	0.59
227	DI-RS	13C-PCB-15	100.00	1.31e+08	1.57 y	25:58	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.27e+08	1.06 y	28:59	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.09e+08	0.78 y	36:45	-	1.00
230	Penta	13C-PCB-111	100.00	6.79e+07	1.58 y	39:12	-	1.00
231	Hexa¶	13C-PCB-128	100.00	5.60e+07	1.28 y	46:20	-	1.00

232	Octa╗	13C-PCB-205	100.00	5.17e+07	0.93	y	53:56	-	1.00
233	CRS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	0.97
234	CRS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.62
235	PS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	1.18
236	PS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.88

Filename: 140620E1 S: 2 Acquired: 20-JUN-14 10:35:42
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-2 PCB CS1 13H1204

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	1.98e+06	3.08 y	16:16	-	1.26
2	Mono	PCB-2	1.00	1.97e+06	2.92 y	18:37	-	1.26
3	Mono	PCB-3	1.00	2.01e+06	3.12 y	18:51	-	1.29
4	Di	PCB-4/10	4.00	6.16e+06	1.55 y	20:12	-	1.64
5	Di	PCB-7/9	4.00	7.32e+06	1.64 y	21:57	-	1.30
6	Di	PCB-6	2.00	3.65e+06	1.60 y	22:37	-	1.29
7	Di	PCB-5/8	4.00	7.27e+06	1.61 y	23:01	-	1.29
8	Di	PCB-14	2.00	3.94e+06	1.66 y	24:06	-	1.24
9	Di	PCB-11	2.00	3.77e+06	1.68 y	25:17	-	1.19
10	Di	PCB-12/13	4.00	7.13e+06	1.61 y	25:41	-	1.12
11	Di	PCB-15	2.00	3.79e+06	1.72 y	26:00	-	1.19
12	Tri	PCB-19	1.00	1.20e+06	1.12 y	24:17	-	1.31
13	Tri	PCB-30	1.00	1.72e+06	1.12 y	25:10	-	1.88
14	Tri	PCB-18	1.00	1.24e+06	1.05 y	25:55	-	0.90
15	Tri	PCB-17	1.00	1.31e+06	1.07 y	26:05	-	0.96
16	Tri	PCB-24/27	2.00	3.29e+06	1.07 y	26:40	-	1.20
17	Tri	PCB-16/32	2.00	2.95e+06	1.04 y	27:10	-	1.08
18	Tri	PCB-34	1.00	1.94e+06	1.06 y	27:58	-	1.39
19	Tri	PCB-23	1.00	1.78e+06	1.00 y	28:04	-	1.27
20	Tri	PCB-29	1.00	1.84e+06	1.07 y	28:18	-	1.32
21	Tri	PCB-26	1.00	1.83e+06	1.06 y	28:31	-	1.31
22	Tri	PCB-25	1.00	1.92e+06	1.07 y	28:40	-	1.37
23	Tri	PCB-31	1.00	1.96e+06	1.10 y	29:02	-	1.40
24	Tri	PCB-28	1.00	2.00e+06	1.03 y	29:07	-	1.43
25	Tri	PCB-20/21/33	3.00	5.56e+06	1.09 y	29:45	-	1.33
26	Tri	PCB-22	1.00	1.93e+06	1.07 y	30:11	-	1.38
27	Tri	PCB-36	1.00	1.90e+06	1.15 y	30:47	-	1.49
28	Tri	PCB-39	1.00	1.91e+06	1.10 y	31:16	-	1.49
29	Tri	PCB-38	1.00	1.86e+06	1.05 y	32:02	-	1.45
30	Tri	PCB-35	1.00	1.77e+06	1.19 y	32:33	-	1.38
31	Tri	PCB-37	1.00	1.80e+06	1.09 y	32:59	-	1.40
32	Tetra	PCB-54	1.00	1.51e+06	0.77 y	28:01	-	1.28
33	Tetra	PCB-50	1.00	1.19e+06	0.86 y	29:11	-	1.01
34	Tetra	PCB-53	1.00	1.21e+06	0.82 y	29:49	-	1.24
35	Tetra	PCB-51	1.00	1.15e+06	0.86 y	30:10	-	1.18
36	Tetra	PCB-45	1.00	9.70e+05	0.76 y	30:36	-	0.99
37	Tetra	PCB-46	1.00	9.57e+05	0.75 y	31:05	-	0.98
38	Tetra	PCB-52/69	2.00	2.60e+06	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	1.00	1.36e+06	0.84 y	31:40	-	1.39
40	Tetra	PCB-43/49	2.00	2.21e+06	0.81 y	31:50	-	1.13
41	Tetra	PCB-47	1.00	1.22e+06	0.72 y	32:02	-	1.18

42	Tetra	PCB-48/75	2.00	2.64e+06	0.76	y	32:09	-	1.28
43	Tetra	PCB-65	1.00	1.34e+06	0.76	y	32:25	-	1.30
44	Tetra	PCB-62	1.00	1.44e+06	0.77	y	32:32	-	1.40
45	Tetra	PCB-44	1.00	9.24e+05	0.78	y	32:50	-	0.90
46	Tetra	PCB-42/59	2.00	2.58e+06	0.75	y	33:04	-	1.25
47	Tetra	PCB-41/64/71/72	4.00	5.45e+06	0.78	y	33:39	-	1.32
48	Tetra	PCB-68	1.00	1.64e+06	0.79	y	33:54	-	1.59
49	Tetra	PCB-40	1.00	8.54e+05	0.76	y	34:07	-	0.83
50	Tetra	PCB-57	1.00	1.51e+06	0.73	y	34:29	-	1.18
51	Tetra	PCB-67	1.00	1.53e+06	0.78	y	34:47	-	1.20
52	Tetra	PCB-58	1.00	1.45e+06	0.75	y	34:54	-	1.13

53	Tetra	PCB-63	1.00	1.51e+06	0.75 y	35:03	-	1.17
54	Tetra	PCB-74	1.00	1.62e+06	0.77 y	35:20	-	1.27
55	Tetra	PCB-61/70	2.00	2.91e+06	0.80 y	35:31	-	1.13
56	Tetra	PCB-76/66	2.00	3.02e+06	0.75 y	35:44	-	1.18
57	Tetra	PCB-80	1.00	1.75e+06	0.82 y	35:57	-	1.33
58	Tetra	PCB-55	1.00	1.55e+06	0.78 y	36:17	-	1.17
59	Tetra	PCB-56/60	2.00	2.96e+06	0.79 y	36:47	-	1.12
60	Tetra	PCB-79	1.00	1.47e+06	0.75 y	37:50	-	1.11
61	Tetra	PCB-78	1.00	1.43e+06	0.78 y	38:32	-	1.32
62	Tetra	PCB-81	1.00	1.62e+06	0.82 y	39:04	-	1.50
63	Tetra	PCB-77	1.00	1.46e+06	0.80 y	39:40	-	1.26
64	Penta	PCB-104	1.00	1.12e+06	1.57 y	32:42	-	1.31
65	Penta	PCB-96	1.00	9.56e+05	1.70 y	33:57	-	1.12
66	Penta	PCB-103	1.00	8.44e+05	1.51 y	34:29	-	0.98
67	Penta	PCB-100	1.00	9.21e+05	1.69 y	34:50	-	1.08
68	Penta	PCB-94	1.00	6.94e+05	1.57 y	35:18	-	1.11
69	Penta	PCB-95/98/102	3.00	2.34e+06	1.61 y	35:47	-	1.25
70	Penta	PCB-93	1.00	8.35e+05	1.78 y	35:55	-	1.34
71	Penta	PCB-88/91	2.00	1.32e+06	1.53 y	36:12	-	1.06
72	Penta	PCB-121	1.00	1.38e+06	1.59 y	36:18	-	2.21
73	Penta	PCB-84/92	2.00	1.48e+06	1.69 y	37:09	-	1.13
74	Penta	PCB-89	1.00	6.78e+05	1.51 y	37:20	-	1.04
75	Penta	PCB-90/101	2.00	1.64e+06	1.61 y	37:31	-	1.26
76	Penta	PCB-113	1.00	8.19e+05	1.58 y	37:44	-	1.26
77	Penta	PCB-99	1.00	9.67e+05	1.59 y	37:50	-	1.48
78	Penta	PCB-119	1.00	1.04e+06	1.76 y	38:18	-	1.88
79	Penta	PCB-108/112	2.00	1.54e+06	1.59 y	38:27	-	1.39
80	Penta	PCB-83	1.00	8.48e+05	1.61 y	38:38	-	1.53
81	Penta	PCB-97	1.00	7.01e+05	1.71 y	38:49	-	1.26
82	Penta	PCB-86	1.00	5.31e+05	1.42 y	38:58	-	0.96
83	Penta	PCB-87/117/125	3.00	2.66e+06	1.67 y	39:05	-	1.60
84	Penta	PCB-111/115	2.00	2.00e+06	1.53 y	39:15	-	1.80
85	Penta	PCB-85/116	2.00	1.50e+06	1.61 y	39:23	-	1.35
86	Penta	PCB-120	1.00	1.00e+06	1.51 y	39:37	-	1.80
87	Penta	PCB-110	1.00	9.88e+05	1.74 y	39:46	-	1.78
88	Penta	PCB-82	1.00	6.18e+05	1.61 y	40:23	-	0.83
89	Penta	PCB-124	1.00	9.98e+05	1.74 y	41:03	-	1.34
90	Penta	PCB-107/109	2.00	1.94e+06	1.58 y	41:12	-	1.31
91	Penta	PCB-123	1.00	9.67e+05	1.61 y	41:22	-	1.30
92	Penta	PCB-106/118	2.00	1.95e+06	1.71 y	41:35	-	1.27
93	Penta	PCB-114	1.00	1.19e+06	1.64 y	42:13	-	1.37
94	Penta	PCB-122	1.00	1.14e+06	1.68 y	42:21	-	1.32
95	Penta	PCB-105	1.00	1.16e+06	1.68 y	43:05	-	1.29
96	Penta	PCB-127	1.00	1.14e+06	1.58 y	43:24	-	1.18
97	Penta	PCB-126	1.00	1.08e+06	1.48 y	45:19	-	1.28
98	Hexa	PCB-155	1.00	8.43e+05	1.23 y	37:03	-	1.20
99	Hexa	PCB-150	1.00	7.33e+05	1.34 y	38:20	-	1.04
100	Hexa	PCB-152	1.00	7.58e+05	1.20 y	38:48	-	1.08
101	Hexa	PCB-145	1.00	7.48e+05	1.15 y	39:15	-	1.06
102	Hexa	PCB-136	1.00	7.19e+05	1.34 y	39:33	-	1.02

103	Hexa	PCB-148	1.00	5.31e-05	1.18	y	39:40	- 0.75
104	Hexa	PCB-154	1.00	6.17e+05	1.37	y	40:10	- 0.88
105	Hexa	PCB-151	1.00	5.78e+05	1.33	y	40:48	0.82
106	Hexa	PCB-135	1.00	5.29e+05	1.36	y	41:01	- 0.75
107	Hexa	PCB-144	1.00	5.73e+05	1.29	y	41:08	- 0.81
108	Hexa	PCB-147	1.00	5.38e+05	1.32	y	41:16	- 0.76
109	Hexa	PCB-139/149	2.00	1.16e+06	1.33	y	41:30	- 0.82
110	Hexa	PCB-140	1.00	5.12e+05	1.26	y	41:42	- 0.73
111	Hexa	PCB-134/143	2.00	1.51e+06	1.24	y	42:09	- 0.94
112	Hexa	PCB-133/142	2.00	1.57e+06	1.37	y	42:26	- 0.98
113	Hexa	PCB-131	1.00	7.67e+05	1.32	y	42:36	- 0.96

114	Hexa	PCB-146/165	2.00	1.91e+06	1.21 y	42:48	-	1.19
115	Hexa	PCB-132/161	2.00	1.82e+06	1.22 y	43:03	-	1.14
116	Hexa	PCB-153	1.00	9.94e+05	1.17 y	43:14	-	1.24
117	Hexa	PCB-168	1.00	1.15e+06	1.10 y	43:27	-	1.44
118	Hexa	PCB-141	1.00	7.87e+05	1.28 y	43:58	-	1.00
119	Hexa	PCB-137	1.00	9.10e+05	1.29 y	44:21	-	1.16
120	Hexa	PCB-130	1.00	6.47e+05	1.23 y	44:28	-	0.83
121	Hexa	PCB-138/163/164	3.00	2.92e+06	1.18 y	44:50	-	1.28
122	Hexa	PCB-158/160	2.00	2.01e+06	1.38 y	45:05	-	1.33
123	Hexa	PCB-129	1.00	7.44e+05	1.17 y	45:19	-	0.98
124	Hexa	PCB-166	1.00	1.04e+06	1.28 y	45:46	-	1.21
125	Hexa	PCB-159	1.00	1.07e+06	1.23 y	46:05	-	1.24
126	Hexa	PCB-128/162	2.00	1.76e+06	1.16 y	46:22	-	1.03
127	Hexa	PCB-167	1.00	1.00e+06	1.19 y	46:47	-	1.04
128	Hexa	PCB-156	1.00	1.09e+06	1.12 y	48:04	-	1.20
129	Hexa	PCB-157	1.00	1.06e+06	1.22 y	48:20	-	1.12
130	Hexa	PCB-169	1.00	1.01e+06	1.16 y	50:24	-	1.15
131	Hepta	PCB-188	1.00	9.64e+05	1.15 y	42:52	-	1.44
132	Hepta	PCB-184	1.00	8.74e+05	0.93 y	43:18	-	1.30
133	Hepta	PCB-179	1.00	9.19e+05	1.16 y	44:06	-	1.37
134	Hepta	PCB-176	1.00	9.89e+05	1.02 y	44:34	-	1.47
135	Hepta	PCB-186	1.00	8.74e+05	1.12 y	45:09	-	1.30
136	Hepta	PCB-178	1.00	7.05e+05	1.02 y	45:38	-	1.05
137	Hepta	PCB-175	1.00	6.78e+05	0.95 y	45:59	-	1.01
138	Hepta	PCB-182/187	2.00	1.38e+06	0.98 y	46:11	-	1.03
139	Hepta	PCB-183	1.00	7.83e+05	1.07 y	46:29	-	1.17
140	Hepta	PCB-185	1.00	6.66e+05	0.96 y	47:09	-	1.37
141	Hepta	PCB-174	1.00	6.57e+05	1.07 y	47:31	-	1.36
142	Hepta	PCB-181	1.00	7.19e+05	0.90 y	47:36	-	1.48
143	Hepta	PCB-177	1.00	5.95e+05	0.98 y	47:47	-	1.23
144	Hepta	PCB-171	1.00	6.43e+05	1.06 y	48:04	-	1.33
145	Hepta	PCB-173	1.00	5.49e+05	1.09 y	48:31	-	1.13
146	Hepta	PCB-172	1.00	5.72e+05	1.17 y	48:57	-	1.18
147	Hepta	PCB-192	1.00	7.66e+05	1.07 y	49:09	-	1.58
148	Hepta	PCB-180	1.00	7.16e+05	1.13 y	49:20	-	1.48
149	Hepta	PCB-193	1.00	8.30e+05	1.09 y	49:32	-	1.71
150	Hepta	PCB-191	1.00	7.89e+05	1.14 y	49:46	-	1.63
151	Hepta	PCB-170	1.00	6.49e+05	1.09 y	50:45	-	1.67
152	Hepta	PCB-190	1.00	8.09e+05	1.12 y	50:55	-	2.09
153	Hepta	PCB-189	1.00	8.02e+05	1.19 y	52:12	-	1.58
154	Octa	PCB-202	1.00	6.64e+05	0.98 y	48:17	-	1.11
155	Octa	PCB-201	1.00	6.64e+05	0.96 y	48:46	-	1.11
156	Octa	PCB-204	1.00	5.92e+05	0.96 y	48:55	-	0.99
157	Octa	PCB-197	1.00	6.20e+05	0.87 y	49:13	-	1.04
158	Octa	PCB-200	1.00	6.09e+05	0.92 y	50:03	-	1.02
159	Octa	PCB-198	1.00	4.81e+05	0.77 y	51:20	-	0.81
160	Octa	PCB-199	1.00	4.49e+05	0.78 y	51:25	-	0.75
161	Octa	PCB-196/203	2.00	9.60e+05	0.87 y	51:40	-	0.80
162	Octa	PCB-195	1.00	6.50e+05	0.91 y	52:49	-	1.23
163	Octa	PCB-194	1.00	6.42e+05	1.01 y	53:40	-	1.21

164	Octa	PCB-205	1.00	7.63e+05	0.88	y	53:57	-	1.44
165	Nona	PCB-208	1.00	7.07e+05	1.32	y	52:57	-	0.95
166	Nona	PCB-207	1.00	7.22e+05	1.40	y	53:16	-	0.97
167	Nona	PCB-206	1.00	4.47e+05	1.26	y	55:21	-	1.05
168	Deca	PCB-209	1.00	4.65e+05	1.13	y	56:37	-	1.19
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.24
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.20

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.38
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.27
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.12
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.31
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.94
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.29
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.98
182	Tot ╗	Total Deca-PCB	1.00	4.65e+05	1.13	y	56:37	-	1.19
183	Mono╗	13C-PCB-1	100.00	1.56e+08	3.23	y	16:15	-	0.94
184	Mono╗	13C-PCB-3	100.00	1.56e+08	3.29	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	9.40e+07	1.58	y	20:09	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.41e+08	1.60	y	21:55	-	0.85
187	Di-IS	13C-PCB-11	100.00	1.59e+08	1.57	y	25:17	-	0.96
188	Tri-╗	13C-PCB-19	100.00	9.18e+07	1.06	y	24:16	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.37e+08	1.08	y	27:10	-	0.82
190	Tri-╗	13C-PCB-28	100.00	1.40e+08	1.05	y	29:07	-	0.91
191	Tri-╗	13C-PCB-37	100.00	1.28e+08	1.06	y	32:59	-	0.83
192	Tetr╗	13C-PCB-54	100.00	1.18e+08	0.81	y	28:00	-	0.89
193	Tetr╗	13C-PCB-52	100.00	9.78e+07	0.79	y	31:30	-	0.74
194	Tetr╗	13C-PCB-47	100.00	1.03e+08	0.79	y	32:01	-	0.78
195	Tetr╗	13C-PCB-70	100.00	1.28e+08	0.80	y	35:31	-	0.97
196	Tetr╗	13C-PCB-80	100.00	1.32e+08	0.81	y	35:56	-	1.00
197	Tetr╗	13C-PCB-81	100.00	1.09e+08	0.81	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	1.16e+08	0.80	y	39:38	-	0.87
199	Pent╗	13C-PCB-104	100.00	8.57e+07	1.62	y	32:41	-	1.06
200	Pent╗	13C-PCB-95	100.00	6.25e+07	1.56	y	35:50	-	0.78
201	Pent╗	13C-PCB-101	100.00	6.52e+07	1.58	y	37:30	-	0.81
202	Pent╗	13C-PCB-97	100.00	5.55e+07	1.65	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.42e+07	1.57	y	41:21	-	0.92
204	Pent╗	13C-PCB-118	100.00	7.69e+07	1.66	y	41:33	-	0.95
205	Pent╗	13C-PCB-114	100.00	8.65e+07	1.61	y	42:12	-	1.20
206	Pent╗	13C-PCB-105	100.00	8.97e+07	1.59	y	43:03	-	1.24
207	Pent╗	13C-PCB-127	100.00	9.70e+07	1.57	y	43:23	-	1.34
208	Pent╗	13C-PCB-126	100.00	8.43e+07	1.60	y	45:18	-	1.17
209	Hexa╗	13C-PCB-155	100.00	7.04e+07	1.28	y	37:03	-	0.87
210	Hexa╗	13C-PCB-153	100.00	8.00e+07	1.28	y	43:13	-	1.11
211	Hexa╗	13C-PCB-141	100.00	7.84e+07	1.29	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	7.60e+07	1.27	y	44:48	-	1.05
213	Hexa╗	13C-PCB-159	100.00	8.60e+07	1.28	y	46:05	-	1.19
214	Hexa╗	13C-PCB-167	100.00	9.61e+07	1.31	y	46:45	-	1.33
215	Hexa╗	13C-PCB-156	100.00	9.01e+07	1.28	y	48:03	-	1.25
216	Hexa╗	13C-PCB-157	100.00	9.47e+07	1.27	y	48:19	-	1.31
217	Hexa╗	13C-PCB-169	100.00	8.76e+07	1.27	y	50:24	-	1.21
218	Hept╗	13C-PCB-188	100.00	6.71e+07	0.47	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.84e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.88e+07	0.48	y	50:45	-	0.54
221	Hept╗	13C-PCB-189	100.00	5.08e+07	0.46	y	52:10	-	0.70
222	Octa╗	13C-PCB-202	100.00	5.96e+07	0.91	y	48:16	-	0.83

223	Octa¶	13C-PCB-194	100.00	5.30e+07	0.91	y	53:40	-	0.82
224	Nona¶	13C-PCB-208	100.00	7.41e+07	0.77	y	52:56	-	1.14
225	Nona¶	13C-PCB-206	100.00	4.24e+07	0.79	y	55:20	-	0.65
226	Deca¶	13C-PCB-209	100.00	3.91e+07	1.19	y	56:37	-	0.60
227	DI-RS	13C-PCB-15	100.00	1.66e+08	1.58	y	25:59	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.54e+08	1.06	y	29:00	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.33e+08	0.79	y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	8.06e+07	1.63	y	39:14	-	1.00
231	Hexa¶	13C-PCB-128	100.00	7.22e+07	1.30	y	46:21	-	1.00
232	Octa¶	13C-PCB-205	100.00	6.47e+07	0.91	y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 0.97
234	CRS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.61
235	PS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 1.18
236	PS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.91

Filename: 140620E1 S: 3 Acquired: 20-JUN-14 11:39:47
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-3 PCB CS2 13H1205

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	2.50	1.09e+07	2.94 y	16:15	-	1.26
2	Mono	PCB-2	2.50	1.01e+07	3.00 y	18:37	-	1.14
3	Mono	PCB-3	2.50	1.09e+07	3.06 y	18:51	-	1.23
4	Di	PCB-4/10	10.00	3.30e+07	1.63 y	20:12	-	1.55
5	Di	PCB-7/9	10.00	4.03e+07	1.63 y	21:58	-	1.26
6	Di	PCB-6	5.00	2.02e+07	1.66 y	22:36	-	1.26
7	Di	PCB-5/8	10.00	3.95e+07	1.65 y	23:01	-	1.23
8	Di	PCB-14	5.00	2.20e+07	1.65 y	24:06	-	1.21
9	Di	PCB-11	5.00	2.10e+07	1.68 y	25:18	-	1.16
10	Di	PCB-12/13	10.00	3.98e+07	1.61 y	25:41	-	1.10
11	Di	PCB-15	5.00	2.21e+07	1.67 y	25:59	-	1.22
12	Tri	PCB-19	2.50	6.55e+06	1.07 y	24:18	-	1.26
13	Tri	PCB-30	2.50	9.41e+06	1.06 y	25:11	-	1.82
14	Tri	PCB-18	2.50	6.63e+06	1.06 y	25:55	-	0.85
15	Tri	PCB-17	2.50	6.98e+06	1.08 y	26:06	-	0.89
16	Tri	PCB-24/27	5.00	1.85e+07	1.06 y	26:40	-	1.18
17	Tri	PCB-16/32	5.00	1.59e+07	1.07 y	27:10	-	1.02
18	Tri	PCB-34	2.50	9.58e+06	1.09 y	27:57	-	1.25
19	Tri	PCB-23	2.50	1.08e+07	1.09 y	28:03	-	1.41
20	Tri	PCB-29	2.50	1.02e+07	1.10 y	28:18	-	1.32
21	Tri	PCB-26	2.50	1.02e+07	1.06 y	28:30	-	1.32
22	Tri	PCB-25	2.50	1.04e+07	1.14 y	28:40	-	1.36
23	Tri	PCB-31	2.50	1.12e+07	1.09 y	29:02	-	1.46
24	Tri	PCB-28	2.50	1.08e+07	1.11 y	29:08	-	1.41
25	Tri	PCB-20/21/33	7.50	3.04e+07	1.09 y	29:45	-	1.32
26	Tri	PCB-22	2.50	1.03e+07	1.06 y	30:11	-	1.35
27	Tri	PCB-36	2.50	1.02e+07	1.08 y	30:48	-	1.38
28	Tri	PCB-39	2.50	1.04e+07	1.08 y	31:16	-	1.41
29	Tri	PCB-38	2.50	1.00e+07	1.09 y	32:03	-	1.36
30	Tri	PCB-35	2.50	9.94e+06	1.07 y	32:33	-	1.35
31	Tri	PCB-37	2.50	1.02e+07	1.12 y	32:59	-	1.39
32	Tetra	PCB-54	2.50	7.98e+06	0.79 y	28:02	-	1.18
33	Tetra	PCB-50	2.50	6.47e+06	0.77 y	29:11	-	0.96
34	Tetra	PCB-53	2.50	6.40e+06	0.77 y	29:50	-	1.14
35	Tetra	PCB-51	2.50	6.58e+06	0.81 y	30:10	-	1.17
36	Tetra	PCB-45	2.50	5.60e+06	0.78 y	30:36	-	1.00
37	Tetra	PCB-46	2.50	5.09e+06	0.75 y	31:05	-	0.90
38	Tetra	PCB-52/69	5.00	1.50e+07	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	2.50	7.36e+06	0.75 y	31:40	-	1.31
40	Tetra	PCB-43/49	5.00	1.23e+07	0.78 y	31:50	-	1.10
41	Tetra	PCB-47	2.50	6.07e+06	0.76 y	32:02	-	1.04

42	Tetra	PCB-48/75	5.00	1.55e+07	0.77	y	32:09	- 1.33
43	Tetra	PCB-65	2.50	7.45e+06	0.79	y	32:25	- 1.28
44	Tetra	PCB-62	2.50	7.60e+06	0.79	y	32:32	- 1.30
45	Tetra	PCB-44	2.50	5.73e+06	0.74	y	32:50	- 0.98
46	Tetra	PCB-42/59	5.00	1.41e+07	0.77	y	33:04	- 1.21
47	Tetra	PCB-41/64/71/72	10.00	2.98e+07	0.78	y	33:39	- 1.28
48	Tetra	PCB-68	2.50	8.64e+06	0.79	y	33:54	- 1.48
49	Tetra	PCB-40	2.50	4.77e+06	0.77	y	34:07	- 0.82
50	Tetra	PCB-57	2.50	7.93e+06	0.79	y	34:28	- 1.11
51	Tetra	PCB-67	2.50	8.04e+06	0.68	y	34:46	- 1.12
52	Tetra	PCB-58	2.50	8.03e+06	0.88	y	34:53	- 1.12

53	Tetra	PCB-63	2.50	8.15e+06	0.80 y	35:03	-	1.14
54	Tetra	PCB-74	2.50	8.76e+06	0.78 y	35:20	-	1.22
55	Tetra	PCB-61/70	5.00	1.56e+07	0.76 y	35:31	-	1.08
56	Tetra	PCB-76/66	5.00	1.60e+07	0.79 y	35:44	-	1.12
57	Tetra	PCB-80	2.50	9.48e+06	0.78 y	35:58	-	1.28
58	Tetra	PCB-55	2.50	8.11e+06	0.77 y	36:17	-	1.10
59	Tetra	PCB-56/60	5.00	1.58e+07	0.77 y	36:47	-	1.07
60	Tetra	PCB-79	2.50	8.31e+06	0.75 y	37:50	-	1.12
61	Tetra	PCB-78	2.50	7.55e+06	0.77 y	38:32	-	1.20
62	Tetra	PCB-81	2.50	8.89e+06	0.79 y	39:04	-	1.41
63	Tetra	PCB-77	2.50	8.13e+06	0.82 y	39:39	-	1.22
64	Penta	PCB-104	2.50	6.23e+06	1.51 y	32:41	-	1.28
65	Penta	PCB-96	2.50	5.23e+06	1.55 y	33:57	-	1.08
66	Penta	PCB-103	2.50	4.30e+06	1.55 y	34:29	-	0.89
67	Penta	PCB-100	2.50	4.69e+06	1.55 y	34:50	-	0.97
68	Penta	PCB-94	2.50	3.79e+06	1.67 y	35:18	-	1.11
69	Penta	PCB-95/98/102	7.50	1.21e+07	1.60 y	35:48	-	1.18
70	Penta	PCB-93	2.50	4.14e+06	1.71 y	35:56	-	1.21
71	Penta	PCB-88/91	5.00	6.98e+06	1.52 y	36:13	-	1.02
72	Penta	PCB-121	2.50	6.62e+06	1.66 y	36:18	-	1.94
73	Penta	PCB-84/92	5.00	7.58e+06	1.59 y	37:08	-	1.05
74	Penta	PCB-89	2.50	3.69e+06	1.55 y	37:20	-	1.02
75	Penta	PCB-90/101	5.00	8.58e+06	1.58 y	37:30	-	1.19
76	Penta	PCB-113	2.50	4.74e+06	1.59 y	37:45	-	1.32
77	Penta	PCB-99	2.50	4.85e+06	1.65 y	37:50	-	1.35
78	Penta	PCB-119	2.50	5.47e+06	1.52 y	38:19	-	1.72
79	Penta	PCB-108/112	5.00	8.21e+06	1.65 y	38:28	-	1.29
80	Penta	PCB-83	2.50	4.81e+06	1.57 y	38:38	-	1.51
81	Penta	PCB-97	2.50	4.05e+06	1.59 y	38:49	-	1.27
82	Penta	PCB-86	2.50	3.35e+06	1.53 y	38:57	-	1.05
83	Penta	PCB-87/117/125	7.50	1.48e+07	1.59 y	39:05	-	1.55
84	Penta	PCB-111/115	5.00	1.08e+07	1.58 y	39:14	-	1.69
85	Penta	PCB-85/116	5.00	8.48e+06	1.60 y	39:22	-	1.33
86	Penta	PCB-120	2.50	5.59e+06	1.63 y	39:37	-	1.76
87	Penta	PCB-110	2.50	5.26e+06	1.59 y	39:45	-	1.65
88	Penta	PCB-82	2.50	3.23e+06	1.69 y	40:24	-	0.73
89	Penta	PCB-124	2.50	5.89e+06	1.57 y	41:04	-	1.33
90	Penta	PCB-107/109	5.00	1.04e+07	1.65 y	41:13	-	1.18
91	Penta	PCB-123	2.50	5.43e+06	1.52 y	41:23	-	1.23
92	Penta	PCB-106/118	5.00	1.13e+07	1.59 y	41:34	-	1.25
93	Penta	PCB-114	2.50	6.81e+06	1.68 y	42:13	-	1.36
94	Penta	PCB-122	2.50	6.01e+06	1.59 y	42:21	-	1.20
95	Penta	PCB-105	2.50	6.91e+06	1.69 y	43:05	-	1.33
96	Penta	PCB-127	2.50	6.53e+06	1.64 y	43:25	-	1.14
97	Penta	PCB-126	2.50	6.39e+06	1.68 y	45:18	-	1.28
98	Hexa	PCB-155	2.50	4.51e+06	1.22 y	37:04	-	1.18
99	Hexa	PCB-150	2.50	4.00e+06	1.22 y	38:20	-	1.05
100	Hexa	PCB-152	2.50	4.04e+06	1.22 y	38:48	-	1.06
101	Hexa	PCB-145	2.50	4.00e+06	1.28 y	39:14	-	1.05
102	Hexa	PCB-136	2.50	4.13e+06	1.32 y	39:34	-	1.08

103	Hexa	PCB-148	2.50	2.58e-06	1.36 y	39:41	-	0.68
104	Hexa	PCB-154	2.50	3.37e+06	1.28 y	40:09	-	0.88
105	Hexa	PCB-151	2.50	2.97e+06	1.35 y	40:48	-	0.78
106	Hexa	PCB-135	2.50	2.92e+06	1.29 y	41:00	-	0.76
107	Hexa	PCB-144	2.50	2.97e+06	1.28 y	41:07	-	0.78
108	Hexa	PCB-147	2.50	2.99e+06	1.23 y	41:15	-	0.78
109	Hexa	PCB-139/149	5.00	6.36e+06	1.23 y	41:31	-	0.83
110	Hexa	PCB-140	2.50	2.90e+06	1.28 y	41:42	-	0.76
111	Hexa	PCB-134/143	5.00	8.39e+06	1.23 y	42:08	-	0.90
112	Hexa	PCB-133/142	5.00	8.52e+06	1.22 y	42:26	-	0.91
113	Hexa	PCB-131	2.50	4.20e+06	1.24 y	42:36	-	0.90

114	Hexa	PCB-146/165	5.00	1.07e+07	1.23 y	42:49	-	1.14
115	Hexa	PCB-132/161	5.00	1.02e+07	1.22 y	43:04	-	1.09
116	Hexa	PCB-153	2.50	5.91e+06	1.25 y	43:13	-	1.26
117	Hexa	PCB-168	2.50	6.38e+06	1.17 y	43:26	-	1.37
118	Hexa	PCB-141	2.50	4.37e+06	1.21 y	43:58	-	0.97
119	Hexa	PCB-137	2.50	4.74e+06	1.24 y	44:21	-	1.05
120	Hexa	PCB-130	2.50	3.95e+06	1.26 y	44:27	-	0.87
121	Hexa	PCB-138/163/164	7.50	1.61e+07	1.23 y	44:50	-	1.22
122	Hexa	PCB-158/160	5.00	1.14e+07	1.26 y	45:04	-	1.29
123	Hexa	PCB-129	2.50	4.07e+06	1.27 y	45:19	-	0.93
124	Hexa	PCB-166	2.50	5.65e+06	1.19 y	45:46	-	1.11
125	Hexa	PCB-159	2.50	5.99e+06	1.25 y	46:05	-	1.18
126	Hexa	PCB-128/162	5.00	1.06e+07	1.20 y	46:23	-	1.04
127	Hexa	PCB-167	2.50	6.20e+06	1.24 y	46:46	-	1.10
128	Hexa	PCB-156	2.50	6.26e+06	1.23 y	48:04	-	1.18
129	Hexa	PCB-157	2.50	6.28e+06	1.27 y	48:20	-	1.13
130	Hexa	PCB-169	2.50	5.82e+06	1.20 y	50:24	-	1.12
131	Hepta	PCB-188	2.50	5.50e+06	1.08 y	42:52	-	1.43
132	Hepta	PCB-184	2.50	4.81e+06	1.08 y	43:19	-	1.25
133	Hepta	PCB-179	2.50	5.06e+06	1.03 y	44:06	-	1.32
134	Hepta	PCB-176	2.50	5.19e+06	1.06 y	44:34	-	1.35
135	Hepta	PCB-186	2.50	4.80e+06	1.01 y	45:11	-	1.25
136	Hepta	PCB-178	2.50	3.68e+06	1.04 y	45:40	-	0.96
137	Hepta	PCB-175	2.50	3.76e+06	1.07 y	46:00	-	0.98
138	Hepta	PCB-182/187	5.00	7.80e+06	1.03 y	46:11	-	1.01
139	Hepta	PCB-183	2.50	4.14e+06	1.08 y	46:30	-	1.08
140	Hepta	PCB-185	2.50	3.61e+06	1.06 y	47:09	-	1.30
141	Hepta	PCB-174	2.50	3.80e+06	1.05 y	47:31	-	1.36
142	Hepta	PCB-181	2.50	3.56e+06	1.02 y	47:38	-	1.28
143	Hepta	PCB-177	2.50	3.33e+06	1.02 y	47:47	-	1.20
144	Hepta	PCB-171	2.50	3.72e+06	1.05 y	48:04	-	1.34
145	Hepta	PCB-173	2.50	3.21e+06	1.03 y	48:31	-	1.15
146	Hepta	PCB-172	2.50	3.40e+06	1.05 y	48:57	-	1.22
147	Hepta	PCB-192	2.50	4.16e+06	1.05 y	49:09	-	1.49
148	Hepta	PCB-180	2.50	4.01e+06	1.10 y	49:21	-	1.44
149	Hepta	PCB-193	2.50	4.60e+06	1.04 y	49:32	-	1.65
150	Hepta	PCB-191	2.50	4.58e+06	1.05 y	49:46	-	1.65
151	Hepta	PCB-170	2.50	3.36e+06	1.02 y	50:45	-	1.51
152	Hepta	PCB-190	2.50	4.37e+06	1.06 y	50:55	-	1.97
153	Hepta	PCB-189	2.50	4.66e+06	1.06 y	52:12	-	1.55
154	Octa	PCB-202	2.50	3.48e+06	0.98 y	48:17	-	1.01
155	Octa	PCB-201	2.50	3.65e+06	0.94 y	48:46	-	1.06
156	Octa	PCB-204	2.50	3.41e+06	0.91 y	48:55	-	0.99
157	Octa	PCB-197	2.50	3.58e+06	0.96 y	49:14	-	1.04
158	Octa	PCB-200	2.50	3.52e+06	0.95 y	50:03	-	1.02
159	Octa	PCB-198	2.50	2.39e+06	0.96 y	51:19	-	0.69
160	Octa	PCB-199	2.50	2.50e+06	0.94 y	51:25	-	0.73
161	Octa	PCB-196/203	5.00	5.16e+06	0.89 y	51:41	-	0.75
162	Octa	PCB-195	2.50	3.62e+06	0.88 y	52:48	-	1.17
163	Octa	PCB-194	2.50	3.77e+06	0.94 y	53:40	-	1.22

164	Octa	PCB-205	2.50	4.34e+06	0.90	y	53:57	-	1.41
165	Nona	PCB-208	2.50	3.94e+06	1.36	y	52:56	-	0.93
166	Nona	PCB-207	2.50	3.87e+06	1.29	y	53:15	-	0.91
167	Nona	PCB-206	2.50	2.57e+06	1.40	y	55:20	-	1.03
168	Deca	PCB-209	2.50	2.82e+06	1.17	y	56:37	-	1.21
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.21
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.21
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.15

172	Tot ╕	Total Tri-PCB	0.00	-	-	n	-	-	1.36
173	Tot ╕	Total Tetra-PCB	0.00	-	-	n	-	-	1.17
174	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.26
176	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	0.89
177	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	1.08
178	Tot ╕	Total Hepta-PCB	0.00	-	-	n	-	-	1.27
179	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	0.89
180	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	1.26
181	Tot ╕	Total Nona-PCB	0.00	-	-	n	-	-	0.94
182	Tot ╕	Total Deca-PCB	2.50	2.82e+06	1.17	y	56:37	-	1.21
183	Mono╕	13C-PCB-1	100.00	3.46e+08	3.25	y	16:14	-	0.91
184	Mono╕	13C-PCB-3	100.00	3.56e+08	3.24	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	2.13e+08	1.57	y	20:09	-	0.56
186	Di-IS	13C-PCB-9	100.00	3.20e+08	1.57	y	21:55	-	0.84
187	Di-IS	13C-PCB-11	100.00	3.64e+08	1.57	y	25:16	-	0.96
188	Tri-╕	13C-PCB-19	100.00	2.07e+08	1.06	y	24:16	-	0.55
189	Tri-╕	13C-PCB-32	100.00	3.14e+08	1.08	y	27:10	-	0.83
190	Tri-╕	13C-PCB-28	100.00	3.07e+08	1.06	y	29:07	-	0.83
191	Tri-╕	13C-PCB-37	100.00	2.95e+08	1.07	y	32:58	-	0.80
192	Tetr╕	13C-PCB-54	100.00	2.71e+08	0.81	y	28:00	-	0.91
193	Tetr╕	13C-PCB-52	100.00	2.25e+08	0.80	y	31:31	-	0.75
194	Tetr╕	13C-PCB-47	100.00	2.33e+08	0.79	y	32:01	-	0.78
195	Tetr╕	13C-PCB-70	100.00	2.87e+08	0.80	y	35:32	-	0.96
196	Tetr╕	13C-PCB-80	100.00	2.96e+08	0.81	y	35:56	-	0.99
197	Tetr╕	13C-PCB-81	100.00	2.52e+08	0.80	y	39:03	-	0.84
198	Tetr╕	13C-PCB-77	100.00	2.67e+08	0.80	y	39:38	-	0.90
199	Pent╕	13C-PCB-104	100.00	1.94e+08	1.60	y	32:40	-	1.07
200	Pent╕	13C-PCB-95	100.00	1.37e+08	1.60	y	35:50	-	0.75
201	Pent╕	13C-PCB-101	100.00	1.44e+08	1.61	y	37:30	-	0.79
202	Pent╕	13C-PCB-97	100.00	1.27e+08	1.61	y	38:48	-	0.70
203	Pent╕	13C-PCB-123	100.00	1.77e+08	1.58	y	41:22	-	0.98
204	Pent╕	13C-PCB-118	100.00	1.80e+08	1.61	y	41:33	-	0.99
205	Pent╕	13C-PCB-114	100.00	2.01e+08	1.59	y	42:12	-	1.21
206	Pent╕	13C-PCB-105	100.00	2.08e+08	1.59	y	43:04	-	1.25
207	Pent╕	13C-PCB-127	100.00	2.30e+08	1.60	y	43:23	-	1.38
208	Pent╕	13C-PCB-126	100.00	2.00e+08	1.58	y	45:18	-	1.20
209	Hexa╕	13C-PCB-155	100.00	1.53e+08	1.28	y	37:03	-	0.84
210	Hexa╕	13C-PCB-153	100.00	1.87e+08	1.28	y	43:13	-	1.13
211	Hexa╕	13C-PCB-141	100.00	1.81e+08	1.27	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	1.75e+08	1.26	y	44:48	-	1.06
213	Hexa╕	13C-PCB-159	100.00	2.03e+08	1.26	y	46:04	-	1.22
214	Hexa╕	13C-PCB-167	100.00	2.26e+08	1.29	y	46:46	-	1.36
215	Hexa╕	13C-PCB-156	100.00	2.13e+08	1.27	y	48:03	-	1.28
216	Hexa╕	13C-PCB-157	100.00	2.22e+08	1.29	y	48:20	-	1.34
217	Hexa╕	13C-PCB-169	100.00	2.08e+08	1.29	y	50:23	-	1.25
218	Hept╕	13C-PCB-188	100.00	1.54e+08	0.47	y	42:51	-	0.93
219	Hept╕	13C-PCB-180	100.00	1.11e+08	0.47	y	49:20	-	0.67
220	Hept╕	13C-PCB-170	100.00	8.90e+07	0.47	y	50:44	-	0.54
221	Hept╕	13C-PCB-189	100.00	1.21e+08	0.46	y	52:11	-	0.73
222	Octa╕	13C-PCB-202	100.00	1.38e+08	0.91	y	48:16	-	0.83

223	Octa╗	13C-PCB-194	100.00	1.24e+08	0.92 y	53:39	-	0.82
224	Nona╗	13C-PCB-208	100.00	1.70e+08	0.78 y	52:56	-	1.13
225	Nona╗	13C-PCB-206	100.00	1.00e+08	0.81 y	55:19	-	0.66
226	Deca╗	13C-PCB-209	100.00	9.32e+07	1.21 y	56:36	-	0.62
227	DI-RS	13C-PCB-15	100.00	3.79e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	3.70e+08	1.06 y	29:01	-	1.00
229	Tetr╗	13C-PCB-60	100.00	2.98e+08	0.79 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.81e+08	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.66e+08	1.28 y	46:22	-	1.00
232	Octa╗	13C-PCB-205	100.00	1.51e+08	0.90 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 0.99
234	CRS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.62
235	PS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 1.17
236	PS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.92

Filename: 140620E1 S: 4 Acquired: 20-JUN-14 12:43:46
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-4 PCB CS3 14F1901

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	7.81e+07	2.96 y	16:15	-	1.31
2	Mono	PCB-2	50.00	7.76e+07	2.98 y	18:36	-	1.24
3	Mono	PCB-3	50.00	7.92e+07	2.99 y	18:50	-	1.26
4	Di	PCB-4/10	200.00	2.38e+08	1.63 y	20:12	-	1.61
5	Di	PCB-7/9	200.00	2.89e+08	1.64 y	21:57	-	1.30
6	Di	PCB-6	100.00	1.40e+08	1.64 y	22:36	-	1.26
7	Di	PCB-5/8	200.00	2.85e+08	1.64 y	23:01	-	1.28
8	Di	PCB-14	100.00	1.58e+08	1.64 y	24:06	-	1.27
9	Di	PCB-11	100.00	1.47e+08	1.66 y	25:17	-	1.18
10	Di	PCB-12/13	200.00	2.83e+08	1.65 y	25:41	-	1.14
11	Di	PCB-15	100.00	1.54e+08	1.67 y	26:00	-	1.24
12	Tri	PCB-19	50.00	4.61e+07	1.05 y	24:17	-	1.28
13	Tri	PCB-30	50.00	6.74e+07	1.06 y	25:10	-	1.87
14	Tri	PCB-18	50.00	4.73e+07	1.06 y	25:55	-	0.87
15	Tri	PCB-17	50.00	4.99e+07	1.05 y	26:05	-	0.92
16	Tri	PCB-24/27	100.00	1.33e+08	1.06 y	26:40	-	1.22
17	Tri	PCB-16/32	100.00	1.13e+08	1.05 y	27:10	-	1.03
18	Tri	PCB-34	50.00	6.57e+07	1.09 y	27:57	-	1.23
19	Tri	PCB-23	50.00	7.68e+07	1.09 y	28:02	-	1.44
20	Tri	PCB-29	50.00	7.27e+07	1.09 y	28:18	-	1.36
21	Tri	PCB-26	50.00	7.01e+07	1.08 y	28:30	-	1.31
22	Tri	PCB-25	50.00	7.40e+07	1.09 y	28:40	-	1.38
23	Tri	PCB-31	50.00	7.56e+07	1.08 y	29:02	-	1.41
24	Tri	PCB-28	50.00	7.73e+07	1.11 y	29:07	-	1.45
25	Tri	PCB-20/21/33	150.00	2.14e+08	1.09 y	29:45	-	1.34
26	Tri	PCB-22	50.00	7.44e+07	1.09 y	30:11	-	1.39
27	Tri	PCB-36	50.00	7.19e+07	1.09 y	30:47	-	1.43
28	Tri	PCB-39	50.00	7.33e+07	1.08 y	31:16	-	1.46
29	Tri	PCB-38	50.00	7.08e+07	1.08 y	32:02	-	1.41
30	Tri	PCB-35	50.00	7.21e+07	1.11 y	32:33	-	1.44
31	Tri	PCB-37	50.00	7.05e+07	1.09 y	32:59	-	1.41
32	Tetra	PCB-54	50.00	5.75e+07	0.77 y	28:01	-	1.24
33	Tetra	PCB-50	50.00	4.62e+07	0.77 y	29:11	-	0.99
34	Tetra	PCB-53	50.00	4.60e+07	0.78 y	29:49	-	1.19
35	Tetra	PCB-51	50.00	4.72e+07	0.78 y	30:10	-	1.23
36	Tetra	PCB-45	50.00	3.93e+07	0.78 y	30:36	-	1.02
37	Tetra	PCB-46	50.00	3.68e+07	0.76 y	31:04	-	0.95
38	Tetra	PCB-52/69	100.00	1.04e+08	0.77 y	31:33	-	1.35
39	Tetra	PCB-73	50.00	5.52e+07	0.77 y	31:39	-	1.43
40	Tetra	PCB-43/49	100.00	8.70e+07	0.78 y	31:50	-	1.13
41	Tetra	PCB-47	50.00	4.87e+07	0.76 y	32:02	-	1.20

42	Tetra	PCB-48/75	100.00	1.06e-08	0.78 y	32:09	-	1.31
43	Tetra	PCB-65	50.00	5.35e-07	0.77 y	32:25	-	1.32
44	Tetra	PCB-62	50.00	5.60e+07	0.77 y	32:32	-	1.38
45	Tetra	PCB-44	50.00	3.98e+07	0.78 y	32:49	-	0.98
46	Tetra	PCB-42/59	100.00	1.02e+08	0.77 y	33:02	-	1.26
47	Tetra	PCB-41/64/71/72	200.00	2.19e+08	0.78 y	33:38	-	1.35
48	Tetra	PCB-68	50.00	6.14e+07	0.78 y	33:54	-	1.51
49	Tetra	PCB-40	50.00	3.36e+07	0.77 y	34:06	-	0.83
50	Tetra	PCB-57	50.00	5.91e+07	0.77 y	34:28	-	1.15
51	Tetra	PCB-67	50.00	5.87e+07	0.78 y	34:46	-	1.15
52	Tetra	PCB-58	50.00	5.57e+07	0.78 y	34:53	-	1.09

53	Tetra	PCB-63	50.00	5.92e+07	0.76 y	35:03	-	1.16
54	Tetra	PCB-74	50.00	6.39e+07	0.77 y	35:20	-	1.25
55	Tetra	PCB-61/70	100.00	1.13e+08	0.78 y	35:30	-	1.10
56	Tetra	PCB-76/66	100.00	1.20e+08	0.77 y	35:43	-	1.17
57	Tetra	PCB-80	50.00	6.75e+07	0.78 y	35:56	-	1.28
58	Tetra	PCB-55	50.00	6.01e+07	0.77 y	36:17	-	1.14
59	Tetra	PCB-56/60	100.00	1.15e+08	0.77 y	36:46	-	1.09
60	Tetra	PCB-79	50.00	6.07e+07	0.78 y	37:50	-	1.15
61	Tetra	PCB-78	50.00	5.78e+07	0.78 y	38:32	-	1.27
62	Tetra	PCB-81	50.00	6.42e+07	0.78 y	39:03	-	1.41
63	Tetra	PCB-77	50.00	6.12e+07	0.79 y	39:39	-	1.25
64	Penta	PCB-104	50.00	4.42e+07	1.62 y	32:41	-	1.27
65	Penta	PCB-96	50.00	3.85e+07	1.59 y	33:57	-	1.10
66	Penta	PCB-103	50.00	3.30e+07	1.58 y	34:29	-	0.95
67	Penta	PCB-100	50.00	3.53e+07	1.61 y	34:49	-	1.01
68	Penta	PCB-94	50.00	2.93e+07	1.58 y	35:18	-	1.13
69	Penta	PCB-95/98/102	150.00	1.01e+08	1.60 y	35:47	-	1.30
70	Penta	PCB-93	50.00	2.46e+07	1.63 y	35:56	-	0.95
71	Penta	PCB-88/91	100.00	5.97e+07	1.61 y	36:12	-	1.15
72	Penta	PCB-121	50.00	4.37e+07	1.56 y	36:19	-	1.69
73	Penta	PCB-84/92	100.00	5.90e+07	1.59 y	37:08	-	1.09
74	Penta	PCB-89	50.00	2.93e+07	1.61 y	37:19	-	1.08
75	Penta	PCB-90/101	100.00	6.59e+07	1.60 y	37:31	-	1.21
76	Penta	PCB-113	50.00	4.09e+07	1.59 y	37:45	-	1.51
77	Penta	PCB-99	50.00	3.25e+07	1.60 y	37:51	-	1.20
78	Penta	PCB-119	50.00	4.22e+07	1.61 y	38:18	-	1.73
79	Penta	PCB-108/112	100.00	6.46e+07	1.63 y	38:27	-	1.33
80	Penta	PCB-83	50.00	3.86e+07	1.62 y	38:38	-	1.58
81	Penta	PCB-97	50.00	3.20e+07	1.59 y	38:49	-	1.32
82	Penta	PCB-86	50.00	2.38e+07	1.53 y	38:58	-	0.98
83	Penta	PCB-87/117/125	150.00	1.16e+08	1.58 y	39:05	-	1.59
84	Penta	PCB-111/115	100.00	8.59e+07	1.72 y	39:15	-	1.76
85	Penta	PCB-85/116	100.00	6.54e+07	1.46 y	39:23	-	1.34
86	Penta	PCB-120	50.00	4.27e+07	1.57 y	39:37	-	1.75
87	Penta	PCB-110	50.00	4.19e+07	1.60 y	39:46	-	1.72
88	Penta	PCB-82	50.00	2.58e+07	1.60 y	40:23	-	0.73
89	Penta	PCB-124	50.00	4.68e+07	1.60 y	41:03	-	1.32
90	Penta	PCB-107/109	100.00	8.79e+07	1.59 y	41:12	-	1.24
91	Penta	PCB-123	50.00	4.52e+07	1.59 y	41:22	-	1.28
92	Penta	PCB-106/118	100.00	9.20e+07	1.60 y	41:35	-	1.26
93	Penta	PCB-114	50.00	5.39e+07	1.62 y	42:13	-	1.37
94	Penta	PCB-122	50.00	4.95e+07	1.62 y	42:21	-	1.25
95	Penta	PCB-105	50.00	5.39e+07	1.63 y	43:05	-	1.34
96	Penta	PCB-127	50.00	5.03e+07	1.65 y	43:24	-	1.16
97	Penta	PCB-126	50.00	4.94e+07	1.62 y	45:19	-	1.32
98	Hexa	PCB-155	50.00	3.50e+07	1.27 y	37:03	-	1.20
99	Hexa	PCB-150	50.00	3.24e+07	1.28 y	38:20	-	1.11
100	Hexa	PCB-152	50.00	3.29e+07	1.26 y	38:48	-	1.12
101	Hexa	PCB-145	50.00	3.24e+07	1.26 y	39:15	-	1.11
102	Hexa	PCB-136	50.00	3.34e+07	1.27 y	39:35	-	1.14

103	Hexa	PCB-148	50.00	2.20e-07	1.30 y	39:40	-	0.75
104	Hexa	PCB-154	50.00	2.71e+07	1.26 y	40:10	-	0.93
105	Hexa	PCB-151	50.00	2.51e+07	1.30 y	40:47	-	0.86
106	Hexa	PCB-135	50.00	2.36e+07	1.28 y	41:01	-	0.81
107	Hexa	PCB-144	50.00	2.64e+07	1.36 y	41:08	-	0.90
108	Hexa	PCB-147	50.00	2.56e+07	1.18 y	41:16	-	0.88
109	Hexa	PCB-139/149	100.00	5.31e+07	1.27 y	41:30	-	0.91
110	Hexa	PCB-140	50.00	2.51e+07	1.27 y	41:42	-	0.86
111	Hexa	PCB-134/143	100.00	6.92e+07	1.24 y	42:08	-	0.94
112	Hexa	PCB-133/142	100.00	7.07e+07	1.23 y	42:26	-	0.96
113	Hexa	PCB-131	50.00	3.31e+07	1.22 y	42:36	-	0.90

114	Hexa	PCB-146/165	100.00	8.55e+07	1.24	y	42:48	- 1.16
115	Hexa	PCB-132/161	100.00	8.32e+07	1.22	y	43:03	- 1.13
116	Hexa	PCB-153	50.00	4.33e+07	1.22	y	43:14	- 1.18
117	Hexa	PCB-168	50.00	5.02e+07	1.21	y	43:27	- 1.37
118	Hexa	PCB-141	50.00	3.51e+07	1.21	y	43:58	- 0.99
119	Hexa	PCB-137	50.00	3.65e+07	1.26	y	44:21	- 1.03
120	Hexa	PCB-130	50.00	3.32e+07	1.23	y	44:27	- 0.94
121	Hexa	PCB-138/163/164	150.00	1.29e+08	1.23	y	44:50	- 1.26
122	Hexa	PCB-158/160	100.00	9.17e+07	1.23	y	45:05	- 1.34
123	Hexa	PCB-129	50.00	3.18e+07	1.24	y	45:19	- 0.93
124	Hexa	PCB-166	50.00	4.43e+07	1.22	y	45:46	- 1.13
125	Hexa	PCB-159	50.00	4.56e+07	1.22	y	46:05	- 1.17
126	Hexa	PCB-128/162	100.00	8.34e+07	1.23	y	46:22	- 1.07
127	Hexa	PCB-167	50.00	4.70e+07	1.21	y	46:47	- 1.09
128	Hexa	PCB-156	50.00	4.75e+07	1.22	y	48:04	- 1.17
129	Hexa	PCB-157	50.00	4.75e+07	1.22	y	48:20	- 1.11
130	Hexa	PCB-169	50.00	4.39e+07	1.23	y	50:24	- 1.11
131	Hepta	PCB-188	50.00	4.42e+07	1.02	y	42:52	- 1.43
132	Hepta	PCB-184	50.00	3.95e+07	1.05	y	43:18	- 1.28
133	Hepta	PCB-179	50.00	4.06e+07	1.05	y	44:06	- 1.31
134	Hepta	PCB-176	50.00	4.27e+07	1.05	y	44:34	- 1.38
135	Hepta	PCB-186	50.00	4.05e+07	1.04	y	45:10	- 1.31
136	Hepta	PCB-178	50.00	2.95e+07	1.05	y	45:39	- 0.96
137	Hepta	PCB-175	50.00	3.17e+07	1.05	y	46:00	- 1.02
138	Hepta	PCB-182/187	100.00	6.54e+07	1.04	y	46:11	- 1.06
139	Hepta	PCB-183	50.00	3.41e+07	1.05	y	46:29	- 1.10
140	Hepta	PCB-185	50.00	3.05e+07	1.05	y	47:09	- 1.36
141	Hepta	PCB-174	50.00	2.96e+07	1.04	y	47:31	- 1.32
142	Hepta	PCB-181	50.00	3.21e+07	1.07	y	47:37	- 1.43
143	Hepta	PCB-177	50.00	2.87e+07	1.06	y	47:48	- 1.28
144	Hepta	PCB-171	50.00	2.95e+07	1.04	y	48:05	- 1.31
145	Hepta	PCB-173	50.00	2.63e+07	1.05	y	48:31	- 1.17
146	Hepta	PCB-172	50.00	2.77e+07	1.03	y	48:57	- 1.24
147	Hepta	PCB-192	50.00	3.49e+07	1.05	y	49:09	- 1.56
148	Hepta	PCB-180	50.00	3.18e+07	1.04	y	49:20	- 1.42
149	Hepta	PCB-193	50.00	3.77e+07	1.05	y	49:32	- 1.68
150	Hepta	PCB-191	50.00	3.78e+07	1.05	y	49:47	- 1.68
151	Hepta	PCB-170	50.00	2.67e+07	1.04	y	50:46	- 1.50
152	Hepta	PCB-190	50.00	3.64e+07	1.03	y	50:55	- 2.04
153	Hepta	PCB-189	50.00	3.89e+07	1.04	y	52:12	- 1.59
154	Octa	PCB-202	50.00	2.93e+07	0.91	y	48:17	- 1.04
155	Octa	PCB-201	50.00	3.13e+07	0.93	y	48:46	- 1.11
156	Octa	PCB-204	50.00	2.91e+07	0.88	y	48:56	- 1.04
157	Octa	PCB-197	50.00	3.14e+07	0.91	y	49:13	- 1.12
158	Octa	PCB-200	50.00	3.00e+07	0.91	y	50:03	- 1.07
159	Octa	PCB-198	50.00	2.15e+07	0.90	y	51:20	- 0.77
160	Octa	PCB-199	50.00	2.15e+07	0.89	y	51:25	- 0.77
161	Octa	PCB-196/203	100.00	4.56e+07	0.90	y	51:41	- 0.81
162	Octa	PCB-195	50.00	2.93e+07	0.91	y	52:49	- 1.25
163	Octa	PCB-194	50.00	2.92e+07	0.90	y	53:41	- 1.24

164	Octa	PCB-205	50.00	3.30e+07	0.92	y	53:58	-	1.41
165	Nona	PCB-208	50.00	3.17e+07	1.33	y	52:57	-	0.95
166	Nona	PCB-207	50.00	3.11e+07	1.32	y	53:16	-	0.93
167	Nona	PCB-206	50.00	2.08e+07	1.33	y	55:21	-	1.02
168	Deca	PCB-209	50.00	2.28e+07	1.19	y	56:38	-	1.23
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.25
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.18

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.39
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.10
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.30
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.95
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.30
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.96
182	Tot ╗	Total Deca-PCB	50.00	2.28e+07	1.19	y	56:38	-	1.23
183	Mono╗	13C-PCB-1	100.00	1.19e+08	3.24	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.26e+08	3.30	y	18:49	-	0.93
185	Di-IS	13C-PCB-4	100.00	7.38e+07	1.60	y	20:09	-	0.55
186	Di-IS	13C-PCB-9	100.00	1.12e+08	1.59	y	21:55	-	0.82
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.58	y	25:16	-	0.92
188	Tri-╗	13C-PCB-19	100.00	7.23e+07	1.06	y	24:16	-	0.53
189	Tri-╗	13C-PCB-32	100.00	1.09e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.07e+08	1.05	y	29:07	-	0.85
191	Tri-╗	13C-PCB-37	100.00	1.00e+08	1.07	y	32:59	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.29e+07	0.81	y	28:00	-	0.84
193	Tetr╗	13C-PCB-52	100.00	7.70e+07	0.79	y	31:30	-	0.70
194	Tetr╗	13C-PCB-47	100.00	8.12e+07	0.80	y	32:01	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.02e+08	0.79	y	35:31	-	0.93
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	9.11e+07	0.80	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	9.78e+07	0.81	y	39:38	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.97e+07	1.58	y	32:40	-	0.98
200	Pent╗	13C-PCB-95	100.00	5.18e+07	1.63	y	35:49	-	0.73
201	Pent╗	13C-PCB-101	100.00	5.42e+07	1.60	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	4.87e+07	1.60	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.09e+07	1.58	y	41:21	-	1.00
204	Pent╗	13C-PCB-118	100.00	7.31e+07	1.59	y	41:32	-	1.03
205	Pent╗	13C-PCB-114	100.00	7.90e+07	1.61	y	42:12	-	1.18
206	Pent╗	13C-PCB-105	100.00	8.02e+07	1.61	y	43:03	-	1.20
207	Pent╗	13C-PCB-127	100.00	8.65e+07	1.59	y	43:23	-	1.29
208	Pent╗	13C-PCB-126	100.00	7.48e+07	1.61	y	45:18	-	1.12
209	Hexa╗	13C-PCB-155	100.00	5.86e+07	1.27	y	37:02	-	0.83
210	Hexa╗	13C-PCB-153	100.00	7.35e+07	1.25	y	43:13	-	1.10
211	Hexa╗	13C-PCB-141	100.00	7.09e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	6.83e+07	1.26	y	44:48	-	1.02
213	Hexa╗	13C-PCB-159	100.00	7.82e+07	1.30	y	46:05	-	1.17
214	Hexa╗	13C-PCB-167	100.00	8.59e+07	1.26	y	46:45	-	1.29
215	Hexa╗	13C-PCB-156	100.00	8.11e+07	1.27	y	48:03	-	1.21
216	Hexa╗	13C-PCB-157	100.00	8.59e+07	1.29	y	48:19	-	1.28
217	Hexa╗	13C-PCB-169	100.00	7.93e+07	1.27	y	50:24	-	1.19
218	Hept╗	13C-PCB-188	100.00	6.19e+07	0.46	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.49e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.58e+07	0.45	y	50:45	-	0.53
221	Hept╗	13C-PCB-189	100.00	4.91e+07	0.46	y	52:11	-	0.73
222	Octa╗	13C-PCB-202	100.00	5.62e+07	0.92	y	48:16	-	0.84

223	Octa┐	13C-PCB-194	100.00	4.69e+07	0.91 y	53:40	-	0.80
224	Nona┐	13C-PCB-208	100.00	6.66e+07	0.78 y	52:56	-	1.14
225	Nona┐	13C-PCB-206	100.00	4.07e+07	0.77 y	55:20	-	0.70
226	Deca┐	13C-PCB-209	100.00	3.70e+07	1.21 y	56:37	-	0.64
227	DI-RS	13C-PCB-15	100.00	1.35e+08	1.56 y	25:58	-	1.00
228	Tri-┐	13C-PCB-31	100.00	1.25e+08	1.06 y	29:00	-	1.00
229	Tetr┐	13C-PCB-60	100.00	1.11e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	7.09e+07	1.59 y	39:14	-	1.00
231	Hexa┐	13C-PCB-128	100.00	6.69e+07	1.26 y	46:21	-	1.00
232	Octa┐	13C-PCB-205	100.00	5.82e+07	0.91 y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.21e+08	0.80 y	37:49	-	1.09
234	CRS		13C-PCB-178	100.00	4.58e+07	0.46 y	45:38	-	0.69
235	PS		13C-PCB-79	100.00	1.21e+08	0.80 y	37:49	-	1.33
236	PS		13C-PCB-178	100.00	4.58e+07	0.46 y	45:38	-	1.02

Filename: 140620E1 S: 5 Acquired: 20-JUN-14 13:47:50
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-5 PCB CS4 13H1206

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	6.95e+08	2.97 y	16:15	-	1.05
2	Mono	PCB-2	400.00	6.84e+08	2.99 y	18:36	-	1.00
3	Mono	PCB-3	400.00	7.00e+08	3.00 y	18:50	-	1.02
4	Di	PCB-4/10	1600.00	2.12e+09	1.63 y	20:12	-	1.32
5	Di	PCB-7/9	1600.00	2.61e+09	1.63 y	21:57	-	1.08
6	Di	PCB-6	800.00	1.28e+09	1.64 y	22:36	-	1.06
7	Di	PCB-5/8	1600.00	2.62e+09	1.64 y	23:01	-	1.08
8	Di	PCB-14	800.00	1.44e+09	1.64 y	24:06	-	1.03
9	Di	PCB-11	800.00	1.36e+09	1.65 y	25:17	-	0.97
10	Di	PCB-12/13	1600.00	2.65e+09	1.64 y	25:41	-	0.94
11	Di	PCB-15	800.00	1.43e+09	1.63 y	26:00	-	1.02
12	Tri	PCB-19	400.00	4.09e+08	1.05 y	24:17	-	1.05
13	Tri	PCB-30	400.00	5.99e+08	1.06 y	25:10	-	1.54
14	Tri	PCB-18	400.00	4.25e+08	1.06 y	25:55	-	0.70
15	Tri	PCB-17	400.00	4.49e+08	1.05 y	26:05	-	0.74
16	Tri	PCB-24/27	800.00	1.19e+09	1.05 y	26:39	-	0.98
17	Tri	PCB-16/32	800.00	1.02e+09	1.06 y	27:10	-	0.84
18	Tri	PCB-34	400.00	6.61e+08	1.09 y	27:57	-	1.07
19	Tri	PCB-23	400.00	6.32e+08	1.10 y	28:03	-	1.02
20	Tri	PCB-29	400.00	6.52e+08	1.09 y	28:18	-	1.06
21	Tri	PCB-26	400.00	6.34e+08	1.11 y	28:30	-	1.03
22	Tri	PCB-25	400.00	6.76e+08	1.08 y	28:39	-	1.09
23	Tri	PCB-31	400.00	6.48e+08	1.08 y	29:01	-	1.05
24	Tri	PCB-28	400.00	7.30e+08	1.09 y	29:08	-	1.18
25	Tri	PCB-20/21/33	1200.00	2.00e+09	1.09 y	29:44	-	1.08
26	Tri	PCB-22	400.00	6.74e+08	1.09 y	30:10	-	1.09
27	Tri	PCB-36	400.00	6.53e+08	1.09 y	30:47	-	1.16
28	Tri	PCB-39	400.00	6.69e+08	1.09 y	31:15	-	1.19
29	Tri	PCB-38	400.00	6.54e+08	1.09 y	32:02	-	1.16
30	Tri	PCB-35	400.00	6.68e+08	1.09 y	32:32	-	1.19
31	Tri	PCB-37	400.00	6.65e+08	1.09 y	33:00	-	1.18
32	Tetra	PCB-54	400.00	5.24e+08	0.78 y	28:01	-	1.01
33	Tetra	PCB-50	400.00	4.18e+08	0.77 y	29:10	-	0.81
34	Tetra	PCB-53	400.00	4.29e+08	0.78 y	29:49	-	1.00
35	Tetra	PCB-51	400.00	4.24e+08	0.77 y	30:09	-	0.99
36	Tetra	PCB-45	400.00	3.49e+08	0.77 y	30:35	-	0.81
37	Tetra	PCB-46	400.00	3.30e+08	0.78 y	31:05	-	0.77
38	Tetra	PCB-52/69	800.00	9.21e+08	0.77 y	31:32	-	1.07
39	Tetra	PCB-73	400.00	5.23e+08	0.78 y	31:39	-	1.22
40	Tetra	PCB-43/49	800.00	8.03e+08	0.77 y	31:49	-	0.94
41	Tetra	PCB-47	400.00	4.43e+08	0.77 y	32:02	-	0.96

42	Tetra	PCB-48/75	800.00	9.95e+08	0.78	y	32:08	- 1.08
43	Tetra	PCB-65	400.00	5.26e+08	0.77	y	32:24	- 1.15
44	Tetra	PCB-62	400.00	4.75e+08	0.78	y	32:31	- 1.03
45	Tetra	PCB-44	400.00	3.59e+08	0.78	y	32:49	- 0.78
46	Tetra	PCB-42/59	800.00	9.31e+08	0.78	y	33:03	- 1.01
47	Tetra	PCB-41/64/71/72	1600.00	2.06e+09	0.78	y	33:38	- 1.12
48	Tetra	PCB-68	400.00	5.66e+08	0.78	y	33:53	- 1.23
49	Tetra	PCB-40	400.00	3.06e+08	0.78	y	34:07	- 0.67
50	Tetra	PCB-57	400.00	5.45e+08	0.78	y	34:27	- 0.92
51	Tetra	PCB-67	400.00	5.29e+08	0.77	y	34:45	- 0.90
52	Tetra	PCB-58	400.00	5.39e+08	0.78	y	34:53	- 0.91

53	Tetra	PCB-63	400.00	5.63e+08	0.78 y	35:02	-	0.95
54	Tetra	PCB-74	400.00	5.92e-08	0.78 y	35:19	-	1.00
55	Tetra	PCB-61/70	800.00	1.09e+09	0.78 y	35:30	-	0.92
56	Tetra	PCB-76/66	800.00	1.11e+09	0.78 y	35:43	-	0.94
57	Tetra	PCB-80	400.00	6.36e+08	0.78 y	35:57	-	1.07
58	Tetra	PCB-55	400.00	5.70e+08	0.78 y	36:16	-	0.96
59	Tetra	PCB-56/60	800.00	1.08e+09	0.77 y	36:46	-	0.91
60	Tetra	PCB-79	400.00	5.68e+08	0.78 y	37:49	-	0.95
61	Tetra	PCB-78	400.00	5.53e+08	0.77 y	38:31	-	1.02
62	Tetra	PCB-81	400.00	6.17e+08	0.77 y	39:03	-	1.14
63	Tetra	PCB-77	400.00	5.82e+08	0.80 y	39:38	-	1.02
64	Penta	PCB-104	400.00	3.92e+08	1.60 y	32:41	-	1.03
65	Penta	PCB-96	400.00	3.47e+08	1.59 y	33:56	-	0.92
66	Penta	PCB-103	400.00	3.03e+08	1.60 y	34:28	-	0.80
67	Penta	PCB-100	400.00	3.29e+08	1.60 y	34:50	-	0.87
68	Penta	PCB-94	400.00	2.68e+08	1.60 y	35:18	-	0.91
69	Penta	PCB-95/98/102	1200.00	9.09e+08	1.60 y	35:47	-	1.04
70	Penta	PCB-93	400.00	2.47e+08	1.60 y	35:56	-	0.84
71	Penta	PCB-88/91	800.00	5.23e+08	1.56 y	36:12	-	0.89
72	Penta	PCB-121	400.00	4.29e+08	1.64 y	36:18	-	1.46
73	Penta	PCB-84/92	800.00	5.39e+08	1.60 y	37:08	-	0.87
74	Penta	PCB-89	400.00	2.55e+08	1.60 y	37:20	-	0.83
75	Penta	PCB-90/101	800.00	6.11e+08	1.59 y	37:30	-	0.99
76	Penta	PCB-113	400.00	3.59e+08	1.58 y	37:45	-	1.16
77	Penta	PCB-99	400.00	3.19e+08	1.61 y	37:50	-	1.03
78	Penta	PCB-119	400.00	4.01e+08	1.59 y	38:18	-	1.48
79	Penta	PCB-108/112	800.00	5.97e+08	1.60 y	38:28	-	1.10
80	Penta	PCB-83	400.00	3.51e+08	1.60 y	38:37	-	1.30
81	Penta	PCB-97	400.00	2.87e+08	1.60 y	38:48	-	1.06
82	Penta	PCB-86	400.00	2.42e+08	1.63 y	38:58	-	0.90
83	Penta	PCB-87/117/125	1200.00	1.11e+09	1.59 y	39:05	-	1.37
84	Penta	PCB-111/115	800.00	7.75e+08	1.58 y	39:15	-	1.43
85	Penta	PCB-85/116	800.00	6.10e+08	1.63 y	39:23	-	1.13
86	Penta	PCB-120	400.00	4.12e+08	1.59 y	39:36	-	1.52
87	Penta	PCB-110	400.00	3.74e+08	1.60 y	39:45	-	1.38
88	Penta	PCB-82	400.00	2.25e+08	1.60 y	40:23	-	0.60
89	Penta	PCB-124	400.00	4.01e+08	1.59 y	41:04	-	1.07
90	Penta	PCB-107/109	800.00	8.08e+08	1.60 y	41:12	-	1.08
91	Penta	PCB-123	400.00	3.78e+08	1.60 y	41:22	-	1.01
92	Penta	PCB-106/118	800.00	8.07e+08	1.60 y	41:34	-	1.01
93	Penta	PCB-114	400.00	4.81e+08	1.63 y	42:13	-	1.11
94	Penta	PCB-122	400.00	4.40e+08	1.59 y	42:21	-	1.02
95	Penta	PCB-105	400.00	4.86e+08	1.61 y	43:04	-	1.09
96	Penta	PCB-127	400.00	4.44e+08	1.65 y	43:24	-	0.94
97	Penta	PCB-126	400.00	4.53e+08	1.69 y	45:18	-	1.10
98	Hexa	PCB-155	400.00	3.12e+08	1.27 y	37:04	-	0.98
99	Hexa	PCB-150	400.00	2.99e+08	1.28 y	38:19	-	0.94
100	Hexa	PCB-152	400.00	2.95e+08	1.28 y	38:47	-	0.92
101	Hexa	PCB-145	400.00	2.95e+08	1.27 y	39:15	-	0.92
102	Hexa	PCB-136	400.00	2.81e+08	1.31 y	39:34	-	0.88

103	Hexa	PCB-148	400.00	2.24e+08	1.24 y	39:40	-	0.70
104	Hexa	PCB-154	400.00	2.37e+08	1.27 y	40:09	-	0.74
105	Hexa	PCB-151	400.00	2.17e+08	1.27 y	40:48	-	0.68
106	Hexa	PCB-135	400.00	2.24e+08	1.25 y	41:00	-	0.70
107	Hexa	PCB-144	400.00	2.17e+08	1.28 y	41:07	-	0.68
108	Hexa	PCB-147	400.00	2.25e+08	1.29 y	41:15	-	0.70
109	Hexa	PCB-139/149	800.00	4.68e+08	1.28 y	41:31	-	0.73
110	Hexa	PCB-140	400.00	2.12e+08	1.27 y	41:42	-	0.66
111	Hexa	PCB-134/143	800.00	6.17e+08	1.24 y	42:08	-	0.78
112	Hexa	PCB-133/142	800.00	6.26e+08	1.23 y	42:26	-	0.79
113	Hexa	PCB-131	400.00	2.95e+08	1.25 y	42:36	-	0.74

114	Hexa	PCB-146/165	800.00	7.73e+08	1.24 y	42:49	-	0.97
115	Hexa	PCB-132/161	800.00	7.41e+08	1.23 y	43:04	-	0.93
116	Hexa	PCB-153	400.00	3.95e+08	1.23 y	43:13	-	0.99
117	Hexa	PCB-168	400.00	4.52e+08	1.23 y	43:26	-	1.14
118	Hexa	PCB-141	400.00	3.03e+08	1.23 y	43:57	-	0.83
119	Hexa	PCB-137	400.00	3.53e+08	1.24 y	44:20	-	0.96
120	Hexa	PCB-130	400.00	2.61e+08	1.22 y	44:27	-	0.71
121	Hexa	PCB-138/163/164	1200.00	1.16e+09	1.23 y	44:49	-	1.05
122	Hexa	PCB-158/160	800.00	8.21e+08	1.23 y	45:04	-	1.11
123	Hexa	PCB-129	400.00	2.80e+08	1.23 y	45:18	-	0.76
124	Hexa	PCB-166	400.00	3.99e+08	1.23 y	45:46	-	0.94
125	Hexa	PCB-159	400.00	4.06e+08	1.26 y	46:06	-	0.96
126	Hexa	PCB-128/162	800.00	7.15e+08	1.23 y	46:23	-	0.85
127	Hexa	PCB-167	400.00	4.05e+08	1.22 y	46:46	-	0.88
128	Hexa	PCB-156	400.00	4.28e+08	1.23 y	48:03	-	0.98
129	Hexa	PCB-157	400.00	4.21e+08	1.24 y	48:20	-	0.91
130	Hexa	PCB-169	400.00	3.99e+08	1.23 y	50:23	-	0.94
131	Hepta	PCB-188	400.00	3.97e+08	1.04 y	42:51	-	1.17
132	Hepta	PCB-184	400.00	3.45e+08	1.05 y	43:18	-	1.02
133	Hepta	PCB-179	400.00	3.55e+08	1.05 y	44:05	-	1.05
134	Hepta	PCB-176	400.00	3.64e+08	1.05 y	44:33	-	1.07
135	Hepta	PCB-186	400.00	3.55e+08	1.05 y	45:10	-	1.05
136	Hepta	PCB-178	400.00	2.55e+08	1.05 y	45:39	-	0.75
137	Hepta	PCB-175	400.00	2.66e+08	1.05 y	46:00	-	0.78
138	Hepta	PCB-182/187	800.00	5.78e+08	1.06 y	46:10	-	0.85
139	Hepta	PCB-183	400.00	2.87e+08	1.05 y	46:29	-	0.85
140	Hepta	PCB-185	400.00	2.56e+08	1.05 y	47:09	-	1.10
141	Hepta	PCB-174	400.00	2.74e+08	1.04 y	47:30	-	1.18
142	Hepta	PCB-181	400.00	2.51e+08	1.05 y	47:37	-	1.08
143	Hepta	PCB-177	400.00	2.40e+08	1.05 y	47:47	-	1.03
144	Hepta	PCB-171	400.00	2.57e+08	1.05 y	48:05	-	1.10
145	Hepta	PCB-173	400.00	2.26e+08	1.05 y	48:30	-	0.97
146	Hepta	PCB-172	400.00	2.44e+08	1.05 y	48:57	-	1.05
147	Hepta	PCB-192	400.00	3.09e+08	1.05 y	49:08	-	1.33
148	Hepta	PCB-180	400.00	2.75e+08	1.05 y	49:20	-	1.18
149	Hepta	PCB-193	400.00	3.25e+08	1.06 y	49:31	-	1.40
150	Hepta	PCB-191	400.00	3.32e+08	1.05 y	49:46	-	1.43
151	Hepta	PCB-170	400.00	2.30e+08	1.05 y	50:45	-	1.23
152	Hepta	PCB-190	400.00	3.17e+08	1.05 y	50:55	-	1.70
153	Hepta	PCB-189	400.00	3.22e+08	1.05 y	52:11	-	1.30
154	Octa	PCB-202	400.00	2.47e+08	0.91 y	48:16	-	0.85
155	Octa	PCB-201	400.00	2.67e+08	0.90 y	48:45	-	0.92
156	Octa	PCB-204	400.00	2.45e+08	0.91 y	48:54	-	0.84
157	Octa	PCB-197	400.00	2.62e+08	0.91 y	49:13	-	0.90
158	Octa	PCB-200	400.00	2.51e+08	0.91 y	50:03	-	0.87
159	Octa	PCB-198	400.00	1.73e+08	0.90 y	51:19	-	0.60
160	Octa	PCB-199	400.00	1.84e+08	0.91 y	51:25	-	0.63
161	Octa	PCB-196/203	800.00	3.87e+08	0.90 y	51:41	-	0.67
162	Octa	PCB-195	400.00	2.55e+08	0.91 y	52:49	-	1.04
163	Octa	PCB-194	400.00	2.51e+08	0.92 y	53:40	-	1.02

164	Octa		PCB-205	400.00	2.86e+08	0.92	y	53:57	- 1.17
165	Nona		PCB-208	400.00	2.69e+08	1.32	y	52:57	- 0.78
166	Nona		PCB-207	400.00	2.66e+08	1.33	y	53:15	- 0.78
167	Nona		PCB-206	400.00	1.66e+08	1.33	y	55:21	- 0.84
168	Deca		PCB-209	400.00	1.83e+08	1.19	y	56:38	- 0.99
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.02
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.03
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 0.96

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.11
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	0.99
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.03
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.05
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.78
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.91
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.05
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.77
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.08
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.79
182	Tot ╗	Total Deca-PCB	400.00	1.83e+08	1.19	y	56:38	-	0.99
183	Mono╗	13C-PCB-1	100.00	1.66e+08	3.23	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.71e+08	3.33	y	18:49	-	0.91
185	Di-IS	13C-PCB-4	100.00	1.00e+08	1.57	y	20:08	-	0.53
186	Di-IS	13C-PCB-9	100.00	1.51e+08	1.58	y	21:55	-	0.80
187	Di-IS	13C-PCB-11	100.00	1.75e+08	1.57	y	25:16	-	0.93
188	Tri-╗	13C-PCB-19	100.00	9.71e+07	1.07	y	24:16	-	0.52
189	Tri-╗	13C-PCB-32	100.00	1.52e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.54e+08	1.06	y	29:06	-	0.96
191	Tri-╗	13C-PCB-37	100.00	1.41e+08	1.06	y	32:58	-	0.87
192	Tetr╗	13C-PCB-54	100.00	1.29e+08	0.81	y	27:60	-	0.83
193	Tetr╗	13C-PCB-52	100.00	1.07e+08	0.80	y	31:31	-	0.68
194	Tetr╗	13C-PCB-47	100.00	1.15e+08	0.80	y	32:00	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.48e+08	0.80	y	35:31	-	0.94
196	Tetr╗	13C-PCB-80	100.00	1.49e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	1.35e+08	0.82	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.43e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.47e+07	1.61	y	32:40	-	0.96
200	Pent╗	13C-PCB-95	100.00	7.32e+07	1.57	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	7.72e+07	1.62	y	37:30	-	0.78
202	Pent╗	13C-PCB-97	100.00	6.76e+07	1.59	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	9.35e+07	1.62	y	41:21	-	0.95
204	Pent╗	13C-PCB-118	100.00	9.95e+07	1.59	y	41:32	-	1.01
205	Pent╗	13C-PCB-114	100.00	1.08e+08	1.58	y	42:12	-	1.25
206	Pent╗	13C-PCB-105	100.00	1.12e+08	1.60	y	43:04	-	1.29
207	Pent╗	13C-PCB-127	100.00	1.18e+08	1.58	y	43:23	-	1.36
208	Pent╗	13C-PCB-126	100.00	1.03e+08	1.56	y	45:18	-	1.19
209	Hexa╗	13C-PCB-155	100.00	7.98e+07	1.30	y	37:03	-	0.81
210	Hexa╗	13C-PCB-153	100.00	9.94e+07	1.27	y	43:12	-	1.15
211	Hexa╗	13C-PCB-141	100.00	9.18e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	9.22e+07	1.27	y	44:48	-	1.06
213	Hexa╗	13C-PCB-159	100.00	1.06e+08	1.27	y	46:04	-	1.22
214	Hexa╗	13C-PCB-167	100.00	1.14e+08	1.27	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	1.09e+08	1.27	y	48:03	-	1.26
216	Hexa╗	13C-PCB-157	100.00	1.15e+08	1.31	y	48:19	-	1.33
217	Hexa╗	13C-PCB-169	100.00	1.06e+08	1.26	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	8.49e+07	0.47	y	42:50	-	0.98
219	Hept╗	13C-PCB-180	100.00	5.82e+07	0.47	y	49:20	-	0.67
220	Hept╗	13C-PCB-170	100.00	4.66e+07	0.46	y	50:44	-	0.54
221	Hept╗	13C-PCB-189	100.00	6.18e+07	0.46	y	52:11	-	0.71
222	Octa╗	13C-PCB-202	100.00	7.25e+07	0.90	y	48:16	-	0.84

223	Octa╗	13C-PCB-194	100.00	6.13e+07	0.91 y	53:40	-	0.81
224	Nona╗	13C-PCB-208	100.00	8.58e+07	0.78 y	52:56	-	1.14
225	Nona╗	13C-PCB-206	100.00	4.92e+07	0.81 y	55:20	-	0.65
226	Deca╗	13C-PCB-209	100.00	4.62e+07	1.22 y	56:37	-	0.61
227	DI-RS	13C-PCB-15	100.00	1.89e+08	1.58 y	25:58	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.61e+08	1.07 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.57e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	9.86e+07	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	8.68e+07	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	7.56e+07	0.92 y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	0.99
234	CRS		13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.62
235	PS		13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	1.15
236	PS		13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.93

Filename: 140620E1 S: 6 Acquired: 20-JUN-14 14:51:49
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-6 PCB CS5 13H1207

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	750.00	1.43e+09	2.96 y	16:15	-	1.27
2	Mono	PCB-2	750.00	1.51e+09	2.98 y	18:36	-	1.18
3	Mono	PCB-3	750.00	1.54e+09	2.98 y	18:50	-	1.20
4	Di	PCB-4/10	3000.00	4.71e+09	1.64 y	20:12	-	1.54
5	Di	PCB-7/9	3000.00	5.85e+09	1.64 y	21:57	-	1.25
6	Di	PCB-6	1500.00	2.81e+09	1.64 y	22:36	-	1.20
7	Di	PCB-5/8	3000.00	5.77e+09	1.64 y	23:01	-	1.23
8	Di	PCB-14	1500.00	3.24e+09	1.64 y	24:06	-	1.20
9	Di	PCB-11	1500.00	3.05e+09	1.65 y	25:17	-	1.13
10	Di	PCB-12/13	3000.00	5.91e+09	1.64 y	25:41	-	1.09
11	Di	PCB-15	1500.00	3.20e+09	1.64 y	26:00	-	1.18
12	Tri	PCB-19	750.00	9.08e+08	1.05 y	24:17	-	1.23
13	Tri	PCB-30	750.00	1.34e+09	1.06 y	25:10	-	1.82
14	Tri	PCB-18	750.00	9.50e+08	1.05 y	25:55	-	0.81
15	Tri	PCB-17	750.00	1.00e+09	1.05 y	26:05	-	0.86
16	Tri	PCB-24/27	1500.00	2.69e+09	1.05 y	26:40	-	1.15
17	Tri	PCB-16/32	1500.00	2.29e+09	1.06 y	27:10	-	0.98
18	Tri	PCB-34	750.00	1.45e+09	1.09 y	27:57	-	1.16
19	Tri	PCB-23	750.00	1.49e+09	1.09 y	28:03	-	1.19
20	Tri	PCB-29	750.00	1.47e+09	1.09 y	28:18	-	1.18
21	Tri	PCB-26	750.00	1.45e+09	1.10 y	28:30	-	1.16
22	Tri	PCB-25	750.00	1.51e+09	1.09 y	28:40	-	1.21
23	Tri	PCB-31	750.00	1.64e+09	1.06 y	29:01	-	1.32
24	Tri	PCB-28	750.00	1.49e+09	1.12 y	29:08	-	1.20
25	Tri	PCB-20/21/33	2250.00	4.54e+09	1.09 y	29:44	-	1.21
26	Tri	PCB-22	750.00	1.53e+09	1.09 y	30:11	-	1.23
27	Tri	PCB-36	750.00	1.49e+09	1.09 y	30:47	-	1.32
28	Tri	PCB-39	750.00	1.57e+09	1.09 y	31:15	-	1.39
29	Tri	PCB-38	750.00	1.52e+09	1.09 y	32:03	-	1.35
30	Tri	PCB-35	750.00	1.55e+09	1.09 y	32:33	-	1.38
31	Tri	PCB-37	750.00	1.56e+09	1.09 y	32:59	-	1.39
32	Tetra	PCB-54	750.00	1.18e+09	0.78 y	28:01	-	1.18
33	Tetra	PCB-50	750.00	9.47e+08	0.78 y	29:11	-	0.95
34	Tetra	PCB-53	750.00	9.66e+08	0.78 y	29:49	-	1.14
35	Tetra	PCB-51	750.00	9.67e+08	0.77 y	30:10	-	1.14
36	Tetra	PCB-45	750.00	7.90e+08	0.77 y	30:35	-	0.93
37	Tetra	PCB-46	750.00	7.50e+08	0.77 y	31:05	-	0.88
38	Tetra	PCB-52/69	1500.00	2.10e+09	0.77 y	31:33	-	1.23
39	Tetra	PCB-73	750.00	1.23e+09	0.78 y	31:40	-	1.45
40	Tetra	PCB-43/49	1500.00	1.83e+09	0.78 y	31:50	-	1.08
41	Tetra	PCB-47	750.00	9.58e+08	0.77 y	32:02	-	1.07

42	Tetra	PCB-48/75	1500.00	2.33e+09	0.78 y	32:09	-	1.30
43	Tetra	PCB-65	750.00	1.16e+09	0.77 y	32:25	-	1.30
44	Tetra	PCB-62	750.00	1.12e+09	0.78 y	32:32	-	1.25
45	Tetra	PCB-44	750.00	8.19e+08	0.78 y	32:49	-	0.92
46	Tetra	PCB-42/59	1500.00	2.16e+09	0.77 y	33:03	-	1.21
47	Tetra	PCB-41/64/71/72	3000.00	4.74e+09	0.78 y	33:38	-	1.33
48	Tetra	PCB-68	750.00	1.31e+09	0.78 y	33:54	-	1.46
49	Tetra	PCB-40	750.00	6.99e+08	0.78 y	34:07	-	0.78
50	Tetra	PCB-57	750.00	1.25e+09	0.77 y	34:28	-	1.07
51	Tetra	PCB-67	750.00	1.21e+09	0.77 y	34:46	-	1.03
52	Tetra	PCB-58	750.00	1.25e+09	0.78 y	34:53	-	1.07

53	Tetra	PCB-63	750.00	1.31e+09	0.77 y	35:03	-	1.12
54	Tetra	PCB-74	750.00	1.38e+09	0.81 y	35:20	-	1.18
55	Tetra	PCB-61/70	1500.00	2.48e+09	0.75 y	35:31	-	1.06
56	Tetra	PCB-76/66	1500.00	2.59e+09	0.78 y	35:44	-	1.10
57	Tetra	PCB-80	750.00	1.47e+09	0.78 y	35:57	-	1.24
58	Tetra	PCB-55	750.00	1.33e+09	0.78 y	36:17	-	1.12
59	Tetra	PCB-56/60	1500.00	2.53e+09	0.78 y	36:47	-	1.07
60	Tetra	PCB-79	750.00	1.34e+09	0.78 y	37:50	-	1.13
61	Tetra	PCB-78	750.00	1.30e+09	0.78 y	38:32	-	1.18
62	Tetra	PCB-81	750.00	1.44e+09	0.77 y	39:04	-	1.31
63	Tetra	PCB-77	750.00	1.37e+09	0.79 y	39:39	-	1.17
64	Penta	PCB-104	750.00	8.87e+08	1.60 y	32:41	-	1.22
65	Penta	PCB-96	750.00	7.97e+08	1.60 y	33:56	-	1.10
66	Penta	PCB-103	750.00	7.09e+08	1.60 y	34:28	-	0.98
67	Penta	PCB-100	750.00	7.64e+08	1.60 y	34:50	-	1.05
68	Penta	PCB-94	750.00	6.22e+08	1.59 y	35:18	-	1.08
69	Penta	PCB-95/98/102	2250.00	2.03e+09	1.58 y	35:47	-	1.17
70	Penta	PCB-93	750.00	6.23e+08	1.66 y	35:56	-	1.08
71	Penta	PCB-88/91	1500.00	1.15e+09	1.55 y	36:12	-	1.00
72	Penta	PCB-121	750.00	1.07e+09	1.65 y	36:18	-	1.85
73	Penta	PCB-84/92	1500.00	1.26e+09	1.59 y	37:08	-	1.02
74	Penta	PCB-89	750.00	6.06e+08	1.66 y	37:20	-	0.98
75	Penta	PCB-90/101	1500.00	1.42e+09	1.58 y	37:30	-	1.15
76	Penta	PCB-113	750.00	8.20e+08	1.61 y	37:45	-	1.33
77	Penta	PCB-99	750.00	7.64e+08	1.59 y	37:50	-	1.24
78	Penta	PCB-119	750.00	9.38e+08	1.60 y	38:18	-	1.73
79	Penta	PCB-108/112	1500.00	1.41e+09	1.59 y	38:28	-	1.30
80	Penta	PCB-83	750.00	8.35e+08	1.61 y	38:37	-	1.54
81	Penta	PCB-97	750.00	6.67e+08	1.59 y	38:49	-	1.23
82	Penta	PCB-86	750.00	5.75e+08	1.59 y	38:57	-	1.06
83	Penta	PCB-87/117/125	2250.00	2.55e+09	1.60 y	39:05	-	1.57
84	Penta	PCB-111/115	1500.00	1.80e+09	1.61 y	39:14	-	1.66
85	Penta	PCB-85/116	1500.00	1.47e+09	1.60 y	39:22	-	1.35
86	Penta	PCB-120	750.00	9.60e+08	1.60 y	39:36	-	1.77
87	Penta	PCB-110	750.00	8.91e+08	1.60 y	39:45	-	1.64
88	Penta	PCB-82	750.00	5.54e+08	1.60 y	40:23	-	0.71
89	Penta	PCB-124	750.00	1.04e+09	1.59 y	41:04	-	1.33
90	Penta	PCB-107/109	1500.00	1.83e+09	1.60 y	41:12	-	1.17
91	Penta	PCB-123	750.00	9.32e+08	1.60 y	41:23	-	1.20
92	Penta	PCB-106/118	1500.00	1.91e+09	1.60 y	41:34	-	1.19
93	Penta	PCB-114	750.00	1.21e+09	1.60 y	42:13	-	1.35
94	Penta	PCB-122	750.00	1.09e+09	1.62 y	42:22	-	1.22
95	Penta	PCB-105	750.00	1.17e+09	1.61 y	43:05	-	1.28
96	Penta	PCB-127	750.00	1.10e+09	1.63 y	43:25	-	1.09
97	Penta	PCB-126	750.00	1.11e+09	1.70 y	45:18	-	1.27
98	Hexa	PCB-155	750.00	7.23e+08	1.27 y	37:04	-	1.15
99	Hexa	PCB-150	750.00	6.95e+08	1.28 y	38:19	-	1.10
100	Hexa	PCB-152	750.00	6.85e+08	1.28 y	38:48	-	1.09
101	Hexa	PCB-145	750.00	6.77e+08	1.27 y	39:14	-	1.08
102	Hexa	PCB-136	750.00	7.15e+08	1.29 y	39:34	-	1.14

103	Hexa	PCB-148	750.00	4.56e+08	1.26 y	39:41	-	0.72
104	Hexa	PCB-154	750.00	5.75e+08	1.28 y	40:09	-	0.91
105	Hexa	PCB-151	750.00	5.08e+08	1.28 y	40:48	-	0.81
106	Hexa	PCB-135	750.00	5.16e+08	1.27 y	41:00	-	0.82
107	Hexa	PCB-144	750.00	5.14e+08	1.29 y	41:07	-	0.82
108	Hexa	PCB-147	750.00	5.36e+08	1.28 y	41:15	-	0.85
109	Hexa	PCB-139/149	1500.00	1.09e+09	1.28 y	41:31	-	0.86
110	Hexa	PCB-140	750.00	5.03e+08	1.28 y	41:42	-	0.80
111	Hexa	PCB-134/143	1500.00	1.43e+09	1.24 y	42:09	-	0.87
112	Hexa	PCB-133/142	1500.00	1.48e+09	1.23 y	42:26	-	0.90
113	Hexa	PCB-131	750.00	7.12e+08	1.24 y	42:36	-	0.87

114	Hexa	PCB-146/165	1500.00	1.86e+09	1.24 y	42:49	-	1.13
115	Hexa	PCB-132/161	1500.00	1.76e+09	1.23 y	43:04	-	1.07
116	Hexa	PCB-153	750.00	9.65e+08	1.23 y	43:14	-	1.18
117	Hexa	PCB-168	750.00	1.10e+09	1.23 y	43:27	-	1.35
118	Hexa	PCB-141	750.00	7.68e+08	1.23 y	43:58	-	0.99
119	Hexa	PCB-137	750.00	8.69e+08	1.22 y	44:21	-	1.11
120	Hexa	PCB-130	750.00	6.96e+08	1.25 y	44:28	-	0.89
121	Hexa	PCB-138/163/164	2250.00	2.89e+09	1.23 y	44:50	-	1.24
122	Hexa	PCB-158/160	1500.00	2.02e+09	1.23 y	45:05	-	1.29
123	Hexa	PCB-129	750.00	6.88e+08	1.23 y	45:19	-	0.88
124	Hexa	PCB-166	750.00	1.04e+09	1.22 y	45:46	-	1.13
125	Hexa	PCB-159	750.00	1.10e+09	1.22 y	46:05	-	1.20
126	Hexa	PCB-128/162	1500.00	1.89e+09	1.23 y	46:23	-	1.03
127	Hexa	PCB-167	750.00	1.07e+09	1.23 y	46:47	-	1.05
128	Hexa	PCB-156	750.00	1.08e+09	1.23 y	48:04	-	1.12
129	Hexa	PCB-157	750.00	1.06e+09	1.24 y	48:21	-	1.06
130	Hexa	PCB-169	750.00	1.01e+09	1.24 y	50:24	-	1.09
131	Hepta	PCB-188	750.00	9.34e+08	1.05 y	42:52	-	1.37
132	Hepta	PCB-184	750.00	8.40e+08	1.05 y	43:19	-	1.23
133	Hepta	PCB-179	750.00	8.75e+08	1.05 y	44:05	-	1.28
134	Hepta	PCB-176	750.00	9.17e+08	1.06 y	44:33	-	1.34
135	Hepta	PCB-186	750.00	8.77e+08	1.05 y	45:10	-	1.29
136	Hepta	PCB-178	750.00	6.27e+08	1.05 y	45:39	-	0.92
137	Hepta	PCB-175	750.00	6.73e+08	1.05 y	45:60	-	0.99
138	Hepta	PCB-182/187	1500.00	1.46e+09	1.05 y	46:10	-	1.07
139	Hepta	PCB-183	750.00	7.62e+08	1.05 y	46:29	-	1.12
140	Hepta	PCB-185	750.00	6.80e+08	1.05 y	47:09	-	1.35
141	Hepta	PCB-174	750.00	7.07e+08	1.04 y	47:31	-	1.40
142	Hepta	PCB-181	750.00	6.72e+08	1.06 y	47:38	-	1.33
143	Hepta	PCB-177	750.00	6.12e+08	1.05 y	47:47	-	1.21
144	Hepta	PCB-171	750.00	6.44e+08	1.05 y	48:05	-	1.28
145	Hepta	PCB-173	750.00	5.59e+08	1.05 y	48:31	-	1.11
146	Hepta	PCB-172	750.00	5.96e+08	1.04 y	48:57	-	1.18
147	Hepta	PCB-192	750.00	7.62e+08	1.05 y	49:09	-	1.51
148	Hepta	PCB-180	750.00	6.75e+08	1.05 y	49:21	-	1.34
149	Hepta	PCB-193	750.00	8.02e+08	1.05 y	49:32	-	1.59
150	Hepta	PCB-191	750.00	8.11e+08	1.05 y	49:46	-	1.61
151	Hepta	PCB-170	750.00	5.79e+08	1.05 y	50:45	-	1.44
152	Hepta	PCB-190	750.00	7.99e+08	1.05 y	50:55	-	1.98
153	Hepta	PCB-189	750.00	8.34e+08	1.05 y	52:11	-	1.54
154	Octa	PCB-202	750.00	6.16e+08	0.91 y	48:17	-	0.99
155	Octa	PCB-201	750.00	6.74e+08	0.90 y	48:46	-	1.09
156	Octa	PCB-204	750.00	6.20e+08	0.90 y	48:55	-	1.00
157	Octa	PCB-197	750.00	6.60e+08	0.90 y	49:13	-	1.06
158	Octa	PCB-200	750.00	6.36e+08	0.90 y	50:03	-	1.02
159	Octa	PCB-198	750.00	4.35e+08	0.90 y	51:19	-	0.70
160	Octa	PCB-199	750.00	4.62e+08	0.92 y	51:25	-	0.74
161	Octa	PCB-196/203	1500.00	9.78e+08	0.91 y	51:41	-	0.79
162	Octa	PCB-195	750.00	6.36e+08	0.92 y	52:48	-	1.19
163	Octa	PCB-194	750.00	6.26e+08	0.92 y	53:40	-	1.17

164	Octa		PCB-205	750.00	7.28e+08	0.91	y	53:57	- 1.36
165	Nona		PCB-208	750.00	6.70e+08	1.33	y	52:57	- 0.91
166	Nona		PCB-207	750.00	6.71e+08	1.33	y	53:15	- 0.91
167	Nona		PCB-206	750.00	4.30e+08	1.34	y	55:19	- 0.98
168	Deca		PCB-209	750.00	4.91e+08	1.19	y	56:35	- 1.16
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.22
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.19
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 1.12

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.26
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.15
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.93
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.07
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.26
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.91
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.24
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.93
182	Tot ╗	Total Deca-PCB	750.00	4.91e+08	1.19	y	56:35	-	1.16
183	Mono╗	13C-PCB-1	100.00	1.50e+08	3.31	y	16:14	-	0.76
184	Mono╗	13C-PCB-3	100.00	1.70e+08	3.29	y	18:49	-	0.86
185	Di-IS	13C-PCB-4	100.00	1.02e+08	1.58	y	20:08	-	0.52
186	Di-IS	13C-PCB-9	100.00	1.56e+08	1.60	y	21:55	-	0.79
187	Di-IS	13C-PCB-11	100.00	1.80e+08	1.58	y	25:16	-	0.91
188	Tri-╗	13C-PCB-19	100.00	9.83e+07	1.04	y	24:16	-	0.50
189	Tri-╗	13C-PCB-32	100.00	1.56e+08	1.07	y	27:10	-	0.79
190	Tri-╗	13C-PCB-28	100.00	1.66e+08	1.06	y	29:07	-	0.98
191	Tri-╗	13C-PCB-37	100.00	1.50e+08	1.08	y	32:58	-	0.89
192	Tetr╗	13C-PCB-54	100.00	1.33e+08	0.80	y	27:59	-	0.77
193	Tetr╗	13C-PCB-52	100.00	1.13e+08	0.80	y	31:31	-	0.66
194	Tetr╗	13C-PCB-47	100.00	1.19e+08	0.80	y	32:01	-	0.70
195	Tetr╗	13C-PCB-70	100.00	1.56e+08	0.81	y	35:31	-	0.91
196	Tetr╗	13C-PCB-80	100.00	1.58e+08	0.80	y	35:56	-	0.92
197	Tetr╗	13C-PCB-81	100.00	1.47e+08	0.81	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.56e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.67e+07	1.59	y	32:40	-	0.90
200	Pent╗	13C-PCB-95	100.00	7.69e+07	1.59	y	35:49	-	0.72
201	Pent╗	13C-PCB-101	100.00	8.24e+07	1.61	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	7.23e+07	1.63	y	38:48	-	0.67
203	Pent╗	13C-PCB-123	100.00	1.04e+08	1.60	y	41:22	-	0.97
204	Pent╗	13C-PCB-118	100.00	1.07e+08	1.61	y	41:33	-	0.99
205	Pent╗	13C-PCB-114	100.00	1.19e+08	1.61	y	42:12	-	1.15
206	Pent╗	13C-PCB-105	100.00	1.23e+08	1.59	y	43:04	-	1.19
207	Pent╗	13C-PCB-127	100.00	1.34e+08	1.58	y	43:23	-	1.30
208	Pent╗	13C-PCB-126	100.00	1.17e+08	1.57	y	45:18	-	1.14
209	Hexa╗	13C-PCB-155	100.00	8.39e+07	1.28	y	37:03	-	0.78
210	Hexa╗	13C-PCB-153	100.00	1.09e+08	1.28	y	43:13	-	1.06
211	Hexa╗	13C-PCB-141	100.00	1.04e+08	1.29	y	43:57	-	1.01
212	Hexa	13C-PCB-138	100.00	1.04e+08	1.28	y	44:48	-	1.01
213	Hexa╗	13C-PCB-159	100.00	1.22e+08	1.26	y	46:04	-	1.19
214	Hexa╗	13C-PCB-167	100.00	1.35e+08	1.27	y	46:45	-	1.31
215	Hexa╗	13C-PCB-156	100.00	1.28e+08	1.27	y	48:03	-	1.24
216	Hexa╗	13C-PCB-157	100.00	1.33e+08	1.28	y	48:19	-	1.29
217	Hexa╗	13C-PCB-169	100.00	1.24e+08	1.28	y	50:23	-	1.20
218	Hept╗	13C-PCB-188	100.00	9.09e+07	0.46	y	42:51	-	0.88
219	Hept╗	13C-PCB-180	100.00	6.73e+07	0.47	y	49:20	-	0.65
220	Hept╗	13C-PCB-170	100.00	5.38e+07	0.46	y	50:44	-	0.52
221	Hept╗	13C-PCB-189	100.00	7.24e+07	0.47	y	52:11	-	0.70
222	Octa╗	13C-PCB-202	100.00	8.28e+07	0.92	y	48:16	-	0.80

223	Octa╗	13C-PCB-194	100.00	7.14e+07	0.92 y	53:39	-	0.79
224	Nona╗	13C-PCB-208	100.00	9.82e+07	0.76 y	52:56	-	1.09
225	Nona╗	13C-PCB-206	100.00	5.84e+07	0.80 y	55:19	-	0.65
226	Deca╗	13C-PCB-209	100.00	5.63e+07	1.21 y	56:35	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.97e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.69e+08	1.06 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.71e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.07e+08	1.60 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.03e+08	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	9.02e+07	0.91 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.02
234	CRS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.62
235	PS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.19
236	PS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.96

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.96	2.66-3.60	y	52.3	37.5-62.5
PCB-2	2.98	2.66-3.60	y	52.3	37.5-62.5
PCB-3	2.98	2.66-3.60	y	51.7	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	206.7	150-250
PCB-7/9	1.64	1.33-1.79	y	204.6	150-250
PCB-6	1.64	1.33-1.79	y	99.9	75.0-125
PCB-5/8	1.64	1.33-1.79	y	206.9	150-250
PCB-14	1.65	1.33-1.79	y	102.3	75.0-125
PCB-11	1.66	1.33-1.79	y	101.6	75.0-125
PCB-12/13	1.63	1.33-1.79	y	205.7	150-250
PCB-15	1.66	1.33-1.79	y	101.1	75.0-125
PCB-19	1.05	0.88-1.20	y	49.4	37.5-62.5
PCB-30	1.06	0.88-1.20	y	51.2	37.5-62.5
PCB-18	1.05	0.88-1.20	y	50.4	37.5-62.5
PCB-17	1.05	0.88-1.20	y	51.0	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	103.5	75.0-125
PCB-16/32	1.05	0.88-1.20	y	100.5	75.0-125
PCB-34	1.08	0.88-1.20	y	57.4	37.5-62.5
PCB-23	1.11	0.88-1.20	y	46.4	37.5-62.5
PCB-29	1.09	0.88-1.20	y	51.1	37.5-62.5
PCB-26	1.08	0.88-1.20	y	50.7	37.5-62.5
PCB-25	1.09	0.88-1.20	y	51.5	37.5-62.5
PCB-31	1.08	0.88-1.20	y	49.7	37.5-62.5
PCB-28	1.11	0.88-1.20	y	52.5	37.5-62.5
PCB-20/21/33	1.09	0.88-1.20	y	152.7	112.5-225
PCB-22	1.08	0.88-1.20	y	52.6	37.5-62.5
PCB-36	1.09	0.88-1.20	y	52.3	37.5-62.5
PCB-39	1.08	0.88-1.20	y	51.7	37.5-62.5
PCB-38	1.10	0.88-1.20	y	52.4	37.5-62.5
PCB-35	1.11	0.88-1.20	y	52.7	37.5-62.5
PCB-37	1.09	0.88-1.20	y	51.2	37.5-62.5
PCB-54	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-50	0.77	0.65-0.89	y	51.4	37.5-62.5
PCB-53	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-51	0.78	0.65-0.89	y	53.2	37.5-62.5
PCB-45	0.78	0.65-0.89	y	52.8	37.5-62.5
PCB-46	0.76	0.65-0.89	y	50.1	37.5-62.5
PCB-52/69	0.77	0.65-0.89	y	105.4	75.0-125
PCB-73	0.77	0.65-0.89	y	52.2	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	101.6	75.0-125
PCB-47	0.76	0.65-0.89	y	53.7	37.5-62.5
PCB-48/75	0.77	0.65-0.89	y	99.8	75.0-125
PCB-65	0.77	0.65-0.89	y	49.4	37.5-62.5
PCB-62	0.77	0.65-0.89	y	53.4	37.5-62.5
PCB-44	0.78	0.65-0.89	y	51.3	37.5-62.5
PCB-42/59	0.77	0.65-0.89	y	103.4	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	205.8	150-250
PCB-68	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-40	0.77	0.65-0.89	y	50.7	37.5-62.5
PCB-57	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-67	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-58	0.78	0.65-0.89	y	49.3	37.5-62.5
PCB-63	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-74	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	101.8	75.0-125
PCB-76/66	0.77	0.65-0.89	y	103.1	75.0-125
PCB-80	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-55	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-56/60	0.77	0.65-0.89	y	100.3	75.0-125
PCB-79	0.78	0.65-0.89	y	51.2	37.5-62.5
PCB-78	0.78	0.65-0.89	y	51.1	37.5-62.5
PCB-81	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-77	0.79	0.65-0.89	y	52.0	37.5-62.5
PCB-104	1.61	1.32-1.78	y	50.4	37.5-62.5
PCB-96	1.59	1.32-1.78	y	50.5	37.5-62.5
PCB-103	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-100	1.61	1.32-1.78	y	50.5	37.5-62.5
PCB-94	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-95/98/102	1.60	1.32-1.78	y	160.1	112.5-225
PCB-93	1.63	1.32-1.78	y	42.1	37.5-62.5
PCB-88/91	1.59	1.32-1.78	y	114.0	75.0-125
PCB-121	1.59	1.32-1.78	y	43.7	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.59	1.32-1.78	y	103.4	75.0-125	PCB-140	1.28	1.05-1.43	y	54.6	37.5-62.5
PCB-89	1.61	1.32-1.78	y	53.1	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	102.9	75.0-125
PCB-90/101	1.60	1.32-1.78	y	102.1	75.0-125	PCB-133/142	1.23	1.05-1.43	y	102.0	75.0-125
PCB-113	1.58	1.32-1.78	y	56.1	37.5-62.5	PCB-131	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-99	1.64	1.32-1.78	y	46.1	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	100.9	75.0-125
PCB-119	1.61	1.32-1.78	y	50.3	37.5-62.5	PCB-132/161	1.22	1.05-1.43	y	102.0	75.0-125
PCB-108/112	1.63	1.32-1.78	y	103.0	75.0-125	PCB-153	1.22	1.05-1.43	y	50.2	37.5-62.5
PCB-83	1.62	1.32-1.78	y	52.1	37.5-62.5	PCB-168	1.21	1.05-1.43	y	50.2	37.5-62.5
PCB-97	1.60	1.32-1.78	y	52.6	37.5-62.5	PCB-141	1.21	1.05-1.43	y	50.4	37.5-62.5
PCB-86	1.58	1.32-1.78	y	48.0	37.5-62.5	PCB-137	1.24	1.05-1.43	y	48.3	37.5-62.5
PCB-87/117/125	1.60	1.32-1.78	y	154.2	112.5-225	PCB-130	1.26	1.05-1.43	y	54.3	37.5-62.5
PCB-111/115	1.68	1.32-1.78	y	102.0	75.0-125	PCB-138/163/164	1.23	1.05-1.43	y	154.4	112.5-225
PCB-85/116	1.48	1.32-1.78	y	101.9	75.0-125	PCB-158/160	1.23	1.05-1.43	y	104.2	75.0-125
PCB-120	1.57	1.32-1.78	y	49.2	37.5-62.5	PCB-129	1.25	1.05-1.43	y	50.6	37.5-62.5
PCB-110	1.61	1.32-1.78	y	51.1	37.5-62.5	PCB-166	1.22	1.05-1.43	y	51.1	37.5-62.5
PCB-82	1.59	1.32-1.78	y	49.3	37.5-62.5	PCB-159	1.23	1.05-1.43	y	52.7	37.5-62.5
PCB-124	1.60	1.32-1.78	y	49.9	37.5-62.5	PCB-128/162	1.22	1.05-1.43	y	104.6	75.0-125
PCB-107/109	1.59	1.32-1.78	y	101.7	75.0-125	PCB-167	1.21	1.05-1.43	y	51.6	37.5-62.5
PCB-123	1.59	1.32-1.78	y	52.4	37.5-62.5	PCB-156	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	104.7	75.0-125	PCB-157	1.22	1.05-1.43	y	51.2	37.5-62.5
PCB-114	1.64	1.32-1.78	y	50.7	37.5-62.5	PCB-169	1.22	1.05-1.43	y	49.9	37.5-62.5
PCB-122	1.64	1.32-1.78	y	51.0	37.5-62.5	PCB-188	1.02	0.89-1.21	y	50.8	37.5-62.5
PCB-105	1.62	1.32-1.78	y	51.4	37.5-62.5	PCB-184	1.04	0.89-1.21	y	51.3	37.5-62.5
PCB-127	1.64	1.32-1.78	y	51.1	37.5-62.5	PCB-179	1.04	0.89-1.21	y	50.2	37.5-62.5
PCB-126	1.62	1.32-1.78	y	51.1	37.5-62.5	PCB-176	1.04	0.89-1.21	y	50.5	37.5-62.5
PCB-155	1.27	1.05-1.43	y	52.7	37.5-62.5	PCB-186	1.04	0.89-1.21	y	51.2	37.5-62.5
PCB-150	1.28	1.05-1.43	y	51.9	37.5-62.5	PCB-178	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-152	1.27	1.05-1.43	y	51.1	37.5-62.5	PCB-175	1.04	0.89-1.21	y	52.7	37.5-62.5
PCB-145	1.26	1.05-1.43	y	50.6	37.5-62.5	PCB-182/187	1.04	0.89-1.21	y	104.2	75.0-125
PCB-136	1.27	1.05-1.43	y	52.1	37.5-62.5	PCB-183	1.04	0.89-1.21	y	50.9	37.5-62.5
PCB-148	1.30	1.05-1.43	y	51.3	37.5-62.5	PCB-185	1.04	0.89-1.21	y	50.3	37.5-62.5
PCB-154	1.25	1.05-1.43	y	52.4	37.5-62.5	PCB-174	1.03	0.89-1.21	y	49.1	37.5-62.5
PCB-151	1.30	1.05-1.43	y	52.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	52.4	37.5-62.5
PCB-135	1.28	1.05-1.43	y	51.8	37.5-62.5	PCB-177	1.05	0.89-1.21	y	51.2	37.5-62.5
PCB-144	1.36	1.05-1.43	y	55.0	37.5-62.5	PCB-171	1.04	0.89-1.21	y	49.7	37.5-62.5
PCB-147	1.18	1.05-1.43	y	52.9	37.5-62.5	PCB-173	1.05	0.89-1.21	y	49.7	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	107.6	75.0-125	PCB-172	1.02	0.89-1.21	y	49.8	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	50.5	37.5-62.5
PCB-180	1.04	0.89-1.21	y	49.1	37.5-62.5
PCB-193	1.05	0.89-1.21	y	50.4	37.5-62.5
PCB-191	1.06	0.89-1.21	y	50.0	37.5-62.5
PCB-170	1.03	0.89-1.21	y	49.6	37.5-62.5
PCB-190	1.02	0.89-1.21	y	50.5	37.5-62.5
PCB-189	1.04	0.89-1.21	y	51.7	37.5-62.5
PCB-202	0.91	0.76-1.02	y	50.0	37.5-62.5
PCB-201	0.93	0.76-1.02	y	50.4	37.5-62.5
PCB-204	0.88	0.76-1.02	y	52.0	37.5-62.5
PCB-197	0.91	0.76-1.02	y	52.0	37.5-62.5
PCB-200	0.91	0.76-1.02	y	52.4	37.5-62.5
PCB-198	0.90	0.76-1.02	y	51.5	37.5-62.5
PCB-199	0.89	0.76-1.02	y	52.5	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	104.9	75.0-125
PCB-195	0.90	0.76-1.02	y	51.9	37.5-62.5
PCB-194	0.90	0.76-1.02	y	49.9	37.5-62.5
PCB-205	0.91	0.76-1.02	y	49.6	37.5-62.5
PCB-208	1.33	1.14-1.54	y	49.5	37.5-62.5
PCB-207	1.32	1.14-1.54	y	50.8	37.5-62.5
PCB-206	1.33	1.14-1.54	y	49.7	37.5-62.5
PCB-209	1.19	0.99-1.33	y	52.5	37.5-62.5

Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	7.79e+07	2.96 y	1.25	16:15	1.001	0.996	1.006	52.3077
PCB-2	7.75e+07	2.98 y	1.18	18:36	0.988	0.983	0.993	52.2846
PCB-3	7.90e+07	2.98 y	1.22	18:50	1.001	0.996	1.006	51.6788
PCB-4/10	2.37e+08	1.64 y	1.55	20:12	1.003	0.998	1.008	206.748
PCB-7/9	2.89e+08	1.64 y	1.27	21:57	0.869	0.865	0.873	204.628
PCB-6	1.40e+08	1.64 y	1.26	22:36	0.894	0.890	0.899	99.9095
PCB-5/8	2.84e+08	1.64 y	1.23	23:01	0.911	0.906	0.916	206.862
PCB-14	1.57e+08	1.65 y	1.23	24:06	0.954	0.949	0.959	102.294
PCB-11	1.47e+08	1.66 y	1.16	25:17	1.000	0.996	1.006	101.627
PCB-12/13	2.82e+08	1.63 y	1.10	25:41	1.016	1.010	1.020	205.694
PCB-15	1.52e+08	1.66 y	1.21	26:00	1.029	1.024	1.034	101.148
PCB-19	4.60e+07	1.05 y	1.30	24:17	1.001	0.996	1.006	49.3886
PCB-30	6.73e+07	1.06 y	1.83	25:10	1.037	1.032	1.042	51.1589
PCB-18	4.72e+07	1.05 y	0.86	25:55	0.954	0.949	0.959	50.4475
PCB-17	5.00e+07	1.05 y	0.90	26:05	0.960	0.955	0.965	50.9703
PCB-24/27	1.33e+08	1.06 y	1.18	26:40	0.981	0.976	0.986	103.472
- PCB-16/32	1.13e+08	1.05 y	1.03	27:10	1.000	0.995	1.005	100.505
- PCB-34	7.74e+07	1.08 y	1.26	27:58	0.961	0.956	0.966	57.3995
PCB-23	6.51e+07	1.11 y	1.31	28:04	0.964	0.959	0.969	46.4036
PCB-29	7.26e+07	1.09 y	1.33	28:18	0.972	0.967	0.977	51.0903
PCB-26	7.01e+07	1.08 y	1.29	28:30	0.979	0.974	0.984	50.7150
PCB-25	7.40e+07	1.09 y	1.34	28:40	0.985	0.980	0.990	51.5314
PCB-31	7.55e+07	1.08 y	1.42	29:02	0.997	0.992	1.002	49.7377
PCB-28	7.73e+07	1.11 y	1.38	29:07	1.000	0.996	1.006	52.4521
PCB-20/21/33	2.14e+08	1.09 y	1.31	29:45	1.022	1.017	1.027	152.731
PCB-22	7.44e+07	1.08 y	1.32	30:11	1.037	1.032	1.042	52.6344
PCB-36	7.16e+07	1.09 y	1.38	30:47	0.933	0.929	0.939	52.3141
PCB-39	7.29e+07	1.08 y	1.42	31:16	0.948	0.943	0.953	51.6606
PCB-38	7.06e+07	1.10 y	1.35	32:02	0.971	0.967	0.976	52.4183
PCB-35	7.21e+07	1.11 y	1.38	32:33	0.987	0.982	0.992	52.6668
PCB-37	7.08e+07	1.09 y	1.39	32:59	1.000	0.996	1.006	51.1869
PCB-54	5.75e+07	0.76 y	1.20	28:01	1.001	0.996	1.006	51.7229
PCB-50	4.61e+07	0.77 y	0.97	29:11	1.042	1.037	1.047	51.4094
PCB-53	4.59e+07	0.78 y	1.19	29:49	0.946	0.941	0.951	50.2276
PCB-51	4.72e+07	0.78 y	1.15	30:10	0.957	0.952	0.962	53.1558
PCB-45	3.92e+07	0.78 y	0.97	30:35	0.971	0.966	0.976	52.7585
PCB-46	3.67e+07	0.76 y	0.95	31:04	0.986	0.982	0.992	50.0611

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.04e+08	0.77 y	1.28	31:33	1.001	0.996	1.006	105.426
PCB-73	5.51e+07	0.77 y	1.37	31:39	1.005	1.000	1.010	52.1810
PCB-43/49	8.70e+07	0.77 y	1.11	31:50	1.010	1.005	1.015	101.562
PCB-47	4.93e+07	0.76 y	1.13	32:02	1.000	0.996	1.006	53.6979
PCB-48/75	1.06e+08	0.77 y	1.30	32:09	1.004	0.999	1.009	99.7567
PCB-65	5.34e+07	0.77 y	1.33	32:25	1.012	1.007	1.017	49.3948
PCB-62	5.60e+07	0.77 y	1.29	32:32	1.016	1.011	1.021	53.4188
PCB-44	3.91e+07	0.78 y	0.94	32:50	1.025	1.020	1.030	51.2578
PCB-42/59	1.02e+08	0.77 y	1.22	33:02	1.032	1.028	1.038	103.394
PCB-41/64/71/72	2.19e+08	0.78 y	1.31	33:38	1.050	1.046	1.056	205.816
PCB-68	6.14e+07	0.78 y	1.49	33:54	1.059	1.054	1.064	50.9457
PCB-40	3.37e+07	0.77 y	0.82	34:06	1.065	1.061	1.071	50.7163
PCB-57	5.90e+07	0.77 y	1.11	34:28	0.970	0.965	0.975	51.7966
PCB-67	5.86e+07	0.77 y	1.07	34:46	0.979	0.974	0.984	53.3170
PCB-58	5.56e+07	0.78 y	1.10	34:53	0.982	0.977	0.987	49.2975
PCB-63	5.91e+07	0.76 y	1.12	35:03	0.987	0.982	0.992	51.7181
PCB-74	6.38e+07	0.77 y	1.20	35:20	0.995	0.990	1.000	51.8367
PCB-61/70	1.12e+08	0.78 y	1.08	35:30	0.999	0.994	1.004	101.842
PCB-76/66	1.20e+08	0.77 y	1.14	35:43	1.005	1.001	1.011	103.088
PCB-80	6.74e+07	0.78 y	1.28	35:56	1.000	0.996	1.006	50.2410
PCB-55	6.01e+07	0.77 y	1.11	36:17	1.010	1.005	1.015	51.5207
PCB-56/60	1.15e+08	0.77 y	1.09	36:46	1.023	1.018	1.028	100.313
PCB-79	6.04e+07	0.78 y	1.12	37:50	1.053	1.048	1.058	51.1728
PCB-78	5.76e+07	0.78 y	1.24	38:32	0.987	0.982	0.992	51.0794
PCB-81	6.41e+07	0.78 y	1.38	39:03	1.000	0.995	1.005	50.9258
PCB-77	6.12e+07	0.79 y	1.21	39:39	1.000	0.995	1.005	51.9669
PCB-104	4.41e+07	1.61 y	1.26	32:41	1.000	0.996	1.006	50.3835
PCB-96	3.84e+07	1.59 y	1.09	33:57	1.039	1.034	1.044	50.4976
PCB-103	3.30e+07	1.58 y	0.93	34:29	1.055	1.050	1.060	50.7622
PCB-100	3.52e+07	1.61 y	1.00	34:49	1.066	1.061	1.071	50.4670
PCB-94	2.91e+07	1.58 y	1.11	35:18	0.985	0.981	0.991	50.7908
PCB-95/98/102	1.01e+08	1.60 y	1.21	35:47	0.999	0.994	1.004	160.143
PCB-93	2.46e+07	1.63 y	1.13	35:56	1.003	0.998	1.008	42.0683
PCB-88/91	6.02e+07	1.59 y	1.02	36:12	1.010	1.006	1.016	114.032
PCB-121	4.31e+07	1.59 y	1.90	36:19	1.014	1.009	1.019	43.6820
PCB-84/92	5.90e+07	1.59 y	1.05	37:08	0.990	0.986	0.996	103.399
PCB-89	2.93e+07	1.61 y	1.02	37:19	0.995	0.991	1.001	53.0820

RL: MONO, TRI - DECA: ——

RL: DI : ——

Integrations by Analyst: DMS Date: 6/23/14

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	6.59e+07	1.60	y	1.19	37:31	1.001	0.996	1.006	102.056
	PCB-113	4.11e+07	1.58	y	1.35	37:45	1.007	1.002	1.012	56.0520
	PCB-99	3.22e+07	1.64	y	1.29	37:51	1.010	1.005	1.015	46.1415
	PCB-119	4.21e+07	1.61	y	1.72	38:18	0.987	0.982	0.992	50.2990
	PCB-108/112	6.45e+07	1.63	y	1.29	38:27	0.991	0.986	0.996	102.978
	PCB-83	3.85e+07	1.62	y	1.52	38:38	0.996	0.991	1.001	52.0737
	PCB-97	3.19e+07	1.60	y	1.25	38:49	1.000	0.996	1.006	52.5654
	PCB-86	2.39e+07	1.58	y	1.02	38:58	1.004	1.000	1.010	48.0340
	B-87/117/125	1.17e+08	1.60	y	1.56	39:05	1.007	1.002	1.012	154.194
	PCB-111/115	8.69e+07	1.68	y	1.75	39:15	1.012	1.007	1.017	101.981
	PCB-85/116	6.45e+07	1.48	y	1.30	39:23	1.015	1.010	1.020	101.910
	PCB-120	4.26e+07	1.57	y	1.78	39:37	1.021	1.016	1.026	49.1740
	PCB-110	4.18e+07	1.61	y	1.68	39:46	1.025	1.020	1.030	51.1450
	PCB-82	2.58e+07	1.59	y	0.74	40:23	0.976	0.972	0.982	49.2945
	PCB-124	4.68e+07	1.60	y	1.32	41:03	0.993	0.988	0.998	49.9220
	PCB-107/109	8.79e+07	1.59	y	1.22	41:12	0.996	0.991	1.001	101.669
	PCB-123	4.52e+07	1.59	y	1.22	41:22	1.000	0.995	1.005	52.4448
-	PCB-106/118	9.37e+07	1.62	y	1.22	41:35	1.001	0.996	1.006	104.679
-	PCB-114	5.41e+07	1.64	y	1.36	42:13	1.000	0.995	1.005	50.6622
	PCB-122	4.97e+07	1.64	y	1.24	42:21	1.004	0.999	1.009	50.9693
	PCB-105	5.28e+07	1.62	y	1.28	43:05	1.001	0.995	1.005	51.3611
	PCB-127	5.04e+07	1.64	y	1.14	43:24	1.000	0.995	1.005	51.1125
	PCB-126	4.91e+07	1.62	y	1.28	45:19	1.001	0.995	1.005	51.0683
	PCB-155	3.50e+07	1.27	y	1.14	37:04	1.001	0.966	1.006	52.6727
	PCB-150	3.23e+07	1.28	y	1.06	38:20	1.035	1.030	1.040	51.8920
	PCB-152	3.28e+07	1.27	y	1.10	38:49	1.048	1.043	1.053	51.0615
	PCB-145	3.24e+07	1.26	y	1.09	39:15	1.060	1.055	1.065	50.6281
	PCB-136	3.31e+07	1.27	y	1.08	39:35	1.069	1.064	1.074	52.0720
	PCB-148	2.22e+07	1.30	y	0.74	39:40	1.071	1.066	1.076	51.2670
	PCB-154	2.71e+07	1.25	y	0.88	40:10	1.084	1.079	1.089	52.4052
	PCB-151	2.51e+07	1.30	y	0.81	40:48	1.102	1.097	1.107	52.9183
	PCB-135	2.36e+07	1.28	y	0.78	41:01	1.107	1.101	1.113	51.8361
	PCB-144	2.64e+07	1.36	y	0.82	41:08	1.110	1.105	1.116	54.9912
	PCB-147	2.56e+07	1.18	y	0.83	41:16	1.114	1.011	1.120	52.8823
	PCB-139/149	5.32e+07	1.27	y	0.84	41:31	1.121	1.115	1.127	107.613
-	PCB-140	2.51e+07	1.28	y	0.79	41:43	1.126	1.120	1.132	54.6052
-	PCB-134/143	7.01e+07	1.24	y	0.93	42:08	0.975	0.970	0.980	102.949

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	7.08e+07	1.23	y	0.95	42:26	0.982	0.977	0.987	102.037
PCB-131	3.32e+07	1.22	y	0.91	42:36	0.986	0.981	0.991	49.4221
PCB-146/165	8.56e+07	1.24	y	1.16	42:48	0.991	0.986	0.996	100.884
PCB-132/161	8.34e+07	1.22	y	1.11	43:03	0.996	0.992	1.002	102.031
PCB-153	4.34e+07	1.22	y	1.18	43:14	1.001	0.995	1.005	50.1872
PCB-168	5.04e+07	1.21	y	1.37	43:27	1.006	1.000	1.010	50.1556
PCB-141	3.48e+07	1.21	y	0.97	43:58	1.001	0.996	1.005	50.4291
PCB-137	3.66e+07	1.24	y	1.07	44:21	1.009	1.004	1.014	48.2814
PCB-130	3.25e+07	1.26	y	0.85	44:27	1.012	1.007	1.017	54.2556
PCB-138/163/164	1.29e+08	1.23	y	1.23	44:50	1.001	0.996	1.006	154.435
PCB-158/160	9.17e+07	1.23	y	1.29	45:05	1.007	1.001	1.011	104.238
PCB-129	3.19e+07	1.25	y	0.92	45:19	1.012	1.007	1.017	50.5660
PCB-166	4.45e+07	1.22	y	1.12	45:46	0.993	0.988	0.998	51.1070
PCB-159	4.79e+07	1.23	y	1.16	46:05	1.000	0.995	1.005	52.6640
PCB-128/162	8.32e+07	1.22	y	1.02	46:22	1.006	1.002	1.012	104.591
PCB-167	4.69e+07	1.21	y	1.06	46:47	1.001	0.995	1.005	51.5594
PCB-156	4.73e+07	1.22	y	1.18	48:04	1.000	0.995	1.005	49.4312
PCB-157	4.74e+07	1.22	y	1.08	48:20	1.000	0.995	1.005	51.2216
PCB-169	4.38e+07	1.22	y	1.11	50:24	1.000	0.995	1.005	49.8867
PCB-188	4.41e+07	1.02	y	1.40	42:52	1.000	0.995	1.005	50.7803
PCB-184	3.92e+07	1.04	y	1.24	43:18	1.011	1.006	1.016	51.2869
PCB-179	4.05e+07	1.04	y	1.30	44:06	1.029	1.024	1.034	50.2126
PCB-176	4.26e+07	1.04	y	1.36	44:34	1.040	1.035	1.045	50.5434
PCB-186	4.04e+07	1.04	y	1.28	45:10	1.054	1.049	1.059	51.1676
PCB-178	2.94e+07	1.04	y	0.94	45:39	1.066	1.061	1.071	50.8281
PCB-175	3.16e+07	1.04	y	0.97	46:00	1.074	1.069	1.079	52.7165
PCB-182/187	6.54e+07	1.04	y	1.01	46:11	1.078	1.073	1.083	104.234
PCB-183	3.41e+07	1.04	y	1.08	46:29	1.085	1.080	1.090	50.9232
PCB-185	3.03e+07	1.04	y	1.34	47:09	0.956	0.951	0.961	50.2993
PCB-174	2.95e+07	1.03	y	1.34	47:31	0.963	0.958	0.968	49.0649
PCB-181	3.20e+07	1.06	y	1.36	47:37	0.966	0.961	0.971	52.3684
PCB-177	2.85e+07	1.05	y	1.24	47:48	0.969	0.964	0.974	51.2147
PCB-171	2.93e+07	1.04	y	1.31	48:05	0.975	0.970	0.980	49.7433
PCB-173	2.59e+07	1.05	y	1.16	48:31	0.984	0.979	0.989	49.7232
PCB-172	2.73e+07	1.02	y	1.22	48:57	0.993	0.988	0.998	49.7746
PCB-192	3.46e+07	1.05	y	1.53	49:09	0.996	0.991	1.001	50.4921
PCB-180	3.15e+07	1.04	y	1.43	49:20	1.000	0.995	1.005	49.0865

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4
Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.74e+07	1.05	y	1.65	49:32	1.004	0.999	1.009	50.3769
	PCB-191	3.75e+07	1.06	y	1.67	49:47	1.009	1.004	1.014	49.9945
	PCB-170	2.66e+07	1.03	y	1.50	50:46	1.000	0.995	1.005	49.6074
	PCB-190	3.64e+07	1.02	y	2.02	50:55	1.003	0.998	1.008	50.4804
	PCB-189	3.90e+07	1.04	y	1.54	52:12	1.000	0.995	1.005	51.6684
	PCB-202	2.92e+07	0.91	y	1.04	48:17	1.000	0.995	1.005	49.9695
	PCB-201	3.12e+07	0.93	y	1.10	48:46	1.011	1.006	1.016	50.3688
	PCB-204	2.91e+07	0.88	y	0.99	48:56	1.014	1.009	1.019	52.0459
	PCB-197	3.14e+07	0.91	y	1.07	49:13	1.020	1.015	1.025	51.9828
	PCB-200	3.00e+07	0.91	y	1.02	50:03	1.037	1.032	1.044	52.4432
	PCB-198	2.15e+07	0.90	y	0.74	51:20	1.063	1.058	1.068	51.5297
	PCB-199	2.15e+07	0.89	y	0.73	51:25	1.065	1.060	1.070	52.5143
-	PCB-196/203	4.56e+07	0.90	y	0.77	51:41	1.071	1.066	1.076	104.918
-	PCB-195	2.91e+07	0.90	y	1.20	52:49	0.984	0.979	0.989	51.8965
	PCB-194	2.91e+07	0.90	y	1.25	53:41	1.000	0.995	1.005	49.8808
	PCB-205	3.28e+07	0.91	y	1.41	53:58	1.006	1.001	1.011	49.5944
	PCB-208	3.18e+07	1.33	y	0.96	52:57	1.000	0.995	1.005	49.4830
	PCB-207	3.10e+07	1.32	y	0.92	53:16	1.006	1.001	1.011	50.7809
	PCB-206	2.07e+07	1.33	y	1.03	55:21	1.000	0.995	1.005	49.7349
	PCB-209	2.28e+07	1.19	y	1.18	56:38	1.000	0.995	1.005	52.4674

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.34e+08	2.96	y	16:15	1.22	156.271	
Total Di-PCB	1.69e+09	1.64	y	20:12	1.21	1228.91	
Total Tri-PCB	4.56e+08	1.05	y	24:17	1.16	405.942	
Total Tri-PCB	1.17e+09	1.08	y	27:58	1.35	834.371	Sum:1240.31
Total Tetra-PCB	2.26e+09	0.76	y	28:01	1.17	2169.09	
Total Penta-PCB	1.49e+09	1.61	y	32:41	1.21	2099.97	
Total Penta-PCB	2.69e+08	1.64	y	42:13	1.26	267.736	Sum:2367.71
Total Hexa-PCB	3.94e+08	1.27	y	37:04	0.92	736.844	
Total Hexa-PCB	1.17e+09	1.24	y	42:08	1.08	1448.04	Sum:2184.88
Total Hepta-PCB	8.19e+08	1.02	y	42:52	1.27	1225.74	
Total Octa-PCB	2.40e+08	0.91	y	48:17	0.92	465.773	
Total Octa-PCB	9.28e+07	0.90	y	52:49	1.29	154.410	Sum:620.183
Total Nona-PCB	8.35e+07	1.33	y	52:57	0.96	149.999	
Total Deca-PCB	2.28e+07	1.19	y	56:38	1.18	52.4674	

Total PCB Conc:11327.5526340

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.19e+08	3.24 y	0.89	16:14	0.625	0.622	0.628	98.9	98.9
13C-PCB-3	1.25e+08	3.32 y	0.93	18:49	0.725	0.721	0.729	100	100
13C-PCB-4	7.38e+07	1.60 y	0.55	20:09	0.776	0.772	0.780	99.9	99.9
13C-PCB-9	1.11e+08	1.59 y	0.83	21:55	0.844	0.840	0.848	100.0	100.0
13C-PCB-11	1.25e+08	1.58 y	0.94	25:16	0.973	0.968	0.978	98.6	98.6
13C-PCB-19	7.19e+07	1.04 y	0.53	24:16	0.934	0.929	0.939	100	100
13C-PCB-28	1.07e+08	1.05 y	0.89	29:07	1.004	0.999	1.009	96.1	96.1
13C-PCB-32	1.09e+08	1.07 y	0.81	27:10	1.046	1.041	1.051	99.3	99.3
13C-PCB-37	9.94e+07	1.06 y	0.83	32:59	1.137	1.131	1.143	95.3	95.3
13C-PCB-47	8.11e+07	0.81 y	0.74	32:01	0.871	0.867	0.875	98.7	98.7
13C-PCB-52	7.70e+07	0.79 y	0.71	31:30	0.857	0.853	0.861	98.5	98.5
13C-PCB-54	9.29e+07	0.81 y	0.85	28:00	0.762	0.758	0.766	99.0	99.0
13C-PCB-70	1.02e+08	0.79 y	0.94	35:31	0.966	0.961	0.971	98.1	98.1
13C-PCB-77	9.74e+07	0.81 y	0.89	39:38	1.078	1.073	1.083	98.7	98.7
13C-PCB-80	1.05e+08	0.80 y	0.96	35:56	0.977	0.972	0.982	99.0	99.0
13C-PCB-81	9.10e+07	0.80 y	0.84	39:03	1.062	1.057	1.067	98.4	98.4
13C-PCB-95	5.18e+07	1.63 y	0.74	35:49	0.913	0.908	0.918	98.4	98.4
13C-PCB-97	4.86e+07	1.60 y	0.69	38:48	0.989	0.984	0.994	99.7	99.7
13C-PCB-101	5.42e+07	1.60 y	0.79	37:30	0.956	0.951	0.961	97.6	97.6
13C-PCB-104	6.97e+07	1.58 y	1.00	32:40	0.833	0.829	0.837	99.0	99.0
13C-PCB-105	8.01e+07	1.61 y	1.24	43:03	0.929	0.924	0.934	96.7	96.7
13C-PCB-114	7.88e+07	1.61 y	1.21	42:12	0.910	0.905	0.915	97.6	97.6
13C-PCB-118	7.31e+07	1.59 y	0.98	41:32	1.059	1.054	1.064	105	105
13C-PCB-123	7.08e+07	1.58 y	0.95	41:21	1.054	1.049	1.059	105	105
13C-PCB-126	7.48e+07	1.61 y	1.16	45:18	0.977	0.972	0.982	96.2	96.2
13C-PCB-127	8.64e+07	1.59 y	1.34	43:23	0.936	0.931	0.941	96.3	96.3
13C-PCB-138	6.82e+07	1.26 y	1.04	44:48	0.966	0.961	0.971	97.7	97.7
13C-PCB-141	7.08e+07	1.28 y	1.07	43:57	0.948	0.943	0.953	98.8	98.8
13C-PCB-153	7.34e+07	1.25 y	1.11	43:13	0.932	0.927	0.937	98.6	98.6
13C-PCB-155	5.85e+07	1.27 y	0.83	37:02	0.944	0.939	0.949	99.4	99.4
13C-PCB-156	8.09e+07	1.27 y	1.24	48:03	1.037	1.032	1.042	97.2	97.2
13C-PCB-157	8.55e+07	1.28 y	1.31	48:19	1.042	1.037	1.047	97.5	97.5
13C-PCB-159	7.80e+07	1.30 y	1.20	46:05	0.994	0.989	0.999	97.3	97.3
13C-PCB-167	8.57e+07	1.25 y	1.32	46:45	1.009	1.004	1.014	97.0	97.0
13C-PCB-169	7.92e+07	1.27 y	1.22	50:24	1.087	1.082	1.092	97.5	97.5
13C-PCB-170	3.58e+07	0.46 y	0.54	50:45	1.095	1.089	1.101	99.9	99.9
13C-PCB-180	4.49e+07	0.47 y	0.67	49:19	1.064	1.059	1.069	99.6	99.6
13C-PCB-188	6.18e+07	0.46 y	0.94	42:51	0.924	0.919	0.929	98.8	98.8
13C-PCB-189	4.90e+07	0.46 y	0.72	52:11	1.126	1.120	1.132	102	102
13C-PCB-194	4.68e+07	0.91 y	0.81	53:40	0.995	0.990	1.000	99.2	99.2
13C-PCB-202	5.62e+07	0.92 y	0.83	48:16	1.041	1.036	1.046	101	101
13C-PCB-206	4.05e+07	0.78 y	0.66	55:20	1.026	1.021	1.031	106	106
13C-PCB-208	6.67e+07	0.78 y	1.12	52:56	0.981	0.976	0.986	102	102
13C-PCB-209	3.70e+07	1.21 y	0.61	56:37	1.049	1.044	1.054	103	103

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.01	37:49	1.028	1.023	1.033	109	109
13C-PCB-178	4.58e+07	0.46 y	0.63	45:38	0.984	0.979	0.989	109	109

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.20	37:49	0.968	0.963	0.973	110	110
13C-PCB-178	4.58e+07	0.46 y	0.94	45:38	0.925	0.920	0.930	109	109

RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	1.35e+08	1.56 y	1.00	25:58	100
13C-PCB-31	1.25e+08	1.07 y	1.00	29:00	100
13C-PCB-60	1.10e+08	0.80 y	1.00	36:46	100
13C-PCB-111	7.08e+07	1.59 y	1.00	39:14	100
13C-PCB-128	6.69e+07	1.27 y	1.00	46:21	100
13C-PCB-205	5.82e+07	0.91 y	1.00	53:57	100

Analyst: DMS

Date: 6/23/14

Vista Analytical Laboratory - Injection Log Run file: 140620E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
140620E1	1	ST140620E1-1	DMS	20-JUN-14	09:31:44	NA	NA
140620E1	2	ST140620E1-2	DMS	20-JUN-14	10:35:42	NA	NA
140620E1	3	ST140620E1-3	DMS	20-JUN-14	11:39:47	NA	NA
140620E1	4	ST140620E1-4	DMS	20-JUN-14	12:43:46	ST140620E1-4	ST140620E1-8
140620E1	5	ST140620E1-5	DMS	20-JUN-14	13:47:50	NA	NA
140620E1	6	ST140620E1-6	DMS	20-JUN-14	14:51:49	NA	NA
140620E1	8	ST140620E1-7	DMS	20-JUN-14	15:57:15	NA	NA
140620E1	9	B4F0047-BS1	DMS	20-JUN-14	17:01:12	ST140620E1-4	ST140620E1-8
140620E1	10	SOLVENT BLANK	DMS	20-JUN-14	18:05:10	NA	NA
140620E1	11	B4F0047-BLK1	DMS	20-JUN-14	19:09:06	ST140620E1-4	ST140620E1-8
140620E1	12	1400406-01	DMS	20-JUN-14	20:13:09	ST140620E1-4	ST140620E1-8
140620E1	13	1400434-01	DMS	20-JUN-14	21:17:10	ST140620E1-4	NA
140620E1	14	1400434-02	DMS	20-JUN-14	22:21:13	ST140620E1-4	NA
140620E1	15	1400434-03	DMS	20-JUN-14	23:25:09	ST140620E1-4	NA
140620E1	16	SOLVENT BLANK	DMS	21-JUN-14	00:29:07	ST140620E1-4	NA
140620E1	17	ST140620E1-8	DMS	21-JUN-14	01:33:10	ST140620E1-4	ST140620E1-8

March 31, 2015

Vista Project I.D.: 1400915

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the additional results for the sample set received at Vista Analytical Laboratory on December 04, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '1400647'. The work was authorized under your Purchase Order No. 10163569.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400915
Case Narrative

Sample Condition on Receipt:

One aqueous sample and four sediment samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The PCB analyses on the sediment samples, which were originally on hold, were authorized for analysis on March 9, 2015.

Analytical Notes:

EPA Method 1668C

The samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400915-01	BD-OWS-02-20141203-W	03-Dec-14 13:56	04-Dec-14 09:03	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400915-02	BD-MH-9.66-20141203-S	03-Dec-14 09:02	04-Dec-14 09:03	Amber Glass, 250mL
1400915-03	BD-OWS-15-20141203-S	03-Dec-14 10:33	04-Dec-14 09:03	Amber Glass, 250mL
1400915-04	BD-MH-10.9-20141203-S	03-Dec-14 15:13	04-Dec-14 09:03	Glass Jar, 120mL
1400915-05	BD-MH-13.43-20141202-S	02-Dec-14 15:07	04-Dec-14 09:03	Amber Glass, 250mL

Vista Project: 1400915

Client Project: 1400647

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BLK1
Date Analyzed: 18-Mar-15 13:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	2.50	10.8		0.320	
PCB-2	ND	2.50	8.86		0.240	
PCB-3	ND	2.50	7.36		0.323	
PCB-4/10	ND	5.00	34.6		1.14	
PCB-5/8	ND	5.00	27.8		1.76	
PCB-6	ND	2.50	24.5		1.00	
PCB-7/9	ND	5.00	26.4		1.34	
PCB-11	ND	2.50	26.3		3.48	
PCB-12/13	ND	5.00	24.0		1.37	
PCB-14	ND	2.50	25.8		0.337	
PCB-15	ND	2.50	22.3		0.634	
PCB-16/32	ND	5.00	3.98		0.430	
PCB-17	ND	2.50	4.06		0.658	
PCB-18	ND	2.50	4.79		0.696	
PCB-19	ND	2.50	5.52		0.612	
PCB-20/21/33	ND	7.50	3.54		2.47	
PCB-22	ND	2.50	3.17		0.964	
PCB-23	ND	2.50	2.99		0.543	
PCB-24/27	ND	5.00	3.15		0.742	
PCB-25	ND	2.50	3.04		0.768	
PCB-26	ND	2.50	3.17		0.766	
PCB-28	ND	2.50	2.24		1.12	
PCB-29	ND	2.50	3.55		0.949	
PCB-30	ND	2.50	3.36		0.355	
PCB-31	ND	2.50	2.98		0.809	
PCB-34	ND	2.50	3.37		1.57	
PCB-35	ND	2.50	3.14		0.565	
PCB-36	ND	2.50	3.39		0.406	
PCB-37	ND	2.50	3.15		0.389	
PCB-38	ND	2.50	3.23		0.528	
PCB-39	ND	2.50	3.47		0.461	
PCB-40	ND	2.50	6.11		0.927	
PCB-41/64/71/72	ND	10.0	3.55		1.70	
PCB-42/59	ND	5.00	3.77		0.899	
PCB-43/49	ND	5.00	4.49		0.879	
PCB-44	ND	2.50	4.98		0.745	
PCB-45	ND	2.50	5.17		0.402	
PCB-46	ND	2.50	5.29		0.537	
PCB-47	ND	2.50	4.05		2.19	
PCB-48/75	ND	5.00	3.49		0.983	
PCB-50	ND	2.50	4.67		0.603	
PCB-51	ND	2.50	4.51		0.789	
PCB-52/69	ND	5.00	3.49		0.722	
PCB-53	ND	2.50	4.20		0.331	
PCB-54	ND	2.50	3.73		0.275	
PCB-55	ND	2.50	3.07		0.416	
PCB-56/60	ND	5.00	3.17		0.825	
PCB-57	ND	2.50	3.45		0.354	
PCB-58	ND	2.50	3.64		0.589	
PCB-61/70	ND	5.00	3.54		1.20	
PCB-62	ND	2.50	3.51		0.597	
PCB-63	ND	2.50	3.54		0.524	
PCB-65	ND	2.50	3.50		0.842	
PCB-66/76	ND	5.00	3.23		1.31	
PCB-67	ND	2.50	3.05		0.486	
PCB-68	ND	2.50	3.18		0.658	
PCB-73	ND	2.50	3.30		0.454	
PCB-74	ND	2.50	2.71		0.781	
PCB-77	ND	2.50	3.10		0.748	
PCB-78	ND	2.50	2.64		0.385	
PCB-79	ND	2.50	2.96		0.633	
PCB-80	ND	2.50	2.68		0.336	
PCB-81	ND	2.50	2.52		0.674	
PCB-82	ND	2.50	13.1		0.981	
PCB-83	ND	2.50	8.49		0.440	
PCB-84/92	ND	5.00	11.2		1.01	
PCB-85/116	ND	5.00	9.90		1.64	
PCB-86	ND	2.50	15.3		1.79	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: Method Blank — EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BLK1
Date Analyzed: 18-Mar-15 13:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	7.50	8.32		0.880	
PCB-88/91	ND	5.00	11.5		1.25	
PCB-89	ND	2.50	10.4		1.22	
PCB-90/101	ND	5.00	10.6		1.19	
PCB-93	ND	2.50	15.2		2.53	
PCB-94	ND	2.50	12.2		0.874	
PCB-95/98/102	ND	7.50	10.5		1.38	
PCB-96	ND	2.50	8.81		0.588	
PCB-97	ND	2.50	10.9		0.675	
PCB-99	ND	2.50	8.77		0.474	
PCB-100	ND	2.50	10.7		0.511	
PCB-103	ND	2.50	10.5		0.428	
PCB-104	ND	2.50	8.47		0.876	
PCB-105	ND	2.50	4.50		0.462	
PCB-106/118	ND	5.00	7.90		0.728	
PCB-107/109	ND	5.00	7.54		0.631	
PCB-108/112	ND	5.00	10.1		0.844	
PCB-110	ND	2.50	8.29		0.555	
PCB-111/115	ND	5.00	7.90		1.24	
PCB-113	ND	2.50	8.31		0.495	
PCB-114	ND	2.50	4.59		0.418	
PCB-119	ND	2.50	8.42		0.383	
PCB-120	ND	2.50	7.69		0.622	
PCB-121	ND	2.50	7.95		0.978	
PCB-122	ND	2.50	5.31		0.619	
PCB-123	ND	2.50	8.53		0.494	
PCB-124	ND	2.50	6.78		0.813	
PCB-126	ND	2.50	5.23		0.543	
PCB-127	ND	2.50	4.09		0.326	
PCB-128/162	ND	5.00	4.01		1.08	
PCB-129	ND	2.50	6.07		0.567	
PCB-130	ND	2.50	5.23		0.798	
PCB-131	ND	2.50	5.28		0.731	
PCB-132/161	ND	5.00	4.34		1.05	
PCB-133/142	ND	5.00	5.85		1.04	
PCB-134/143	ND	5.00	5.23		1.05	
PCB-135	ND	2.50	12.1		1.47	
PCB-136	ND	2.50	8.12		0.776	
PCB-137	ND	2.50	4.75		0.541	
PCB-138/163/164	5.41	7.50			0.809	J
PCB-139/149	ND	5.00	12.6		1.49	
PCB-140	ND	2.50	13.2		1.20	
PCB-141	ND	2.50	4.65		0.678	
PCB-144	ND	2.50	12.6		1.38	
PCB-145	ND	2.50	7.96		1.05	
PCB-146/165	ND	5.00	3.85		0.792	
PCB-147	ND	2.50	11.7		5.26	
PCB-148	ND	2.50	12.9		1.45	
PCB-150	ND	2.50	9.58		0.801	
PCB-151	ND	2.50	12.8		1.16	
PCB-152	ND	2.50	8.57		0.744	
PCB-153	ND	2.50	3.84		0.484	
PCB-154	ND	2.50	11.1		0.837	
PCB-155	ND	2.50	8.59		0.767	
PCB-156	ND	2.50	3.55		0.534	
PCB-157	ND	2.50	3.44		0.485	
PCB-158/160	ND	5.00	3.86		0.915	
PCB-159	ND	2.50	3.77		0.578	
PCB-166	ND	2.50	3.54		0.425	
PCB-167	ND	2.50	3.32		0.653	
PCB-168	ND	2.50	3.31		0.502	
PCB-169	ND	2.50	3.44		0.767	
PCB-170	ND	2.50	3.79		0.758	
PCB-171	ND	2.50	3.45		0.372	
PCB-172	ND	2.50	3.34		0.857	
PCB-173	ND	2.50	4.92		0.507	
PCB-174	ND	2.50	3.96		0.797	
PCB-175	ND	2.50	4.04		0.679	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BLK1
Date Analyzed: 18-Mar-15 13:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	2.50	2.77		0.729	
PCB-177	ND	2.50	4.34		0.404	
PCB-178	ND	2.50	3.95		0.610	
PCB-179	ND	2.50	3.14		0.418	
PCB-180	ND	2.50	4.06		0.420	
PCB-181	ND	2.50	3.95		1.26	
PCB-182/187	ND	5.00	3.27		1.33	
PCB-183	ND	2.50	3.38		0.638	
PCB-184	ND	2.50	2.51		0.597	
PCB-185	ND	2.50	3.03		0.557	
PCB-186	ND	2.50	2.81		0.421	
PCB-188	ND	2.50	2.59		0.759	
PCB-189	ND	2.50	2.57		0.483	
PCB-190	ND	2.50	2.74		0.686	
PCB-191	ND	2.50	3.22		0.447	
PCB-192	ND	2.50	3.13		0.528	
PCB-193	ND	2.50	3.18		0.836	
PCB-194	ND	2.50	2.68		0.645	
PCB-195	ND	2.50	2.65		0.722	
PCB-196/203	ND	5.00	8.81		0.983	
PCB-197	ND	2.50	6.57		0.794	
PCB-198	ND	2.50	9.35		0.792	
PCB-199	ND	2.50	8.85		0.615	
PCB-200	ND	2.50	6.64		0.795	
PCB-201	ND	2.50	6.14		0.317	
PCB-202	ND	2.50	6.52		0.759	
PCB-204	ND	2.50	6.20		0.543	
PCB-205	ND	2.50	2.11		0.471	
PCB-206	ND	2.50	3.36		0.852	
PCB-207	ND	2.50	1.93		0.402	
PCB-208	ND	2.50	2.24		0.441	
PCB-209	ND	2.50		4.10	1.10	
Total monoCB	ND	2.50	10.8			
Total diCB	ND	2.50	34.6			
Total triCB	ND	2.50	5.52			
Total tetraCB	ND	2.50	6.11			
Total pentaCB	ND	2.50	15.3			
Total hexaCB	5.41	2.50				
Total heptaCB	ND	2.50	4.92			
Total octaCB	ND	2.50	9.35			
Total nonaCB	ND	2.50	3.36			
DecaCB	ND	2.50		4.10		
Total PCB	5.41	2.50				

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BLK1
Date Analyzed: 18-Mar-15 13:13 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	50.0	5 - 145	
	13C-PCB-3	62.8	5 - 145	
	13C-PCB-4	60.8	5 - 145	
	13C-PCB-11	77.1	5 - 145	
	13C-PCB-9	68.3	5 - 145	
	13C-PCB-19	71.4	5 - 145	
	13C-PCB-28	88.3	5 - 145	
	13C-PCB-32	77.3	5 - 145	
	13C-PCB-37	99.9	5 - 145	
	13C-PCB-47	80.4	5 - 145	
	13C-PCB-52	81.7	5 - 145	
	13C-PCB-54	71.3	5 - 145	
	13C-PCB-70	87.5	5 - 145	
	13C-PCB-77	92.2	10 - 145	
	13C-PCB-80	88.2	10 - 145	
	13C-PCB-81	93.4	10 - 145	
	13C-PCB-95	87.7	10 - 145	
	13C-PCB-97	92.8	10 - 145	
	13C-PCB-101	90.5	10 - 145	
	13C-PCB-104	82.6	10 - 145	
	13C-PCB-105	99.3	10 - 145	
	13C-PCB-114	98.1	10 - 145	
	13C-PCB-118	95.3	10 - 145	
	13C-PCB-123	97.7	10 - 145	
	13C-PCB-126	102	10 - 145	
	13C-PCB-127	99.7	10 - 145	
	13C-PCB-138	91.0	10 - 145	
	13C-PCB-141	92.1	10 - 145	
	13C-PCB-153	92.1	10 - 145	
	13C-PCB-155	72.3	10 - 145	
	13C-PCB-156	96.6	10 - 145	
	13C-PCB-157	94.4	10 - 145	
	13C-PCB-159	96.8	10 - 145	
	13C-PCB-167	95.8	10 - 145	
	13C-PCB-169	93.0	10 - 145	
	13C-PCB-170	80.9	10 - 145	
	13C-PCB-180	79.1	10 - 145	
	13C-PCB-188	78.7	10 - 145	
	13C-PCB-189	85.5	10 - 145	
	13C-PCB-194	90.4	10 - 145	
	13C-PCB-202	69.4	10 - 145	
	13C-PCB-206	93.7	10 - 145	
	13C-PCB-208	84.1	10 - 145	
	13C-PCB-209	99.0	10 - 145	
CRS	13C-PCB-79	92.5	10 - 145	
	13C-PCB-178	78.3	10 - 145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration

DL - Sample specifc estimated detection limit
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: OPR

EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BS1
Date Analyzed: 18-Mar-15 11:04 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits
PCB-1	4430	5000	88.7	60 - 135
PCB-3	4390	5000	87.7	60 - 135
PCB-4/10	21400	20000	107	60 - 135
PCB-15	10500	10000	105	60 - 135
PCB-19	5330	5000	107	60 - 135
PCB-37	5770	5000	115	60 - 135
PCB-54	5260	5000	105	60 - 135
PCB-77	5420	5000	108	60 - 135
PCB-81	5330	5000	107	60 - 135
PCB-104	5860	5000	117	60 - 135
PCB-105	5350	5000	107	60 - 135
PCB-106/118	11200	10000	112	60 - 135
PCB-114	5230	5000	105	60 - 135
PCB-123	5550	5000	111	60 - 135
PCB-126	5760	5000	115	60 - 135
PCB-155	5570	5000	111	60 - 135
PCB-156	5260	5000	105	60 - 135
PCB-157	5130	5000	103	60 - 135
PCB-167	5550	5000	111	60 - 135
PCB-169	5220	5000	104	60 - 135
PCB-188	5600	5000	112	60 - 135
PCB-189	5450	5000	109	60 - 135
PCB-202	5440	5000	109	60 - 135
PCB-205	5470	5000	109	60 - 135
PCB-206	5450	5000	109	60 - 135
PCB-208	5550	5000	111	60 - 135
PCB-209	5580	5000	112	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	71.4	15 - 145
IS	13C-PCB-3	77.6	15 - 145
IS	13C-PCB-4	68.7	15 - 145
IS	13C-PCB-11	79.4	15 - 145
IS	13C-PCB-9	73.6	15 - 145
IS	13C-PCB-19	76.1	15 - 145
IS	13C-PCB-28	94.1	15 - 145
IS	13C-PCB-32	79.5	15 - 145
IS	13C-PCB-37	108	15 - 145
IS	13C-PCB-47	80.7	15 - 145
IS	13C-PCB-52	80.1	15 - 145
IS	13C-PCB-54	70.9	15 - 145
IS	13C-PCB-70	90.3	15 - 145
IS	13C-PCB-77	96.2	40 - 145
IS	13C-PCB-80	89.5	40 - 145
IS	13C-PCB-81	94.8	40 - 145
IS	13C-PCB-95	87.3	40 - 145
IS	13C-PCB-97	92.8	40 - 145
IS	13C-PCB-101	90.5	40 - 145
IS	13C-PCB-104	81.3	40 - 145
IS	13C-PCB-105	104	40 - 145
IS	13C-PCB-114	102	40 - 145
IS	13C-PCB-118	97.8	40 - 145
IS	13C-PCB-123	98.1	40 - 145
IS	13C-PCB-126	107	40 - 145
IS	13C-PCB-127	103	40 - 145
IS	13C-PCB-138	94.3	40 - 145
IS	13C-PCB-141	93.8	40 - 145
IS	13C-PCB-153	96.8	40 - 145
IS	13C-PCB-155	73.4	40 - 145
IS	13C-PCB-156	104	40 - 145
IS	13C-PCB-157	103	40 - 145
IS	13C-PCB-159	99.5	40 - 145
IS	13C-PCB-167	95.5	40 - 145
IS	13C-PCB-169	108	40 - 145
IS	13C-PCB-170	88.5	40 - 145
IS	13C-PCB-180	84.6	40 - 145
IS	13C-PCB-188	82.0	40 - 145
IS	13C-PCB-189	93.0	40 - 145
IS	13C-PCB-194	91.0	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Solid
Sample Size: 2.00 g

QC Batch: B5C0059
Date Extracted: 12-Mar-2015 12:37

Lab Sample: B5C0059-BS1
Date Analyzed: 18-Mar-15 11:04 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	76.2	40 - 145
IS	13C-PCB-206	93.1	40 - 145
IS	13C-PCB-208	81.3	40 - 145
IS	13C-PCB-209	99.4	40 - 145
CRS	13C-PCB-79	92.9	40 - 145
CRS	13C-PCB-178	85.4	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-MH-9.66-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 9:02

Sample Data
Matrix: Sediment
Sample Size: 2.91 g
% Solids: 69.6

Laboratory Data
Lab Sample: 1400915-02 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 14:17 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	59.6	2.47			0.320	
PCB-2	13.1	2.47			0.240	
PCB-3	33.2	2.47			0.323	
PCB-4/10	83.3	4.94			1.14	
PCB-5/8	271	4.94			1.76	
PCB-6	48.4	2.47			1.00	
PCB-7/9	32.2	4.94			1.34	
PCB-11	613	2.47			3.48	
PCB-12/13	35.9	4.94			1.37	
PCB-14	ND	2.47	18.2		0.337	
PCB-15	509	2.47			0.634	
PCB-16/32	1570	4.94			0.430	
PCB-17	457	2.47			0.658	
PCB-18	1050	2.47			0.696	
PCB-19	182	2.47			0.612	
PCB-20/21/33	731	7.41			2.47	
PCB-22	491	2.47			0.964	
PCB-23	ND	2.47	7.00		0.543	
PCB-24/27	97.1	4.94			0.742	
PCB-25	90.3	2.47			0.768	
PCB-26	206	2.47			0.766	
PCB-28	2600	2.47			1.12	
PCB-29	ND	2.47		5.82	0.949	
PCB-30	ND	2.47	3.31		0.355	
PCB-31	1660	2.47			0.809	
PCB-34	14.8	2.47			1.57	
PCB-35	64.5	2.47			0.565	
PCB-36	19.5	2.47			0.406	
PCB-37	764	2.47			0.389	
PCB-38	324	2.47			0.528	
PCB-39	8.80	2.47			0.461	
PCB-40	1220	2.47			0.927	
PCB-41/64/71/72	14000	9.88			1.70	
PCB-42/59	7300	4.94			0.899	
PCB-43/49	35300	4.94			0.879	E
PCB-44	13600	2.47			0.745	E
PCB-45	665	2.47			0.402	
PCB-46	2190	2.47			0.537	
PCB-47	21000	2.47			2.19	E
PCB-48/75	1030	4.94			0.983	
PCB-50	27.5	2.47			0.603	
PCB-51	2640	2.47			0.789	
PCB-52/69	26300	4.94			0.722	E
PCB-53	6140	2.47			0.331	
PCB-54	67.3	2.47			0.275	
PCB-55	459	2.47			0.416	
PCB-56/60	3880	4.94			0.825	
PCB-57	55.8	2.47			0.354	
PCB-58	322	2.47			0.589	
PCB-61/70	22000	4.94			1.20	E
PCB-62	ND	2.47	12.9		0.597	
PCB-63	860	2.47			0.524	
PCB-65	ND	2.47	12.8		0.842	
PCB-66/76	24000	4.94			1.31	E
PCB-67	88.3	2.47			0.486	
PCB-68	961	2.47			0.658	
PCB-73	95.2	2.47			0.454	
PCB-74	3450	2.47			0.781	
PCB-77	1380	2.47			0.748	
PCB-78	ND	2.47	10.2		0.385	
PCB-79	802	2.47			0.633	
PCB-80	ND	2.47	10.0		0.336	
PCB-81	94.2	2.47			0.674	
PCB-82	4880	2.47			0.981	
PCB-83	ND	2.47	7.31		0.440	
PCB-84/92	31700	4.94			1.01	E
PCB-85/116	6820	4.94			1.64	
PCB-86	ND	2.47	13.2		1.79	
PCB-87/117/125	16500	7.41			0.880	
PCB-88/91	17000	4.94			1.25	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-9.66-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 9:02

Sample Data
Matrix: Sediment
Sample Size: 2.91 g
% Solids: 69.6

Laboratory Data
Lab Sample: 1400915-02 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 14:17 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	286	2.47			1.22	
PCB-90/101	77500	4.94			1.19	E
PCB-93	ND	2.47	12.9		2.53	
PCB-94	780	2.47			0.874	
PCB-95/98/102	54400	7.41			1.38	E
PCB-96	651	2.47			0.588	
PCB-97	16500	2.47			0.675	E
PCB-99	33000	2.47			0.474	E
PCB-100	922	2.47			0.511	
PCB-103	1230	2.47			0.428	
PCB-104	17.9	2.47			0.876	
PCB-105	12900	2.47			0.462	E
PCB-106/118	60000	4.94			0.728	E
PCB-107/109	5530	4.94			0.631	
PCB-108/112	4010	4.94			0.844	
PCB-110	84100	2.47			0.555	E
PCB-111/115	659	4.94			1.24	
PCB-113	132	2.47			0.495	
PCB-114	754	2.47			0.418	
PCB-119	3830	2.47			0.383	
PCB-120	564	2.47			0.622	
PCB-121	ND	2.47	6.71		0.978	
PCB-122	530	2.47			0.619	
PCB-123	631	2.47			0.494	
PCB-124	1990	2.47			0.813	
PCB-126	446	2.47			0.543	
PCB-127	ND	2.47	8.52		0.326	
PCB-128/162	14800	4.94			1.08	
PCB-129	4970	2.47			0.567	
PCB-130	6580	2.47			0.798	
PCB-131	ND	2.47	20.5		0.731	
PCB-132/161	31000	4.94			1.05	E
PCB-133/142	3440	4.94			1.04	
PCB-134/143	6740	4.94			1.05	
PCB-135	16200	2.47			1.47	E

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	15000	2.47			0.776	E
PCB-137	4630	2.47			0.541	
PCB-138/163/164	116000	7.41			0.809	B, E
PCB-139/149	113000	4.94			1.49	E
PCB-140	618	2.47			1.20	
PCB-141	25200	2.47			0.678	E
PCB-144	5940	2.47			1.38	
PCB-145	20.5	2.47			1.05	
PCB-146/165	15300	4.94			0.792	
PCB-147	2930	2.47			5.26	
PCB-148	120	2.47			1.45	
PCB-150	276	2.47			0.801	
PCB-151	33700	2.47			1.16	E
PCB-152	126	2.47			0.744	
PCB-153	106000	2.47			0.484	E
PCB-154	1470	2.47			0.837	
PCB-155	ND	2.47	9.62		0.767	
PCB-156	9300	2.47			0.534	
PCB-157	2080	2.47			0.485	
PCB-158/160	12300	4.94			0.915	
PCB-159	ND	2.47	14.5		0.578	
PCB-166	323	2.47			0.425	
PCB-167	4080	2.47			0.653	
PCB-168	190	2.47			0.502	
PCB-169	28.7	2.47			0.767	
PCB-170	40700	2.47			0.758	E
PCB-171	10100	2.47			0.372	E
PCB-172	5940	2.47			0.857	
PCB-173	1110	2.47			0.507	
PCB-174	45900	2.47			0.797	E
PCB-175	1740	2.47			0.679	
PCB-176	5290	2.47			0.729	
PCB-177	26900	2.47			0.404	E
PCB-178	8410	2.47			0.610	
PCB-179	19800	2.47			0.418	E

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-9.66-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 9:02

Sample Data
Matrix: Sediment
Sample Size: 2.91 g
% Solids: 69.6

Laboratory Data
Lab Sample: 1400915-02 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 14:17 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	104000	2.47			0.420	E
PCB-181	145	2.47			1.26	
PCB-182/187	46400	4.94			1.33	E
PCB-183	22700	2.47			0.638	E
PCB-184	25.6	2.47			0.597	
PCB-185	4300	2.47			0.557	
PCB-186	ND	2.47	15.1		0.421	
PCB-188	72.7	2.47			0.759	
PCB-189	1520	2.47			0.483	
PCB-190	8220	2.47			0.686	
PCB-191	1740	2.47			0.447	
PCB-192	ND	2.47	17.2		0.528	
PCB-193	5000	2.47			0.836	
PCB-194	24500	2.47			0.645	E
PCB-195	9710	2.47			0.722	
PCB-196/203	28900	4.94			0.983	E
PCB-197	957	2.47			0.794	
PCB-198	1130	2.47			0.792	
PCB-199	24400	2.47			0.615	E
PCB-200	3190	2.47			0.795	
PCB-201	3060	2.47			0.317	
PCB-202	4270	2.47			0.759	
PCB-204	ND	2.47	8.27		0.543	
PCB-205	1170	2.47			0.471	
PCB-206	7240	2.47			0.852	
PCB-207	893	2.47			0.402	
PCB-208	1610	2.47			0.441	
PCB-209	522	2.47			1.10	
Total monoCB	106	2.47				
Total diCB	1590	2.47				
Total triCB	10300	2.47				
Total tetraCB	190000	2.47				
Total pentaCB	438000	2.47				
Total hexaCB	553000	2.47				B
Total heptaCB	360000	2.47				
Total octaCB	101000	2.47				
Total nonaCB	9740	2.47				
DecaCB	522	2.47				B
Total PCB	1660000	2.47				B

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-9.66-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 9:02

Sample Data
Matrix: Sediment
Sample Size: 2.91 g
% Solids: 69.6

Laboratory Data
Lab Sample: 1400915-02 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 14:17 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	84.0	5 -145	
	13C-PCB-3	89.9	5 -145	
	13C-PCB-4	81.3	5 -145	
	13C-PCB-11	82.3	5 -145	
	13C-PCB-9	86.2	5 -145	
	13C-PCB-19	85.2	5 -145	
	13C-PCB-28	90.9	5 -145	
	13C-PCB-32	88.4	5 -145	
	13C-PCB-37	102	5 -145	
	13C-PCB-47	86.9	5 -145	
	13C-PCB-52	87.7	5 -145	
	13C-PCB-54	77.7	5 -145	
	13C-PCB-70	91.6	5 -145	
	13C-PCB-77	94.0	10 -145	
	13C-PCB-80	91.8	10 -145	
	13C-PCB-81	95.0	10 -145	
	13C-PCB-95	91.4	10 -145	
	13C-PCB-97	96.9	10 -145	
	13C-PCB-101	95.6	10 -145	
	13C-PCB-104	86.2	10 -145	
	13C-PCB-105	109	10 -145	
	13C-PCB-114	110	10 -145	
	13C-PCB-118	99.6	10 -145	
	13C-PCB-123	102	10 -145	
	13C-PCB-126	110	10 -145	
	13C-PCB-127	107	10 -145	
	13C-PCB-138	94.3	10 -145	
	13C-PCB-141	94.8	10 -145	
	13C-PCB-153	97.5	10 -145	
	13C-PCB-155	74.1	10 -145	
	13C-PCB-156	101	10 -145	
	13C-PCB-157	102	10 -145	
	13C-PCB-159	97.5	10 -145	
	13C-PCB-167	99.3	10 -145	
	13C-PCB-169	98.0	10 -145	
	13C-PCB-170	87.0	10 -145	
	13C-PCB-180	86.3	10 -145	
	13C-PCB-188	88.1	10 -145	
	13C-PCB-189	86.3	10 -145	
	13C-PCB-194	93.9	10 -145	
	13C-PCB-202	78.3	10 -145	
	13C-PCB-206	95.2	10 -145	
	13C-PCB-208	85.7	10 -145	
	13C-PCB-209	102	10 -145	
CRS	13C-PCB-79	96.7	10 -145	
	13C-PCB-178	90.4	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-OWS-15-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 10:33

Sample Data
Matrix: Sediment
Sample Size: 11.1 g
% Solids: 18.1

Laboratory Data
Lab Sample: 1400915-03 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 29-Mar-15 04:19 Column: ZB-1 Analyst: DMS
30-Mar-15 10:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	5070	49.8			0.320	D
PCB-2	759	49.8			0.240	D
PCB-3	2090	49.8			0.323	D
PCB-4/10	2030	99.5			1.14	D
PCB-5/8	4550	99.5			1.76	D
PCB-6	1230	49.8			1.00	D
PCB-7/9	2600	99.5			1.34	D
PCB-11	5870	49.8			3.48	D
PCB-12/13	903	99.5			1.37	D
PCB-14	ND	49.8	1060		0.337	D
PCB-15	1880	49.8			0.634	D
PCB-16/32	2180	99.5			0.430	D
PCB-17	1250	49.8			0.658	D
PCB-18	1960	49.8			0.696	D
PCB-19	559	49.8			0.612	D
PCB-20/21/33	1650	37.3			2.47	D
PCB-22	758	12.4			0.964	D
PCB-23	ND	12.4	47.7		0.543	D
PCB-24/27	ND	99.5		326	0.742	D
PCB-25	271	12.4			0.768	D
PCB-26	624	12.4			0.766	D
PCB-28	1270	12.4			1.12	D
PCB-29	ND	12.4	56.5		0.949	D
PCB-30	ND	49.8	98.1		0.355	D
PCB-31	2160	12.4			0.809	D
PCB-34	ND	12.4	53.7		1.57	D
PCB-35	366	12.4			0.565	D
PCB-36	152	12.4			0.406	D
PCB-37	1140	12.4			0.389	D
PCB-38	ND	12.4	76.9		0.528	D
PCB-39	ND	12.4	82.7		0.461	D
PCB-40	225	12.4			0.927	D
PCB-41/64/71/72	2430	49.8			1.70	D
PCB-42/59	1050	24.9			0.899	D
PCB-43/49	2940	24.9			0.879	D

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-44	4470	12.4			0.745	D
PCB-45	540	12.4			0.402	D
PCB-46	246	12.4			0.537	D
PCB-47	802	12.4			2.19	D
PCB-48/75	593	24.9			0.983	D
PCB-50	ND	12.4	35.2		0.603	D
PCB-51	167	12.4			0.789	D
PCB-52/69	6120	24.9			0.722	D
PCB-53	609	12.4			0.331	D
PCB-54	ND	12.4	28.1		0.275	D
PCB-55	170	12.4			0.416	D
PCB-56/60	2900	24.9			0.825	D
PCB-57	49.9	12.4			0.354	D
PCB-58	ND	12.4	52.3		0.589	D
PCB-61/70	8810	24.9			1.20	D
PCB-62	ND	12.4	40.0		0.597	D
PCB-63	278	12.4			0.524	D
PCB-65	ND	12.4	39.9		0.842	D
PCB-66/76	5500	24.9			1.31	D
PCB-67	229	12.4			0.486	D
PCB-68	ND	12.4		17.4	0.658	D
PCB-73	ND	12.4	36.2		0.454	D
PCB-74	2690	12.4			0.781	D
PCB-77	1050	12.4			0.748	D
PCB-78	ND	12.4	29.4		0.385	D
PCB-79	197	12.4			0.633	D
PCB-80	ND	12.4	27.4		0.336	D
PCB-81	72.5	12.4			0.674	D
PCB-82	2340	12.4			0.981	D
PCB-83	ND	12.4	58.8		0.440	D
PCB-84/92	7740	24.9			1.01	D
PCB-85/116	2490	24.9			1.64	D
PCB-86	70.2	12.4			1.79	D
PCB-87/117/125	5930	37.3			0.880	D
PCB-88/91	2460	24.9			1.25	D

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-OWS-15-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 10:33

Sample Data
Matrix: Sediment
Sample Size: 11.1 g
% Solids: 18.1

Laboratory Data
Lab Sample: 1400915-03 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 29-Mar-15 04:19 Column: ZB-1 Analyst: DMS
30-Mar-15 10:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	177	12.4			1.22	D
PCB-90/101	22400	24.9			1.19	D
PCB-93	ND	12.4	104		2.53	D
PCB-94	109	12.4			0.874	D
PCB-95/98/102	13900	37.3			1.38	D
PCB-96	ND	12.4	75.1		0.588	D
PCB-97	4910	12.4			0.675	D
PCB-99	5530	12.4			0.474	D
PCB-100	ND	12.4	91.2		0.511	D
PCB-103	103	12.4			0.428	D
PCB-104	ND	12.4	72.2		0.876	D
PCB-105	6830	12.4			0.462	D
PCB-106/118	16000	24.9			0.728	D
PCB-107/109	1080	24.9			0.631	D
PCB-108/112	779	24.9			0.844	D
PCB-110	21000	12.4			0.555	D
PCB-111/115	220	24.9			1.24	D
PCB-113	ND	12.4		1240	0.495	D
PCB-114	437	12.4			0.418	D
PCB-119	252	12.4			0.383	D
PCB-120	ND	12.4	53.3		0.622	D
PCB-121	ND	12.4	54.5		0.978	D
PCB-122	231	12.4			0.619	D
PCB-123	300	12.4			0.494	D
PCB-124	652	12.4			0.813	D
PCB-126	358	12.4			0.543	D
PCB-127	ND	12.4	236		0.326	D
PCB-128/162	5050	24.9			1.08	D
PCB-129	1580	12.4			0.567	D
PCB-130	2000	12.4			0.798	D
PCB-131	ND	12.4	88.5		0.731	D
PCB-132/161	8900	24.9			1.05	D
PCB-133/142	896	24.9			1.04	D
PCB-134/143	1530	24.9			1.05	D
PCB-135	2910	12.4			1.47	D

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	2660	12.4			0.776	D
PCB-137	1200	12.4			0.541	D
PCB-138/163/164	23300	37.3			0.809	B, D
PCB-139/149	21400	24.9			1.49	D
PCB-140	156	12.4			1.20	D
PCB-141	4820	12.4			0.678	D
PCB-144	1240	12.4			1.38	D
PCB-145	ND	12.4	44.5		1.05	D
PCB-146/165	3160	24.9			0.792	D
PCB-147	482	12.4			5.26	D
PCB-148	ND	12.4	71.8		1.45	D
PCB-150	ND	12.4	53.5		0.801	D
PCB-151	5070	12.4			1.16	D
PCB-152	36.1	12.4			0.744	D
PCB-153	18800	12.4			0.484	D
PCB-154	257	12.4			0.837	D
PCB-155	ND	12.4	48.0		0.767	D
PCB-156	2660	12.4			0.534	D
PCB-157	661	12.4			0.485	D
PCB-158/160	3060	24.9			0.915	D
PCB-159	ND	12.4	64.8		0.578	D
PCB-166	111	12.4			0.425	D
PCB-167	1140	12.4			0.653	D
PCB-168	ND	12.4	55.4		0.502	D
PCB-169	ND	12.4	69.4		0.767	D
PCB-170	7660	12.4			0.758	D
PCB-171	1740	12.4			0.372	D
PCB-172	1190	12.4			0.857	D
PCB-173	184	12.4			0.507	D
PCB-174	7270	12.4			0.797	D
PCB-175	313	12.4			0.679	D
PCB-176	908	12.4			0.729	D
PCB-177	4480	12.4			0.404	D
PCB-178	1600	12.4			0.610	D
PCB-179	3450	12.4			0.418	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-OWS-15-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 10:33

Sample Data
Matrix: Sediment
Sample Size: 11.1 g
% Solids: 18.1

Laboratory Data
Lab Sample: 1400915-03 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 29-Mar-15 04:19 Column: ZB-1 Analyst: DMS
30-Mar-15 10:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	20500	12.4			0.420	D
PCB-181	ND	12.4	44.2		1.26	D
PCB-182/187	9480	24.9			1.33	D
PCB-183	4260	12.4			0.638	D
PCB-184	ND	12.4	23.3		0.597	D
PCB-185	812	12.4			0.557	D
PCB-186	ND	12.4	26.1		0.421	D
PCB-188	24.4	12.4			0.759	D
PCB-189	338	12.4			0.483	D
PCB-190	1380	12.4			0.686	D
PCB-191	340	12.4			0.447	D
PCB-192	ND	12.4	35.0		0.528	D
PCB-193	874	12.4			0.836	D
PCB-194	4740	12.4			0.645	D
PCB-195	1740	12.4			0.722	D
PCB-196/203	6620	24.9			0.983	D
PCB-197	244	12.4			0.794	D
PCB-198	ND	12.4		189	0.792	D
PCB-199	5620	12.4			0.615	D
PCB-200	686	12.4			0.795	D
PCB-201	795	12.4			0.317	D
PCB-202	1330	12.4			0.759	D
PCB-204	ND	12.4	70.8		0.543	D
PCB-205	218	12.4			0.471	D
PCB-206	2660	12.4			0.852	D
PCB-207	608	12.4			0.402	D
PCB-208	858	12.4			0.441	D
PCB-209	6580	12.4			1.10	D
Total monoCB	7920	12.4				
Total diCB	19000	12.4				
Total triCB	14300	12.4		14700		
Total tetraCB	42100	12.4		42200		
Total pentaCB	116000	12.4		117000		
Total hexaCB	113000	12.4				B
Total heptaCB	66800	12.4				

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
Total octaCB	22000	12.4		22200		
Total nonaCB	4120	12.4				
DecaCB	6580	12.4				B
Total PCB	412000	12.4				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-OWS-15-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 10:33

Sample Data
Matrix: Sediment
Sample Size: 11.1 g
% Solids: 18.1

Laboratory Data
Lab Sample: 1400915-03 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 29-Mar-15 04:19 Column: ZB-1 Analyst: DMS
30-Mar-15 10:23 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	108	5 -145	D
	13C-PCB-3	108	5 -145	D
	13C-PCB-4	99.8	5 -145	D
	13C-PCB-11	85.4	5 -145	D
	13C-PCB-9	98.8	5 -145	D
	13C-PCB-19	94.6	5 -145	D
	13C-PCB-28	91.0	5 -145	D
	13C-PCB-32	83.5	5 -145	D
	13C-PCB-37	78.2	5 -145	D
	13C-PCB-47	85.4	5 -145	D
	13C-PCB-52	85.5	5 -145	D
	13C-PCB-54	87.9	5 -145	D
	13C-PCB-70	58.1	5 -145	D
	13C-PCB-77	85.8	10 -145	D
	13C-PCB-80	87.9	10 -145	D
	13C-PCB-81	88.2	10 -145	D
	13C-PCB-95	98.6	10 -145	D
	13C-PCB-97	102	10 -145	D
	13C-PCB-101	102	10 -145	D
	13C-PCB-104	90.1	10 -145	D
	13C-PCB-105	78.2	10 -145	D
	13C-PCB-114	86.0	10 -145	D
	13C-PCB-118	95.1	10 -145	D
	13C-PCB-123	99.4	10 -145	D
	13C-PCB-126	77.0	10 -145	D
	13C-PCB-127	76.7	10 -145	D
	13C-PCB-138	95.4	10 -145	D
	13C-PCB-141	87.8	10 -145	D
	13C-PCB-153	87.9	10 -145	D
	13C-PCB-155	79.8	10 -145	D
	13C-PCB-156	82.3	10 -145	D
	13C-PCB-157	80.0	10 -145	D
	13C-PCB-159	95.1	10 -145	D
	13C-PCB-167	84.4	10 -145	D
	13C-PCB-169	82.8	10 -145	D
	13C-PCB-170	77.8	10 -145	D
	13C-PCB-180	76.2	10 -145	D
	13C-PCB-188	85.3	10 -145	D
	13C-PCB-189	68.9	10 -145	D
	13C-PCB-194	93.7	10 -145	D
	13C-PCB-202	68.1	10 -145	D
	13C-PCB-206	120	10 -145	D
	13C-PCB-208	102	10 -145	D
	13C-PCB-209	131	10 -145	D
CRS	13C-PCB-79	92.5	10 -145	D
	13C-PCB-178	81.8	10 -145	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-10.9-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 15:13

Sample Data
Matrix: Sediment
Sample Size: 5.76 g
% Solids: 32.9

Laboratory Data
Lab Sample: 1400915-04 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 16:26 Column: ZB-1 Analyst: DMS
29-Mar-15 05:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	139	2.64			0.320	
PCB-2	132	2.64			0.240	
PCB-3	130	2.64			0.323	
PCB-4/10	304	5.28			1.14	
PCB-5/8	1050	5.28			1.76	
PCB-6	202	2.64			1.00	
PCB-7/9	110	5.28			1.34	
PCB-11	2790	2.64			3.48	
PCB-12/13	230	5.28			1.37	
PCB-14	ND	2.64	42.3		0.337	
PCB-15	1640	2.64			0.634	
PCB-16/32	1980	5.28			0.430	
PCB-17	843	2.64			0.658	
PCB-18	2720	2.64			0.696	
PCB-19	331	2.64			0.612	
PCB-20/21/33	2310	7.92			2.47	
PCB-22	1200	2.64			0.964	
PCB-23	ND	2.64	16.5		0.543	
PCB-24/27	249	5.28			0.742	
PCB-25	269	2.64			0.768	
PCB-26	770	2.64			0.766	
PCB-28	2700	2.64			1.12	
PCB-29	29.6	2.64			0.949	
PCB-30	ND	2.64	4.84		0.355	
PCB-31	3340	2.64			0.809	
PCB-34	23.0	2.64			1.57	
PCB-35	734	2.64			0.565	
PCB-36	104	2.64			0.406	
PCB-37	4070	2.64			0.389	
PCB-38	221	2.64			0.528	
PCB-39	62.5	2.64			0.461	
PCB-40	5010	2.64			0.927	
PCB-41/64/71/72	26100	10.6			1.70	
PCB-42/59	5470	5.28			0.899	
PCB-43/49	38000	5.28			0.879	E
PCB-44	61000	2.64			0.745	E
PCB-45	1580	2.64			0.402	
PCB-46	896	2.64			0.537	
PCB-47	7490	2.64			2.19	
PCB-48/75	1800	5.28			0.983	
PCB-50	28.3	2.64			0.603	
PCB-51	1040	2.64			0.789	
PCB-52/69	134000	5.28			0.722	E
PCB-53	3750	2.64			0.331	
PCB-54	67.6	2.64			0.275	
PCB-55	1930	2.64			0.416	
PCB-56/60	18900	5.28			0.825	
PCB-57	182	2.64			0.354	
PCB-58	210	2.64			0.589	
PCB-61/70	122000	5.28			1.20	E
PCB-62	ND	2.64	10.7		0.597	
PCB-63	1410	2.64			0.524	
PCB-65	ND	2.64	10.6		0.842	
PCB-66/76	39900	5.28			1.31	E
PCB-67	894	2.64			0.486	
PCB-68	216	2.64			0.658	
PCB-73	ND	2.64	9.07		0.454	
PCB-74	17500	2.64			0.781	E
PCB-77	30500	2.64			0.748	E
PCB-78	ND	2.64	10.2		0.385	
PCB-79	4210	2.64			0.633	
PCB-80	ND	2.64	7.21		0.336	
PCB-81	8310	2.64			0.674	
PCB-82	68300	2.64			0.981	E
PCB-83	ND	2.64	28.1		0.440	
PCB-84/92	207000	5.28			1.01	E
PCB-85/116	68700	5.28			1.64	E
PCB-86	ND	2.64	50.6		1.79	
PCB-87/117/125	187000	7.92			0.880	E
PCB-88/91	53200	5.28			1.25	E

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-10.9-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 15:13

Sample Data
Matrix: Sediment
Sample Size: 5.76 g
% Solids: 32.9

Laboratory Data
Lab Sample: 1400915-04 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 16:26 Column: ZB-1 Analyst: DMS
29-Mar-15 05:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	2340	2.64			1.22	
PCB-90/101	581000	5.28			1.19	E
PCB-93	ND	2.64	41.0		2.53	
PCB-94	1500	2.64			0.874	
PCB-95/98/102	382000	7.92			1.38	E
PCB-96	1010	2.64			0.588	
PCB-97	149000	2.64			0.675	E
PCB-99	154000	2.64			0.474	E
PCB-100	997	2.64			0.511	
PCB-103	2440	2.64			0.428	
PCB-104	ND	2.64		64.1	0.876	
PCB-105	216000	2.64			0.462	E
PCB-106/118	546000	5.28			0.728	E
PCB-107/109	32000	5.28			0.631	E
PCB-108/112	22900	5.28			0.844	E
PCB-110	581000	2.64			0.555	E
PCB-111/115	6370	5.28			1.24	
PCB-113	1900	2.64			0.495	
PCB-114	10300	2.64			0.418	
PCB-119	7740	2.64			0.383	
PCB-120	1600	2.64			0.622	
PCB-121	ND	2.64	21.4		0.978	
PCB-122	6570	2.64			0.619	
PCB-123	8250	2.64			0.494	
PCB-124	24900	2.64			0.813	E
PCB-126	13500	2.64			0.543	E
PCB-127	ND	2.64	390		0.326	
PCB-128/162	167000	5.28			1.08	E
PCB-129	56900	2.64			0.567	E
PCB-130	61200	2.64			0.798	E
PCB-131	ND	2.64	417		0.731	
PCB-132/161	294000	5.28			1.05	E
PCB-133/142	30700	5.28			1.04	E
PCB-134/143	55100	5.28			1.05	E
PCB-135	95600	2.64			1.47	E

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	87700	2.64			0.776	E
PCB-137	37900	2.64			0.541	E
PCB-138/163/164	979000	7.92			0.809	B, E
PCB-139/149	605000	5.28			1.49	E
PCB-140	2280	2.64			1.20	
PCB-141	212000	2.64			0.678	E
PCB-144	38300	2.64			1.38	E
PCB-145	164	2.64			1.05	
PCB-146/165	119000	5.28			0.792	E
PCB-147	8700	2.64			5.26	
PCB-148	353	2.64			1.45	
PCB-150	779	2.64			0.801	
PCB-151	188000	2.64			1.16	E
PCB-152	477	2.64			0.744	
PCB-153	802000	2.64			0.484	E
PCB-154	5510	2.64			0.837	
PCB-155	29.5	2.64			0.767	
PCB-156	107000	2.64			0.534	E
PCB-157	24700	2.64			0.485	E
PCB-158/160	113000	5.28			0.915	E
PCB-159	ND	2.64	375		0.578	
PCB-166	3480	2.64			0.425	
PCB-167	41300	2.64			0.653	E
PCB-168	762	2.64			0.502	
PCB-169	314	2.64			0.767	
PCB-170	242000	13.2			0.758	E, D
PCB-171	70100	13.2			0.372	E, D
PCB-172	41200	13.2			0.857	D
PCB-173	6550	13.2			0.507	D
PCB-174	329000	13.2			0.797	E, D
PCB-175	11600	13.2			0.679	D
PCB-176	35500	13.2			0.729	D
PCB-177	188000	13.2			0.404	E, D
PCB-178	59200	13.2			0.610	E, D
PCB-179	138000	13.2			0.418	E, D

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-10.9-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 15:13

Sample Data
Matrix: Sediment
Sample Size: 5.76 g
% Solids: 32.9

Laboratory Data
Lab Sample: 1400915-04 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 16:26 Column: ZB-1 Analyst: DMS
29-Mar-15 05:23 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	729000	13.2			0.420	E, D
PCB-181	1070	13.2			1.26	D
PCB-182/187	342000	26.4			1.33	E, D
PCB-183	159000	13.2			0.638	E, D
PCB-184	227	13.2			0.597	D
PCB-185	32800	13.2			0.557	D
PCB-186	33.1	13.2			0.421	D
PCB-188	507	13.2			0.759	D
PCB-189	10300	13.2			0.483	D
PCB-190	48600	13.2			0.686	D
PCB-191	11400	13.2			0.447	D
PCB-192	ND	13.2	101		0.528	D
PCB-193	32700	13.2			0.836	D
PCB-194	191000	2.64			0.645	E
PCB-195	70100	2.64			0.722	E
PCB-196/203	212000	5.28			0.983	E
PCB-197	7730	2.64			0.794	
PCB-198	13500	2.64			0.792	E
PCB-199	189000	2.64			0.615	E
PCB-200	25700	2.64			0.795	E
PCB-201	29300	2.64			0.317	E
PCB-202	52100	2.64			0.759	E
PCB-204	102	2.64			0.543	
PCB-205	8810	2.64			0.471	
PCB-206	146000	2.64			0.852	E
PCB-207	13600	2.64			0.402	E
PCB-208	39900	2.64			0.441	E
PCB-209	16700	2.64			1.10	E
Total monoCB	401	2.64				
Total diCB	6330	2.64				
Total triCB	22000	2.64				
Total tetraCB	532000	2.64				
Total pentaCB	3340000	2.64				
Total hexaCB	4140000	2.64				B
Total heptaCB	2490000	2.64				
Total octaCB	799000	2.64				
Total nonaCB	199000	2.64				
DecaCB	16700	2.64				B
Total PCB	11500000	2.64				B

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-10.9-20141203-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 03-Dec-2014 15:13

Sample Data
Matrix: Sediment
Sample Size: 5.76 g
% Solids: 32.9

Laboratory Data
Lab Sample: 1400915-04 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 18-Mar-15 16:26 Column: ZB-1 Analyst: DMS
29-Mar-15 05:23 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	96.4	5 -145	
	13C-PCB-3	98.9	5 -145	
	13C-PCB-4	93.5	5 -145	
	13C-PCB-11	85.1	5 -145	
	13C-PCB-9	90.4	5 -145	
	13C-PCB-19	80.7	5 -145	
	13C-PCB-28	104	5 -145	
	13C-PCB-32	85.9	5 -145	
	13C-PCB-37	104	5 -145	
	13C-PCB-47	92.8	5 -145	
	13C-PCB-52	93.0	5 -145	
	13C-PCB-54	85.2	5 -145	
	13C-PCB-70	98.6	5 -145	
	13C-PCB-77	77.0	10 -145	
	13C-PCB-80	102	10 -145	
	13C-PCB-81	76.5	10 -145	
	13C-PCB-95	116	10 -145	
	13C-PCB-97	103	10 -145	
	13C-PCB-101	110	10 -145	
	13C-PCB-104	110	10 -145	
	13C-PCB-105	112	10 -145	
	13C-PCB-114	132	10 -145	
	13C-PCB-118	78.7	10 -145	
	13C-PCB-123	92.3	10 -145	
	13C-PCB-126	98.7	10 -145	
	13C-PCB-127	114	10 -145	
	13C-PCB-138	99.3	10 -145	
	13C-PCB-141	108	10 -145	
	13C-PCB-153	111	10 -145	
	13C-PCB-155	94.2	10 -145	
	13C-PCB-156	87.2	10 -145	
	13C-PCB-157	88.1	10 -145	
	13C-PCB-159	91.0	10 -145	
	13C-PCB-167	91.8	10 -145	
	13C-PCB-169	71.7	10 -145	
	13C-PCB-170	86.3	10 -145	D
	13C-PCB-180	84.7	10 -145	D
	13C-PCB-188	92.3	10 -145	D
	13C-PCB-189	72.8	10 -145	D
	13C-PCB-194	94.1	10 -145	
	13C-PCB-202	82.1	10 -145	
	13C-PCB-206	84.5	10 -145	
	13C-PCB-208	92.9	10 -145	
	13C-PCB-209	114	10 -145	
CRS	13C-PCB-79	88.5	10 -145	
	13C-PCB-178	91.0	10 -145	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-13.43-20141202-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 02-Dec-2014 15:07

Sample Data
Matrix: Sediment
Sample Size: 5.35 g
% Solids: 36.6

Laboratory Data
Lab Sample: 1400915-05 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 19-Mar-15 14:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	170	12.8			0.320	D
PCB-2	116	12.8			0.240	D
PCB-3	139	12.8			0.323	D
PCB-4/10	174	25.5			1.14	D
PCB-5/8	667	25.5			1.76	D
PCB-6	146	12.8			1.00	D
PCB-7/9	ND	25.5	167		1.34	D
PCB-11	1800	12.8			3.48	D
PCB-12/13	112	25.5			1.37	D
PCB-14	ND	12.8	215		0.337	D
PCB-15	727	12.8			0.634	D
PCB-16/32	1150	25.5			0.430	D
PCB-17	530	12.8			0.658	D
PCB-18	656	12.8			0.696	D
PCB-19	ND	12.8		211	0.612	D
PCB-20/21/33	998	38.3			2.47	D
PCB-22	545	12.8			0.964	D
PCB-23	ND	12.8	31.8		0.543	D
PCB-24/27	186	25.5			0.742	D
PCB-25	ND	12.8		157	0.768	D
PCB-26	423	12.8			0.766	D
PCB-28	1100	12.8			1.12	D
PCB-29	ND	12.8	37.7		0.949	D
PCB-30	ND	12.8	25.5		0.355	D
PCB-31	1710	12.8			0.809	D
PCB-34	ND	12.8	35.8		1.57	D
PCB-35	167	12.8			0.565	D
PCB-36	ND	12.8	47.0		0.406	D
PCB-37	985	12.8			0.389	D
PCB-38	ND	12.8	44.8		0.528	D
PCB-39	ND	12.8	48.2		0.461	D
PCB-40	412	12.8			0.927	D
PCB-41/64/71/72	7100	51.1			1.70	D
PCB-42/59	1220	25.5			0.899	D
PCB-43/49	4170	25.5			0.879	D

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-44	7070	12.8			0.745	D
PCB-45	662	12.8			0.402	D
PCB-46	316	12.8			0.537	D
PCB-47	993	12.8			2.19	D
PCB-48/75	500	25.5			0.983	D
PCB-50	ND	12.8	56.4		0.603	D
PCB-51	229	12.8			0.789	D
PCB-52/69	12900	25.5			0.722	D
PCB-53	778	12.8			0.331	D
PCB-54	ND	12.8		18.3	0.275	D
PCB-55	228	12.8			0.416	D
PCB-56/60	3050	25.5			0.825	D
PCB-57	ND	12.8		27.8	0.354	D
PCB-58	ND	12.8		14.9	0.589	D
PCB-61/70	10700	25.5			1.20	D
PCB-62	ND	12.8	53.6		0.597	D
PCB-63	185	12.8			0.524	D
PCB-65	ND	12.8	53.4		0.842	D
PCB-66/76	4580	25.5			1.31	D
PCB-67	118	12.8			0.486	D
PCB-68	23.3	12.8			0.658	D
PCB-73	ND	12.8	49.4		0.454	D
PCB-74	2300	12.8			0.781	D
PCB-77	1260	12.8			0.748	D
PCB-78	ND	12.8	37.1		0.385	D
PCB-79	325	12.8			0.633	D
PCB-80	ND	12.8	34.8		0.336	D
PCB-81	92.9	12.8			0.674	D
PCB-82	5180	12.8			0.981	D
PCB-83	ND	12.8	54.1		0.440	D
PCB-84/92	18400	25.5			1.01	D
PCB-85/116	5860	25.5			1.64	D
PCB-86	120	12.8			1.79	D
PCB-87/117/125	14900	38.3			0.880	D
PCB-88/91	5290	25.5			1.25	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-13.43-20141202-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 02-Dec-2014 15:07

Sample Data
Matrix: Sediment
Sample Size: 5.35 g
% Solids: 36.6

Laboratory Data
Lab Sample: 1400915-05 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 19-Mar-15 14:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	361	12.8			1.22	D
PCB-90/101	46200	25.5			1.19	D
PCB-93	ND	12.8	96.7		2.53	D
PCB-94	178	12.8			0.874	D
PCB-95/98/102	36900	38.3			1.38	D
PCB-96	109	12.8			0.588	D
PCB-97	12100	12.8			0.675	D
PCB-99	12800	12.8			0.474	D
PCB-100	76.0	12.8			0.511	D
PCB-103	163	12.8			0.428	D
PCB-104	ND	12.8	56.8		0.876	D
PCB-105	13900	12.8			0.462	D
PCB-106/118	36400	25.5			0.728	D
PCB-107/109	2440	25.5			0.631	D
PCB-108/112	1860	25.5			0.844	D
PCB-110	51000	12.8			0.555	D
PCB-111/115	655	25.5			1.24	D
PCB-113	ND	12.8	51.0		0.495	D
PCB-114	743	12.8			0.418	D
PCB-119	549	12.8			0.383	D
PCB-120	192	12.8			0.622	D
PCB-121	ND	12.8	50.4		0.978	D
PCB-122	516	12.8			0.619	D
PCB-123	635	12.8			0.494	D
PCB-124	1750	12.8			0.813	D
PCB-126	504	12.8			0.543	D
PCB-127	ND	12.8	85.2		0.326	D
PCB-128/162	10400	25.5			1.08	D
PCB-129	3650	12.8			0.567	D
PCB-130	4420	12.8			0.798	D
PCB-131	ND	12.8	86.2		0.731	D
PCB-132/161	20100	25.5			1.05	D
PCB-133/142	2160	25.5			1.04	D
PCB-134/143	3890	25.5			1.05	D
PCB-135	9150	12.8			1.47	D

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	8420	12.8			0.776	D
PCB-137	3130	12.8			0.541	D
PCB-138/163/164	67700	38.3			0.809	B, D
PCB-139/149	64600	25.5			1.49	D
PCB-140	371	12.8			1.20	D
PCB-141	14700	12.8			0.678	D
PCB-144	3940	12.8			1.38	D
PCB-145	ND	12.8	61.5		1.05	D
PCB-146/165	8180	25.5			0.792	D
PCB-147	1190	12.8			5.26	D
PCB-148	ND	12.8	99.3		1.45	D
PCB-150	80.9	12.8			0.801	D
PCB-151	18800	12.8			1.16	D
PCB-152	75.1	12.8			0.744	D
PCB-153	57200	12.8			0.484	E, D
PCB-154	506	12.8			0.837	D
PCB-155	ND	12.8	66.4		0.767	D
PCB-156	6750	12.8			0.534	D
PCB-157	1470	12.8			0.485	D
PCB-158/160	8220	25.5			0.915	D
PCB-159	ND	12.8	71.9		0.578	D
PCB-166	239	12.8			0.425	D
PCB-167	2670	12.8			0.653	D
PCB-168	85.5	12.8			0.502	D
PCB-169	55.4	12.8			0.767	D
PCB-170	20600	12.8			0.758	D
PCB-171	5200	12.8			0.372	D
PCB-172	3190	12.8			0.857	D
PCB-173	597	12.8			0.507	D
PCB-174	24000	12.8			0.797	D
PCB-175	878	12.8			0.679	D
PCB-176	2670	12.8			0.729	D
PCB-177	14000	12.8			0.404	D
PCB-178	4090	12.8			0.610	D
PCB-179	9640	12.8			0.418	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-13.43-20141202-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 02-Dec-2014 15:07

Sample Data
Matrix: Sediment
Sample Size: 5.35 g
% Solids: 36.6

Laboratory Data
Lab Sample: 1400915-05 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 19-Mar-15 14:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	55900	12.8			0.420	E, D
PCB-181	76.5	12.8			1.26	D
PCB-182/187	22300	25.5			1.33	D
PCB-183	11200	12.8			0.638	D
PCB-184	ND	12.8	19.8		0.597	D
PCB-185	2300	12.8			0.557	D
PCB-186	ND	12.8	22.2		0.421	D
PCB-188	43.7	12.8			0.759	D
PCB-189	783	12.8			0.483	D
PCB-190	4000	12.8			0.686	D
PCB-191	907	12.8			0.447	D
PCB-192	ND	12.8	28.7		0.528	D
PCB-193	2540	12.8			0.836	D
PCB-194	11800	12.8			0.645	D
PCB-195	4160	12.8			0.722	D
PCB-196/203	13400	25.5			0.983	D
PCB-197	453	12.8			0.794	D
PCB-198	517	12.8			0.792	D
PCB-199	11400	12.8			0.615	D
PCB-200	1550	12.8			0.795	D
PCB-201	1550	12.8			0.317	D
PCB-202	2360	12.8			0.759	D
PCB-204	ND	12.8	44.7		0.543	D
PCB-205	558	12.8			0.471	D
PCB-206	4020	12.8			0.852	D
PCB-207	526	12.8			0.402	D
PCB-208	941	12.8			0.441	D
PCB-209	461	12.8			1.10	D
Total monoCB	426	12.8				
Total diCB	3620	12.8				
Total triCB	8450	12.8		8820		
Total tetraCB	59200	12.8		59300		
Total pentaCB	270000	12.8				
Total hexaCB	322000	12.8				B
Total heptaCB	185000	12.8				
Total octaCB	47800	12.8				
Total nonaCB	5490	12.8				
DecaCB	461	12.8				B
Total PCB	902000	12.8				B

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
The results are reported in dry weight. The sample size is reported in wet weight.

Sample ID: BD-MH-13.43-20141202-S

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 02-Dec-2014 15:07

Sample Data
Matrix: Sediment
Sample Size: 5.35 g
% Solids: 36.6

Laboratory Data
Lab Sample: 1400915-05 Date Received: 04-Dec-2014 9:03
QC Batch: B5C0059 Date Extracted: 12-Mar-2015 12:37
Date Analyzed : 19-Mar-15 14:56 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	103	5 -145	D
	13C-PCB-3	97.3	5 -145	D
	13C-PCB-4	89.5	5 -145	D
	13C-PCB-11	93.8	5 -145	D
	13C-PCB-9	91.1	5 -145	D
	13C-PCB-19	81.4	5 -145	D
	13C-PCB-28	81.6	5 -145	D
	13C-PCB-32	86.4	5 -145	D
	13C-PCB-37	91.6	5 -145	D
	13C-PCB-47	82.3	5 -145	D
	13C-PCB-52	82.7	5 -145	D
	13C-PCB-54	73.4	5 -145	D
	13C-PCB-70	87.8	5 -145	D
	13C-PCB-77	88.8	10 -145	D
	13C-PCB-80	87.6	10 -145	D
	13C-PCB-81	89.5	10 -145	D
	13C-PCB-95	83.3	10 -145	D
	13C-PCB-97	95.1	10 -145	D
	13C-PCB-101	89.2	10 -145	D
	13C-PCB-104	84.6	10 -145	D
	13C-PCB-105	100	10 -145	D
	13C-PCB-114	98.5	10 -145	D
	13C-PCB-118	94.3	10 -145	D
	13C-PCB-123	93.7	10 -145	D
	13C-PCB-126	94.0	10 -145	D
	13C-PCB-127	98.4	10 -145	D
	13C-PCB-138	88.3	10 -145	D
	13C-PCB-141	88.8	10 -145	D
	13C-PCB-153	92.2	10 -145	D
	13C-PCB-155	66.3	10 -145	D
	13C-PCB-156	88.5	10 -145	D
	13C-PCB-157	87.3	10 -145	D
	13C-PCB-159	87.3	10 -145	D
	13C-PCB-167	87.8	10 -145	D
	13C-PCB-169	83.4	10 -145	D
	13C-PCB-170	74.5	10 -145	D
	13C-PCB-180	73.1	10 -145	D
	13C-PCB-188	83.0	10 -145	D
	13C-PCB-189	71.9	10 -145	D
	13C-PCB-194	87.2	10 -145	D
	13C-PCB-202	72.0	10 -145	D
	13C-PCB-206	93.5	10 -145	D
	13C-PCB-208	85.9	10 -145	D
	13C-PCB-209	94.4	10 -145	D
CRS	13C-PCB-79	90.4	10 -145	D
	13C-PCB-178	79.7	10 -145	D

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Laboratory Project ID: 1400915

Storage Secured: Yes ☑ No ☐

Storage ID: WR-2 Temp: 0.7 °C

TAT: (Check One):
Standard: ○ 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.: 1400647 P.O.#: PO10163569 Sampler: Melissa Ivankevich (Name)

CW 12/3/14 Christine

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N Creek Pkwy City: Bothell State: WA Zip: 98011 Ph#: 206.300.2144 Fax#:

Relinquished by: (Signature and Printed Name) Corey Wilson Date: 12/3/14 Time: 1752 Received by: (Signature and Printed Name) Bethany B. Benedict Date: 12/04/14 Time: 0906

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: Sample Receiving

Method of Shipment: Overnight

Tracking No.: 8064 5979 2497

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29
BD-OWS-02-20141203-W	12/3/14	1356	0:1 Water Separator	4	A	AQ		✓								✓	✓				
BD-MH-9.66-20141203-S	12/3/14	0902	Manhole	1	G	SD		✓								✓	✓				
BD-OWS-15-20141203-S	12/3/14	1033	0:1 Water Separator	1	G	SD		✓								✓	✓				
BD-MH-10.9-20141203-S	12/3/14	1513	Manhole	1	G	SD		✓								✓	✓				
BD-MH-13.43-20141202-S	12/2/14	1507	Manhole	1	G	SD		✓								✓	✓				

12/3/14

Special Instructions/Comments: For Sample MH-10.9 Analyze Congeners 1st.

SEND DOCUMENTATION AND RESULTS TO:

Name: Christine Nancarrow
Company: SAME AS ABOVE
Address:
City: State: Zip:
Phone: Fax:
Email:

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other

*Bottle Preservative Type: T = Thiosulfate,
O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, AQ = Aqueous, O = Other

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400915 **TAT** Std

Samples Arrival:	**Date/Time** 12/04/14 0903	**Initials:** VBLB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/04/14 1610	**Initials:** VBLB	**Location:** WR-2 **Shelf/Rack:** A3

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 0.7 (uncorrected)	**Time:** 0905	**Thermometer ID:** IR-1
Temp °C: 0.7 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 8064 5979 2437	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	(Vista)	Client	Retain	Return	Dispose

Comments:

BD-OWS-02-20141203-W AQ A, B, C, D Containers

Soil container for BD-MH-10.9-20141203-S in 120ml jar ~~covered~~ Covered VBLB 12/5/14 in foil.

Sample Login 11/2013 ckt

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400915

RX

Prep Expiration: 12/02/2015
Client: Leidos

30-March
Workorder Due: ~~25-Dec-14 00:00~~

TAT: 21

Method: **1668C Full List**
Matrix: **Solid**
Client Matrix: Sediment
Also run: **Percent Solids**

Prep Batch: BSC0059

Prep Data Entered: 3/17/15 es
Date and Initials

Initial Sequence: S5C00 H3E

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400915-02 A	☑	BD-MH-9.66-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-03 A	☑	BD-OWS-15-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-04 A	☑	BD-MH-10.9-20141203-S	04-Dec-14 09:03	WR-2 A-3	
1400915-05 A	☑	BD-MH-13.43-20141202-S	04-Dec-14 09:03	WR-2 A-3	

2g, 2x spike, 200µL FV

Vista PM:Martha Maier

Vial Box ID: Soup

Sample Reconciled By: KBridgeman 3,12,15

Solids estimate

Batch: B4L0054

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1400915-02	Percent Solids	69.57		2.00	2.87
1400915-03	Percent Solids	18.06		2.00	11.08
1400915-04	Percent Solids	32.89		2.00	6.08
1400915-05	Percent Solids	36.59		2.00	5.47

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0054

Analyst: CVG **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN:	Date/Time OUT
12/8/14 12:55	12/10/14 8:15

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	CG 12/8/14	CB 12/10/14			N/A			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400915-02		Sample	1.2800	12.7500	9.2600	7.9800	69.57	N/A	N/A	N/A	N/A
	1400915-03		Sample	1.3100	11.3900	3.1300	1.8200	18.06	N/A	N/A	N/A	N/A
	1400915-04		Sample	1.3000	14.1300	5.5200	4.2200	32.89	N/A	N/A	N/A	N/A
	1400915-05		Sample	1.3200	22.6400	9.1200	7.8000	36.59	N/A	N/A	N/A	N/A

Matrix: Solid

Method: 1668C Full List

PREPARATION BENCH SHEET

B5C0059

Prepared using: HRMS - Soxhlet

Chemist: A. Clarke

Prep Date/Time: 12-Mar-15 12:37

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE (C5C0069)	ABSG CHEM/ DATE (C5C0070)	AA CHEM/ DATE (N/A)	Florisil CHEM/ DATE (N/A)	RS CHEM/WIT DATE
☐	B5C0059-BLK1	2.00	(2.00)	AC/KB 3/12/15	ES BMS 3/17/15	ES 3/17/15	ES 3/17/15	N/A	N/A	ES KB 3/17/15
☐	B5C0059-BS1	2.00	↓	↓	↓	↓	↓	↓	↓	↓
☐	1400915-02RE1 (C)	2.87	2.91							
☐	1400915-03RE1 (A)(C)	11.08	11.13							
☐	1400915-04RE1 (C)	6.08	5.76							
☐	1400915-05RE1 (C)	5.47	5.35							
☐	1400948-01RE1 (C)(B)	7.39	7.85							
☐	1400948-02RE1 (C)(B)	3.69	3.49							
☐	1400948-03RE1 (C)(B)	4.80	4.57	↓	↓	↓	↓	↓	↓	↓

(A) Crystals present at final volume ES 3/17/15
(B) Precipitate present at FV. ES 3/17/15
(C) 1:20 Dilutions made per request. ES 3/17/15

2X 2X 2X 2X

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date: KB 3/12/15
PCDD/F (V1)	PCDD/F (V2)	PCDD/F (V1)	PCDD/F (V1)	Start Date/Time 3/12/15 16:00	SOLV: Tol	Check In: Chemist/Date: ↓
PCB 14D2901, 20µL	PCB 14F1301, 20µL	PCB 14D2903, 20µL	PCB 14D2904, 20µL		Other N/A	
PAH	PAH	PAH	PAH	Stop Date/Time 3/13/15 8:00	Final Volume(s) 200µL Cg	Balance ID: HRMS-2

Comments:

SAMPLE DATA

EPA Method 1668C

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1
Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n NotF	1.19	*		3730	2.5	10.8	*	0.996	1.006
Mono	PCB-2	*	*	n NotF	1.18	*		3730	2.5	8.86	*	0.984	0.994
Mono	PCB-3	*	*	n NotF	1.43	*		3730	2.5	7.36	*	0.996	1.006
Di	PCB-4/10	*	*	n NotF	1.57	*		18000	2.5	34.6	*	0.997	1.007
Di	PCB-7/9	*	*	n NotF	1.21	*		18000	2.5	38.4	*	0.866	0.874
Di	PCB-6	*	*	n NotF	1.30	*		18000	2.5	35.6	*	0.890	0.899
Di	PCB-5/8	*	*	n NotF	1.15	*		18000	2.5	40.4	*	0.907	0.917
Di	PCB-14	*	*	n NotF	1.11	*		18000	2.5	37.5	*	0.949	0.959
Di	PCB-11	*	*	n NotF	1.09	*		18000	2.5	38.3	*	0.995	1.005
Di	PCB-12/13	*	*	n NotF	1.19	*		18000	2.5	34.9	*	1.011	1.021
Di	PCB-15	*	*	n NotF	1.28	*		18000	2.5	32.5	*	1.023	1.033
Tri	PCB-19	*	*	n NotF	1.04	*		2400	2.5	5.52	*	0.996	1.006
Tri	PCB-30	*	*	n NotF	1.71	*		2400	2.5	3.36	*	1.032	1.042
Tri	PCB-18	*	*	n NotF	0.78	*		2400	2.5	4.79	*	0.949	0.959
Tri	PCB-17	*	*	n NotF	0.92	*		2400	2.5	4.06	*	0.956	0.966
Tri	PCB-24/27	*	*	n NotF	1.19	*		2400	2.5	3.15	*	0.977	0.987
Tri	PCB-16/32	*	*	n NotF	0.94	*		2400	2.5	3.98	*	0.995	1.005
Tri	PCB-34	*	*	n NotF	1.14	*		2380	2.5	3.37	*	0.955	0.965
Tri	PCB-23	*	*	n NotF	1.28	*		2380	2.5	2.99	*	0.959	0.969
Tri	PCB-29	*	*	n NotF	1.08	*		2380	2.5	3.55	*	0.967	0.977
Tri	PCB-26	*	*	n NotF	1.21	*		2380	2.5	3.17	*	0.974	0.984
Tri	PCB-25	*	*	n NotF	1.26	*		2380	2.5	3.04	*	0.979	0.989
Tri	PCB-31	*	*	n NotF	1.28	*		2380	2.5	2.98	*	0.992	1.002
Tri	PCB-28	*	*	n NotF	1.71	*		2380	2.5	2.24	*	0.995	1.005
Tri	PCB-20/21/33	*	*	n NotF	1.08	*		2380	2.5	3.54	*	1.017	1.027
Tri	PCB-22	*	*	n NotF	1.21	*		2380	2.5	3.17	*	1.032	1.042
Tri	PCB-36	*	*	n NotF	1.14	*		2380	2.5	3.39	*	0.928	0.938
Tri	PCB-39	*	*	n NotF	1.12	*		2380	2.5	3.47	*	0.943	0.953
Tri	PCB-38	*	*	n NotF	1.20	*		2380	2.5	3.23	*	0.966	0.976
Tri	PCB-35	*	*	n NotF	1.23	*		2380	2.5	3.14	*	0.982	0.992
Tri	PCB-37	*	*	n NotF	1.23	*		2380	2.5	3.15	*	0.995	1.005
Tetra	PCB-54	*	*	n NotF	1.10	*		2160	2.5	3.73	*	0.996	1.006
Tetra	PCB-50	*	*	n NotF	0.88	*		2160	2.5	4.67	*	1.037	1.047
Tetra	PCB-53	*	*	n NotF	1.06	*		2160	2.5	4.20	*	0.942	0.952
Tetra	PCB-51	*	*	n NotF	0.99	*		2160	2.5	4.51	*	0.952	0.962
Tetra	PCB-45	*	*	n NotF	0.86	*		2160	2.5	5.17	*	0.966	0.976
Tetra	PCB-46	*	*	n NotF	0.85	*		2160	2.5	5.29	*	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/26/15

Reviewed by: [signature] Date: 3/27/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1
Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	*	n	NotF	1.28	*		2160	2.5	3.49	*	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.35	*		2160	2.5	3.30	*	1.000	1.010
Tetra	PCB-43/49	*	*	n	NotF	0.99	*		2160	2.5	4.49	*	1.005	1.015
Tetra	PCB-47	*	*	n	NotF	1.06	*		2160	2.5	4.05	*	0.996	1.006
Tetra	PCB-48/75	*	*	n	NotF	1.23	*		2160	2.5	3.49	*	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.22	*		2160	2.5	3.50	*	1.008	1.018
Tetra	PCB-62	*	*	n	NotF	1.22	*		2160	2.5	3.51	*	1.011	1.021
Tetra	PCB-44	*	*	n	NotF	0.86	*		2160	2.5	4.98	*	1.021	1.031
Tetra	PCB-42/59	*	*	n	NotF	1.14	*		2160	2.5	3.77	*	1.028	1.038
Tetra	PCB-41/64/71/72	*	*	n	NotF	1.21	*		2160	2.5	3.55	*	1.046	1.056
Tetra	PCB-68	*	*	n	NotF	1.35	*		2160	2.5	3.18	*	1.054	1.064
Tetra	PCB-40	*	*	n	NotF	0.70	*		2160	2.5	6.11	*	1.061	1.071
Tetra	PCB-57	*	*	n	NotF	0.98	*		2160	2.5	3.45	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF	1.11	*		2160	2.5	3.05	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF	0.93	*		2160	2.5	3.64	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF	0.95	*		2160	2.5	3.54	*	0.982	0.992
Tetra	PCB-74	*	*	n	NotF	1.24	*		2160	2.5	2.71	*	0.990	1.000
Tetra	PCB-61/70	*	*	n	NotF	0.95	*		2160	2.5	3.54	*	0.995	1.005
Tetra	PCB-76/66	*	*	n	NotF	1.04	*		2160	2.5	3.23	*	1.001	1.011
Tetra	PCB-80	*	*	n	NotF	1.19	*		2160	2.5	2.68	*	0.996	1.006
Tetra	PCB-55	*	*	n	NotF	1.04	*		2160	2.5	3.07	*	1.005	1.015
Tetra	PCB-56/60	*	*	n	NotF	1.01	*		2160	2.5	3.17	*	1.019	1.029
Tetra	PCB-79	*	*	n	NotF	1.08	*		2160	2.5	2.96	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.27	*		2160	2.5	2.64	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF	1.33	*		2160	2.5	2.52	*	0.995	1.005
Tetra	PCB-77	*	*	n	NotF	1.10	*		2160	2.5	3.10	*	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.18	*		2240	2.5	8.47	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF	1.14	*		2240	2.5	8.81	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF	0.96	*		2240	2.5	10.5	*	1.050	1.060
Penta	PCB-100	*	*	n	NotF	0.94	*		2240	2.5	10.7	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF	1.06	*		2240	2.5	12.2	*	0.980	0.990
Penta	PCB-95/98/102	*	*	n	NotF	1.22	*		2240	2.5	10.5	*	0.995	1.005
Penta	PCB-93	*	*	n	NotF	0.84	*		2240	2.5	15.2	*	0.997	1.007
Penta	PCB-88/91	*	*	n	NotF	1.12	*		2240	2.5	11.5	*	1.005	1.015
Penta	PCB-121	*	*	n	NotF	1.62	*		2240	2.5	7.95	*	1.009	1.019
Penta	PCB-84/92	*	*	n	NotF	1.05	*		2240	2.5	11.2	*	0.985	0.995
Penta	PCB-89	*	*	n	NotF	1.13	*		2240	2.5	10.4	*	0.991	1.001

Analyst: DMS

Date: 3/26/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1
Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	*	*	n NotF	1.10	*		2240	2.5	10.6	*	0.995	1.005
Penta	PCB-113	*	*	n NotF	1.41	*		2240	2.5	8.31	*	1.002	1.012
Penta	PCB-99	*	*	n NotF	1.34	*		2240	2.5	8.77	*	1.004	1.014
Penta	PCB-119	*	*	n NotF	1.53	*		2240	2.5	8.42	*	0.982	0.992
Penta	PCB-108/112	*	*	n NotF	1.28	*		2240	2.5	10.1	*	0.986	0.996
Penta	PCB-83	*	*	n NotF	1.52	*		2240	2.5	8.49	*	0.990	1.000
Penta	PCB-97	*	*	n NotF	1.18	*		2240	2.5	10.9	*	0.995	1.005
Penta	PCB-86	*	*	n NotF	0.84	*		2240	2.5	15.3	*	0.999	1.009
Penta	PCB-87/117/125	*	*	n NotF	1.55	*		2240	2.5	8.32	*	1.002	1.012
Penta	PCB-111/115	*	*	n NotF	1.63	*		2240	2.5	7.90	*	1.006	1.016
Penta	PCB-85/116	*	*	n NotF	1.30	*		2240	2.5	9.90	*	1.010	1.020
Penta	PCB-120	*	*	n NotF	1.68	*		2240	2.5	7.69	*	1.016	1.026
Penta	PCB-110	*	*	n NotF	1.56	*		2240	2.5	8.29	*	1.020	1.030
Penta	PCB-82	*	*	n NotF	0.76	*		2240	2.5	13.1	*	0.971	0.981
Penta	PCB-124	*	*	n NotF	1.47	*		2240	2.5	6.78	*	0.988	0.998
Penta	PCB-107/109	*	*	n NotF	1.32	*		2240	2.5	7.54	*	0.991	1.001
Penta	PCB-123	*	*	n NotF	1.17	*		2240	2.5	8.53	*	0.996	1.006
Penta	PCB-106/118	*	*	n NotF	1.17	*		2240	2.5	7.90	*	0.996	1.006
Penta	PCB-114	*	*	n NotF	1.30	*		2090	2.5	4.59	*	0.995	1.005
Penta	PCB-122	*	*	n NotF	1.12	*		2090	2.5	5.31	*	0.999	1.009
Penta	PCB-105	*	*	n NotF	1.30	*		2090	2.5	4.50	*	0.995	1.005
Penta	PCB-127	*	*	n NotF	1.33	*		2090	2.5	4.09	*	0.996	1.006
Penta	PCB-126	*	*	n NotF	1.18	*		2090	2.5	5.23	*	0.995	1.005
Hexa	PCB-155	*	*	n NotF	1.11	*		1780	2.5	8.59	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF	1.00	*		1780	2.5	9.58	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF	1.12	*		1780	2.5	8.57	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF	1.20	*		1780	2.5	7.96	*	1.055	1.065
Hexa	PCB-136	*	*	n NotF	1.18	*		1780	2.5	8.12	*	1.064	1.074
Hexa	PCB-148	*	*	n NotF	0.74	*		1780	2.5	12.9	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF	0.86	*		1780	2.5	11.1	*	1.080	1.090
Hexa	PCB-151	*	*	n NotF	0.75	*		1780	2.5	12.8	*	1.097	1.107
Hexa	PCB-135	*	*	n NotF	0.79	*		1780	2.5	12.1	*	1.103	1.113
Hexa	PCB-144	*	*	n NotF	0.76	*		1780	2.5	12.6	*	1.105	1.117
Hexa	PCB-147	*	*	n NotF	0.82	*		1780	2.5	11.7	*	1.109	1.121
Hexa	PCB-139/149	*	*	n NotF	0.76	*		1780	2.5	12.6	*	1.116	1.128
Hexa	PCB-140	*	*	n NotF	0.72	*		1780	2.5	13.2	*	1.121	1.133
Hexa	PCB-134/143	*	*	n NotF	0.92	*		1540	2.5	5.23	*	0.970	0.980

Analyst: DMS

Date: 3/26/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1

Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n	NotF¶	0.82	*		1540	2.5	5.85	*	0.977	0.987
Hexa	PCB-131	*	*	n	NotF¶	0.91	*		1540	2.5	5.28	*	0.981	0.991
Hexa	PCB-146/165	*	*	n	NotF¶	1.25	*		1540	2.5	3.85	*	0.986	0.996
Hexa	PCB-132/161	*	*	n	NotF¶	1.10	*		1540	2.5	4.34	*	0.992	1.002
Hexa	PCB-153	*	*	n	NotF¶	1.25	*		1540	2.5	3.84	*	0.995	1.005
Hexa	PCB-168	*	*	n	NotF¶	1.45	*		1540	2.5	3.31	*	1.001	1.011
Hexa	PCB-141	*	*	n	NotF¶	1.09	*		1540	2.5	4.65	*	0.995	1.005
Hexa	PCB-137	*	*	n	NotF¶	1.06	*		1540	2.5	4.75	*	1.004	1.014
Hexa	PCB-130	*	*	n	NotF¶	0.96	*		1540	2.5	5.23	*	1.006	1.016
Hexa	PCB-138/163/164	5.97e+04	1.25	y	44:47	1.29	5.41		*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	*	*	n	NotF¶	1.34	*		1540	2.5	3.86	*	1.001	1.011
Hexa	PCB-129	*	*	n	NotF¶	0.85	*		1540	2.5	6.07	*	1.007	1.017
Hexa	PCB-166	*	*	n	NotF¶	1.19	*		1540	2.5	3.54	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF¶	1.11	*		1540	2.5	3.77	*	0.996	1.006
Hexa	PCB-128/162	*	*	n	NotF¶	1.05	*		1540	2.5	4.01	*	1.002	1.012
Hexa	PCB-167	*	*	n	NotF¶	1.20	*		1540	2.5	3.32	*	0.995	1.005
Hexa	PCB-156	*	*	n	NotF¶	1.14	*		1540	2.5	3.55	*	0.996	1.006
Hexa	PCB-157	*	*	n	NotF¶	1.16	*		1540	2.5	3.44	*	0.995	1.005
Hexa	PCB-169	*	*	n	NotF¶	1.12	*		1540	2.5	3.44	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotF¶	1.58	*		1400	2.5	2.59	*	0.996	1.006
Hepta	PCB-184	*	*	n	NotF¶	1.63	*		1400	2.5	2.51	*	1.006	1.016
Hepta	PCB-179	*	*	n	NotF¶	1.30	*		1400	2.5	3.14	*	1.024	1.034
Hepta	PCB-176	*	*	n	NotF¶	1.48	*		1400	2.5	2.77	*	1.035	1.045
Hepta	PCB-186	*	*	n	NotF¶	1.45	*		1400	2.5	2.81	*	1.050	1.060
Hepta	PCB-178	*	*	n	NotF¶	1.03	*		1400	2.5	3.95	*	1.061	1.071
Hepta	PCB-175	*	*	n	NotF¶	1.01	*		1400	2.5	4.04	*	1.069	1.079
Hepta	PCB-182/187	*	*	n	NotF¶	1.25	*		1400	2.5	3.27	*	1.073	1.083
Hepta	PCB-183	*	*	n	NotF¶	1.21	*		1400	2.5	3.38	*	1.081	1.091
Hepta	PCB-185	*	*	n	NotF¶	1.80	*		1400	2.5	3.03	*	0.951	0.961
Hepta	PCB-174	*	*	n	NotF¶	1.38	*		1400	2.5	3.96	*	0.958	0.968
Hepta	PCB-181	*	*	n	NotF¶	1.38	*		1400	2.5	3.95	*	0.960	0.970
Hepta	PCB-177	*	*	n	NotF¶	1.26	*		1400	2.5	4.34	*	0.963	0.973
Hepta	PCB-171	*	*	n	NotF¶	1.58	*		1400	2.5	3.45	*	0.970	0.980
Hepta	PCB-173	*	*	n	NotF¶	1.11	*		1400	2.5	4.92	*	0.978	0.988
Hepta	PCB-172	*	*	n	NotF¶	1.63	*		1400	2.5	3.34	*	0.987	0.997
Hepta	PCB-192	*	*	n	NotF¶	1.74	*		1400	2.5	3.13	*	0.991	1.001
Hepta	PCB-180	*	*	n	NotF¶	1.34	*		1400	2.5	4.06	*	0.995	1.005

Analyst: DMS

Date: 3/26/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1
Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF╖	1.72	*		1400	2.5	3.18	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF╖	1.69	*		1400	2.5	3.22	*	1.004	1.014
Hepta	PCB-170	*	*	n	NotF╖	1.60	*		1400	2.5	3.79	*	0.995	1.005
Hepta	PCB-190	*	*	n	NotF╖	2.21	*		1400	2.5	2.74	*	0.998	1.008
Hepta	PCB-189	*	*	n	NotF╖	1.55	*		1400	2.5	2.57	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF╖	1.08	*		1500	2.5	6.52	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF╖	1.15	*		1500	2.5	6.14	*	1.005	1.015
Octa	PCB-204	*	*	n	NotF╖	1.14	*		1500	2.5	6.20	*	1.008	1.018
Octa	PCB-197	*	*	n	NotF╖	1.07	*		1500	2.5	6.57	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF╖	1.06	*		1500	2.5	6.64	*	1.032	1.044
Octa	PCB-198	*	*	n	NotF╖	0.76	*		1500	2.5	9.35	*	1.059	1.069
Octa	PCB-199	*	*	n	NotF╖	0.80	*		1500	2.5	8.85	*	1.061	1.071
Octa	PCB-196/203	*	*	n	NotF╖	0.80	*		1500	2.5	8.81	*	1.066	1.076
Octa	PCB-195	*	*	n	NotF╖	1.23	*		1360	2.5	2.65	*	0.979	0.989
Octa	PCB-194	*	*	n	NotF╖	1.21	*		1360	2.5	2.68	*	0.995	1.005
Octa	PCB-205	*	*	n	NotF╖	1.54	*		1360	2.5	2.11	*	1.001	1.011
Nona	PCB-208	*	*	n	NotF╖	0.93	*		1200	2.5	2.24	*	0.995	1.005
Nona	PCB-207	*	*	n	NotF╖	1.08	*		1200	2.5	1.93	*	1.001	1.011
Nona	PCB-206	*	*	n	NotF╖	1.02	*		1200	2.5	3.36	*	0.995	1.005
Deca	PCB-209	2.80e+04	0.96	n	56:49	1.17	4.10	R	*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/26/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1
Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.0000 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.27	*	
Total Di-PCB	*	*	n	NotFnd	1.21	*	
Total Tri-PCB	*	*	n	NotFnd	1.10	*	
Total Tri-PCB	*	*	n	NotFnd	1.21	*	Sum:0.00000
Total Tetra-PCB	*	*	n	NotFnd	1.09	*	
Total Penta-PCB	*	*	n	NotFnd	1.18	*	
Total Penta-PCB	*	*	n	NotFnd	1.25	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.90	*	
Total Hexa-PCB	5.97e+04	1.25	y	44:47	1.11	5.40708	Sum:5.40708
Total Hepta-PCB	*	*	n	NotFnd	1.42	*	
Total Octa-PCB	*	*	n	NotFnd	0.96	*	
Total Octa-PCB	*	*	n	NotFnd	1.33	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	1.01	*	
Total Deca-PCB	2.80e+04	0.96	n	56:49	1.17	4.10166	

Total PCB Conc:9.50874300000

Integrations
by
Analyst: DMS

Date: 3/26/15

Client ID: Method Blank Filename: 150318E1 S:4 Acq:18-MAR-15 13:13:08 ConCal: ST150318E1-1

Lab ID: B5C0059-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:2.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	9.41e+07	3.22 y	0.87	16:09	0.623	0.629	0.635	5000	50.0
13C-PCB-3	1.23e+08	3.24 y	0.91	18:46	0.724	0.725	0.733	6280	62.8
13C-PCB-4	7.69e+07	1.60 y	0.59	20:05	0.774	0.775	0.783	6080	60.8
13C-PCB-9	1.32e+08	1.60 y	0.90	21:52	0.843	0.842	0.850	6830	68.3
13C-PCB-11	1.56e+08	1.58 y	0.94	25:14	0.973	0.968	0.978	7710	77.1
13C-PCB-19	8.19e+07	1.07 y	0.53	24:13	0.934	0.930	0.940	7140	71.4
13C-PCB-28	1.51e+08	1.08 y	0.93	29:05	1.003	0.999	1.009	8830	88.3
13C-PCB-32	1.33e+08	1.10 y	0.80	27:08	1.046	1.040	1.050	7730	77.3
13C-PCB-37	1.54e+08	1.08 y	0.84	32:57	1.137	1.131	1.143	9990	99.9
13C-PCB-47	1.06e+08	0.79 y	0.81	31:59	0.871	0.866	0.874	8040	80.4
13C-PCB-52	1.02e+08	0.80 y	0.77	31:29	0.857	0.853	0.861	8170	81.7
13C-PCB-54	1.12e+08	0.84 y	0.97	27:58	0.761	0.758	0.766	7130	71.3
13C-PCB-70	1.42e+08	0.80 y	1.00	35:30	0.966	0.961	0.971	8750	87.5
13C-PCB-77	1.41e+08	0.79 y	0.94	39:36	1.078	1.073	1.083	9220	92.2
13C-PCB-80	1.48e+08	0.80 y	1.03	35:55	0.978	0.972	0.982	8820	88.2
13C-PCB-81	1.40e+08	0.80 y	0.92	39:01	1.062	1.057	1.067	9340	93.4
13C-PCB-95	5.48e+07	1.62 y	0.74	35:48	0.913	0.908	0.918	8770	87.7
13C-PCB-97	5.52e+07	1.60 y	0.70	38:46	0.989	0.984	0.994	9280	92.8
13C-PCB-101	5.99e+07	1.62 y	0.78	37:29	0.956	0.951	0.961	9050	90.5
13C-PCB-104	6.98e+07	1.62 y	1.00	32:39	0.833	0.828	0.836	8260	82.6
13C-PCB-105	1.16e+08	1.58 y	1.37	43:02	0.929	0.924	0.934	9930	99.3
13C-PCB-114	1.14e+08	1.62 y	1.36	42:10	0.911	0.905	0.915	9810	98.1
13C-PCB-118	7.71e+07	1.59 y	0.96	41:31	1.059	1.054	1.064	9530	95.3
13C-PCB-123	7.38e+07	1.65 y	0.89	41:20	1.054	1.050	1.060	9770	97.7
13C-PCB-126	1.14e+08	1.63 y	1.31	45:15	0.977	0.972	0.982	10200	102
13C-PCB-127	1.25e+08	1.64 y	1.47	43:21	0.936	0.931	0.941	9970	99.7
13C-PCB-138	8.54e+07	1.32 y	1.10	44:45	0.967	0.961	0.971	9100	91.0
13C-PCB-141	8.45e+07	1.28 y	1.07	43:55	0.949	0.943	0.953	9210	92.1
13C-PCB-153	9.01e+07	1.31 y	1.15	43:11	0.933	0.927	0.937	9210	92.1
13C-PCB-155	5.13e+07	1.28 y	0.84	37:01	0.944	0.939	0.949	7230	72.3
13C-PCB-156	1.07e+08	1.29 y	1.30	48:00	1.037	1.032	1.042	9660	96.6
13C-PCB-157	1.09e+08	1.28 y	1.36	48:16	1.042	1.038	1.048	9440	94.4
13C-PCB-159	1.03e+08	1.28 y	1.25	46:02	0.994	0.989	0.999	9680	96.8
13C-PCB-167	1.11e+08	1.29 y	1.35	46:43	1.009	1.004	1.014	9580	95.8
13C-PCB-169	1.02e+08	1.26 y	1.29	50:26	1.089	1.083	1.093	9300	93.0
13C-PCB-170	3.74e+07	0.48 y	0.54	50:48	1.097	1.089	1.101	8090	80.9
13C-PCB-180	4.62e+07	0.48 y	0.68	49:17	1.064	1.060	1.070	7910	79.1
13C-PCB-188	6.16e+07	0.46 y	0.92	42:49	0.925	0.919	0.929	7870	78.7
13C-PCB-189	5.22e+07	0.47 y	0.72	52:18	1.130	1.120	1.132	8550	85.5
13C-PCB-194	6.95e+07	0.92 y	0.80	53:49	0.995	0.990	1.000	9040	90.4
13C-PCB-202	4.96e+07	0.94 y	0.84	48:13	1.041	1.036	1.046	6940	69.4
13C-PCB-206	5.87e+07	0.79 y	0.65	55:26	1.025	1.021	1.031	9370	93.7
13C-PCB-208	8.76e+07	0.78 y	1.08	53:05	0.982	0.976	0.986	8410	84.1
13C-PCB-209	5.83e+07	1.21 y	0.61	56:48	1.050	1.045	1.055	9900	99.0

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.53e+08	0.79 y	1.02	37:48	1.029	1.023	1.034	9250	92.5
13C-PCB-178	4.10e+07	0.48 y	0.61	45:36	0.985	0.979	0.990	7830	78.3

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.53e+08	0.79 y	1.10	37:48	0.969	0.964	0.974	9900	99.0
13C-PCB-178	4.10e+07	0.48 y	0.90	45:36	0.925	0.920	0.930	9880	98.8

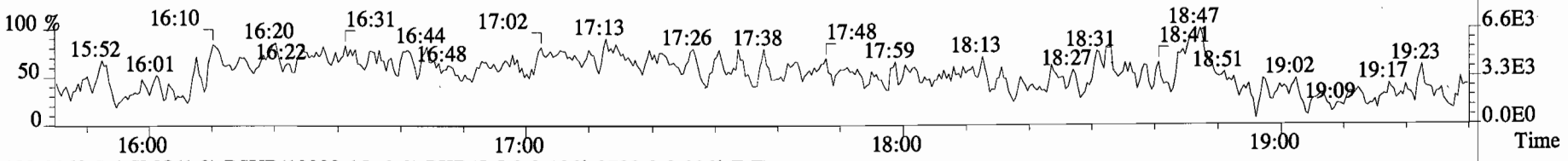
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.16e+08	1.57	y	1.00	25:56	10000
13C-PCB-31	1.83e+08	1.06	y	1.00	28:59	10000
13C-PCB-60	1.62e+08	0.81	y	1.00	36:44	10000
13C-PCB-111	8.44e+07	1.60	y	1.00	39:12	10000
13C-PCB-128	8.53e+07	1.30	y	1.00	46:18	10000
13C-PCB-205	9.64e+07	0.91	y	1.00	54:05	10000

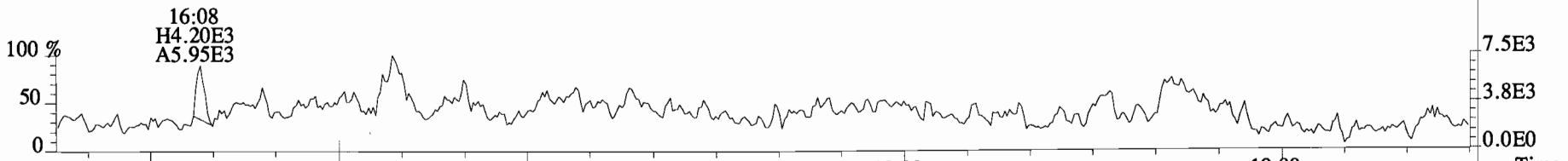
Analyst: DMS

Date: 3/26/15

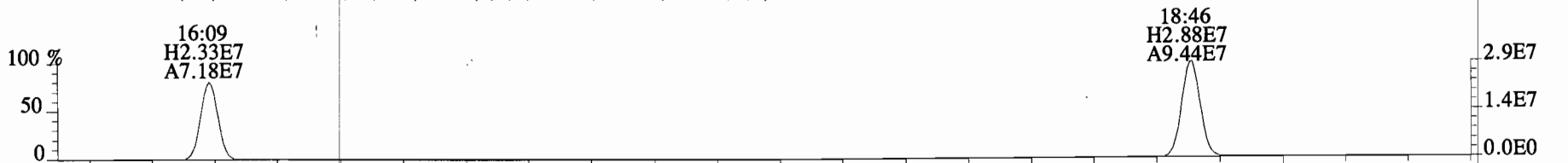
File:150318E1 #1-867 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4496.0,0.00%,F,F)



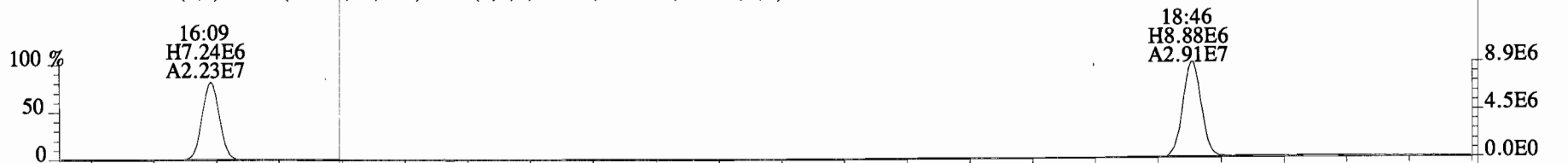
190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3728.0,0.00%,F,F)



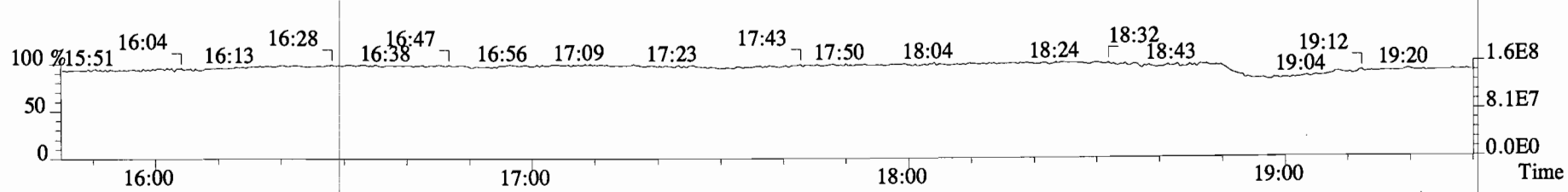
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7836.0,0.00%,F,F)



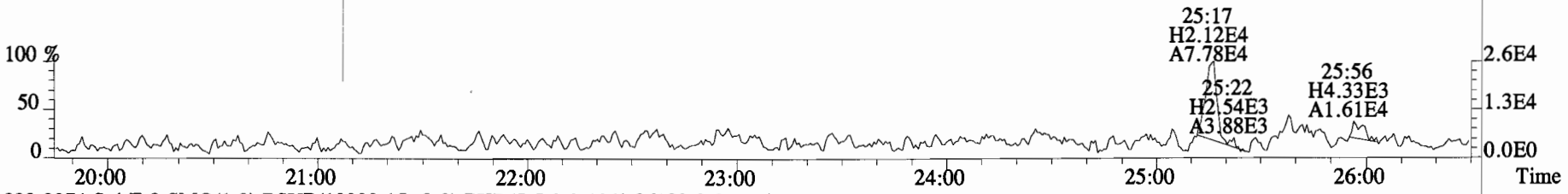
202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,81316.0,0.00%,F,F)



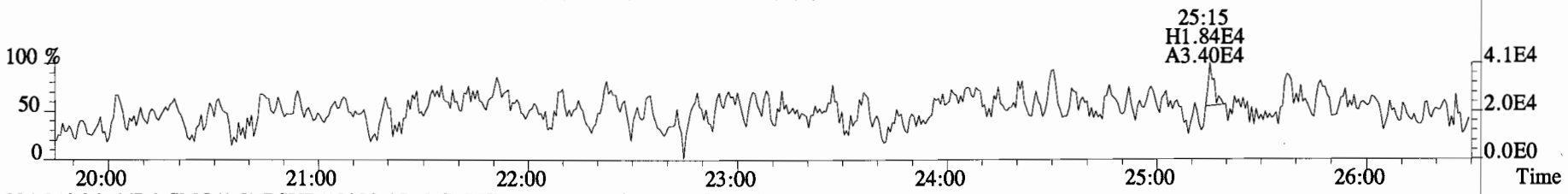
180.9880 S:4



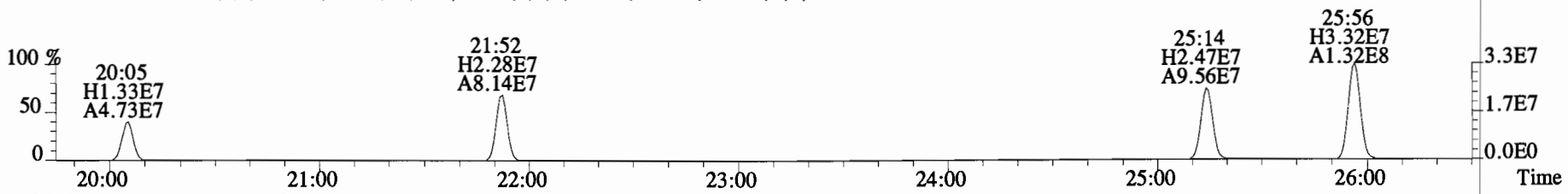
File:150318E1 #1-757 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4960.0,0.00%,F,F)



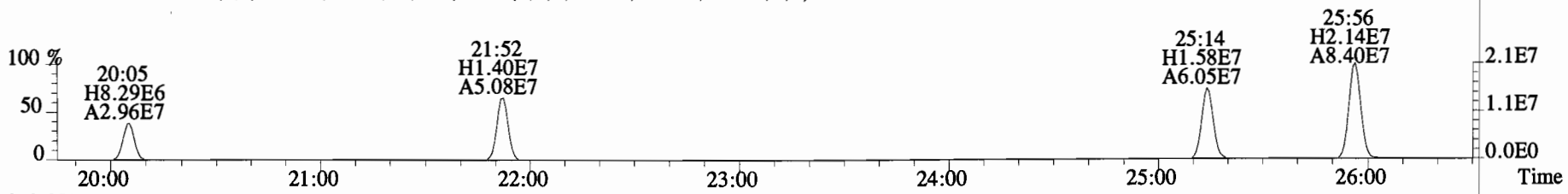
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,26180.0,0.00%,F,F)



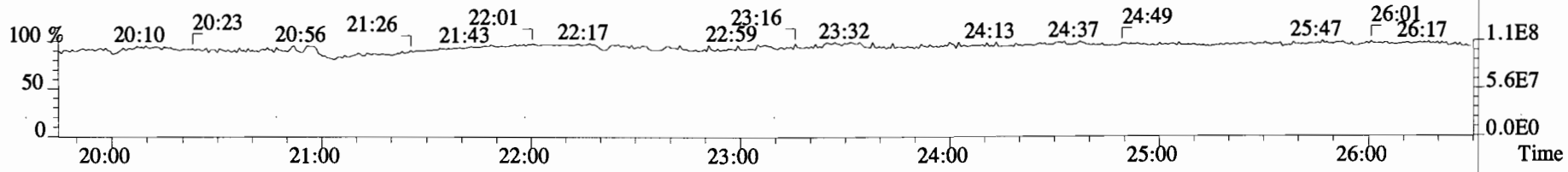
234.0406 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5508.0,0.00%,F,F)



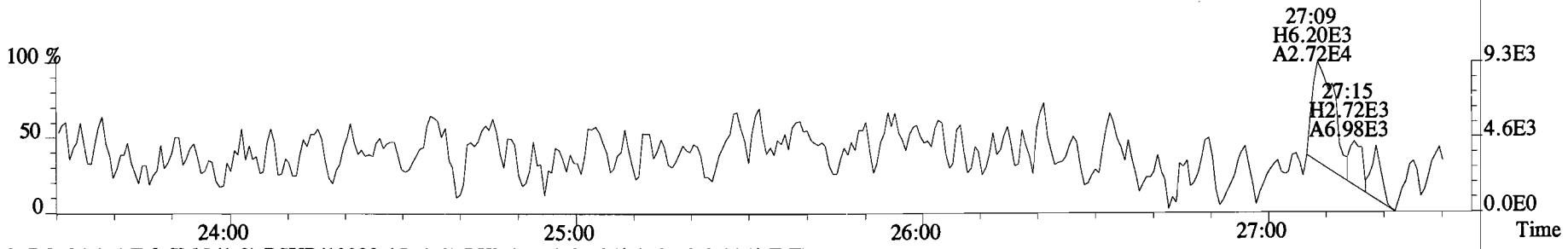
236.0376 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4596.0,0.00%,F,F)



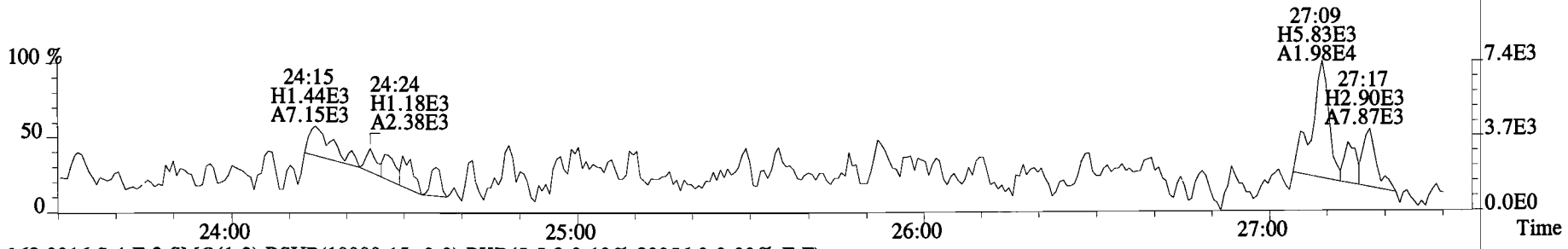
230.9856 S:4 F:2



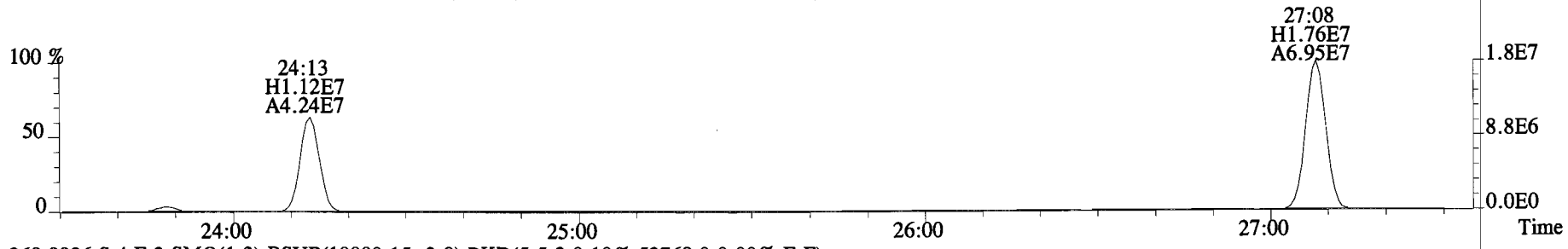
File:150318E1 #1-757 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4688.0,0.00%,F,F)



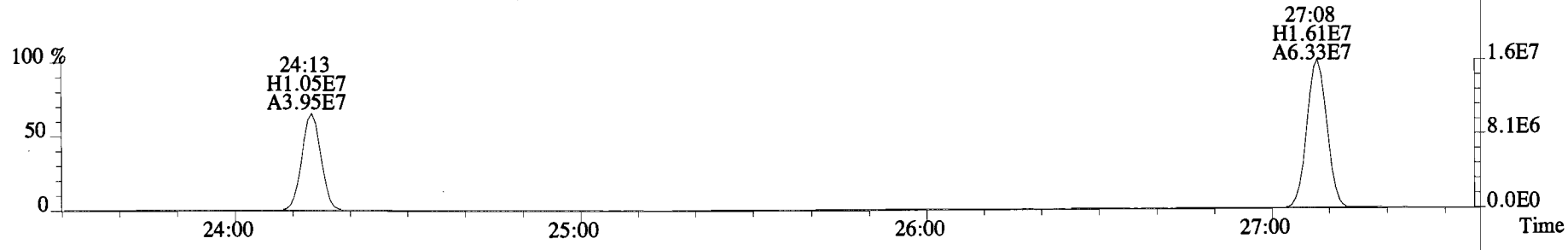
257.9584 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2404.0,0.00%,F,F)

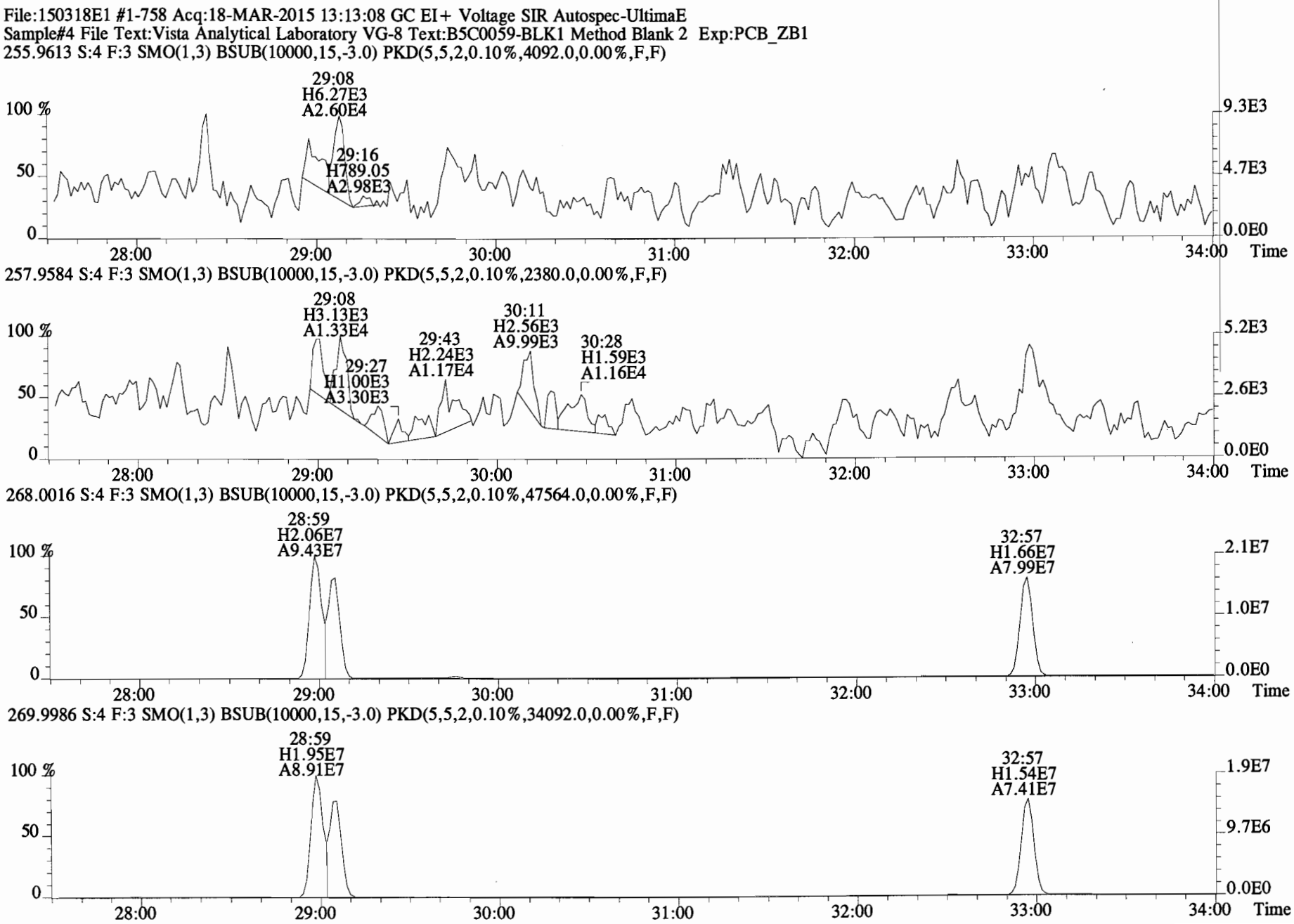


268.0016 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,80356.0,0.00%,F,F)

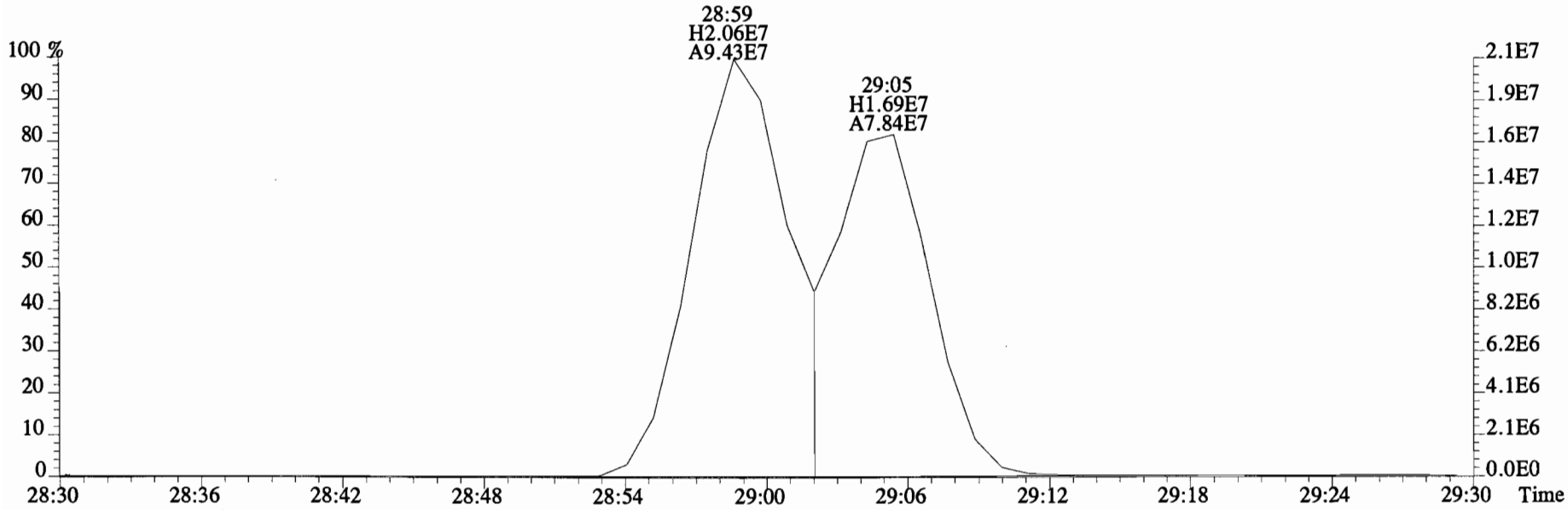


269.9986 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,52768.0,0.00%,F,F)

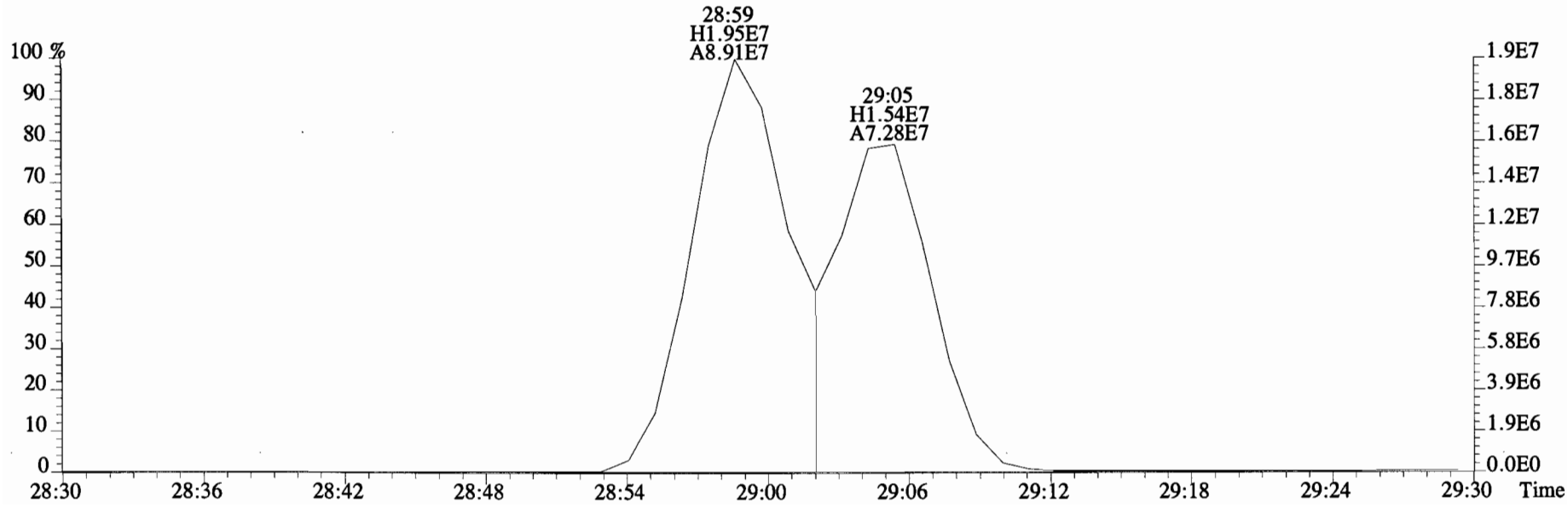



File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4092.0,0.00%,F,F)
29:08
H6.27E3
A2.60E4
29:16
H789.05
A2.98E3
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2380.0,0.00%,F,F)
29:08
H3.13E3
A1.33E4
29:27
H1.00E3
A3.30E3
29:43
H2.24E3
A1.17E4
30:11
H2.56E3
A9.99E3
30:28
H1.59E3
A1.16E4
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,47564.0,0.00%,F,F)
28:59
H2.06E7
A9.43E7
32:57
H1.66E7
A7.99E7
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,34092.0,0.00%,F,F)
28:59
H1.95E7
A8.91E7
32:57
H1.54E7
A7.41E7
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
9.3E3
4.7E3
0.0E0
5.2E3
2.6E3
2.1E7
1.0E7
1.9E7
9.7E6

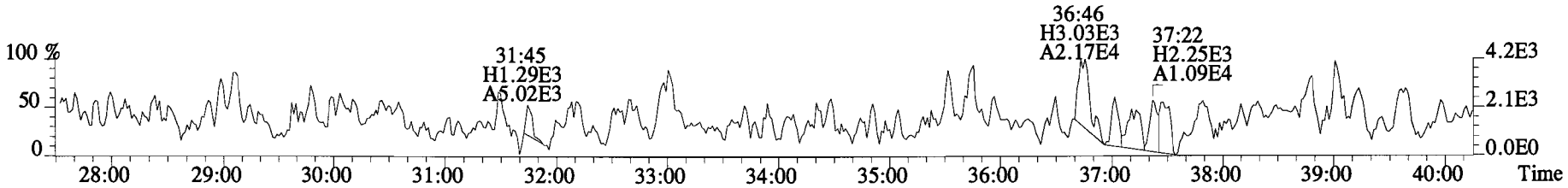
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,47564.0,0.00%,F,F)



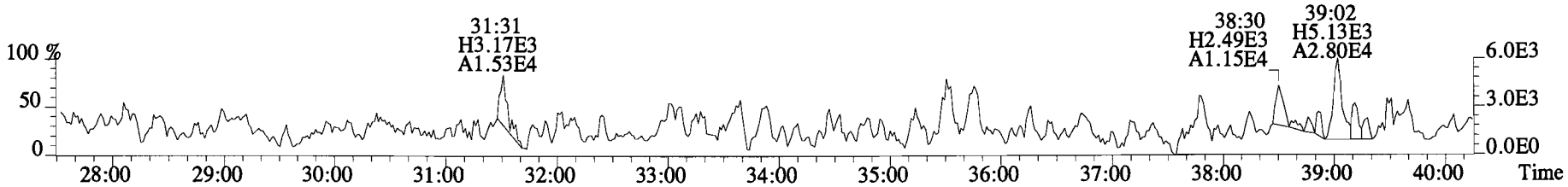
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,34092.0,0.00%,F,F)



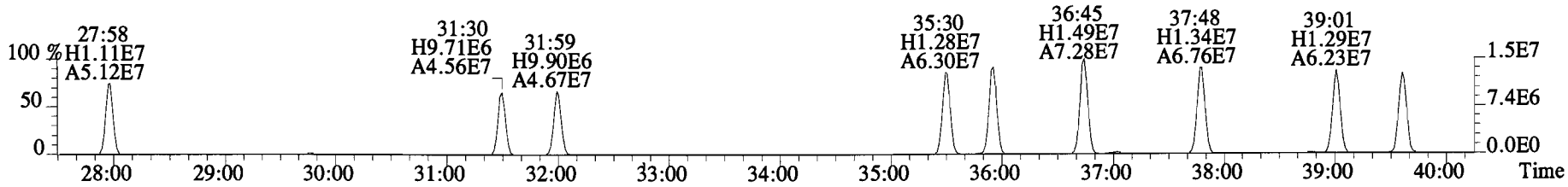
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2104.0,0.00%,F,F)



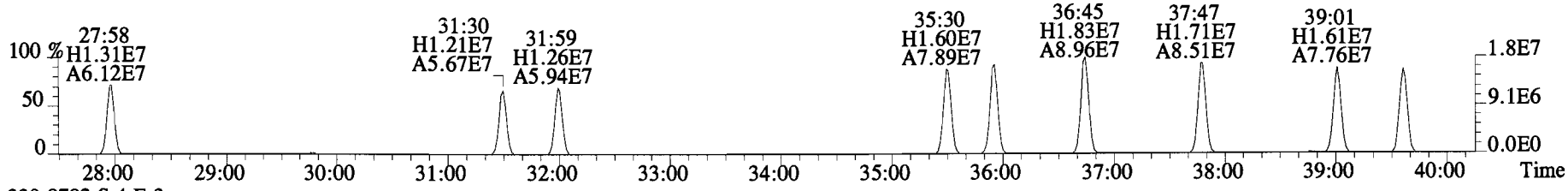
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2164.0,0.00%,F,F)



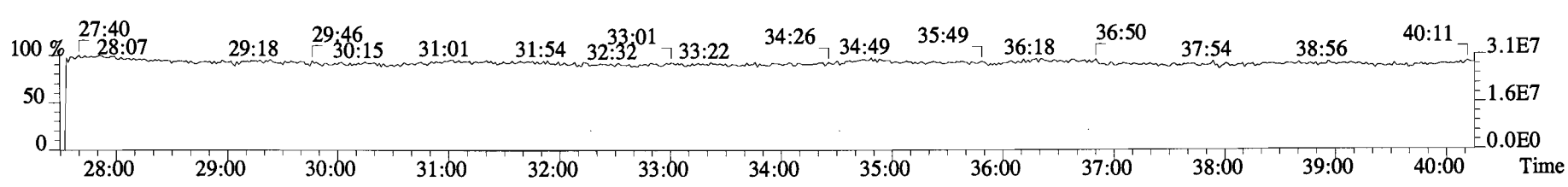
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25996.0,0.00%,F,F)



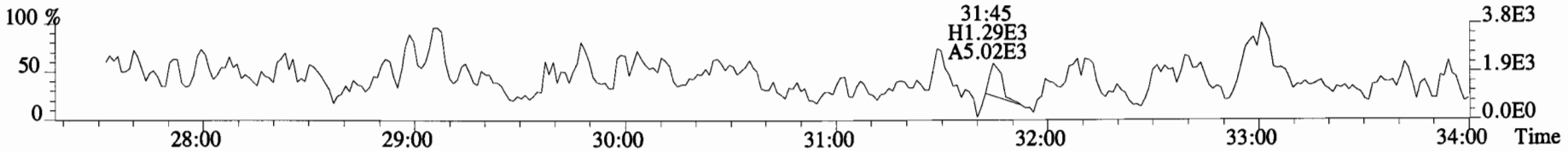
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14968.0,0.00%,F,F)



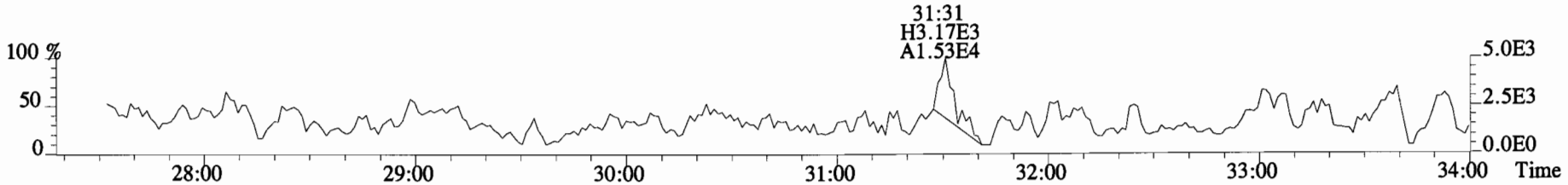
330.9792 S:4 F:3



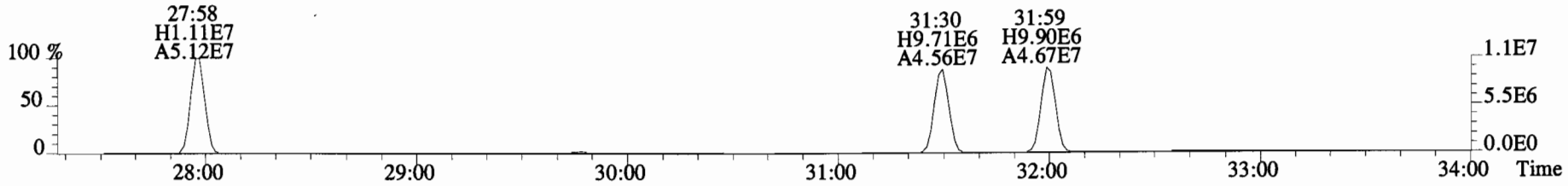
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2104.0,0.00%,F,F)



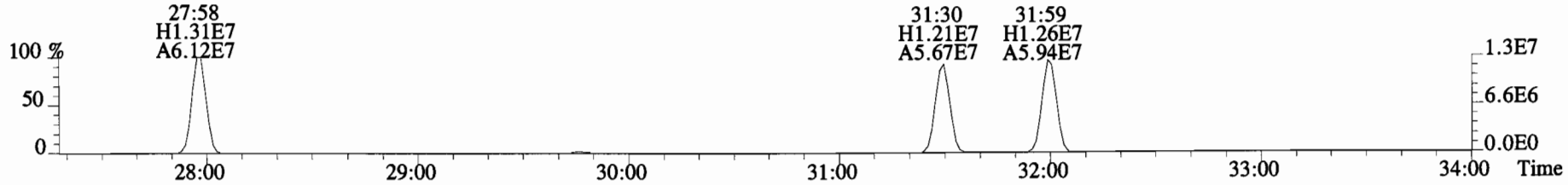
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2164.0,0.00%,F,F)



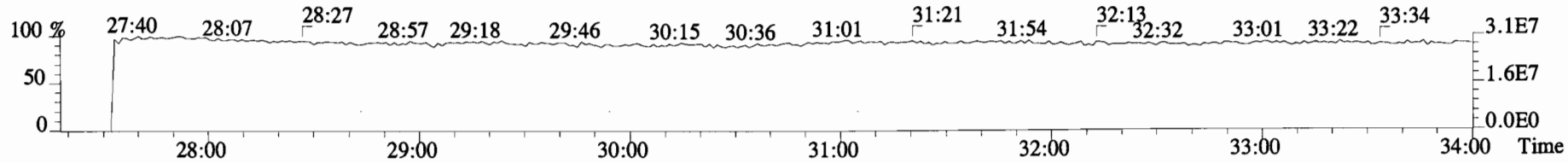
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25996.0,0.00%,F,F)



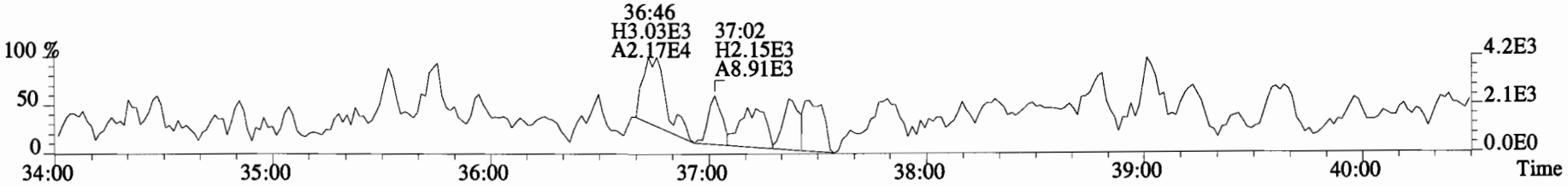
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14968.0,0.00%,F,F)



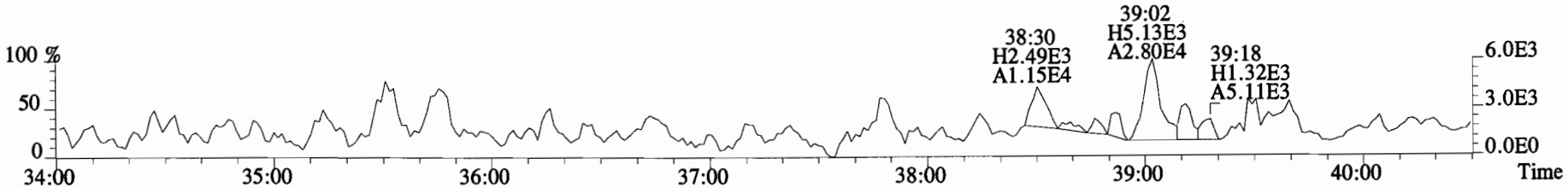
330.9792 S:4 F:3



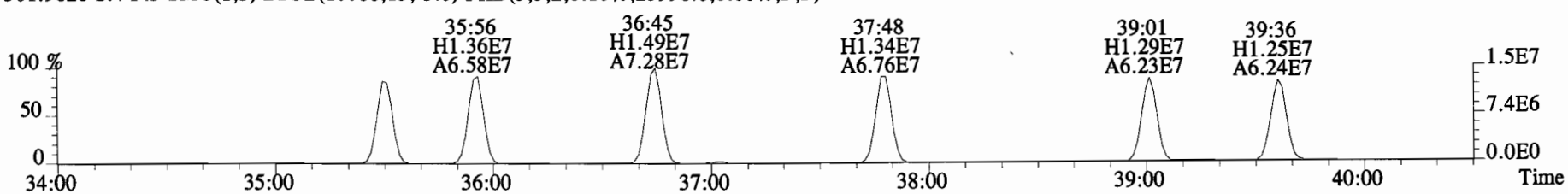
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2104.0,0.00%,F,F)



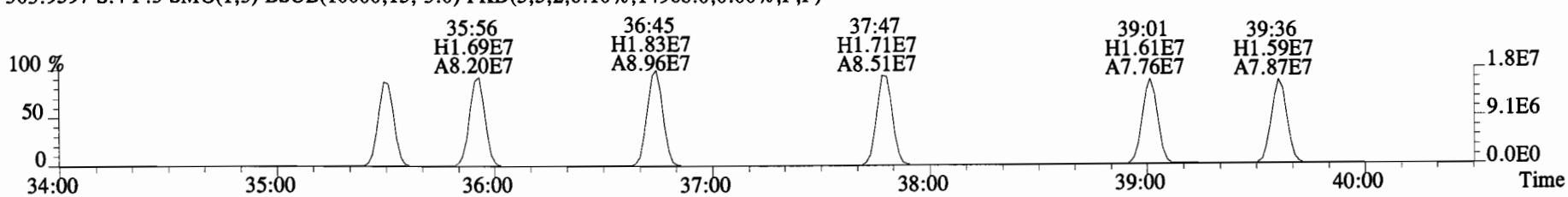
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2164.0,0.00%,F,F)



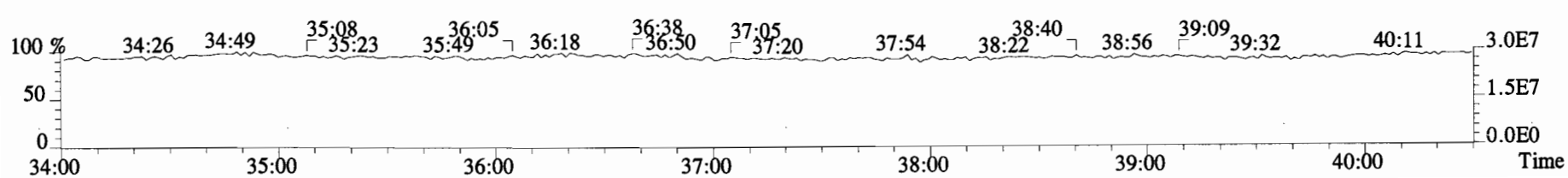
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25996.0,0.00%,F,F)



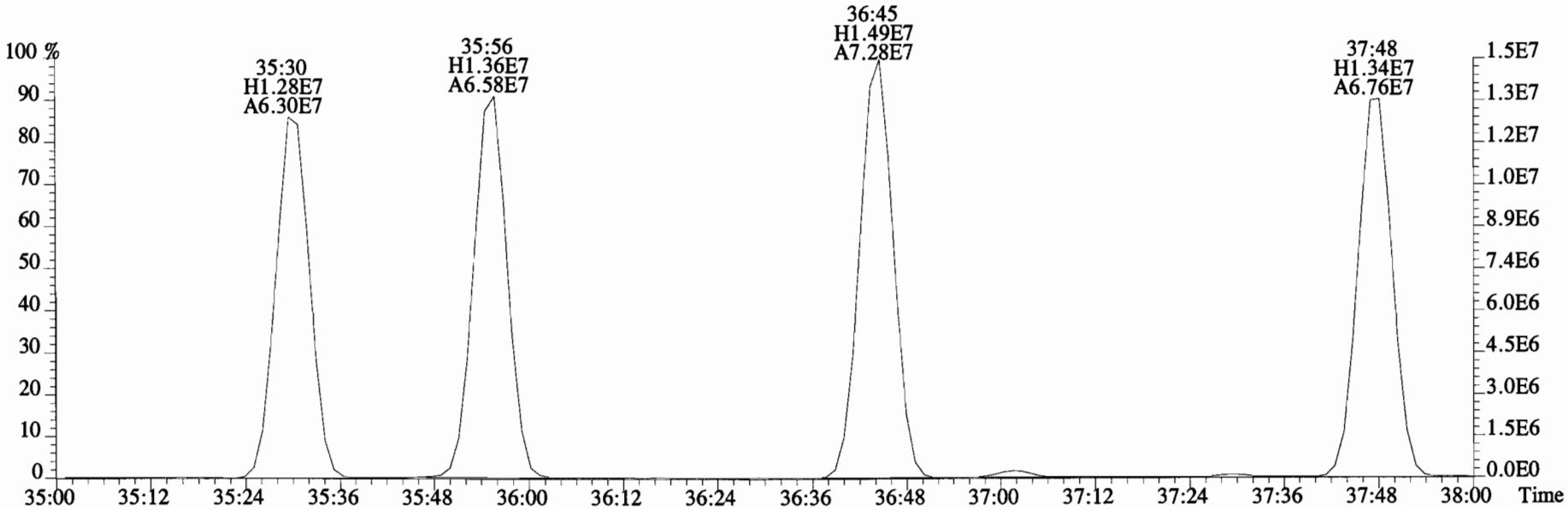
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14968.0,0.00%,F,F)



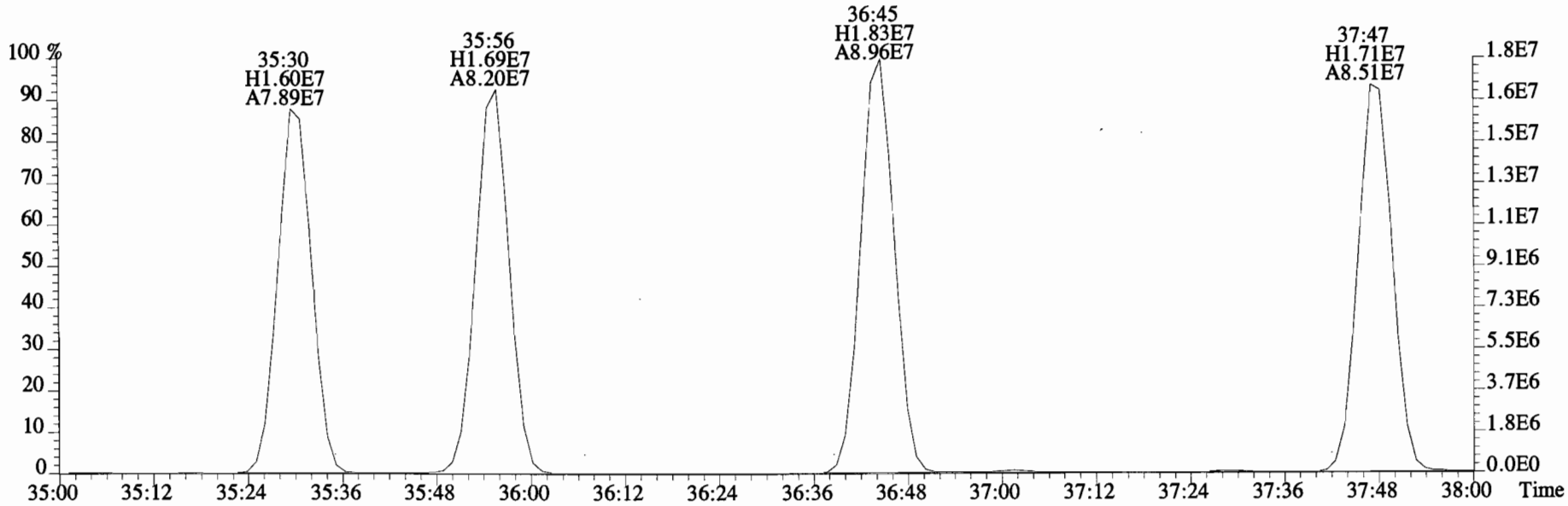
330.9792 S:4 F:3



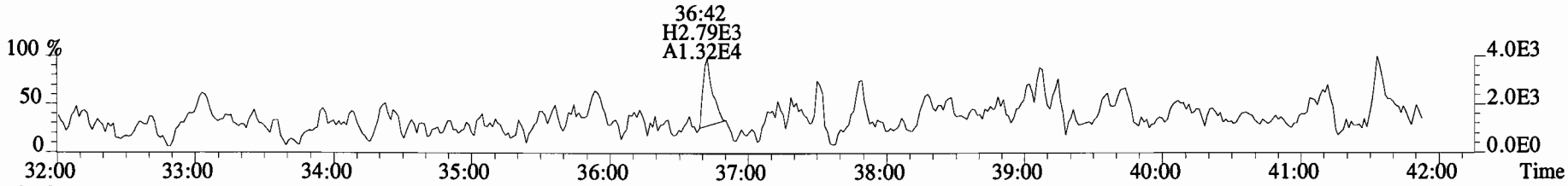
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25996.0,0.00%,F,F)



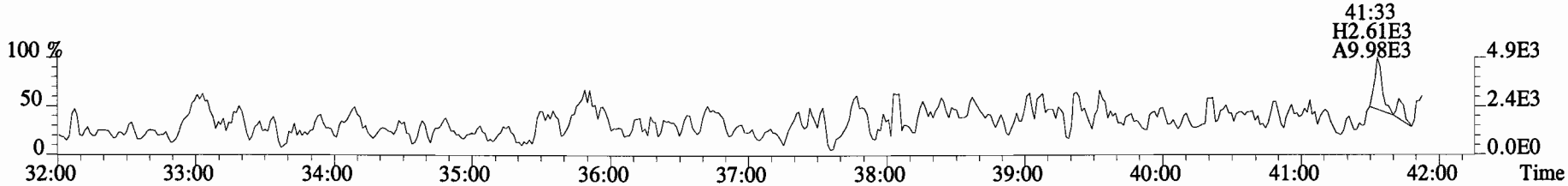
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14968.0,0.00%,F,F)



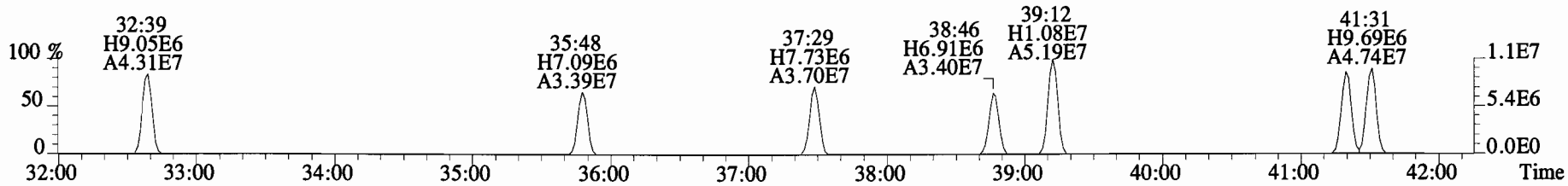
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



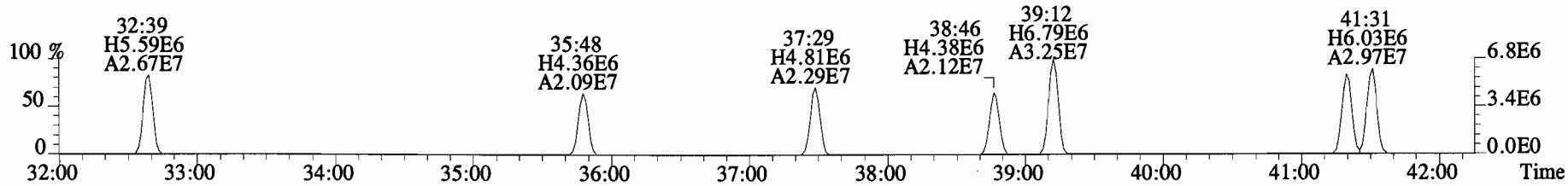
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2244.0,0.00%,F,F)



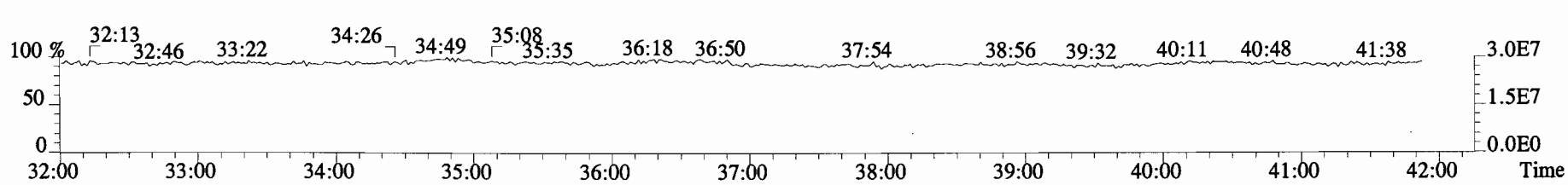
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3144.0,0.00%,F,F)



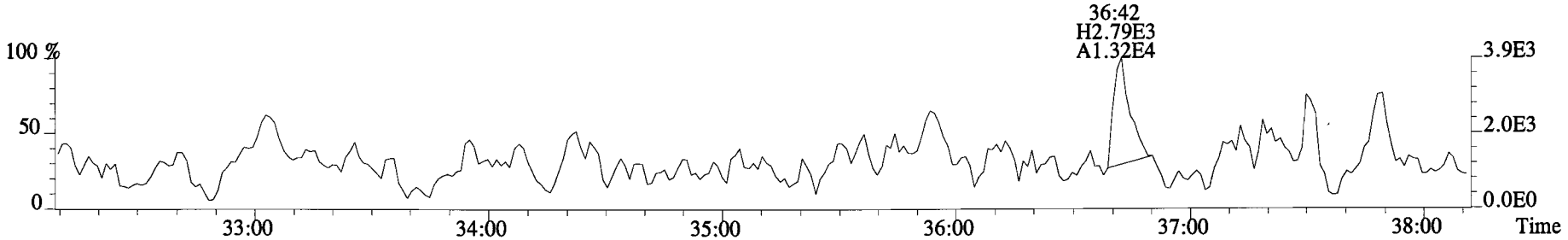
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2736.0,0.00%,F,F)



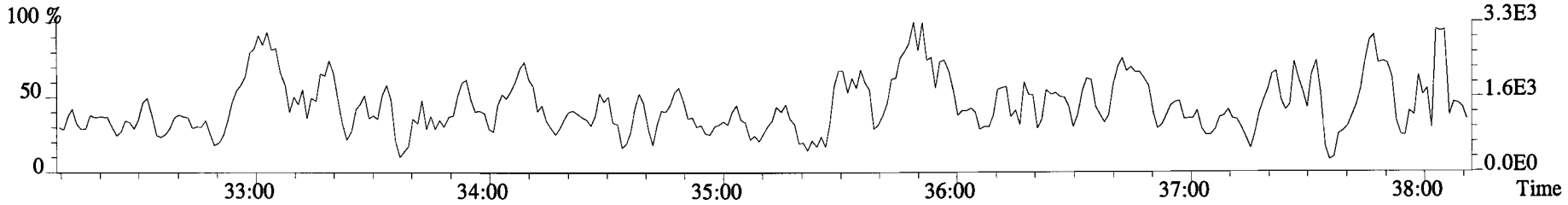
330.9792 S:4 F:3



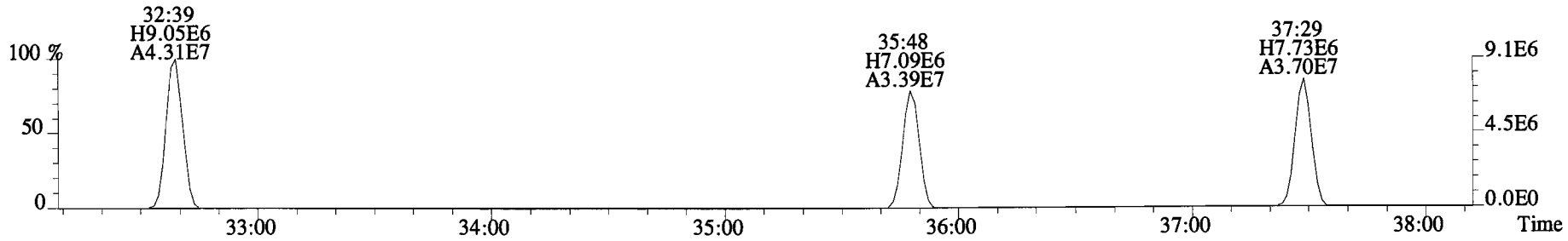
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



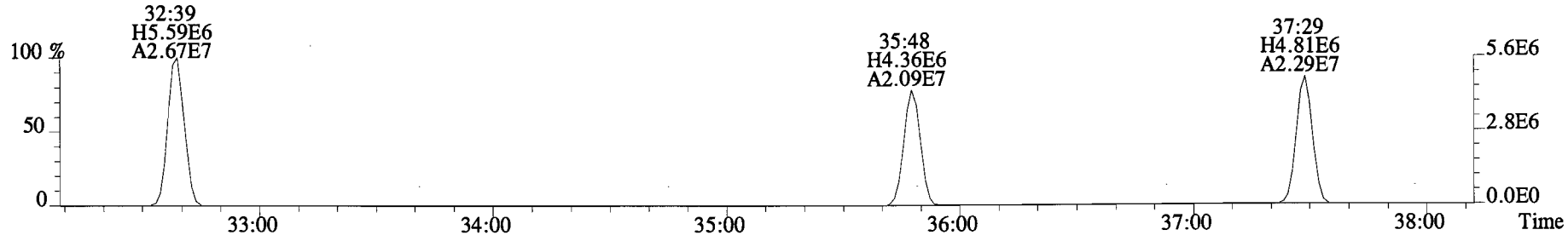
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2244.0,0.00%,F,F)



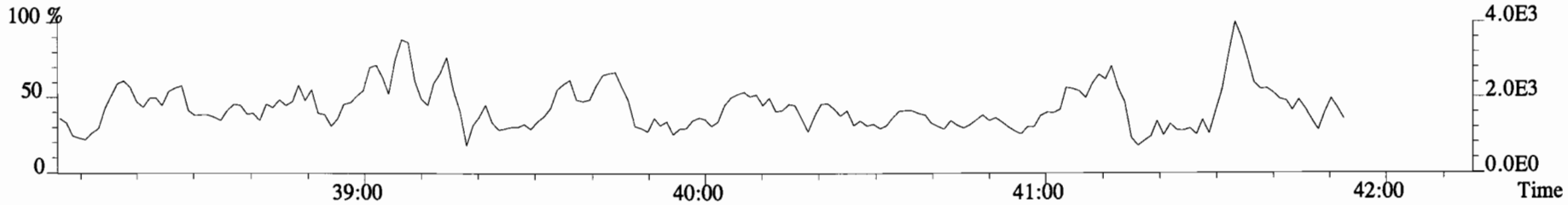
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3144.0,0.00%,F,F)



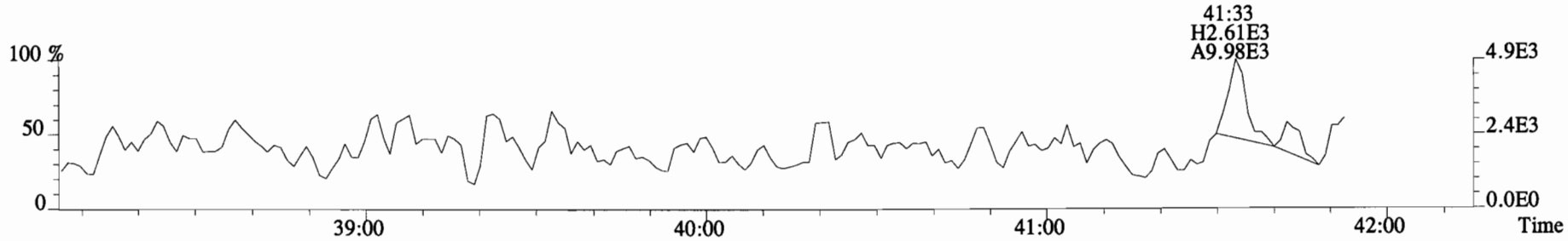
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2736.0,0.00%,F,F)



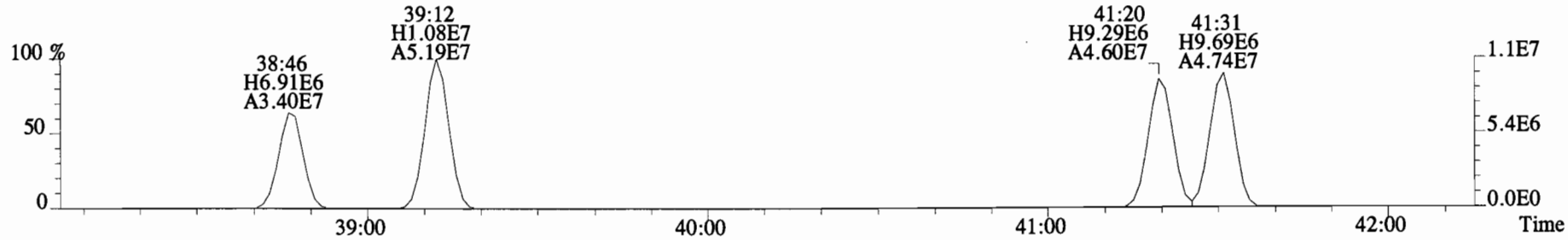
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



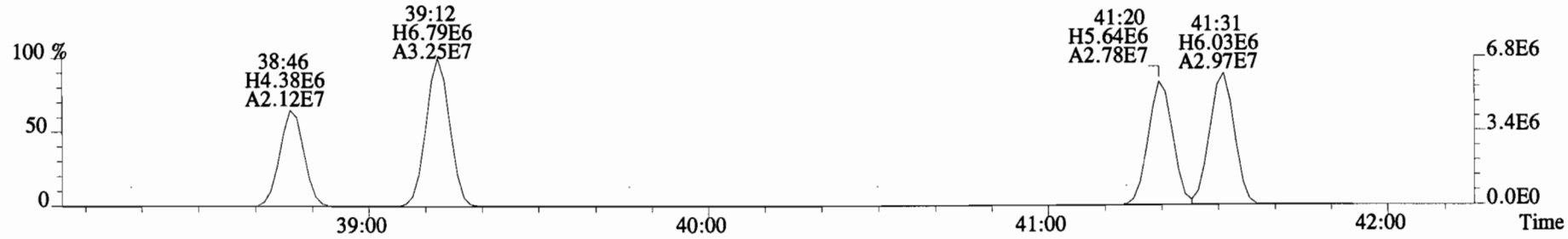
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2244.0,0.00%,F,F)



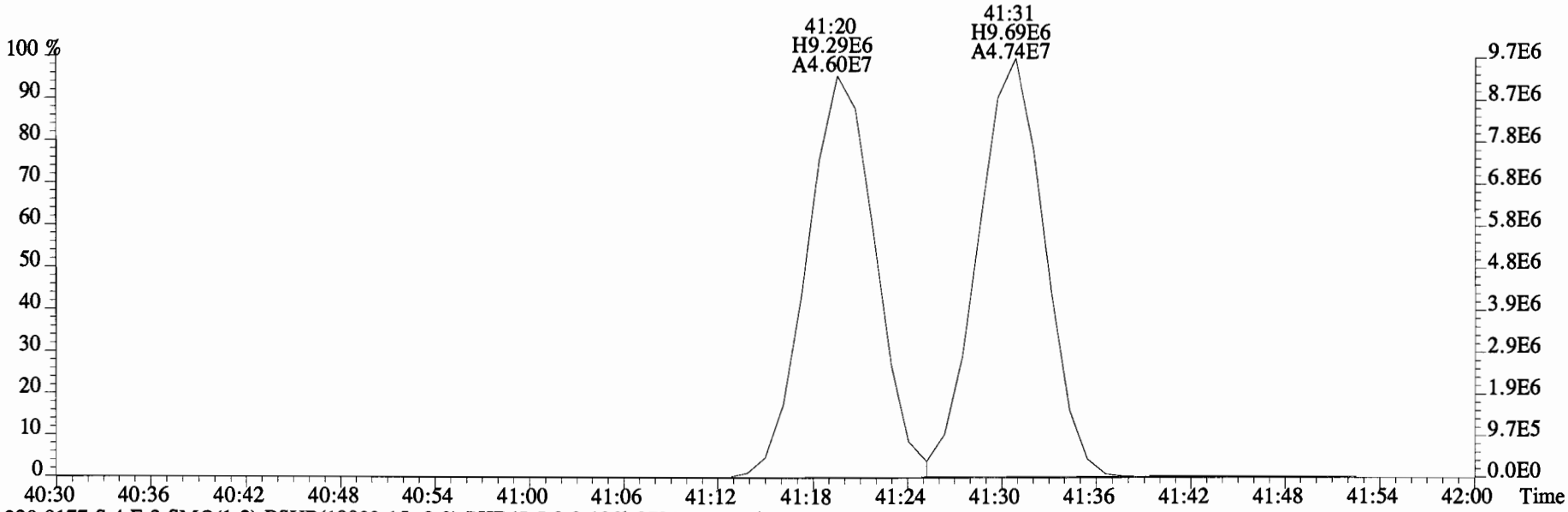
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3144.0,0.00%,F,F)



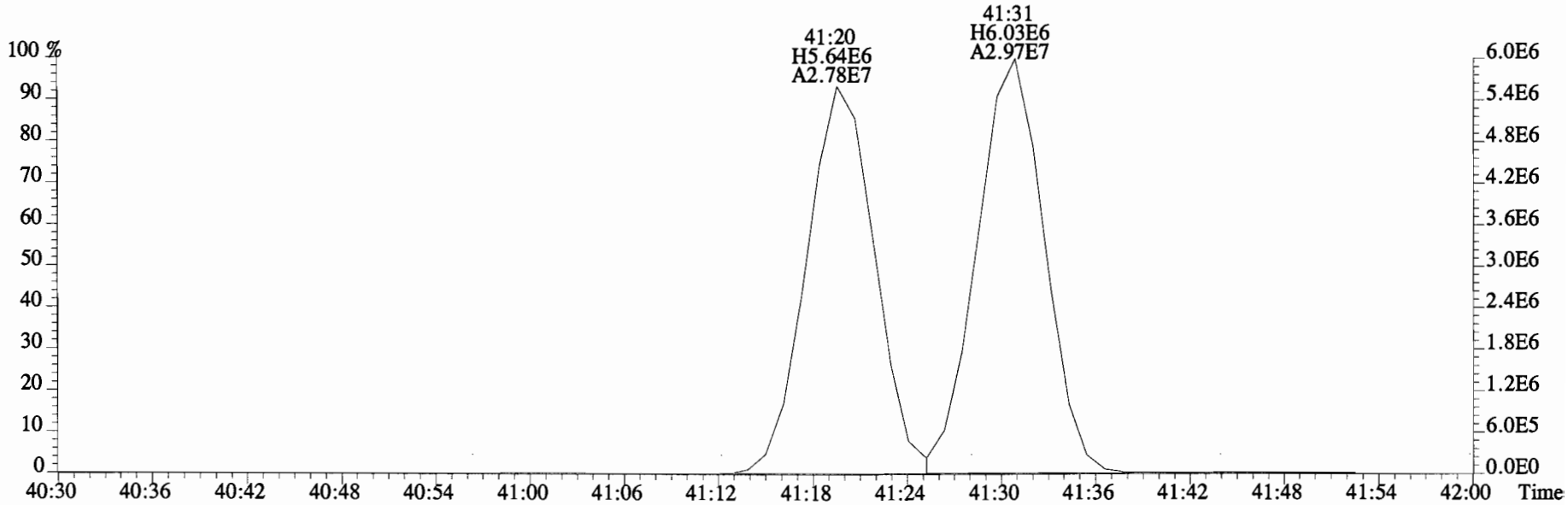
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2736.0,0.00%,F,F)



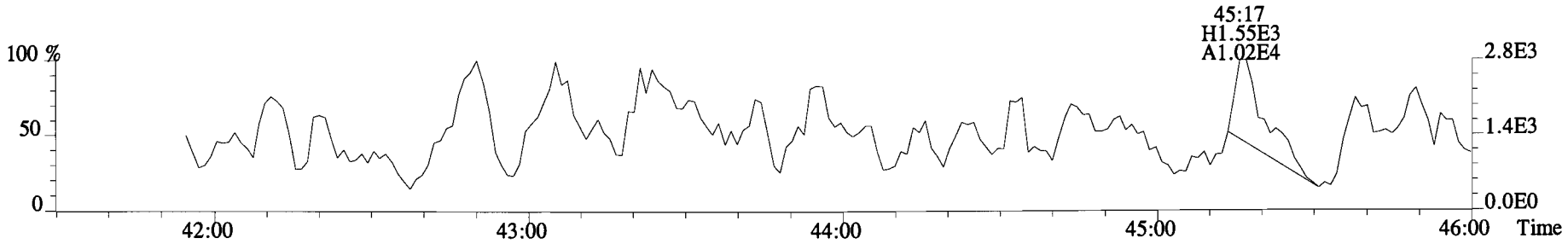
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3144.0,0.00%,F,F)



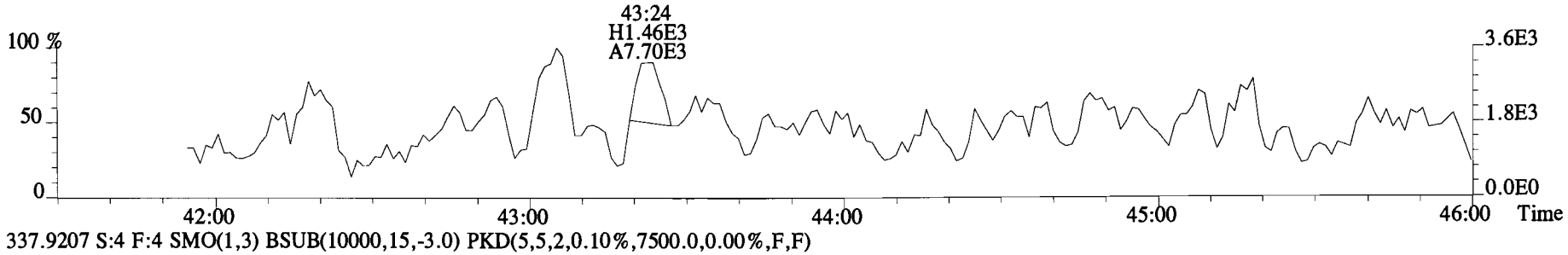
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2736.0,0.00%,F,F)



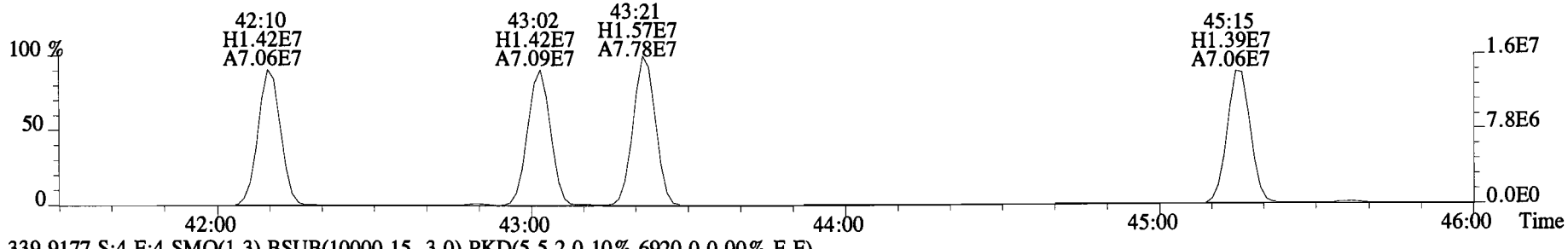
File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



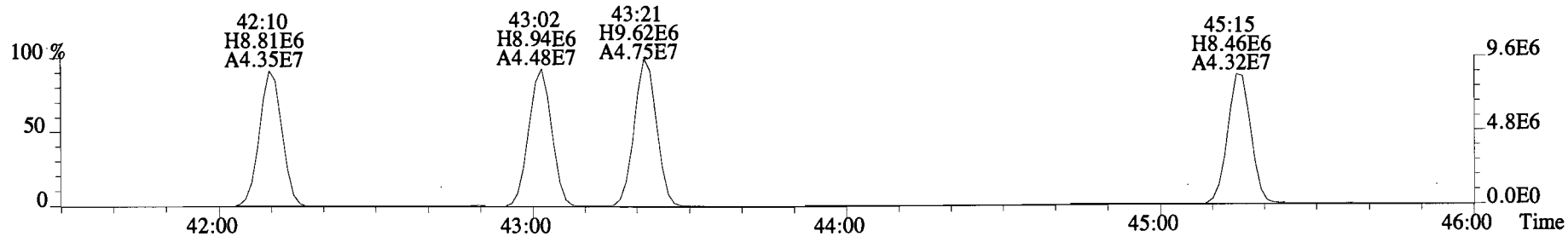
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



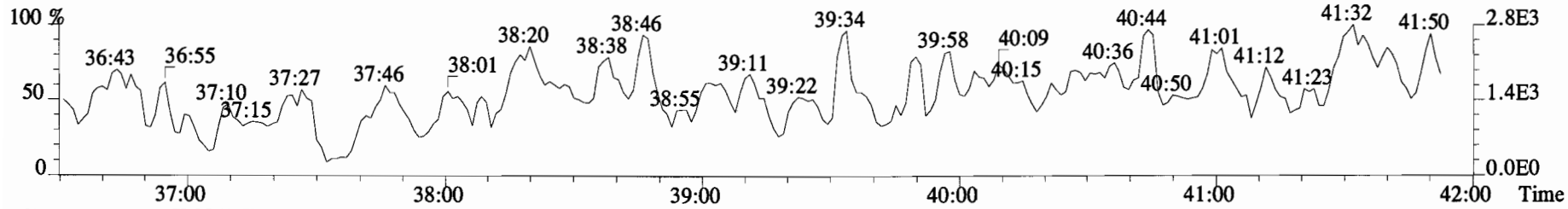
337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7500.0,0.00%,F,F)



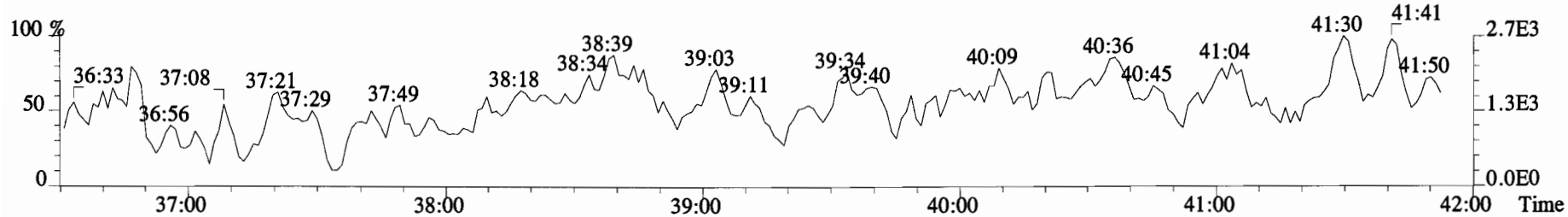
339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6920.0,0.00%,F,F)



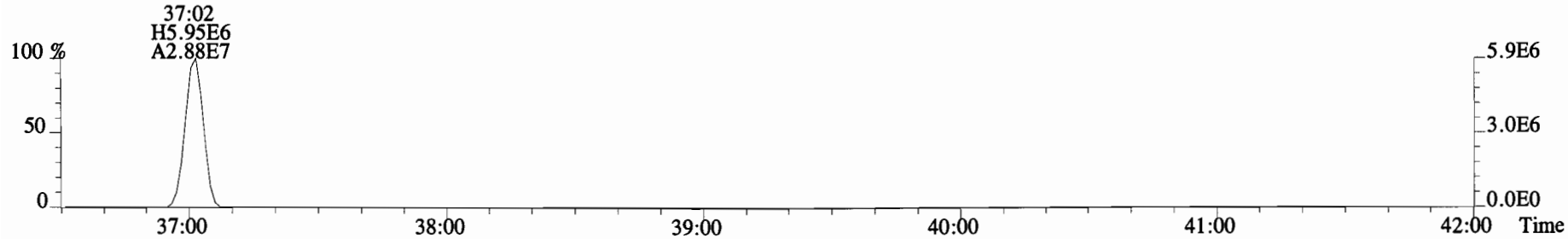
File:150318E1 #1-758 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1768.0,0.00%,F,F)



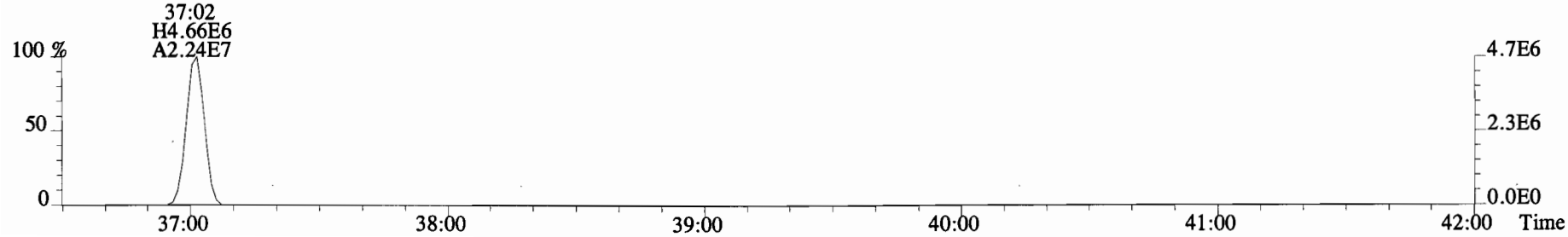
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1776.0,0.00%,F,F)



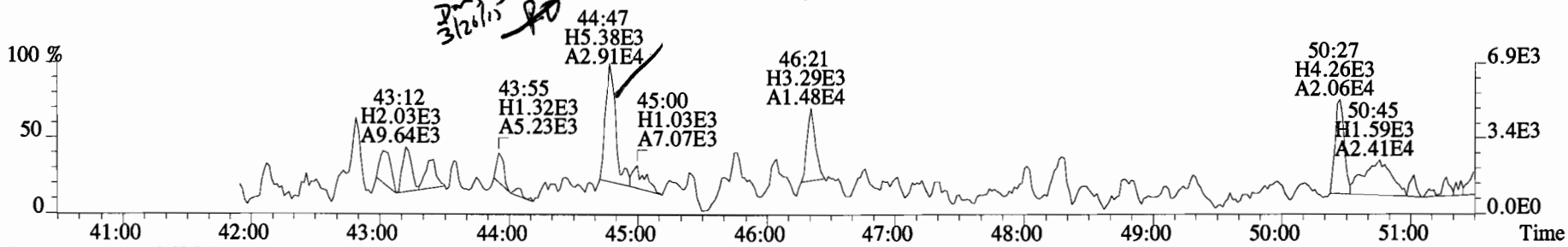
371.8817 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1852.0,0.00%,F,F)



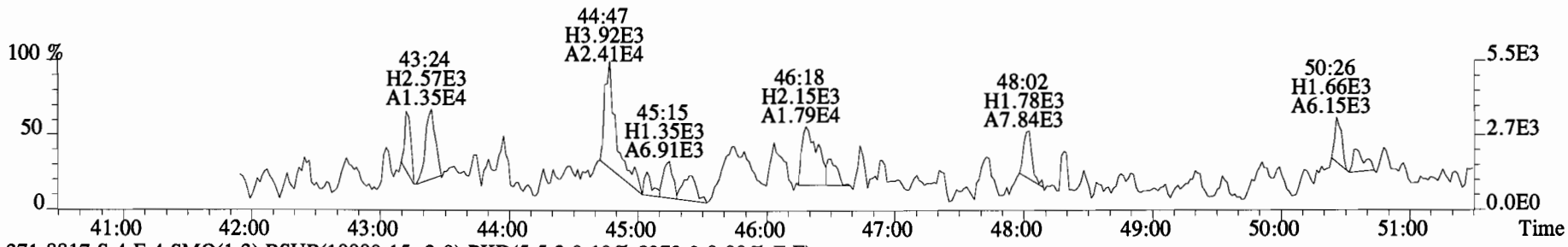
373.8788 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



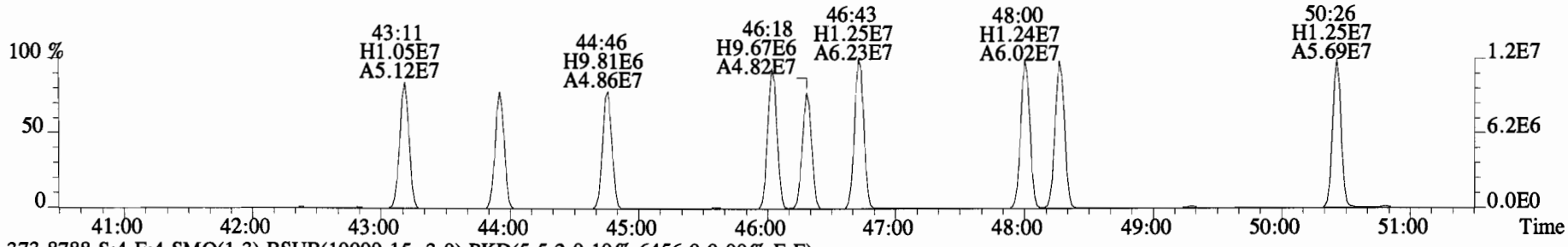
File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1592.0,0.00%,F,F)



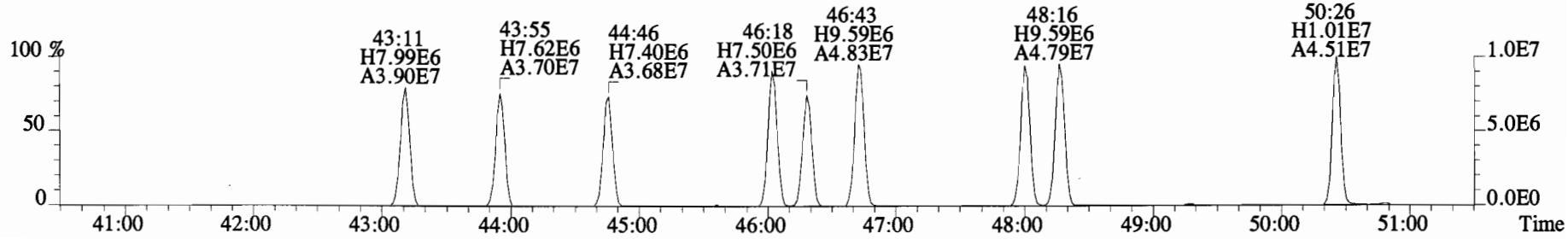
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1536.0,0.00%,F,F)



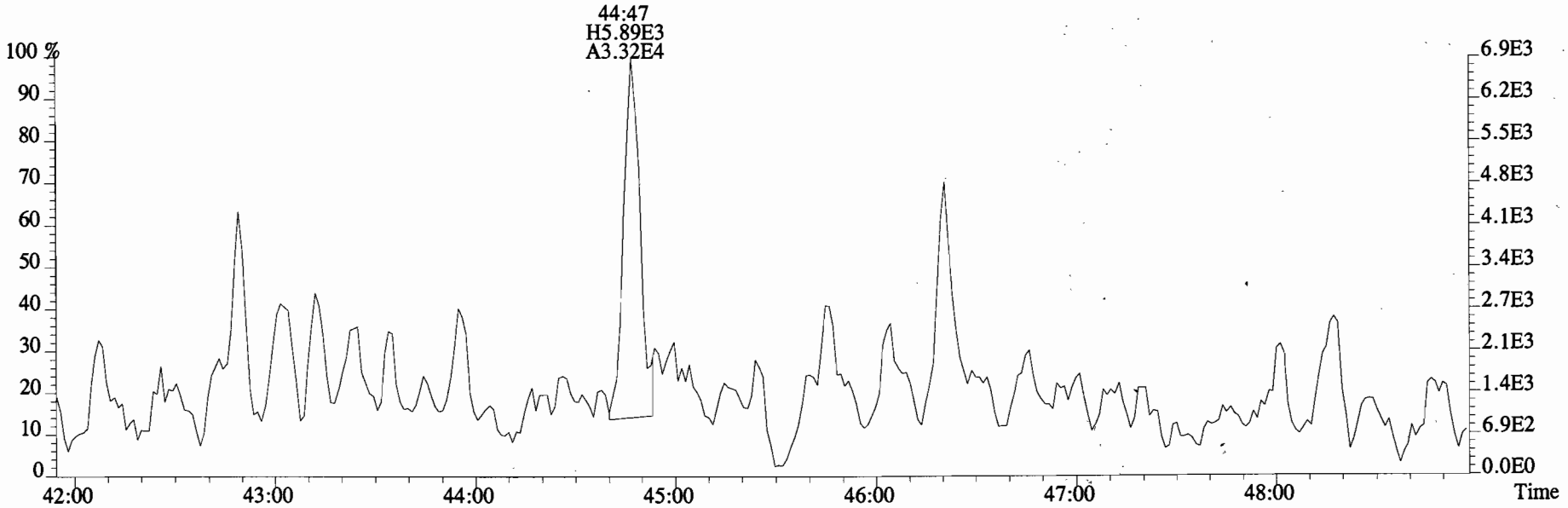
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8372.0,0.00%,F,F)



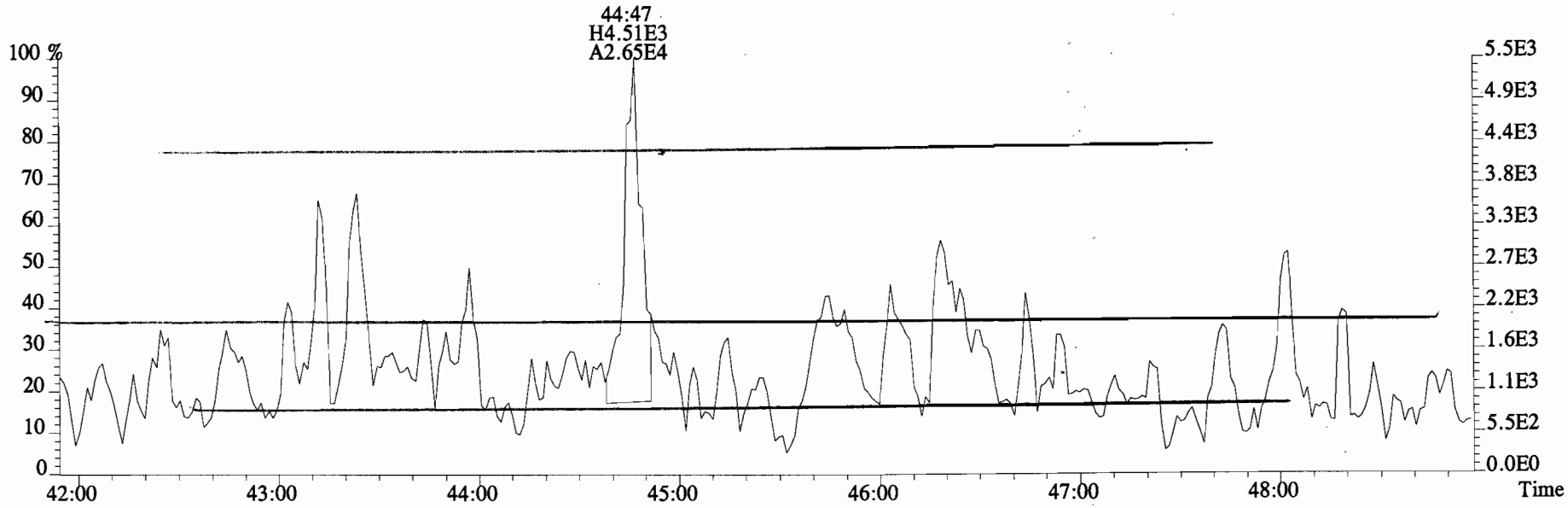
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6456.0,0.00%,F,F)



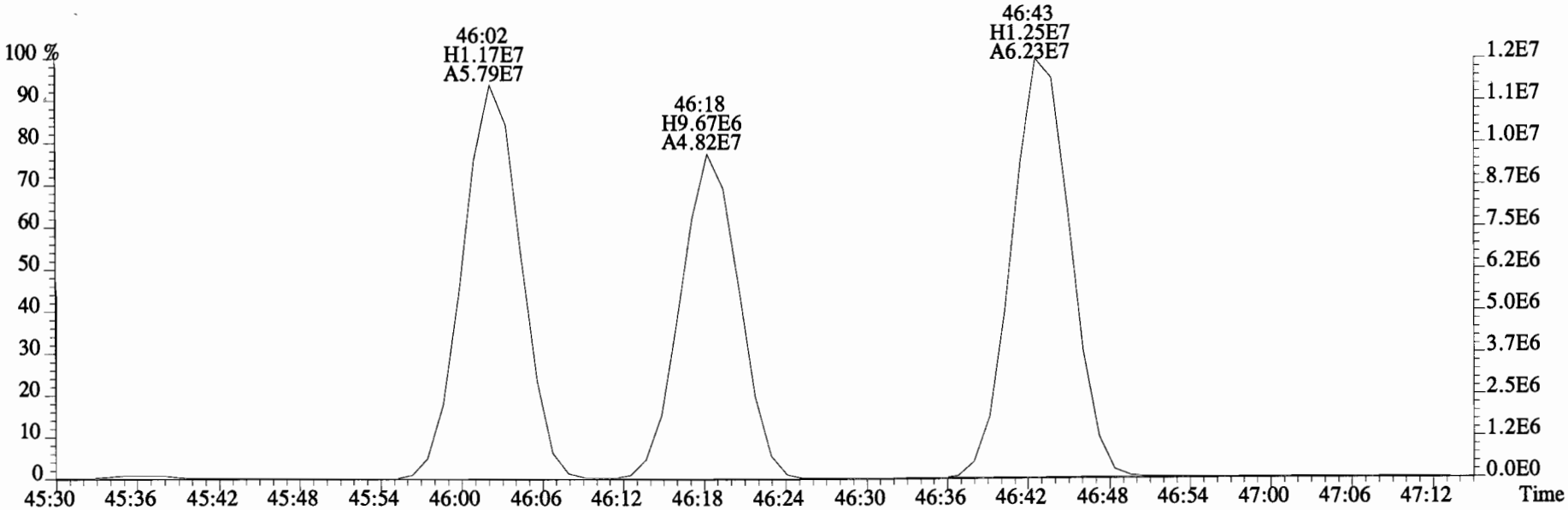
File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1592.0,0.00%,F,F)



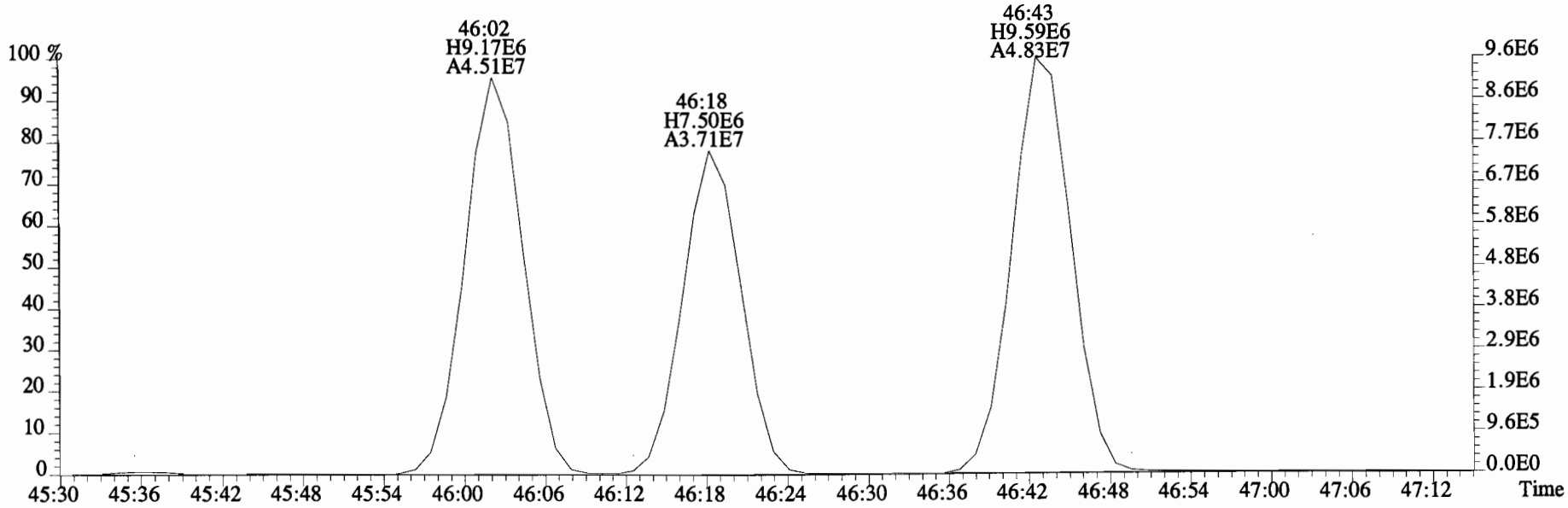
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1536.0,0.00%,F,F)

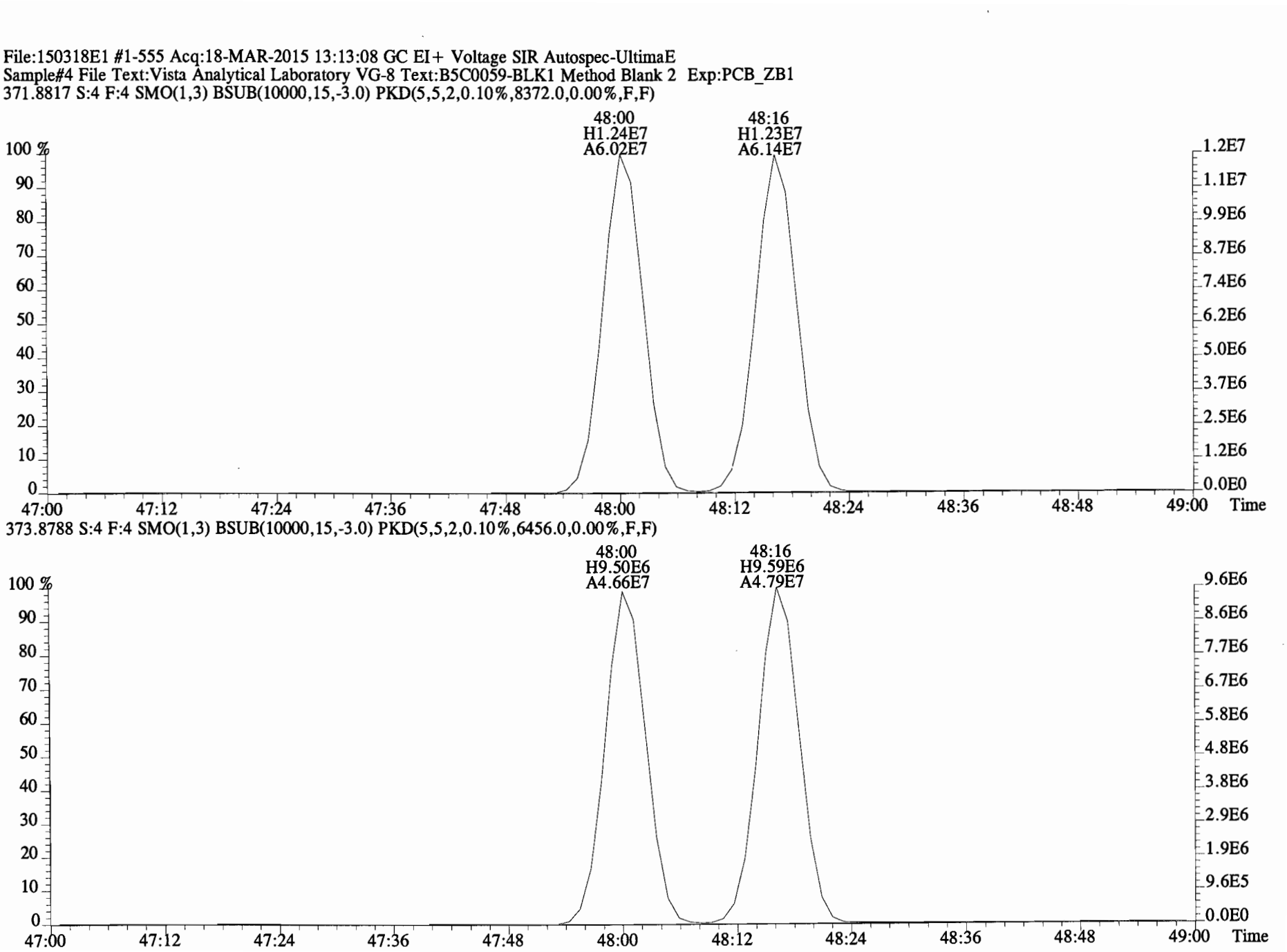


File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8372.0,0.00%,F,F)

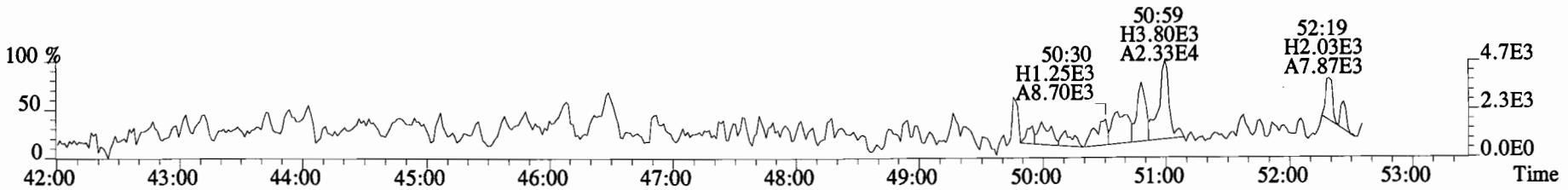


373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6456.0,0.00%,F,F)

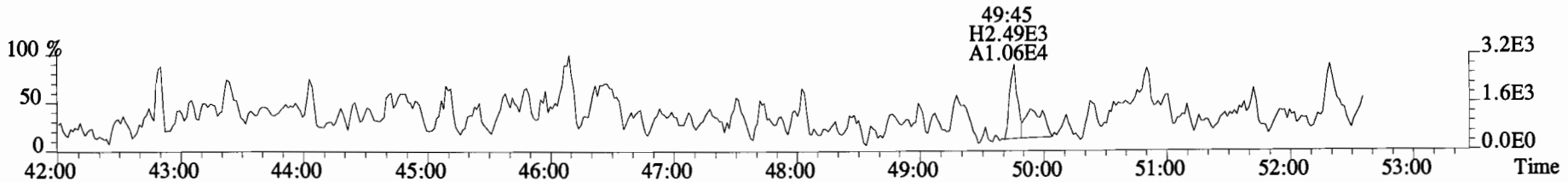



File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8372.0,0.00%,F,F)
48:00
H1.24E7
A6.02E7
48:16
H1.23E7
A6.14E7
100 %
90
80
70
60
50
40
30
20
10
0
1.2E7
1.1E7
9.9E6
8.7E6
7.4E6
6.2E6
5.0E6
3.7E6
2.5E6
1.2E6
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6456.0,0.00%,F,F)
48:00
H9.50E6
A4.66E7
48:16
H9.59E6
A4.79E7
100 %
90
80
70
60
50
40
30
20
10
0
9.6E6
8.6E6
7.7E6
6.7E6
5.8E6
4.8E6
3.8E6
2.9E6
1.9E6
9.6E5
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time

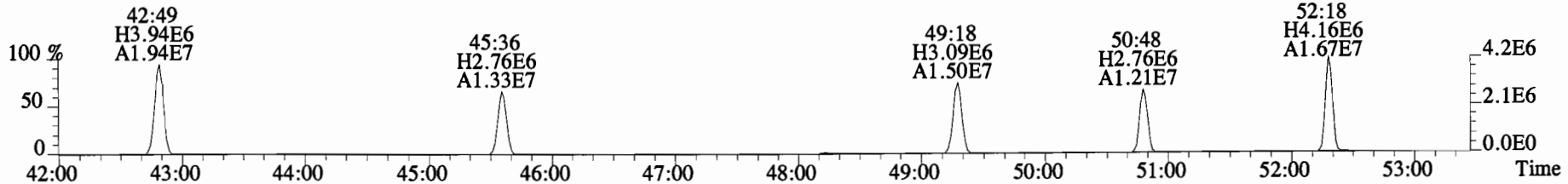
File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



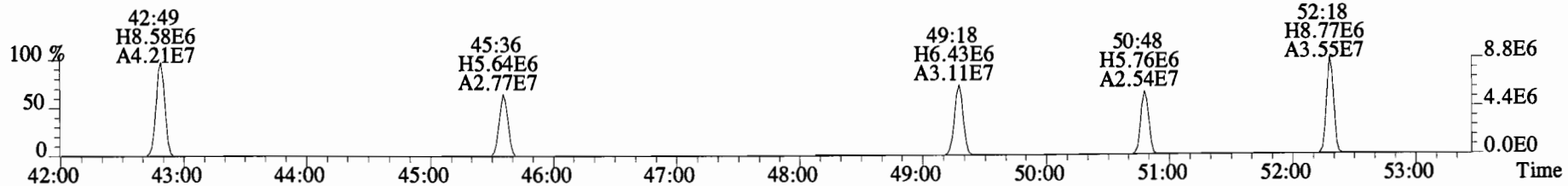
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1400.0,0.00%,F,F)



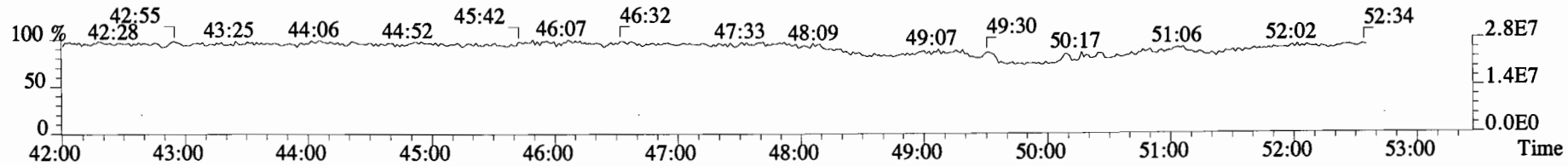
403.8457 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2860.0,0.00%,F,F)



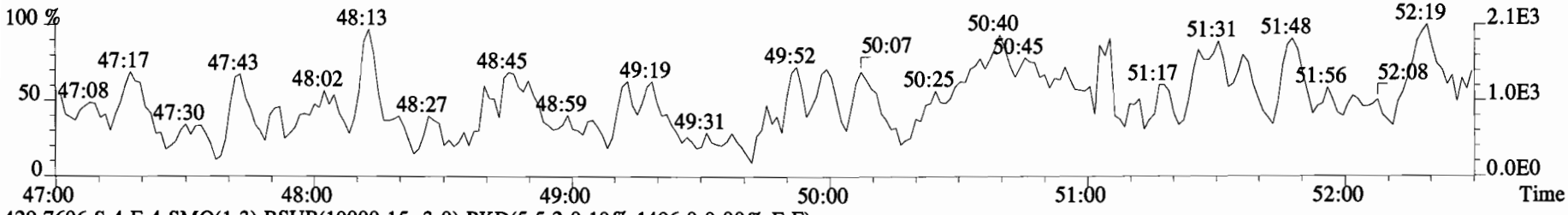
405.8428 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4964.0,0.00%,F,F)



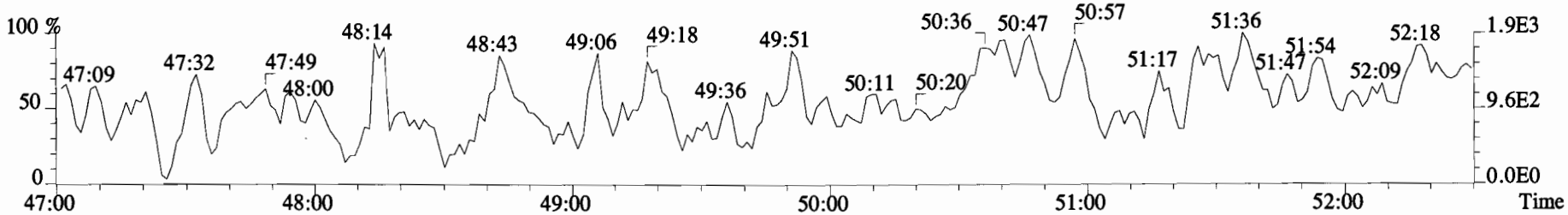
380.9760 S:4 F:4



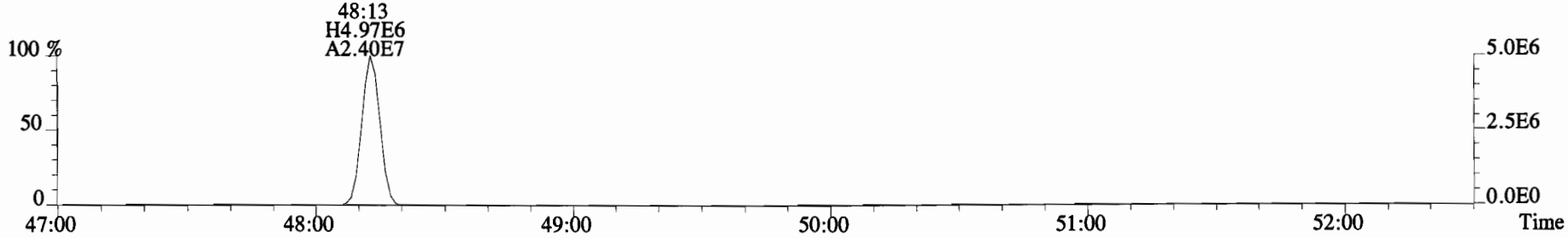
File:150318E1 #1-555 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1400.0,0.00%,F,F)



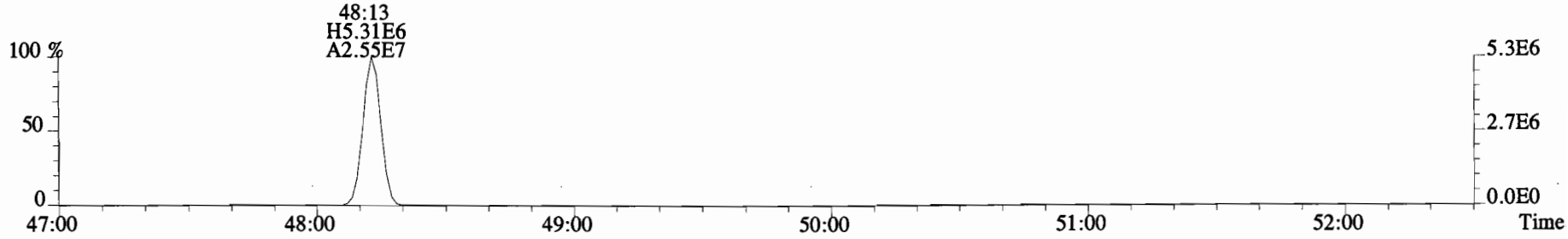
429.7606 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



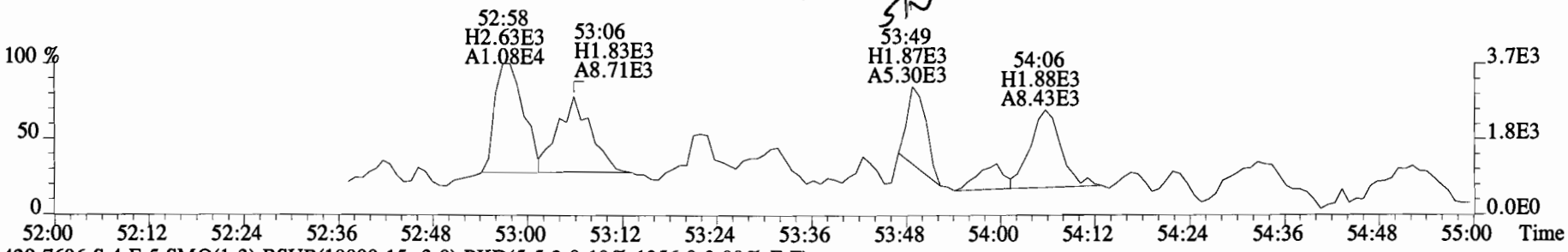
439.8038 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1576.0,0.00%,F,F)



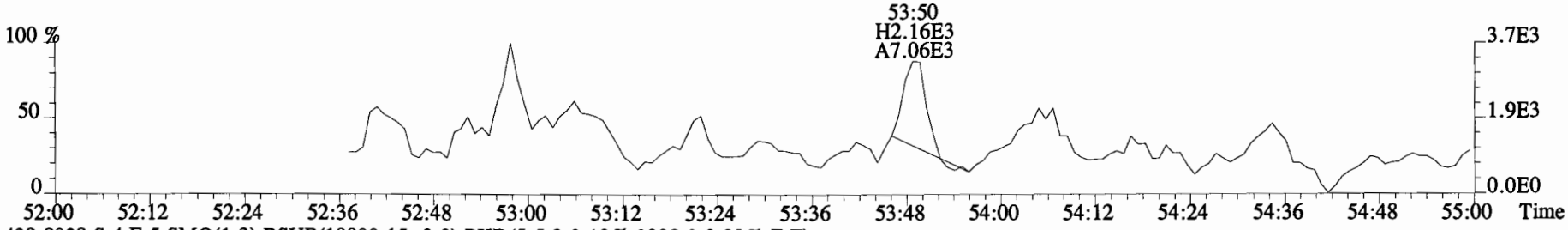
441.8008 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2268.0,0.00%,F,F)



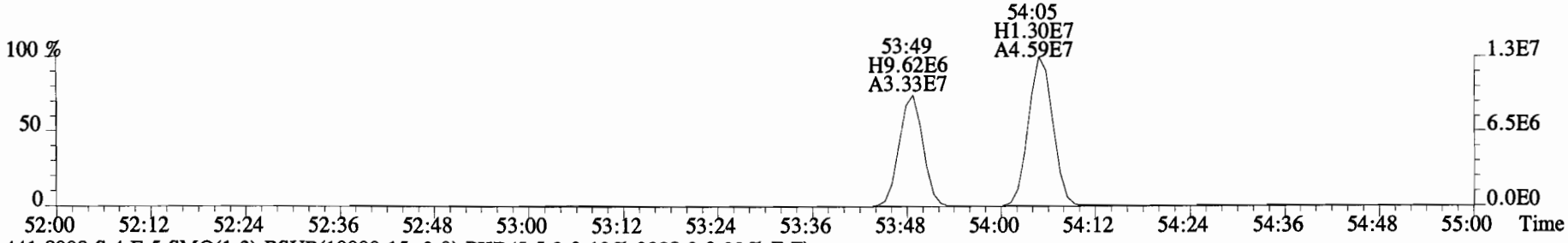
File:150318E1 #1-429 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1228.0,0.00%,F,F)



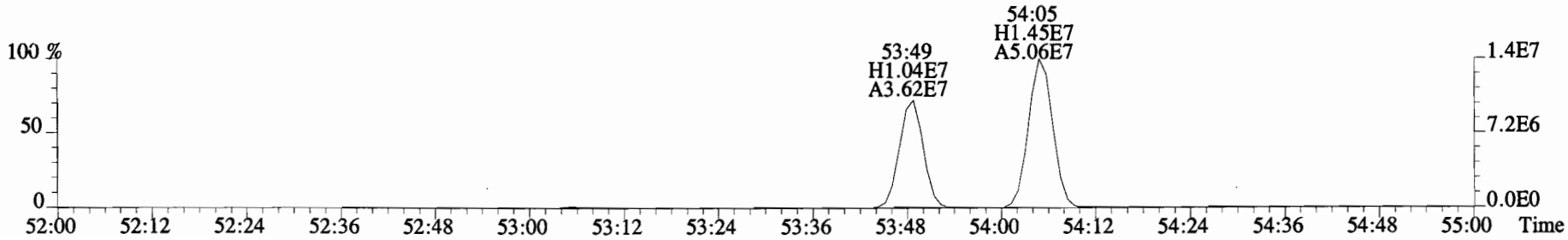
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1356.0,0.00%,F,F)



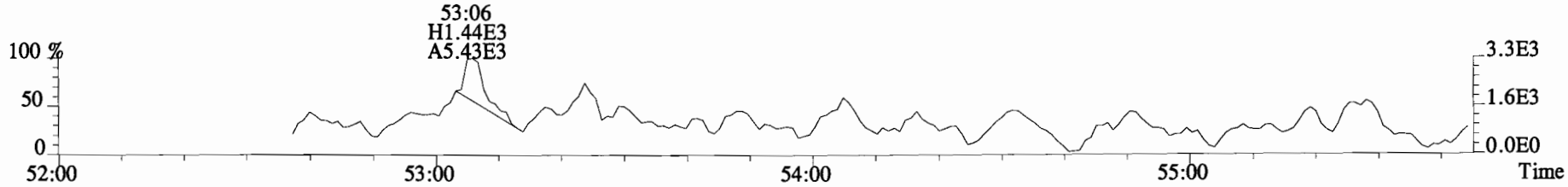
439.8038 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3008.0,0.00%,F,F)



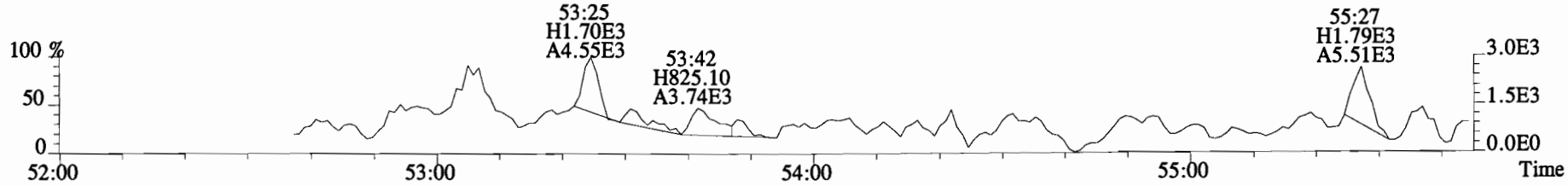
441.8008 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3288.0,0.00%,F,F)



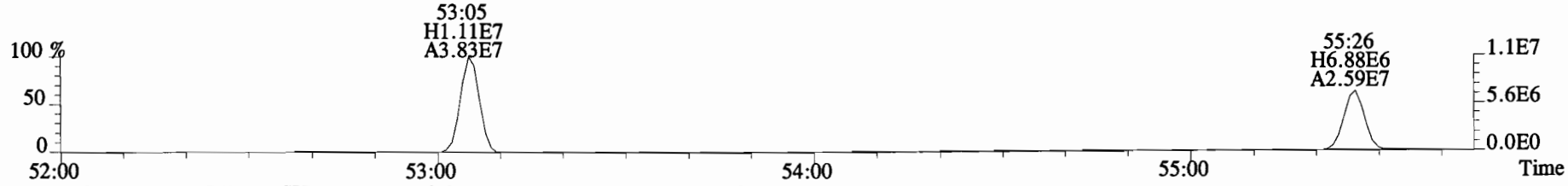
File:150318E1 #1-429 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1432.0,0.00%,F,F)



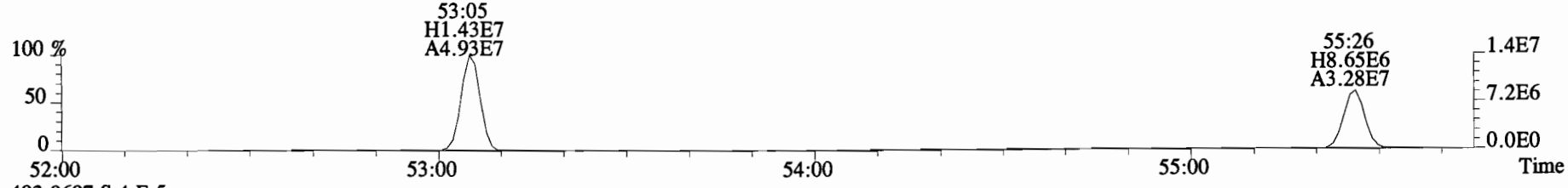
465.7186 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1196.0,0.00%,F,F)



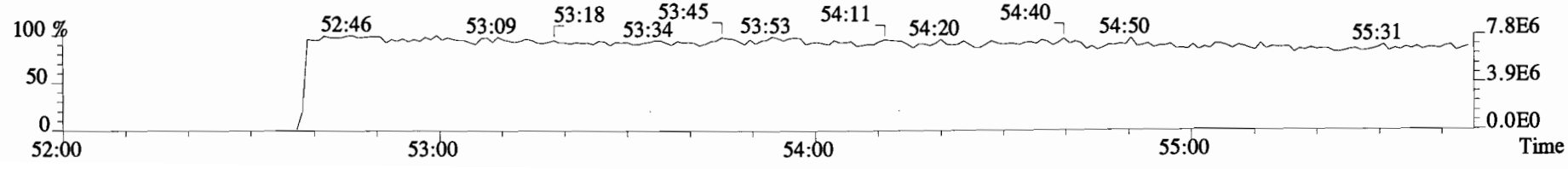
473.7648 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,9644.0,0.00%,F,F)



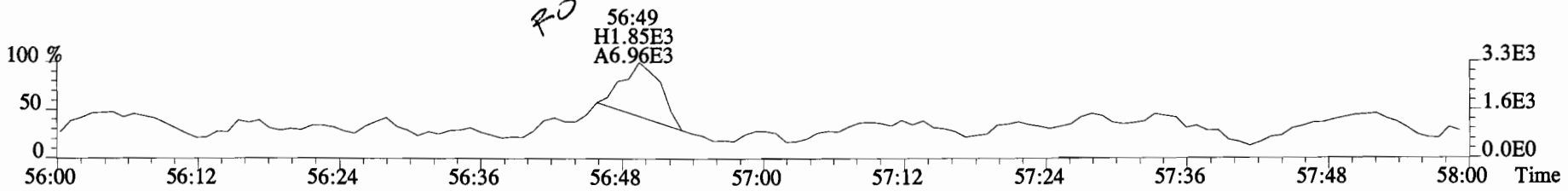
475.7619 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12168.0,0.00%,F,F)



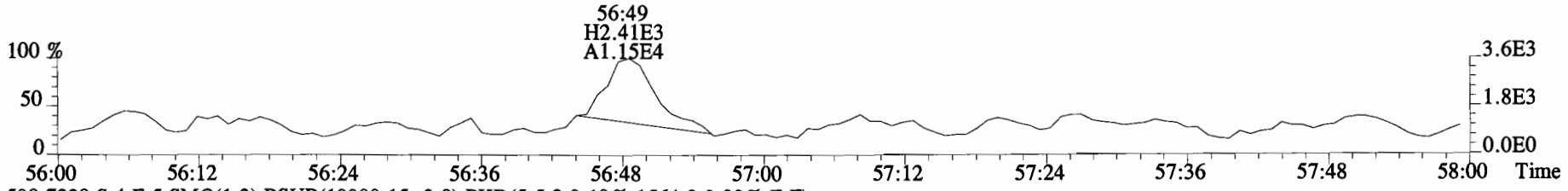
492.9697 S:4 F:5



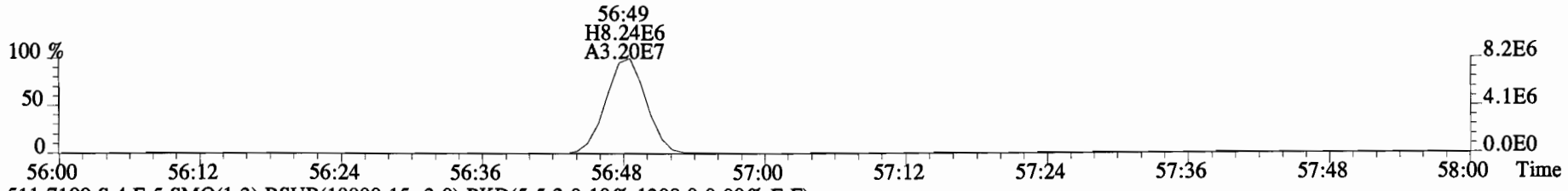
File:150318E1 #1-429 Acq:18-MAR-2015 13:13:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BLK1 Method Blank 2 Exp:PCB_ZB1
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1228.0,0.00%,F,F)



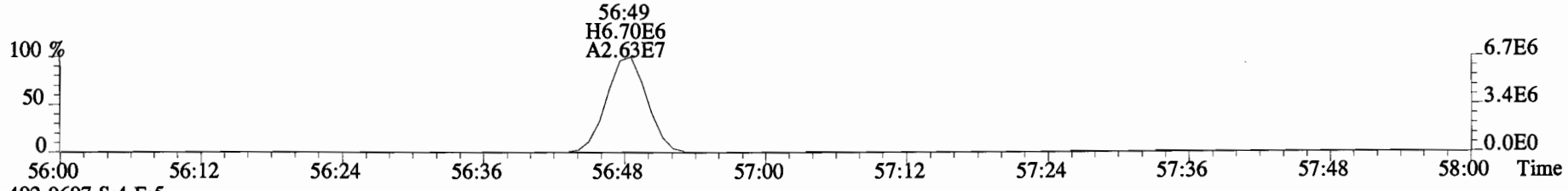
499.6797 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1260.0,0.00%,F,F)



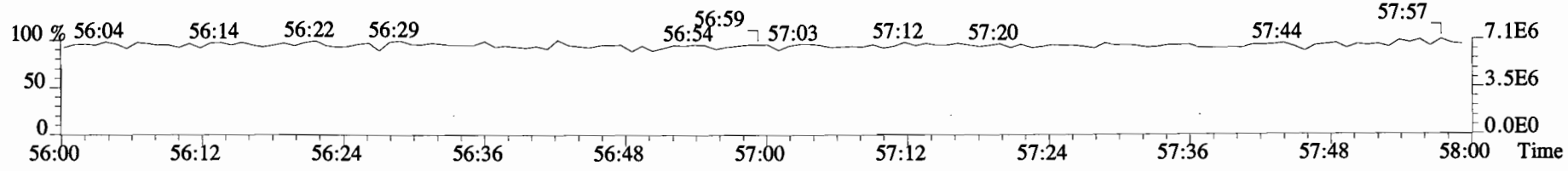
509.7229 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1564.0,0.00%,F,F)



511.7199 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1308.0,0.00%,F,F)



492.9697 S:4 F:5



EPA METHOD 1668A PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B5C0059-BS1

Matrix : SOLID Ext. Date: 3-12-15 Analysis Date: 18-MAR-15 Time: 11:04:10

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	44.3	25.0-75.0	13C-PCB-1	100	71.4	15-140	13C-PCB-79	100	92.9	40-125
PCB-3	50	43.9	25.0-75.0	13C-PCB-3	100	77.6	15-140	13C-PCB-178	100	85.4	40-125
PCB-4/10	200	214.2	100-300	13C-PCB-4	100	68.7	30-140				
PCB-15	100	105.1	50.0-150	13C-PCB-11	100	79.4	30-140				
PCB-19	50	53.3	25.0-75.0	13C-PCB-19	100	76.1	30-140				
PCB-37	50	57.7	25.0-75.0	13C-PCB-37	100	108.3	30-140				
PCB-54	50	52.6	25.0-75.0	13C-PCB-54	100	70.9	30-140				
PCB-81	50	53.3	25.0-75.0	13C-PCB-81	100	94.8	30-140				
PCB-77	50	54.2	25.0-75.0	13C-PCB-77	100	96.2	30-140				
PCB-104	50	58.6	25.0-75.0	13C-PCB-104	100	81.3	30-140				
PCB-123	50	55.5	25.0-75.0	13C-PCB-123	100	98.1	30-140				
PCB-106/118	100	111.6	50.0-150	13C-PCB-118	100	97.8	30-140				
PCB-114	50	52.3	25.0-75.0	13C-PCB-114	100	101.9	30-140				
PCB-105	50	53.5	25.0-75.0	13C-PCB-105	100	104.4	30-140				
PCB-126	50	57.6	25.0-75.0	13C-PCB-126	100	106.9	30-140				
PCB-155	50	55.7	25.0-75.0	13C-PCB-155	100	73.4	30-140				
PCB-167	50	55.5	25.0-75.0	13C-PCB-167	100	95.5	30-140				
PCB-156	50	52.6	25.0-75.0	13C-PCB-156	100	103.7	30-140				
PCB-157	50	51.3	25.0-75.0	13C-PCB-157	100	102.6	30-140				
PCB-169	50	52.2	25.0-75.0	13C-PCB-169	100	108.0	30-140				
PCB-188	50	56.0	25.0-75.0	13C-PCB-188	100	82.0	30-140				
PCB-189	50	54.5	25.0-75.0	13C-PCB-189	100	93.0	30-140				
PCB-202	50	54.4	25.0-75.0	13C-PCB-202	100	76.2	30-140				
PCB-205	50	54.7	25.0-75.0	13C-PCB-194	100	91.0	30-140				
PCB-208	50	55.5	25.0-75.0	13C-PCB-208	100	81.3	30-140				
PCB-206	50	54.5	25.0-75.0	13C-PCB-206	100	93.1	30-140				
PCB-209	50	55.8	25.0-75.0	13C-PCB-209	100	99.4	30-140				

Analyst: DMS

Date: 3/26/15

Client ID: OPR Filename: 150318E1 S:2 Acq:18-MAR-15 11:04:10 ConCal: ST150318E1-1
Lab ID: B5C0059-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	6.56e+07	2.95	y	1.19	16:10	1.001	0.996	1.006	44.3329
	PCB-2	7.64e+07	2.93	y	1.18	18:33	0.988	0.984	0.994	45.7983
	PCB-3	8.81e+07	2.94	y	1.43	18:47	1.001	0.996	1.006	43.8619
	PCB-4/10	2.69e+08	1.64	y	1.57	20:09	1.003	0.997	1.007	214.214
	PCB-7/9	3.44e+08	1.62	y	1.21	21:55	0.868	0.866	0.874	216.633
	PCB-6	1.79e+08	1.66	y	1.30	22:33	0.893	0.890	0.899	104.297
	PCB-5/8	3.26e+08	1.60	y	1.15	22:59	0.910	0.907	0.917	215.934
	PCB-14	1.73e+08	1.65	y	1.11	24:04	0.953	0.949	0.959	105.160
	PCB-11	1.73e+08	1.64	y	1.09	25:15	1.000	0.995	1.005	107.340
	PCB-12/13	3.75e+08	1.62	y	1.19	25:39	1.016	1.011	1.021	211.965
	PCB-15	2.00e+08	1.62	y	1.28	25:58	1.028	1.023	1.033	105.125
	PCB-19	4.48e+07	1.07	y	1.04	24:15	1.001	0.996	1.006	53.2984
	PCB-30	7.67e+07	1.07	y	1.71	25:08	1.038	1.032	1.042	55.6966
	PCB-18	5.51e+07	1.07	y	0.78	25:53	0.954	0.949	0.959	56.0155
	PCB-17	6.42e+07	1.07	y	0.92	26:03	0.960	0.956	0.966	55.2996
	PCB-24/27	1.70e+08	1.06	y	1.19	26:38	0.982	0.977	0.987	113.820
-	PCB-16/32	1.33e+08	1.07	y	0.94	27:08	1.000	0.995	1.005	112.284
-	PCB-34	8.56e+07	1.10	y	1.14	27:56	0.960	0.955	0.965	54.0460
	PCB-23	8.98e+07	1.12	y	1.28	28:02	0.964	0.959	0.969	50.3368
	PCB-29	7.92e+07	1.11	y	1.08	28:17	0.972	0.967	0.977	52.6153
	PCB-26	9.23e+07	1.11	y	1.21	28:29	0.979	0.974	0.984	54.8559
	PCB-25	1.03e+08	1.10	y	1.26	28:39	0.985	0.979	0.989	58.5281
	PCB-31	9.31e+07	1.12	y	1.28	29:00	0.997	0.992	1.002	51.9803
	PCB-28	1.35e+08	1.12	y	1.71	29:07	1.001	0.995	1.005	56.3554
	PCB-20/21/33	2.72e+08	1.10	y	1.08	29:43	1.022	1.017	1.027	180.070
	PCB-22	1.03e+08	1.10	y	1.21	30:09	1.037	1.032	1.042	60.8617
	PCB-36	9.17e+07	1.10	y	1.14	30:47	0.934	0.928	0.938	55.5429
	PCB-39	8.94e+07	1.08	y	1.12	31:14	0.948	0.943	0.953	55.4319
	PCB-38	9.26e+07	1.11	y	1.20	32:00	0.971	0.966	0.976	53.3517
	PCB-35	1.07e+08	1.09	y	1.23	32:32	0.987	0.982	0.992	59.8731
	PCB-37	1.03e+08	1.09	y	1.23	32:58	1.001	0.995	1.005	57.6925
	PCB-54	6.15e+07	0.77	y	1.10	28:00	1.001	0.996	1.006	52.5863
	PCB-50	5.03e+07	0.80	y	0.88	29:09	1.042	1.037	1.047	53.8631
	PCB-53	5.13e+07	0.80	y	1.06	29:48	0.946	0.942	0.952	50.6060
	PCB-51	4.93e+07	0.79	y	0.99	30:08	0.957	0.952	0.962	52.2804
	PCB-45	4.44e+07	0.78	y	0.86	30:34	0.970	0.966	0.976	54.0149
	PCB-46	4.27e+07	0.80	y	0.85	31:04	0.986	0.981	0.991	53.0577

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.32e+08	0.85	y	1.28	31:32	1.001	0.996	1.006	108.411
PCB-73	7.21e+07	0.69	y	1.35	31:39	1.005	1.000	1.010	55.9302
PCB-43/49	1.02e+08	0.79	y	0.99	31:49	1.010	1.005	1.015	107.914
PCB-47	5.46e+07	0.78	y	1.06	32:01	1.001	0.996	1.006	51.0263
PCB-48/75	1.37e+08	0.79	y	1.23	32:08	1.004	0.999	1.009	110.250
PCB-65	7.21e+07	0.79	y	1.22	32:24	1.012	1.008	1.018	58.1930
PCB-62	6.38e+07	0.81	y	1.22	32:31	1.016	1.011	1.021	51.6651
PCB-44	4.85e+07	0.79	y	0.86	32:48	1.025	1.021	1.031	55.7079
PCB-42/59	1.35e+08	0.78	y	1.14	33:02	1.032	1.028	1.038	117.332
PCB-41/64/71/72	2.92e+08	0.78	y	1.21	33:37	1.051	1.046	1.056	239.315
PCB-68	8.31e+07	0.78	y	1.35	33:53	1.059	1.054	1.064	60.9901
PCB-40	4.36e+07	0.77	y	0.70	34:05	1.065	1.061	1.071	61.5200
PCB-57	7.52e+07	0.77	y	0.98	34:27	0.970	0.965	0.975	55.2683
PCB-67	7.65e+07	0.78	y	1.11	34:45	0.979	0.974	0.984	49.7854
PCB-58	7.28e+07	0.77	y	0.93	34:52	0.982	0.977	0.987	56.5267
PCB-63	6.93e+07	0.80	y	0.95	35:01	0.986	0.982	0.992	52.3874
PCB-74	9.01e+07	0.77	y	1.24	35:19	0.995	0.990	1.000	52.1387
PCB-61/70	1.46e+08	0.78	y	0.95	35:29	1.000	0.995	1.005	110.176
PCB-76/66	1.51e+08	0.77	y	1.04	35:42	1.006	1.001	1.011	104.004
PCB-80	9.64e+07	0.78	y	1.19	35:57	1.001	0.996	1.006	56.8025
PCB-55	8.32e+07	0.77	y	1.04	36:16	1.010	1.005	1.015	56.1112
PCB-56/60	1.67e+08	0.78	y	1.01	36:45	1.023	1.019	1.029	116.242
PCB-79	8.84e+07	0.79	y	1.08	37:49	1.053	1.048	1.058	57.4862
PCB-78	8.79e+07	0.78	y	1.27	38:30	0.987	0.982	0.992	51.3574
PCB-81	9.56e+07	0.77	y	1.33	39:02	1.000	0.995	1.005	53.3138
PCB-77	8.34e+07	0.79	y	1.10	39:37	1.000	0.995	1.005	54.1783
PCB-104	4.59e+07	1.62	y	1.18	32:40	1.001	0.996	1.006	58.6110
PCB-96	4.52e+07	1.63	y	1.14	33:55	1.039	1.034	1.044	60.0477
PCB-103	3.71e+07	1.62	y	0.96	34:27	1.055	1.050	1.060	58.5531
PCB-100	3.74e+07	1.62	y	0.94	34:49	1.066	1.061	1.071	60.2027
PCB-94	3.09e+07	1.63	y	1.06	35:17	0.986	0.980	0.990	55.5773
PCB-95/98/102	1.08e+08	1.63	y	1.22	35:47	1.000	0.995	1.005	168.539
PCB-93	2.78e+07	1.64	y	0.84	35:55	1.003	0.997	1.007	62.7395
PCB-88/91	7.52e+07	1.63	y	1.12	36:12	1.011	1.005	1.015	128.171
PCB-121	4.47e+07	1.59	y	1.62	36:18	1.014	1.009	1.019	52.6017
PCB-84/92	6.86e+07	1.63	y	1.05	37:07	0.990	0.985	0.995	113.755
PCB-89	3.71e+07	1.61	y	1.13	37:18	0.995	0.991	1.001	57.0358

Integrations by Analyst: DMS Date: 3/26/15

Reviewed by Analyst: Date: 3/27/15

Client ID: OPR Filename: 150318E1 S:2 Acq:18-MAR-15 11:04:10 ConCal: ST150318E1-1
Lab ID: B5C0059-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	7.35e+07	1.64 y	1.10	37:29	1.000	0.995	1.005	115.757
PCB-113	4.78e+07	1.61 y	1.41	37:44	1.007	1.002	1.012	58.8248
PCB-99	4.48e+07	1.63 y	1.34	37:49	1.009	1.004	1.014	58.1941
PCB-119	4.57e+07	1.60 y	1.53	38:17	0.988	0.982	0.992	56.1561
PCB-108/112	7.73e+07	1.60 y	1.28	38:26	0.991	0.986	0.996	113.565
PCB-83	4.61e+07	1.64 y	1.52	38:36	0.996	0.990	1.000	57.1144
PCB-97	3.56e+07	1.62 y	1.18	38:47	1.000	0.995	1.005	56.6878
PCB-86	2.46e+07	1.54 y	0.84	38:56	1.004	0.999	1.009	55.0304
B-87/117/125	1.44e+08	1.62 y	1.55	39:03	1.007	1.002	1.012	175.092
PCB-111/115	9.94e+07	1.61 y	1.63	39:13	1.012	1.006	1.016	114.491
PCB-85/116	7.88e+07	1.63 y	1.30	39:21	1.015	1.010	1.020	113.902
PCB-120	5.33e+07	1.61 y	1.68	39:35	1.021	1.016	1.026	59.7850
PCB-110	4.60e+07	1.61 y	1.56	39:44	1.025	1.020	1.030	55.6483
PCB-82	3.02e+07	1.62 y	0.76	40:22	0.977	0.971	0.981	55.8661
PCB-124	5.86e+07	1.61 y	1.47	41:01	0.992	0.988	0.998	55.8658
PCB-107/109	1.07e+08	1.63 y	1.32	41:10	0.996	0.991	1.001	113.505
PCB-123	4.62e+07	1.64 y	1.17	41:21	1.000	0.996	1.006	55.4815
- PCB-106/118	9.97e+07	1.63 y	1.17	41:33	1.001	0.996	1.006	111.566
PCB-114	7.33e+07	1.57 y	1.30	42:11	1.000	0.995	1.005	52.3367
56 PCB-122	6.78e+07	1.62 y	1.12	42:19	1.004	0.999	1.009	56.0637
PCB-105	7.69e+07	1.55 y	1.30	43:03	1.000	0.995	1.005	53.4848
PCB-127	8.72e+07	1.66 y	1.33	43:23	1.000	0.996	1.006	55.4493
PCB-126	7.39e+07	1.66 y	1.18	45:16	1.000	0.995	1.005	57.6102
PCB-155	3.10e+07	1.32 y	1.11	37:03	1.000	0.966	1.006	55.6635
PCB-150	2.85e+07	1.29 y	1.00	38:18	1.034	1.030	1.040	57.0168
PCB-152	3.17e+07	1.30 y	1.12	38:47	1.047	1.043	1.053	56.7571
PCB-145	3.55e+07	1.27 y	1.20	39:13	1.059	1.055	1.065	59.0929
PCB-136	3.42e+07	1.27 y	1.18	39:33	1.068	1.064	1.074	57.8959
PCB-148	2.12e+07	1.32 y	0.74	39:39	1.071	1.066	1.076	56.8225
PCB-154	2.58e+07	1.28 y	0.86	40:08	1.084	1.080	1.090	60.0448
PCB-151	2.22e+07	1.27 y	0.75	40:47	1.101	1.097	1.107	59.3995
PCB-135	2.29e+07	1.26 y	0.79	40:59	1.107	1.103	1.113	57.7140
PCB-144	2.48e+07	1.31 y	0.76	41:06	1.110	1.105	1.117	65.0829
PCB-147	2.47e+07	1.30 y	0.82	41:14	1.113	1.109	1.121	60.1736
PCB-139/149	4.67e+07	1.27 y	0.76	41:30	1.121	1.116	1.128	122.419
- PCB-140	2.24e+07	1.30 y	0.72	41:41	1.126	1.121	1.133	61.8581
- PCB-134/143	8.06e+07	1.24 y	0.92	42:06	0.975	0.970	0.980	101.902

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	7.24e+07	1.25 y	0.82	42:25	0.982	0.977	0.987	102.475
PCB-131	4.00e+07	1.26 y	0.91	42:34	0.986	0.981	0.991	51.0487
PCB-146/165	1.11e+08	1.23 y	1.25	42:47	0.991	0.986	0.996	103.533
PCB-132/161	9.95e+07	1.24 y	1.10	43:02	0.997	0.992	1.002	104.386
PCB-153	5.25e+07	1.26 y	1.25	43:12	1.000	0.995	1.005	48.8010
PCB-168	6.34e+07	1.26 y	1.45	43:25	1.005	1.001	1.011	50.7623
PCB-141	4.41e+07	1.23 y	1.09	43:56	1.000	0.995	1.005	51.8815
PCB-137	4.47e+07	1.21 y	1.06	44:19	1.009	1.004	1.014	53.8073
PCB-130	4.18e+07	1.28 y	0.96	44:25	1.011	1.006	1.016	55.3642
PCB-138/163/164	1.62e+08	1.24 y	1.29	44:48	1.001	0.996	1.006	155.397
PCB-158/160	1.19e+08	1.26 y	1.34	45:02	1.006	1.001	1.011	109.828
PCB-129	3.68e+07	1.24 y	0.85	45:17	1.012	1.007	1.017	53.5715
PCB-166	5.98e+07	1.27 y	1.19	45:44	0.993	0.988	0.998	52.3002
PCB-159	5.51e+07	1.30 y	1.11	46:03	1.000	0.996	1.006	51.3802
PCB-128/162	9.94e+07	1.26 y	1.05	46:21	1.007	1.002	1.012	98.4926
PCB-167	6.68e+07	1.27 y	1.20	46:44	1.000	0.995	1.005	55.4819
PCB-156	6.24e+07	1.23 y	1.14	48:01	1.000	0.996	1.006	52.5926
PCB-157	6.46e+07	1.24 y	1.16	48:17	1.000	0.995	1.005	51.2576
PCB-169	6.30e+07	1.24 y	1.12	50:27	1.000	0.995	1.005	52.1999
PCB-188	5.18e+07	1.06 y	1.58	42:50	1.000	0.996	1.006	56.0132
PCB-184	5.44e+07	1.07 y	1.63	43:17	1.011	1.006	1.016	56.9834
PCB-179	4.34e+07	1.08 y	1.30	44:04	1.029	1.024	1.034	56.8839
PCB-176	4.98e+07	1.07 y	1.48	44:32	1.040	1.035	1.045	57.6163
PCB-186	4.81e+07	1.06 y	1.45	45:08	1.054	1.050	1.060	56.5805
PCB-178	3.47e+07	1.07 y	1.03	45:38	1.066	1.061	1.071	57.3100
PCB-175	3.54e+07	1.12 y	1.01	45:58	1.074	1.069	1.079	59.7182
PCB-182/187	8.36e+07	1.07 y	1.25	46:09	1.078	1.073	1.083	114.153
PCB-183	3.98e+07	1.07 y	1.21	46:28	1.085	1.081	1.091	56.3171
PCB-185	4.71e+07	1.09 y	1.80	47:07	0.956	0.951	0.961	58.1742
PCB-174	3.88e+07	1.07 y	1.38	47:29	0.963	0.958	0.968	62.6333
PCB-181	3.53e+07	1.06 y	1.38	47:35	0.965	0.960	0.970	56.8317
PCB-177	3.33e+07	1.08 y	1.26	47:45	0.969	0.963	0.973	59.0280
PCB-171	4.08e+07	1.07 y	1.58	48:02	0.974	0.970	0.980	57.2909
PCB-173	2.99e+07	1.08 y	1.11	48:28	0.983	0.978	0.988	59.9705
PCB-172	4.25e+07	1.07 y	1.63	48:54	0.992	0.987	0.997	57.7963
PCB-192	4.72e+07	1.08 y	1.74	49:07	0.996	0.991	1.001	60.3577
PCB-180	3.48e+07	1.07 y	1.34	49:19	1.000	0.995	1.005	57.5674

Integrations by Analyst: DMS

Date: 3/26/15

Client ID: OPR Filename: 150318E1 S:2 Acq:18-MAR-15 11:04:10 ConCal: ST150318E1-1
Lab ID: B5C0059-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	4.39e+07	1.07	y	1.72	49:31	1.004	0.999	1.009	56.9376
	PCB-191	4.37e+07	1.08	y	1.69	49:46	1.009	1.004	1.014	57.4190
	PCB-170	3.33e+07	1.06	y	1.60	50:49	1.000	0.995	1.005	55.8341
	PCB-190	4.68e+07	1.08	y	2.21	50:59	1.004	0.998	1.008	56.7720
	PCB-189	4.38e+07	1.06	y	1.55	52:19	1.000	0.995	1.005	54.5394
	PCB-202	2.92e+07	0.93	y	1.08	48:15	1.000	0.995	1.005	54.3576
	PCB-201	3.12e+07	0.93	y	1.15	48:44	1.010	1.005	1.015	54.7255
	PCB-204	3.03e+07	0.91	y	1.14	48:53	1.013	1.008	1.018	53.7005
	PCB-197	2.85e+07	0.92	y	1.07	49:11	1.020	1.015	1.025	53.4912
	PCB-200	2.90e+07	0.90	y	1.06	50:04	1.038	1.032	1.044	54.9869
	PCB-198	2.20e+07	0.90	y	0.76	51:25	1.066	1.059	1.069	58.7756
	PCB-199	2.20e+07	0.93	y	0.80	51:31	1.068	1.061	1.071	55.6406
-	PCB-196/203	4.63e+07	0.92	y	0.80	51:47	1.074	1.066	1.076	116.450
-	PCB-195	4.21e+07	0.93	y	1.23	52:57	0.984	0.979	0.989	49.7405
	PCB-194	4.22e+07	0.92	y	1.21	53:49	1.000	0.995	1.005	50.4719
	PCB-205	5.82e+07	0.93	y	1.54	54:06	1.006	1.001	1.011	54.6963
	PCB-208	4.32e+07	1.35	y	0.93	53:06	1.000	0.995	1.005	55.4948
	PCB-207	5.30e+07	1.36	y	1.08	53:25	1.006	1.001	1.011	58.4694
	PCB-206	3.21e+07	1.36	y	1.02	55:26	1.000	0.995	1.005	54.5313
	PCB-209	3.77e+07	1.19	y	1.17	56:48	1.000	0.995	1.005	55.7969

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.30e+08	2.95	y	16:10	1.27	133.993	
Total Di-PCB	2.04e+09	1.64	y	20:09	1.21	1283.61	
Total Tri-PCB	5.44e+08	1.07	y	24:15	1.10	446.413	
Total Tri-PCB	1.55e+09	1.10	y	27:56	1.21	909.631	Sum:1356.04
Total Tetra-PCB	2.93e+09	0.77	y	28:00	1.09	2331.39	
Total Penta-PCB	1.72e+09	1.62	y	32:40	1.18	2361.37	
Total Penta-PCB	4.00e+08	1.57	y	42:11	1.25	289.900	Sum:2651.27
Total Hexa-PCB	3.72e+08	1.32	y	37:03	0.90	829.941	
Total Hexa-PCB	1.46e+09	1.24	y	42:06	1.11	1479.42	Sum:2309.36
Total Hepta-PCB	1.01e+09	1.06	y	42:50	1.42	1395.34	
Total Octa-PCB	2.39e+08	0.93	y	48:15	0.96	502.128	
Total Octa-PCB	1.46e+08	0.93	y	52:57	1.33	159.103	Sum:661.230
Total Nona-PCB	1.29e+08	1.35	y	53:06	1.01	169.290	
Total Deca-PCB	3.77e+07	1.19	y	56:48	1.17	55.7969	

Total PCB Conc:12266.8260710

Integrations by Analyst: DMS

Date: 3/26/15

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.24e+08	3.16 y	0.87	16:09	0.622	0.629	0.635	71.4	71.4
13C-PCB-3	1.41e+08	3.27 y	0.91	18:46	0.723	0.725	0.733	77.6	77.6
13C-PCB-4	8.02e+07	1.59 y	0.59	20:05	0.774	0.775	0.783	68.7	68.7
13C-PCB-9	1.31e+08	1.60 y	0.90	21:52	0.843	0.842	0.850	73.6	73.6
13C-PCB-11	1.48e+08	1.55 y	0.94	25:15	0.973	0.968	0.978	79.4	79.4
13C-PCB-19	8.05e+07	1.08 y	0.53	24:13	0.933	0.930	0.940	76.1	76.1
13C-PCB-28	1.40e+08	1.08 y	0.93	29:05	1.003	0.999	1.009	94.1	94.1
13C-PCB-32	1.26e+08	1.10 y	0.80	27:08	1.046	1.040	1.050	79.5	79.5
13C-PCB-37	1.45e+08	1.06 y	0.84	32:57	1.137	1.131	1.143	108	108
13C-PCB-47	1.01e+08	0.78 y	0.81	32:00	0.871	0.866	0.874	80.7	80.7
13C-PCB-52	9.52e+07	0.80 y	0.77	31:30	0.858	0.853	0.861	80.1	80.1
13C-PCB-54	1.06e+08	0.82 y	0.97	27:58	0.761	0.758	0.766	70.9	70.9
13C-PCB-70	1.39e+08	0.82 y	1.00	35:30	0.966	0.961	0.971	90.2	90.3
13C-PCB-77	1.40e+08	0.83 y	0.94	39:36	1.078	1.073	1.083	96.2	96.2
13C-PCB-80	1.42e+08	0.82 y	1.03	35:55	0.978	0.972	0.982	89.5	89.5
13C-PCB-81	1.35e+08	0.82 y	0.92	39:01	1.062	1.057	1.067	94.8	94.8
13C-PCB-95	5.26e+07	1.61 y	0.74	35:48	0.913	0.908	0.918	87.3	87.3
13C-PCB-97	5.32e+07	1.61 y	0.70	38:46	0.989	0.984	0.994	92.8	92.8
13C-PCB-101	5.77e+07	1.63 y	0.78	37:29	0.956	0.951	0.961	90.5	90.5
13C-PCB-104	6.62e+07	1.58 y	1.00	32:39	0.833	0.828	0.836	81.3	81.3
13C-PCB-105	1.11e+08	1.59 y	1.37	43:02	0.929	0.924	0.934	104	104
13C-PCB-114	1.08e+08	1.62 y	1.36	42:10	0.910	0.905	0.915	102	102
13C-PCB-118	7.62e+07	1.58 y	0.96	41:31	1.059	1.054	1.064	97.8	97.8
13C-PCB-123	7.13e+07	1.59 y	0.89	41:20	1.054	1.050	1.060	98.1	98.1
13C-PCB-126	1.09e+08	1.60 y	1.31	45:16	0.977	0.972	0.982	107	107
13C-PCB-127	1.18e+08	1.59 y	1.47	43:22	0.936	0.931	0.941	103	103
13C-PCB-138	8.06e+07	1.30 y	1.10	44:46	0.967	0.961	0.971	94.3	94.3
13C-PCB-141	7.83e+07	1.29 y	1.07	43:55	0.948	0.943	0.953	93.8	93.8
13C-PCB-153	8.62e+07	1.26 y	1.15	43:11	0.932	0.927	0.937	96.8	96.8
13C-PCB-155	5.01e+07	1.27 y	0.84	37:02	0.945	0.939	0.949	73.4	73.4
13C-PCB-156	1.04e+08	1.27 y	1.30	48:01	1.037	1.032	1.042	104	104
13C-PCB-157	1.08e+08	1.29 y	1.36	48:17	1.042	1.038	1.048	103	103
13C-PCB-159	9.64e+07	1.27 y	1.25	46:03	0.994	0.989	0.999	99.5	99.5
13C-PCB-167	1.00e+08	1.28 y	1.35	46:44	1.009	1.004	1.014	95.5	95.5
13C-PCB-169	1.08e+08	1.31 y	1.29	50:26	1.089	1.083	1.093	108	108
13C-PCB-170	3.73e+07	0.46 y	0.54	50:48	1.097	1.089	1.101	88.5	88.5
13C-PCB-180	4.50e+07	0.47 y	0.68	49:18	1.064	1.060	1.070	84.6	84.6
13C-PCB-188	5.85e+07	0.48 y	0.92	42:49	0.924	0.919	0.929	82.0	82.0
13C-PCB-189	5.18e+07	0.46 y	0.72	52:18	1.129	1.120	1.132	93.0	93.0
13C-PCB-194	6.91e+07	0.91 y	0.80	53:48	0.995	0.990	1.000	91.0	91.0
13C-PCB-202	4.96e+07	0.93 y	0.84	48:14	1.041	1.036	1.046	76.2	76.2
13C-PCB-206	5.75e+07	0.79 y	0.65	55:25	1.025	1.021	1.031	93.1	93.1
13C-PCB-208	8.36e+07	0.78 y	1.08	53:05	0.982	0.976	0.986	81.3	81.3
13C-PCB-209	5.77e+07	1.21 y	0.61	56:48	1.050	1.045	1.055	99.4	99.4

OK

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.46e+08	0.81 y	1.02	37:48	1.029	1.023	1.034	92.9	92.9
13C-PCB-178	4.07e+07	0.47 y	0.61	45:36	0.985	0.979	0.990	85.4	85.4

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.46e+08	0.81 y	1.10	37:48	0.969	0.964	0.974	98.0	98.0
13C-PCB-178	4.07e+07	0.47 y	0.90	45:36	0.925	0.920	0.930	101	101

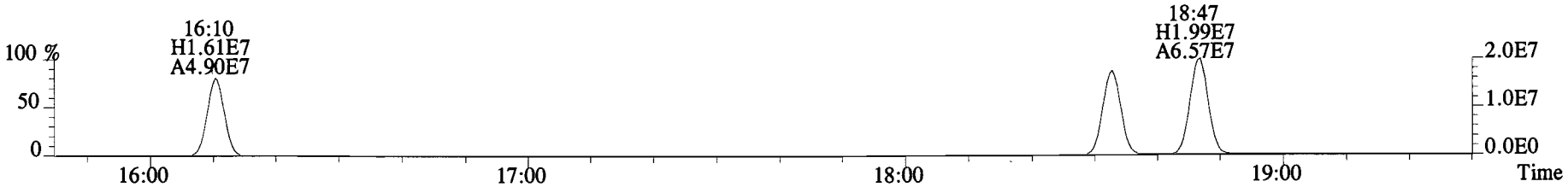
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.99e+08	1.59	y	1.00	25:57	100
13C-PCB-31	1.59e+08	1.07	y	1.00	28:59	100
13C-PCB-60	1.54e+08	0.82	y	1.00	36:44	100
13C-PCB-111	8.13e+07	1.61	y	1.00	39:12	100
13C-PCB-128	7.77e+07	1.28	y	1.00	46:19	100
13C-PCB-205	9.51e+07	0.90	y	1.00	54:05	100

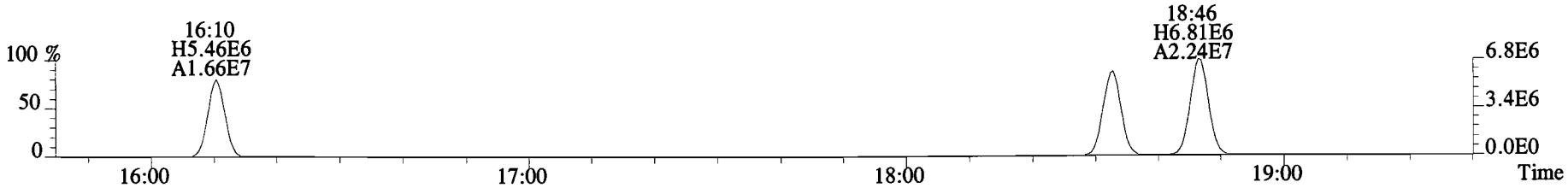
Analyst: JMS

Date: 3/26/15

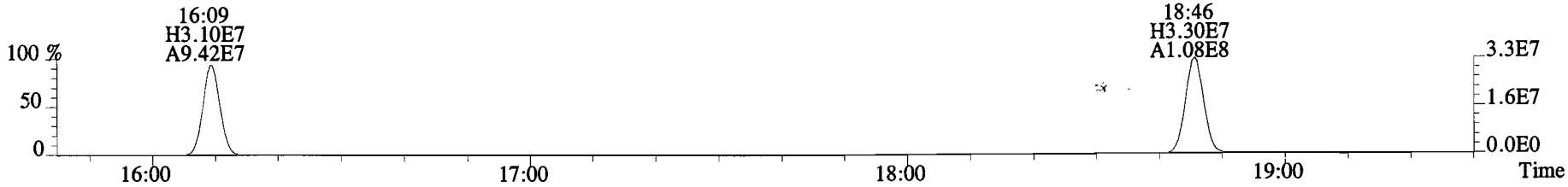
File:150318E1 #1-867 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4484.0,0.00%,F,F)



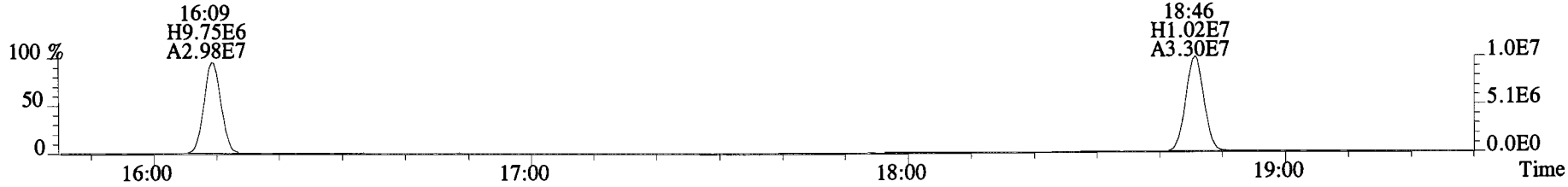
190.0363 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3228.0,0.00%,F,F)



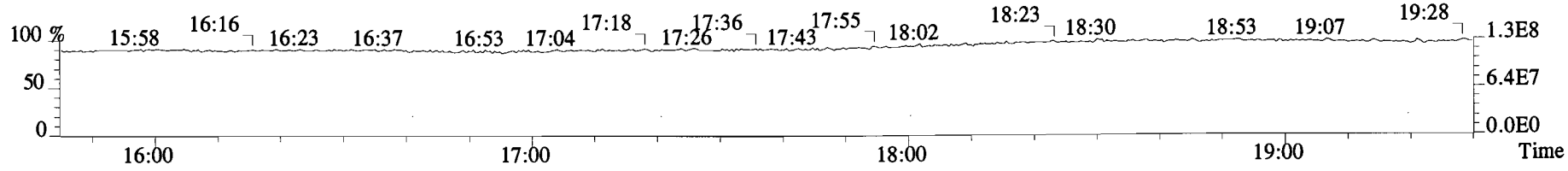
200.0795 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6204.0,0.00%,F,F)



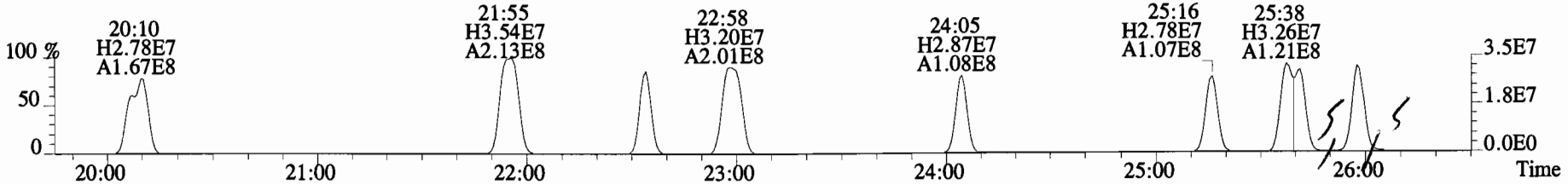
202.0766 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,90652.0,0.00%,F,F)



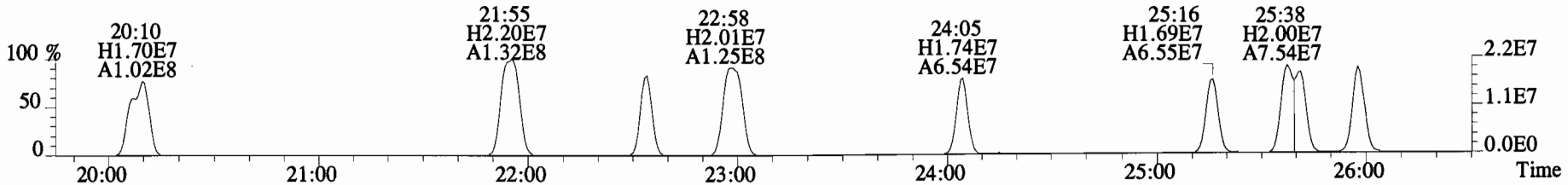
180.9880 S:2



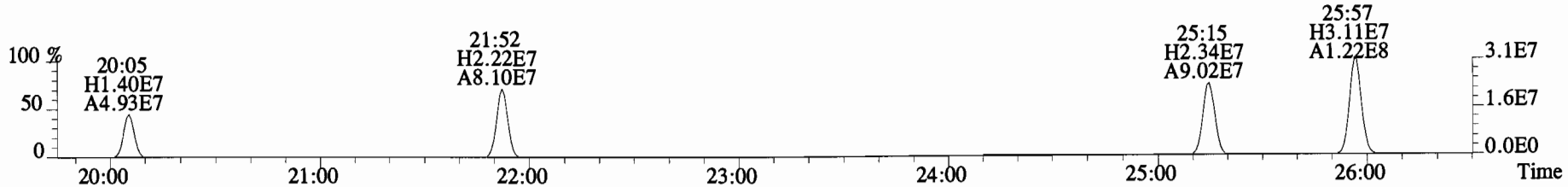
File:150318E1 #1-757 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12588.0,0.00%,F,F)



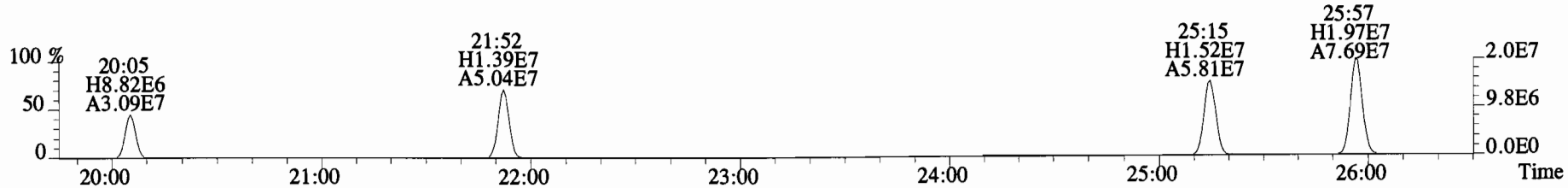
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,32060.0,0.00%,F,F)



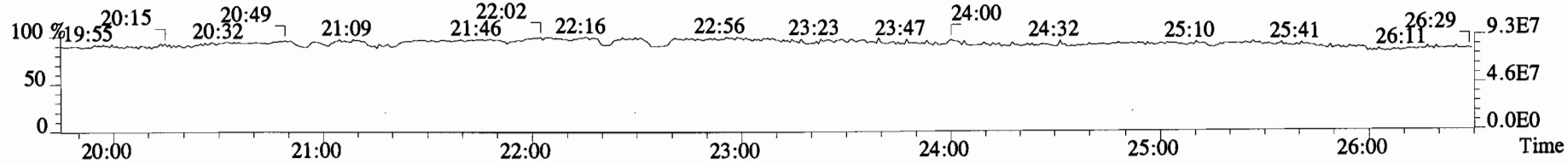
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5956.0,0.00%,F,F)



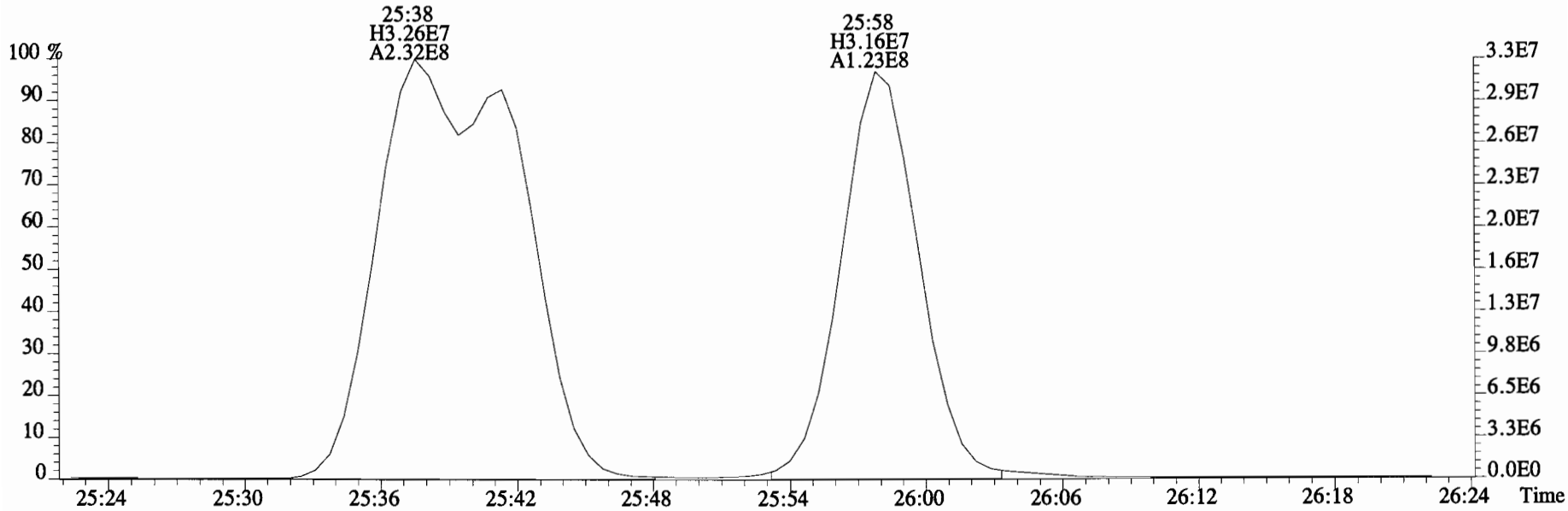
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4208.0,0.00%,F,F)



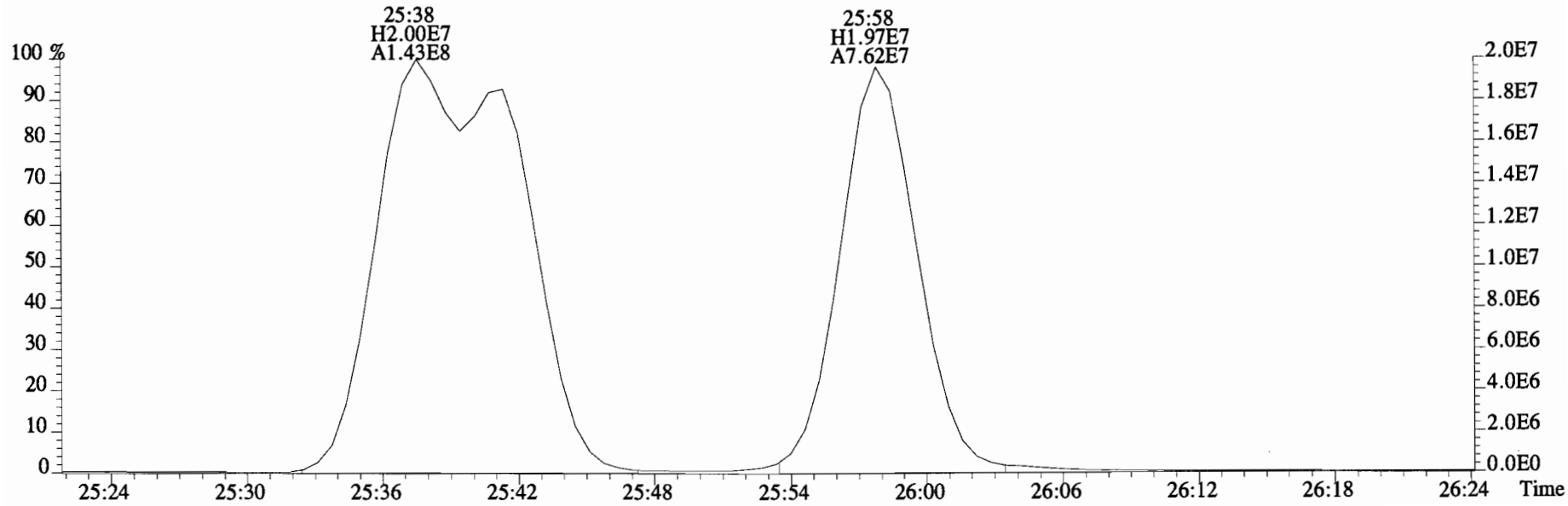
230.9856 S:2 F:2



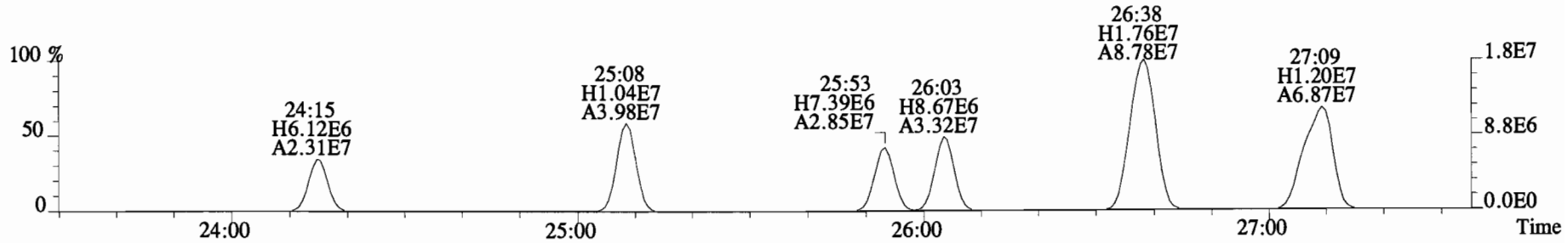
File:150318E1 #1-757 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12588.0,0.00%,F,F)



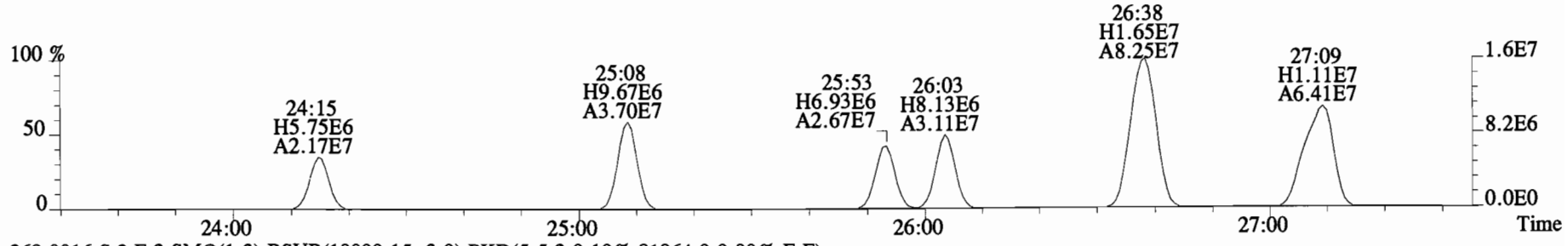
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,32060.0,0.00%,F,F)



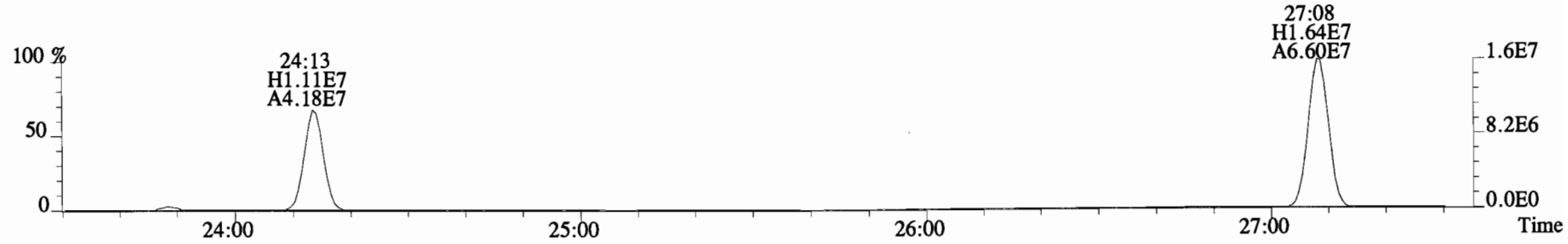
File:150318E1 #1-757 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4524.0,0.00%,F,F)



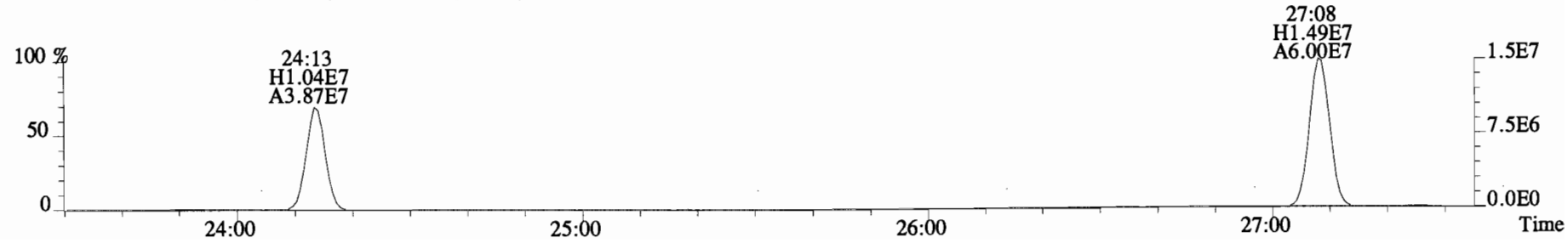
257.9584 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2364.0,0.00%,F,F)



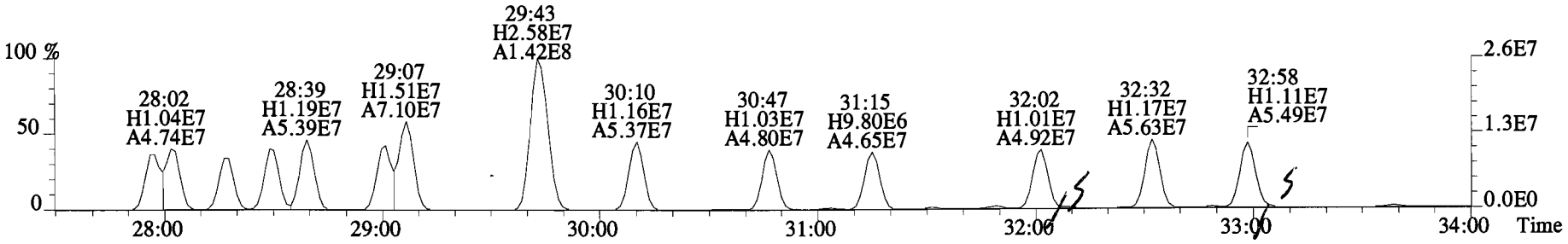
268.0016 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,81964.0,0.00%,F,F)



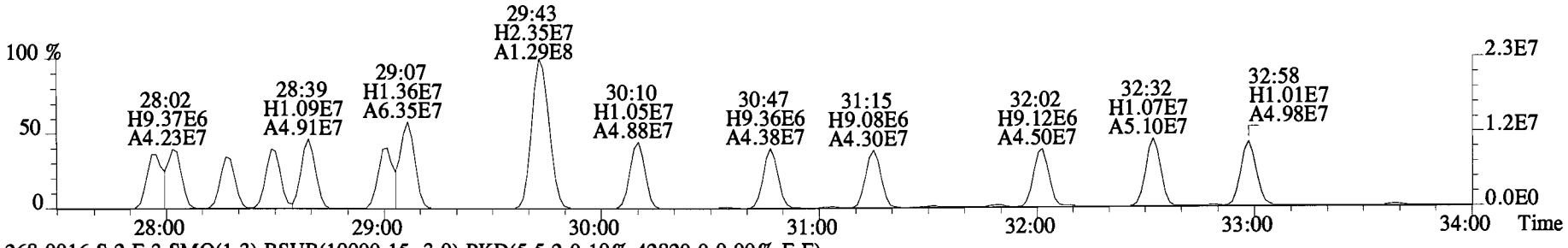
269.9986 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,53844.0,0.00%,F,F)



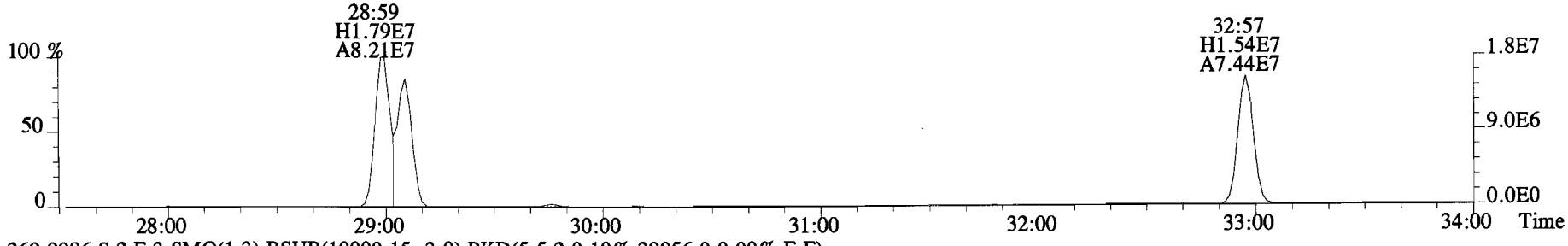
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36464.0,0.00%,F,F)



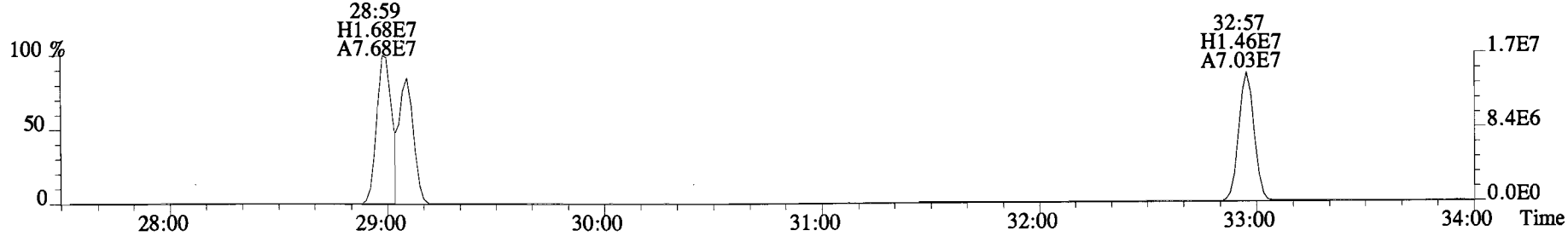
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36488.0,0.00%,F,F)



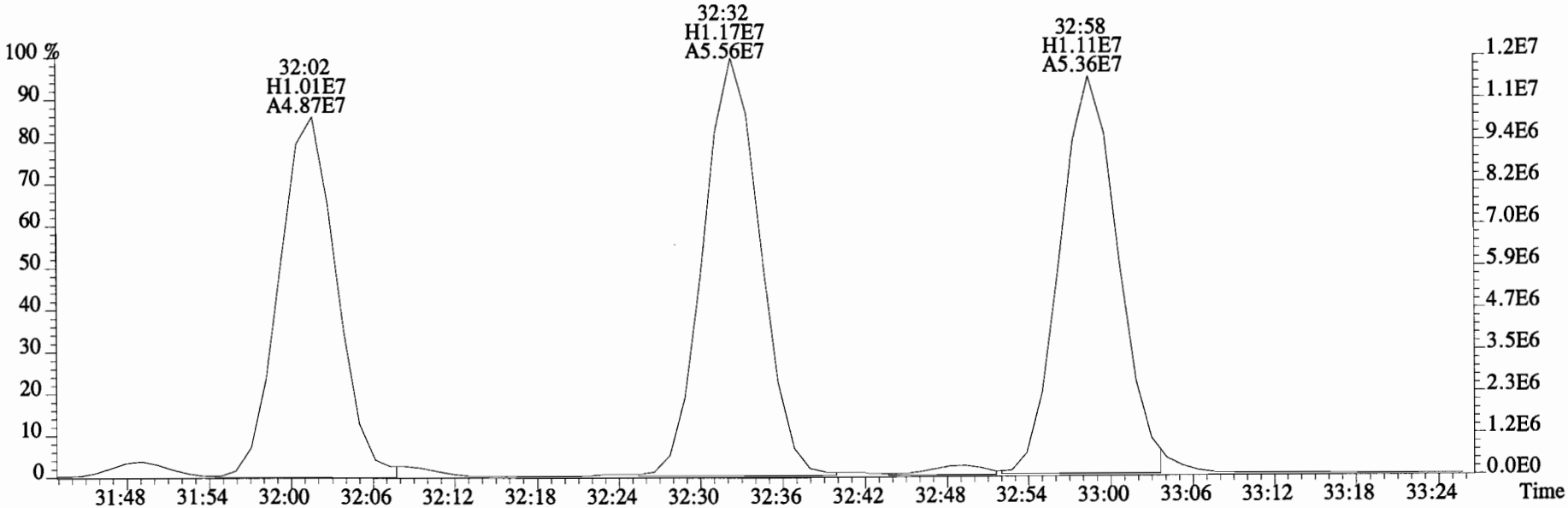
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,42820.0,0.00%,F,F)



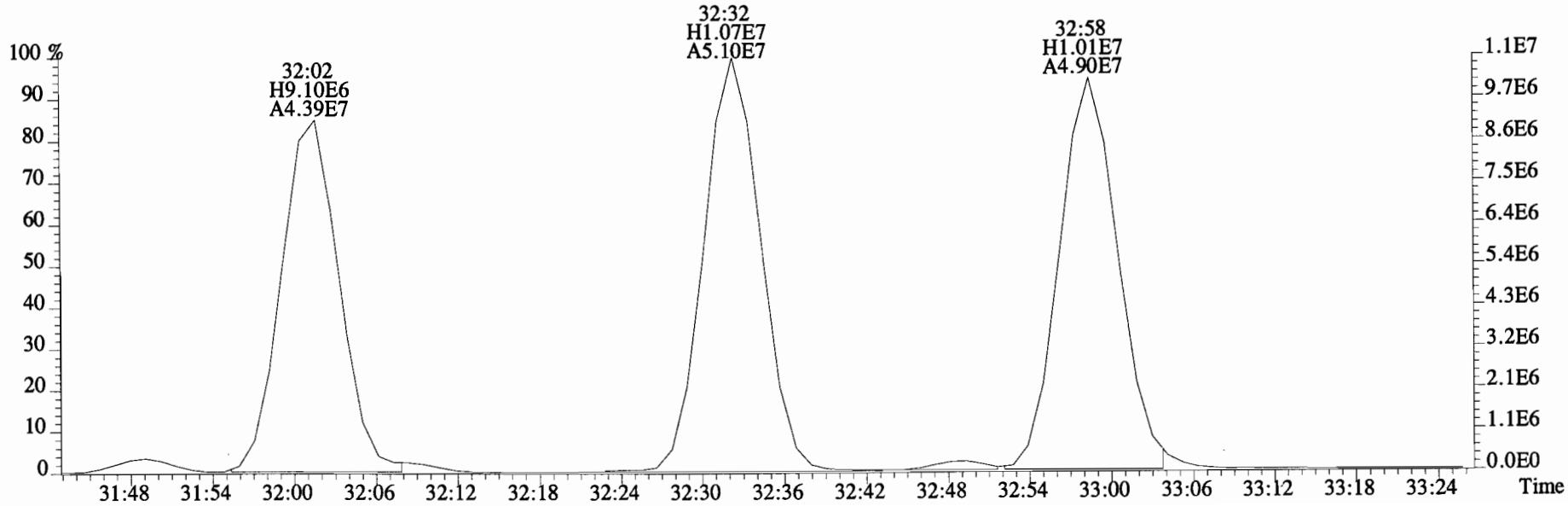
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,39956.0,0.00%,F,F)



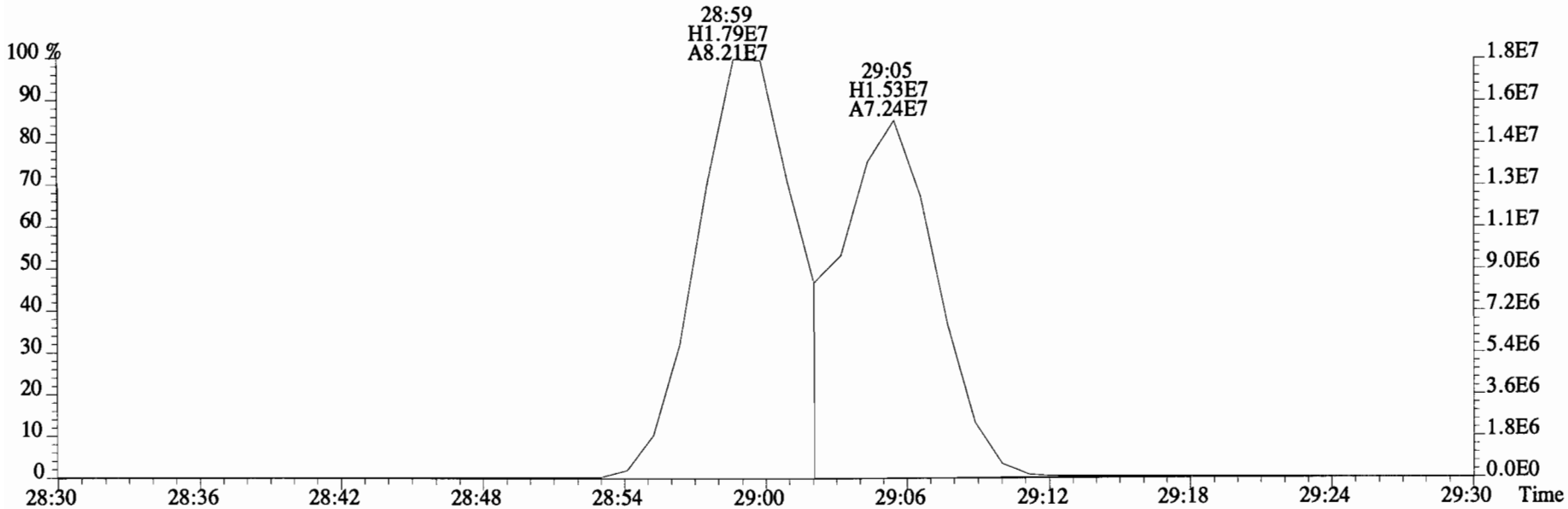
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36464.0,0.00%,F,F)



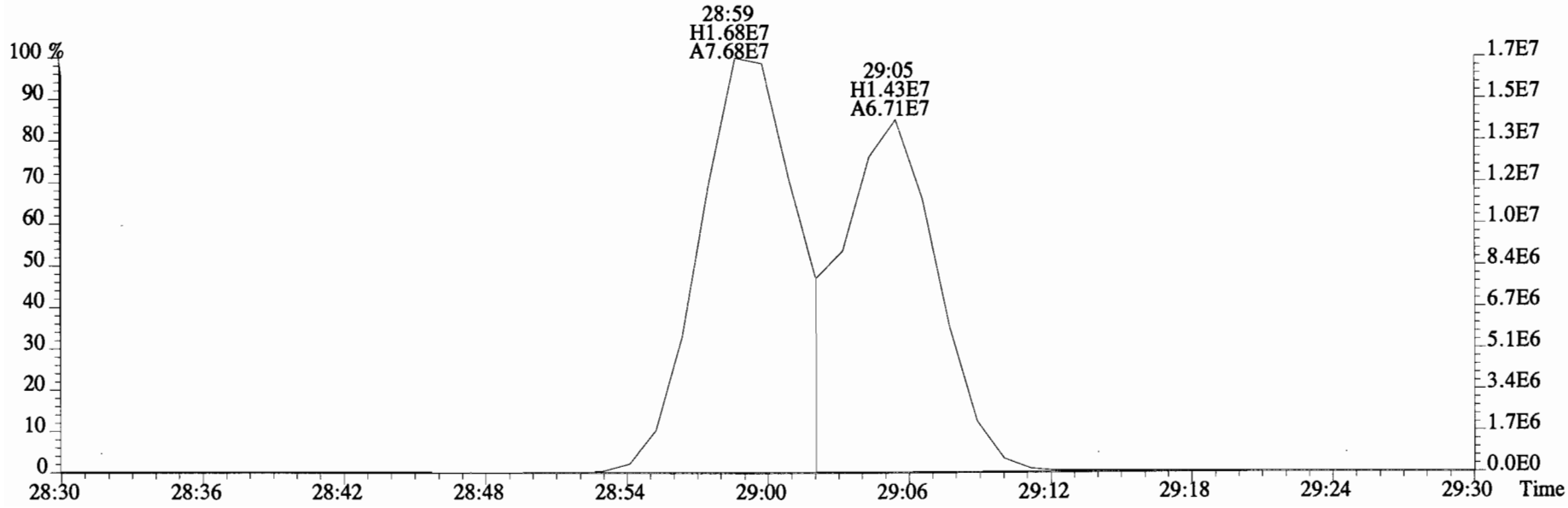
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36488.0,0.00%,F,F)



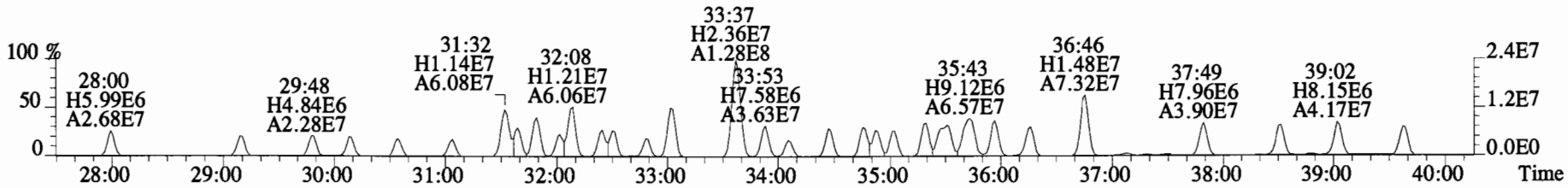
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,42820.0,0.00%,F,F)



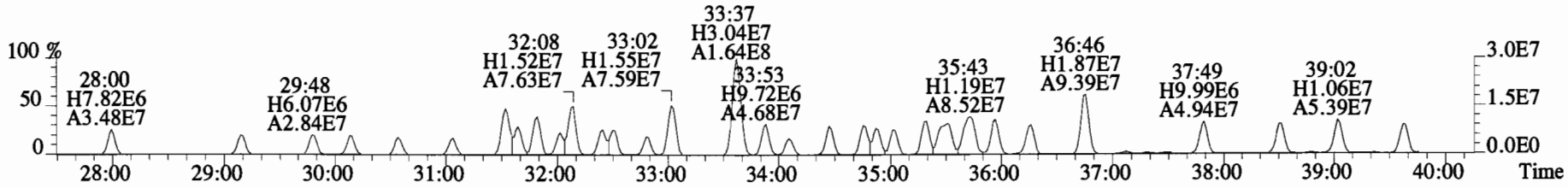
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,39956.0,0.00%,F,F)



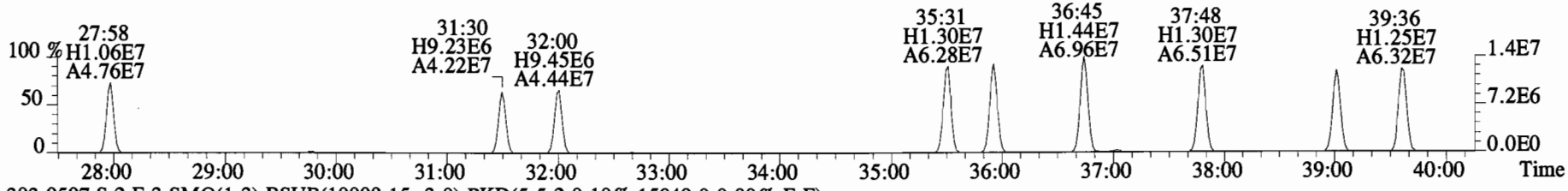
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25620.0,0.00%,F,F)



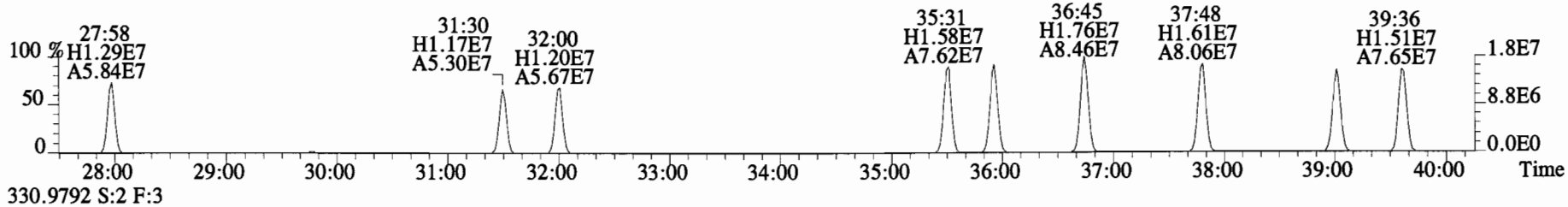
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,32972.0,0.00%,F,F)



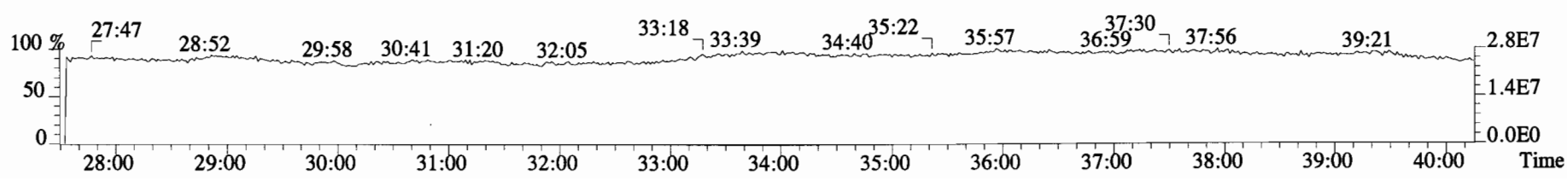
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27944.0,0.00%,F,F)



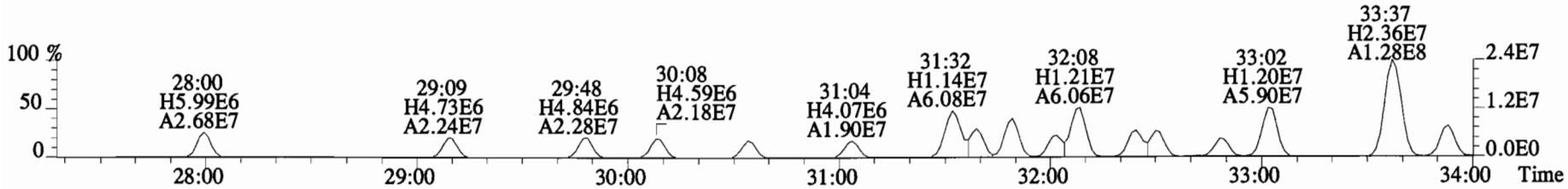
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15948.0,0.00%,F,F)



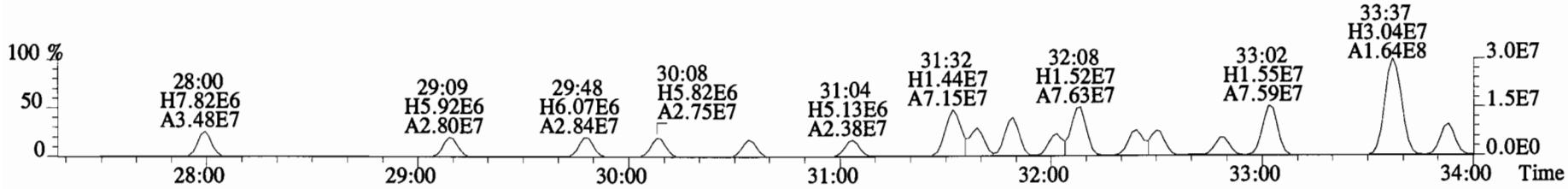
330.9792 S:2 F:3



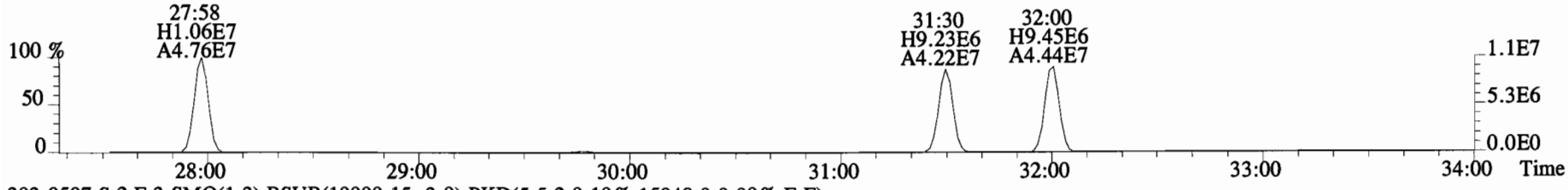
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25620.0,0.00%,F,F)



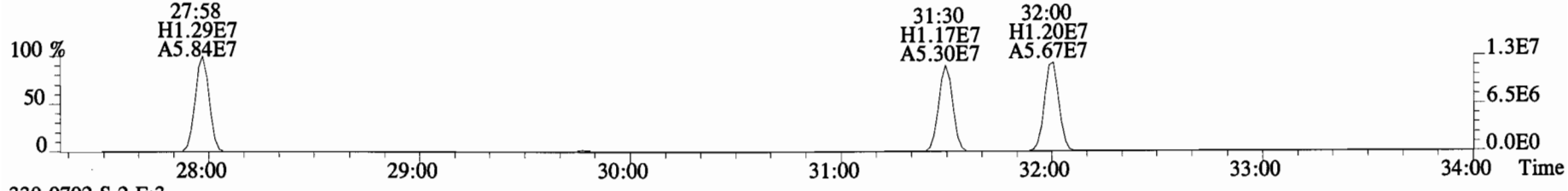
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,32972.0,0.00%,F,F)



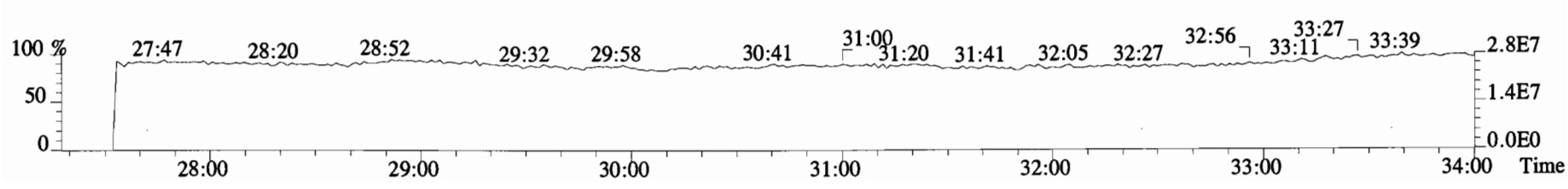
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27944.0,0.00%,F,F)



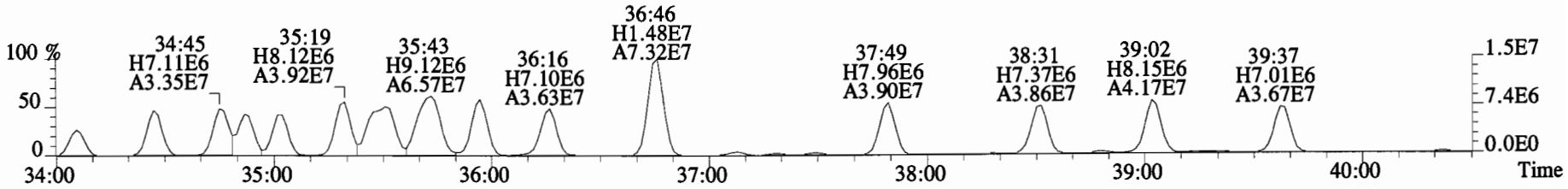
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15948.0,0.00%,F,F)



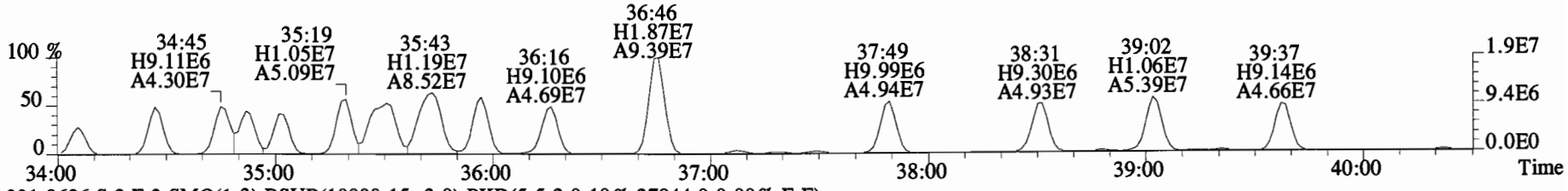
330.9792 S:2 F:3



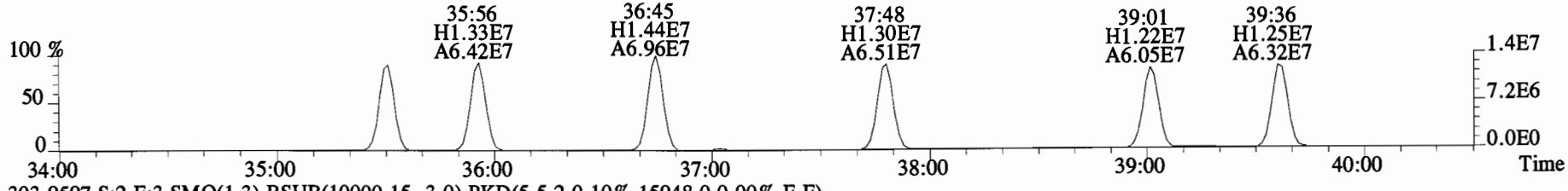
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25620.0,0.00%,F,F)



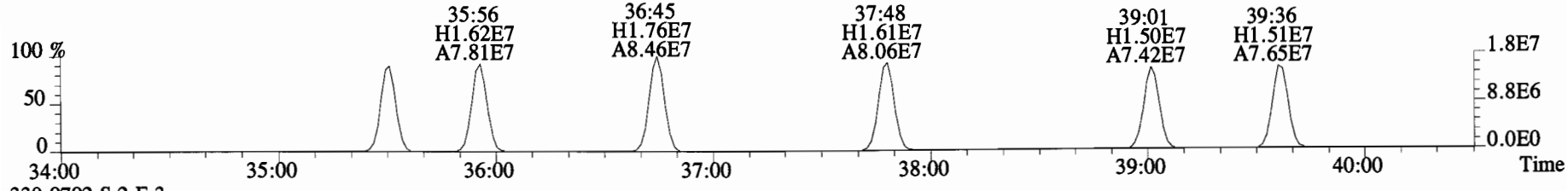
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,32972.0,0.00%,F,F)



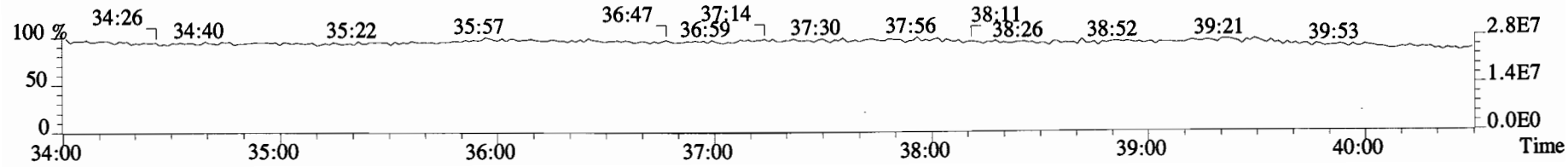
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27944.0,0.00%,F,F)



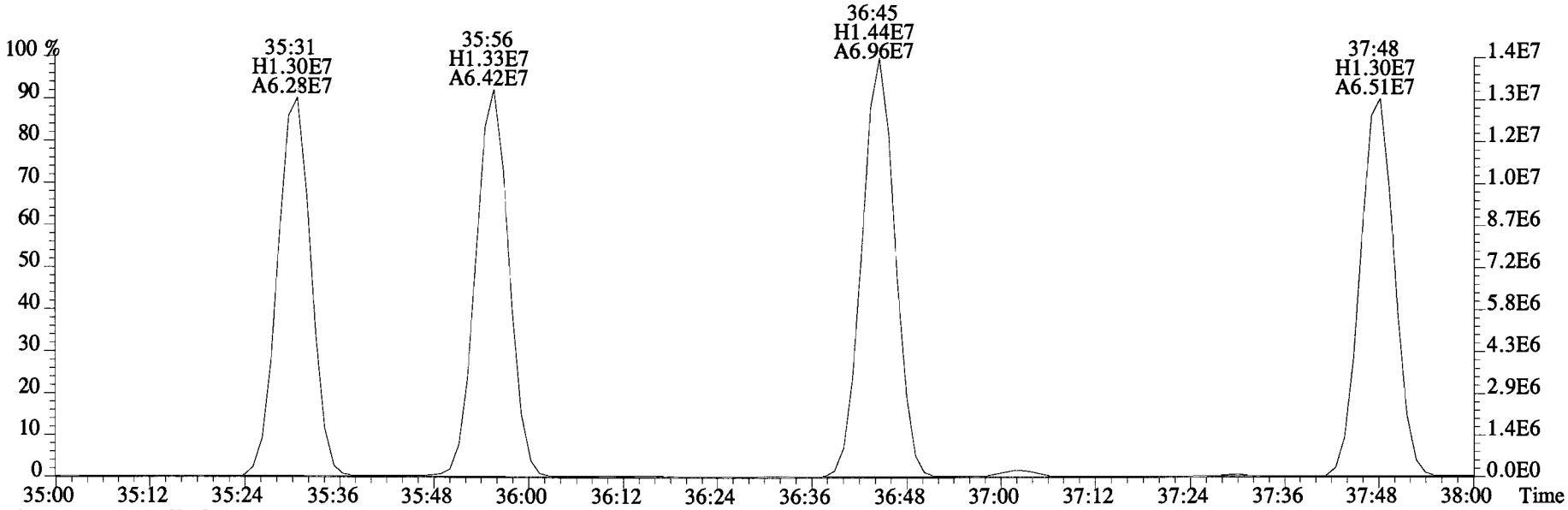
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15948.0,0.00%,F,F)



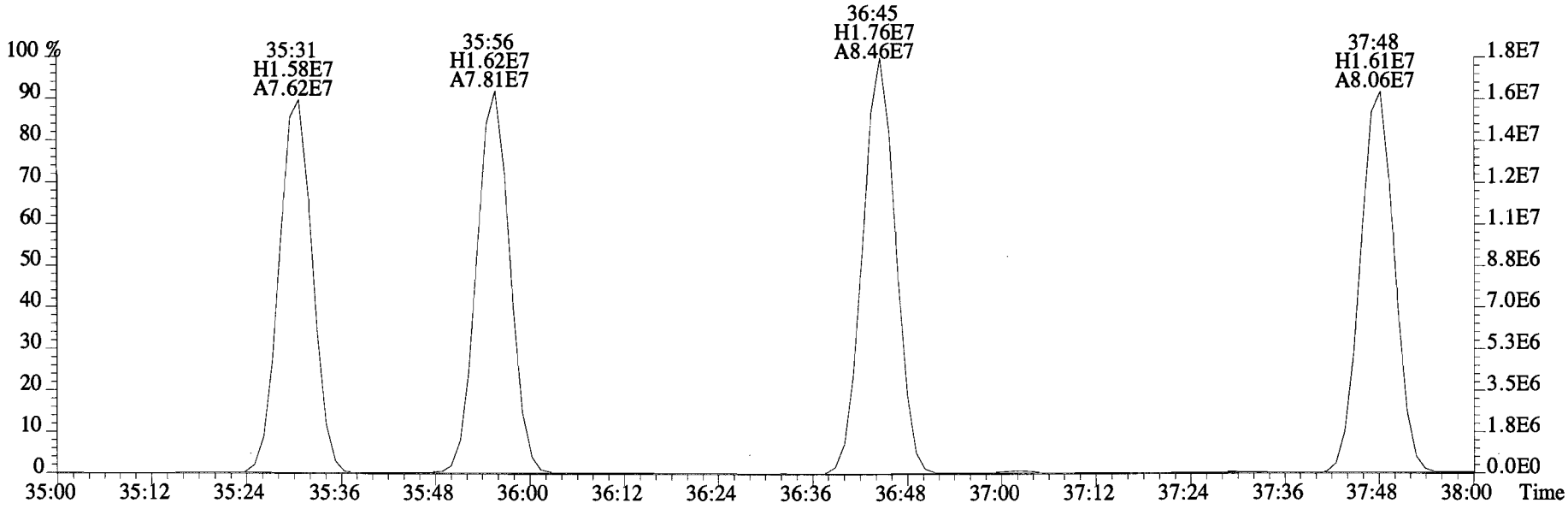
330.9792 S:2 F:3



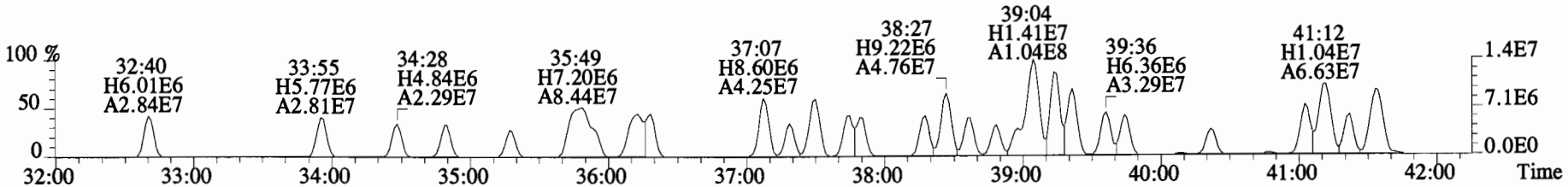
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27944.0,0.00%,F,F)



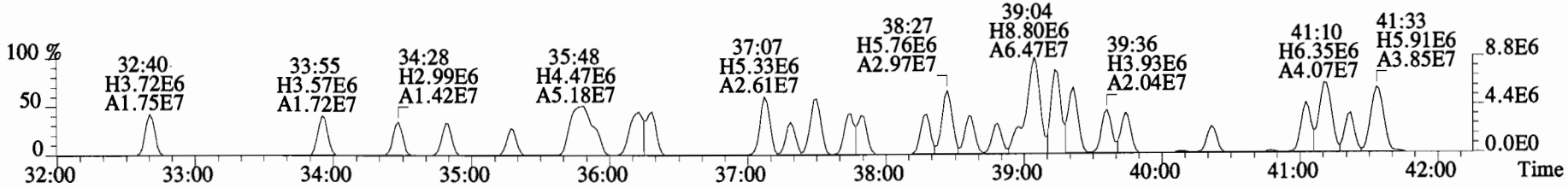
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15948.0,0.00%,F,F)



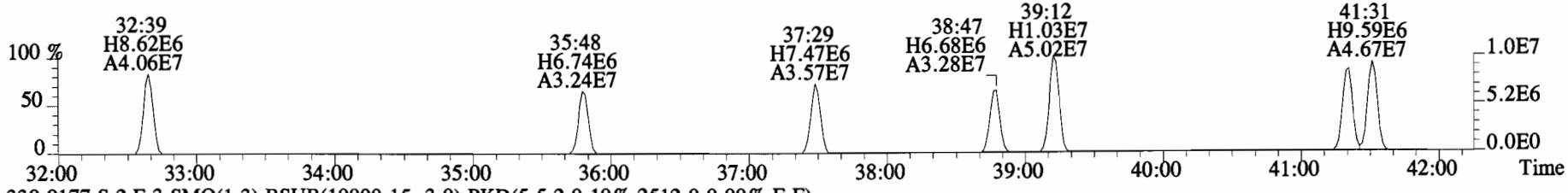
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)



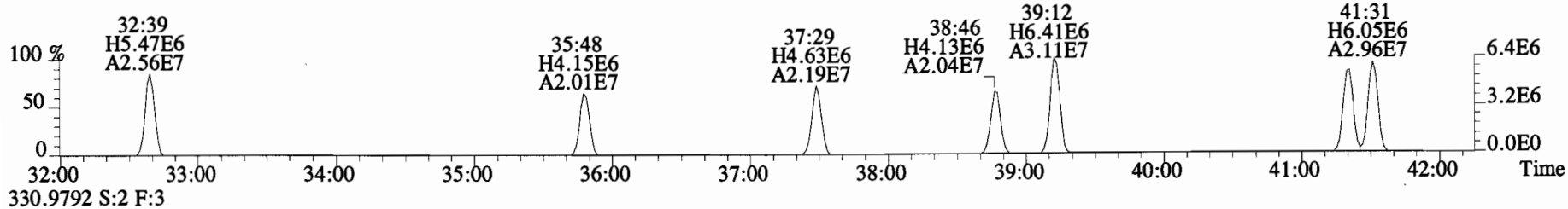
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)



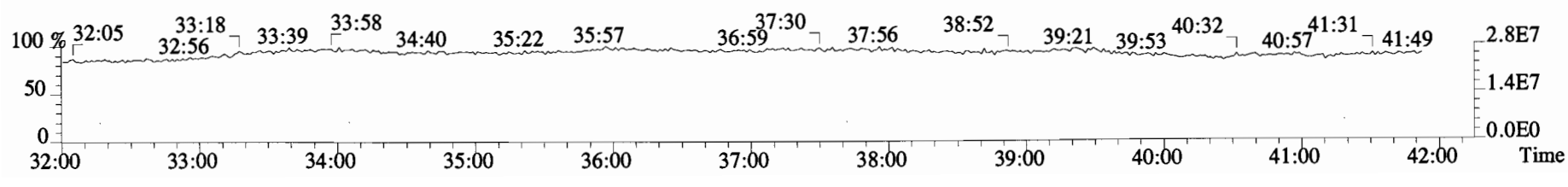
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3048.0,0.00%,F,F)

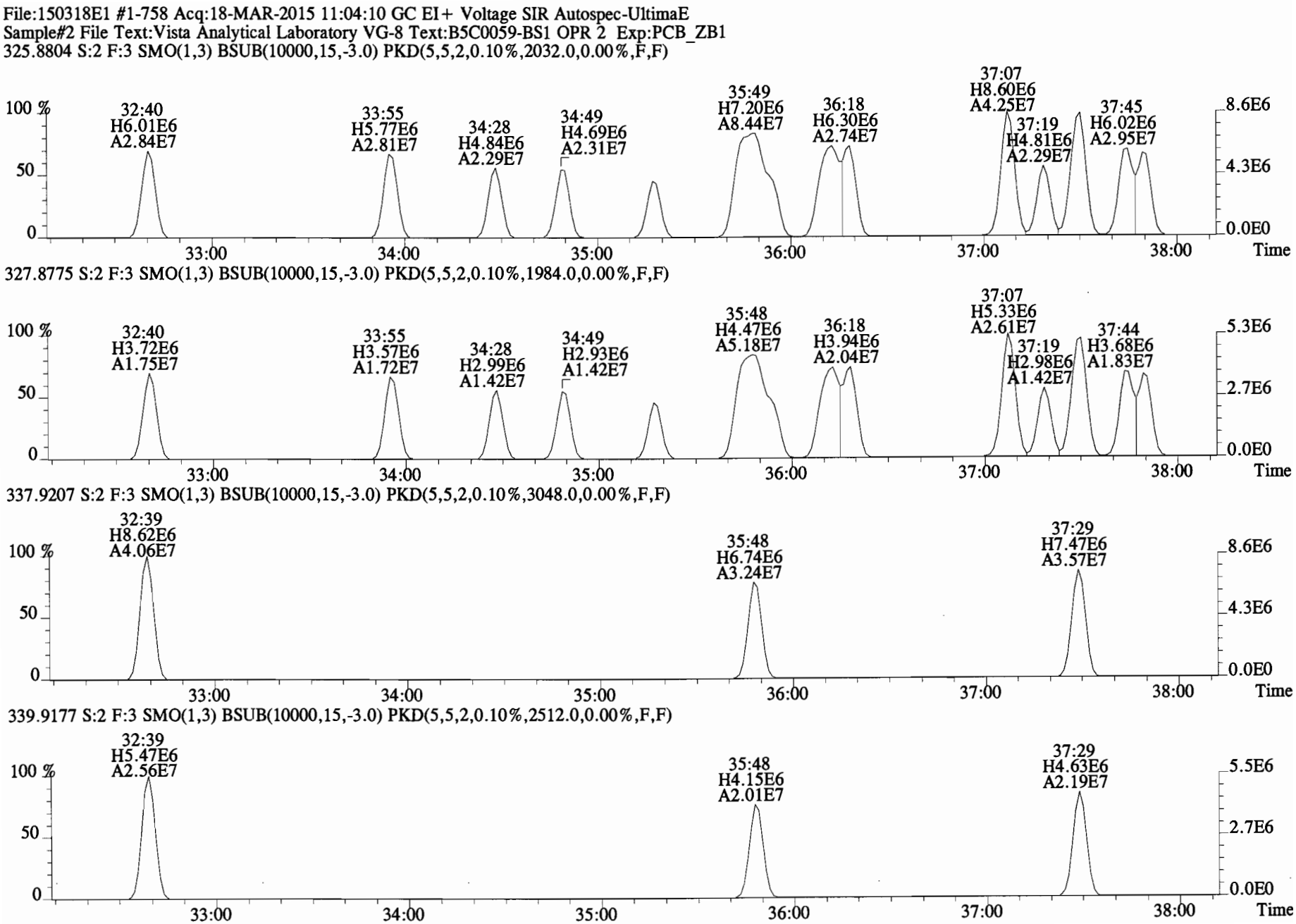


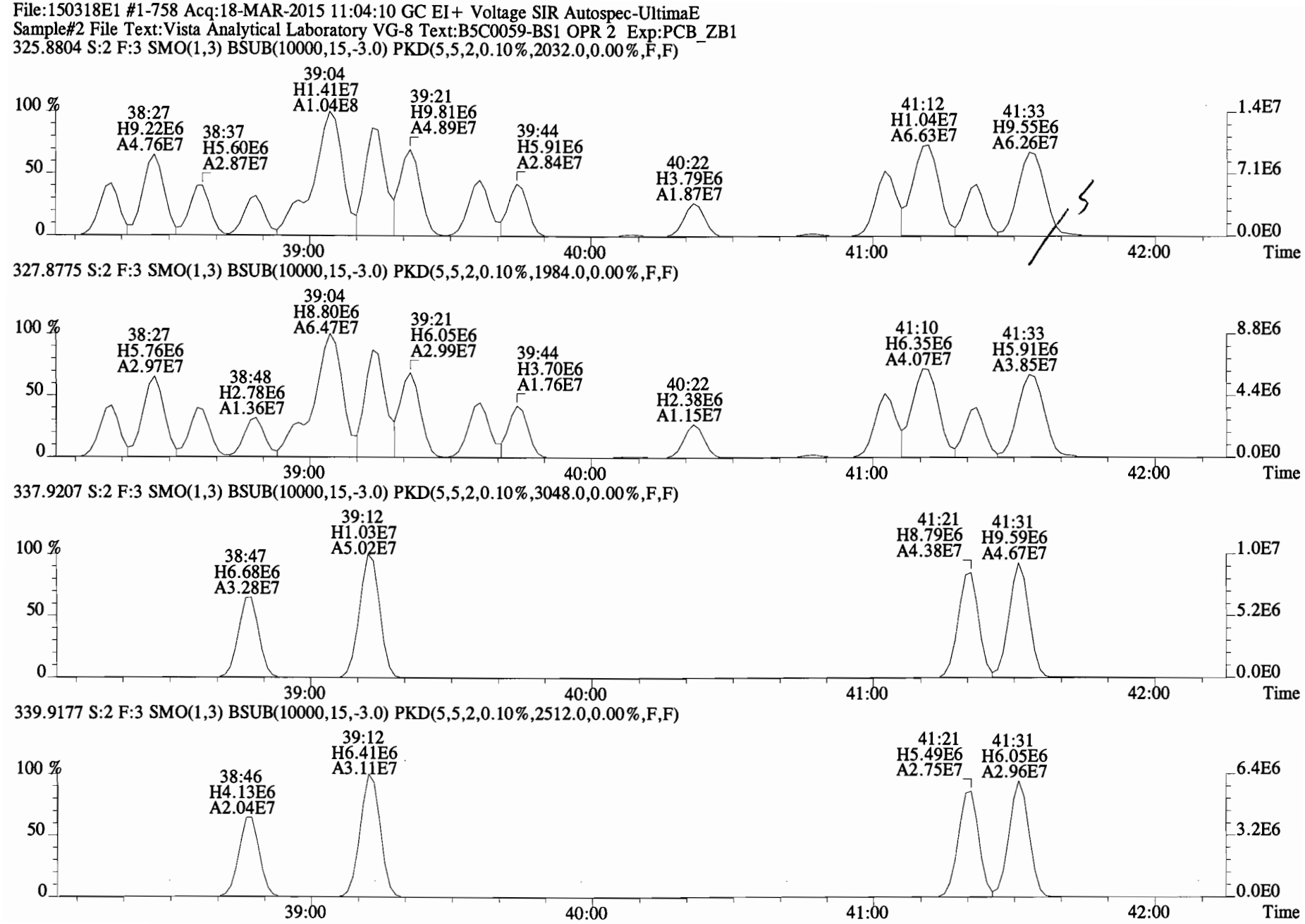
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2512.0,0.00%,F,F)



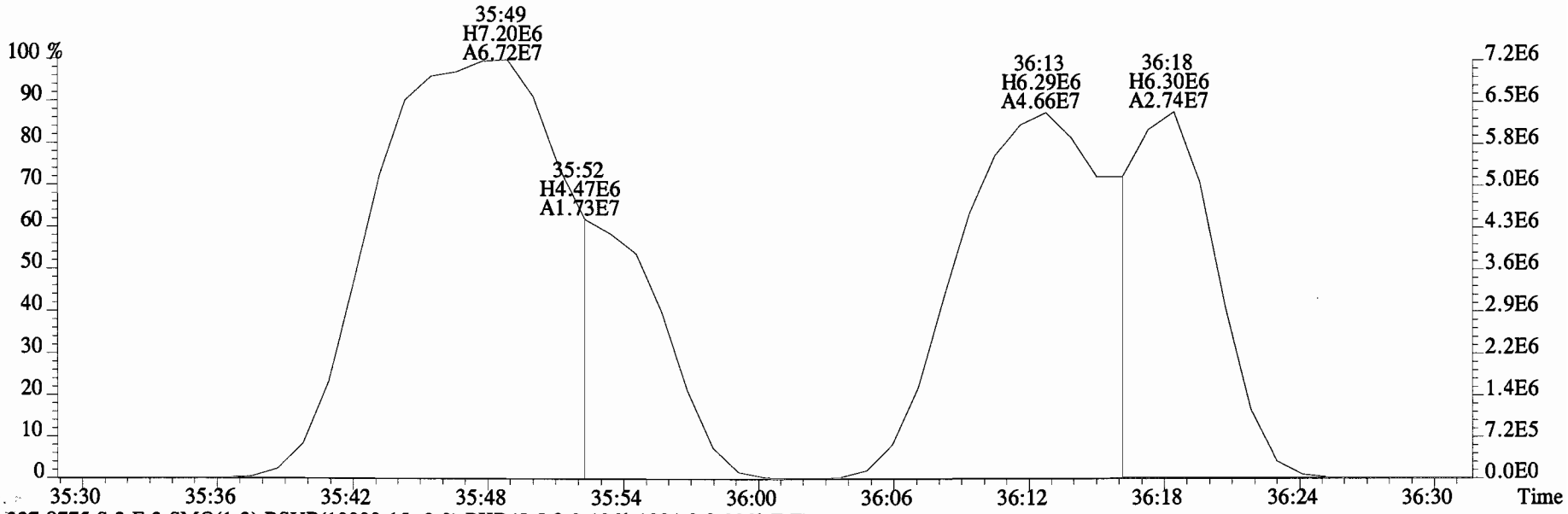
330.9792 S:2 F:3



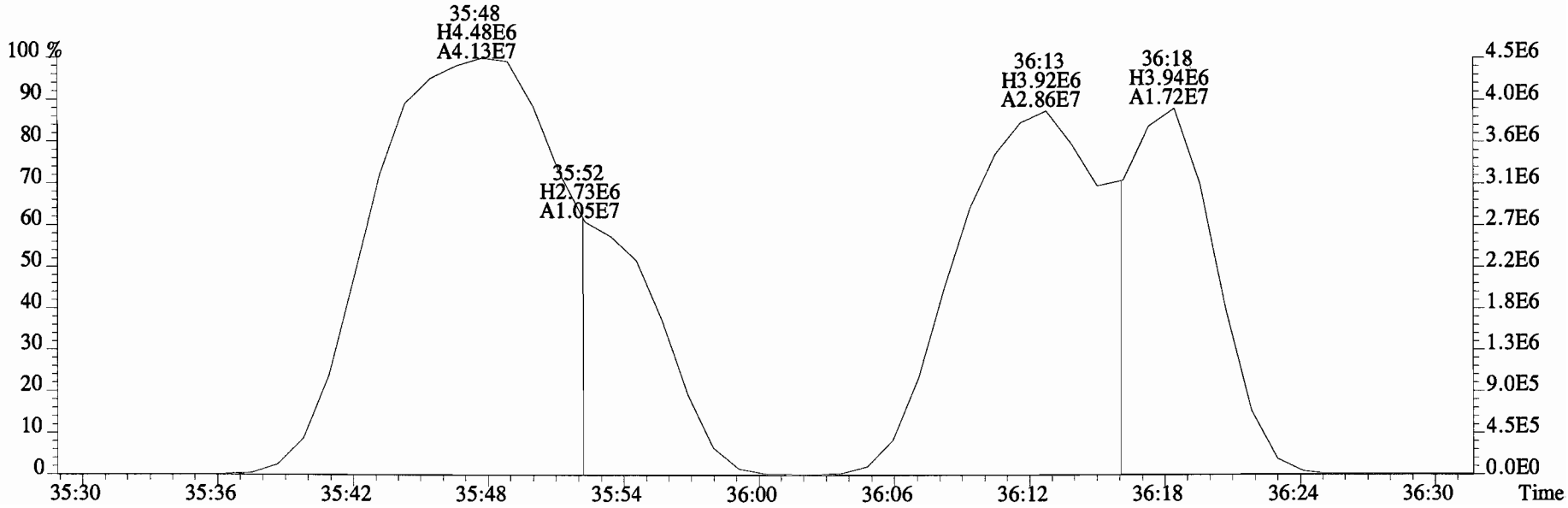

File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)
100 %
50
0
32:40 H6.01E6 A2.84E7
33:55 H5.77E6 A2.81E7
34:28 H4.84E6 A2.29E7
34:49 H4.69E6 A2.31E7
35:49 H7.20E6 A8.44E7
36:18 H6.30E6 A2.74E7
37:07 H8.60E6 A4.25E7
37:19 H4.81E6 A2.29E7
37:45 H6.02E6 A2.95E7
8.6E6
4.3E6
0.0E0
33:00
34:00
35:00
36:00
37:00
38:00
Time
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)
100 %
50
0
32:40 H3.72E6 A1.75E7
33:55 H3.57E6 A1.72E7
34:28 H2.99E6 A1.42E7
34:49 H2.93E6 A1.42E7
35:48 H4.47E6 A5.18E7
36:18 H3.94E6 A2.04E7
37:07 H5.33E6 A2.61E7
37:19 H2.98E6 A1.42E7
37:44 H3.68E6 A1.83E7
5.3E6
2.7E6
0.0E0
33:00
34:00
35:00
36:00
37:00
38:00
Time
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3048.0,0.00%,F,F)
100 %
50
0
32:39 H8.62E6 A4.06E7
35:48 H6.74E6 A3.24E7
37:29 H7.47E6 A3.57E7
8.6E6
4.3E6
0.0E0
33:00
34:00
35:00
36:00
37:00
38:00
Time
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2512.0,0.00%,F,F)
100 %
50
0
32:39 H5.47E6 A2.56E7
35:48 H4.15E6 A2.01E7
37:29 H4.63E6 A2.19E7
5.5E6
2.7E6
0.0E0
33:00
34:00
35:00
36:00
37:00
38:00
Time


File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)
38:27 H9.22E6 A4.76E7
38:37 H5.60E6 A2.87E7
39:04 H1.41E7 A1.04E8
39:21 H9.81E6 A4.89E7
39:44 H5.91E6 A2.84E7
40:22 H3.79E6 A1.87E7
41:12 H1.04E7 A6.63E7
41:33 H9.55E6 A6.26E7
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)
38:27 H5.76E6 A2.97E7
38:48 H2.78E6 A1.36E7
39:04 H8.80E6 A6.47E7
39:21 H6.05E6 A2.99E7
39:44 H3.70E6 A1.76E7
40:22 H2.38E6 A1.15E7
41:10 H6.35E6 A4.07E7
41:33 H5.91E6 A3.85E7
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3048.0,0.00%,F,F)
38:47 H6.68E6 A3.28E7
39:12 H1.03E7 A5.02E7
41:21 H8.79E6 A4.38E7
41:31 H9.59E6 A4.67E7
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2512.0,0.00%,F,F)
38:46 H4.13E6 A2.04E7
39:12 H6.41E6 A3.11E7
41:21 H5.49E6 A2.75E7
41:31 H6.05E6 A2.96E7
100 %
50
0
39:00
40:00
41:00
42:00
Time
1.4E7
7.1E6
0.0E0
8.8E6
4.4E6
1.0E7
5.2E6
6.4E6
3.2E6

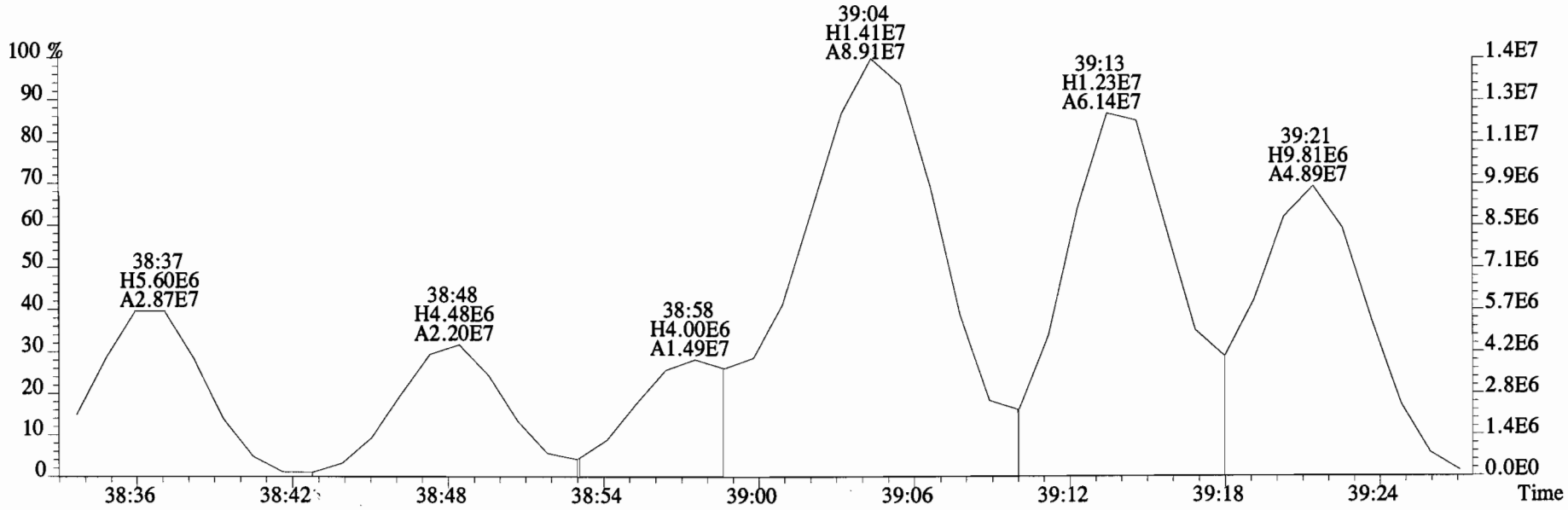
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)



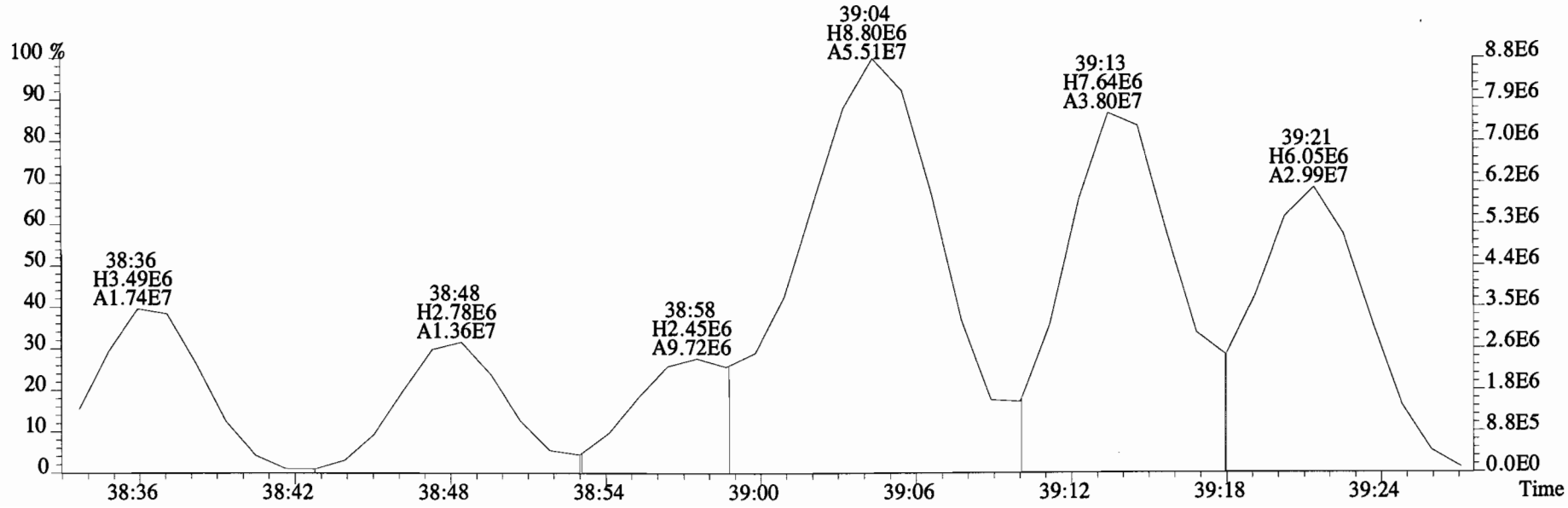
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)

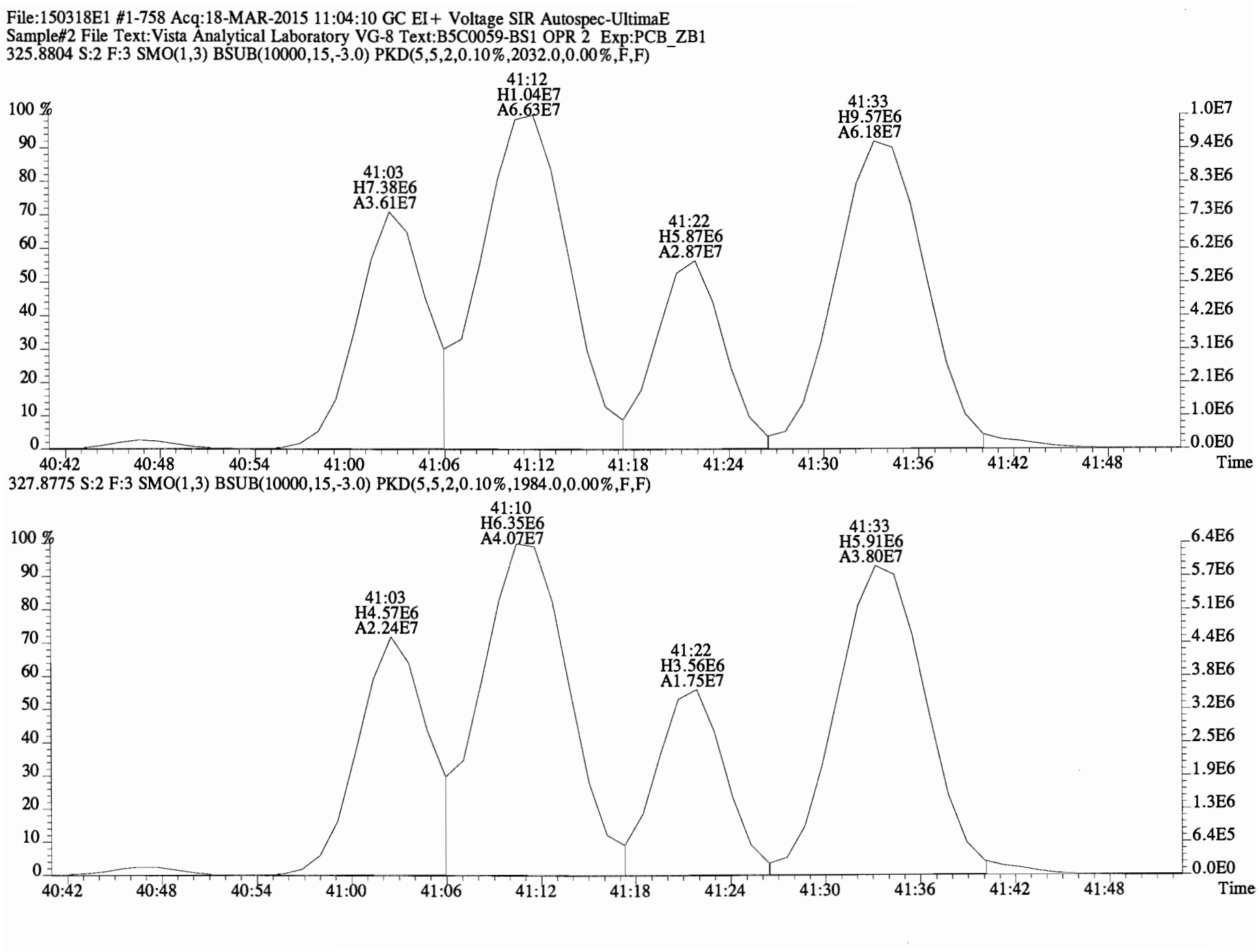


File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)

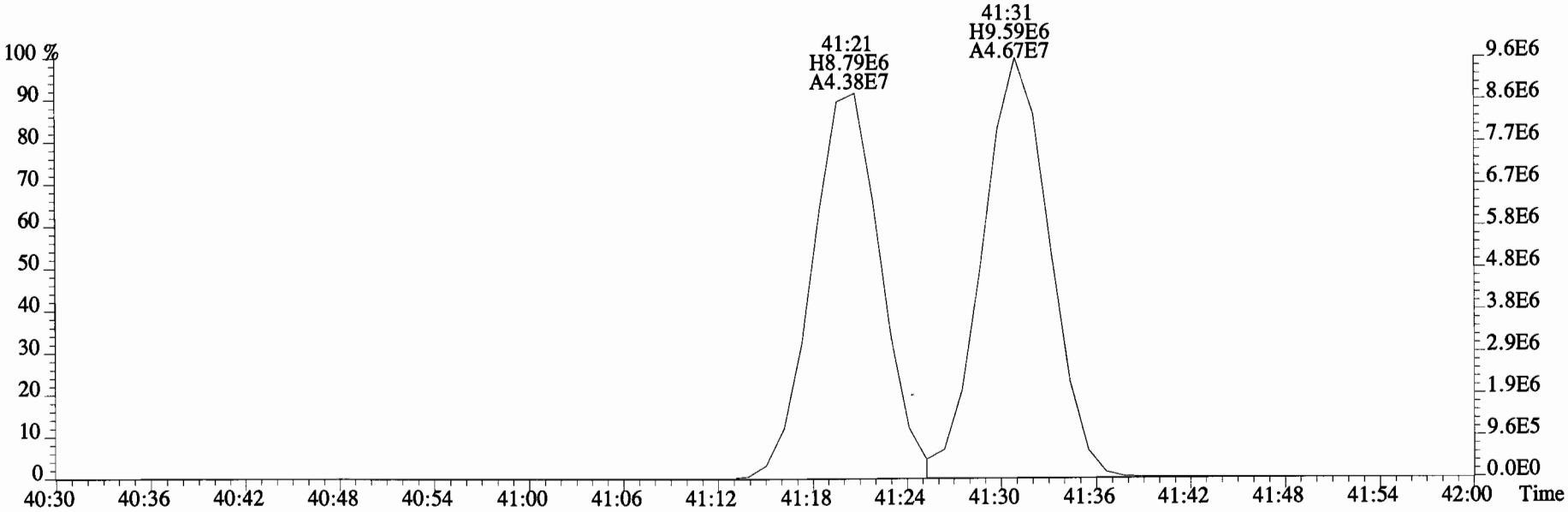


327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)

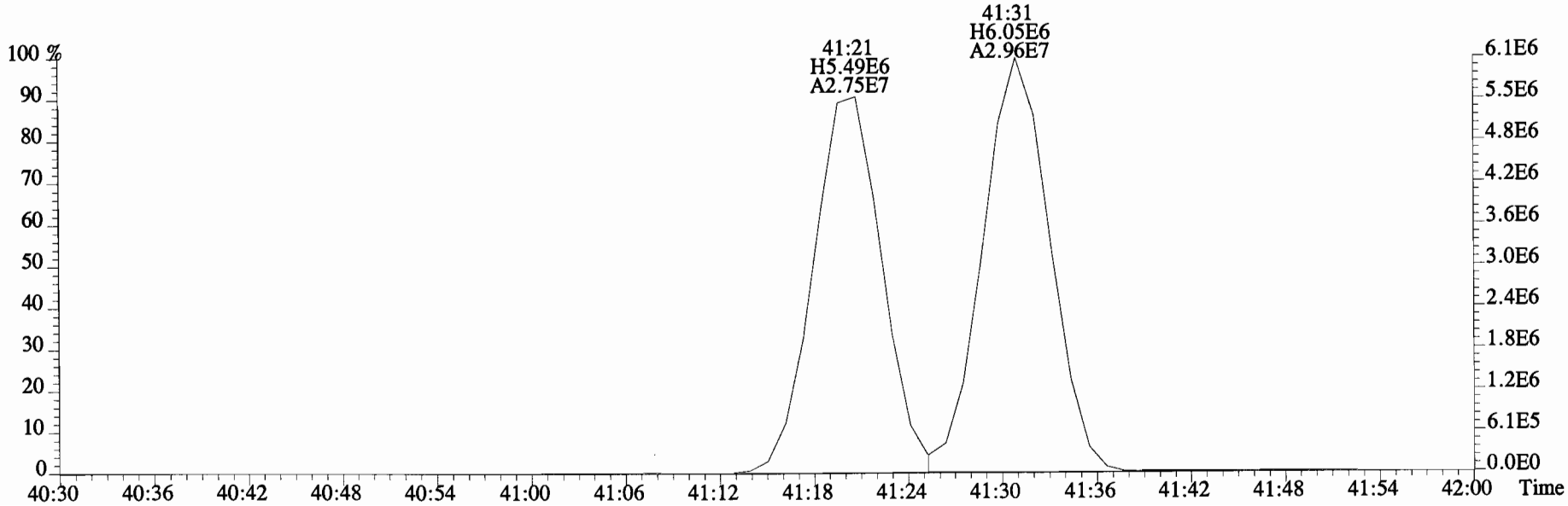



File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2032.0,0.00%,F,F)
41:12
H1.04E7
A6.63E7
41:33
H9.57E6
A6.18E7
41:03
H7.38E6
A3.61E7
41:22
H5.87E6
A2.87E7
100 %
90
80
70
60
50
40
30
20
10
0
1.0E7
9.4E6
8.3E6
7.3E6
6.2E6
5.2E6
4.2E6
3.1E6
2.1E6
1.0E6
0.0E0
40:42
40:48
40:54
41:00
41:06
41:12
41:18
41:24
41:30
41:36
41:42
41:48
Time
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)
41:10
H6.35E6
A4.07E7
41:33
H5.91E6
A3.80E7
41:03
H4.57E6
A2.24E7
41:22
H3.56E6
A1.75E7
100 %
90
80
70
60
50
40
30
20
10
0
6.4E6
5.7E6
5.1E6
4.4E6
3.8E6
3.2E6
2.5E6
1.9E6
1.3E6
6.4E5
0.0E0
40:42
40:48
40:54
41:00
41:06
41:12
41:18
41:24
41:30
41:36
41:42
41:48
Time

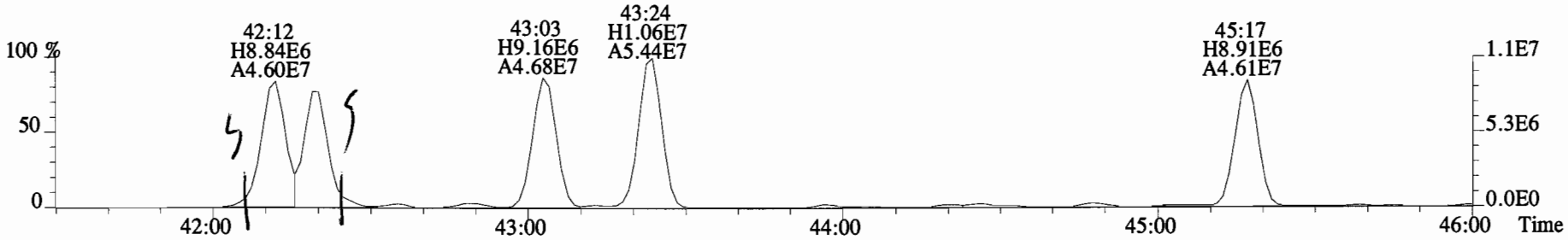
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3048.0,0.00%,F,F)



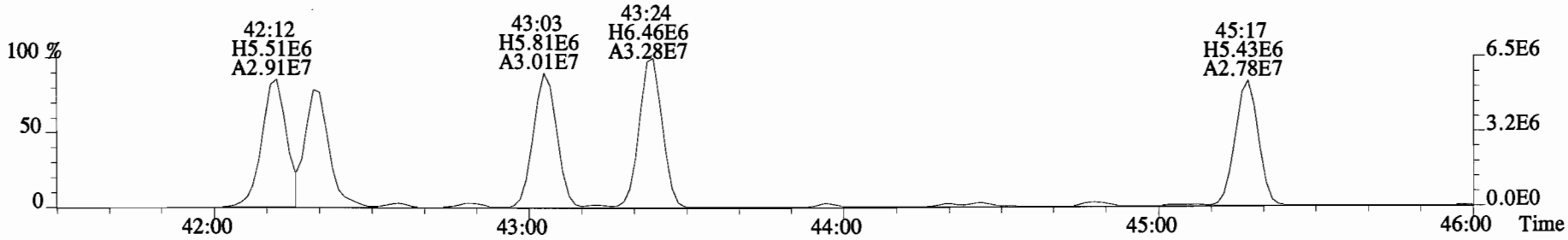
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2512.0,0.00%,F,F)



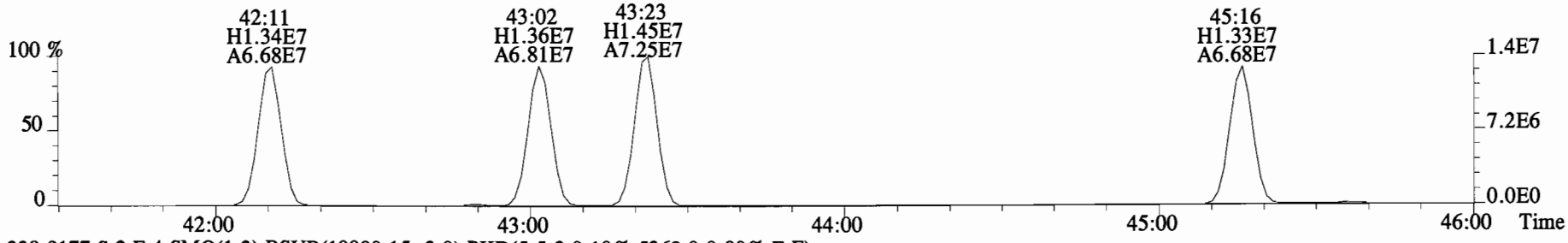
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7644.0,0.00%,F,F)



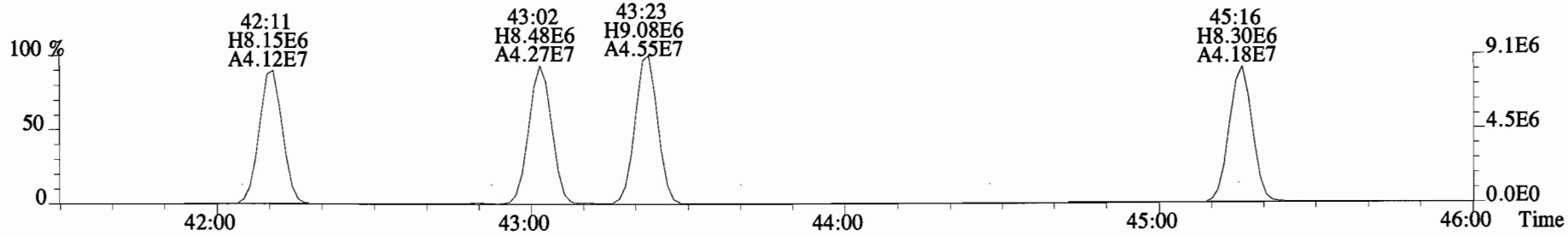
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7000.0,0.00%,F,F)



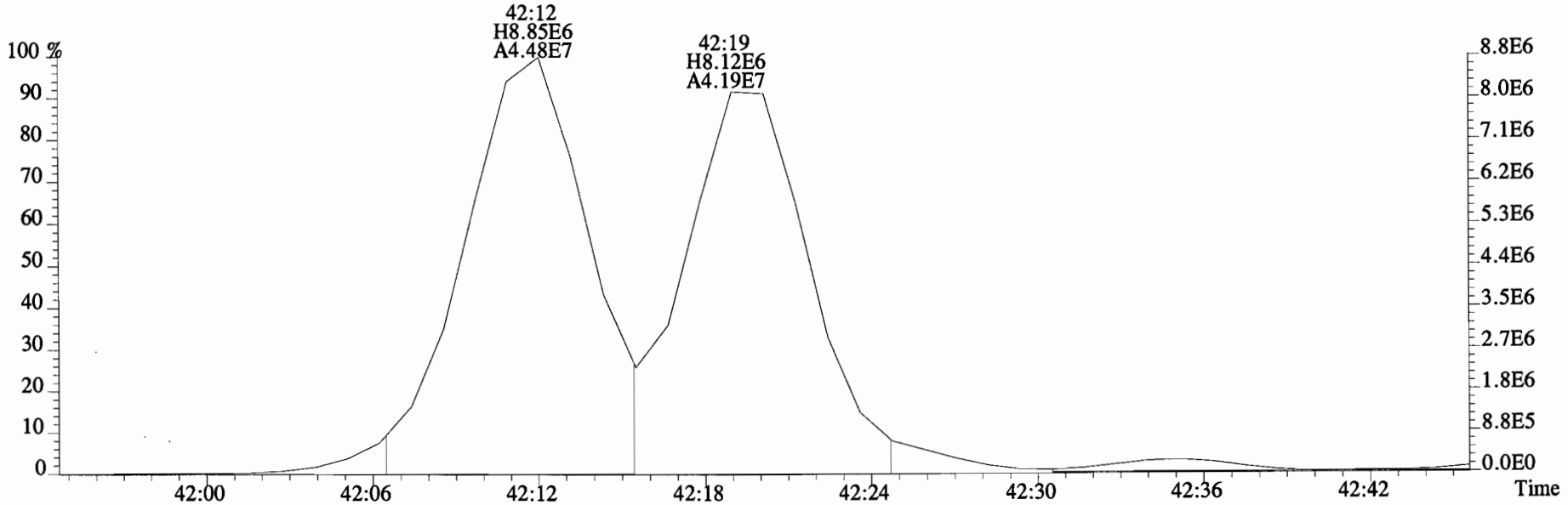
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7324.0,0.00%,F,F)



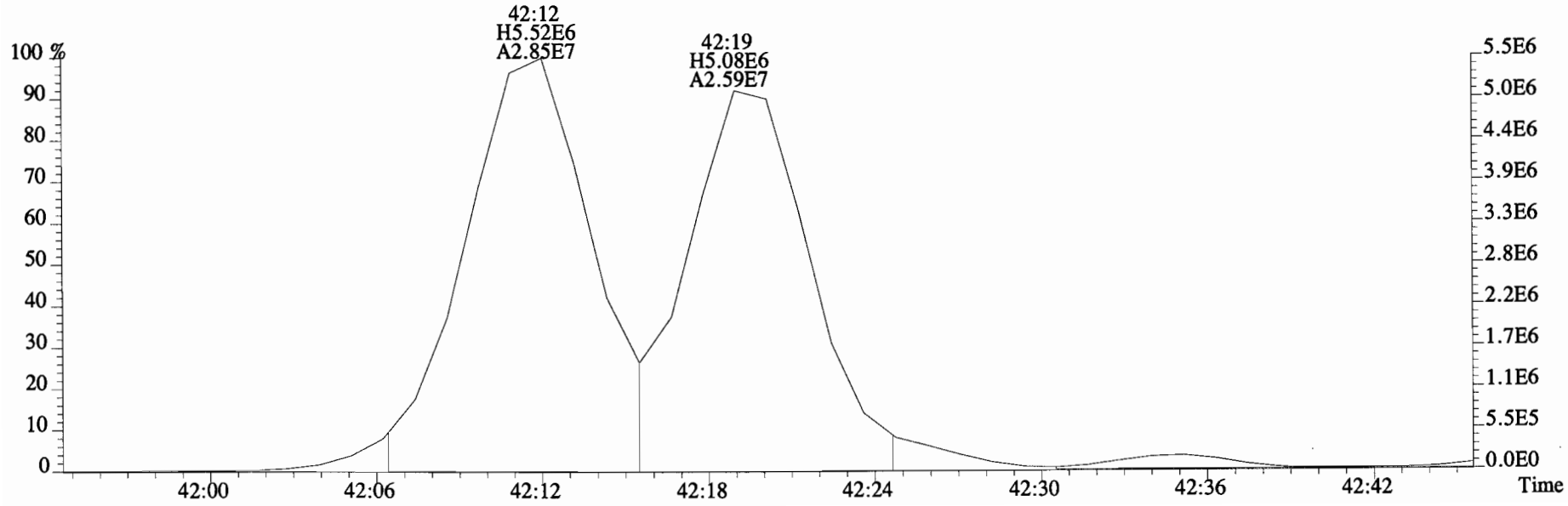
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5368.0,0.00%,F,F)



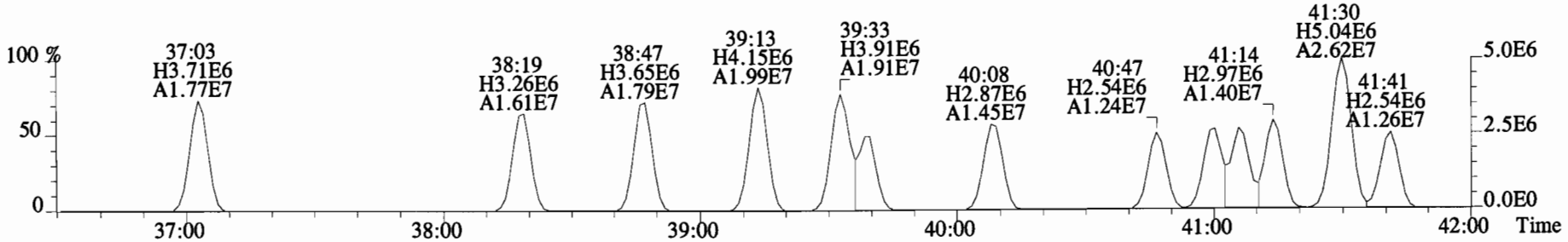
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7644.0,0.00%,F,F)



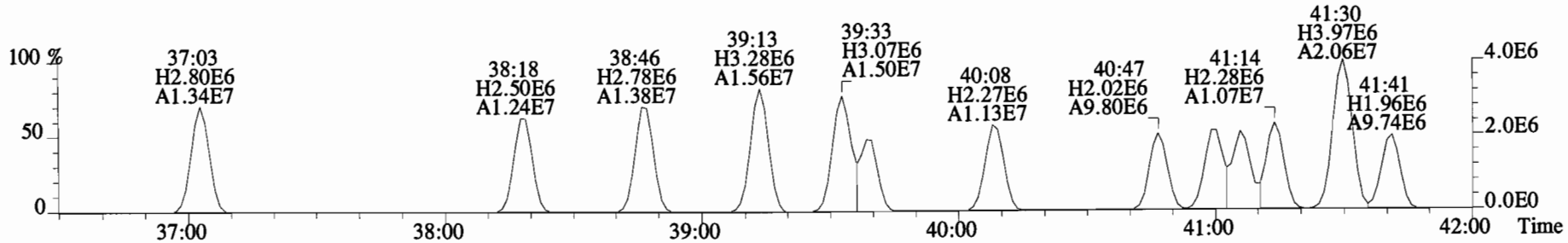
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7000.0,0.00%,F,F)



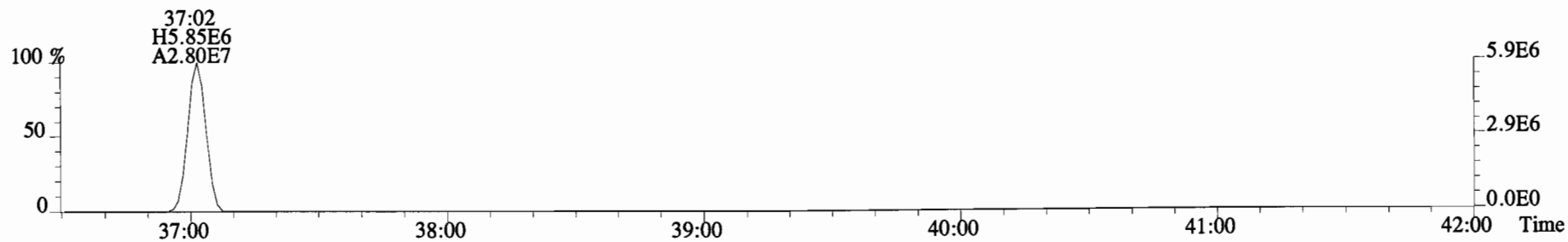
File:150318E1 #1-758 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1688.0,0.00%,F,F)



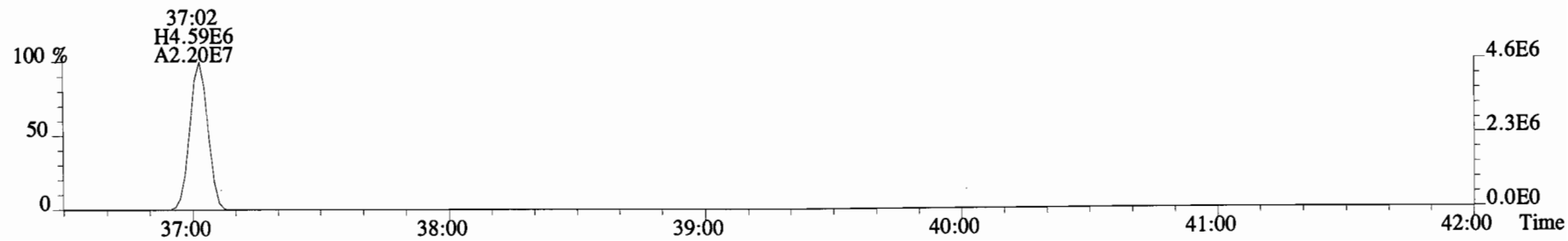
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1892.0,0.00%,F,F)



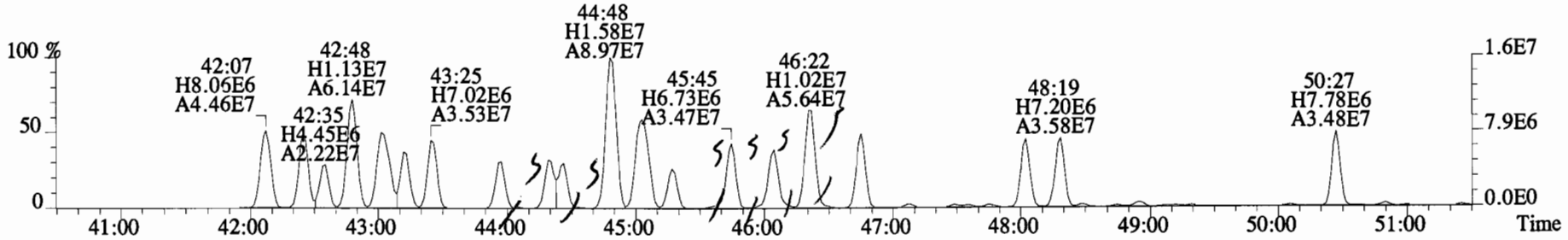
371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2252.0,0.00%,F,F)



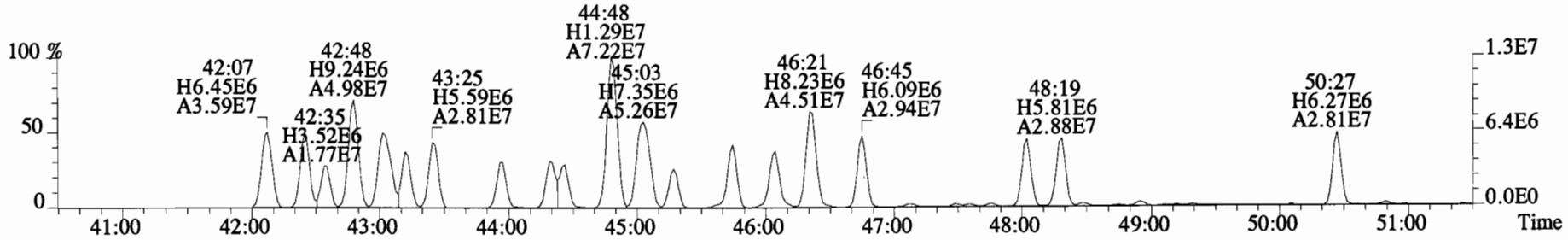
373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2328.0,0.00%,F,F)



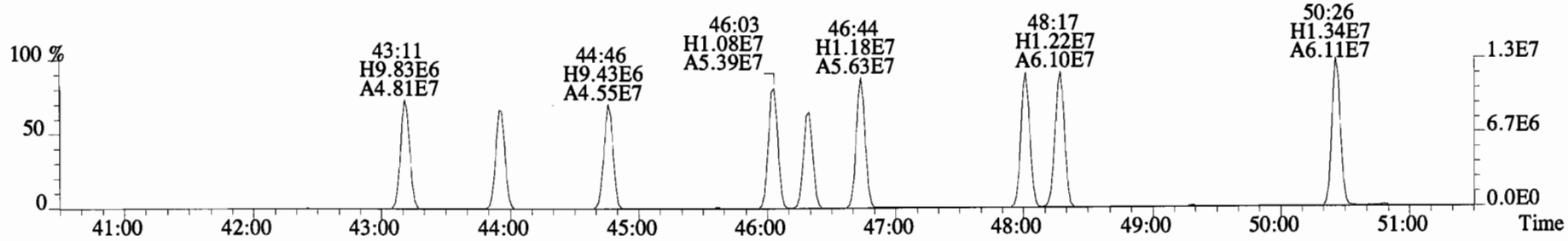
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22708.0,0.00%,F,F)



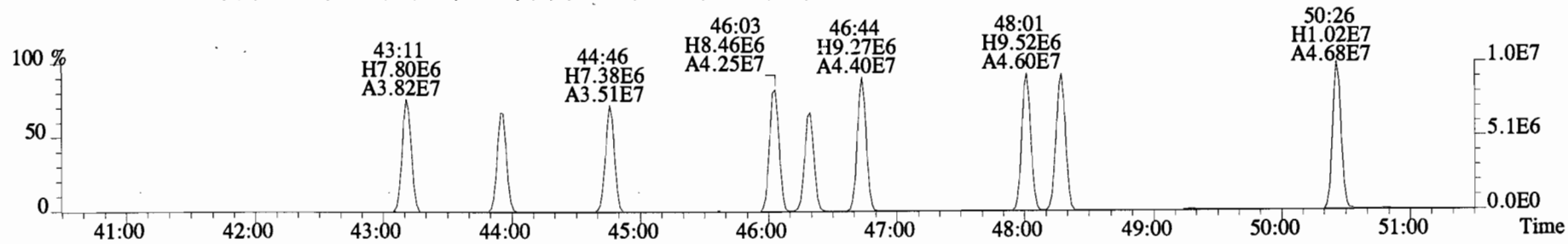
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11828.0,0.00%,F,F)



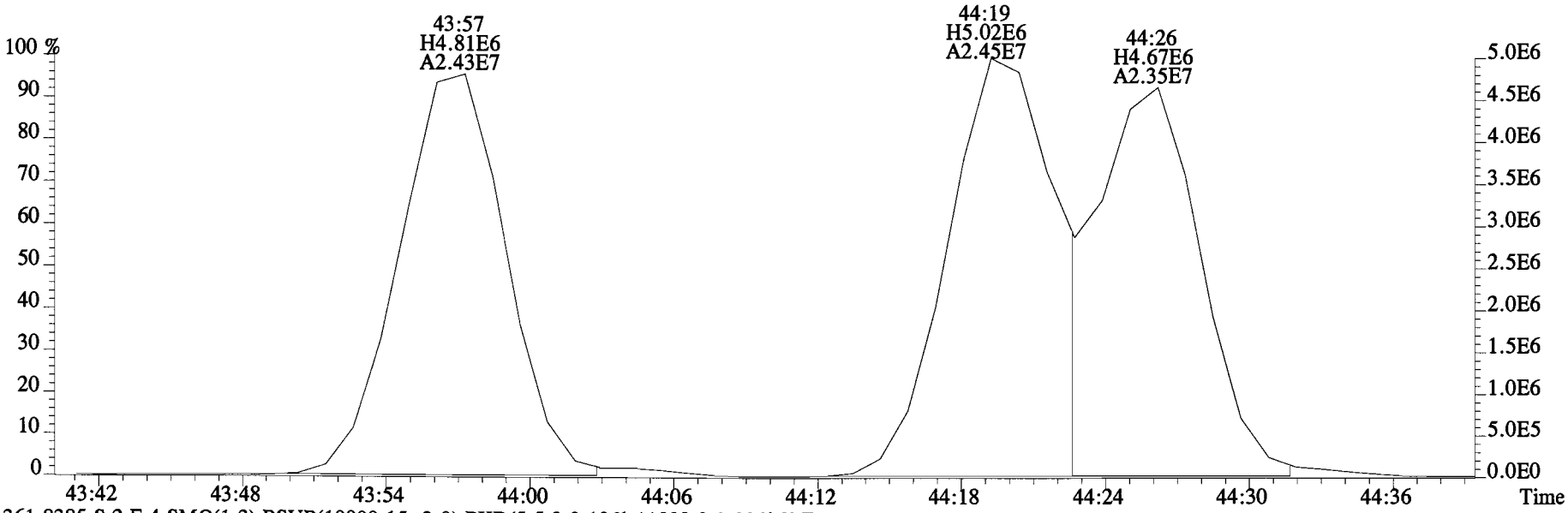
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6672.0,0.00%,F,F)



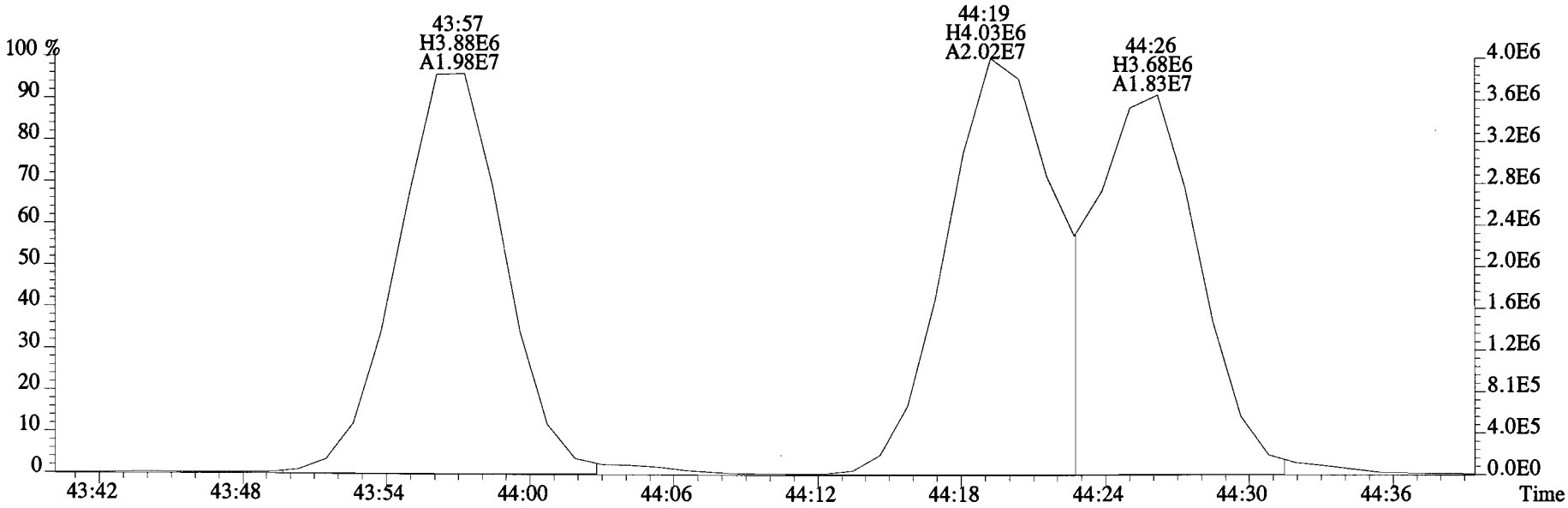
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5744.0,0.00%,F,F)



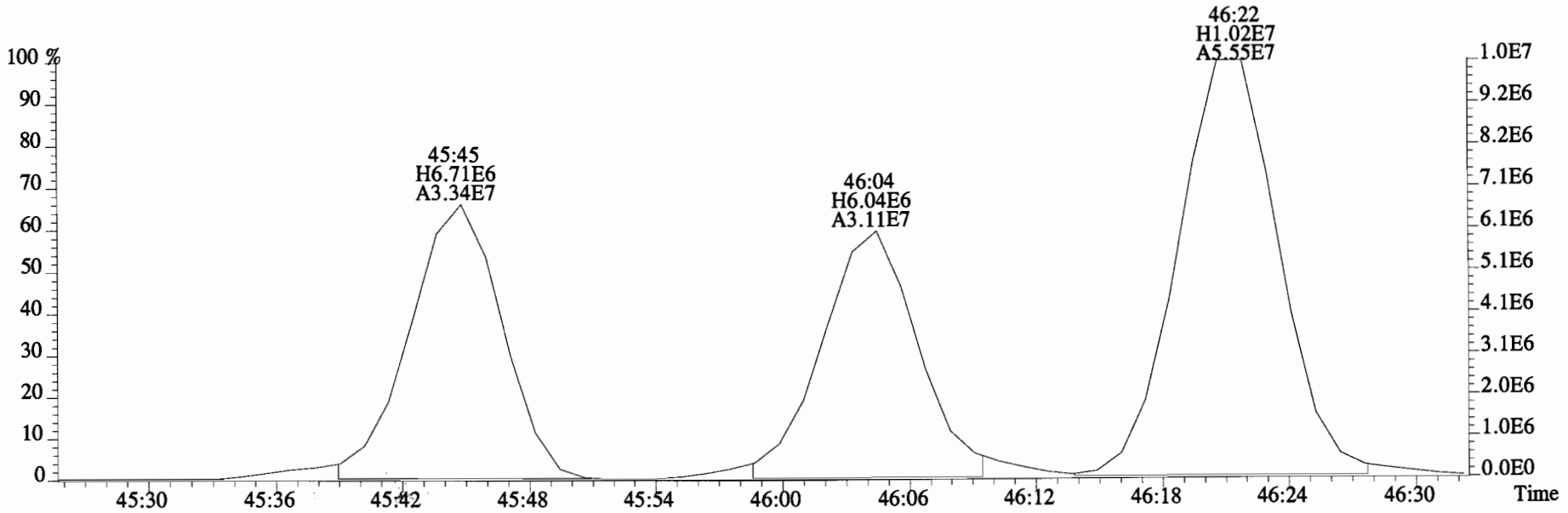
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22708.0,0.00%,F,F)



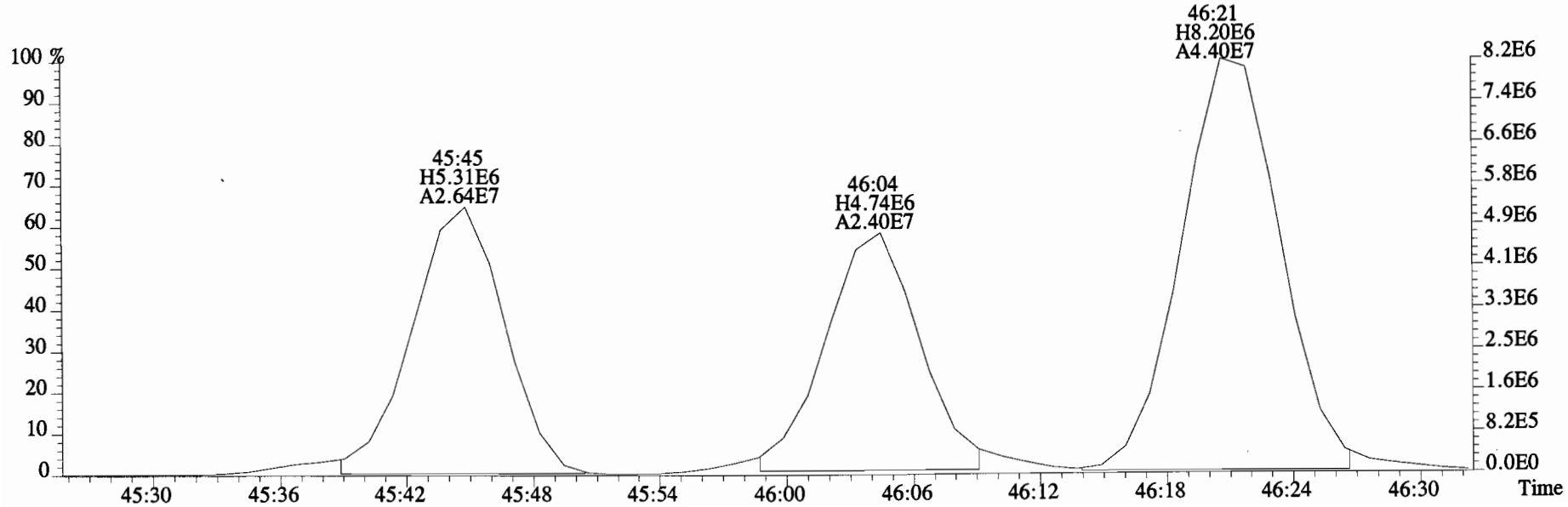
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11828.0,0.00%,F,F)



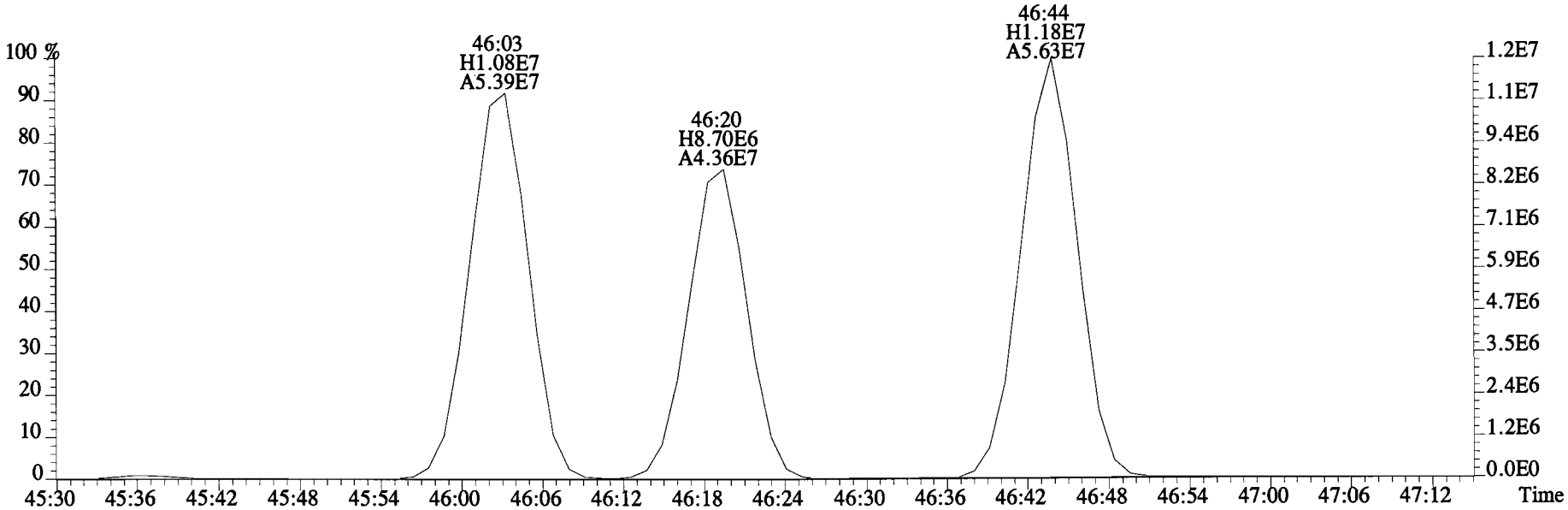
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22708.0,0.00%,F,F)



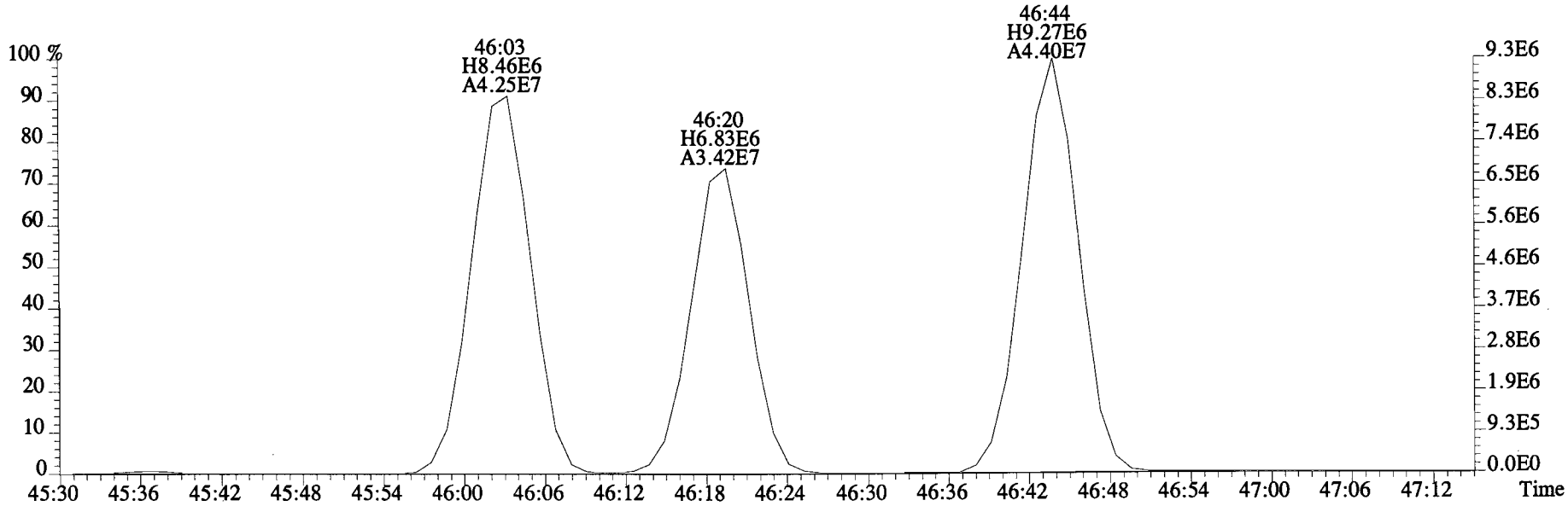
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11828.0,0.00%,F,F)

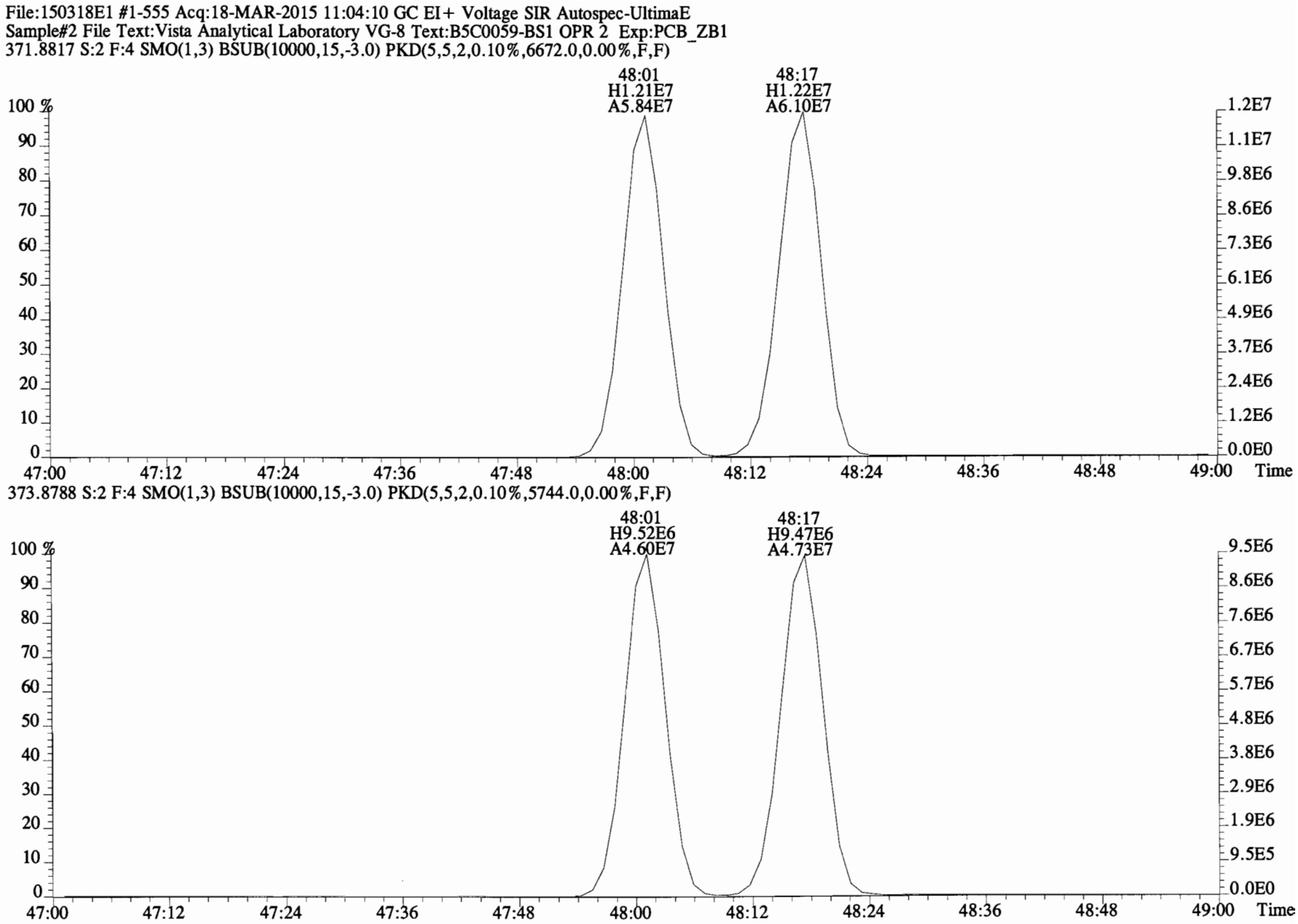


File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6672.0,0.00%,F,F)

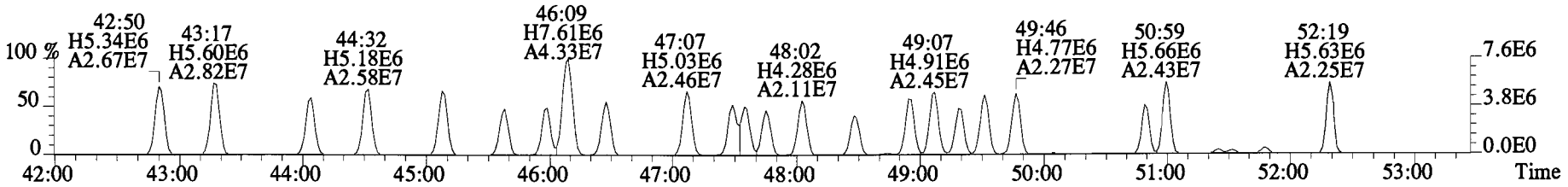


373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5744.0,0.00%,F,F)

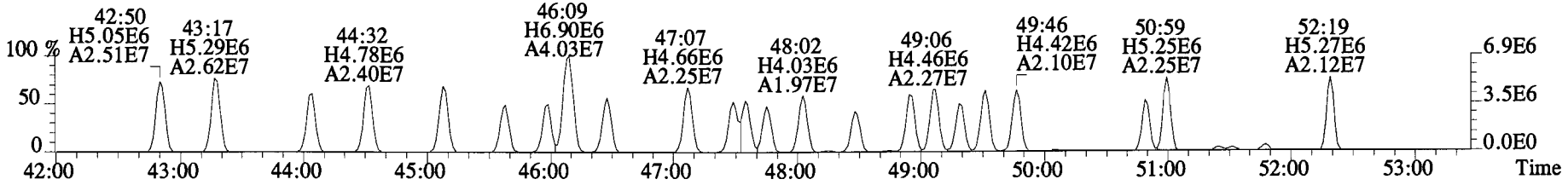



File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6672.0,0.00%,F,F)
48:01
H1.21E7
A5.84E7
48:17
H1.22E7
A6.10E7
100 %
90
80
70
60
50
40
30
20
10
0
1.2E7
1.1E7
9.8E6
8.6E6
7.3E6
6.1E6
4.9E6
3.7E6
2.4E6
1.2E6
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5744.0,0.00%,F,F)
48:01
H9.52E6
A4.60E7
48:17
H9.47E6
A4.73E7
100 %
90
80
70
60
50
40
30
20
10
0
9.5E6
8.6E6
7.6E6
6.7E6
5.7E6
4.8E6
3.8E6
2.9E6
1.9E6
9.5E5
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time

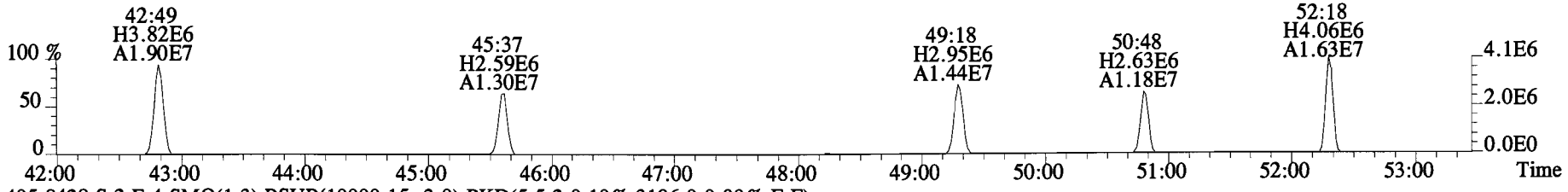
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11768.0,0.00%,F,F)



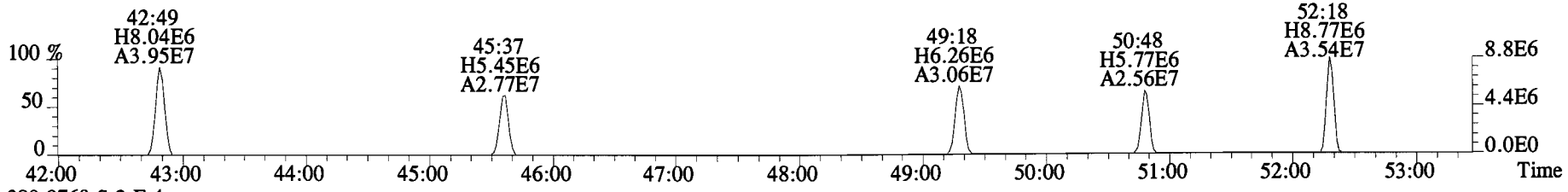
395.7995 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8560.0,0.00%,F,F)



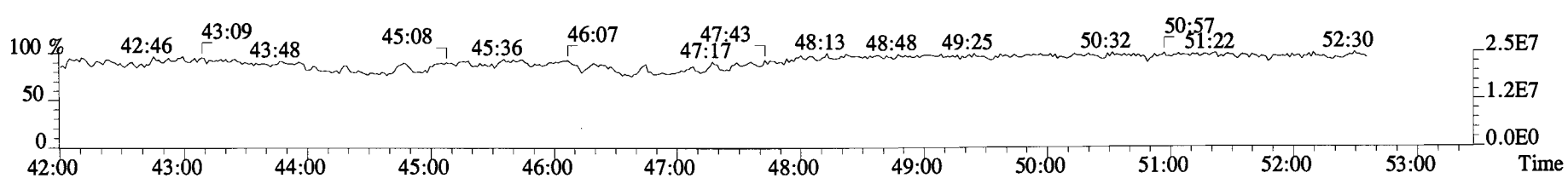
403.8457 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2732.0,0.00%,F,F)



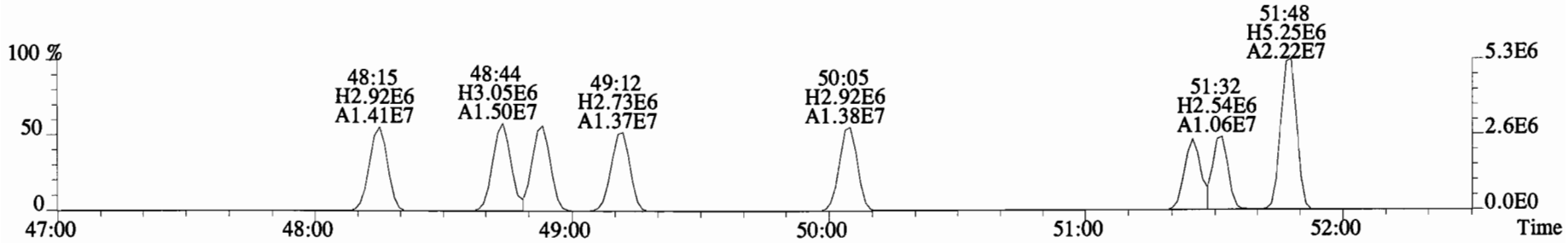
405.8428 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3196.0,0.00%,F,F)



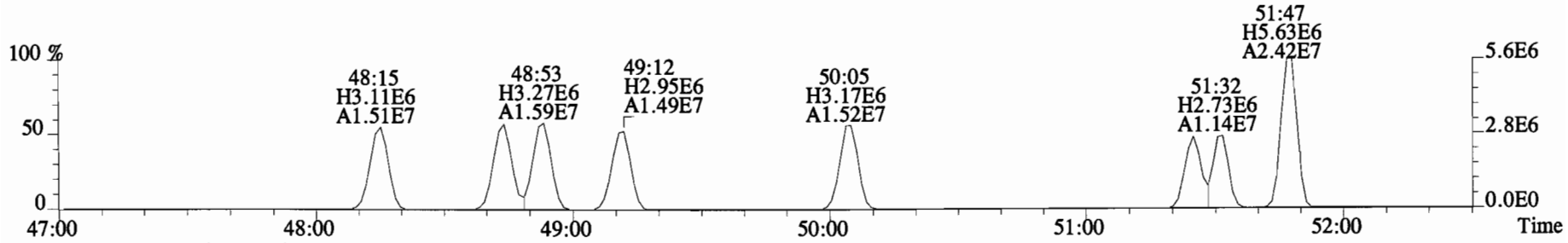
380.9760 S:2 F:4



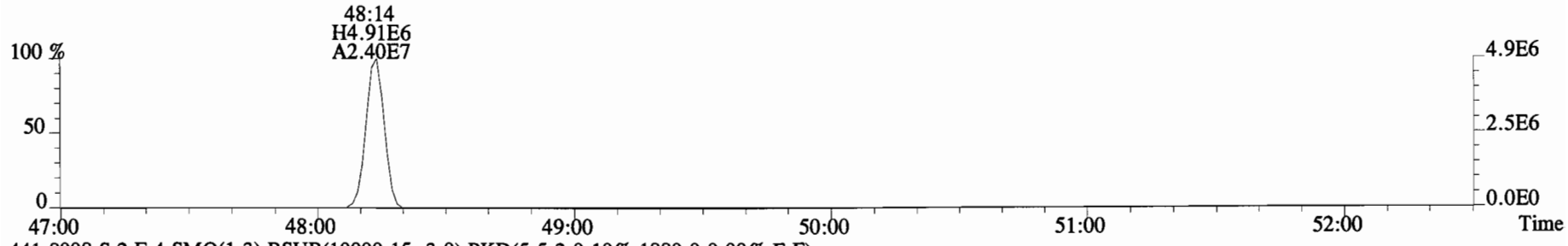
File:150318E1 #1-555 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



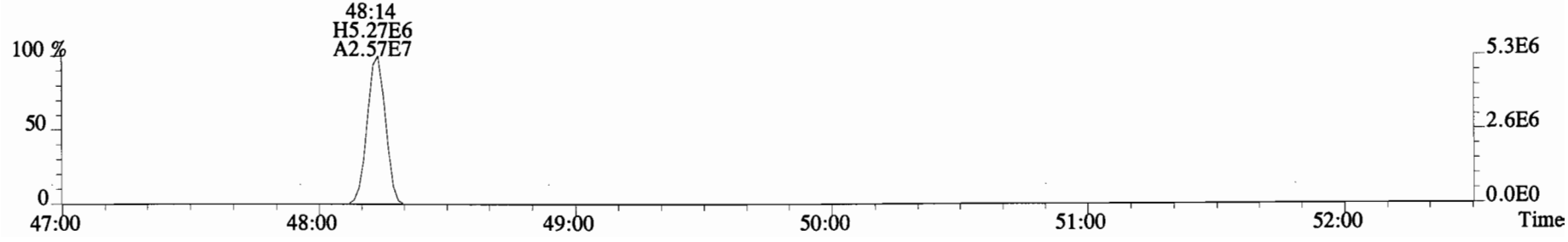
429.7606 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1472.0,0.00%,F,F)



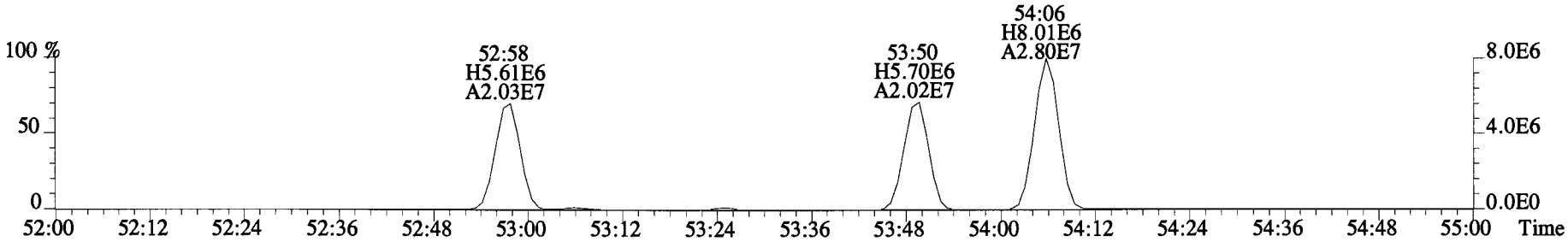
439.8038 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1780.0,0.00%,F,F)



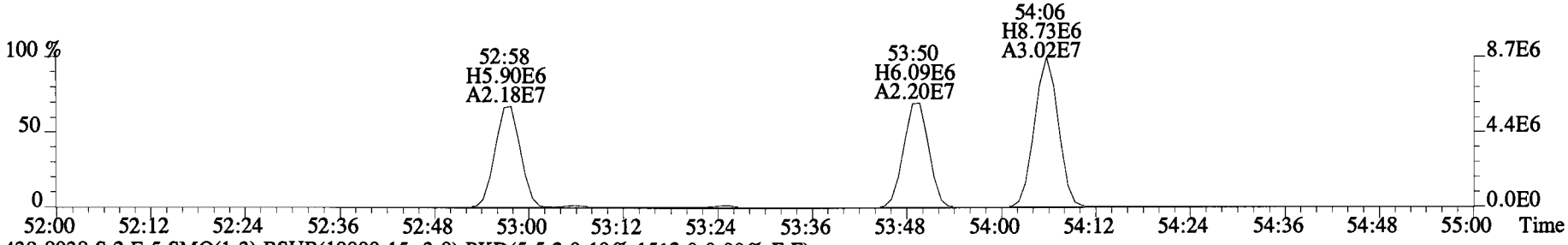
441.8008 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1880.0,0.00%,F,F)



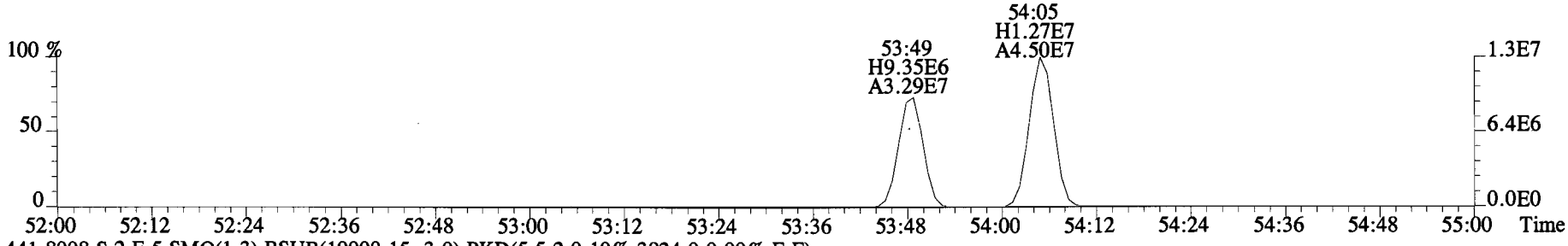
File:150318E1 #1-429 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1536.0,0.00%,F,F)



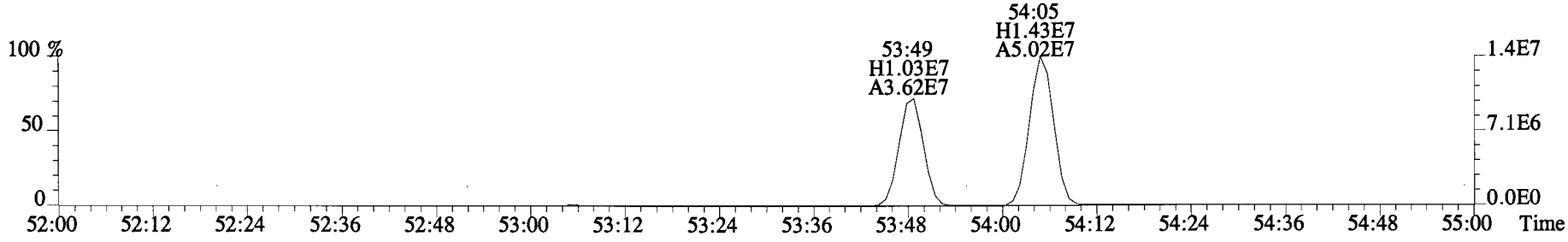
429.7606 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



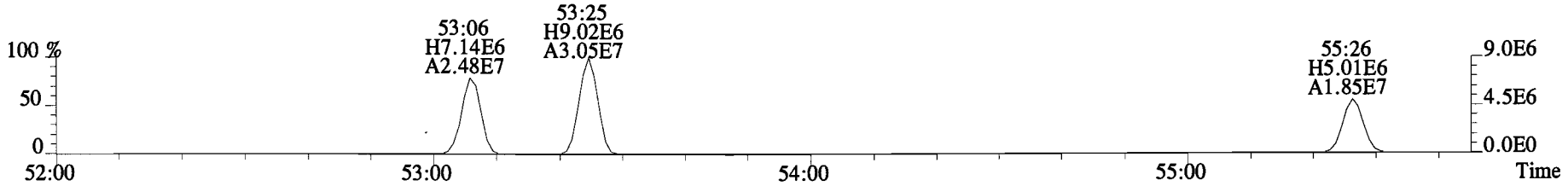
439.8038 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1512.0,0.00%,F,F)



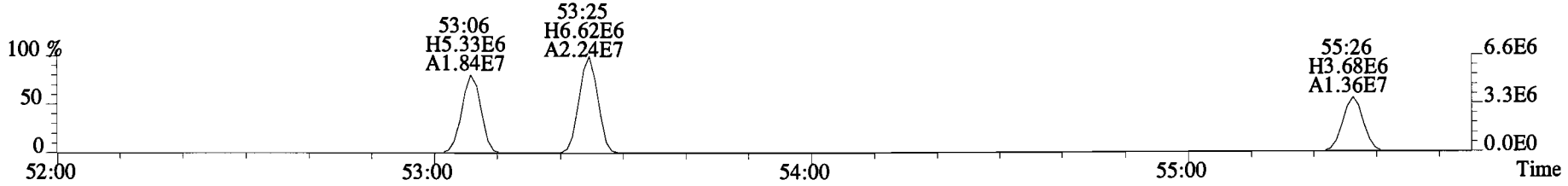
441.8008 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3924.0,0.00%,F,F)



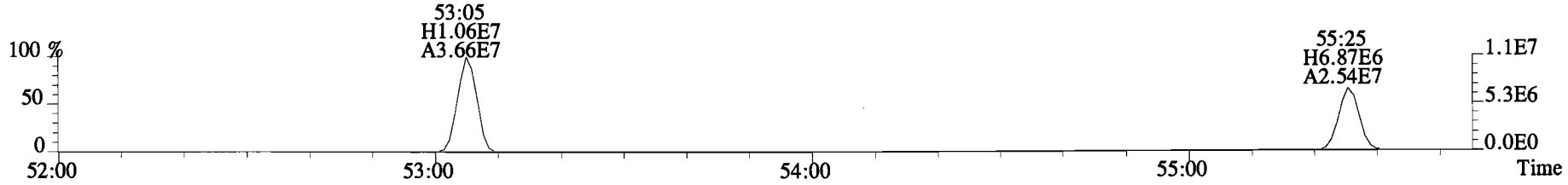
File:150318E1 #1-429 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6728.0,0.00%,F,F)



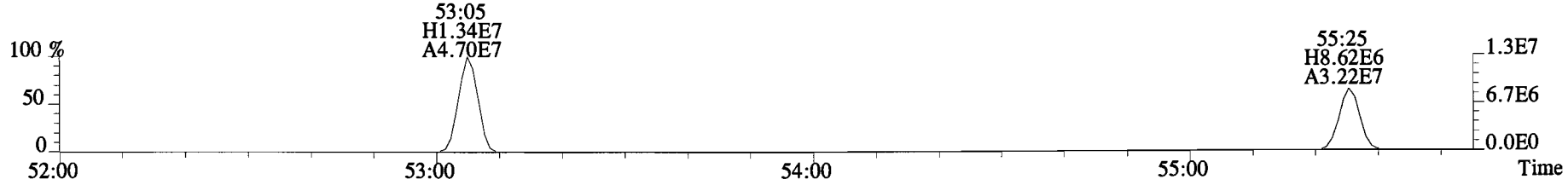
465.7186 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6080.0,0.00%,F,F)



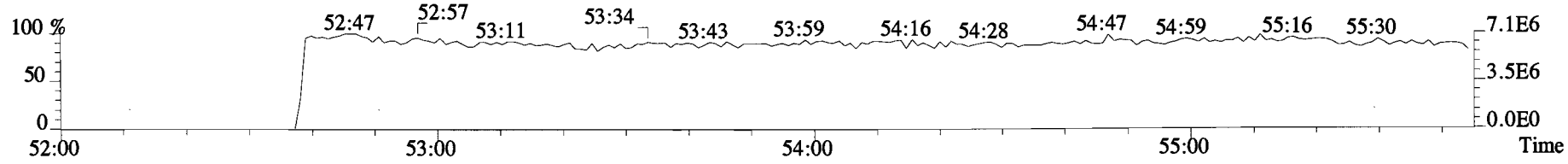
473.7648 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11052.0,0.00%,F,F)



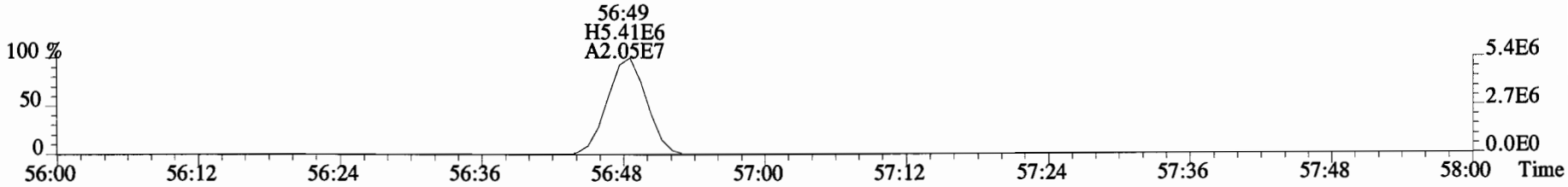
475.7619 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12752.0,0.00%,F,F)



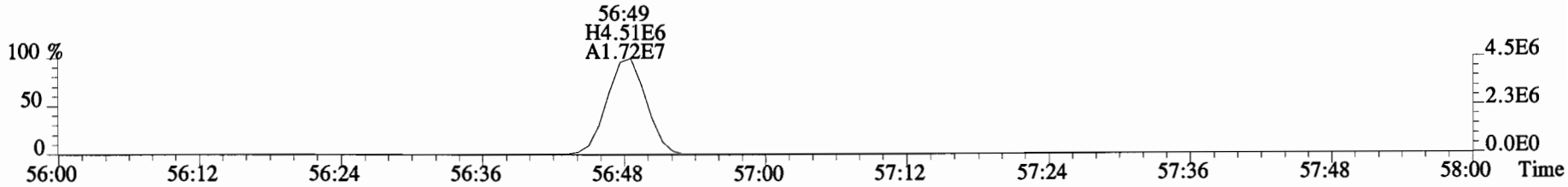
492.9697 S:2 F:5



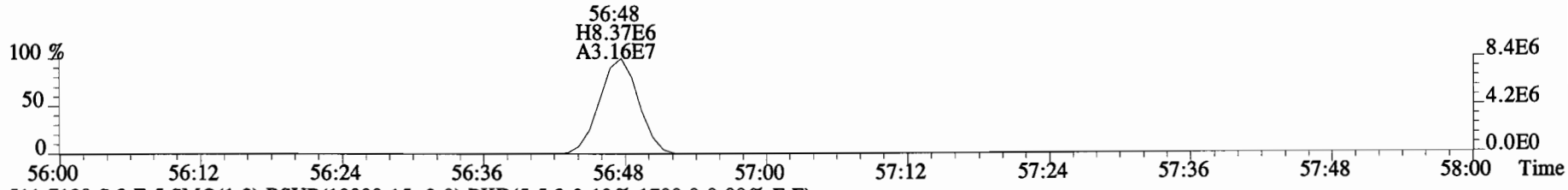
File:150318E1 #1-429 Acq:18-MAR-2015 11:04:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0059-BS1 OPR 2 Exp:PCB_ZB1
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1612.0,0.00%,F,F)



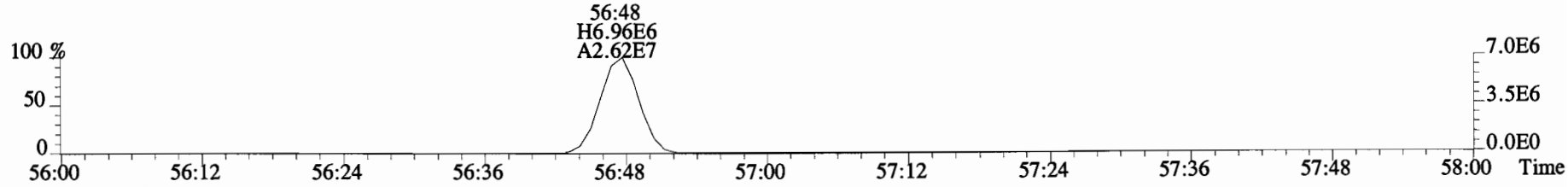
499.6797 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1688.0,0.00%,F,F)



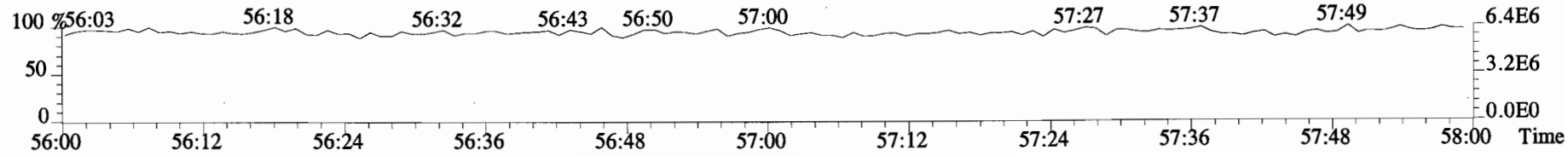
509.7229 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1460.0,0.00%,F,F)



511.7199 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1700.0,0.00%,F,F)



492.9697 S:2 F:5



Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1

Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.025 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	9.97e+05	3.23	y 16:10	1.19	59.6		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	2.44e+05	3.38	y 18:32	1.18	13.1		*	2.5	*	0.988	0.984	0.994
Mono	PCB-3	7.42e+05	3.14	y 18:46	1.43	33.2		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	1.19e+06	1.62	y 20:06	1.57	83.3		*	2.5	*	1.001	0.997	1.007
Di	PCB-7/9	5.76e+05	1.49	y 21:55	1.21	32.2		*	2.5	*	0.868	0.866	0.874
Di	PCB-6	9.33e+05	1.73	y 22:33	1.30	48.4		*	2.5	*	0.893	0.890	0.899
Di	PCB-5/8	4.61e+06	1.60	y 22:57	1.15	271		*	2.5	*	0.909	0.907	0.917
Di	PCB-14	*	*	n NotF	1.11	*		11900	2.5	18.2	*	0.949	0.959
Di	PCB-11	9.84e+06	1.62	y 25:16	1.09	613		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	6.33e+05	1.35	y 25:38	1.19	35.9		*	2.5	*	1.015	1.011	1.021
Di	PCB-15	9.63e+06	1.60	y 25:58	1.28	509		*	2.5	*	1.028	1.023	1.033
Tri	PCB-19	1.65e+06	0.99	y 24:15	1.04	182		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n NotF	1.71	*		2430	2.5	3.31	*	1.032	1.042
Tri	PCB-18	1.10e+07	1.07	y 25:53	0.78	1050		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	5.68e+06	1.08	y 26:03	0.92	457		*	2.5	*	0.960	0.956	0.966
Tri	PCB-24/27	1.55e+06	1.02	y 26:37	1.19	97.1		*	2.5	*	0.981	0.977	0.987
Tri	PCB-16/32	1.99e+07	1.07	y 27:09	0.94	1570		*	2.5	*	1.001	0.995	1.005
Tri	PCB-34	2.48e+05	0.99	y 27:57	1.14	14.8		*	2.5	*	0.960	0.955	0.965
Tri	PCB-23	*	*	n NotF	1.28	*		5350	2.5	7.00	*	0.959	0.969
Tri	PCB-29	9.28e+04	1.42	n 28:16	1.08	5.82	R	*	2.5	*	0.971	0.967	0.977
Tri	PCB-26	3.67e+06	1.12	y 28:29	1.21	206		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	1.68e+06	1.13	y 28:39	1.26	90.3		*	2.5	*	0.985	0.979	0.989
Tri	PCB-31	3.15e+07	1.11	y 28:59	1.28	1660		*	2.5	*	0.996	0.992	1.002
Tri	PCB-28	6.56e+07	1.09	y 29:06	1.71	2600		*	2.5	*	1.000	0.995	1.005
Tri	PCB-20/21/33	1.17e+07	1.11	y 29:44	1.08	731		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	8.76e+06	1.10	y 30:09	1.21	491		*	2.5	*	1.036	1.032	1.042
Tri	PCB-36	3.32e+05	1.02	y 30:46	1.14	19.5		*	2.5	*	0.933	0.928	0.938
Tri	PCB-39	1.46e+05	1.18	y 31:14	1.12	8.80		*	2.5	*	0.947	0.943	0.953
Tri	PCB-38	5.80e+06	1.14	y 32:02	1.20	324		*	2.5	*	0.972	0.966	0.976
Tri	PCB-35	1.19e+06	1.16	y 32:33	1.23	64.5		*	2.5	*	0.987	0.982	0.992
Tri	PCB-37	1.40e+07	1.09	y 32:59	1.23	764		*	2.5	*	1.001	0.995	1.005
Tetra	PCB-54	7.99e+05	0.79	y 27:59	1.10	67.3		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-50	2.61e+05	0.84	y 29:08	0.88	27.5		*	2.5	*	1.042	1.037	1.047
Tetra	PCB-53	6.31e+07	0.78	y 29:47	1.06	6140		*	2.5	*	0.946	0.942	0.952
Tetra	PCB-51	2.52e+07	0.80	y 30:07	0.99	2640		*	2.5	*	0.956	0.952	0.962
Tetra	PCB-45	5.54e+06	0.75	y 30:33	0.86	665		*	2.5	*	0.970	0.966	0.976
Tetra	PCB-46	1.79e+07	0.76	y 31:03	0.85	2190		*	2.5	*	0.986	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/27/15

Reviewed by: [signature] Date: 3/31/15

Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1

Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.025 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Tetra	PCB-52/69	3.25e+08	0.78	y 31:31	1.28	26300		*	2.5	*	1.001	0.996-1.006
Tetra	PCB-73	1.24e+06	0.74	y 31:39	1.35	95.2		*	2.5	*	1.005	1.000-1.010
Tetra	PCB-43/49	3.39e+08	0.78	y 31:49	0.99	35300		*	2.5	*	1.010	1.005-1.015
Tetra	PCB-47	2.23e+08	0.78	y 32:02	1.06	21000		*	2.5	*	1.001	0.996-1.006
Tetra	PCB-48/75	1.27e+07	0.77	y 32:09	1.23	1030		*	2.5	*	1.004	0.999-1.009
Tetra	PCB-65	*	*	n NotFnd	1.22	*		7040	2.5	12.8	*	1.008-1.018
Tetra	PCB-62	*	*	n NotFnd	1.22	*		7040	2.5	12.9	*	1.011-1.021
Tetra	PCB-44	1.18e+08	0.79	y 32:49	0.86	13600		*	2.5	*	1.025	1.021-1.031
Tetra	PCB-42/59	8.36e+07	0.78	y 33:02	1.14	7300		*	2.5	*	1.032	1.028-1.038
Tetra	PCB-41/64/71/72	1.70e+08	0.78	y 33:36	1.21	14000		*	2.5	*	1.049	1.046-1.056
Tetra	PCB-68	1.30e+07	0.76	y 33:52	1.35	961		*	2.5	*	1.058	1.054-1.064
Tetra	PCB-40	8.58e+06	0.80	y 34:05	0.70	1220		*	2.5	*	1.065	1.061-1.071
Tetra	PCB-57	7.13e+05	0.87	y 34:27	0.98	55.8		*	2.5	*	0.970	0.965-0.975
Tetra	PCB-67	1.27e+06	0.76	y 34:44	1.11	88.3		*	2.5	*	0.978	0.974-0.984
Tetra	PCB-58	3.90e+06	0.78	y 34:51	0.93	322		*	2.5	*	0.982	0.977-0.987
Tetra	PCB-63	1.07e+07	0.78	y 35:02	0.95	860		*	2.5	*	0.987	0.982-0.992
Tetra	PCB-74	5.59e+07	0.78	y 35:19	1.24	3450		*	2.5	*	0.995	0.990-1.000
Tetra	PCB-61/70	2.73e+08	0.78	y 35:31	0.95	22000		*	2.5	*	1.000	0.995-1.005
Tetra	PCB-76/66	3.27e+08	0.78	y 35:44	1.04	24000		*	2.5	*	1.007	1.001-1.011
Tetra	PCB-80	*	*	n NotFnd	1.19	*		7040	2.5	10.00	*	0.996-1.006
Tetra	PCB-55	6.46e+06	0.78	y 36:13	1.04	459		*	2.5	*	1.008	1.005-1.015
Tetra	PCB-56/60	5.29e+07	0.77	y 36:45	1.01	3880		*	2.5	*	1.023	1.019-1.029
Tetra	PCB-79	1.17e+07	0.79	y 37:50	1.08	802		*	2.5	*	1.053	1.048-1.058
Tetra	PCB-78	*	*	n NotFnd	1.27	*		7040	2.5	10.2	*	0.982-0.992
Tetra	PCB-81	1.57e+06	0.77	y 39:01	1.33	94.2		*	2.5	*	1.000	0.995-1.005
Tetra	PCB-77	1.92e+07	0.87	y 39:37	1.10	1380		*	2.5	*	1.000	0.995-1.005
Penta	PCB-104	1.39e+05	1.75	y 32:39	1.18	17.9		*	2.5	*	1.000	0.996-1.006
Penta	PCB-96	4.84e+06	1.59	y 33:56	1.14	651		*	2.5	*	1.039	1.034-1.044
Penta	PCB-103	7.69e+06	1.67	y 34:27	0.96	1230		*	2.5	*	1.055	1.050-1.060
Penta	PCB-100	5.65e+06	1.65	y 34:49	0.94	922		*	2.5	*	1.066	1.061-1.071
Penta	PCB-94	4.23e+06	1.53	y 35:16	1.06	780		*	2.5	*	0.985	0.980-0.990
Penta	PCB-95/98/102	3.41e+08	1.60	y 35:49	1.22	54400		*	2.5	*	1.000	0.995-1.005
Penta	PCB-93	*	*	n NotFnd	0.84	*		1730	2.5	12.9	*	0.997-1.007
Penta	PCB-88/91	9.75e+07	1.62	y 36:13	1.12	17000		*	2.5	*	1.012	1.005-1.015
Penta	PCB-121	*	*	n NotFnd	1.62	*		1730	2.5	6.71	*	1.009-1.019
Penta	PCB-84/92	1.88e+08	1.62	y 37:07	1.05	31700		*	2.5	*	0.990	0.985-0.995
Penta	PCB-89	1.83e+06	1.68	y 37:18	1.13	286		*	2.5	*	0.995	0.991-1.001

Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1
Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.025 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Penta	PCB-90/101	4.83e+08	1.61	y 37:29	1.10	77500		*	2.5	*	1.000	0.995-1.005
Penta	PCB-113	1.05e+06	1.54	y 37:42	1.41	132		*	2.5	*	1.006	1.002-1.012
Penta	PCB-99	2.50e+08	1.61	y 37:50	1.34	33000		*	2.5	*	1.009	1.004-1.014
Penta	PCB-119	3.03e+07	1.60	y 38:17	1.53	3830		*	2.5	*	0.987	0.982-0.992
Penta	PCB-108/112	2.65e+07	1.62	y 38:27	1.28	4010		*	2.5	*	0.991	0.986-0.996
Penta	PCB-83	*	*	n NotF	1.52	*		1730	2.5	7.31	*	0.990-1.000
Penta	PCB-97	1.01e+08	1.62	y 38:48	1.18	16500		*	2.5	*	1.000	0.995-1.005
Penta	PCB-86	*	*	n NotF	0.84	*		1730	2.5	13.2	*	0.999-1.009
Penta	PCB-87/117/125	1.32e+08	1.61	y 39:05	1.55	16500		*	2.5	*	1.008	1.002-1.012
Penta	PCB-111/115	5.56e+06	1.71	y 39:14	1.63	659		*	2.5	*	1.012	1.006-1.016
Penta	PCB-85/116	4.59e+07	1.60	y 39:21	1.30	6820		*	2.5	*	1.015	1.010-1.020
Penta	PCB-120	4.89e+06	1.48	y 39:33	1.68	564		*	2.5	*	1.020	1.016-1.026
Penta	PCB-110	6.77e+08	1.62	y 39:45	1.56	84100		*	2.5	*	1.025	1.020-1.030
Penta	PCB-82	2.56e+07	1.60	y 40:21	0.76	4880		*	2.5	*	0.976	0.971-0.981
Penta	PCB-124	2.02e+07	1.66	y 41:02	1.47	1990		*	2.5	*	0.993	0.988-0.998
Penta	PCB-107/109	5.05e+07	1.62	y 41:12	1.32	5530		*	2.5	*	0.997	0.991-1.001
Penta	PCB-123	5.10e+06	1.65	y 41:21	1.17	631		*	2.5	*	1.000	0.996-1.006
Penta	PCB-106/118	5.09e+08	1.60	y 41:32	1.17	60000		*	2.5	*	1.000	0.996-1.006
Penta	PCB-114	1.01e+07	1.65	y 42:10	1.30	754		*	2.5	*	1.000	0.995-1.005
Penta	PCB-122	6.16e+06	1.65	y 42:19	1.12	530		*	2.5	*	1.003	0.999-1.009
Penta	PCB-105	1.71e+08	1.60	y 43:03	1.30	12900		*	2.5	*	1.000	0.995-1.005
Penta	PCB-127	*	*	n NotF	1.33	*		3710	2.5	8.52	*	0.996-1.006
Penta	PCB-126	5.23e+06	1.68	y 45:17	1.18	446		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-155	*	*	n NotF	1.11	*		1790	2.5	9.62	*	0.966-1.006
Hexa	PCB-150	1.30e+06	1.33	y 38:18	1.00	276		*	2.5	*	1.034	1.030-1.040
Hexa	PCB-152	6.63e+05	1.16	y 38:47	1.12	126		*	2.5	*	1.047	1.043-1.053
Hexa	PCB-145	1.16e+05	1.09	y 39:14	1.20	20.5		*	2.5	*	1.059	1.055-1.065
Hexa	PCB-136	8.34e+07	1.29	y 39:32	1.18	15000		*	2.5	*	1.068	1.064-1.074
Hexa	PCB-148	4.22e+05	1.17	y 39:40	0.74	120		*	2.5	*	1.071	1.066-1.076
Hexa	PCB-154	5.93e+06	1.32	y 40:08	0.86	1470		*	2.5	*	1.084	1.080-1.090
Hexa	PCB-151	1.19e+08	1.29	y 40:46	0.75	33700		*	2.5	*	1.101	1.097-1.107
Hexa	PCB-135	6.03e+07	1.27	y 41:00	0.79	16200		*	2.5	*	1.107	1.103-1.113
Hexa	PCB-144	2.13e+07	1.29	y 41:06	0.76	5940		*	2.5	*	1.110	1.105-1.117
Hexa	PCB-147	1.13e+07	1.28	y 41:14	0.82	2930		*	2.5	*	1.113	1.109-1.121
Hexa	PCB-139/149	4.07e+08	1.30	y 41:29	0.76	113000		*	2.5	*	1.120	1.116-1.128
Hexa	PCB-140	2.10e+06	1.29	y 41:40	0.72	618		*	2.5	*	1.125	1.121-1.133
Hexa	PCB-134/143	4.76e+07	1.23	y 42:08	0.92	6740		*	2.5	*	0.976	0.970-0.980

Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1

Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.025 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	2.17e+07	1.22	y 42:25	0.82	3440		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	*	*	n NotF¶	0.91	*		4750	2.5	20.5	*	0.981	0.991
Hexa	PCB-146/165	1.46e+08	1.25	y 42:48	1.25	15300		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	2.63e+08	1.24	y 43:04	1.10	31000		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	1.02e+09	1.25	y 43:13	1.25	106000		*	2.5	*	1.001	0.995	1.005
Hexa	PCB-168	2.12e+06	1.33	y 43:25	1.45	190		*	2.5	*	1.005	1.001	1.011
Hexa	PCB-141	1.92e+08	1.25	y 43:56	1.09	25200		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-137	3.45e+07	1.24	y 44:20	1.06	4630		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	4.46e+07	1.26	y 44:25	0.96	6580		*	2.5	*	1.011	1.006	1.016
Hexa	PCB-138/163/164	1.07e+09	1.25	y 44:47	1.29	116000		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-158/160	1.18e+08	1.26	y 45:01	1.34	12300		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	3.03e+07	1.25	y 45:17	0.85	4970		*	2.5	*	1.012	1.007	1.017
Hexa	PCB-166	3.20e+06	1.26	y 45:45	1.19	323		*	2.5	*	0.993	0.988	0.998
Hexa	PCB-159	*	*	n NotF¶	1.11	*		4750	2.5	14.5	*	0.996	1.006
Hexa	PCB-128/162	1.30e+08	1.27	y 46:21	1.05	14800		*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	4.52e+07	1.24	y 46:45	1.20	4080		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	9.55e+07	1.24	y 48:03	1.14	9300		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-157	2.31e+07	1.26	y 48:19	1.16	2080		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	2.78e+05	1.14	y 50:27	1.12	28.7		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-188	6.40e+05	1.16	y 42:51	1.58	72.7		*	2.5	*	1.001	0.996	1.006
Hepta	PCB-184	2.33e+05	1.03	y 43:16	1.63	25.6		*	2.5	*	1.011	1.006	1.016
Hepta	PCB-179	1.44e+08	1.08	y 44:03	1.30	19800		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	4.35e+07	1.05	y 44:31	1.48	5290		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	*	*	n NotF¶	1.45	*		6740	2.5	15.1	*	1.050	1.060
Hepta	PCB-178	4.85e+07	1.06	y 45:37	1.03	8410		*	2.5	*	1.065	1.061	1.071
Hepta	PCB-175	9.80e+06	1.09	y 45:58	1.01	1740		*	2.5	*	1.074	1.069	1.079
Hepta	PCB-182/187	3.24e+08	1.06	y 46:07	1.25	46400		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	1.53e+08	1.07	y 46:28	1.21	22700		*	2.5	*	1.085	1.081	1.091
Hepta	PCB-185	3.15e+07	1.06	y 47:07	1.80	4300		*	2.5	*	0.955	0.951	0.961
Hepta	PCB-174	2.57e+08	1.07	y 47:29	1.38	45900		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	8.12e+05	1.00	y 47:36	1.38	145		*	2.5	*	0.965	0.960	0.970
Hepta	PCB-177	1.38e+08	1.07	y 47:45	1.26	26900		*	2.5	*	0.968	0.963	0.973
Hepta	PCB-171	6.47e+07	1.08	y 48:03	1.58	10100		*	2.5	*	0.974	0.970	0.980
Hepta	PCB-173	4.99e+06	1.15	y 48:28	1.11	1110		*	2.5	*	0.983	0.978	0.988
Hepta	PCB-172	3.95e+07	1.07	y 48:56	1.63	5940		*	2.5	*	0.992	0.987	0.997
Hepta	PCB-192	*	*	n NotF¶	1.74	*		6740	2.5	17.2	*	0.991	1.001
Hepta	PCB-180	5.70e+08	1.07	y 49:20	1.34	104000		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1
Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.025 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hepta	PCB-193	3.49e+07	1.06	y 49:32	1.72	5000		*	2.5	*	1.004	0.999-1.009
Hepta	PCB-191	1.20e+07	1.08	y 49:47	1.69	1740		*	2.5	*	1.009	1.004-1.014
Hepta	PCB-170	2.12e+08	1.08	y 50:50	1.60	40700		*	2.5	*	1.000	0.995-1.005
Hepta	PCB-190	5.90e+07	1.08	y 51:01	2.21	8220		*	2.5	*	1.004	0.998-1.008
Hepta	PCB-189	1.00e+07	1.08	y 52:21	1.55	1520		*	2.5	*	1.000	0.995-1.005
Octa	PCB-202	2.09e+07	0.92	y 48:16	1.08	4270		*	2.5	*	1.001	0.995-1.005
Octa	PCB-201	1.59e+07	0.90	y 48:44	1.15	3060		*	2.5	*	1.010	1.005-1.015
Octa	PCB-204	*	*	n NotFnd	1.14	*		1830	2.5	8.27	*	1.008-1.018
Octa	PCB-197	4.65e+06	0.94	y 49:12	1.07	957		*	2.5	*	1.020	1.015-1.025
Octa	PCB-200	1.54e+07	0.93	y 50:05	1.06	3190		*	2.5	*	1.038	1.032-1.044
Octa	PCB-198	3.88e+06	0.90	y 51:25	0.76	1130		*	2.5	*	1.066	1.059-1.069
Octa	PCB-199	8.80e+07	0.92	y 51:32	0.80	24400		*	2.5	*	1.068	1.061-1.071
Octa	PCB-196/203	1.05e+08	0.91	y 51:48	0.80	28900		*	2.5	*	1.074	1.066-1.076
Octa	PCB-195	6.29e+07	0.92	y 52:59	1.23	9710		*	2.5	*	0.984	0.979-0.989
Octa	PCB-194	1.57e+08	0.92	y 53:51	1.21	24500		*	2.5	*	1.000	0.995-1.005
Octa	PCB-205	9.54e+06	0.94	y 54:07	1.54	1170		*	2.5	*	1.005	1.001-1.011
Nona	PCB-208	9.78e+06	1.35	y 53:07	0.93	1610		*	2.5	*	1.000	0.995-1.005
Nona	PCB-207	6.31e+06	1.37	y 53:26	1.08	893		*	2.5	*	1.006	1.001-1.011
Nona	PCB-206	3.24e+07	1.35	y 55:28	1.02	7240		*	2.5	*	1.000	0.995-1.005
Deca	PCB-209	2.69e+06	1.16	y 56:50	1.17	522		*	2.5	*	1.000	0.995-1.005

Analyst: DMS

Date: 3/27/15

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	1.98e+06	3.23 y	16:10	1.27	105.921	
Total Di-PCB	2.74e+07	1.62 y	20:06	1.21	1594.00	
Total Tri-PCB	3.97e+07	0.99 y	24:15	1.10	3352.14	
Total Tri-PCB	1.45e+08	0.99 y	27:57	1.21	6971.48	Sum:10323.6
Total Tetra-PCB	2.17e+09	0.79 y	27:59	1.09	189803	
Total Penta-PCB	3.02e+09	1.75 y	32:39	1.18	423632	
Total Penta-PCB	1.93e+08	1.65 y	42:10	1.25	14611.8	Sum:438244
Total Hexa-PCB	7.12e+08	1.33 y	38:18	0.90	189583	
Total Hexa-PCB	3.29e+09	1.23 y	42:08	1.11	363012	Sum:552595
Total Hepta-PCB	2.16e+09	1.16 y	42:51	1.42	360323	
Total Octa-PCB	2.54e+08	0.92 y	48:16	0.96	65928.4	
Total Octa-PCB	2.29e+08	0.92 y	52:59	1.33	35392.8	Sum:101321
Total Nona-PCB	4.84e+07	1.35 y	53:07	1.01	9744.64	
Total Deca-PCB	2.69e+06	1.16 y	56:50	1.17	522.207	

Total PCB Conc:1664582.78866

Integrations
by
Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-9.66-20141203-S Filename: 150318E1 S:5 Acq:18-MAR-15 14:17:36 ConCal: ST150318E1-1
Lab ID: 1400915-02RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:2.0246 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL		Conc	Rec
13C-PCB-1	1.38e+08	3.22 y	0.87	16:09	0.622	0.629	0.635	ok	8300	84.0
13C-PCB-3	1.55e+08	3.25 y	0.91	18:45	0.723	0.725	0.733		8880	89.9
13C-PCB-4	9.01e+07	1.61 y	0.59	20:05	0.774	0.775	0.783		8030	81.3
13C-PCB-9	1.46e+08	1.60 y	0.90	21:52	0.843	0.842	0.850		8510	86.2
13C-PCB-11	1.46e+08	1.58 y	0.94	25:15	0.973	0.968	0.978		8130	82.3
13C-PCB-19	8.56e+07	1.08 y	0.53	24:14	0.934	0.930	0.940		8420	85.2
13C-PCB-28	1.46e+08	1.09 y	0.93	29:06	1.004	0.999	1.009		8980	90.9
13C-PCB-32	1.33e+08	1.08 y	0.80	27:08	1.046	1.040	1.050		8740	88.4
13C-PCB-37	1.47e+08	1.08 y	0.84	32:58	1.137	1.131	1.143		10100	102
13C-PCB-47	9.94e+07	0.81 y	0.81	32:01	0.871	0.866	0.874		8590	86.9
13C-PCB-52	9.53e+07	0.81 y	0.77	31:30	0.857	0.853	0.861		8670	87.7
13C-PCB-54	1.06e+08	0.82 y	0.97	27:58	0.761	0.758	0.766		7680	77.7
13C-PCB-70	1.29e+08	0.83 y	1.00	35:30	0.966	0.961	0.971		9050	91.6
13C-PCB-77	1.25e+08	0.82 y	0.94	39:37	1.078	1.073	1.083		9290	94.0
13C-PCB-80	1.33e+08	0.81 y	1.03	35:56	0.978	0.972	0.982		9070	91.8
13C-PCB-81	1.23e+08	0.81 y	0.92	39:01	1.062	1.057	1.067		9390	95.0
13C-PCB-95	5.07e+07	1.66 y	0.74	35:48	0.913	0.908	0.918		9030	91.4
13C-PCB-97	5.11e+07	1.61 y	0.70	38:47	0.989	0.984	0.994		9570	96.9
13C-PCB-101	5.60e+07	1.59 y	0.78	37:29	0.956	0.951	0.961		9440	95.6
13C-PCB-104	6.46e+07	1.63 y	1.00	32:39	0.833	0.828	0.836		8520	86.2
13C-PCB-105	1.01e+08	1.62 y	1.37	43:02	0.929	0.924	0.934		10700	109
13C-PCB-114	1.02e+08	1.63 y	1.36	42:11	0.910	0.905	0.915		10900	110
13C-PCB-118	7.15e+07	1.64 y	0.96	41:31	1.059	1.054	1.064		9840	99.6
13C-PCB-123	6.83e+07	1.58 y	0.89	41:20	1.054	1.050	1.060		10100	102
13C-PCB-126	9.82e+07	1.62 y	1.31	45:16	0.977	0.972	0.982		10900	110
13C-PCB-127	1.08e+08	1.60 y	1.47	43:23	0.936	0.931	0.941		10600	107
13C-PCB-138	7.06e+07	1.29 y	1.10	44:46	0.966	0.961	0.971		9320	94.3
13C-PCB-141	6.93e+07	1.27 y	1.07	43:56	0.948	0.943	0.953		9360	94.8
13C-PCB-153	7.61e+07	1.29 y	1.15	43:11	0.932	0.927	0.937		9630	97.5
13C-PCB-155	4.66e+07	1.29 y	0.84	37:02	0.944	0.939	0.949		7320	74.1
13C-PCB-156	8.93e+07	1.30 y	1.30	48:02	1.037	1.032	1.042		10000	101
13C-PCB-157	9.40e+07	1.31 y	1.36	48:18	1.042	1.038	1.048		10100	102
13C-PCB-159	8.27e+07	1.28 y	1.25	46:04	0.994	0.989	0.999		9630	97.5
13C-PCB-167	9.13e+07	1.26 y	1.35	46:44	1.009	1.004	1.014		9810	99.3
13C-PCB-169	8.57e+07	1.28 y	1.29	50:27	1.089	1.083	1.093		9680	98.0
13C-PCB-170	3.21e+07	0.47 y	0.54	50:49	1.097	1.089	1.101		8590	87.0
13C-PCB-180	4.02e+07	0.46 y	0.68	49:19	1.064	1.060	1.070		8530	86.3
13C-PCB-188	5.50e+07	0.46 y	0.92	42:49	0.924	0.919	0.929		8710	88.1
13C-PCB-189	4.21e+07	0.46 y	0.72	52:20	1.129	1.120	1.132		8520	86.3
13C-PCB-194	5.22e+07	0.95 y	0.80	53:50	0.995	0.990	1.000		9280	93.9
13C-PCB-202	4.47e+07	0.91 y	0.84	48:14	1.041	1.036	1.046		7740	78.3
13C-PCB-206	4.31e+07	0.79 y	0.65	55:28	1.025	1.021	1.031		9410	95.2
13C-PCB-208	6.45e+07	0.78 y	1.08	53:07	0.982	0.976	0.986		8460	85.7
13C-PCB-209	4.35e+07	1.24 y	0.61	56:49	1.050	1.045	1.055		10100	102

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.38e+08	0.81 y	1.02	37:48	1.029	1.023	1.034	9550	96.7
13C-PCB-178	3.77e+07	0.46 y	0.61	45:37	0.985	0.979	0.990	8930	90.4

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.38e+08	0.81 y	1.10	37:48	0.969	0.964	0.974	10000	102
13C-PCB-178	3.77e+07	0.46 y	0.90	45:37	0.925	0.920	0.930	10300	105

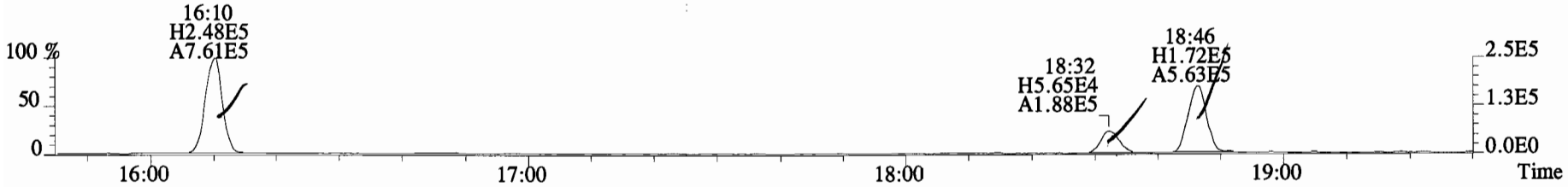
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.89e+08	1.59	y	1.00	25:57	9880
13C-PCB-31	1.72e+08	1.08	y	1.00	28:59	9880
13C-PCB-60	1.41e+08	0.81	y	1.00	36:45	9880
13C-PCB-111	7.48e+07	1.59	y	1.00	39:13	9880
13C-PCB-128	6.81e+07	1.27	y	1.00	46:20	9880
13C-PCB-205	6.97e+07	0.92	y	1.00	54:07	9880

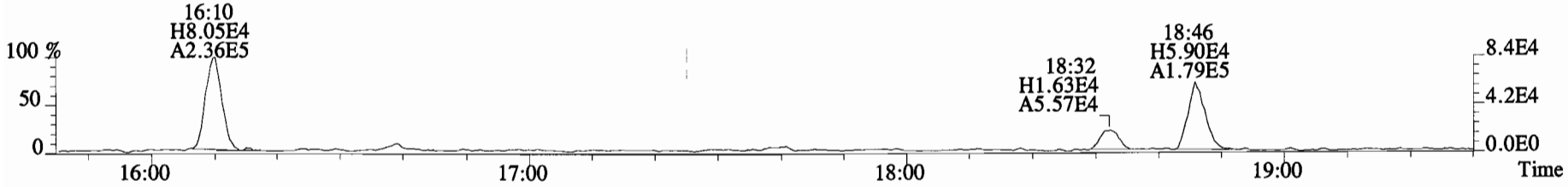
Analyst: DMS

Date: 3/27/15

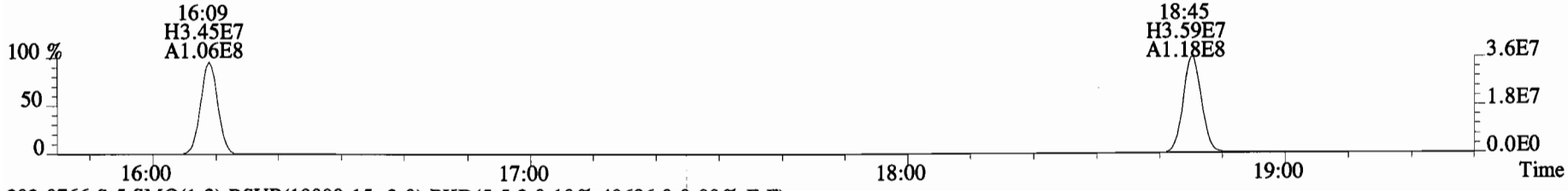
File:150318E1 #1-866 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
188.0393 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4480.0,0.00%,F,F)



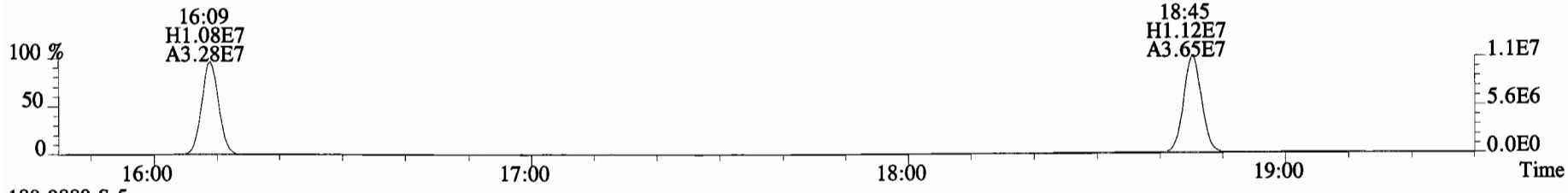
190.0363 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3444.0,0.00%,F,F)



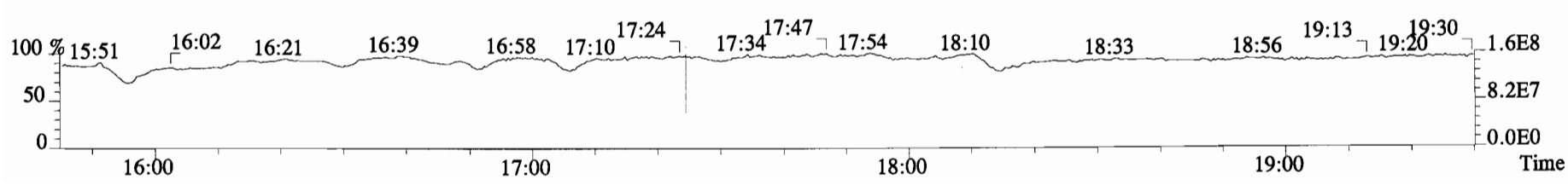
200.0795 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5876.0,0.00%,F,F)



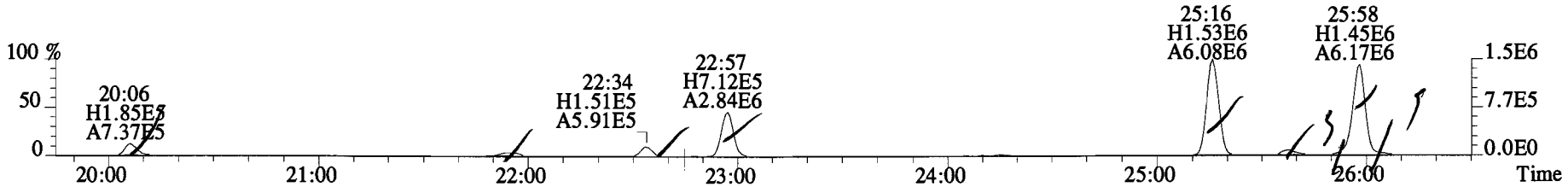
202.0766 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,40696.0,0.00%,F,F)



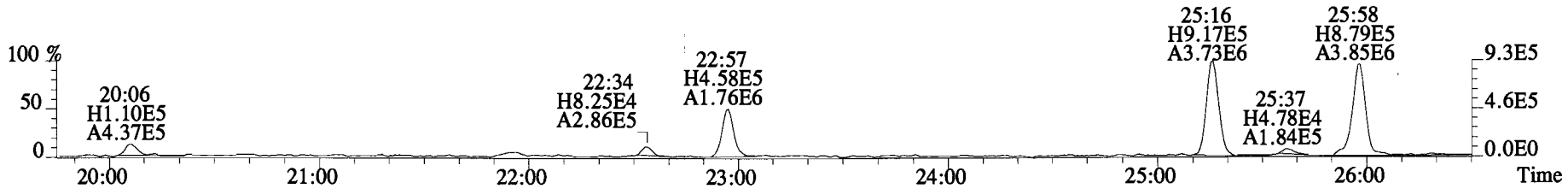
180.9880 S:5



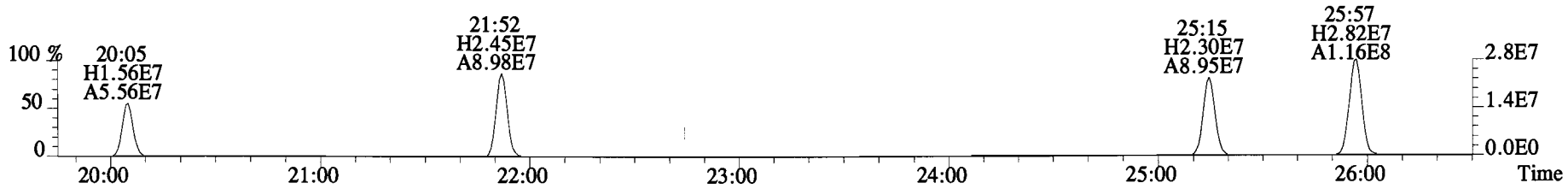
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4684.0,0.00%,F,F)



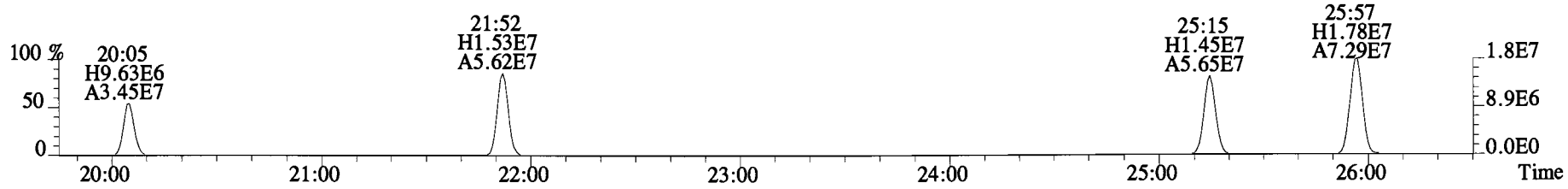
223.9974 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22480.0,0.00%,F,F)



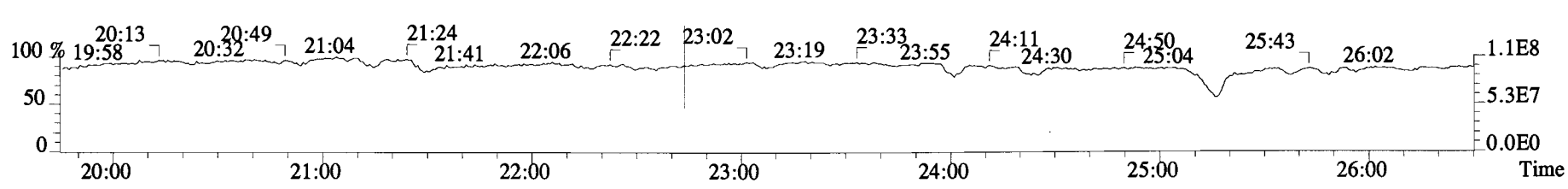
234.0406 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3444.0,0.00%,F,F)



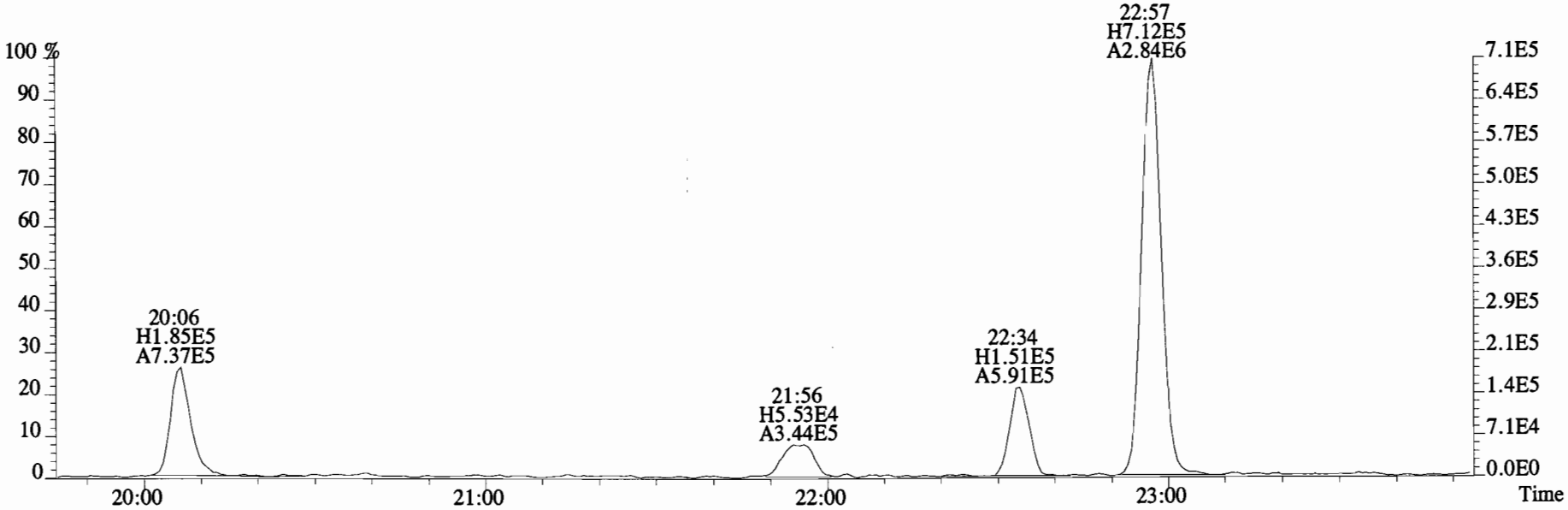
236.0376 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2716.0,0.00%,F,F)



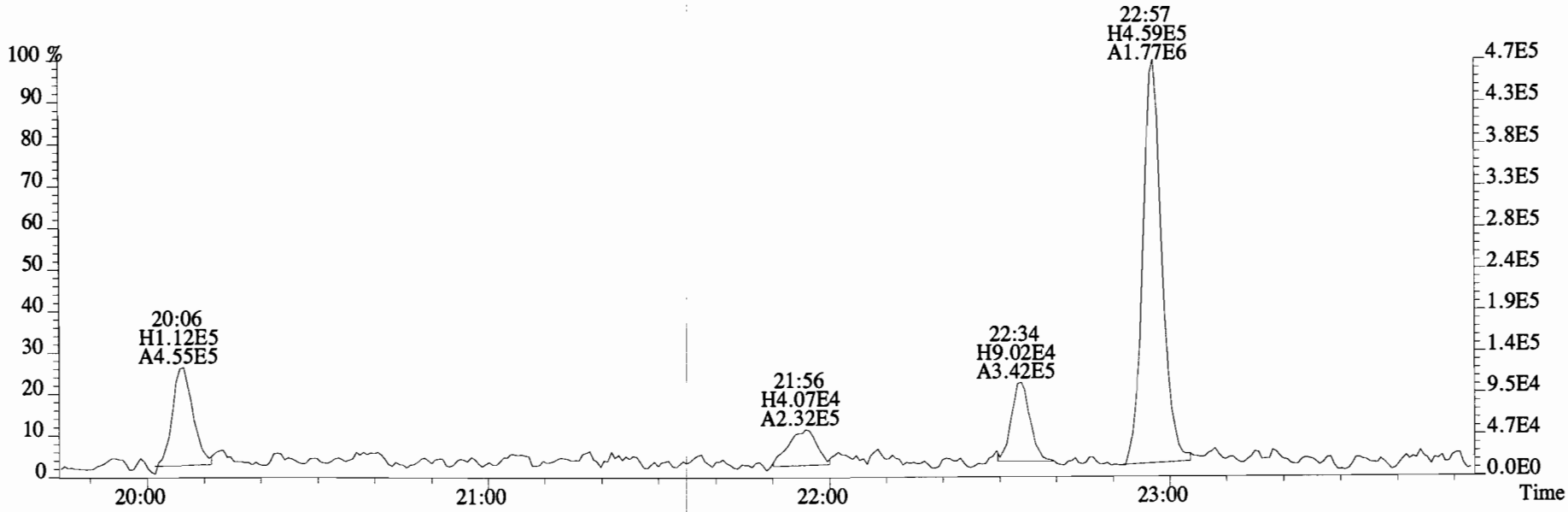
230.9856 S:5 F:2



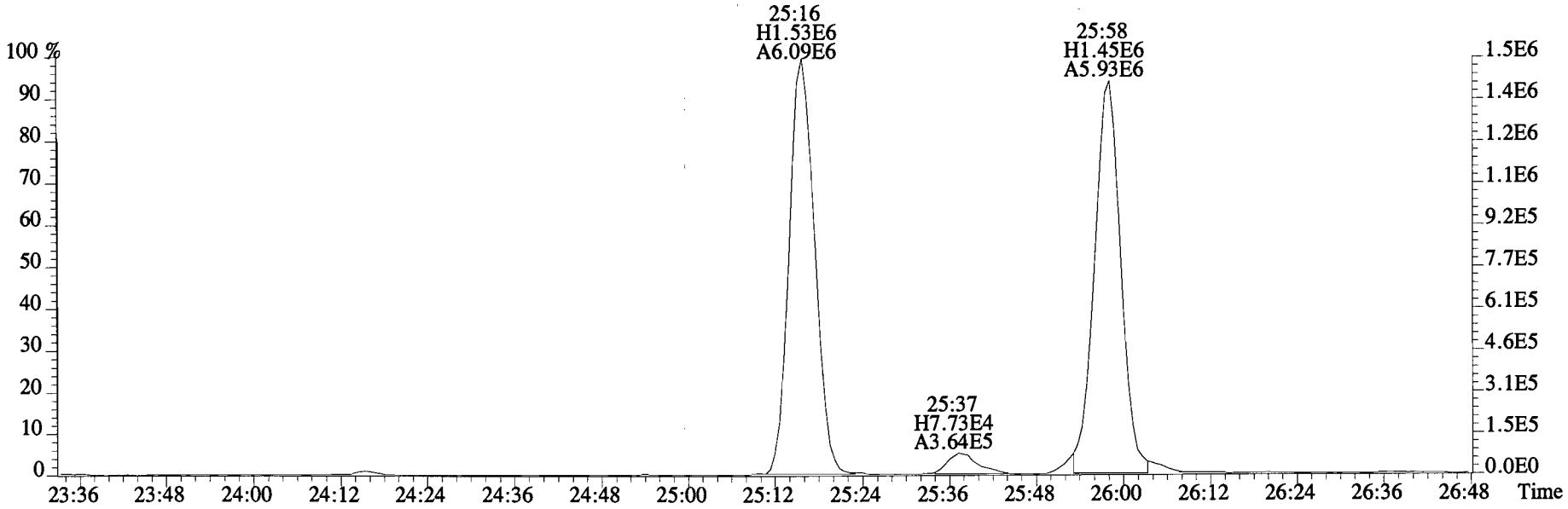
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4684.0,0.00%,F,F)



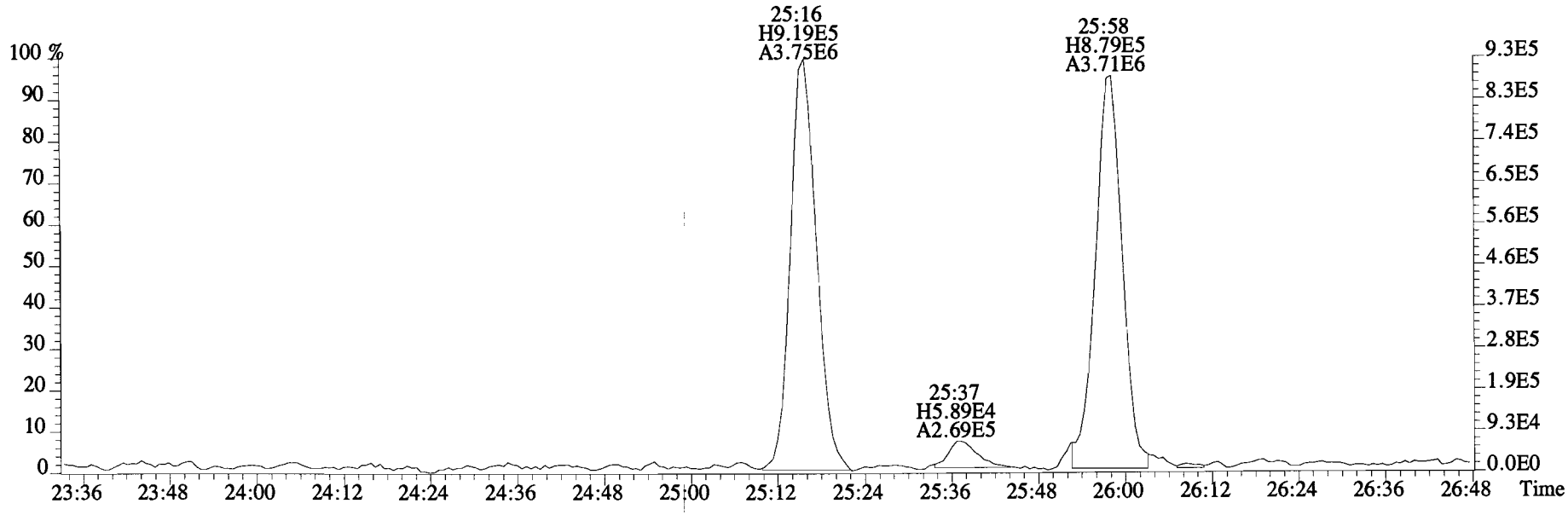
223.9974 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22480.0,0.00%,F,F)



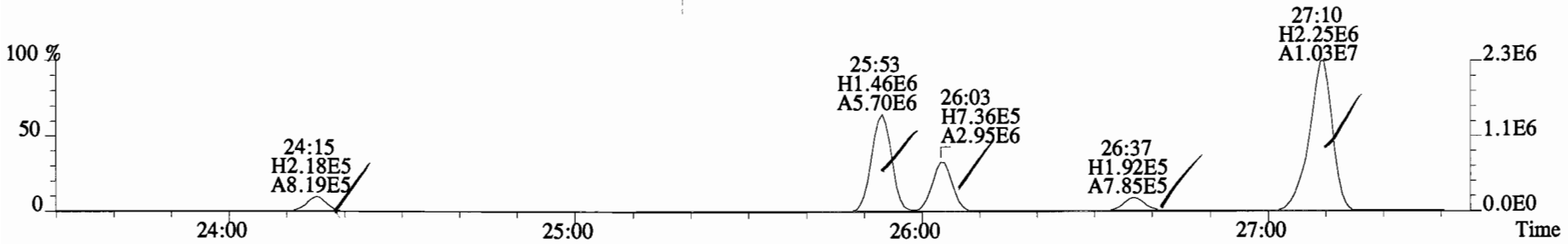
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4684.0,0.00%,F,F)



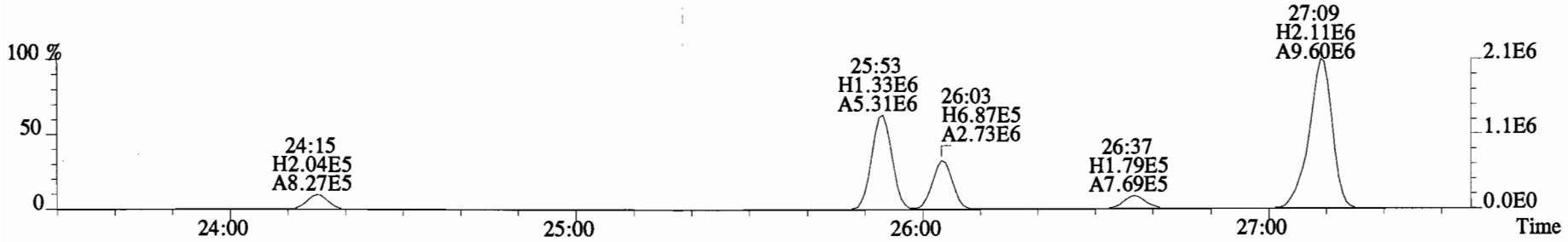
223.9974 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22480.0,0.00%,F,F)



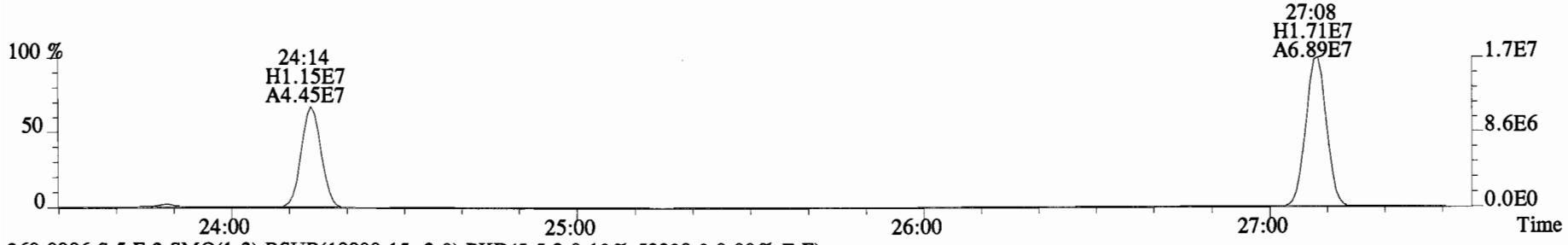
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
255.9613 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5964.0,0.00%,F,F)



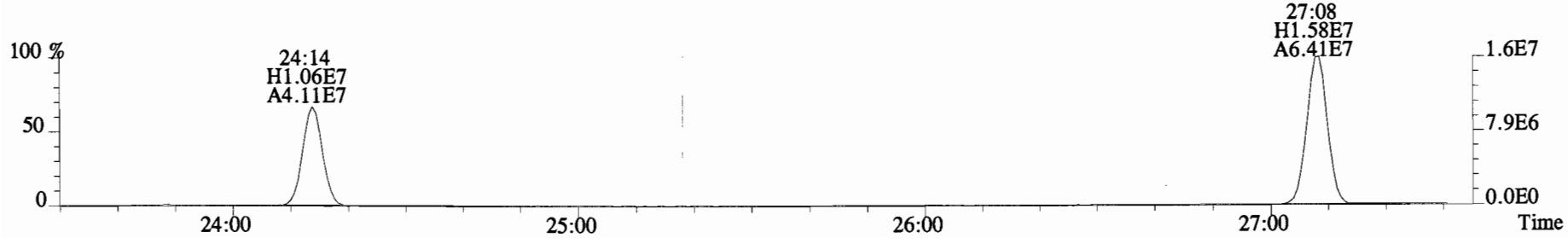
257.9584 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2428.0,0.00%,F,F)



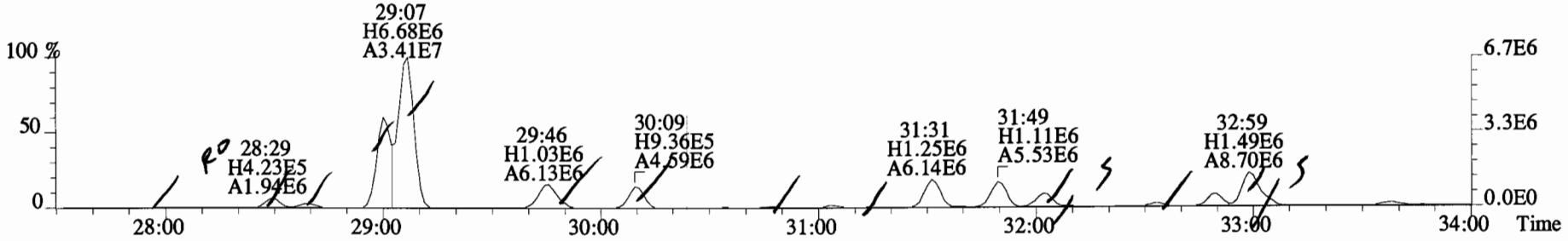
268.0016 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,85008.0,0.00%,F,F)



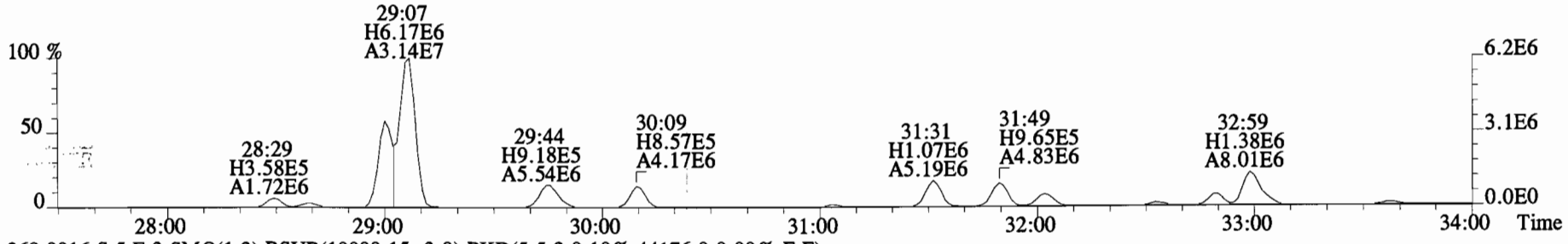
269.9986 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,53308.0,0.00%,F,F)



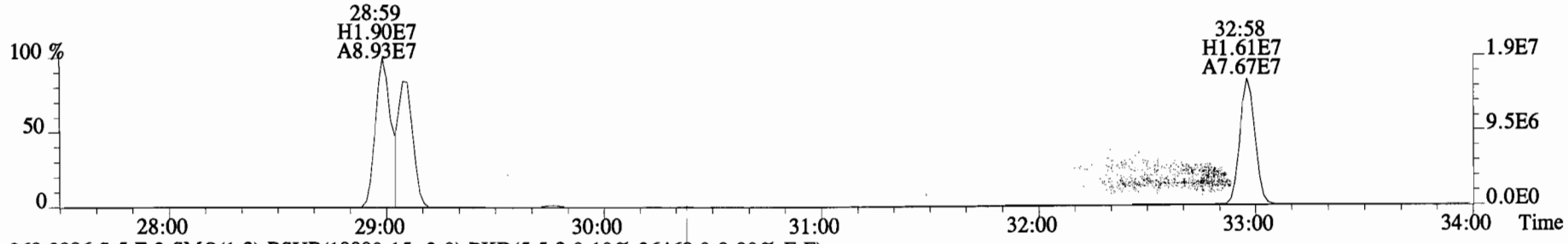
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11728.0,0.00%,F,F)



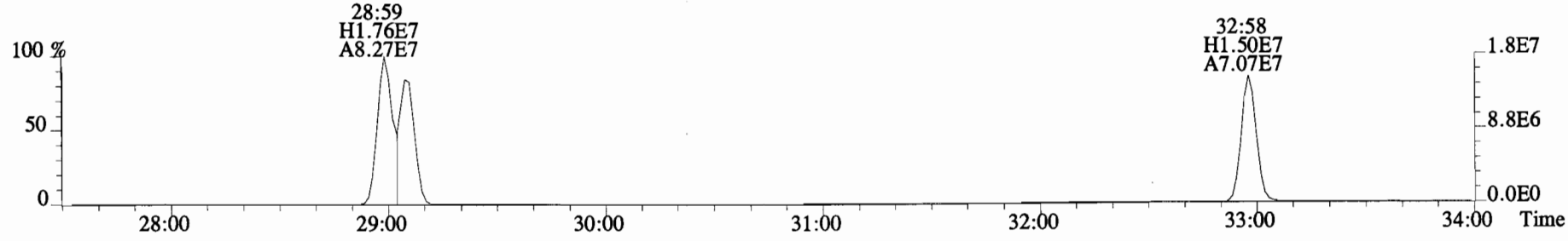
257.9584 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5352.0,0.00%,F,F)



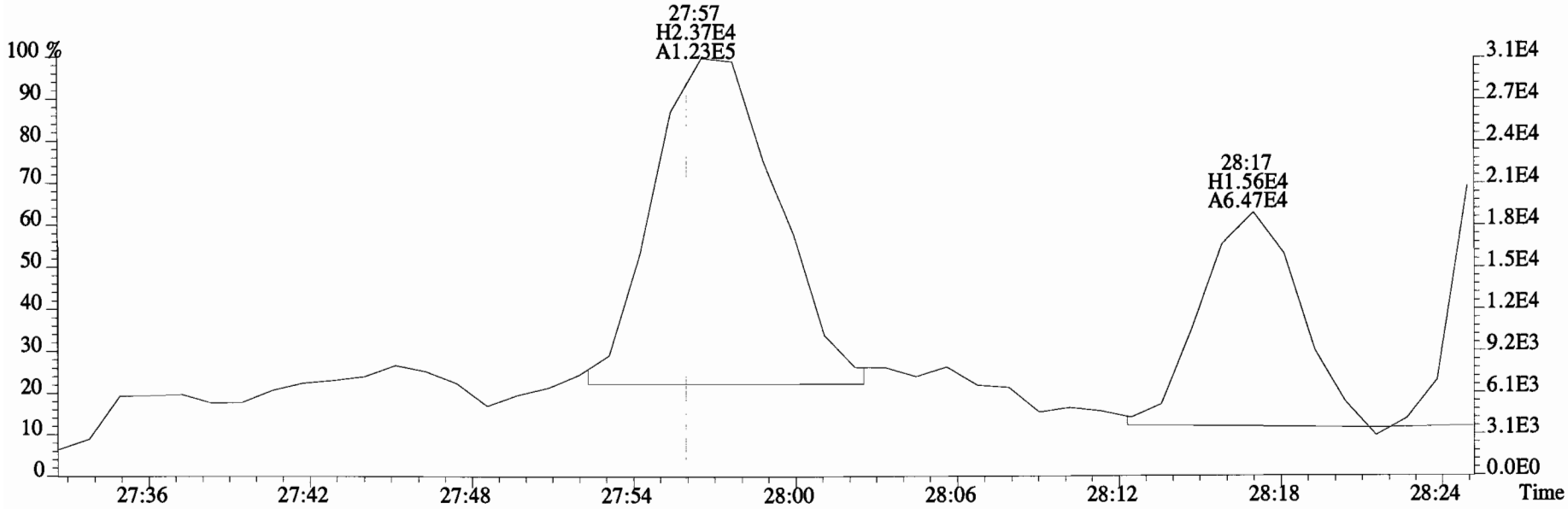
268.0016 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44176.0,0.00%,F,F)



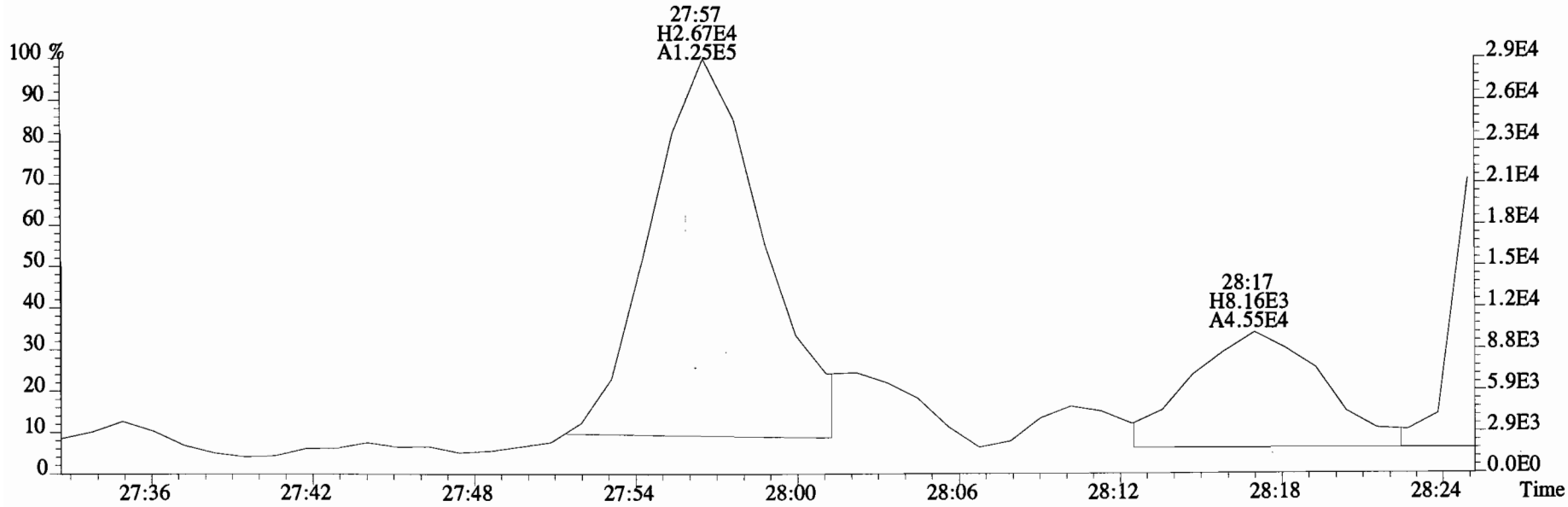
269.9986 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36468.0,0.00%,F,F)

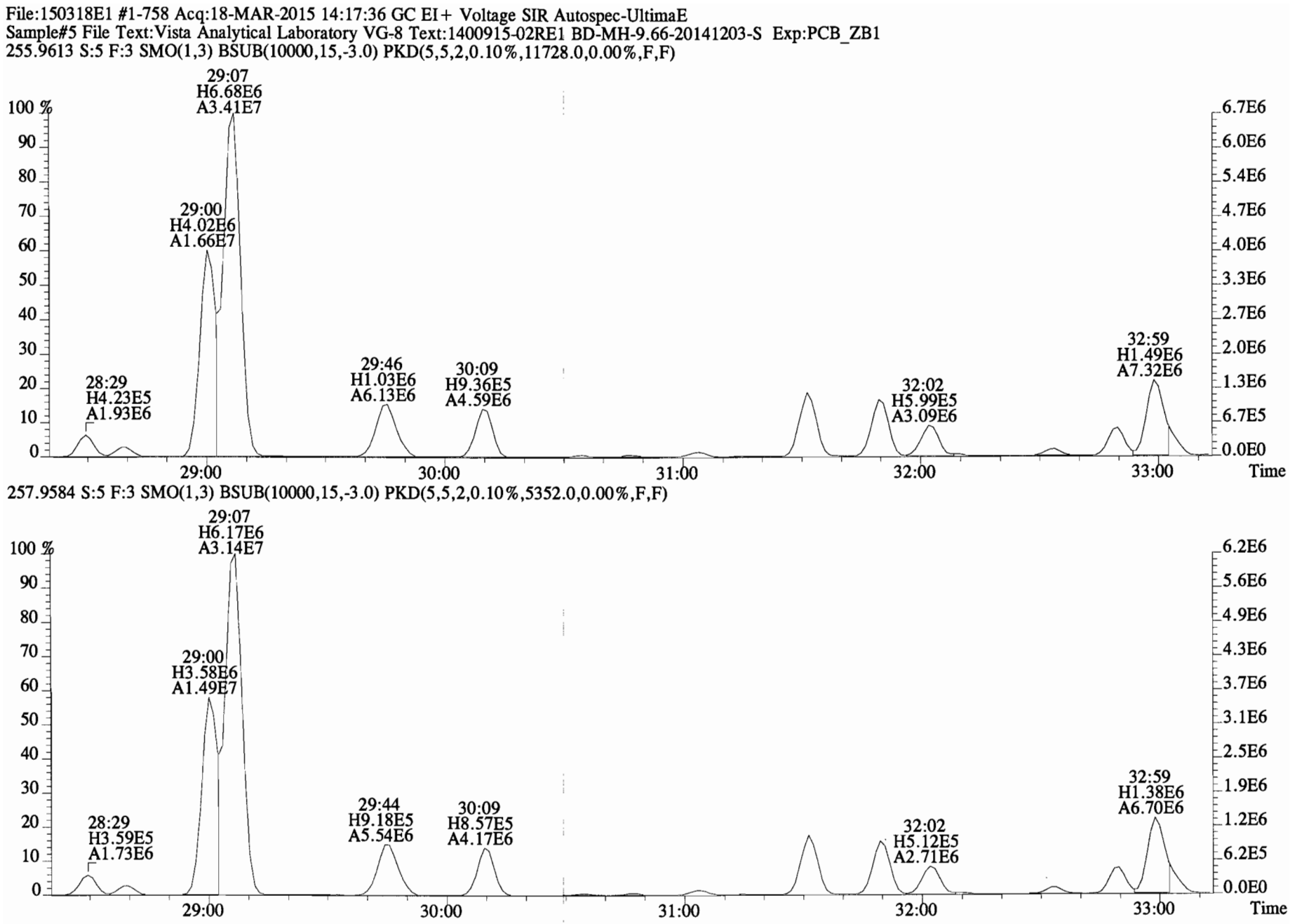


File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11728.0,0.00%,F,F)

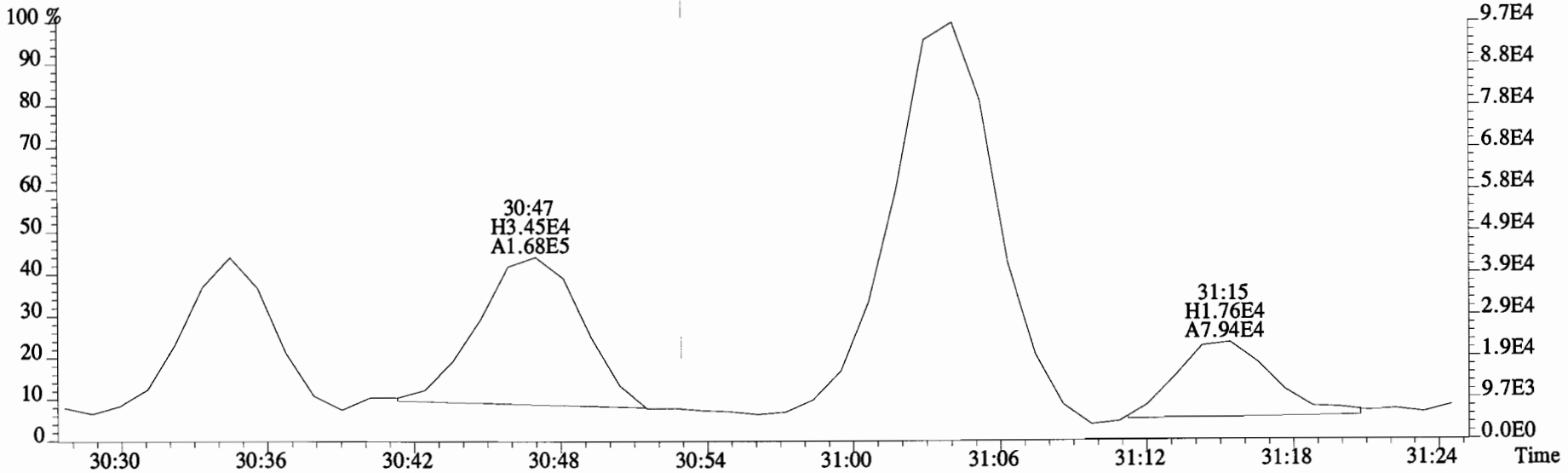


257.9584 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5352.0,0.00%,F,F)

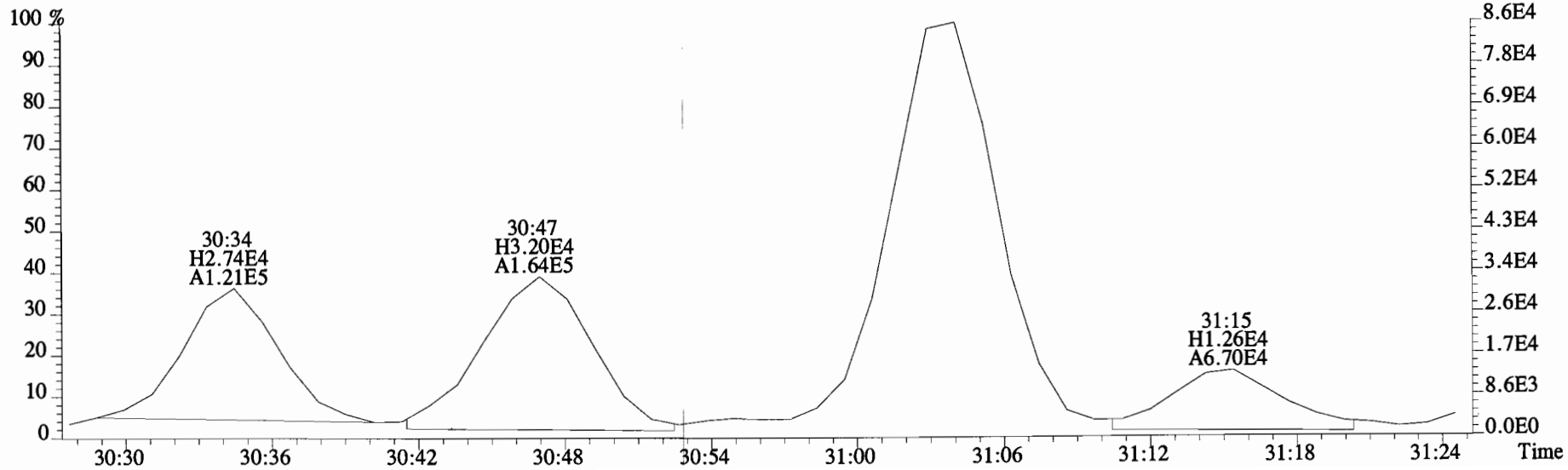



File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11728.0,0.00%,F,F)
29:07
H6.68E6
A3.41E7
29:00
H4.02E6
A1.66E7
28:29
H4.23E5
A1.93E6
29:46
H1.03E6
A6.13E6
30:09
H9.36E5
A4.59E6
32:02
H5.99E5
A3.09E6
32:59
H1.49E6
A7.32E6
100 %
90
80
70
60
50
40
30
20
10
0
6.7E6
6.0E6
5.4E6
4.7E6
4.0E6
3.3E6
2.7E6
2.0E6
1.3E6
6.7E5
0.0E0
29:00
30:00
31:00
32:00
33:00
Time
257.9584 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5352.0,0.00%,F,F)
29:07
H6.17E6
A3.14E7
29:00
H3.58E6
A1.49E7
28:29
H3.59E5
A1.73E6
29:44
H9.18E5
A5.54E6
30:09
H8.57E5
A4.17E6
32:02
H5.12E5
A2.71E6
32:59
H1.38E6
A6.70E6
100 %
90
80
70
60
50
40
30
20
10
0
6.2E6
5.6E6
4.9E6
4.3E6
3.7E6
3.1E6
2.5E6
1.9E6
1.2E6
6.2E5
0.0E0
29:00
30:00
31:00
32:00
33:00
Time

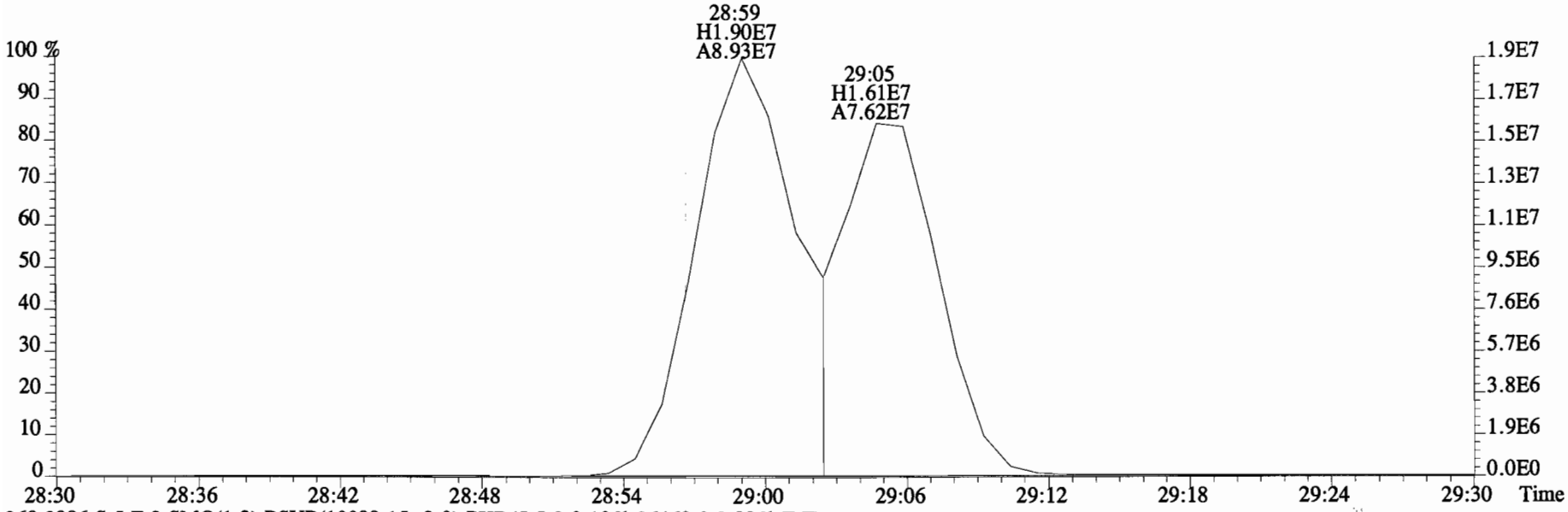
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11728.0,0.00%,F,F)



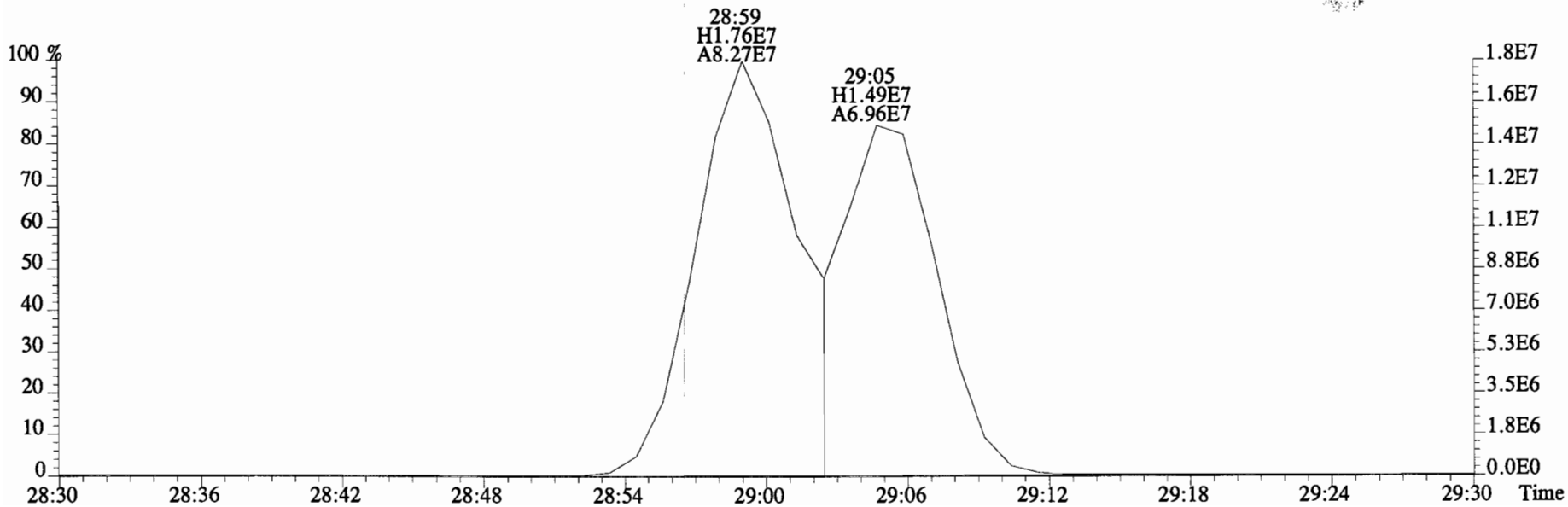
257.9584 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5352.0,0.00%,F,F)



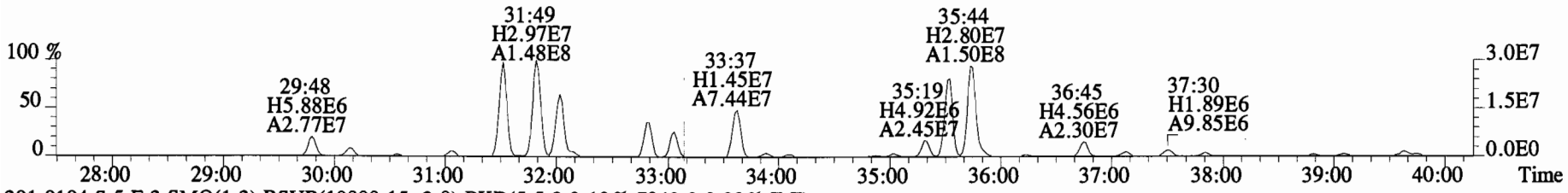
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
268.0016 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44176.0,0.00%,F,F)



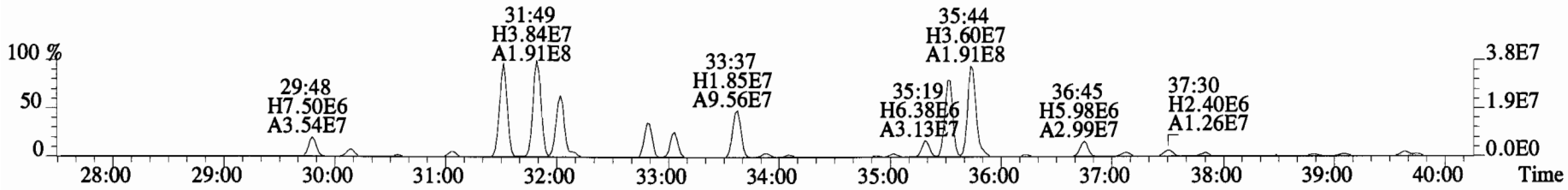
269.9986 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36468.0,0.00%,F,F)



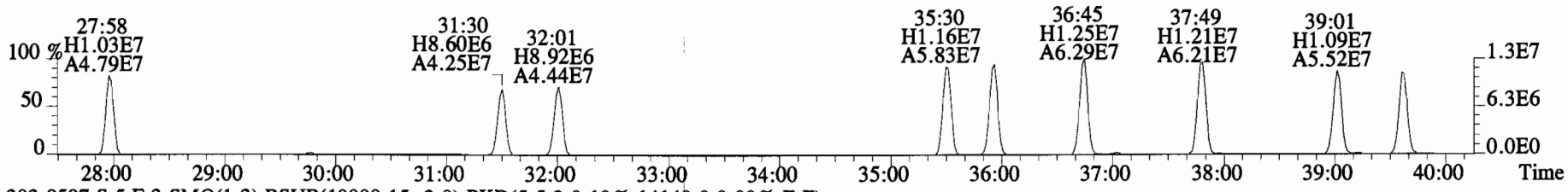
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



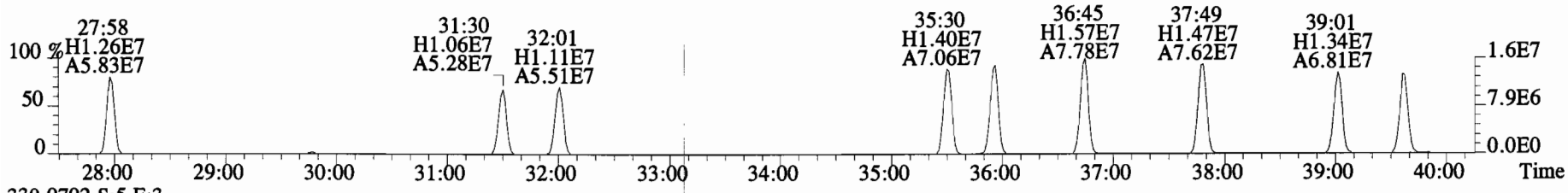
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



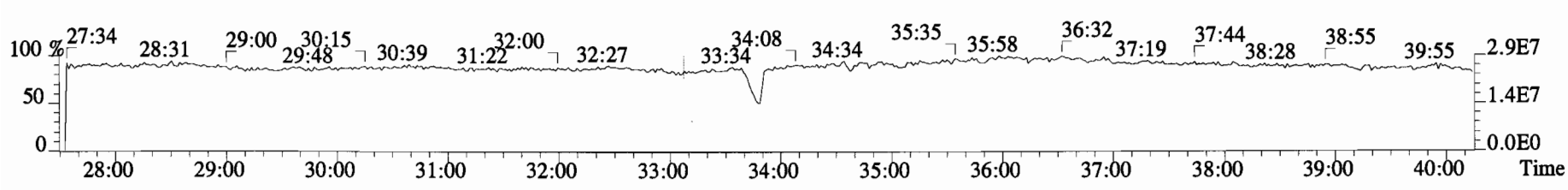
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24204.0,0.00%,F,F)



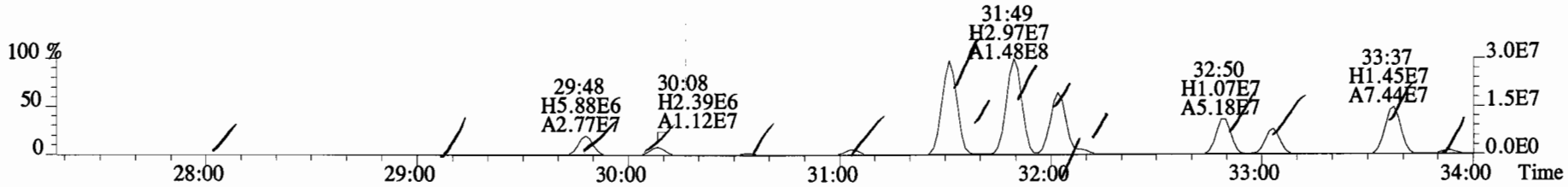
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14140.0,0.00%,F,F)



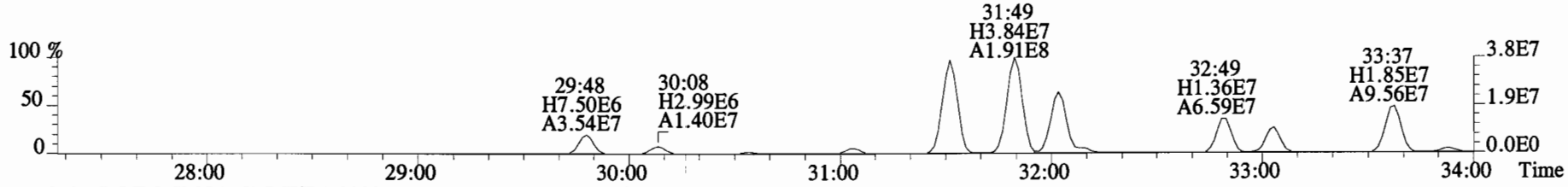
330.9792 S:5 F:3



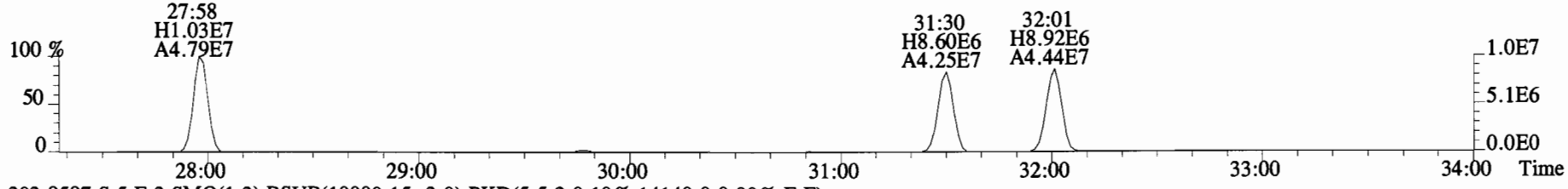
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



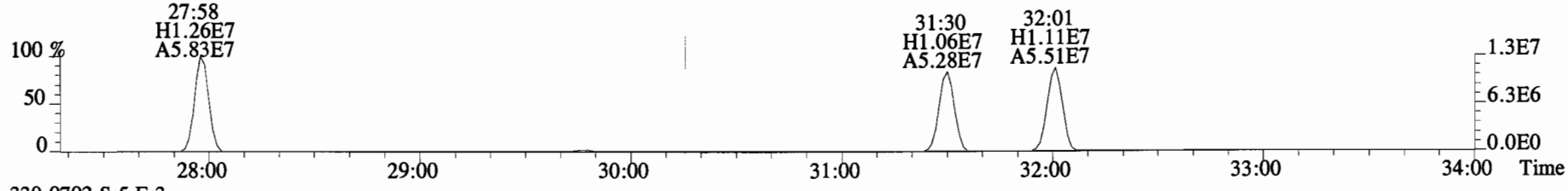
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



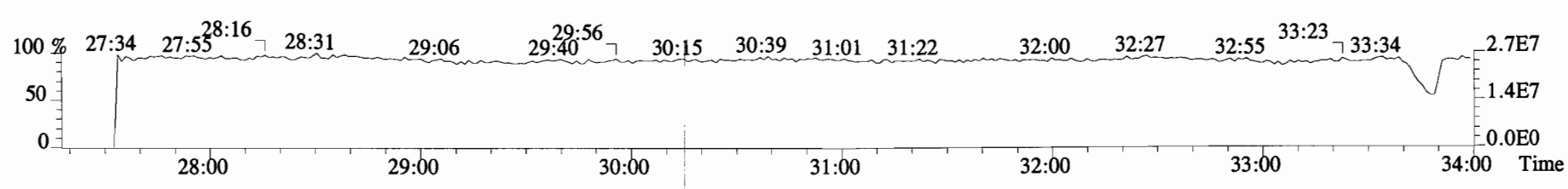
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24204.0,0.00%,F,F)



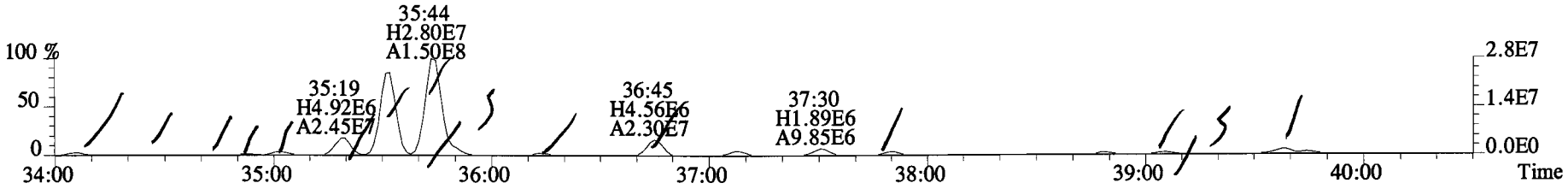
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14140.0,0.00%,F,F)



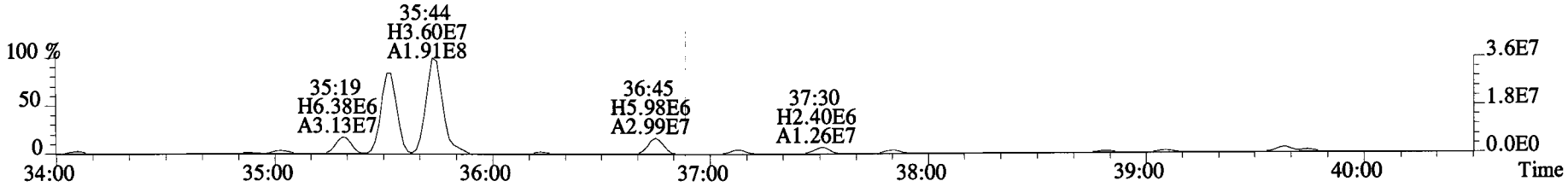
330.9792 S:5 F:3



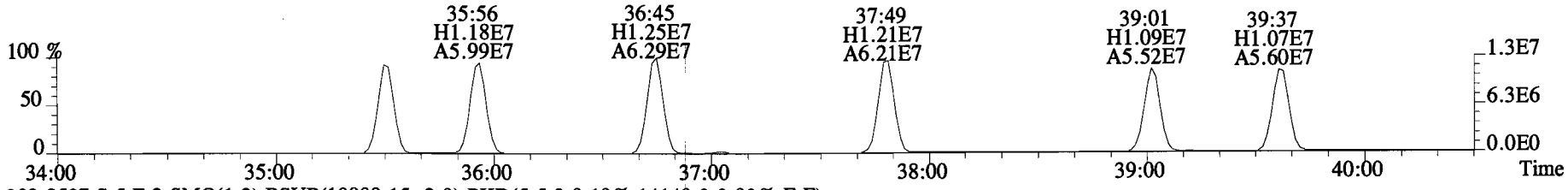
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



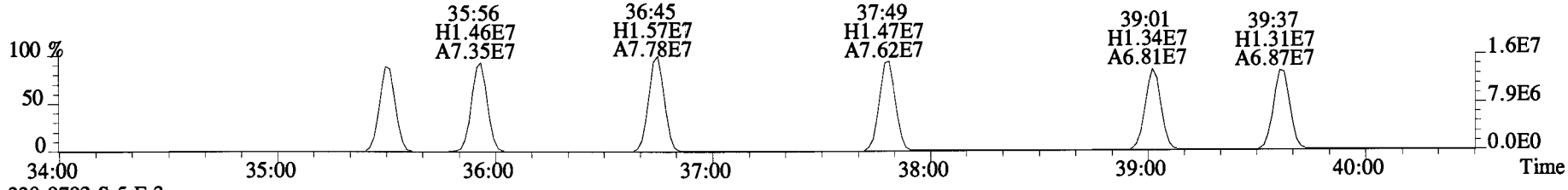
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



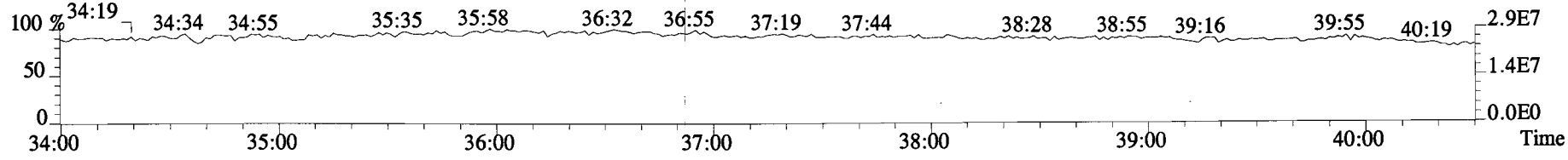
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24204.0,0.00%,F,F)



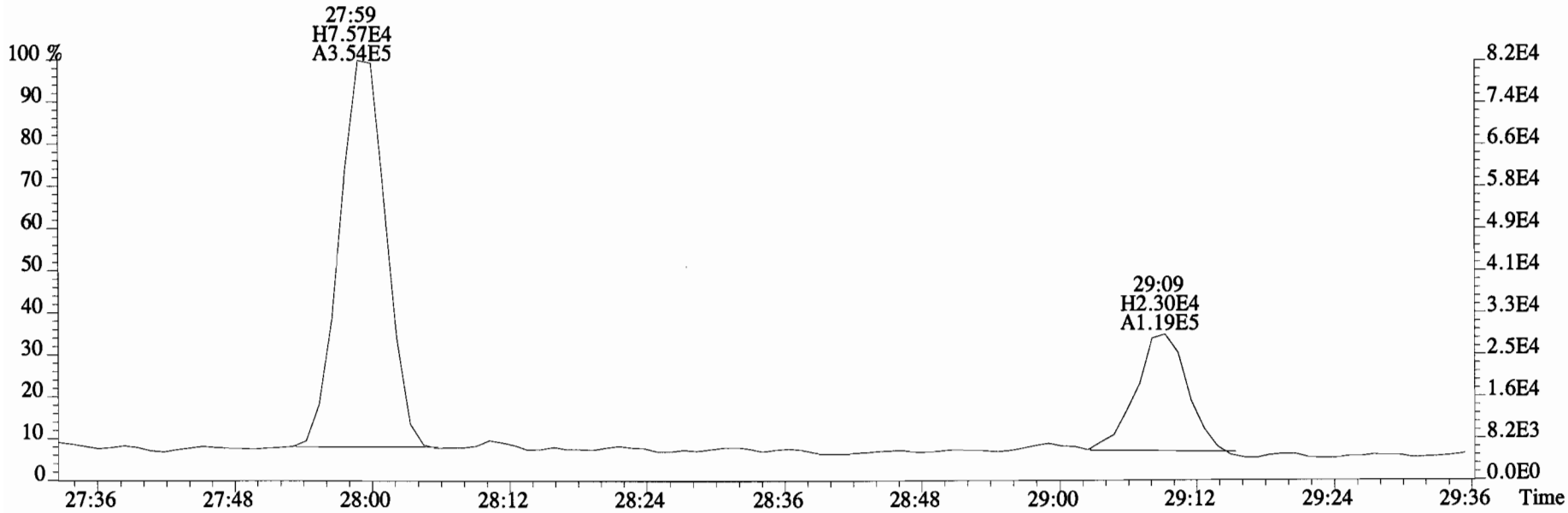
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14140.0,0.00%,F,F)



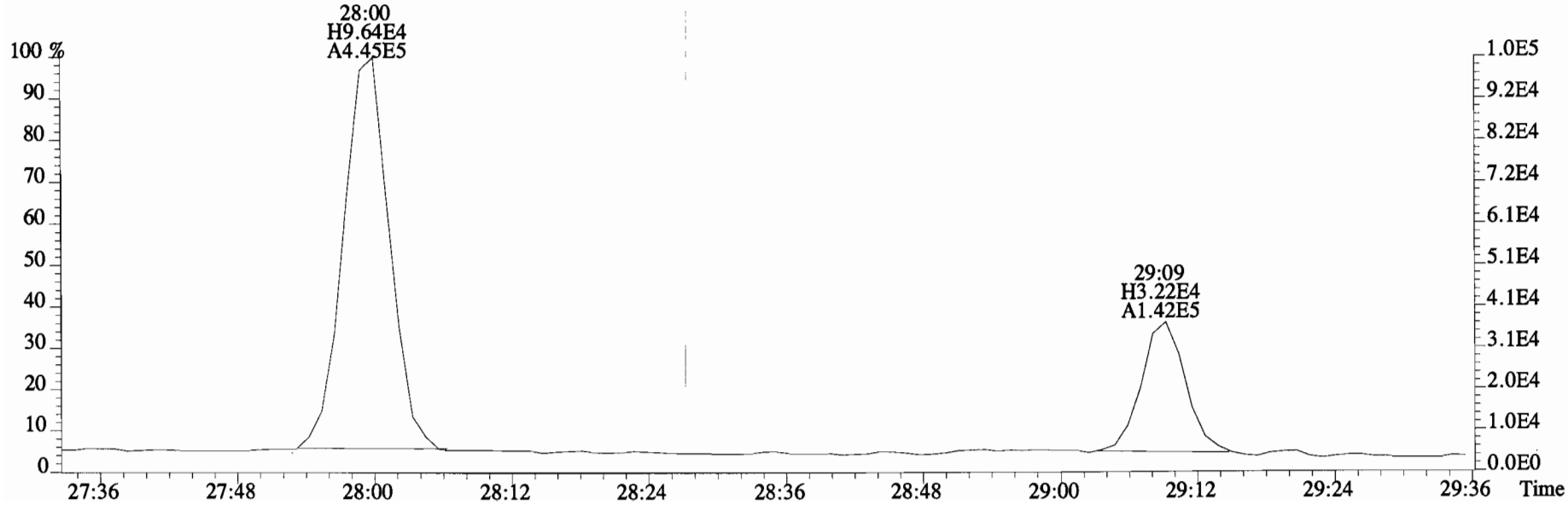
330.9792 S:5 F:3



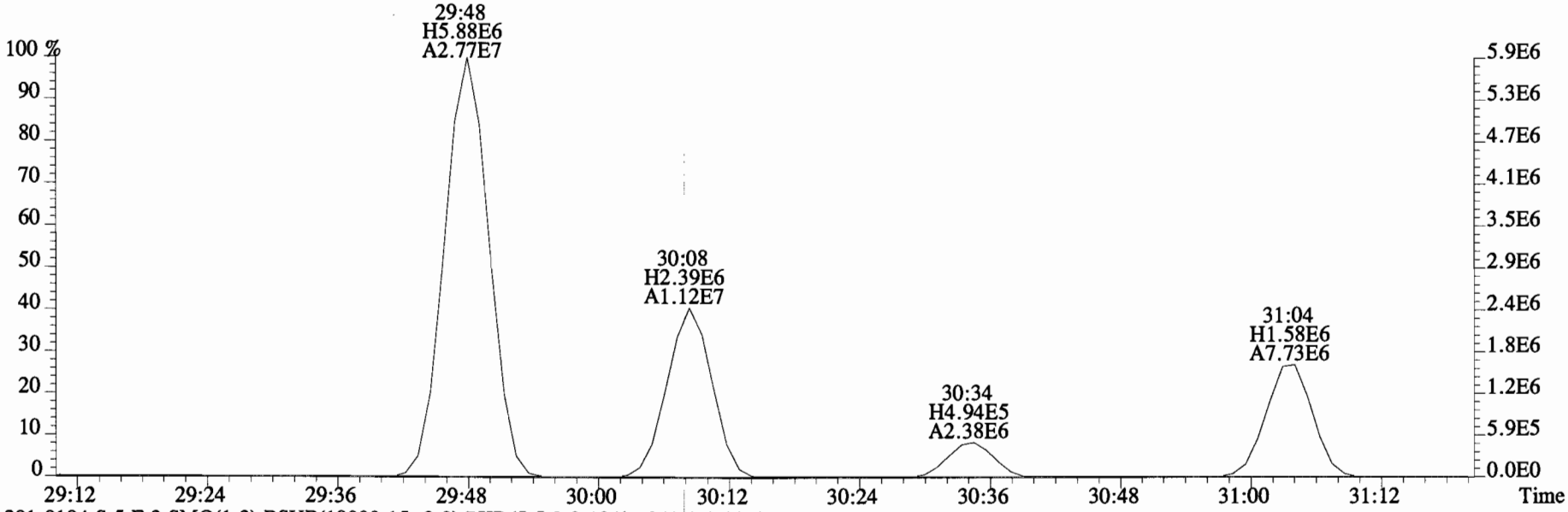
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



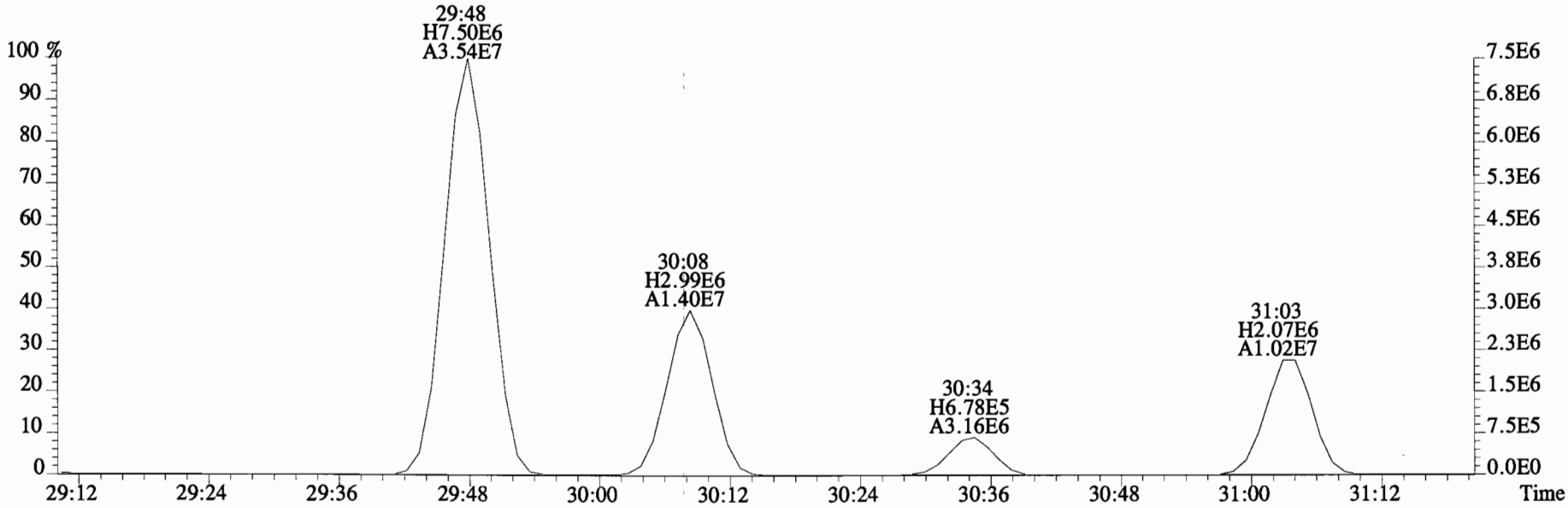
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



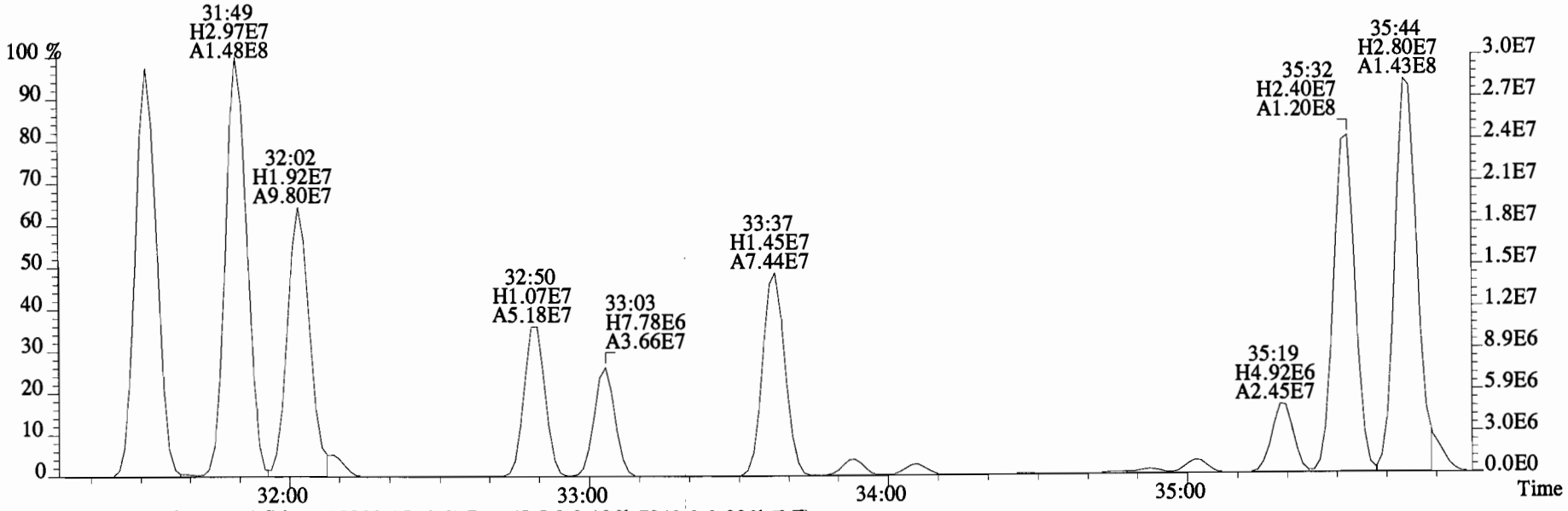
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



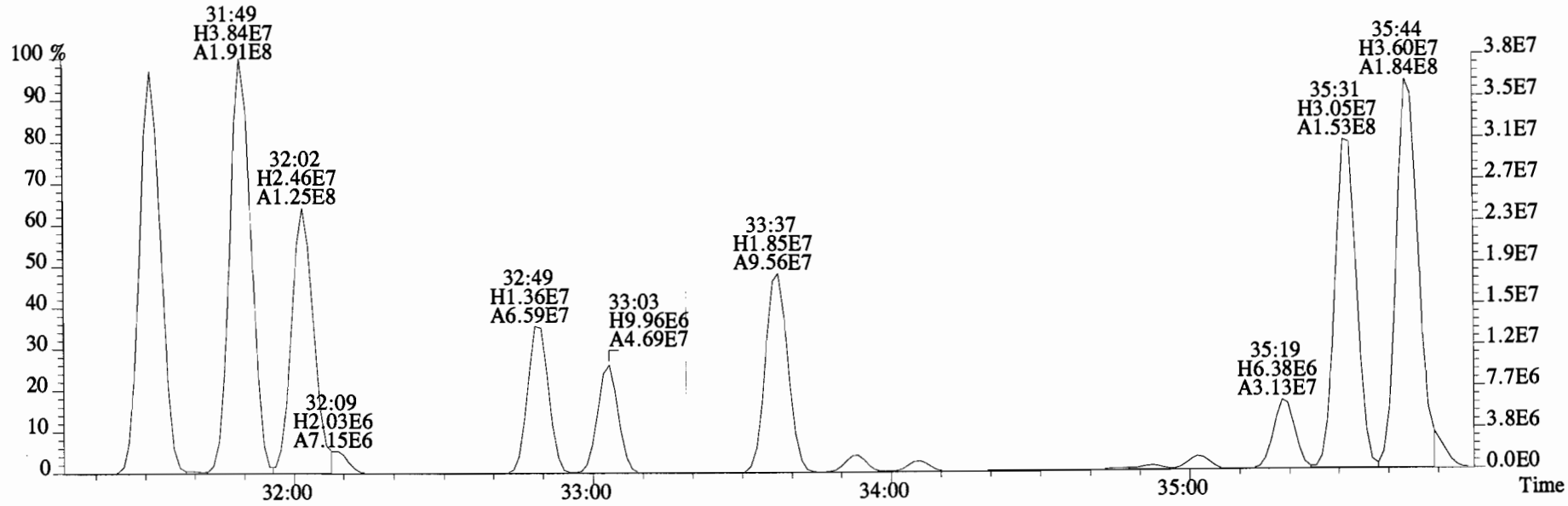
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



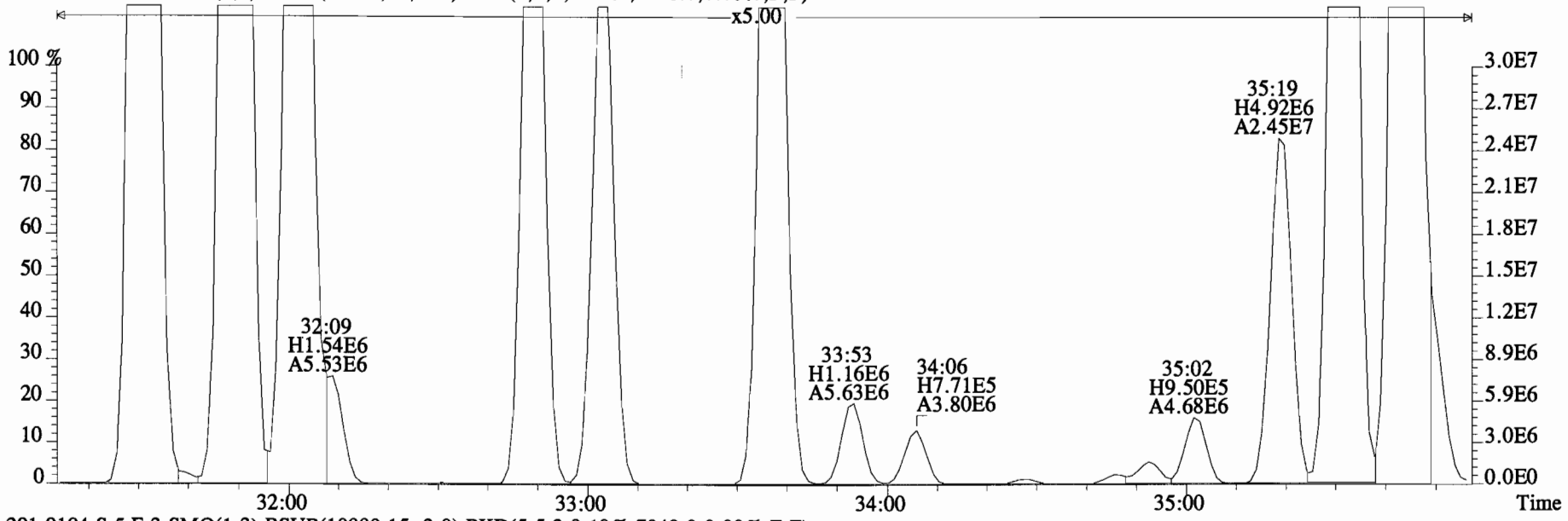
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



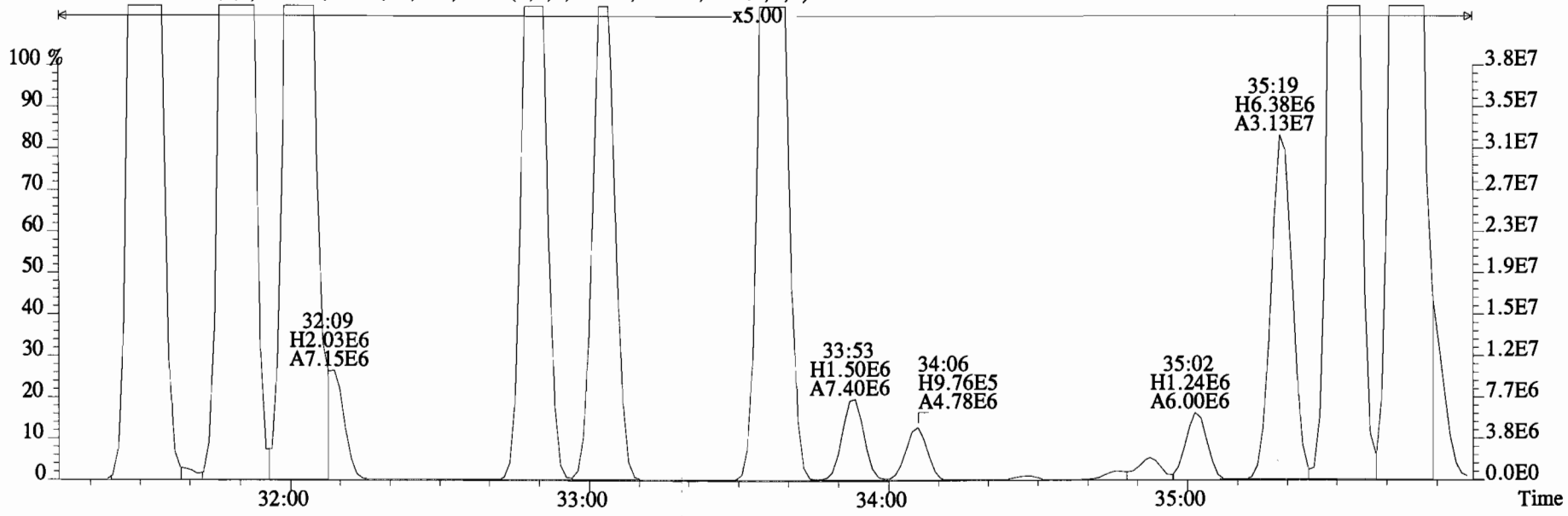
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



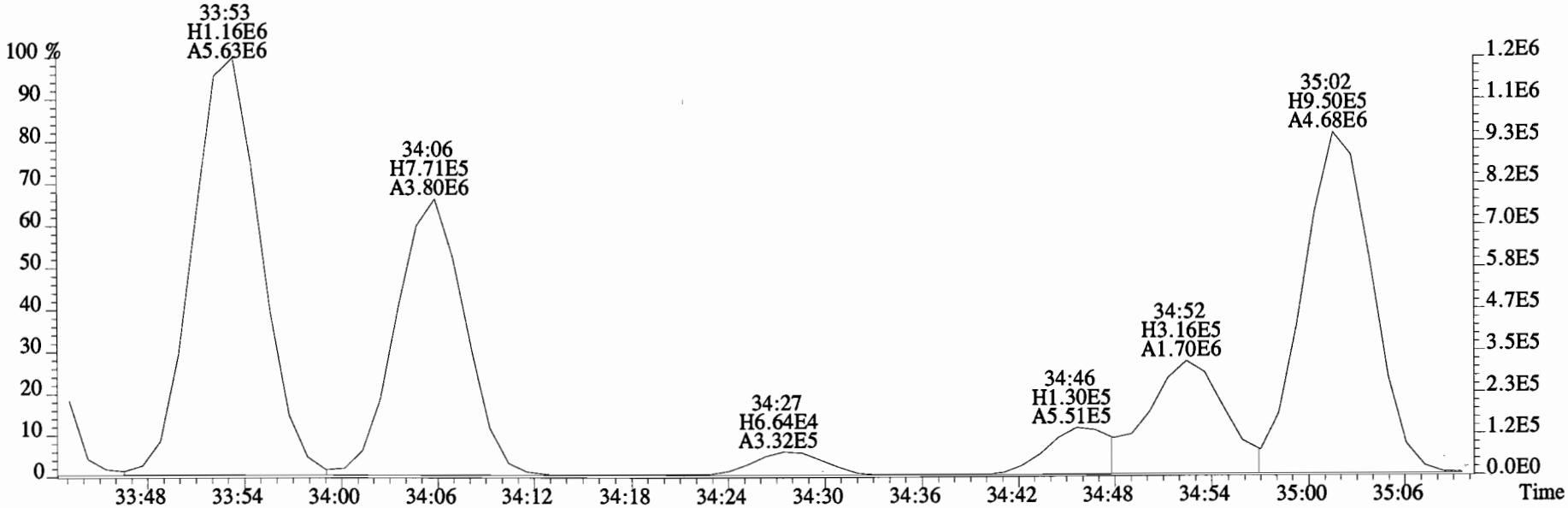
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



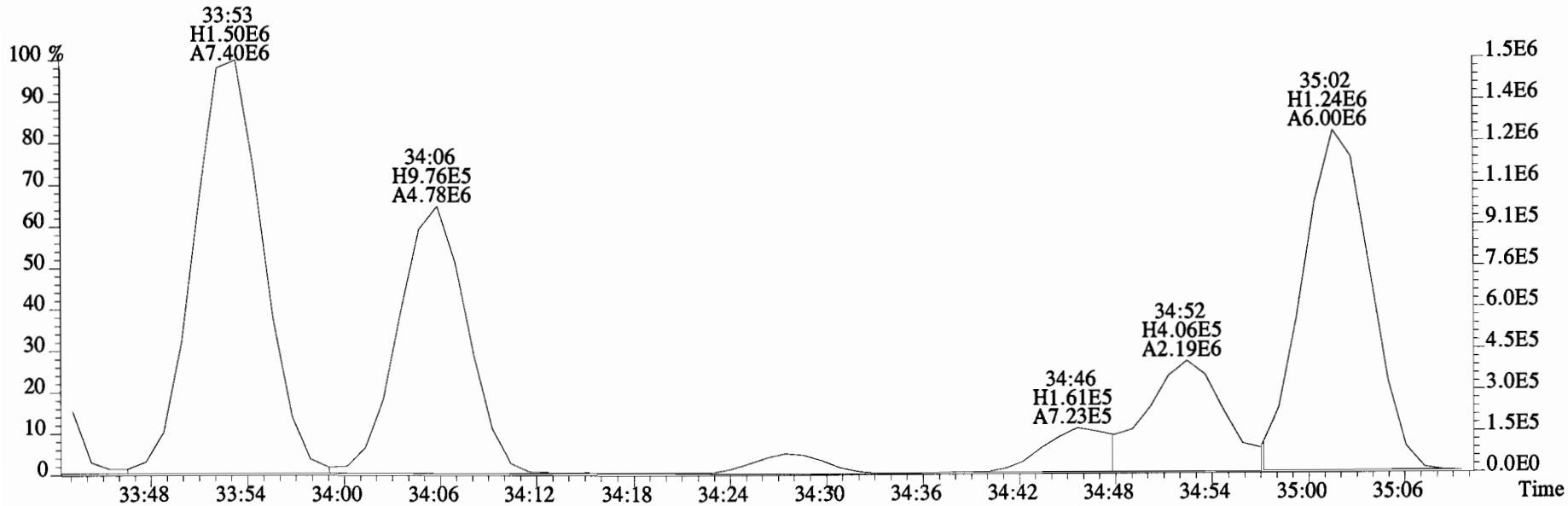
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



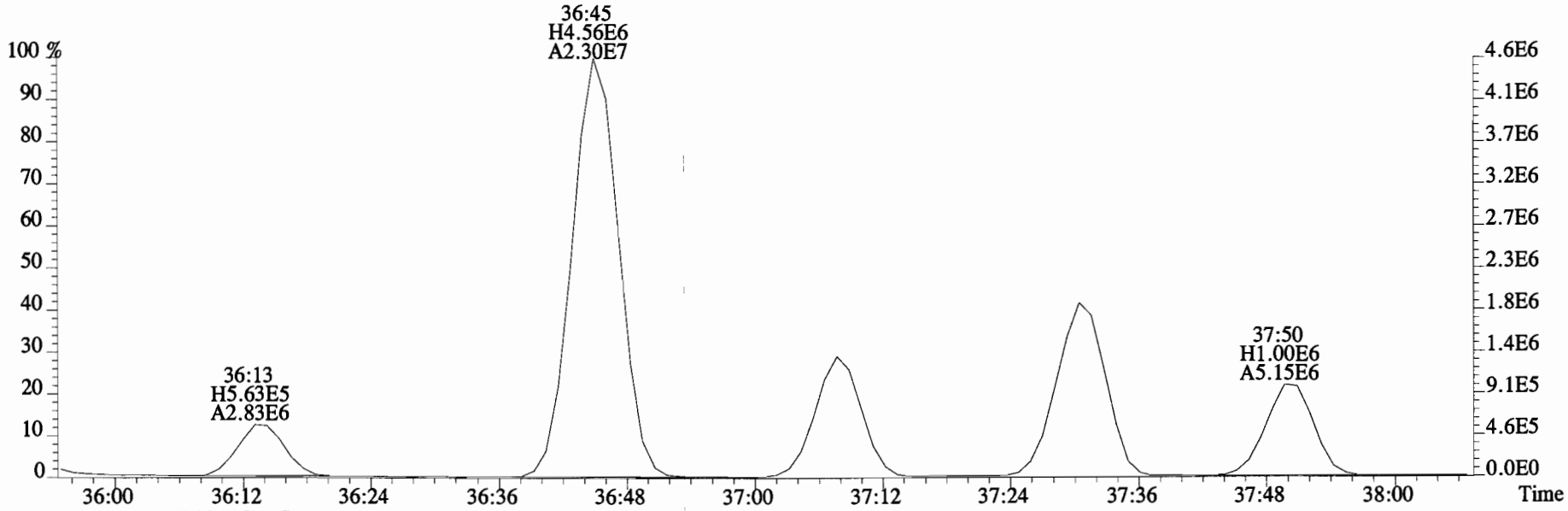
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



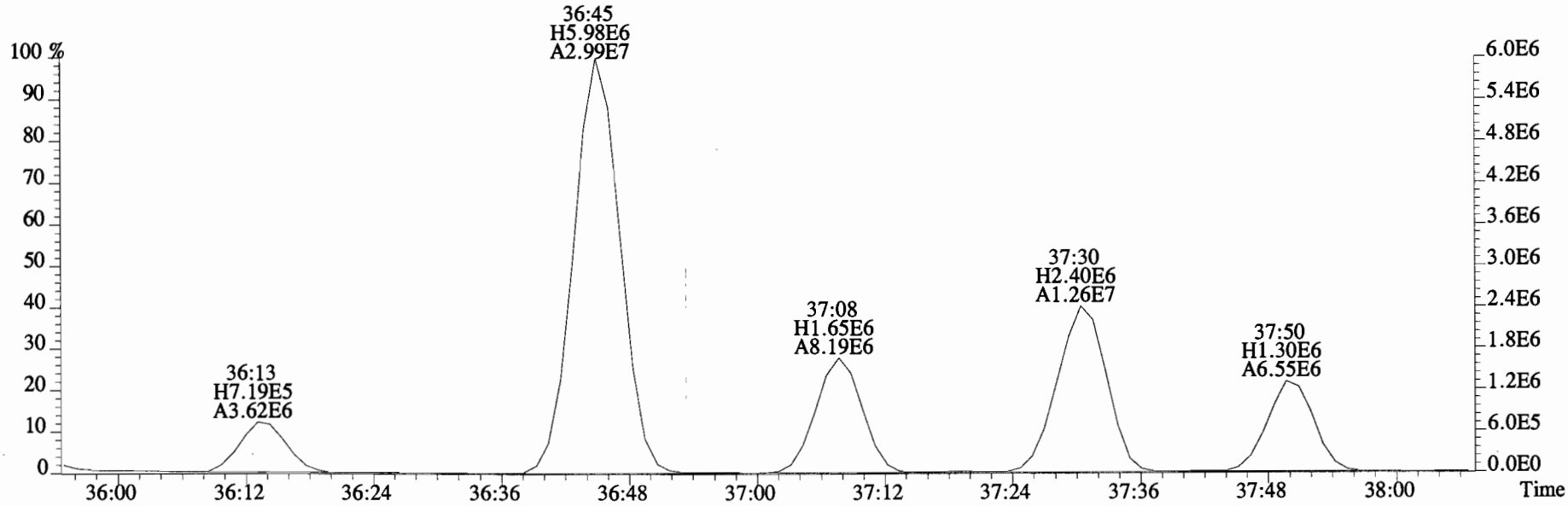
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



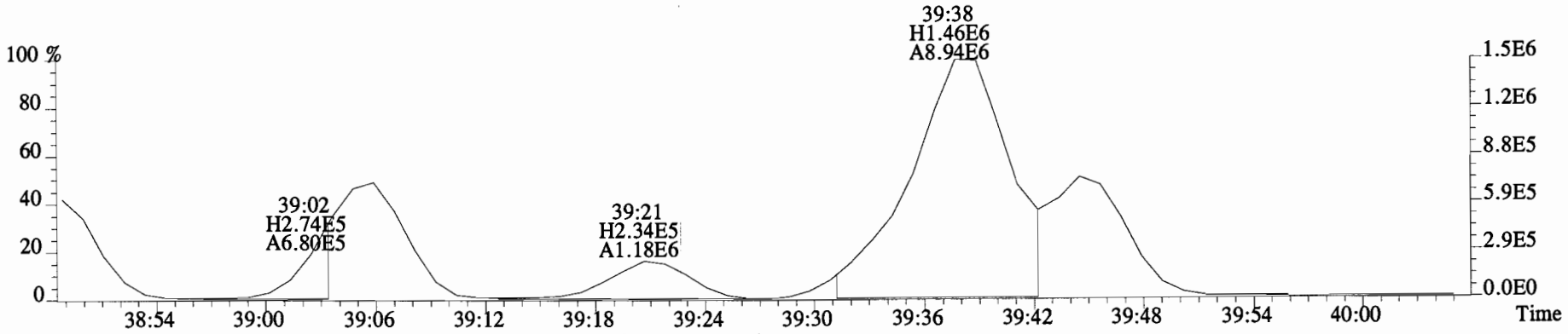
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



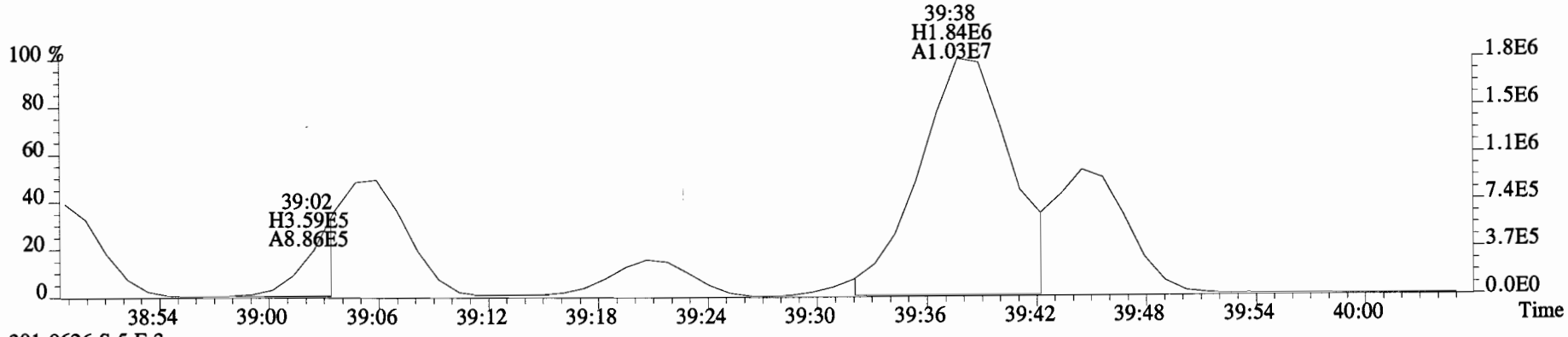
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



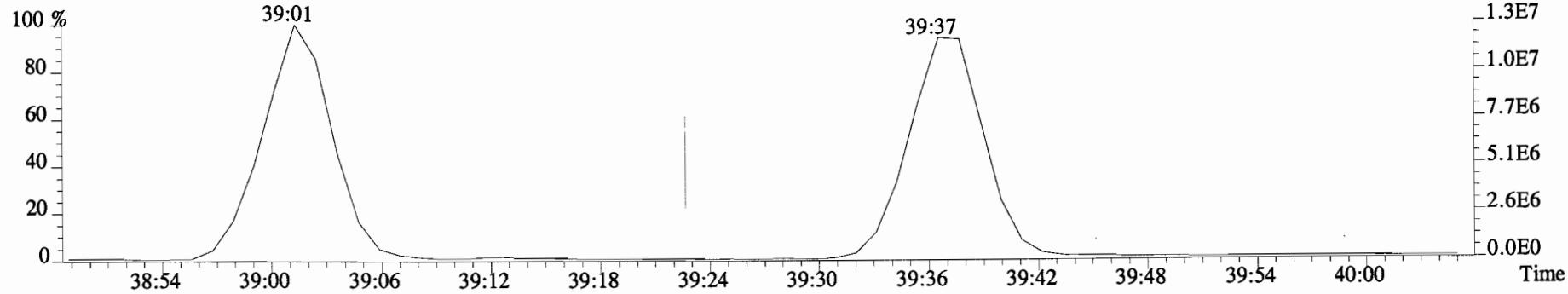
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8728.0,0.00%,F,F)



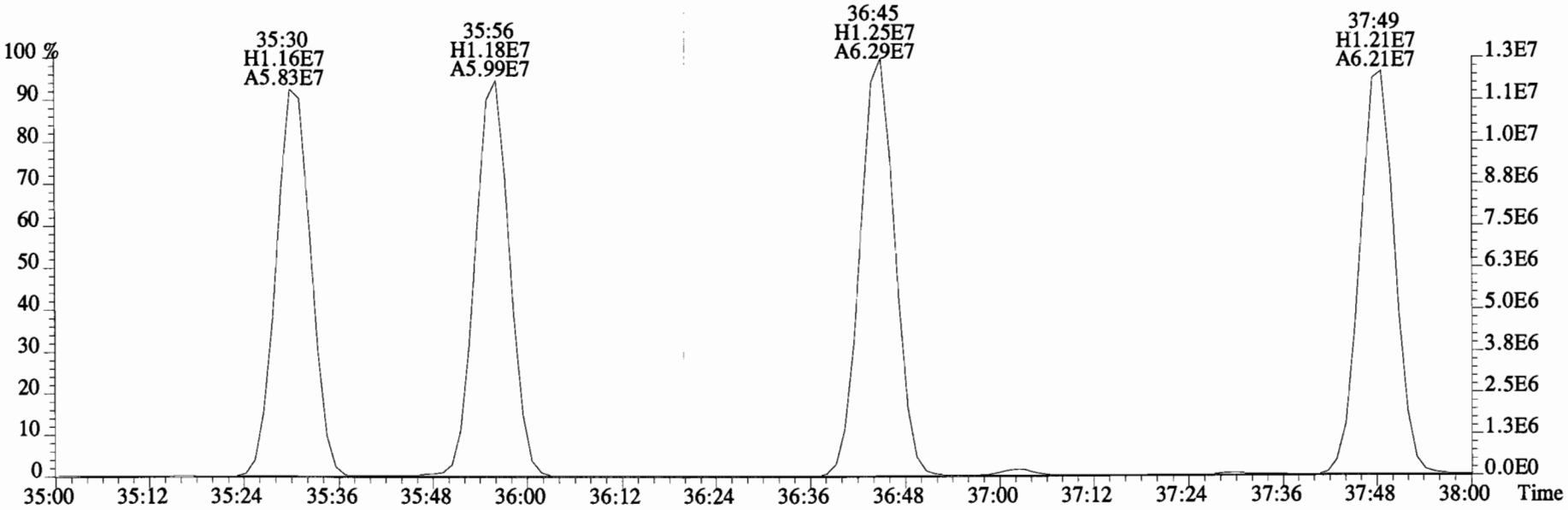
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7040.0,0.00%,F,F)



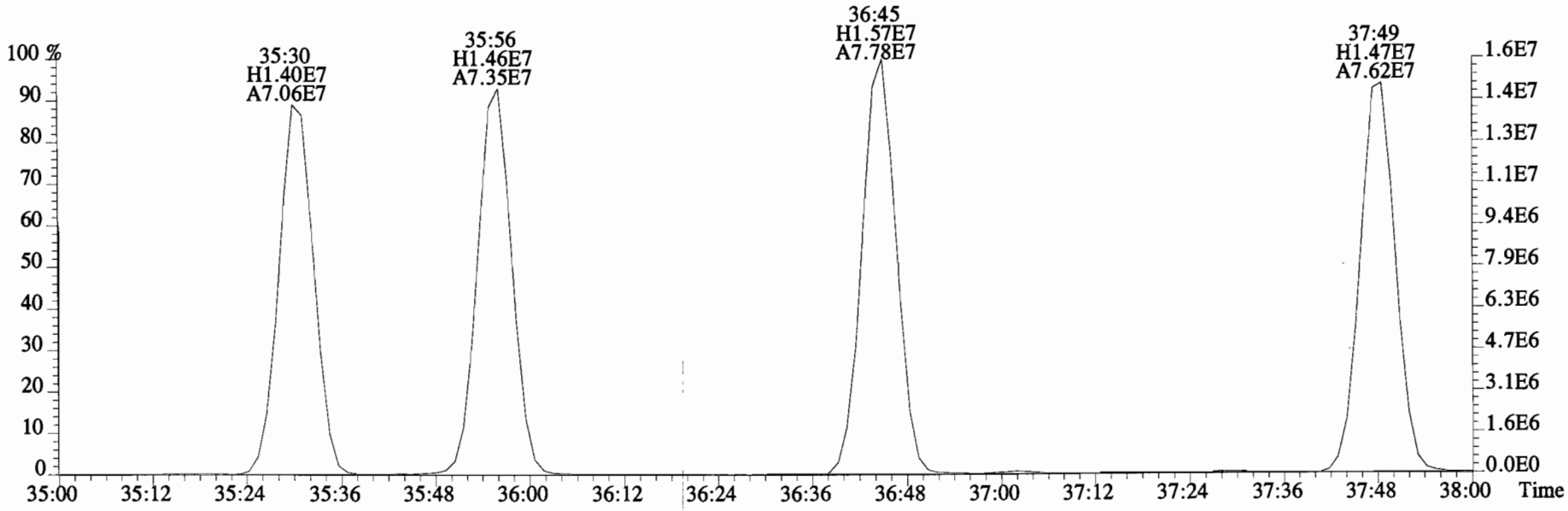
301.9626 S:5 F:3



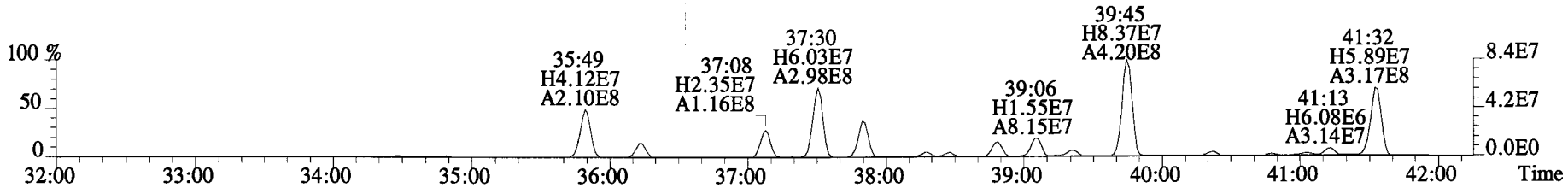
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24204.0,0.00%,F,F)



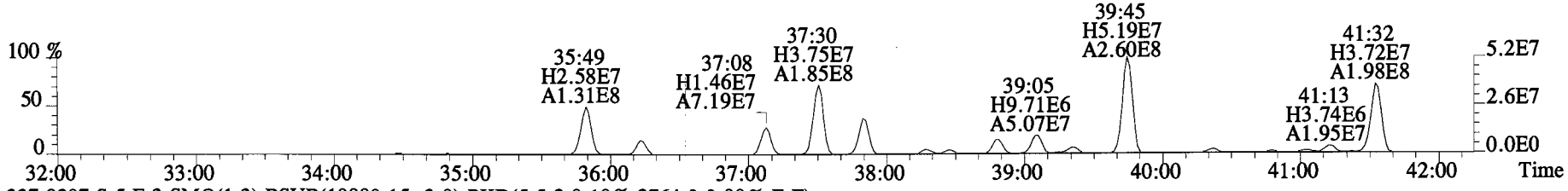
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14140.0,0.00%,F,F)



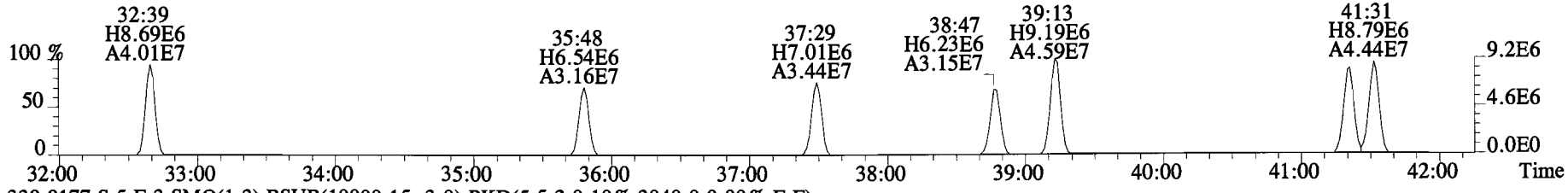
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1340.0,0.00%,F,F)



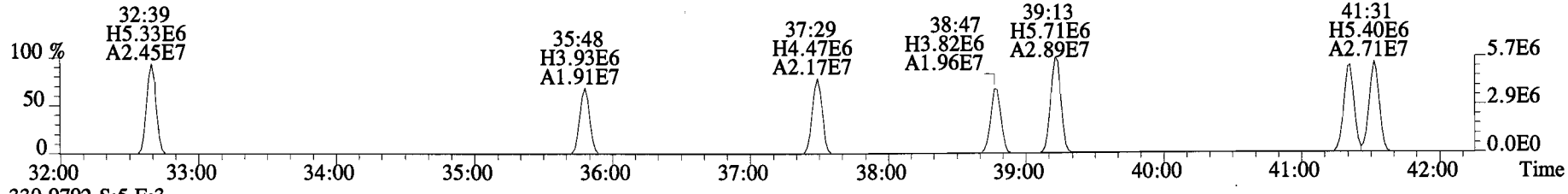
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



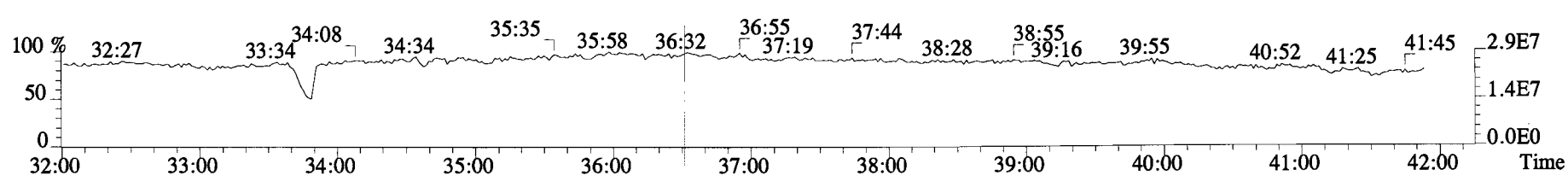
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2764.0,0.00%,F,F)



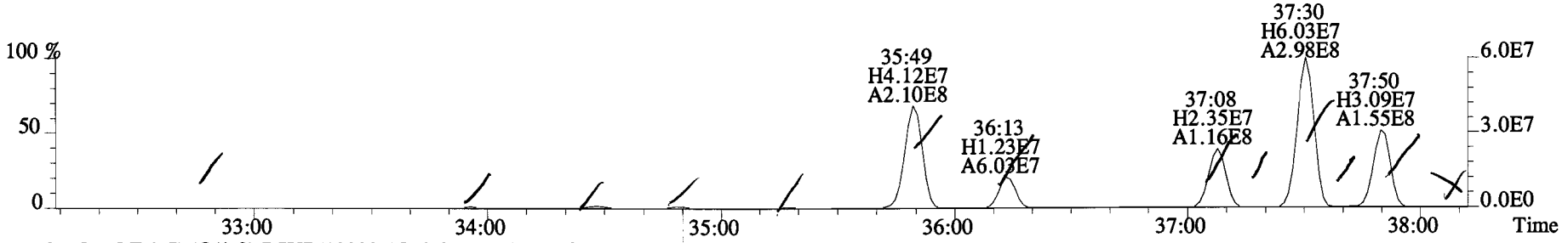
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



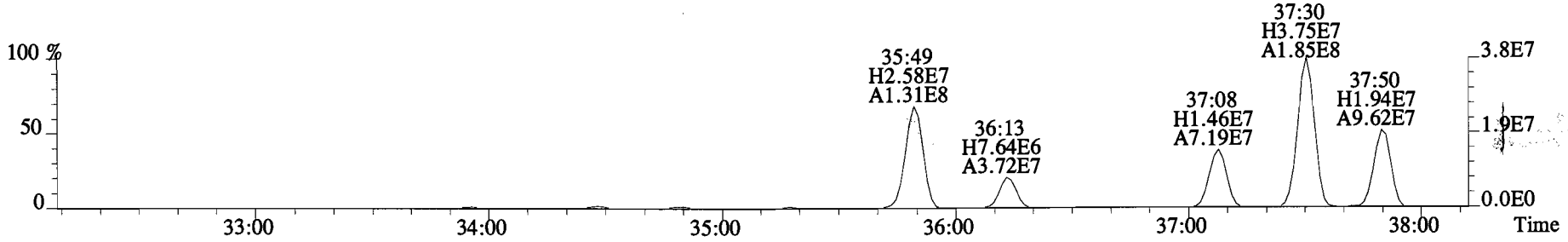
330.9792 S:5 F:3



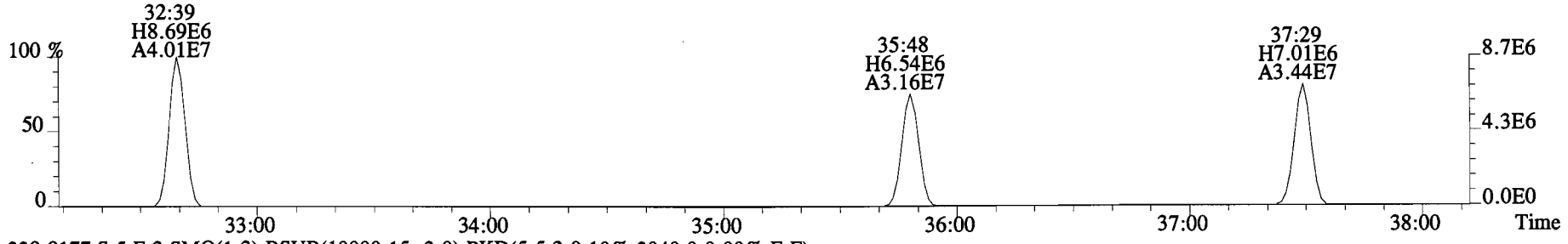
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1340.0,0.00%,F,F)



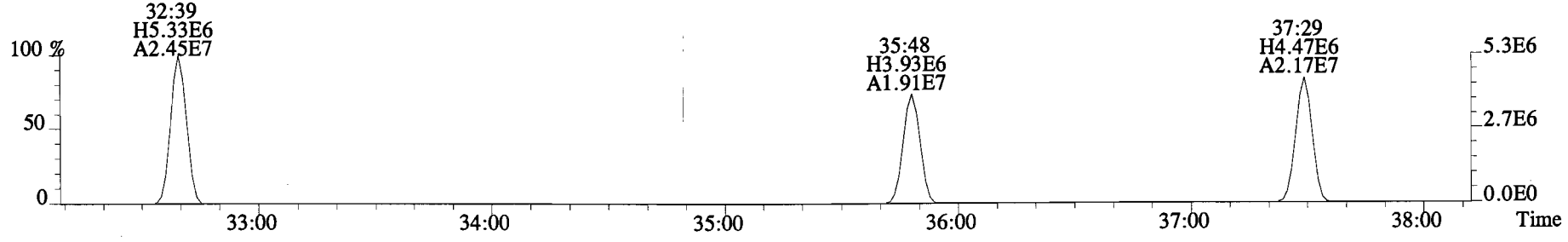
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



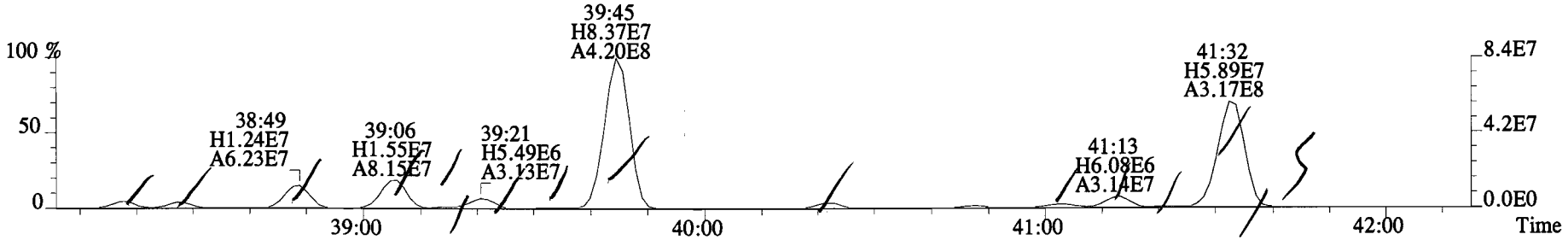
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2764.0,0.00%,F,F)



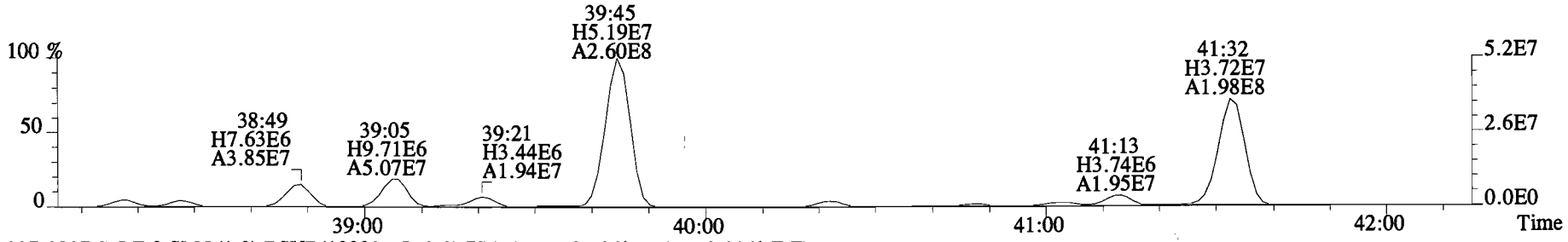
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



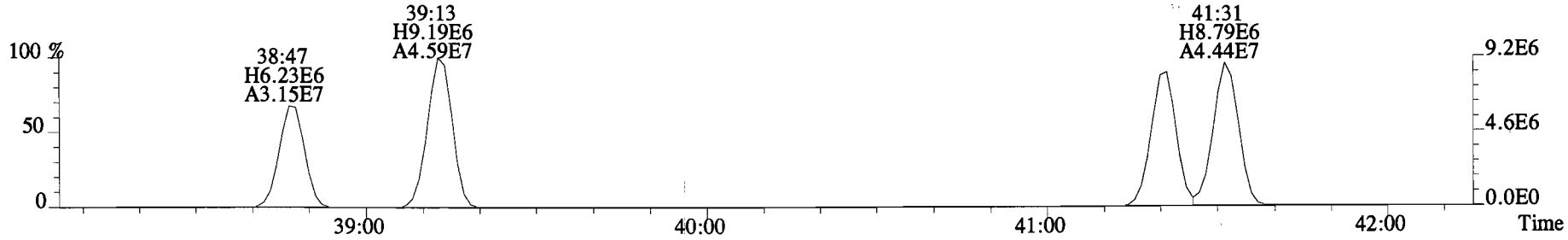
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1340.0,0.00%,F,F)



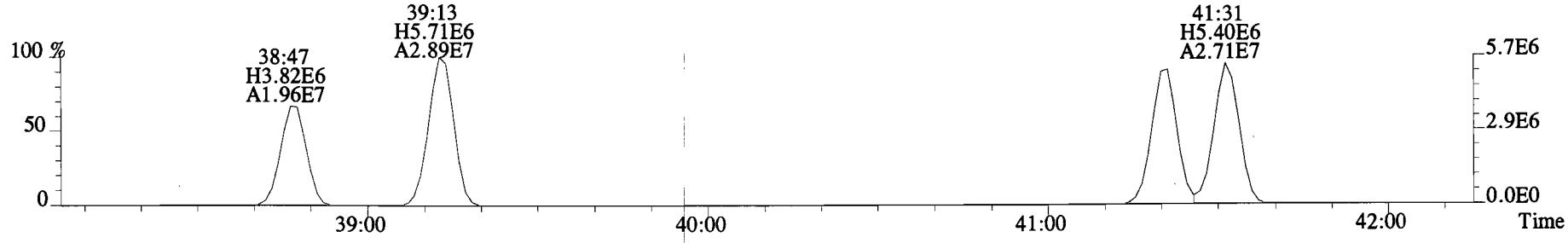
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



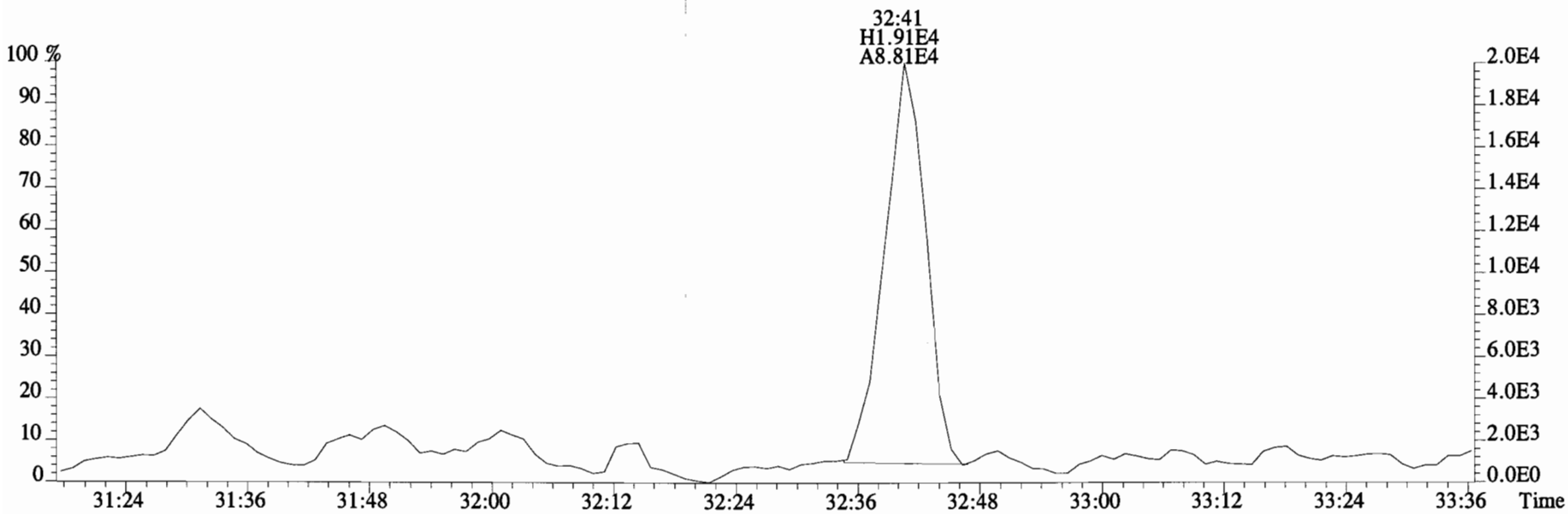
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2764.0,0.00%,F,F)



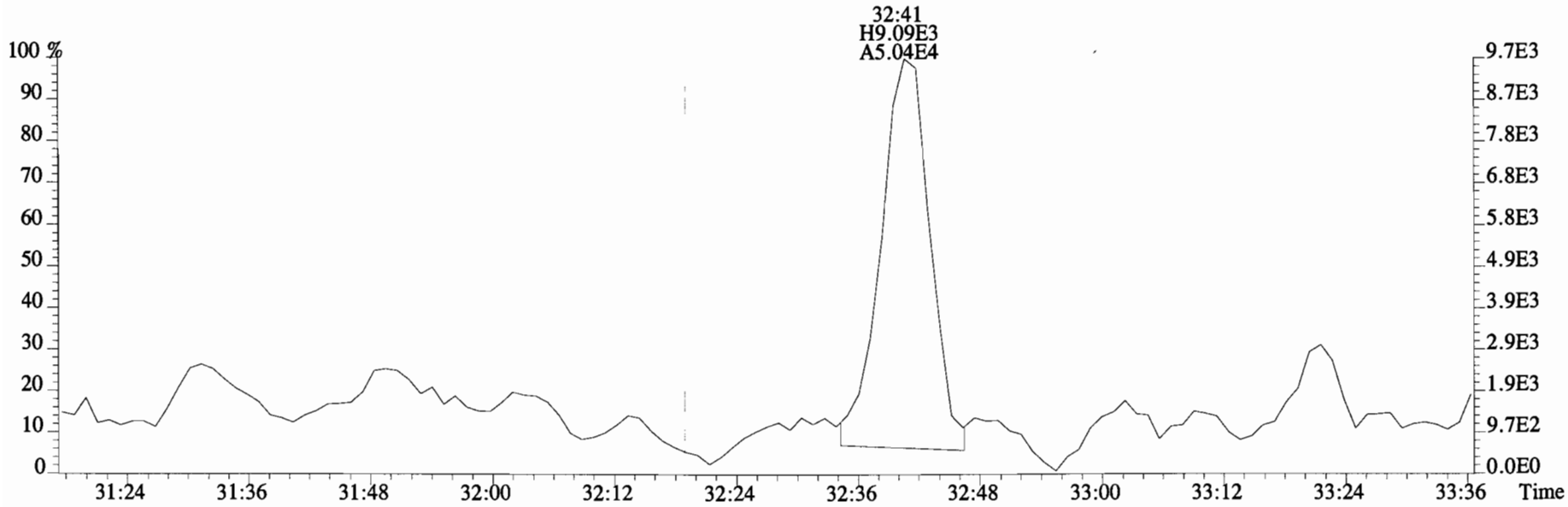
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



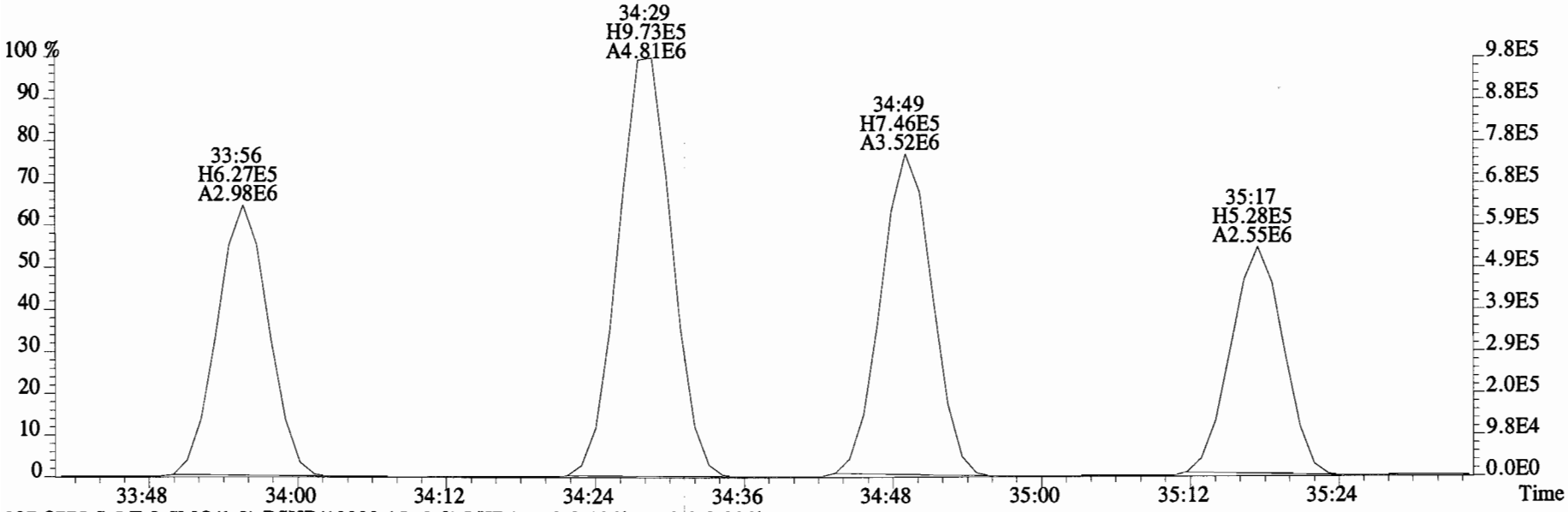
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1340.0,0.00%,F,F)



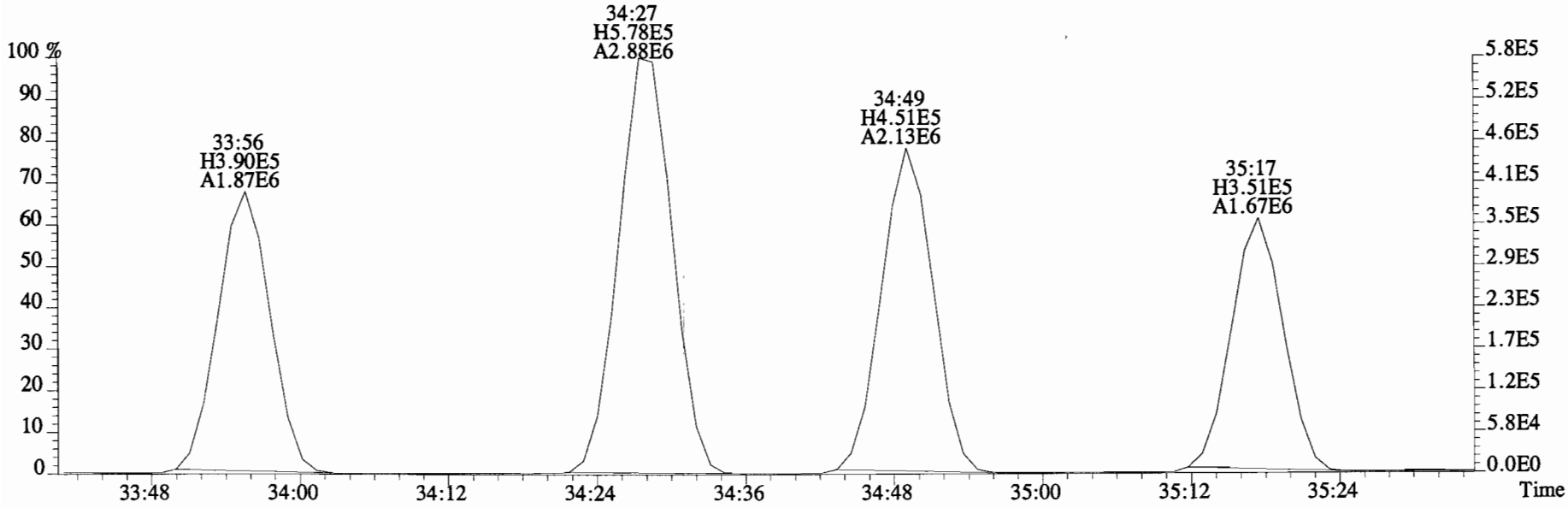
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



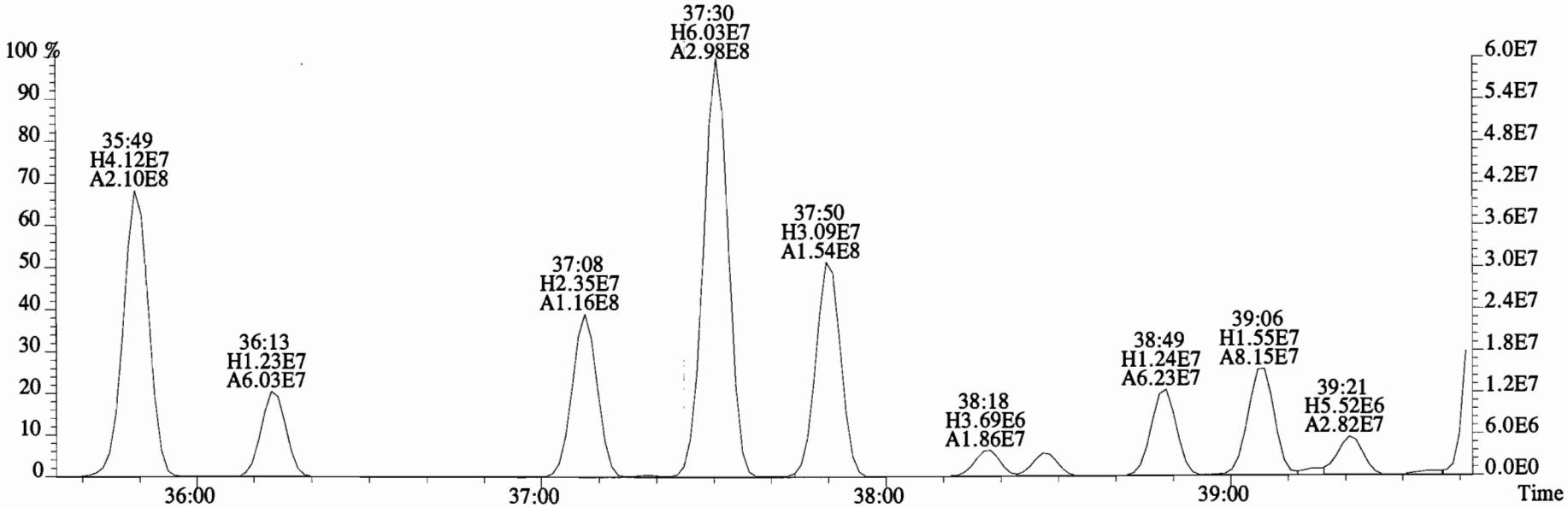
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1340.0,0.00%,F,F)



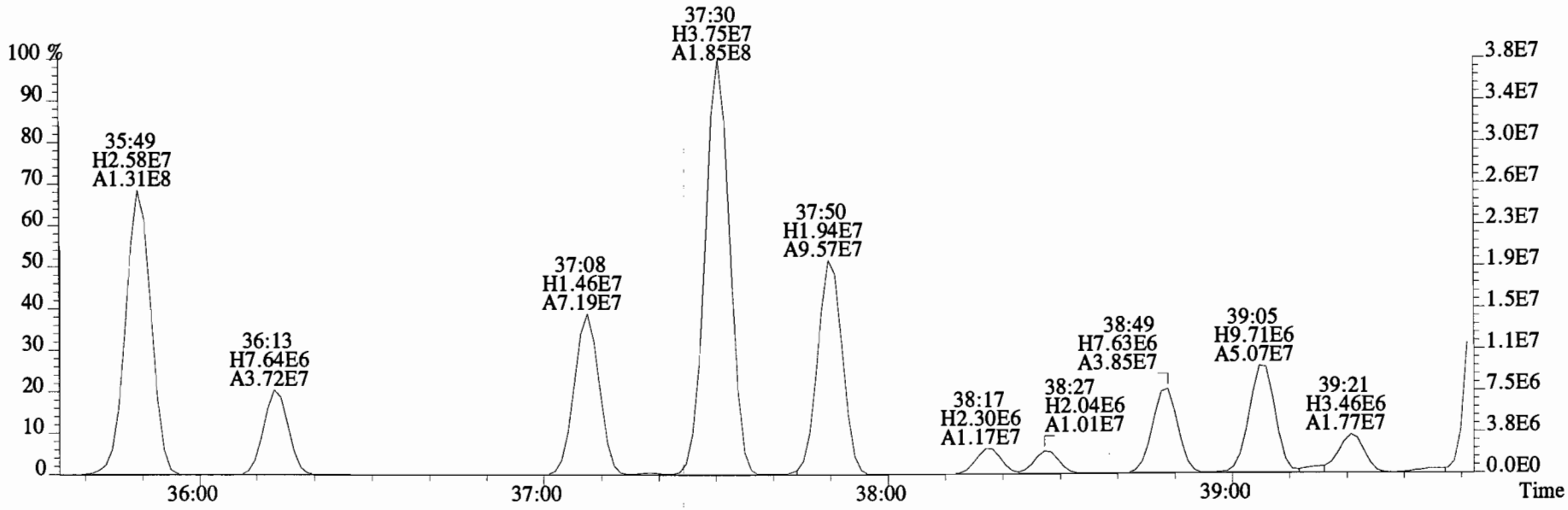
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



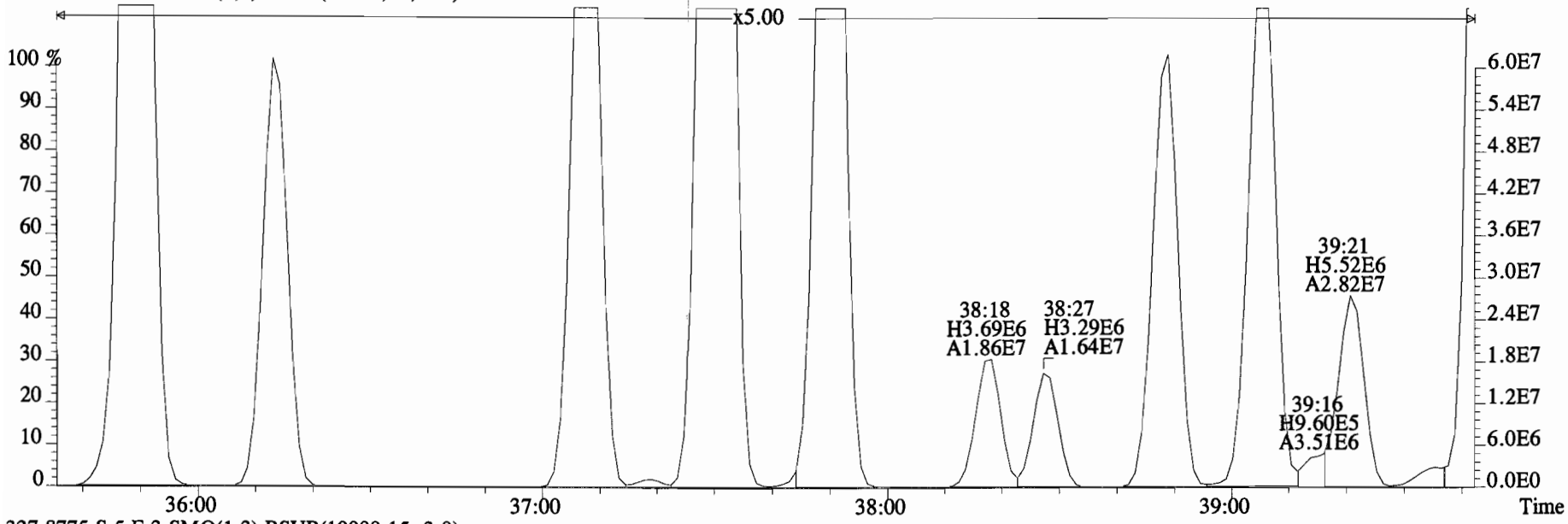
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



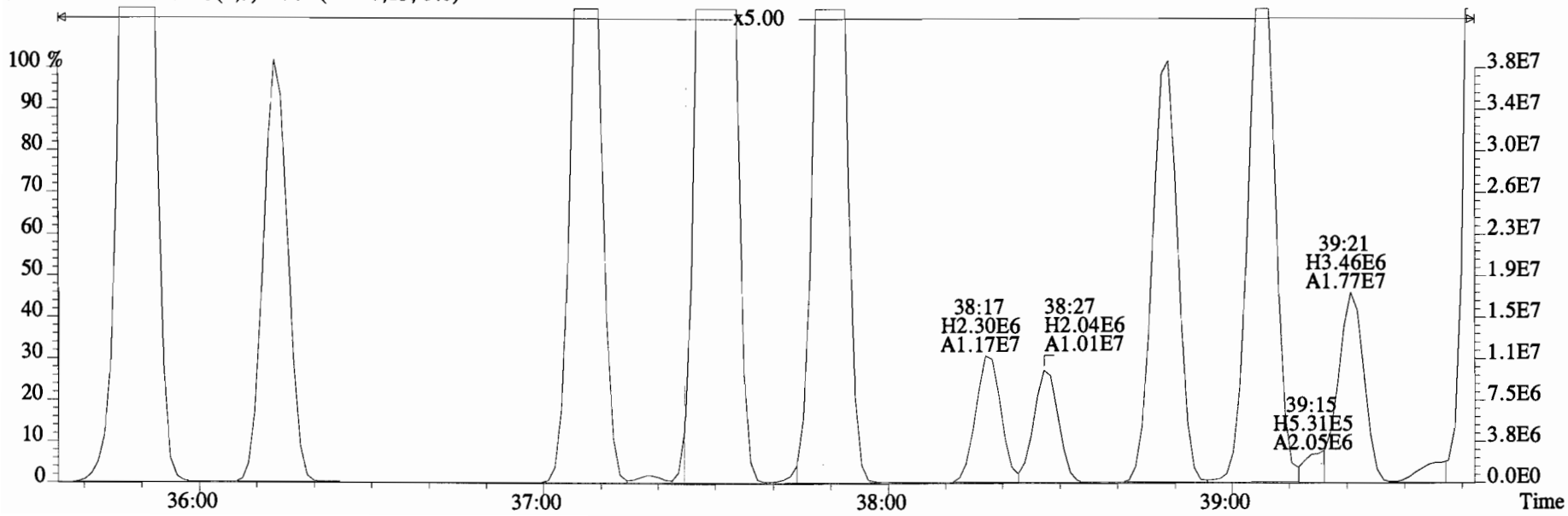
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



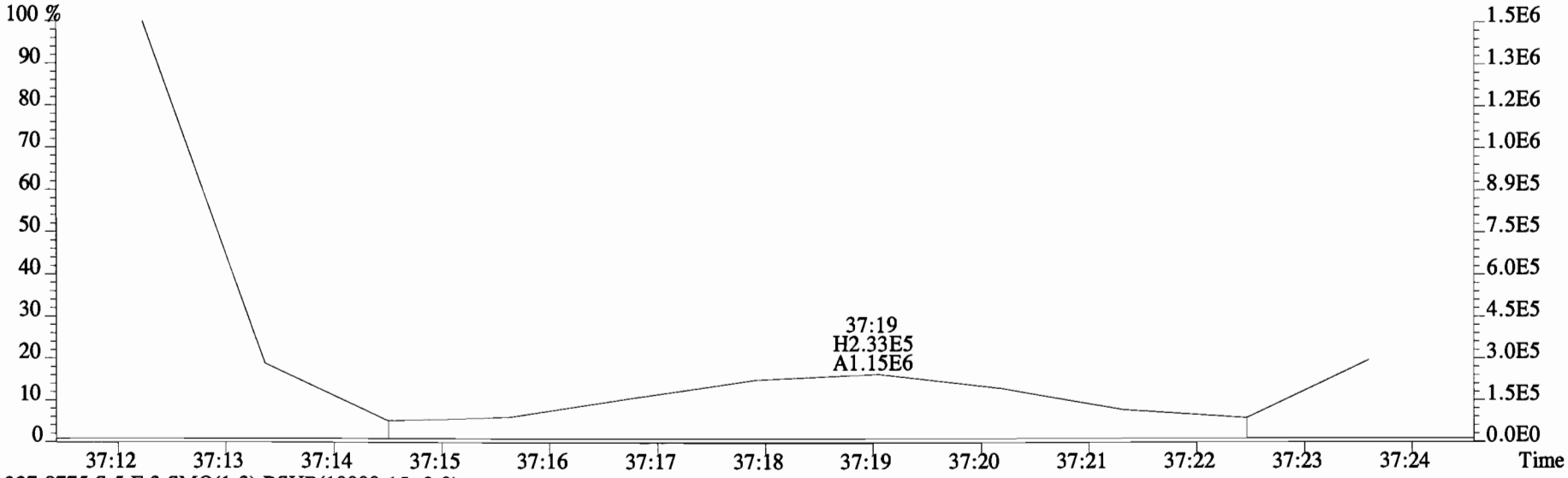
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



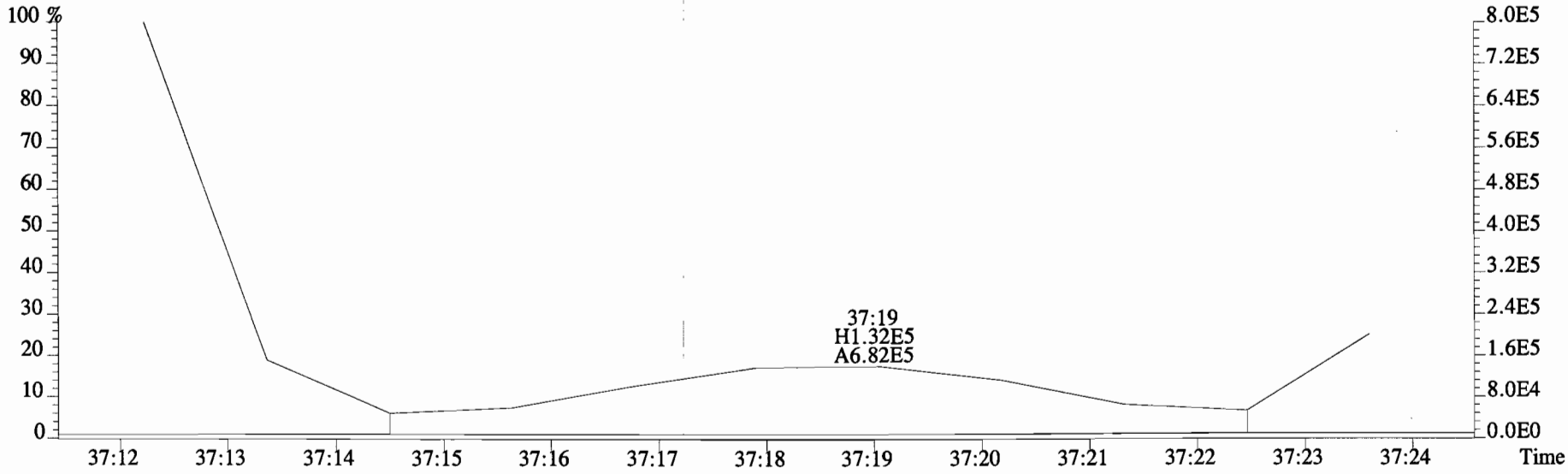
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



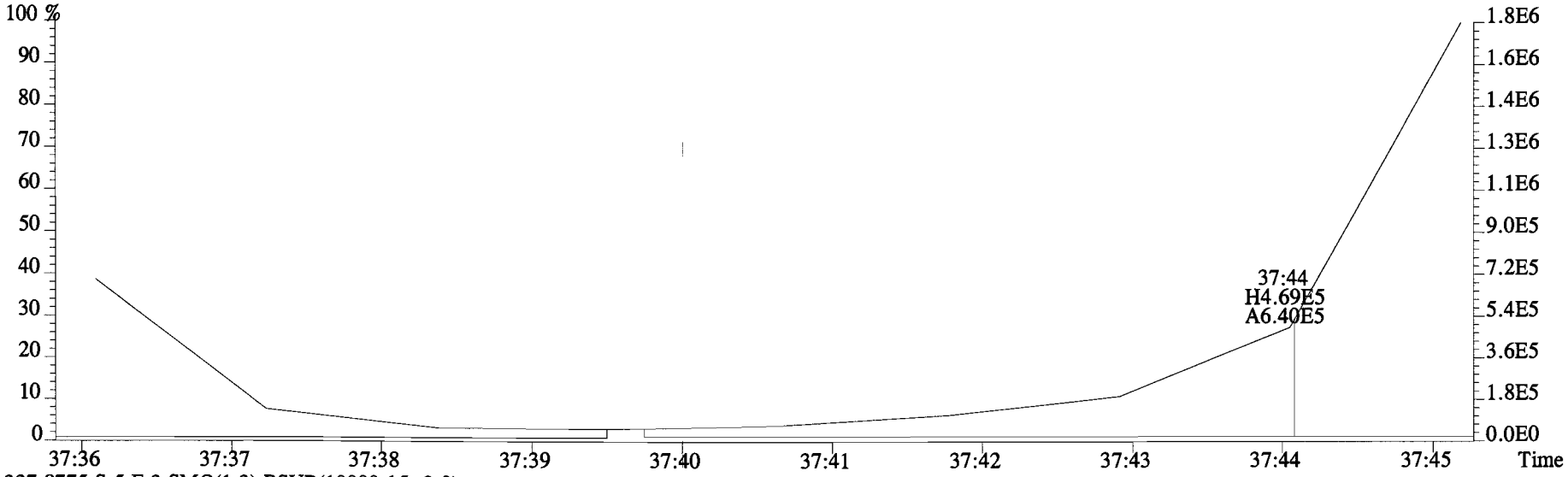
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



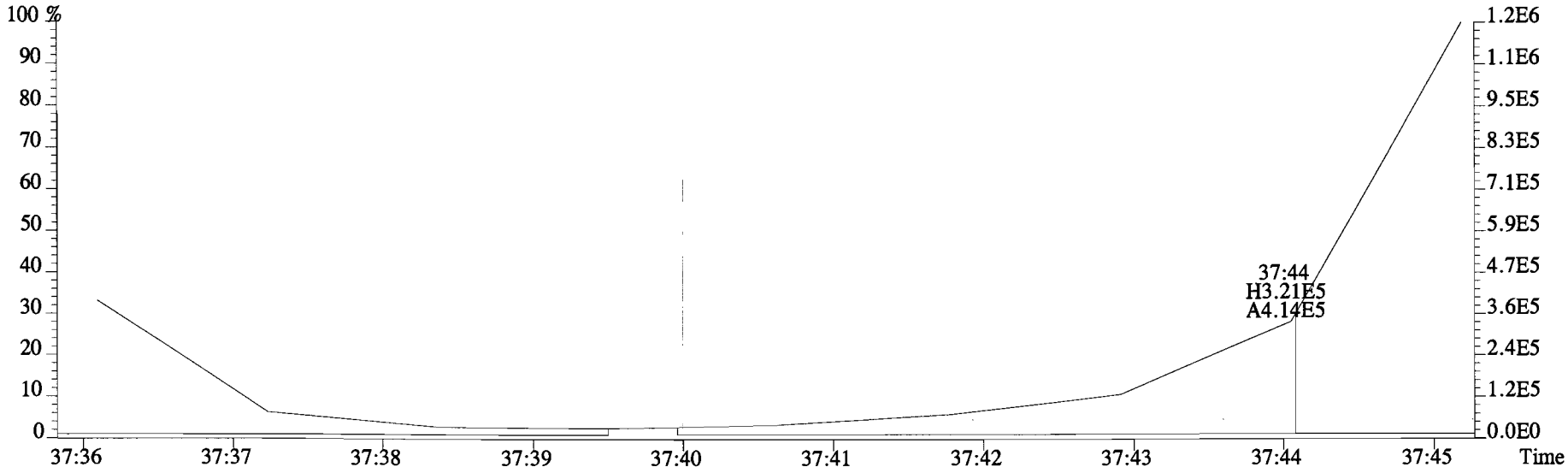
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



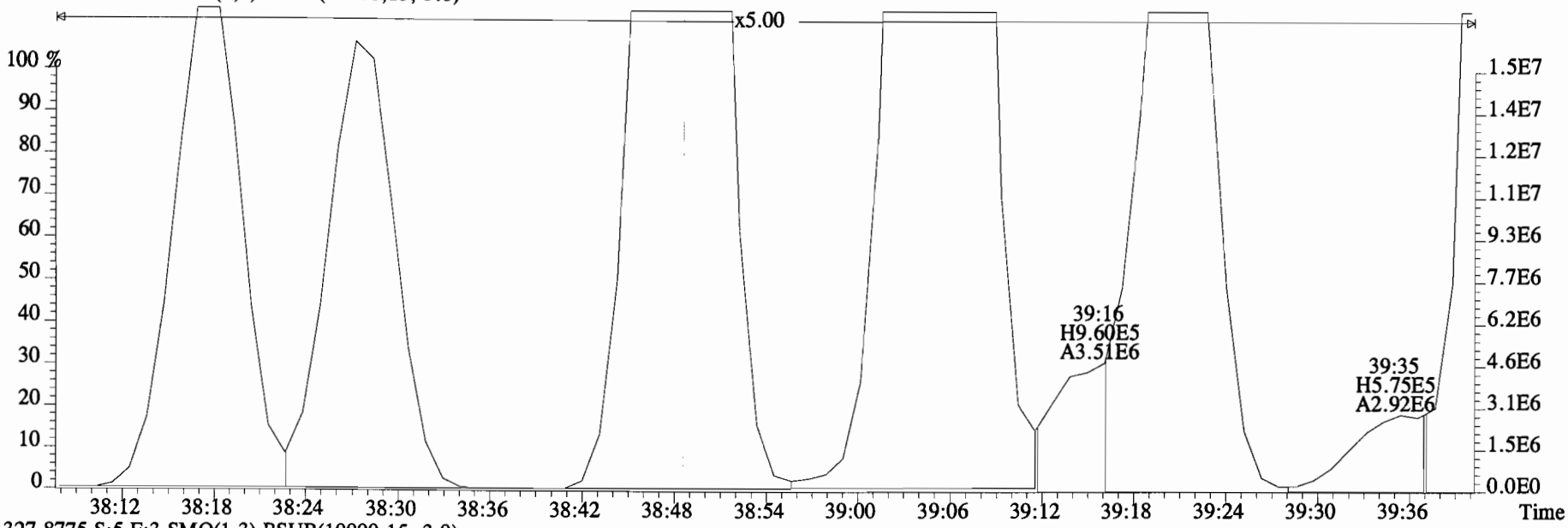
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



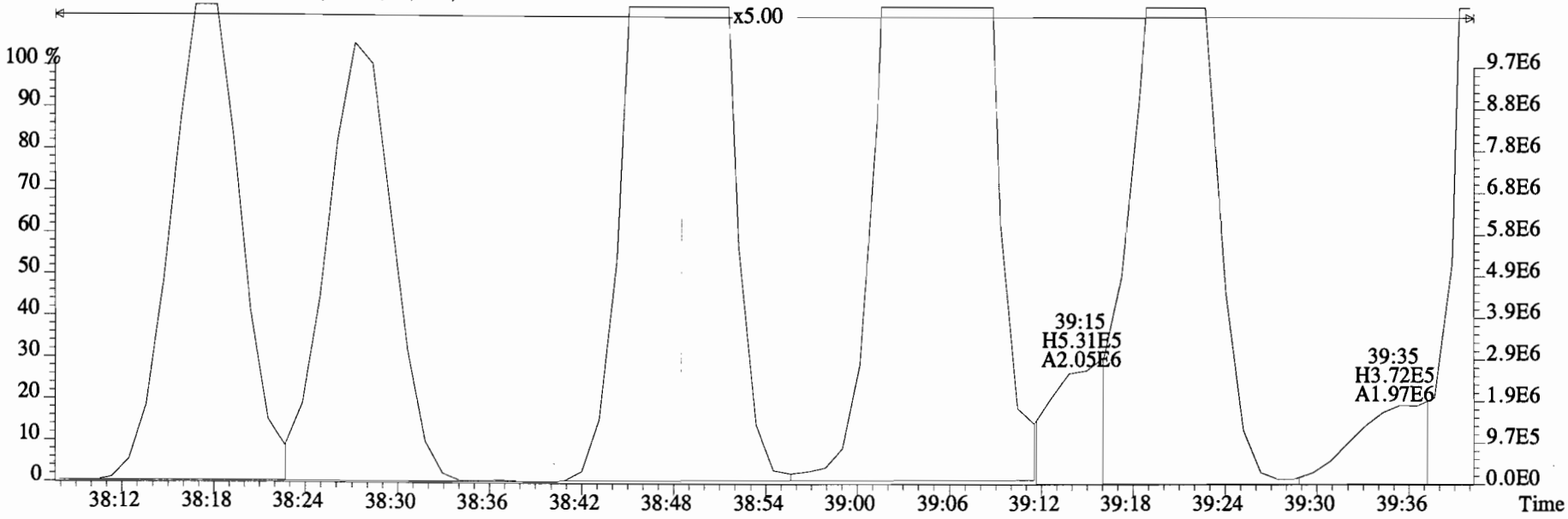
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



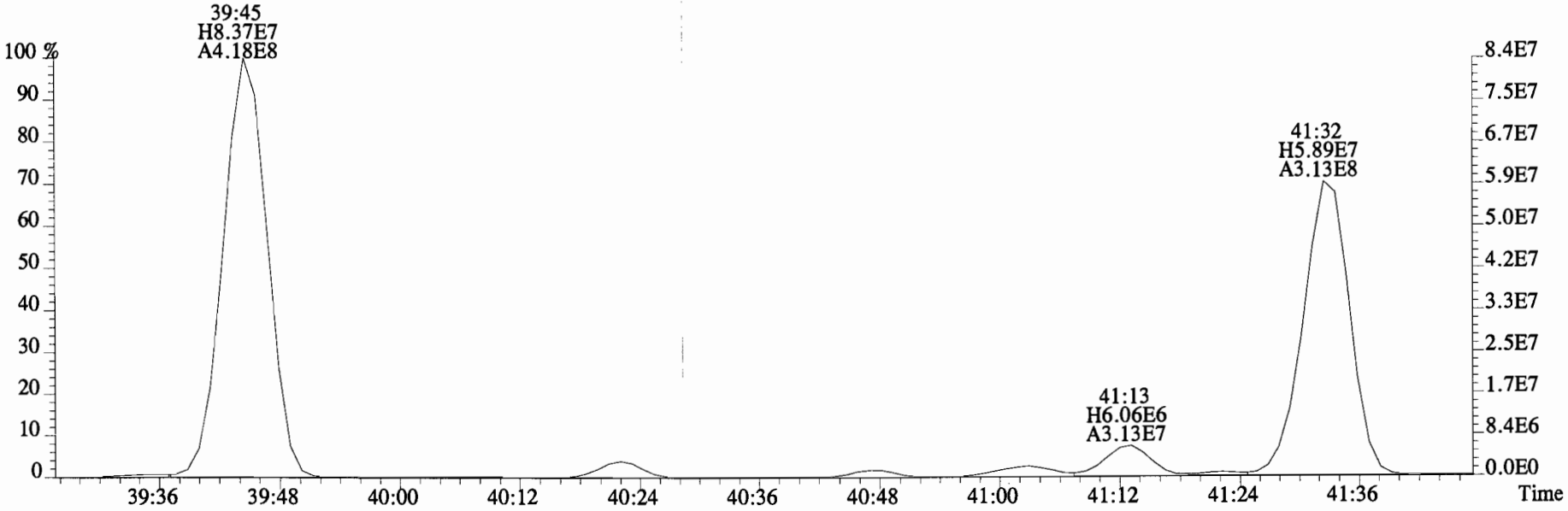
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



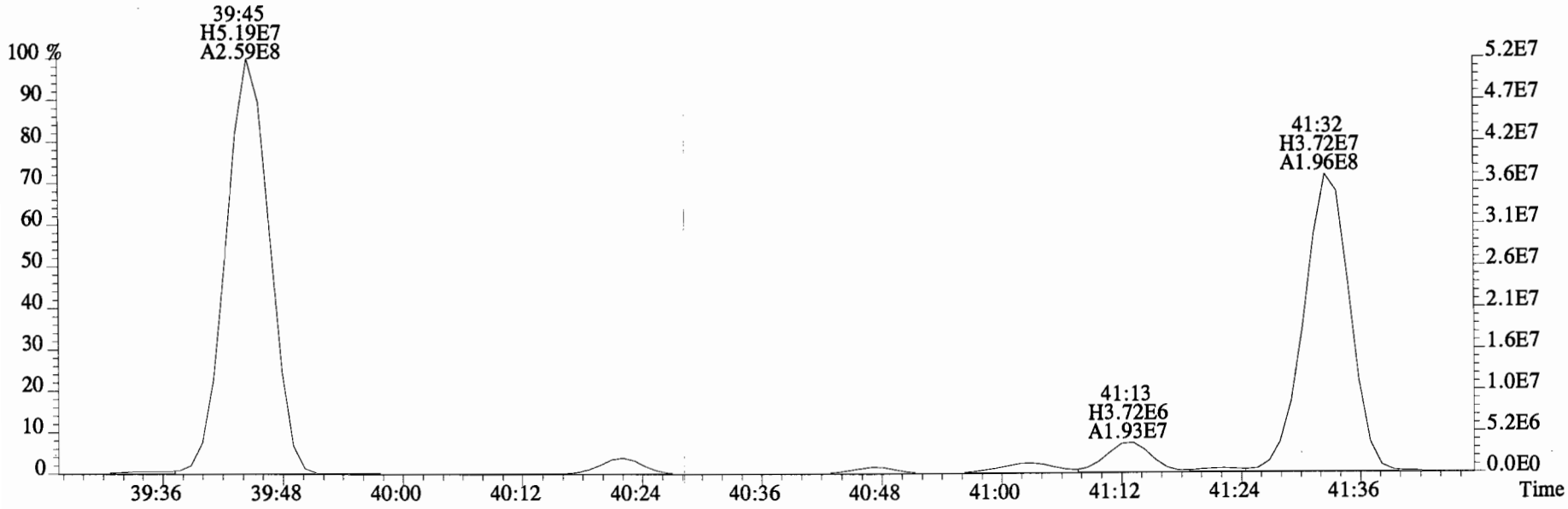
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



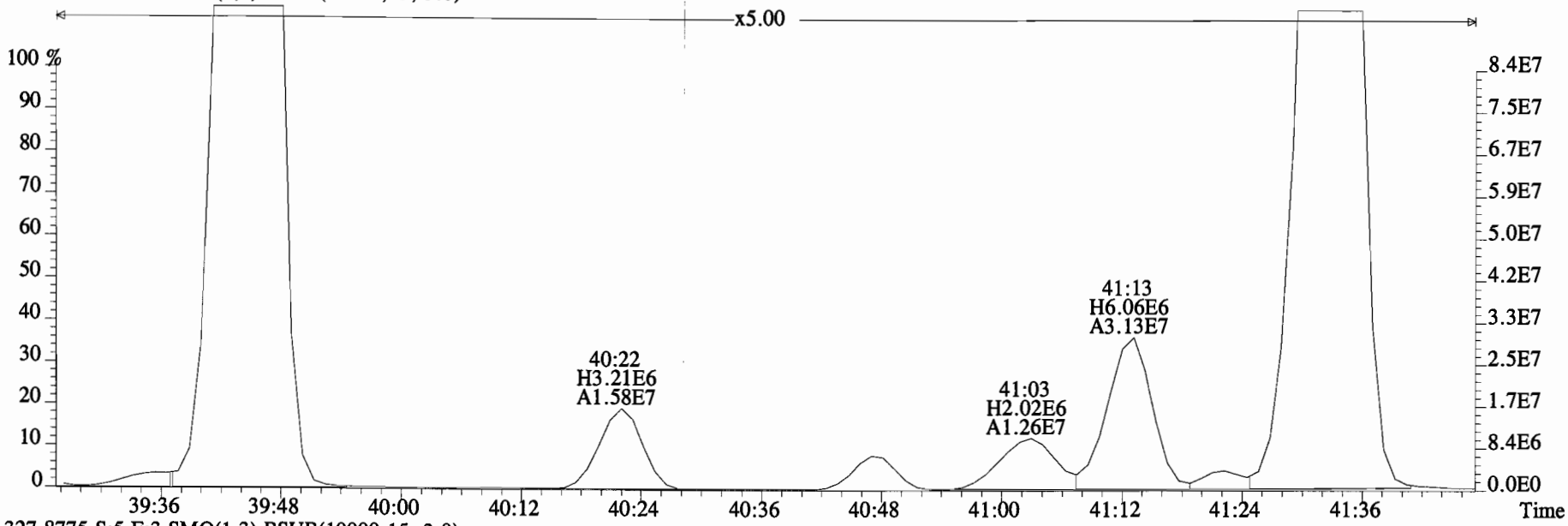
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



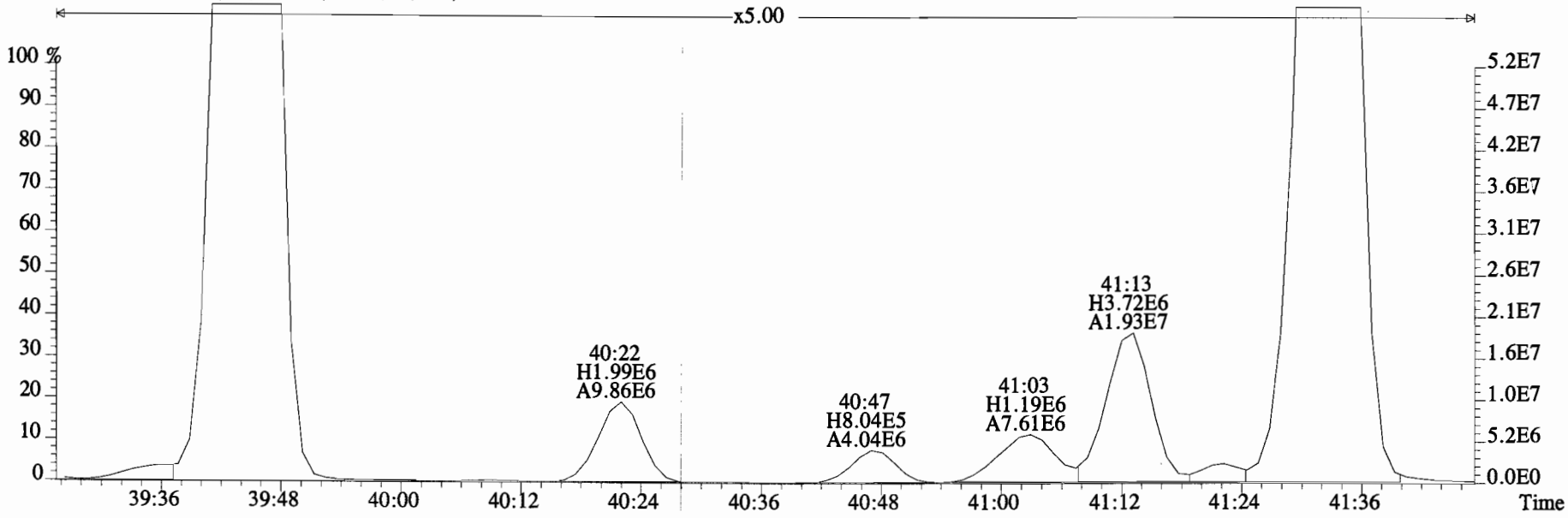
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



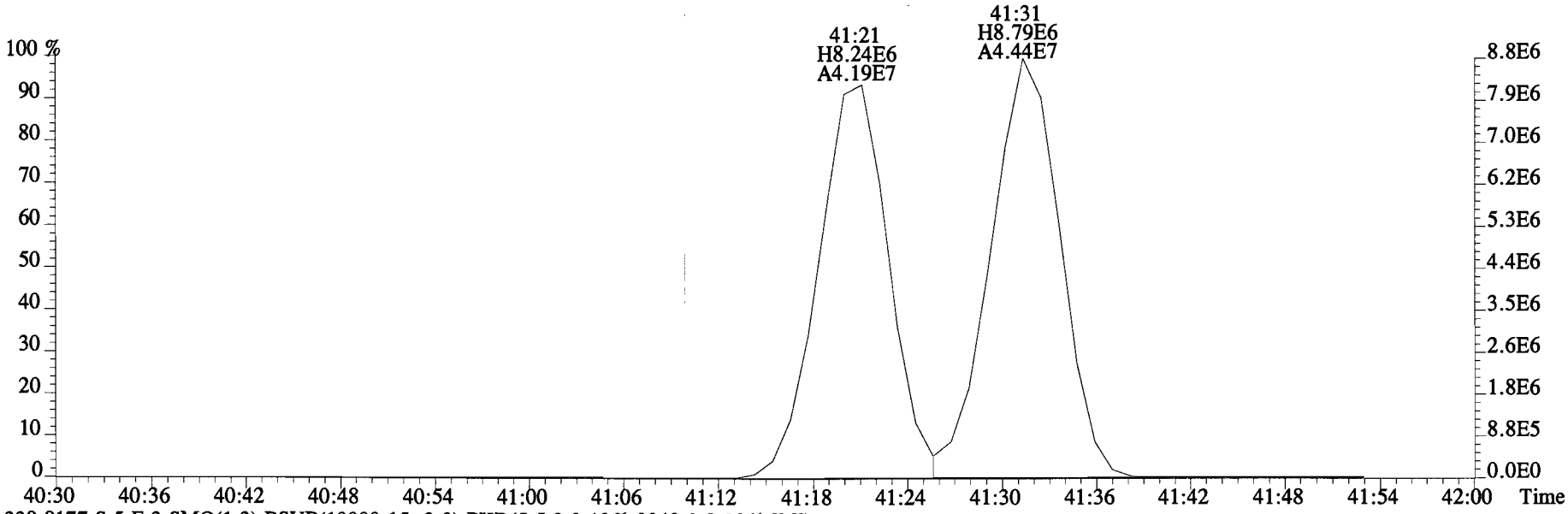
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



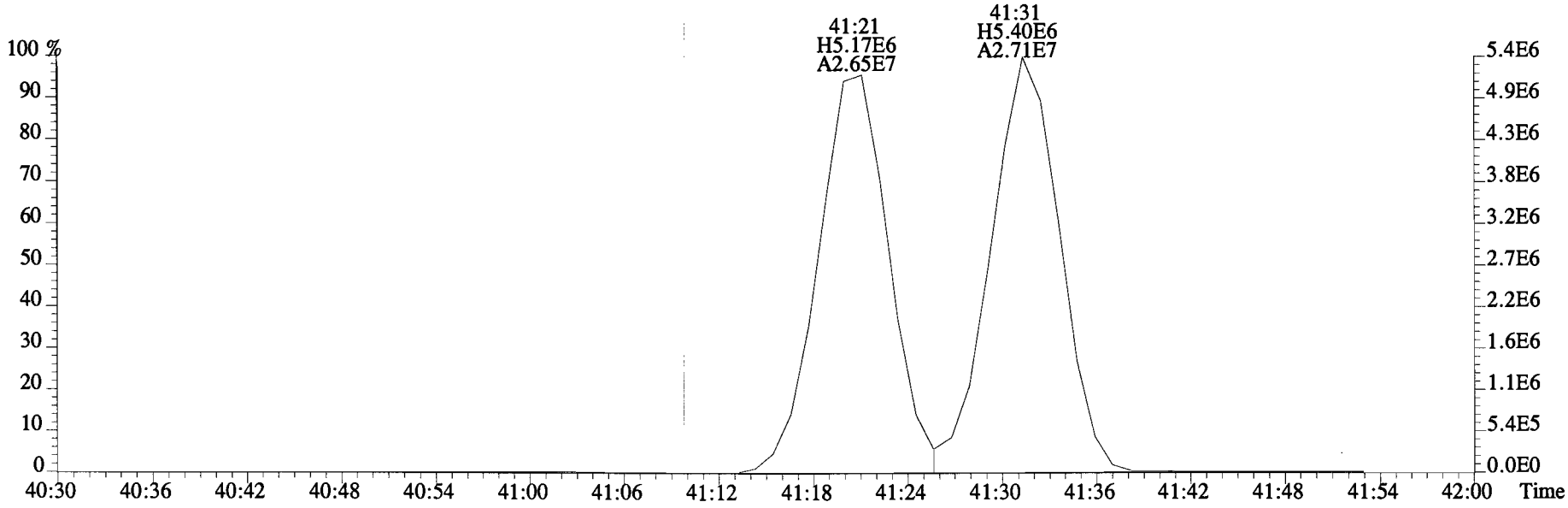
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0)



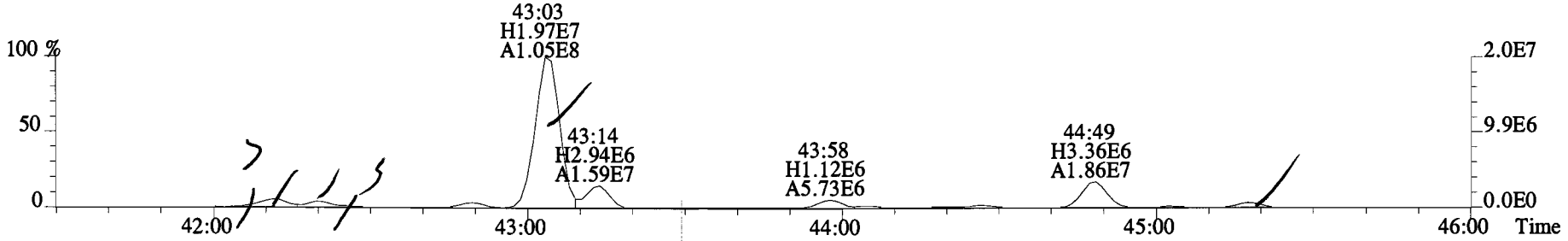
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2764.0,0.00%,F,F)



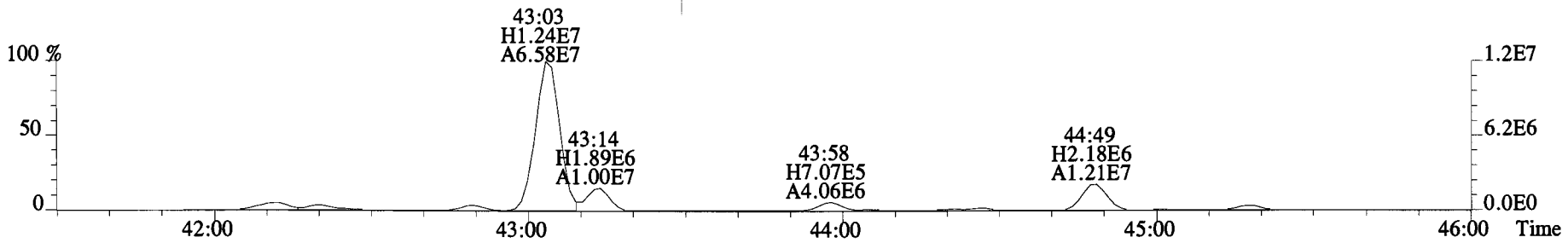
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



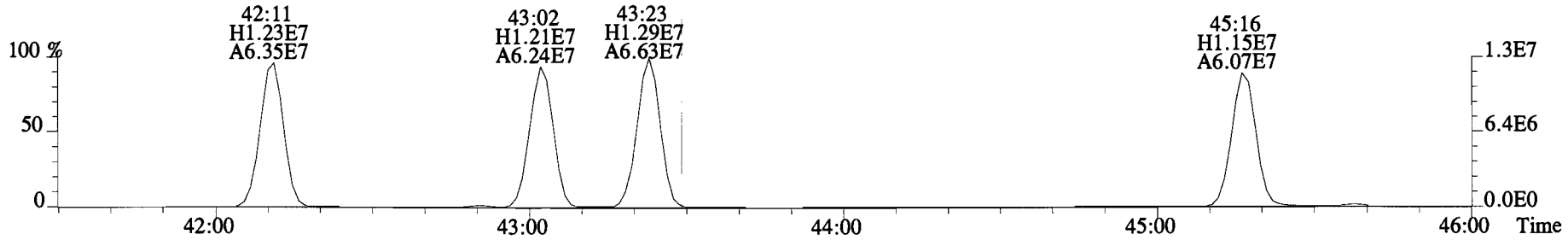
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18176.0,0.00%,F,F)



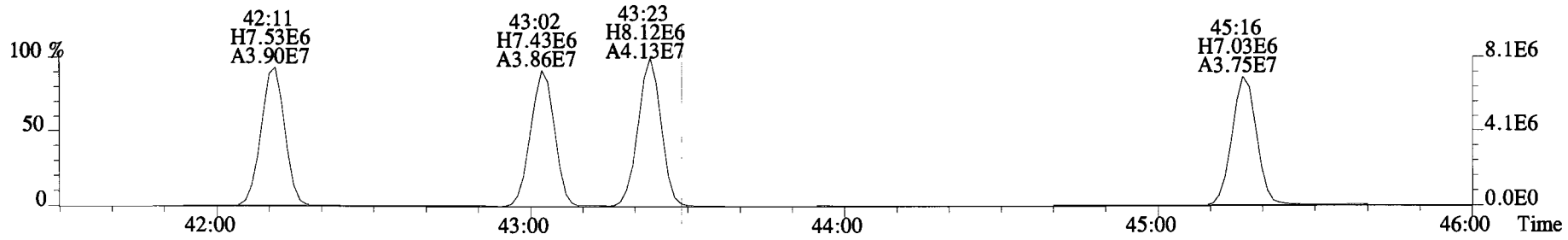
327.8775 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11900.0,0.00%,F,F)



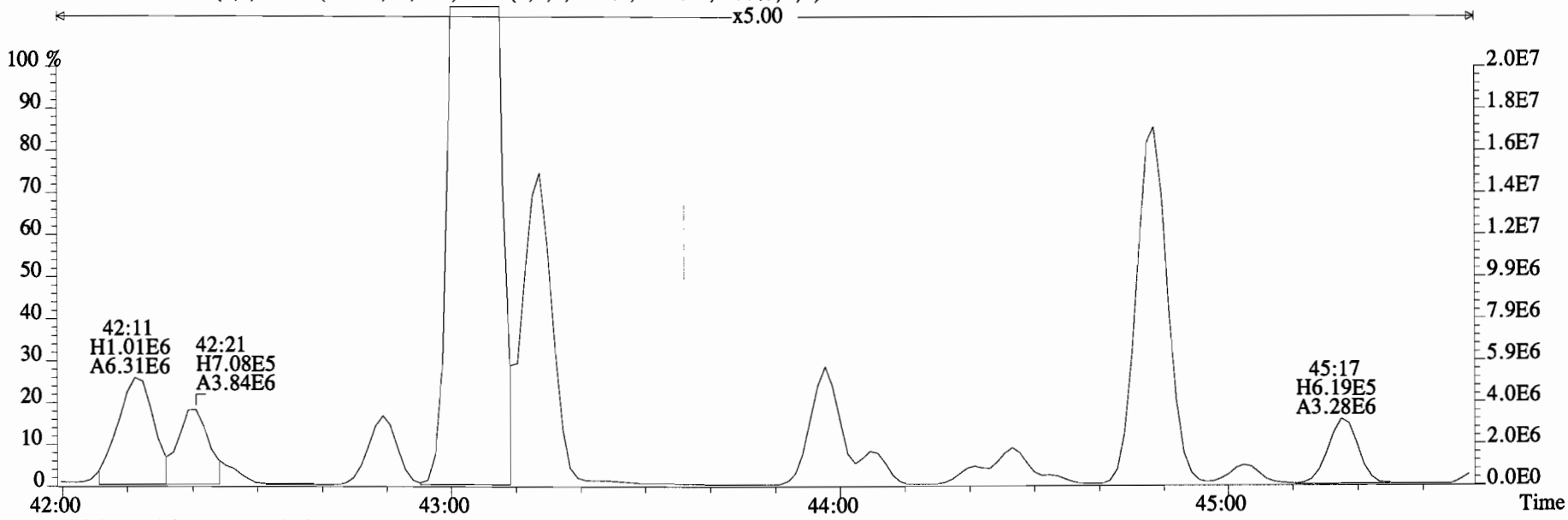
337.9207 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5992.0,0.00%,F,F)



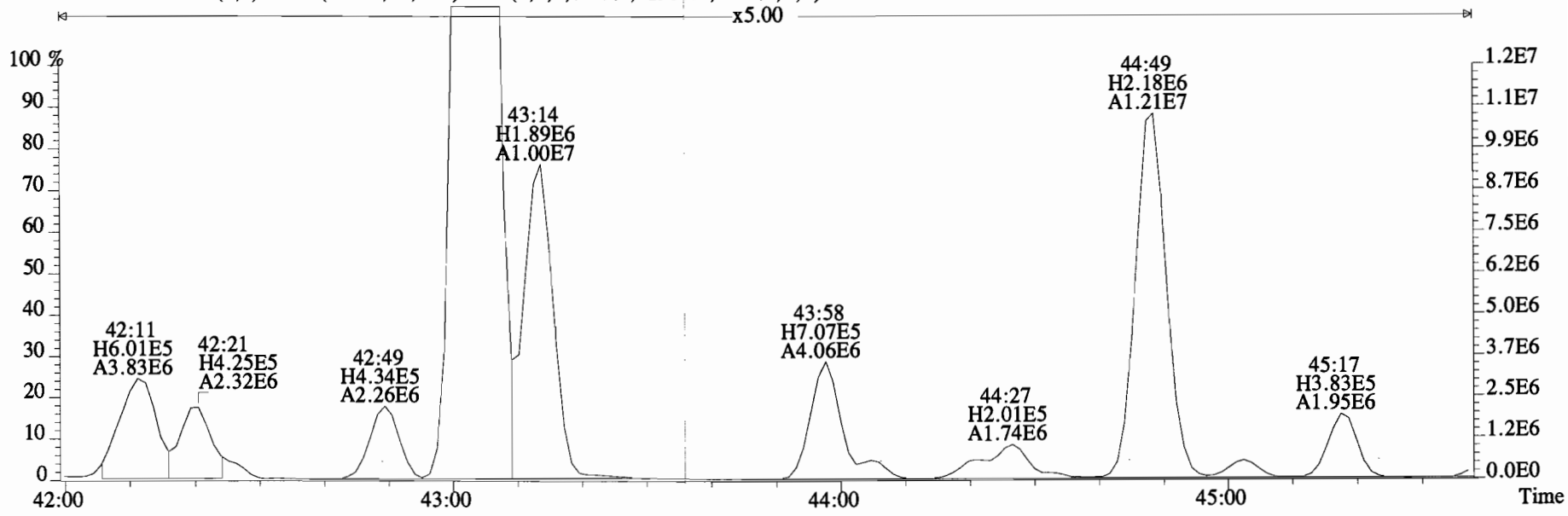
339.9177 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5084.0,0.00%,F,F)



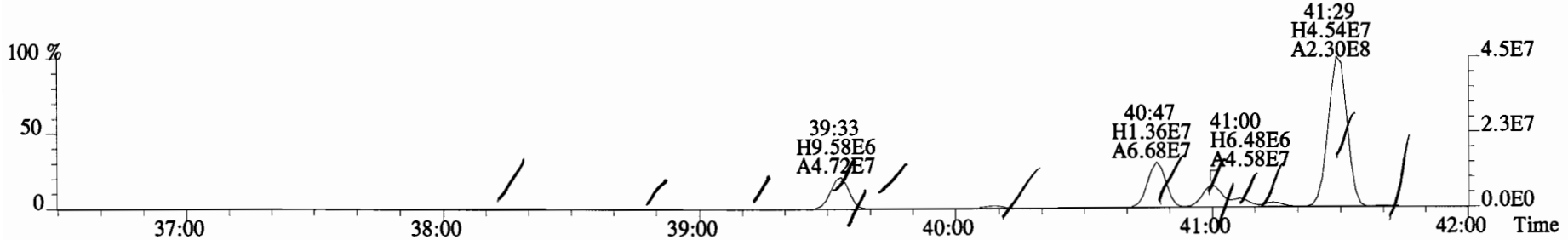
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18176.0,0.00%,F,F)



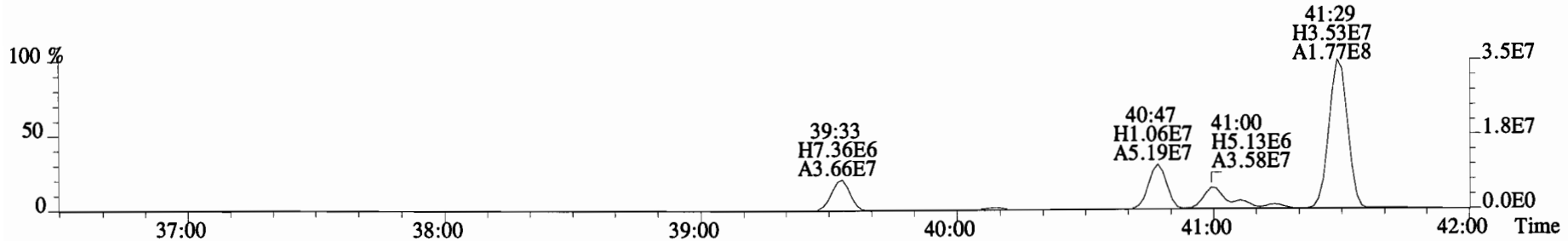
327.8775 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11900.0,0.00%,F,F)



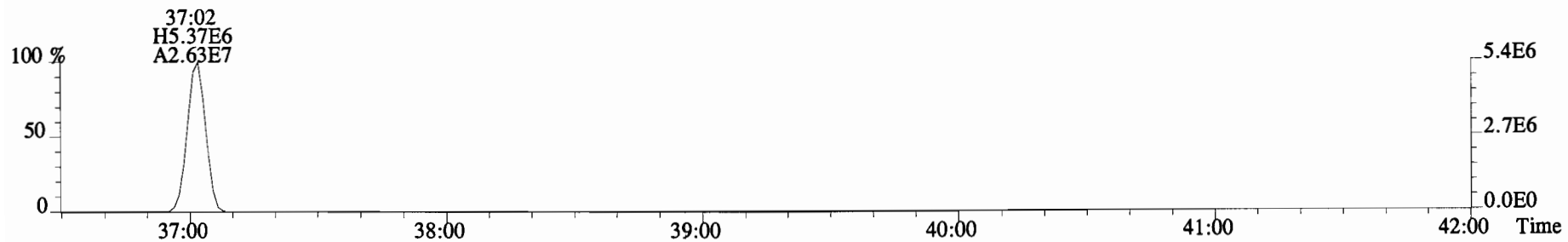
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1884.0,0.00%,F,F)



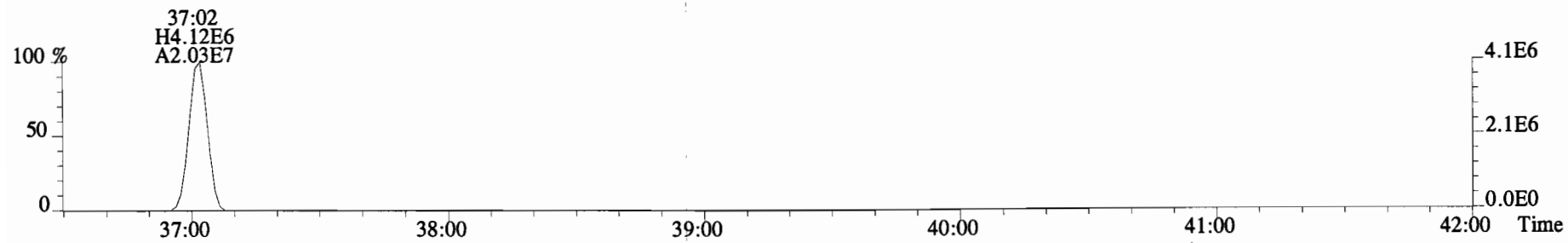
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1792.0,0.00%,F,F)



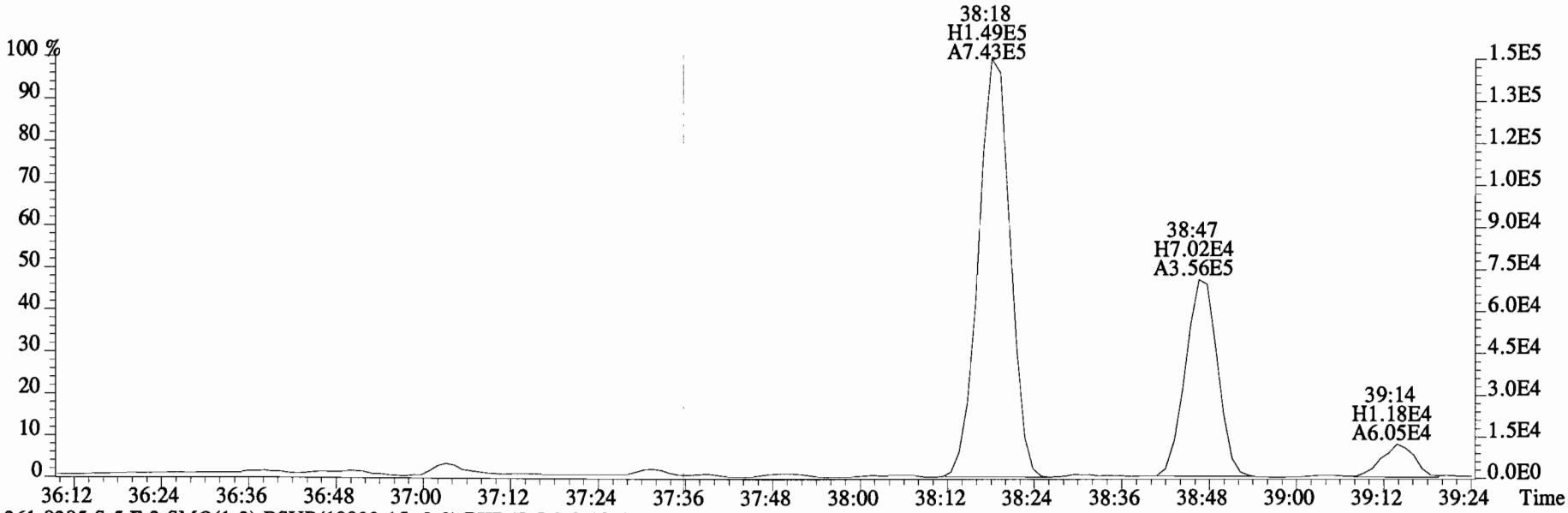
371.8817 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2284.0,0.00%,F,F)



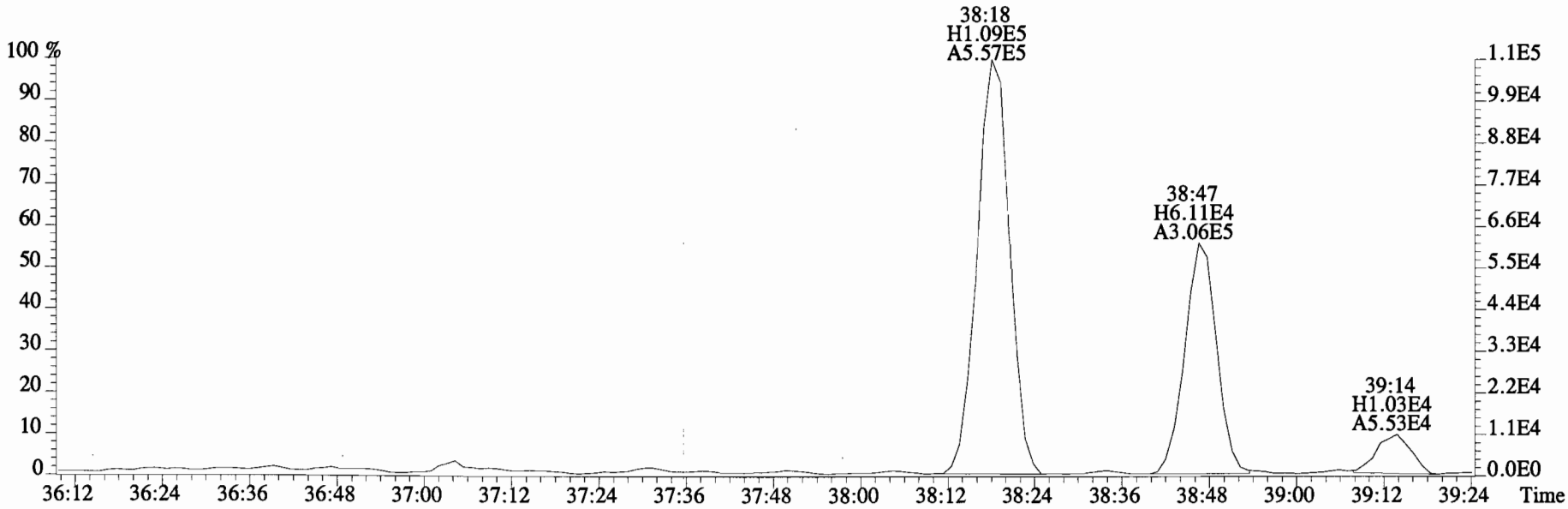
373.8788 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



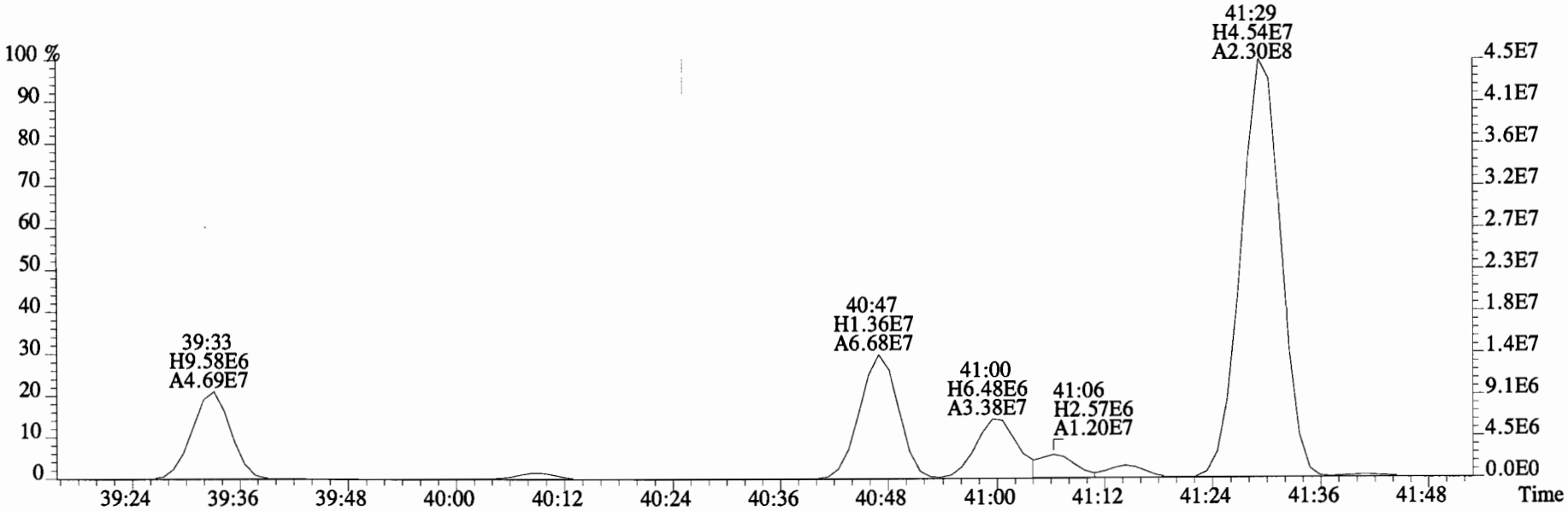
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1884.0,0.00%,F,F)



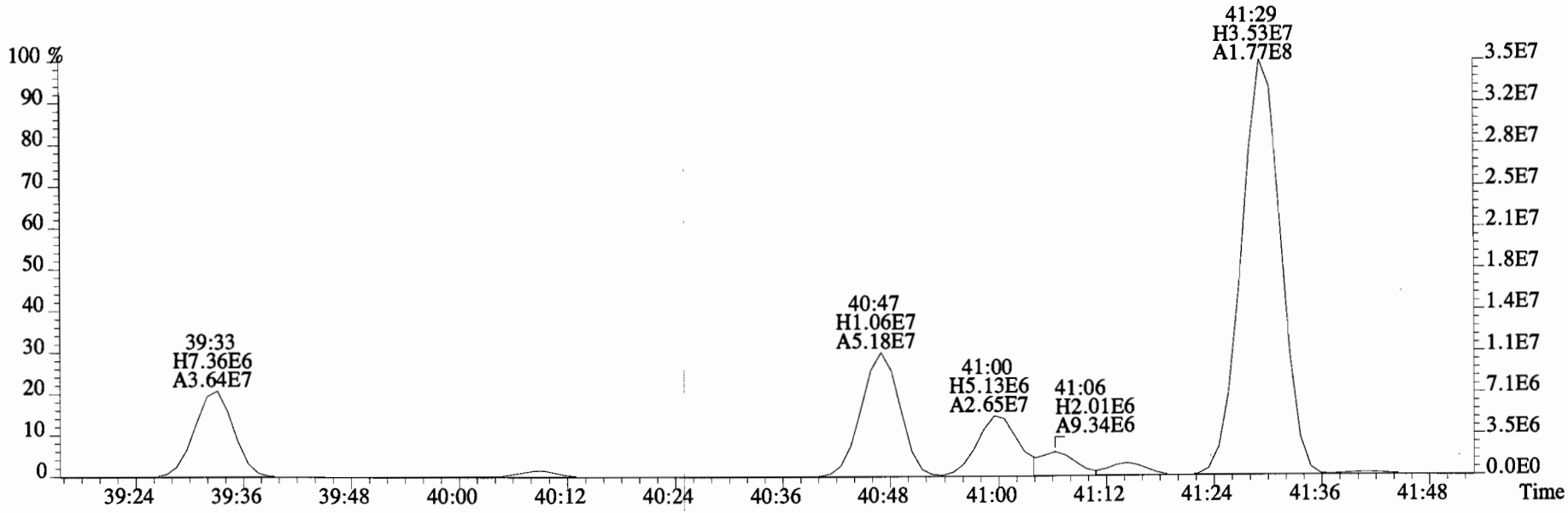
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1792.0,0.00%,F,F)



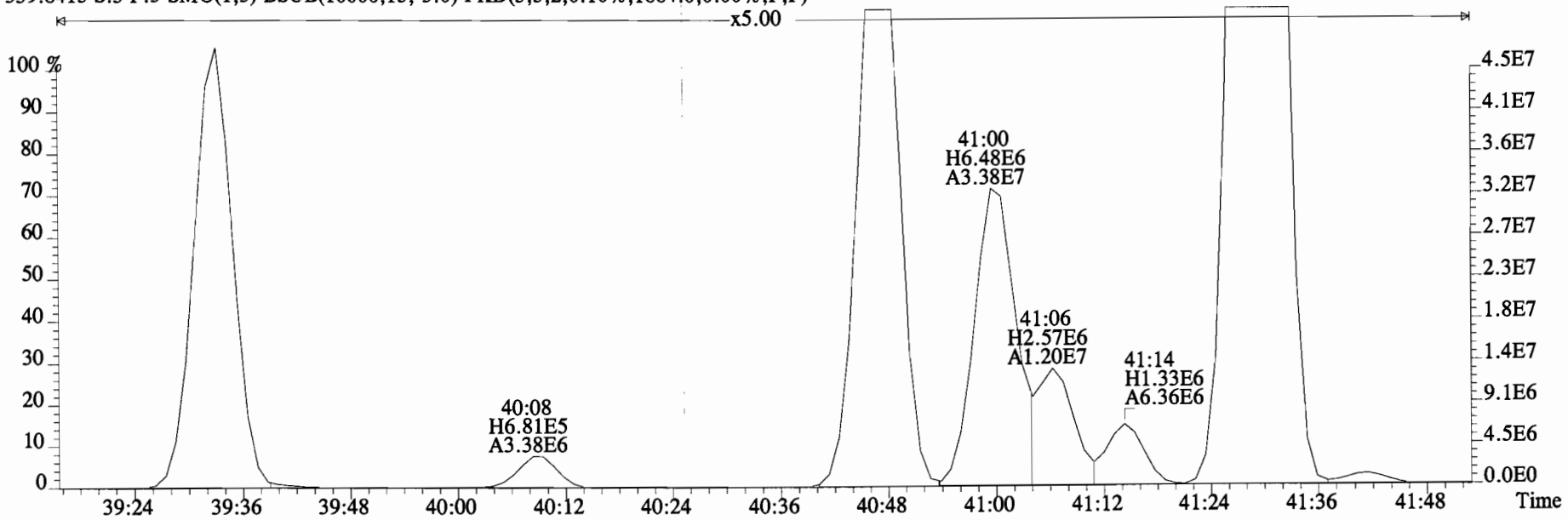
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1884.0,0.00%,F,F)



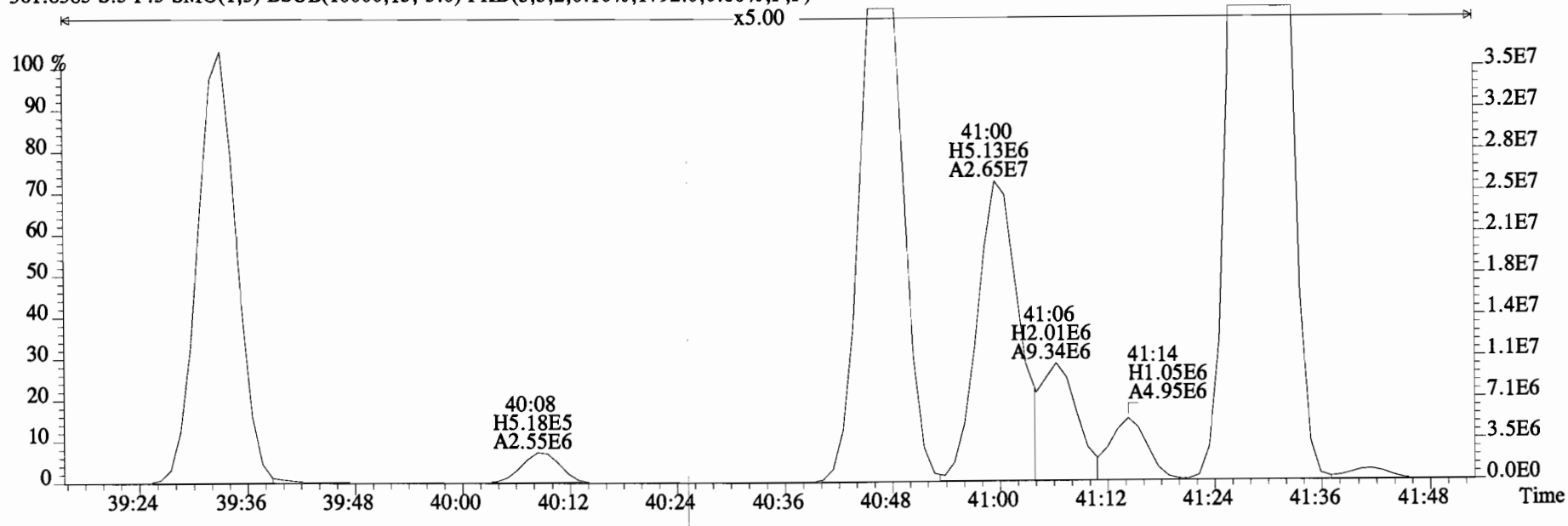
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1792.0,0.00%,F,F)



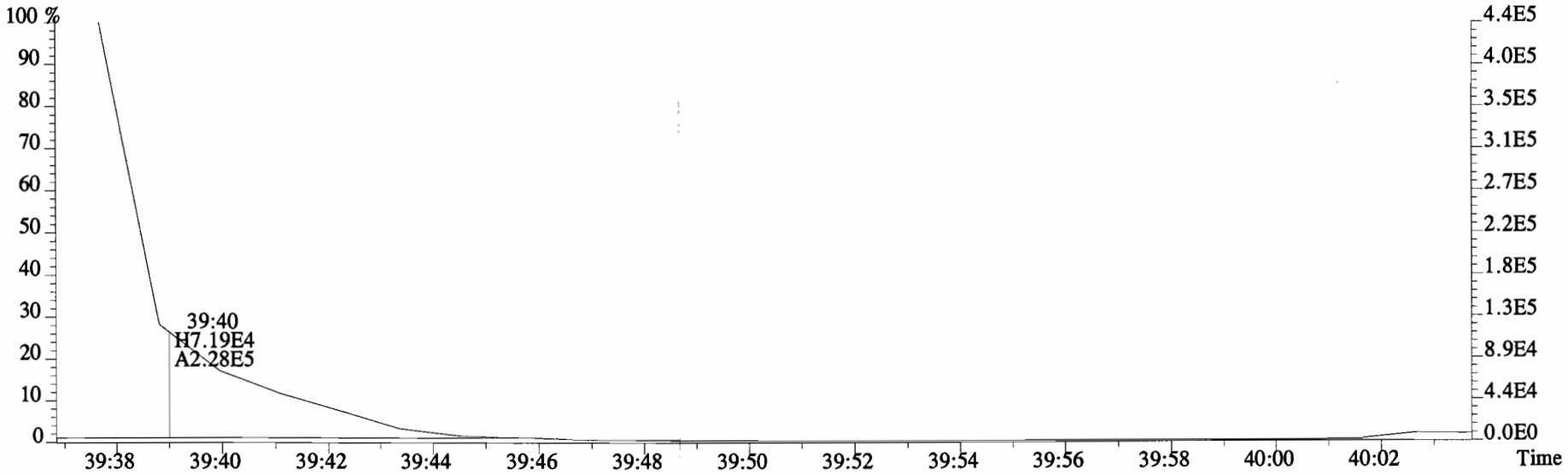
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1884.0,0.00%,F,F)



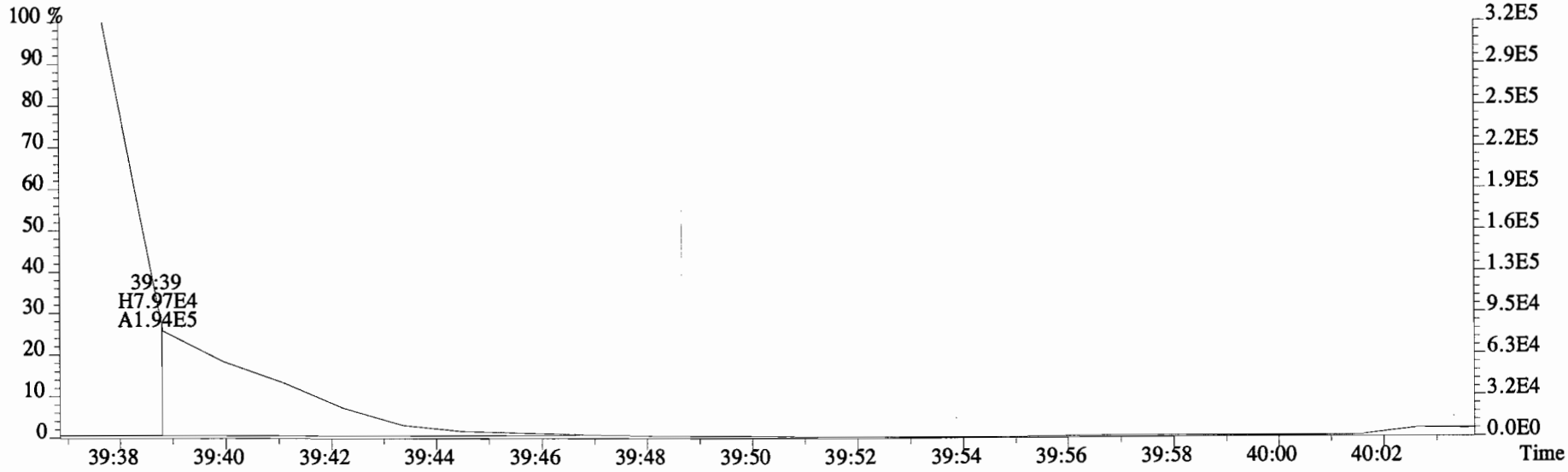
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1792.0,0.00%,F,F)



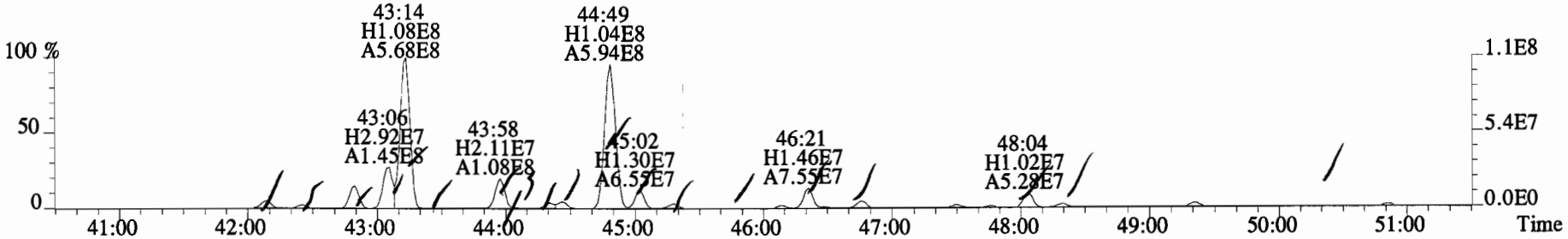
File:150318E1 #1-758 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1884.0,0.00%,F,F)



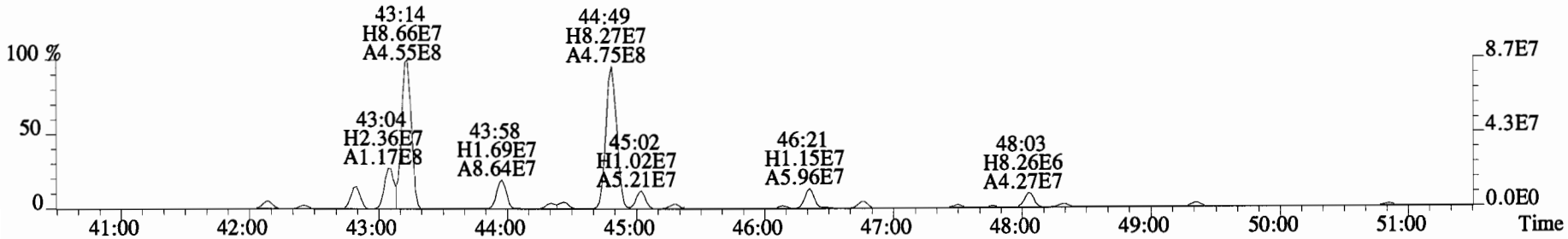
361.8385 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1792.0,0.00%,F,F)



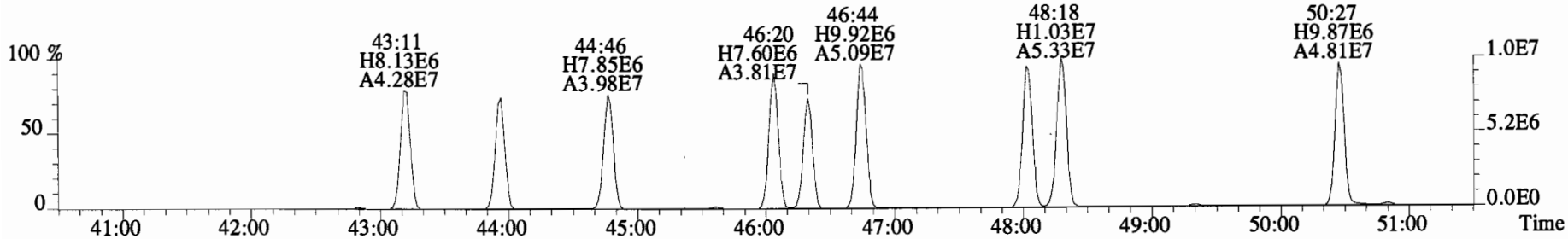
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



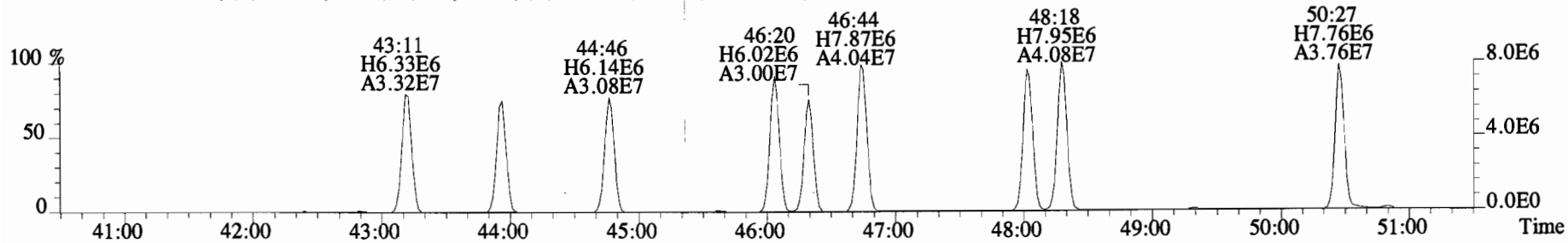
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



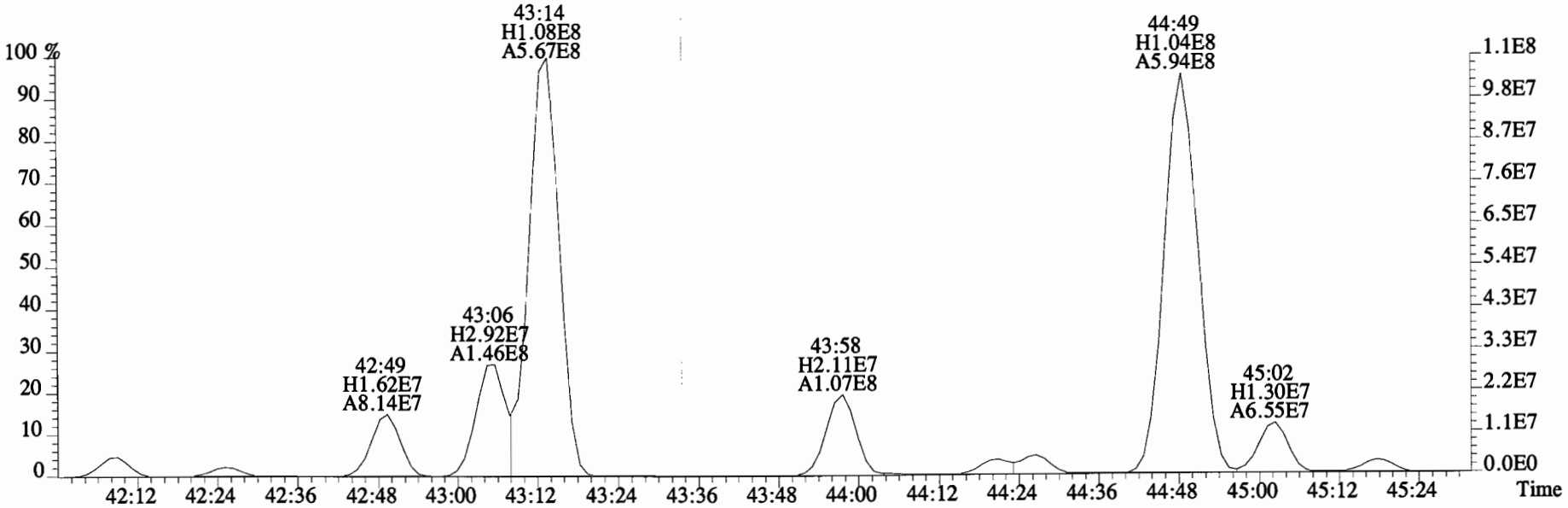
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8084.0,0.00%,F,F)



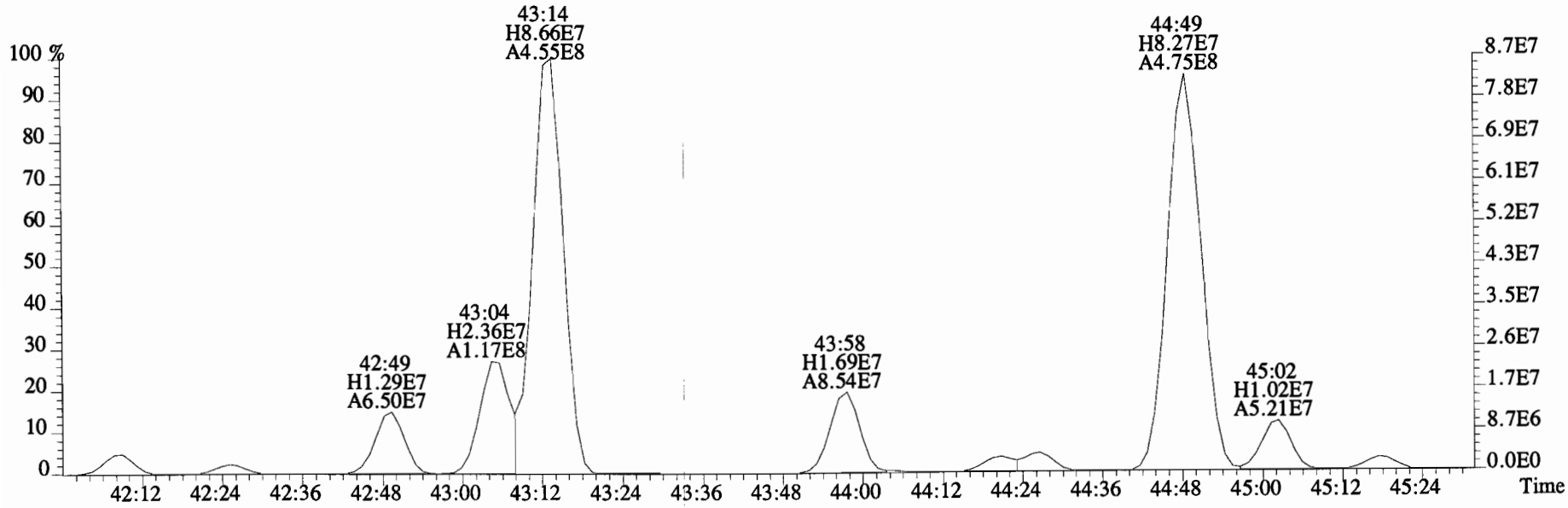
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5648.0,0.00%,F,F)



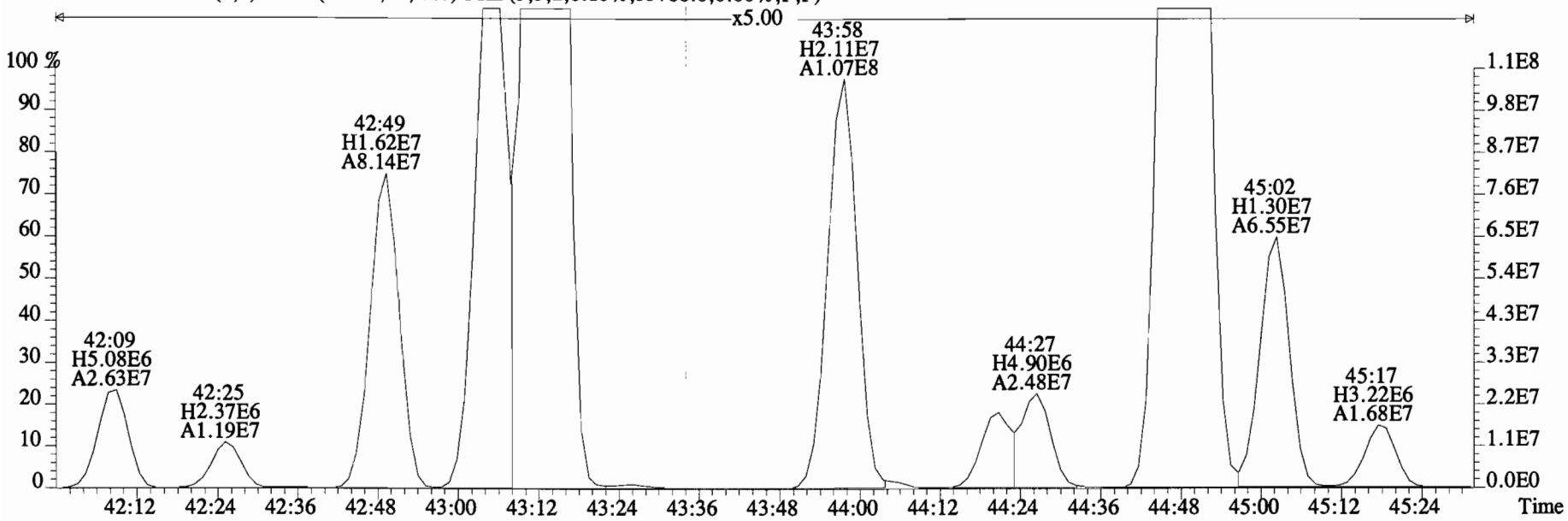
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



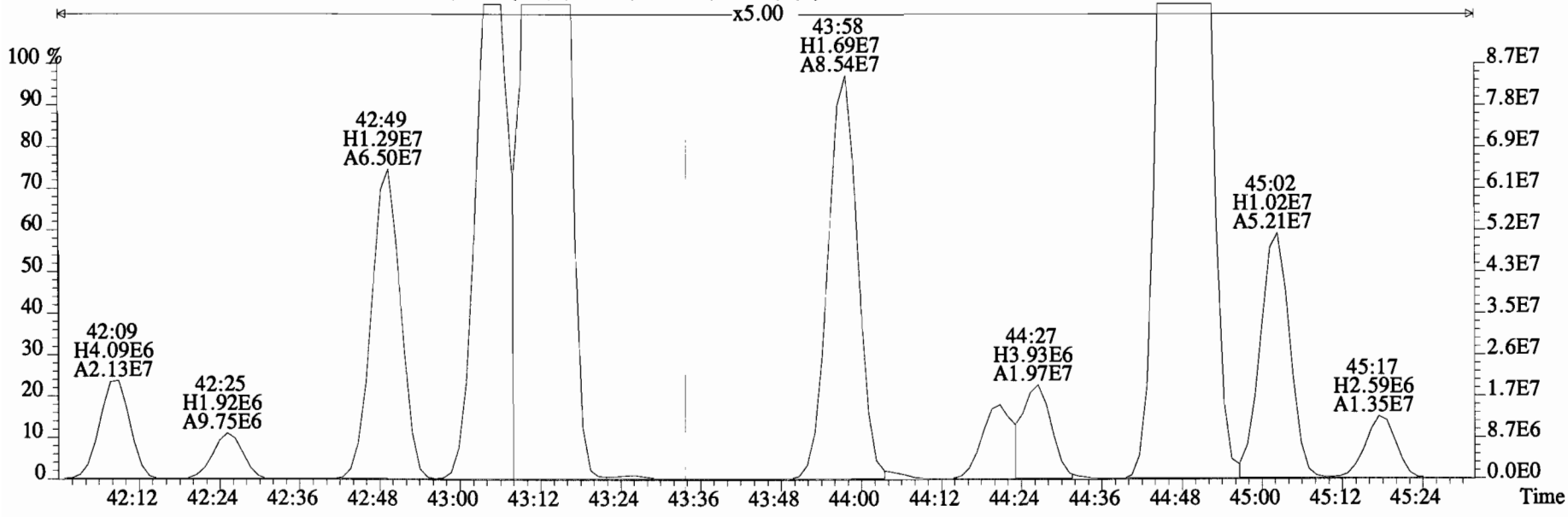
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



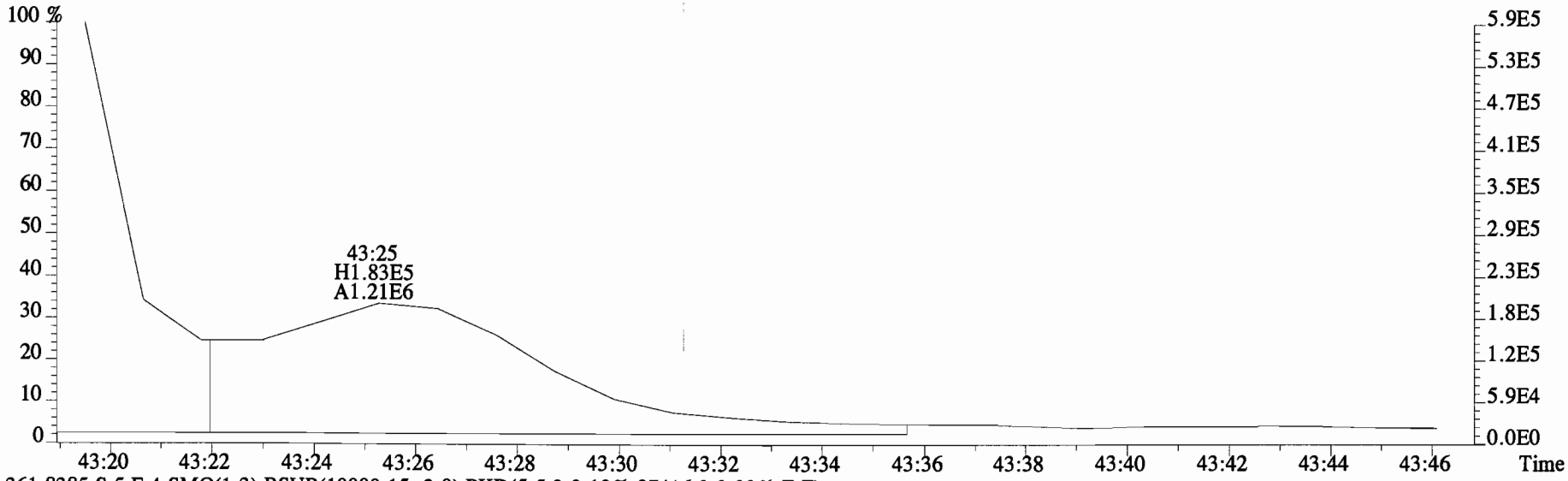
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



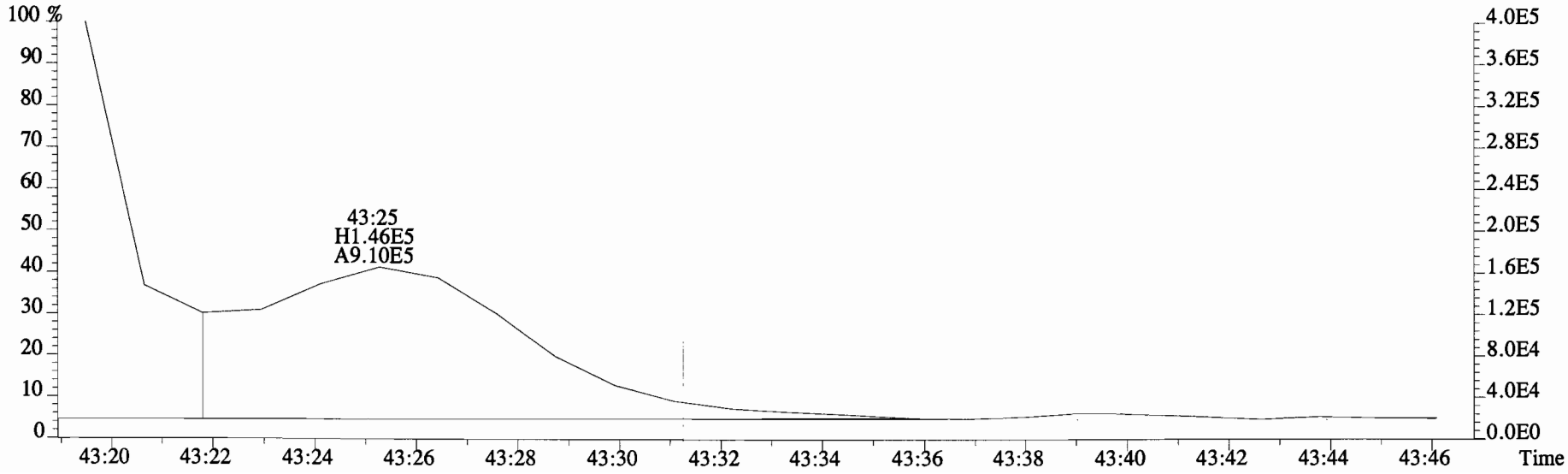
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



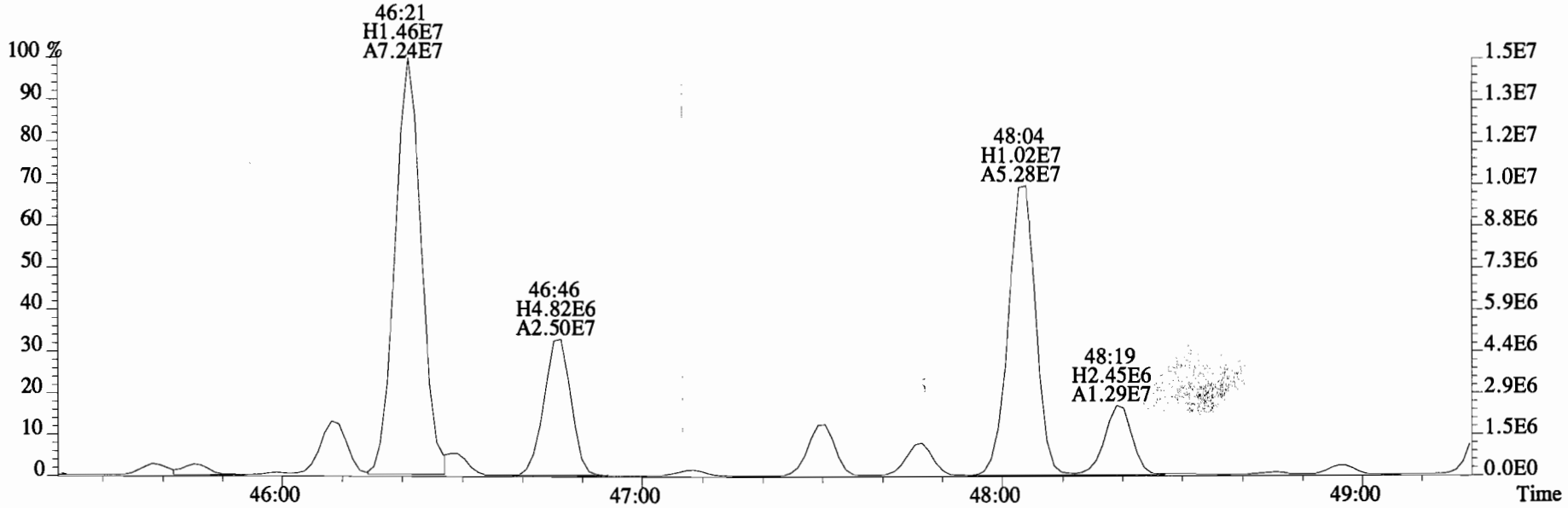
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



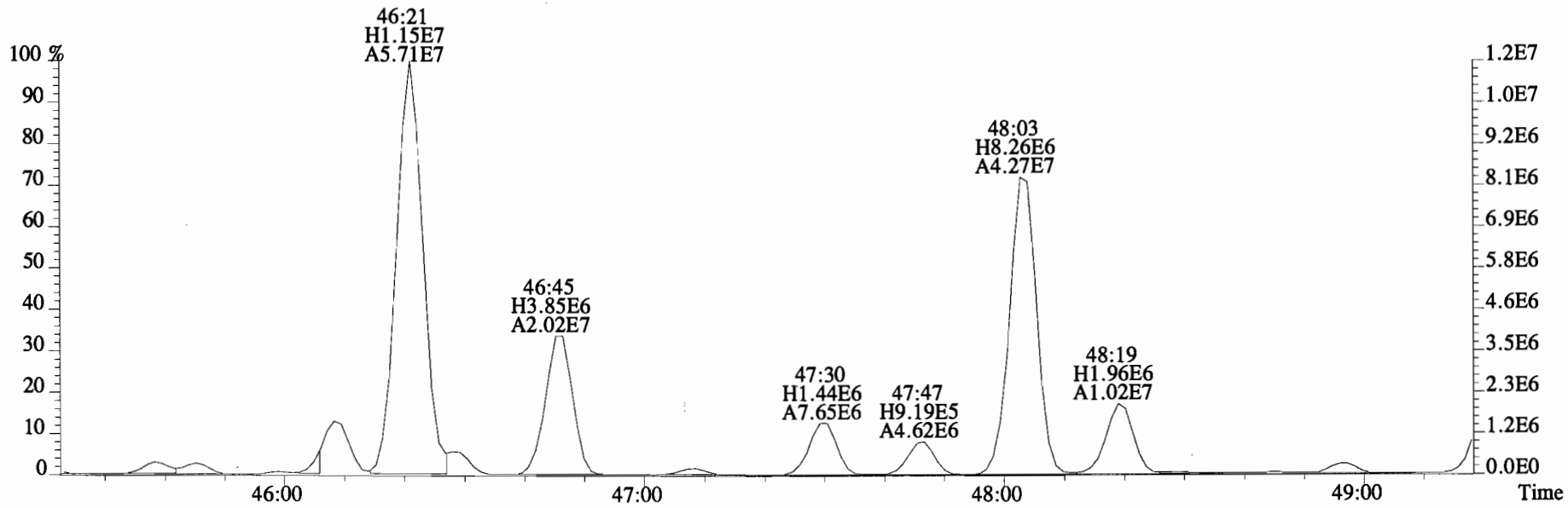
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



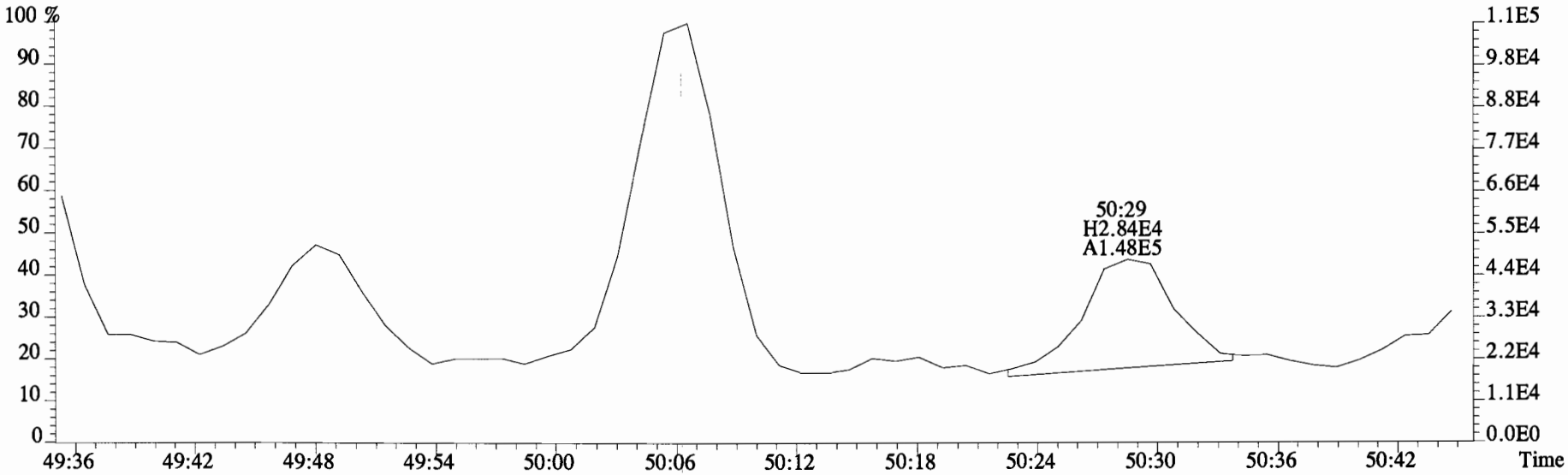
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



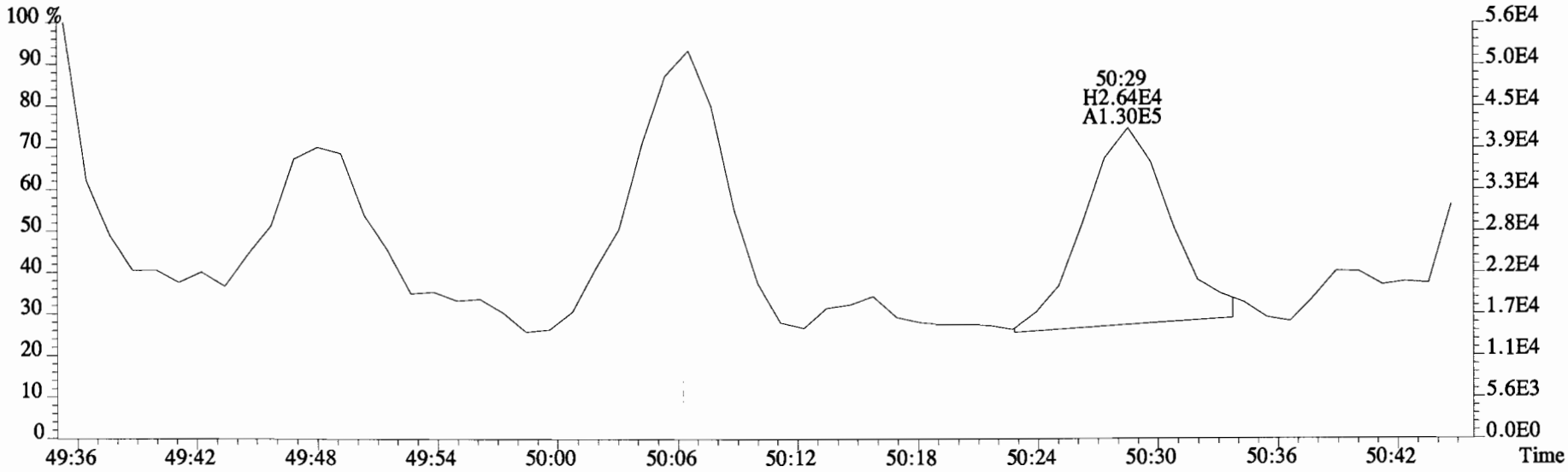
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



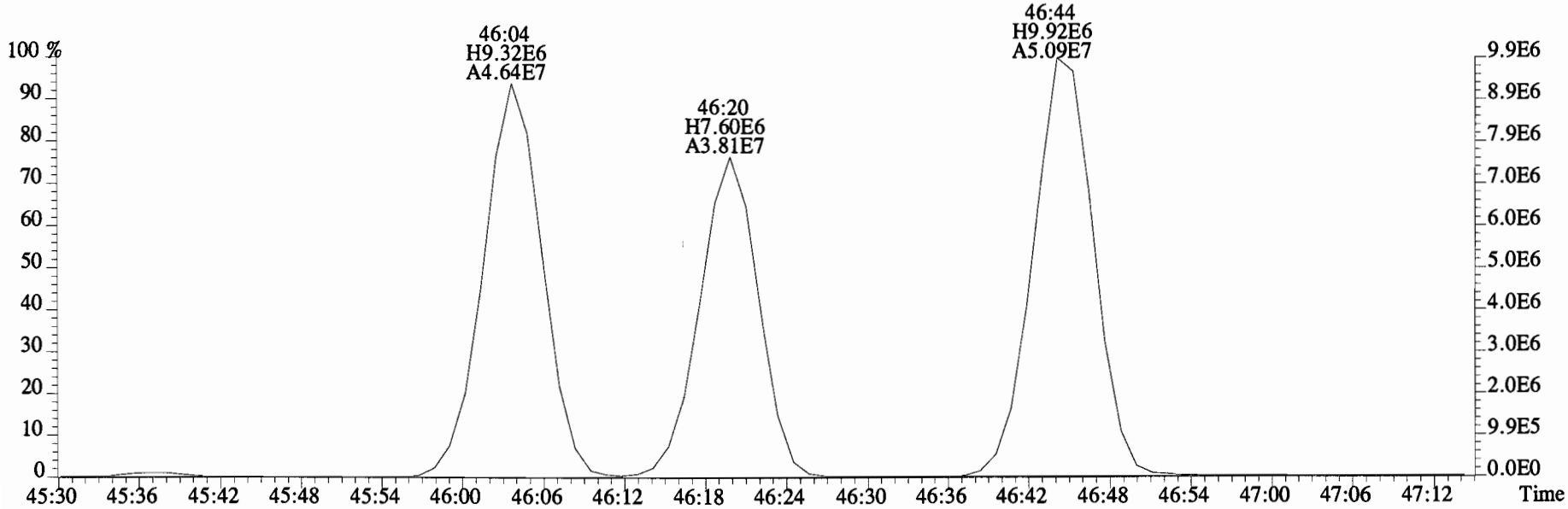
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33788.0,0.00%,F,F)



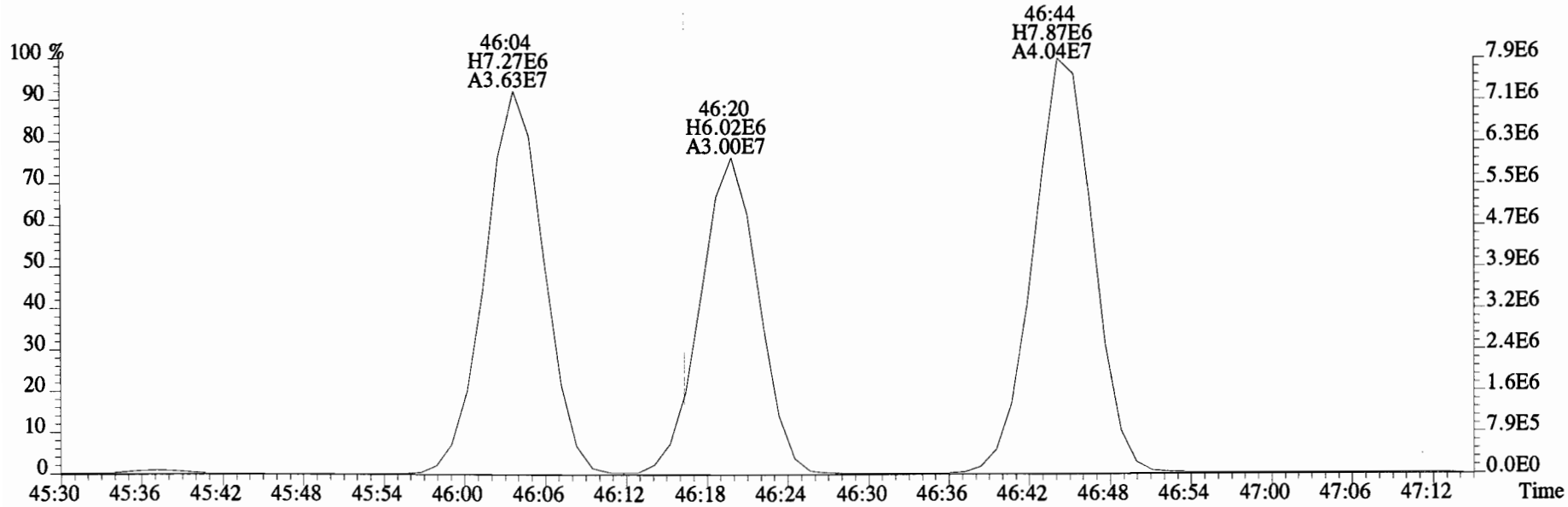
361.8385 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27416.0,0.00%,F,F)



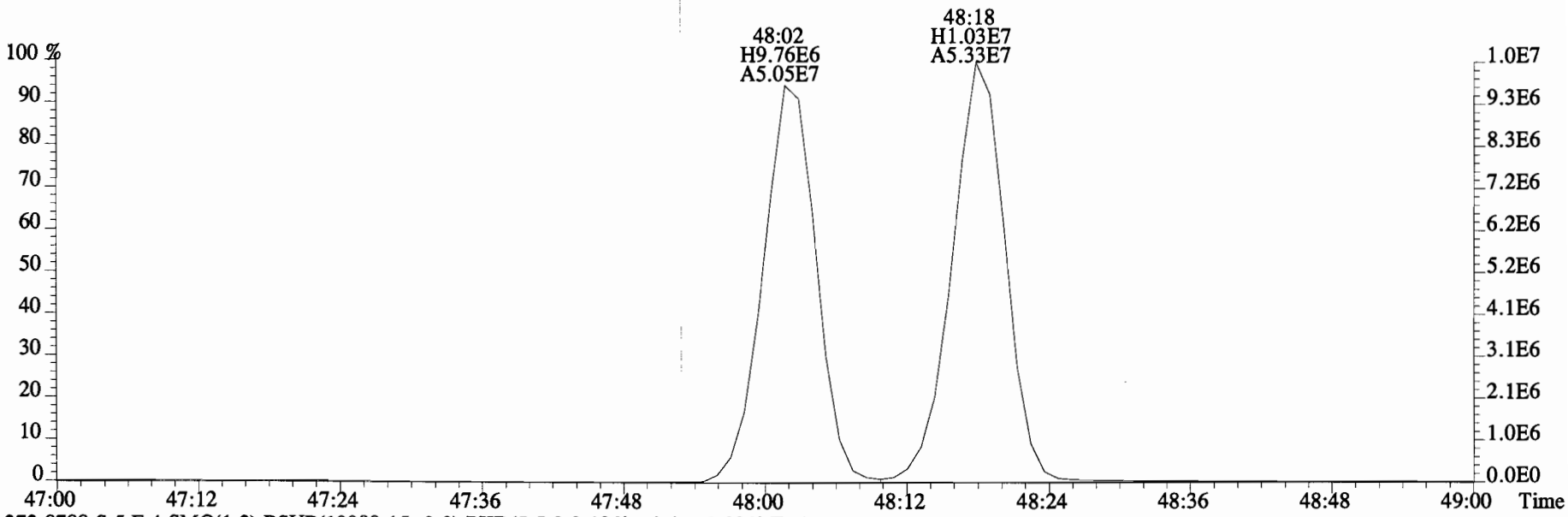
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8084.0,0.00%,F,F)



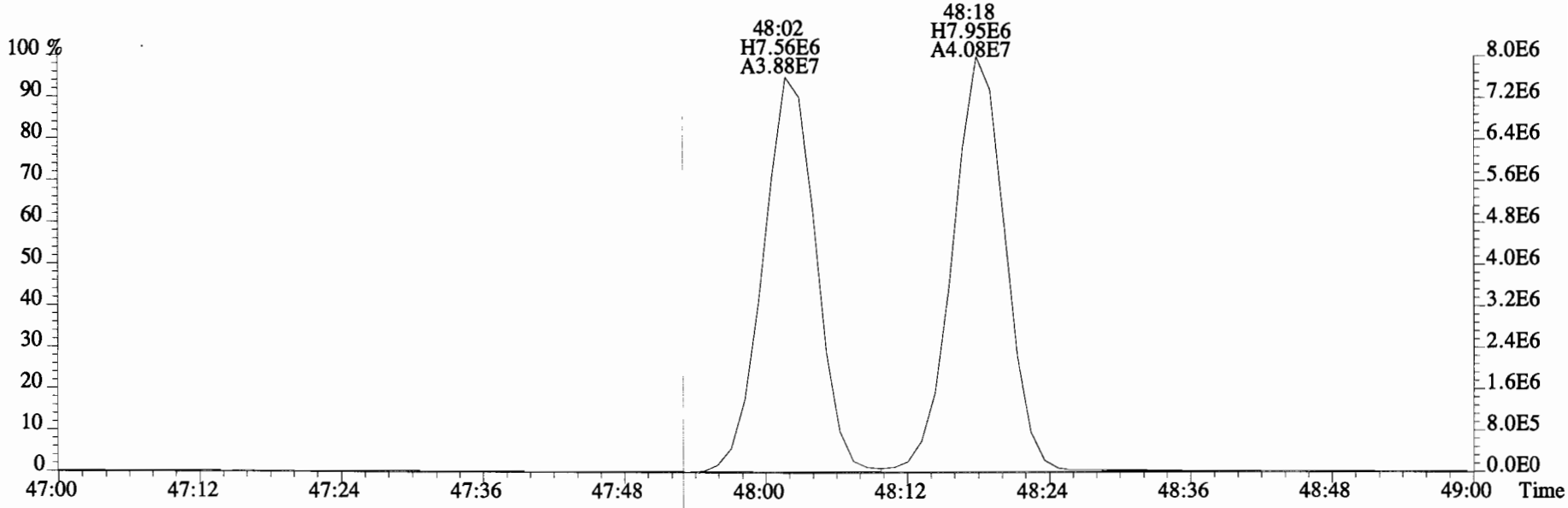
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5648.0,0.00%,F,F)



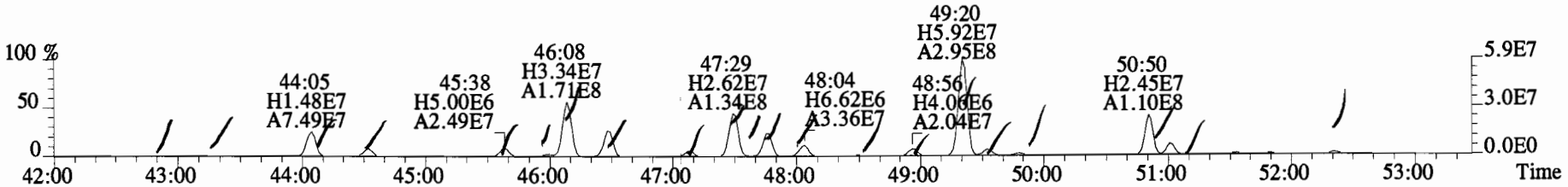
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8084.0,0.00%,F,F)



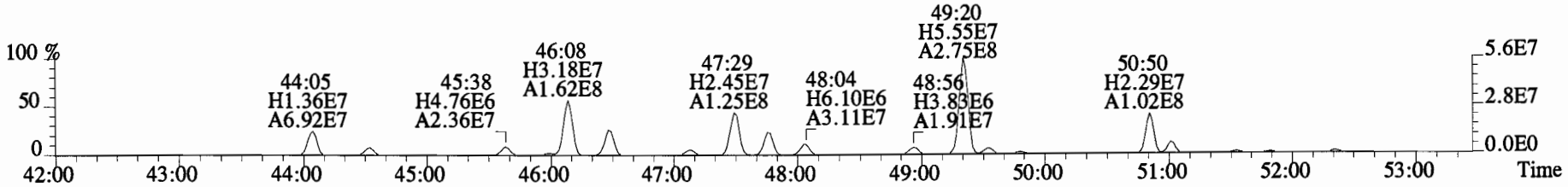
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5648.0,0.00%,F,F)



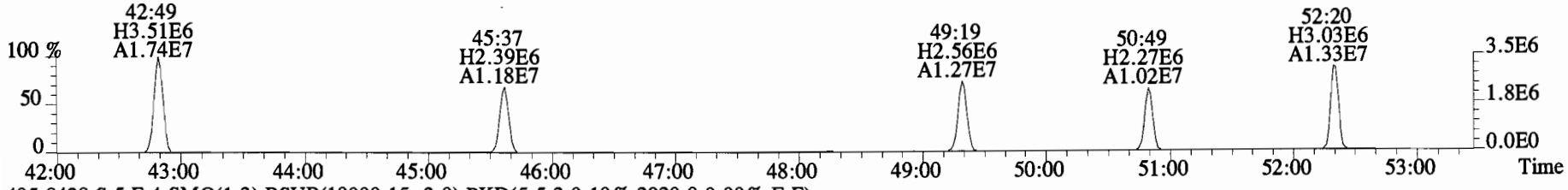
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)



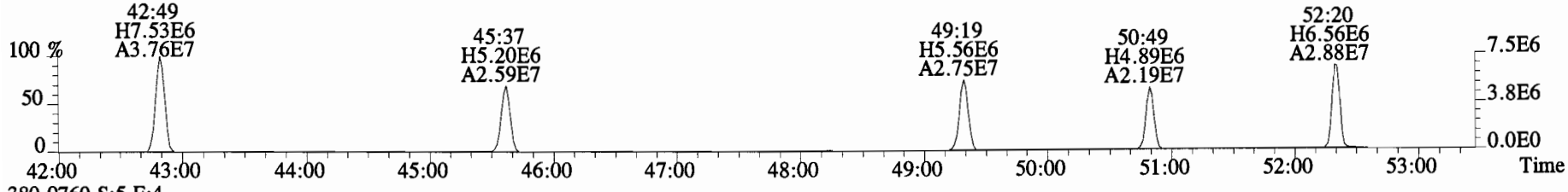
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)



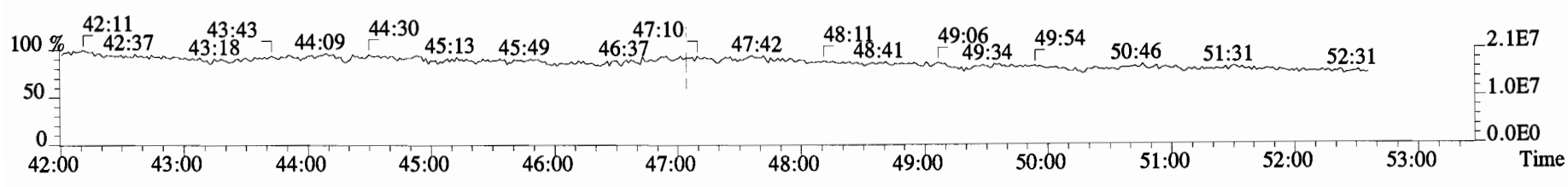
403.8457 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1972.0,0.00%,F,F)



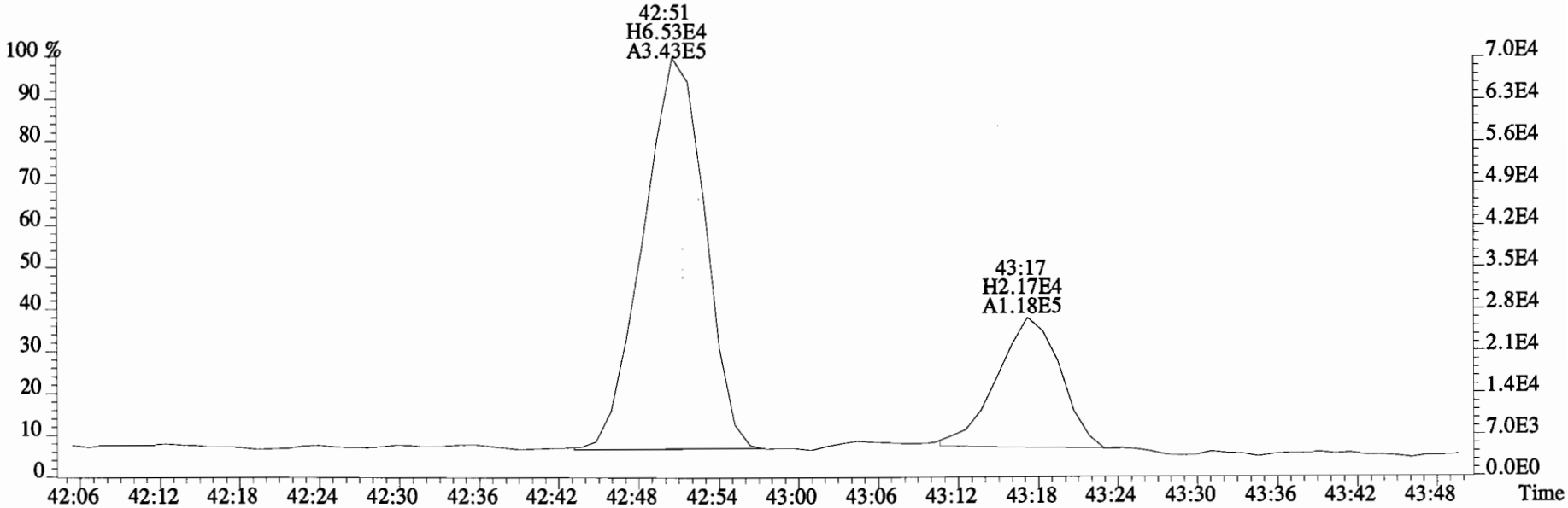
405.8428 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2920.0,0.00%,F,F)



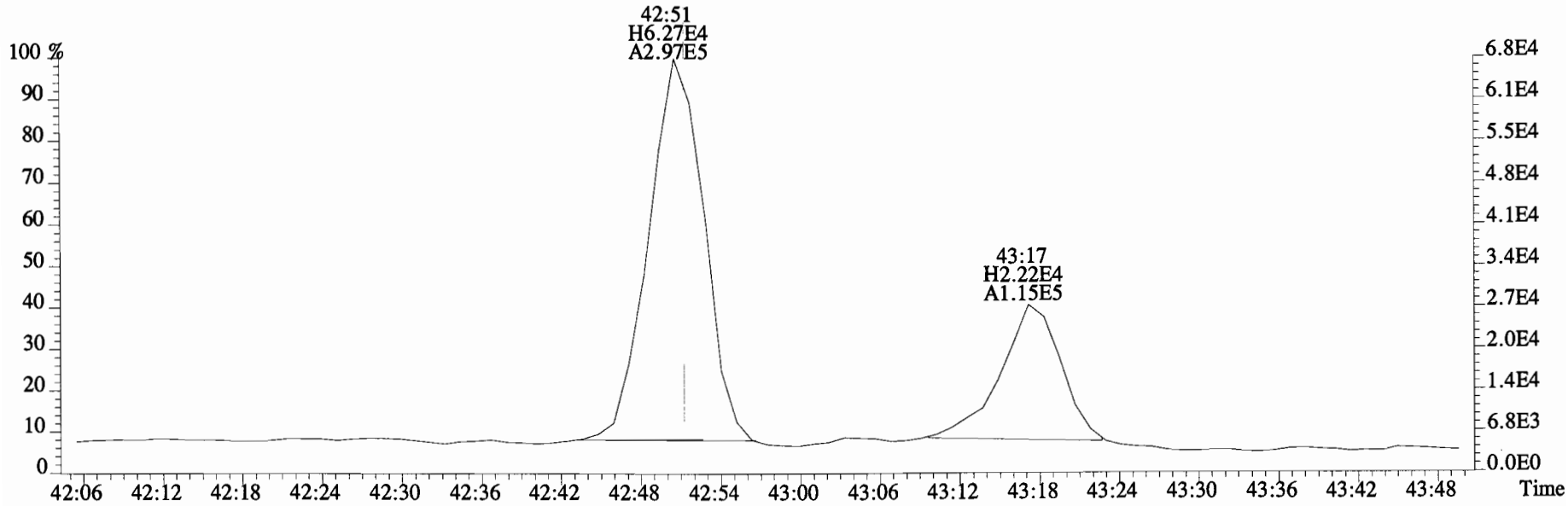
380.9760 S:5 F:4



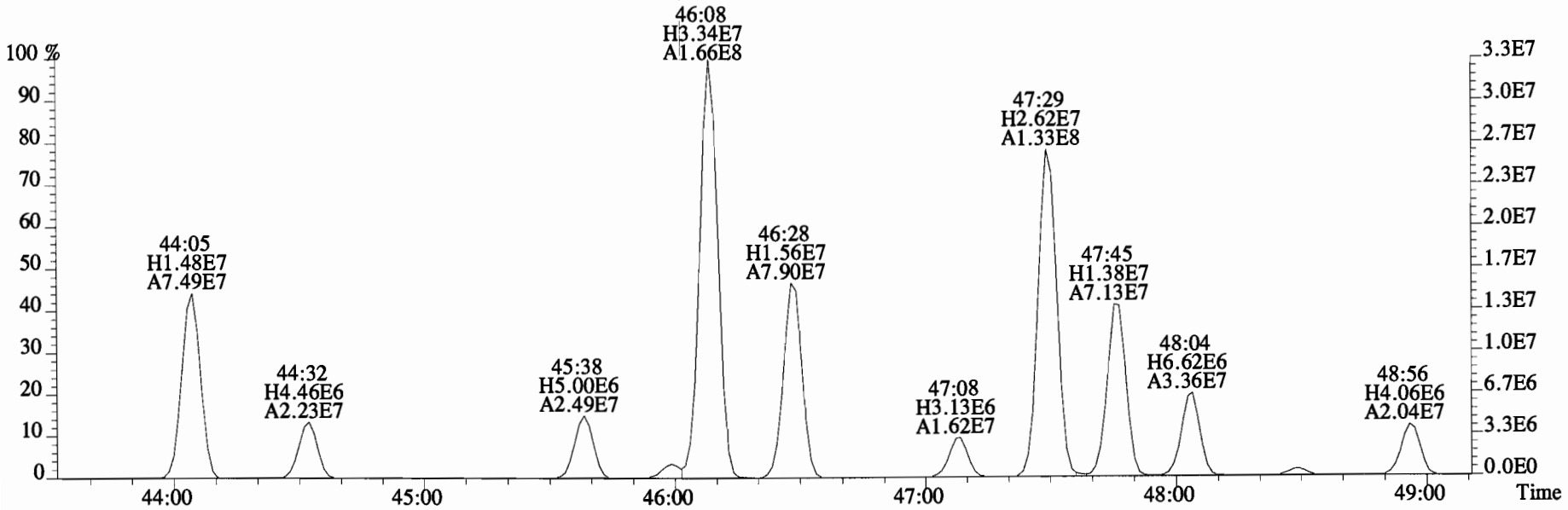
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)



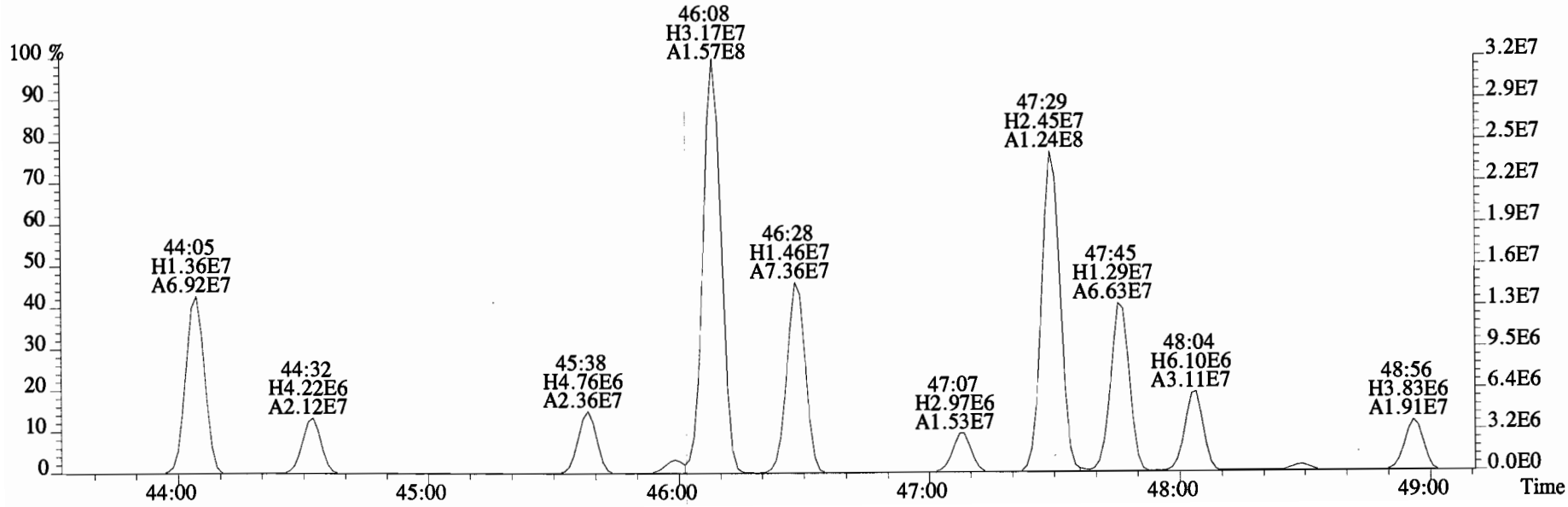
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)

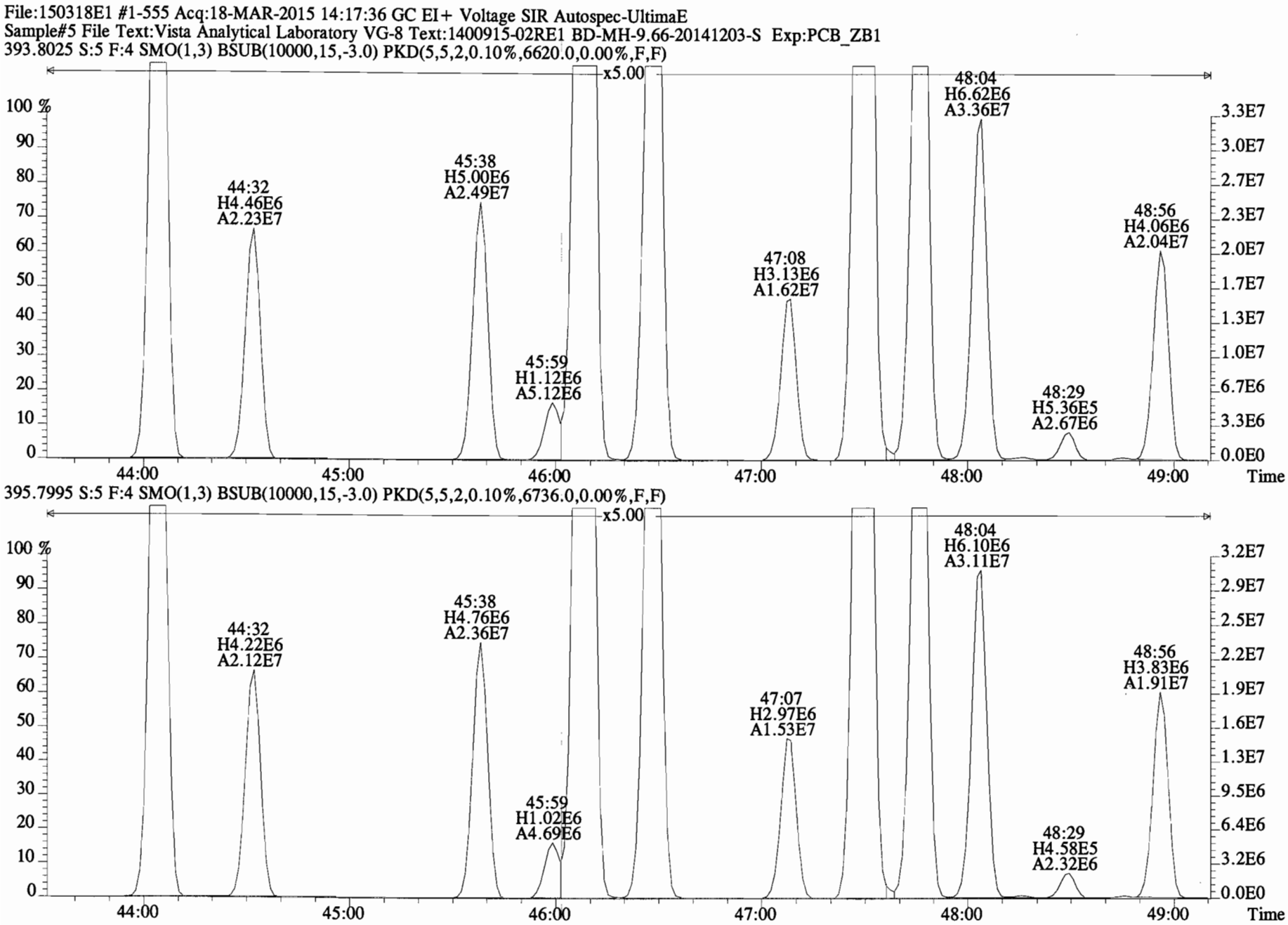


File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)

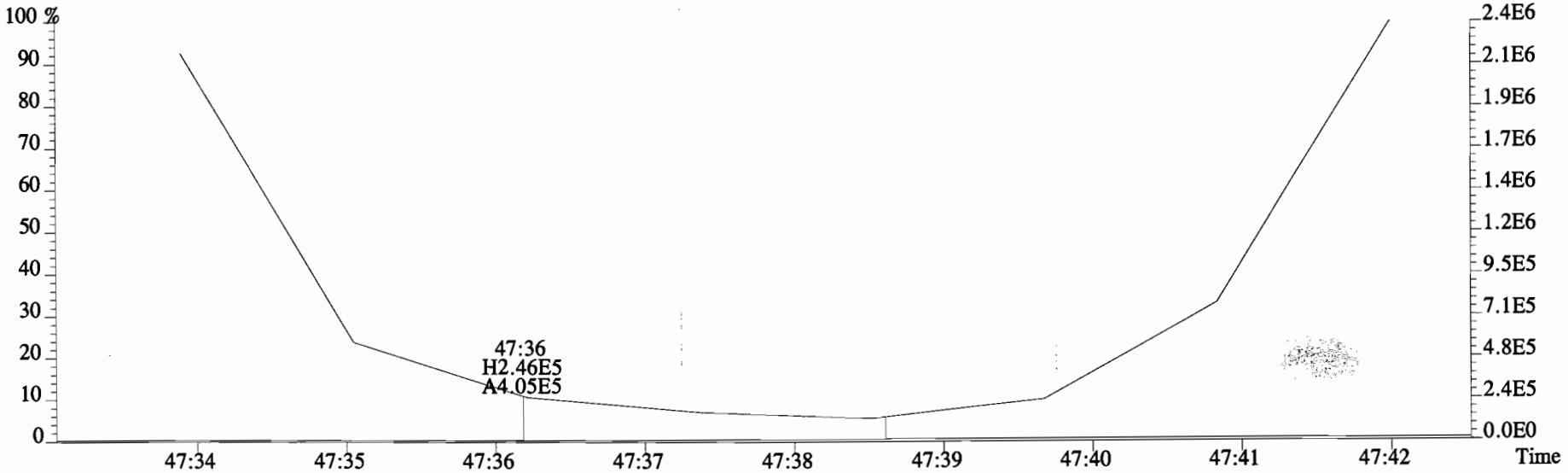


395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)

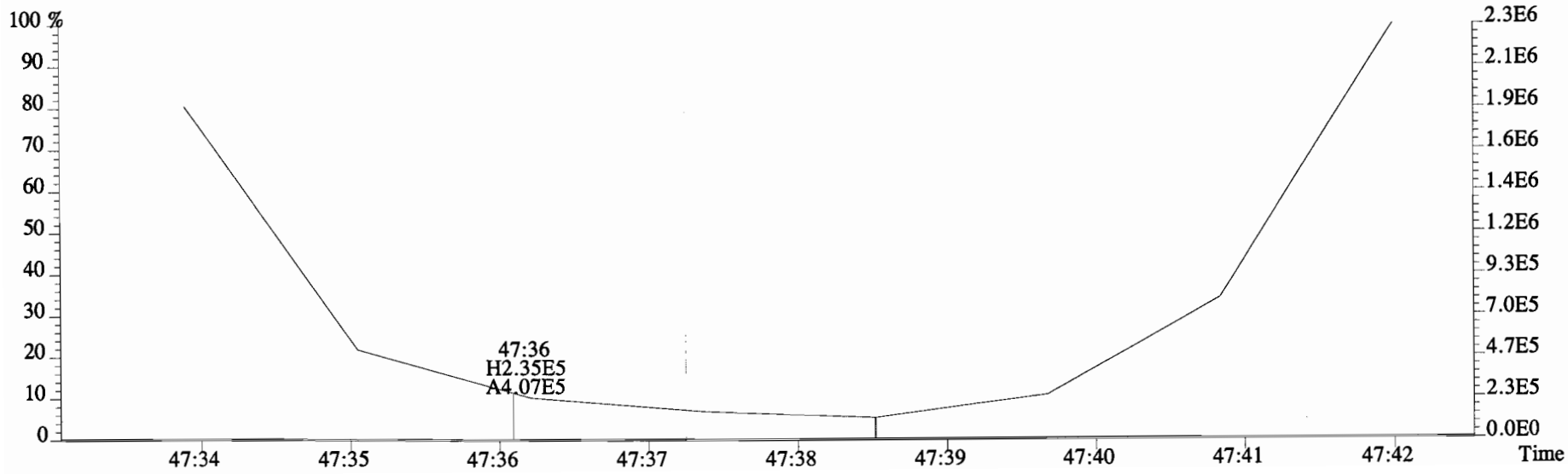



File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)
x5.00
44:32 H4.46E6 A2.23E7
45:38 H5.00E6 A2.49E7
45:59 H1.12E6 A5.12E6
47:08 H3.13E6 A1.62E7
48:04 H6.62E6 A3.36E7
48:29 H5.36E5 A2.67E6
48:56 H4.06E6 A2.04E7
100 %
Time
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)
x5.00
44:32 H4.22E6 A2.12E7
45:38 H4.76E6 A2.36E7
45:59 H1.02E6 A4.69E6
47:07 H2.97E6 A1.53E7
48:04 H6.10E6 A3.11E7
48:29 H4.58E5 A2.32E6
48:56 H3.83E6 A1.91E7
100 %
Time

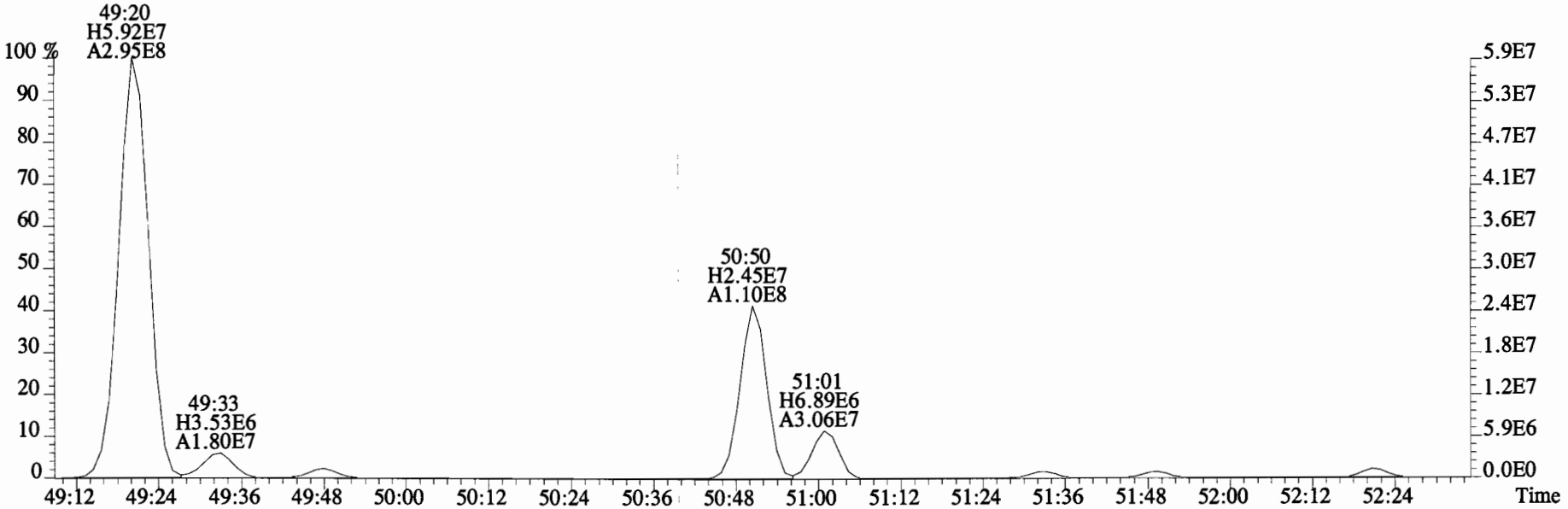
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)



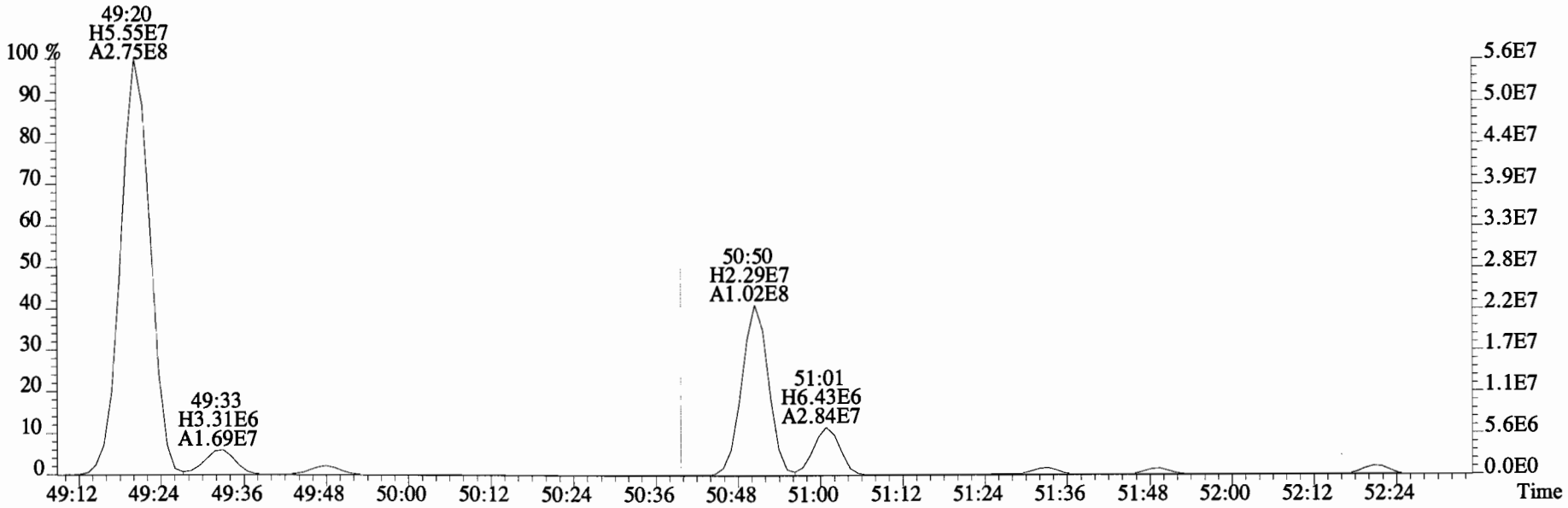
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)



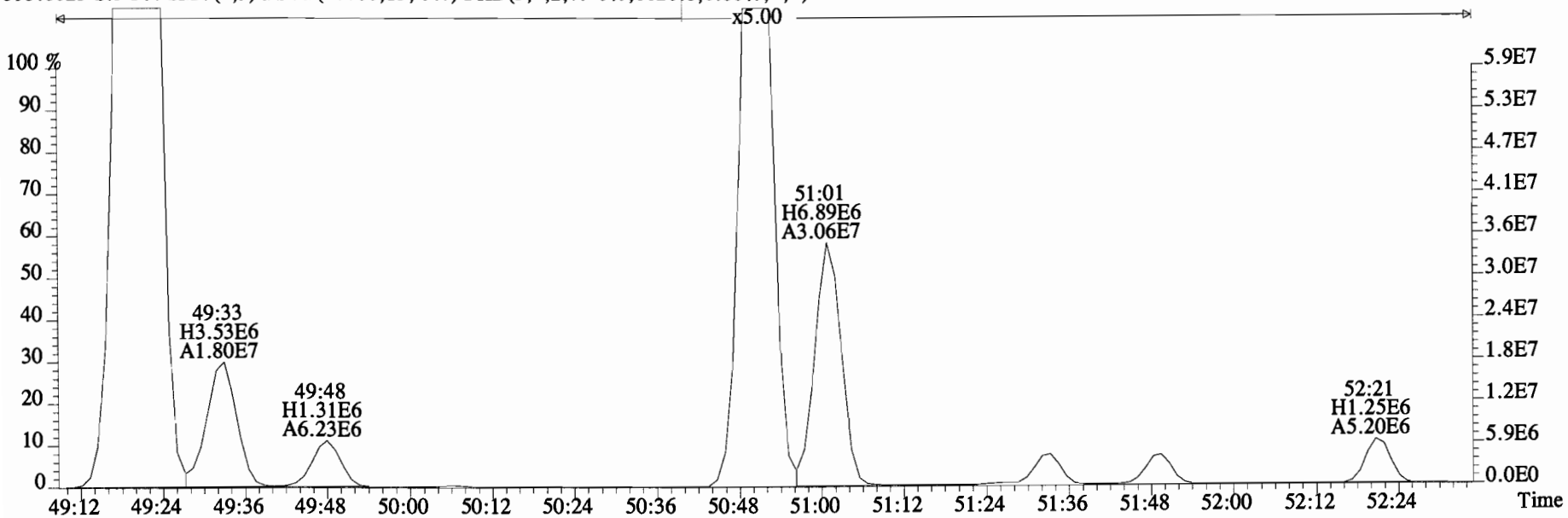
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)



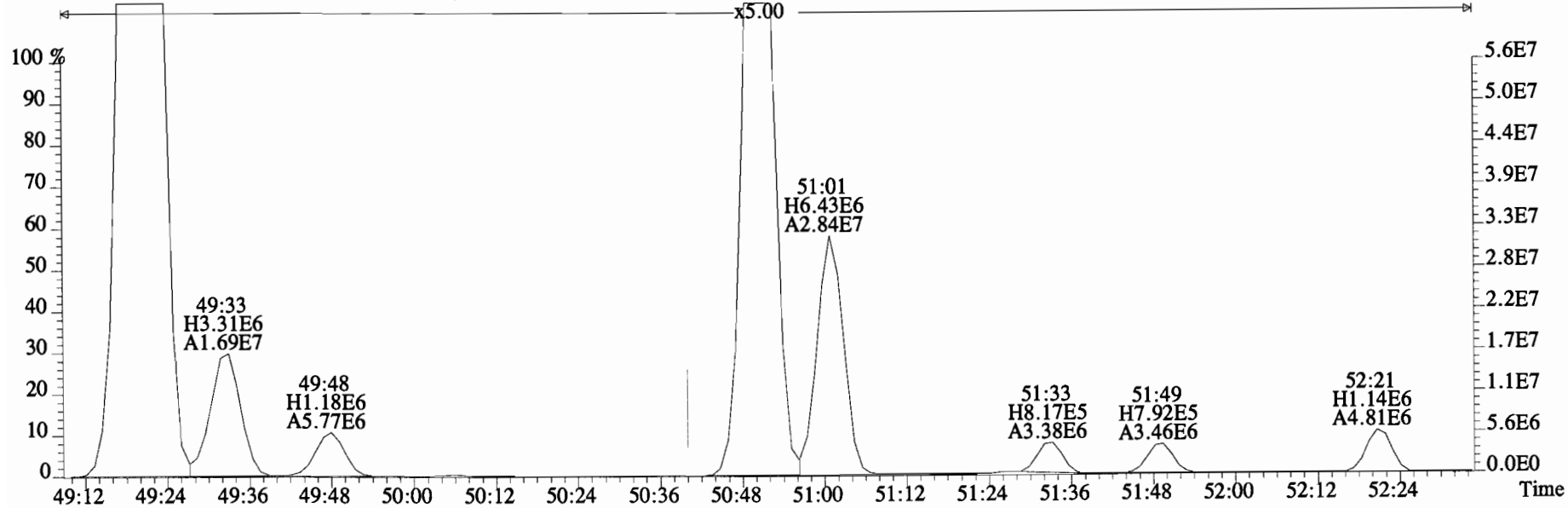
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)



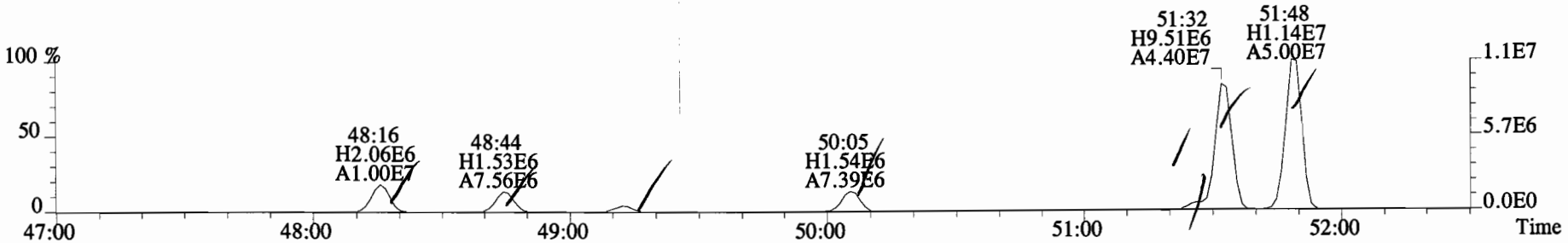
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6620.0,0.00%,F,F)



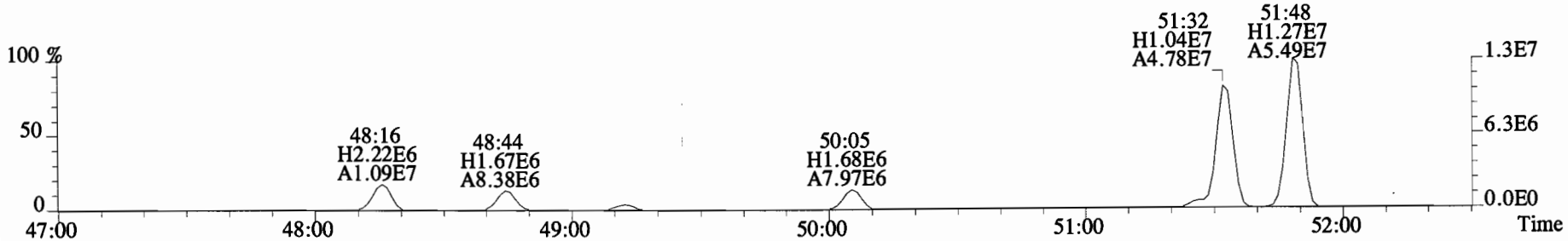
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6736.0,0.00%,F,F)



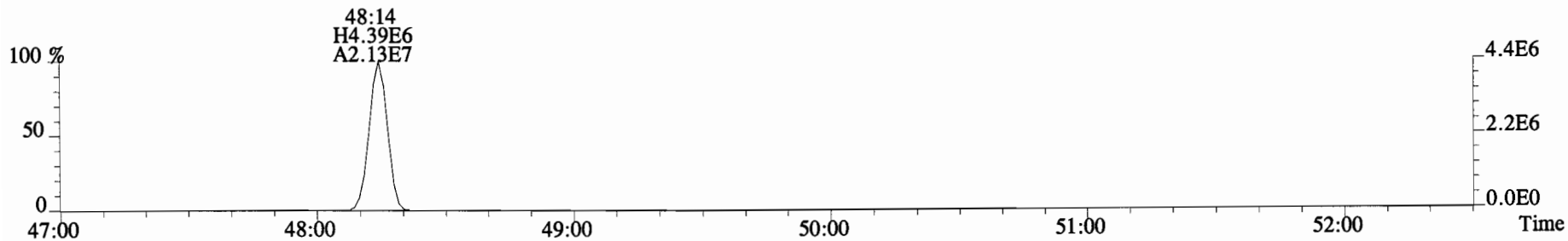
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



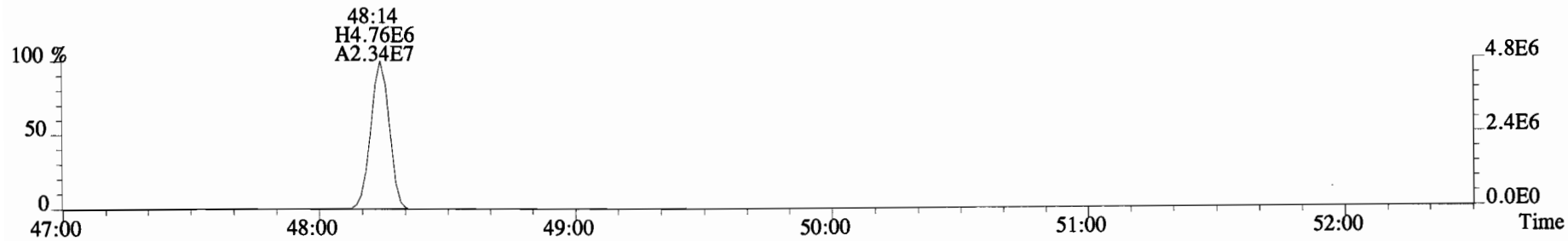
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1828.0,0.00%,F,F)



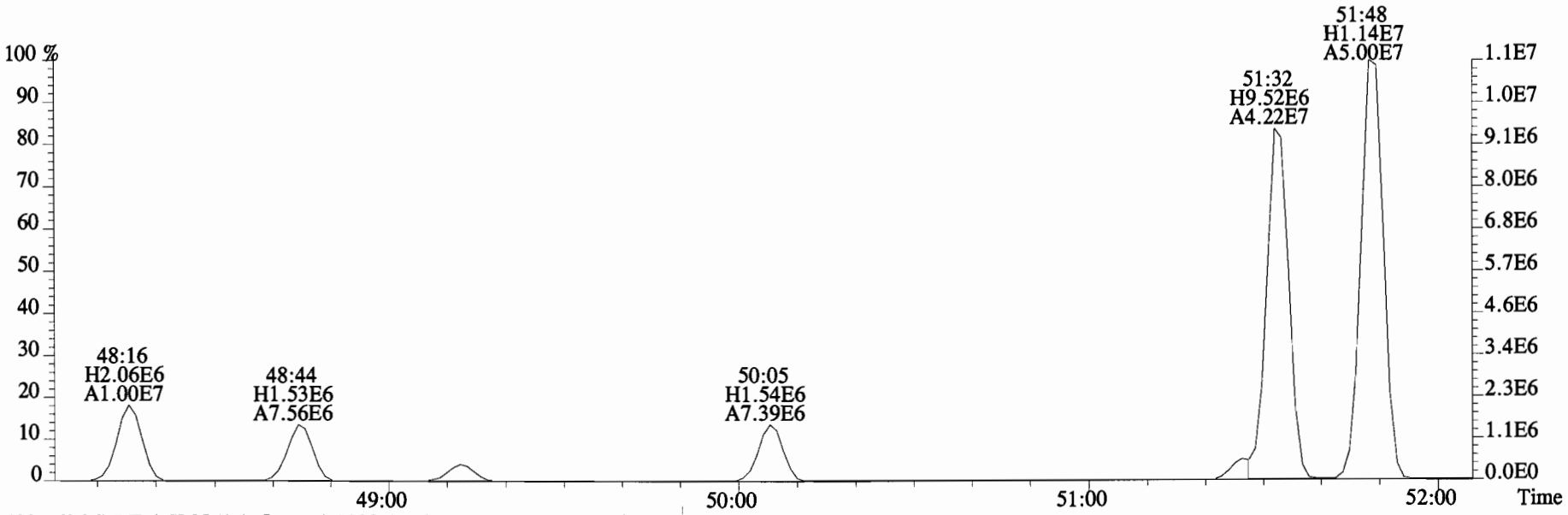
439.8038 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1764.0,0.00%,F,F)



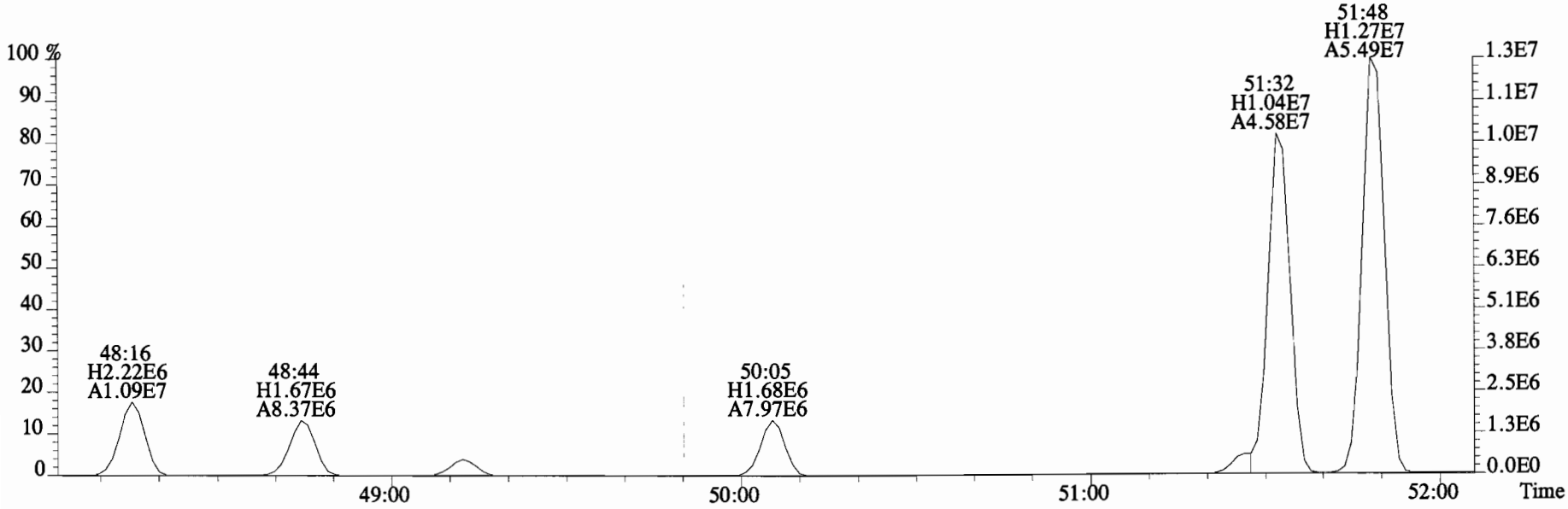
441.8008 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1984.0,0.00%,F,F)



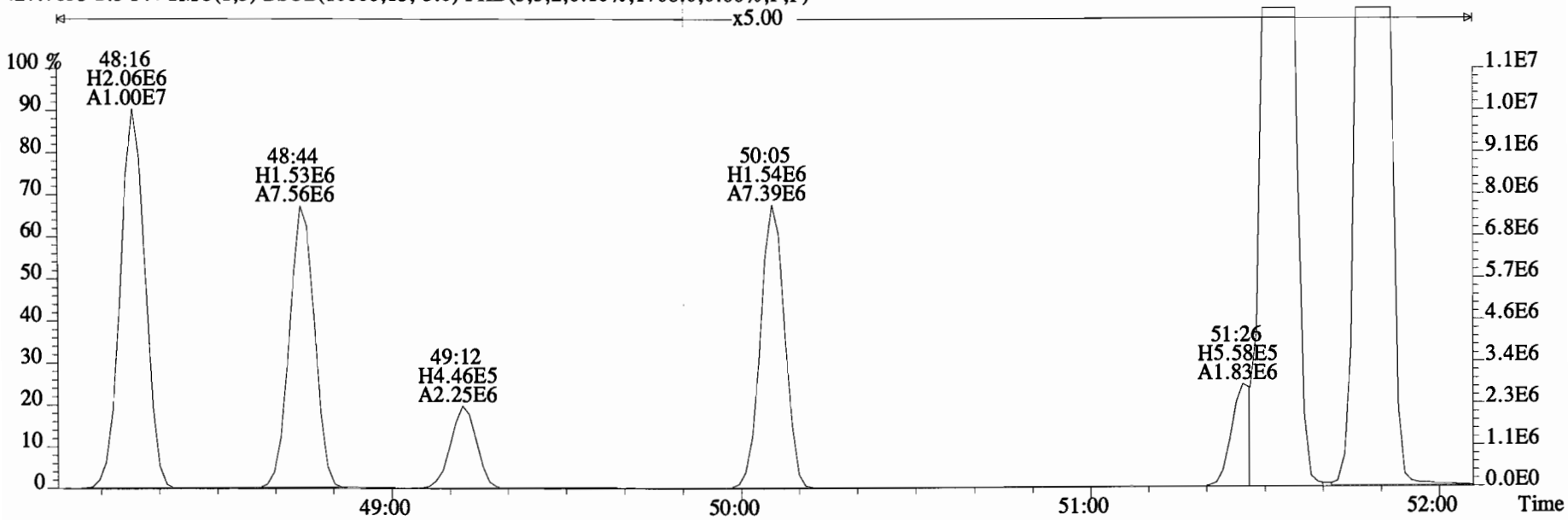
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



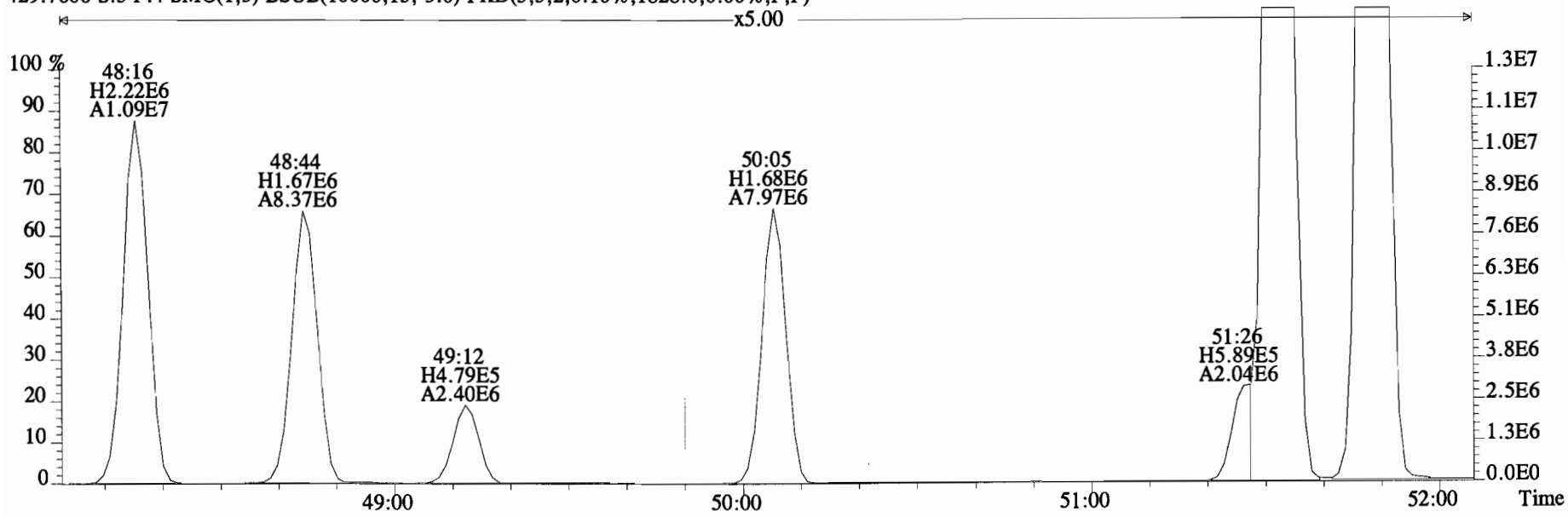
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1828.0,0.00%,F,F)



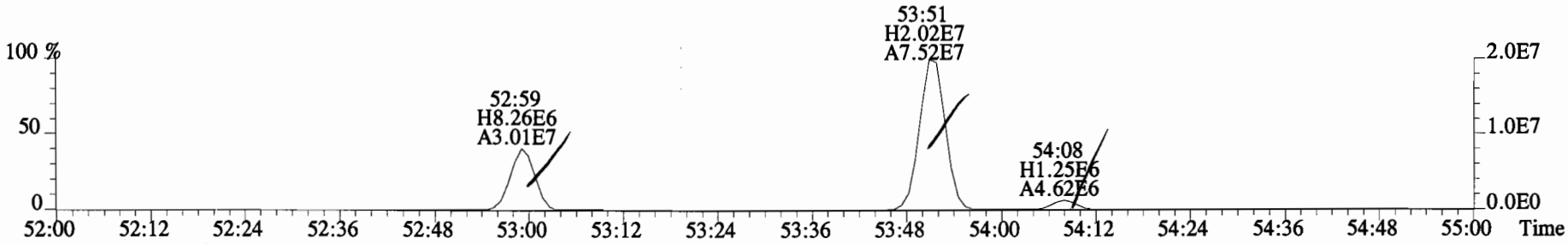
File:150318E1 #1-555 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



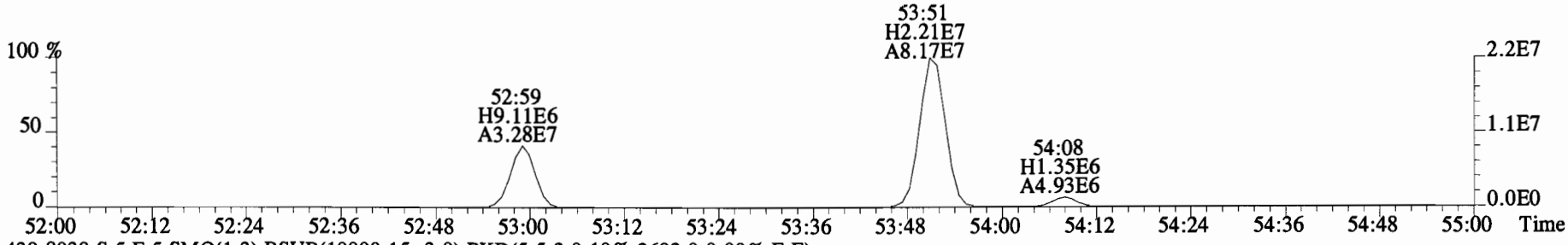
429.7606 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1828.0,0.00%,F,F)



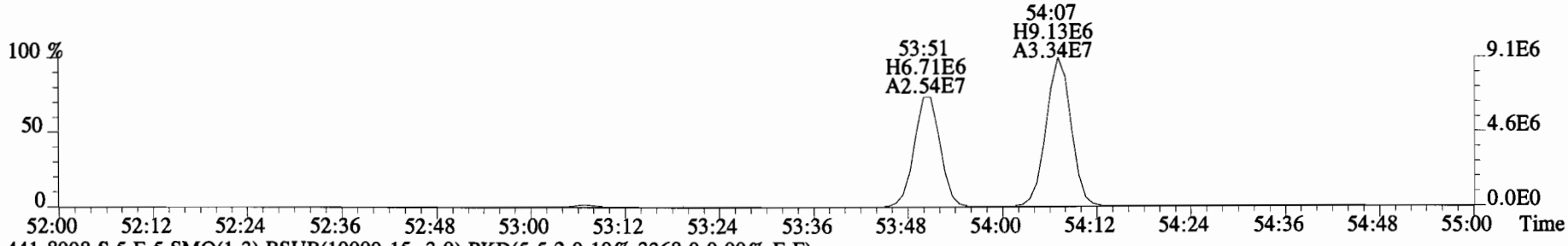
File:150318E1 #1-429 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4636.0,0.00%,F,F)



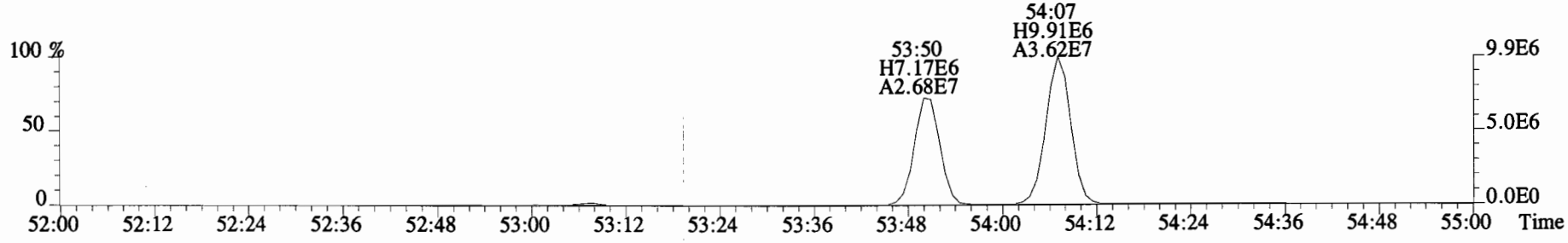
429.7606 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4060.0,0.00%,F,F)



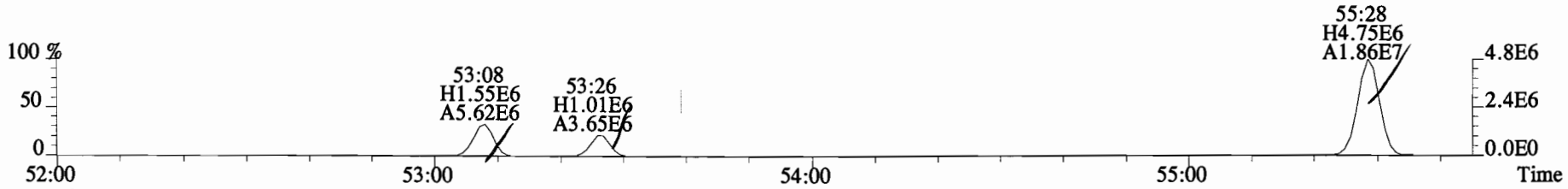
439.8038 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2692.0,0.00%,F,F)



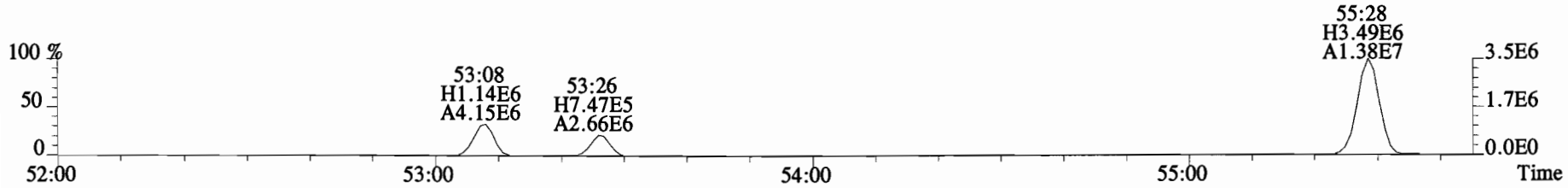
441.8008 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3368.0,0.00%,F,F)



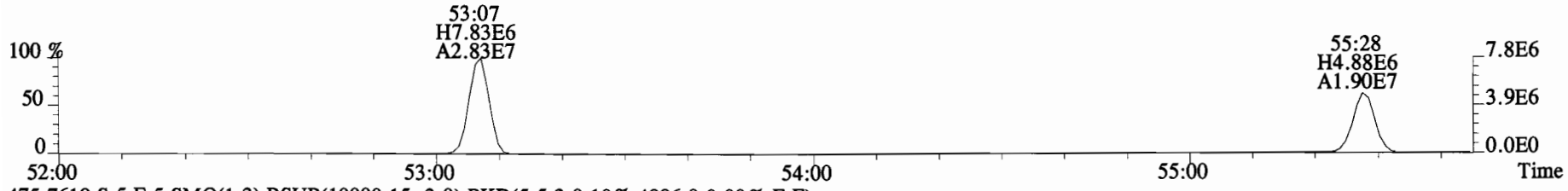
File:150318E1 #1-429 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1968.0,0.00%,F,F)



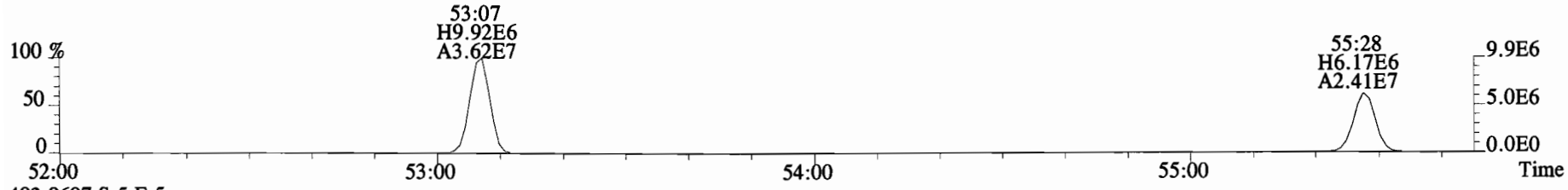
465.7186 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1928.0,0.00%,F,F)



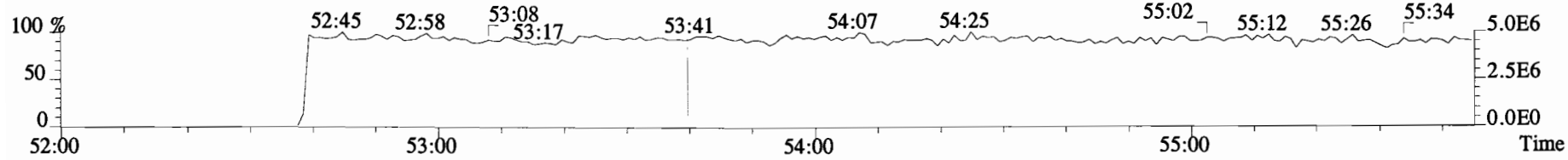
473.7648 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5076.0,0.00%,F,F)



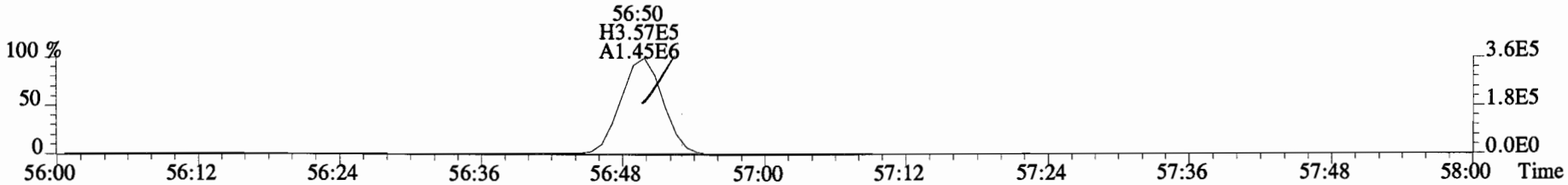
475.7619 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4996.0,0.00%,F,F)



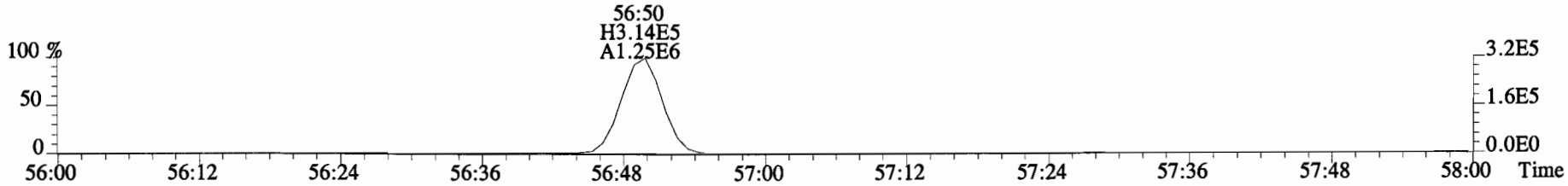
492.9697 S:5 F:5



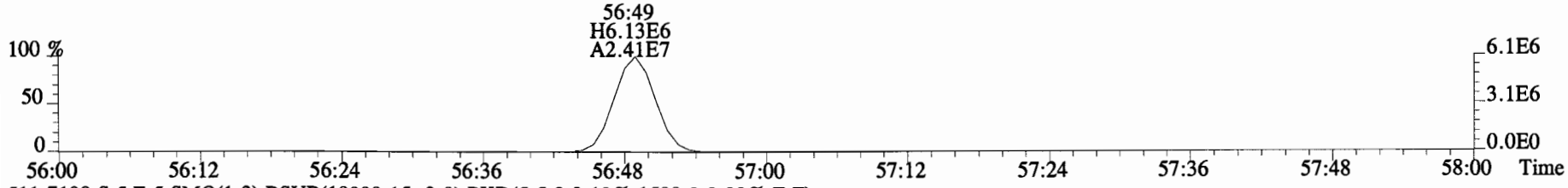
File:150318E1 #1-429 Acq:18-MAR-2015 14:17:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400915-02RE1 BD-MH-9.66-20141203-S Exp:PCB_ZB1
497.6826 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1392.0,0.00%,F,F)



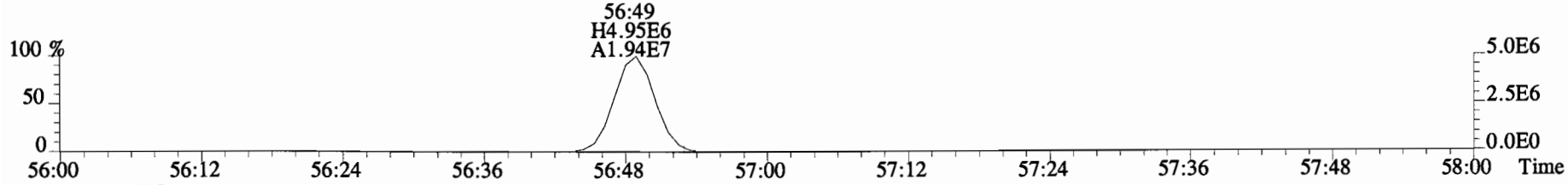
499.6797 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1512.0,0.00%,F,F)



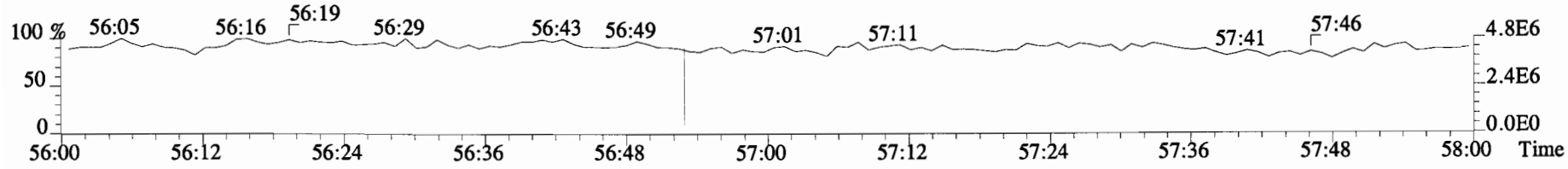
509.7229 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1512.0,0.00%,F,F)



511.7199 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1500.0,0.00%,F,F)



492.9697 S:5 F:5



Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2
Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF	1.19	*	See 1:20 DILUTION	*	2.5	*	*	0.997	1.007
Mono	PCB-2	*	*	n	NotF	1.18	*		*	2.5	*	*	0.984	0.994
Mono	PCB-3	*	*	n	NotF	1.43	*		*	2.5	*	*	0.996	1.006
Di	PCB-4/10	*	*	n	NotF	1.57	*		*	2.5	*	*	0.998	1.008
Di	PCB-7/9	*	*	n	NotF	1.21	*		*	2.5	*	*	0.865	0.873
Di	PCB-6	*	*	n	NotF	1.30	*		*	2.5	*	*	0.889	0.898
Di	PCB-5/8	*	*	n	NotF	1.15	*		*	2.5	*	*	0.905	0.915
Di	PCB-14	*	*	n	NotF	1.11	*		*	2.5	*	*	0.948	0.958
Di	PCB-11	*	*	n	NotF	1.09	*		*	2.5	*	*	0.996	1.006
Di	PCB-12/13	*	*	n	NotF	1.19	*		*	2.5	*	*	1.011	1.021
Di	PCB-15	*	*	n	NotF	1.28	*		*	2.5	*	*	1.024	1.034
Tri	PCB-19	*	*	n	NotF	1.04	*		*	2.5	*	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF	1.71	*		*	2.5	*	*	1.033	1.043
Tri	PCB-18	*	*	n	NotF	0.78	*		*	2.5	*	*	0.949	0.959
Tri	PCB-17	*	*	n	NotF	0.92	*		*	2.5	*	*	0.956	0.966
Tri	PCB-24/27	*	*	n	NotF	1.19	*		*	2.5	*	*	0.977	0.987
Tri	PCB-16/32	*	*	n	NotF	0.94	*		*	2.5	*	*	0.995	1.005
Tri	PCB-34	*	*	n	NotF	1.14	*		2850	2.5	53.7	*	0.956	0.966
Tri	PCB-23	*	*	n	NotF	1.28	*		2850	2.5	47.7	*	0.958	0.968
Tri	PCB-29	*	*	n	NotF	1.08	*		2850	2.5	56.5	*	0.967	0.977
Tri	PCB-26	8.96e+05	0.99	y	28:31	1.21	624		*	2.5	*	0.979	0.975	0.985
Tri	PCB-25	4.07e+05	1.02	y	28:42	1.26	271		*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	3.30e+06	0.94	y	29:03	1.28	2160		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	2.59e+06	0.96	y	29:09	1.71	1270		*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	2.12e+06	0.89	y	29:47	1.08	1650		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	1.09e+06	1.05	y	30:12	1.21	758		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	1.60e+05	0.93	y	30:50	1.14	152		*	2.5	*	0.931	0.929	0.939
Tri	PCB-39	*	*	n	NotF	1.12	*		2850	2.5	82.7	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF	1.20	*		2850	2.5	76.9	*	0.966	0.976
Tri	PCB-35	4.16e+05	0.96	y	32:39	1.23	366		*	2.5	*	0.986	0.982	0.992
Tri	PCB-37	1.30e+06	0.97	y	33:09	1.23	1140		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	*	*	n	NotF	1.10	*		2650	2.5	28.1	*	0.995	1.005
Tetra	PCB-50	*	*	n	NotF	0.88	*		2650	2.5	35.2	*	1.037	1.047
Tetra	PCB-53	8.29e+05	0.74	y	29:50	1.06	609		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	2.11e+05	0.76	y	30:10	0.99	167		*	2.5	*	0.956	0.952	0.962
Tetra	PCB-45	5.97e+05	0.77	y	30:36	0.86	540		*	2.5	*	0.970	0.966	0.976
Tetra	PCB-46	2.65e+05	0.69	y	31:06	0.85	246		*	2.5	*	0.986	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/30/15

Reviewed by: [signature] Date: 3/31/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2
Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Tetra	PCB-52/69	1.00e+07	0.75	y 31:34	1.28	6120		*	2.5	*	1.000	0.996-1.006
Tetra	PCB-73	*	*	n NotF¶	1.35	*		2650	2.5	36.2	*	1.000-1.010
Tetra	PCB-43/49	3.74e+06	0.71	y 31:52	0.99	2940		*	2.5	*	1.010	1.005-1.015
Tetra	PCB-47	1.14e+06	0.76	y 32:06	1.06	802		*	2.5	*	1.001	0.995-1.005
Tetra	PCB-48/75	9.78e+05	0.77	y 32:14	1.23	593		*	2.5	*	1.005	0.999-1.009
Tetra	PCB-65	*	*	n NotF¶	1.22	*		2650	2.5	39.9	*	1.007-1.017
Tetra	PCB-62	*	*	n NotF¶	1.22	*		2650	2.5	40.0	*	1.010-1.020
Tetra	PCB-44	5.17e+06	0.72	y 32:57	0.86	4470		*	2.5	*	1.027	1.020-1.030
Tetra	PCB-42/59	1.60e+06	0.75	y 33:13	1.14	1050		*	2.5	*	1.035	1.027-1.037
Tetra	PCB-41/64/71/72	3.95e+06	0.73	y 33:51	1.21	2430		*	2.5	*	1.055	1.046-1.056
Tetra	PCB-68	3.15e+04	0.59	n 34:02	1.35	17.4	R	*	2.5	*	1.061	1.053-1.063
Tetra	PCB-40	2.12e+05	0.71	y 34:12	0.70	225		*	2.5	*	1.066	1.060-1.070
Tetra	PCB-57	5.49e+04	0.81	y 34:34	0.98	49.9		*	2.5	*	0.971	0.966-0.976
Tetra	PCB-67	2.85e+05	0.80	y 34:52	1.11	229		*	2.5	*	0.980	0.974-0.984
Tetra	PCB-58	*	*	n NotF¶	0.93	*		2650	2.5	52.3	*	0.977-0.987
Tetra	PCB-63	2.97e+05	0.79	y 35:08	0.95	278		*	2.5	*	0.987	0.982-0.992
Tetra	PCB-74	3.76e+06	0.71	y 35:24	1.24	2690		*	2.5	*	0.995	0.990-1.000
Tetra	PCB-61/70	9.45e+06	0.71	y 35:36	0.95	8810		*	2.5	*	1.000	0.994-1.004
Tetra	PCB-76/66	6.46e+06	0.72	y 35:48	1.04	5500		*	2.5	*	1.006	1.001-1.011
Tetra	PCB-80	*	*	n NotF¶	1.19	*		2650	2.5	27.4	*	0.995-1.005
Tetra	PCB-55	3.12e+05	0.67	y 36:17	1.04	170		*	2.5	*	1.008	1.004-1.014
Tetra	PCB-56/60	5.15e+06	0.75	y 36:49	1.01	2900		*	2.5	*	1.023	1.018-1.028
Tetra	PCB-79	3.73e+05	0.72	y 37:54	1.08	197		*	2.5	*	1.053	1.048-1.058
Tetra	PCB-78	*	*	n NotF¶	1.27	*		2650	2.5	29.4	*	0.982-0.992
Tetra	PCB-81	1.52e+05	0.84	y 39:05	1.33	72.5		*	2.5	*	1.000	0.995-1.005
Tetra	PCB-77	1.82e+06	0.76	y 39:42	1.10	1050		*	2.5	*	1.001	0.995-1.005
Penta	PCB-104	*	*	n NotF¶	1.18	*		2400	2.5	72.2	*	0.996-1.006
Penta	PCB-96	*	*	n NotF¶	1.14	*		2400	2.5	75.1	*	1.034-1.044
Penta	PCB-103	1.05e+05	1.51	y 34:34	0.96	103		*	2.5	*	1.055	1.050-1.060
Penta	PCB-100	*	*	n NotF¶	0.94	*		2400	2.5	91.2	*	1.061-1.071
Penta	PCB-94	9.90e+04	1.68	y 35:23	1.06	109		*	2.5	*	0.987	0.981-0.991
Penta	PCB-95/98/102	1.46e+07	1.60	y 35:52	1.22	13900		*	2.5	*	1.000	0.994-1.004
Penta	PCB-93	*	*	n NotF¶	0.84	*		2400	2.5	104	*	0.998-1.008
Penta	PCB-88/91	2.36e+06	1.55	y 36:16	1.12	2460		*	2.5	*	1.011	1.006-1.016
Penta	PCB-121	*	*	n NotF¶	1.62	*		2400	2.5	54.5	*	1.009-1.019
Penta	PCB-84/92	7.67e+06	1.57	y 37:11	1.05	7740		*	2.5	*	0.990	0.985-0.995
Penta	PCB-89	1.89e+05	1.38	y 37:22	1.13	177		*	2.5	*	0.995	0.990-1.000

Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2

Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	2.33e+07	1.71	y 37:33	1.10	22400		*	2.5	*	1.000	0.995	1.005
Penta	PCB-113	1.66e+06	1.88	n 37:46	1.41	1240	R	*	2.5	*	1.006	1.002	1.012
Penta	PCB-99	6.99e+06	1.73	y 37:53	1.34	5530		*	2.5	*	1.009	1.004	1.014
Penta	PCB-119	3.28e+05	1.34	y 38:21	1.53	252		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	8.45e+05	1.65	y 38:30	1.28	779		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	*	*	n NotF┐	1.52	*		2400	2.5	58.8	*	0.990	1.000
Penta	PCB-97	4.92e+06	1.58	y 38:52	1.18	4910		*	2.5	*	1.001	0.996	1.006
Penta	PCB-86	5.01e+04	1.47	y 39:00	0.84	70.2		*	2.5	*	1.004	0.999	1.009
Penta	PCB-87/117/125	7.79e+06	1.58	y 39:08	1.55	5930		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	3.05e+05	1.39	y 39:17	1.63	220		*	2.5	*	1.011	1.006	1.016
Penta	PCB-85/116	2.75e+06	1.56	y 39:24	1.30	2490		*	2.5	*	1.014	1.010	1.020
Penta	PCB-120	*	*	n NotF┐	1.68	*		2400	2.5	53.3	*	1.016	1.026
Penta	PCB-110	2.77e+07	1.58	y 39:47	1.56	21000		*	2.5	*	1.024	1.019	1.029
Penta	PCB-82	1.87e+06	1.46	y 40:25	0.76	2340		*	2.5	*	0.976	0.971	0.981
Penta	PCB-124	1.00e+06	1.76	y 41:06	1.47	652		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	1.49e+06	1.59	y 41:16	1.32	1080		*	2.5	*	0.997	0.991	1.001
Penta	PCB-123	3.68e+05	1.38	y 41:25	1.17	300		*	2.5	*	1.000	0.995	1.005
Penta	PCB-106/118	2.02e+07	1.60	y 41:35	1.17	16000		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	7.54e+05	1.50	y 42:14	1.30	437		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	3.43e+05	1.65	y 42:22	1.12	231		*	2.5	*	1.003	0.998	1.008
Penta	PCB-105	1.07e+07	1.65	y 43:06	1.30	6830		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF┐	1.33	*		12300	2.5	236	*	0.996	1.006
Penta	PCB-126	4.83e+05	1.61	y 45:20	1.18	358		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	*	*	n NotF┐	1.11	*		1500	2.5	48.0	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF┐	1.00	*		1500	2.5	53.5	*	1.030	1.040
Hexa	PCB-152	3.19e+04	1.12	y 38:49	1.12	36.1		*	2.5	*	1.047	1.043	1.052
Hexa	PCB-145	*	*	n NotF┐	1.20	*		1500	2.5	44.5	*	1.054	1.064
Hexa	PCB-136	2.47e+06	1.38	y 39:35	1.18	2660		*	2.5	*	1.067	1.063	1.073
Hexa	PCB-148	*	*	n NotF┐	0.74	*		1500	2.5	71.8	*	1.066	1.076
Hexa	PCB-154	1.74e+05	1.29	y 40:11	0.86	257		*	2.5	*	1.084	1.079	1.089
Hexa	PCB-151	2.99e+06	1.31	y 40:50	0.75	5070		*	2.5	*	1.101	1.095	1.107
Hexa	PCB-135	1.83e+06	1.38	y 41:02	0.79	2910		8.00	2.5	0.361	1.107	1.101	1.113
Hexa	PCB-144	7.48e+05	1.23	y 41:09	0.76	1240		*	2.5	*	1.110	1.105	1.116
Hexa	PCB-147	3.12e+05	1.30	y 41:17	0.82	482		*	2.5	*	1.113	1.107	1.119
Hexa	PCB-139/149	1.29e+07	1.29	y 41:32	0.76	21400		*	2.5	*	1.120	1.115	1.127
Hexa	PCB-140	8.93e+04	1.08	y 41:43	0.72	156		*	2.5	*	1.125	1.120	1.132
Hexa	PCB-134/143	1.60e+06	1.25	y 42:11	0.92	1530		*	2.5	*	0.975	0.970	0.980

Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2

Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	8.39e+05	1.22	y	42:28	0.82	896		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	*	*	n	NotF	0.91	*		3180	2.5	88.5	*	0.981	0.991
Hexa	PCB-146/165	4.50e+06	1.28	y	42:52	1.25	3160		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	1.12e+07	1.21	y	43:07	1.10	8900		*	2.5	*	0.997	0.991	1.001
Hexa	PCB-153	2.68e+07	1.27	y	43:16	1.25	18800		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n	NotF	1.45	*		3180	2.5	55.4	*	1.000	1.010
Hexa	PCB-141	5.60e+06	1.25	y	43:59	1.09	4820		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-137	1.37e+06	1.29	y	44:23	1.06	1200		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	2.06e+06	1.22	y	44:30	0.96	2000		*	2.5	*	1.012	1.006	1.016
Hexa	PCB-138/163/164	3.59e+07	1.23	y	44:52	1.29	23300		*	2.5	*	1.001	0.995	1.005
Hexa	PCB-158/160	4.88e+06	1.19	y	45:05	1.34	3060		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	1.60e+06	1.25	y	45:20	0.85	1580		*	2.5	*	1.011	1.006	1.016
Hexa	PCB-166	1.76e+05	1.31	y	45:48	1.19	111		*	2.5	*	0.993	0.988	0.998
Hexa	PCB-159	*	*	n	NotF	1.11	*		3180	2.5	64.8	*	0.995	1.005
Hexa	PCB-128/162	7.11e+06	1.26	y	46:24	1.05	5050		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-167	1.77e+06	1.25	y	46:49	1.20	1140		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	3.65e+06	1.25	y	48:06	1.14	2660		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-157	9.47e+05	1.41	y	48:22	1.16	661		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	*	*	n	NotF	1.12	*		3180	2.5	69.4	*	0.995	1.005
Hepta	PCB-188	3.43e+04	1.07	y	42:54	1.58	24.4		*	2.5	*	1.001	0.995	1.005
Hepta	PCB-184	*	*	n	NotF	1.63	*		1910	2.5	23.3	*	1.006	1.016
Hepta	PCB-179	3.99e+06	1.07	y	44:06	1.30	3450		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	1.19e+06	1.14	y	44:34	1.48	908		*	2.5	*	1.039	1.035	1.045
Hepta	PCB-186	*	*	n	NotF	1.45	*		1910	2.5	26.1	*	1.049	1.059
Hepta	PCB-178	1.47e+06	1.07	y	45:41	1.03	1600		*	2.5	*	1.066	1.060	1.070
Hepta	PCB-175	2.82e+05	1.18	y	46:01	1.01	313		*	2.5	*	1.073	1.069	1.079
Hepta	PCB-182/187	1.05e+07	1.11	y	46:11	1.25	9480		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	4.57e+06	1.10	y	46:31	1.21	4260		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	8.64e+05	1.11	y	47:11	1.80	812		*	2.5	*	0.956	0.951	0.961
Hepta	PCB-174	5.92e+06	1.05	y	47:32	1.38	7270		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	*	*	n	NotF	1.38	*		1910	2.5	44.2	*	0.960	0.970
Hepta	PCB-177	3.32e+06	1.09	y	47:48	1.26	4480		*	2.5	*	0.968	0.964	0.974
Hepta	PCB-171	1.63e+06	1.04	y	48:06	1.58	1740		*	2.5	*	0.974	0.970	0.980
Hepta	PCB-173	1.21e+05	0.97	y	48:32	1.11	184		*	2.5	*	0.983	0.978	0.988
Hepta	PCB-172	1.15e+06	1.05	y	48:59	1.63	1190		*	2.5	*	0.992	0.987	0.997
Hepta	PCB-192	*	*	n	NotF	1.74	*		1910	2.5	35.0	*	0.991	1.001
Hepta	PCB-180	1.63e+07	1.09	y	49:23	1.34	20500		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2
Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	8.86e+05	1.03	y	49:36	1.72	874		*	2.5	*	1.004	1.000	1.010
Hepta	PCB-191	3.41e+05	1.07	y	49:50	1.69	340		*	2.5	*	1.009	1.005	1.015
Hepta	PCB-170	5.85e+06	1.06	y	50:52	1.60	7660		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	1.46e+06	1.16	y	51:03	2.21	1380		*	2.5	*	1.004	0.999	1.009
Hepta	PCB-189	2.93e+05	0.97	y	52:24	1.55	338		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	9.35e+05	0.93	y	48:17	1.08	1330		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	5.91e+05	0.85	y	48:47	1.15	795		*	2.5	*	1.010	1.005	1.015
Octa	PCB-204	*	*	n	NotF╖	1.14	*		2160	2.5	70.8	*	1.009	1.019
Octa	PCB-197	1.70e+05	0.79	y	49:15	1.07	244		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	4.72e+05	0.89	y	50:07	1.06	686		*	2.5	*	1.038	1.034	1.044
Octa	PCB-198	9.23e+04	1.16	n	51:28	0.76	189	R	*	2.5	*	1.066	1.062	1.072
Octa	PCB-199	2.90e+06	0.89	y	51:35	0.80	5620		*	2.5	*	1.068	1.064	1.074
Octa	PCB-196/203	3.43e+06	0.93	y	51:51	0.80	6620		*	2.5	*	1.074	1.070	1.080
Octa	PCB-195	1.21e+06	0.83	y	53:01	1.23	1740		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	3.26e+06	0.95	y	53:55	1.21	4740		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	1.91e+05	0.93	y	54:11	1.54	218		*	2.5	*	1.005	1.000	1.010
Nona	PCB-208	6.67e+05	1.28	y	53:09	0.93	858		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	5.49e+05	1.43	y	53:28	1.08	608		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	1.61e+06	1.32	y	55:35	1.02	2660		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	4.68e+06	1.18	y	57:00	1.17	6580		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2
Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.0100 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.27	7918.67	*
Total Di-PCB	*	*	n	NotFnd	1.21	19045	*
Total Tri-PCB	*	*	n	NotFnd	1.10	5939	*
Total Tri-PCB	1.23e+07	0.99	y	28:31	1.21	8390.40	Sum:8390.40 14329
Total Tetra-PCB	5.68e+07	0.74	y	29:50	1.09	42133.9	
Total Penta-PCB	1.25e+08	1.51	y	34:34	1.18	108334	
Total Penta-PCB	1.23e+07	1.50	y	42:14	1.25	7852.95	Sum:116187
Total Hexa-PCB	2.15e+07	1.12	y	38:49	0.90	34191.5	
Total Hexa-PCB	1.10e+08	1.25	y	42:11	1.11	78914.9	Sum:113106
Total Hepta-PCB	6.02e+07	1.07	y	42:54	1.42	66833.1	
Total Octa-PCB	8.50e+06	0.93	y	48:17	0.96	15297.2	
Total Octa-PCB	4.66e+06	0.83	y	53:01	1.33	6697.43	Sum:21994.6
Total Nona-PCB	2.97e+06	1.28	y	53:09	1.01	~~4307.99~~ 4320	
Total Deca-PCB	4.68e+06	1.18	y	57:00	1.17	6581.49	

Total PCB Conc:380799.771630 + 33229.17 = 414028.96 412000

Integrations by Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150328E2 S:8 Acq:29-MAR-15 04:19:13 ConCal: ST150328E2-2
Lab ID: 1400915-03RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:2.0100 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.58e+07	3.44 y	0.87	16:11	0.621	0.620	0.626	45700	459
13C-PCB-3	2.78e+07	3.53 y	0.91	18:47	0.721	0.719	0.727	47100	473
13C-PCB-4	1.68e+07	1.60 y	0.59	20:07	0.772	0.771	0.779	44000	443
13C-PCB-9	2.55e+07	1.58 y	0.90	21:54	0.841	0.839	0.847	43900	442
13C-PCB-11	2.69e+07	1.51 y	0.94	25:21	0.973	0.968	0.978	44300	445
13C-PCB-19	1.34e+07	1.09 y	0.53	24:16	0.931	0.929	0.939	38900	391
13C-PCB-28	1.19e+07	0.94 y	0.93	29:08	1.004	0.999	1.009	9050	91.0
13C-PCB-32	2.15e+07	1.05 y	0.80	27:11	1.043	1.041	1.051	41700	419
13C-PCB-37	9.18e+06	1.08 y	0.84	33:07	1.141	1.131	1.143	7780	78.2
13C-PCB-47	1.34e+07	0.76 y	0.81	32:05	0.872	0.867	0.875	8500	85.4
13C-PCB-52	1.27e+07	0.74 y	0.77	31:33	0.857	0.853	0.861	8510	85.5
13C-PCB-54	1.65e+07	0.70 y	0.97	28:00	0.761	0.757	0.765	8750	87.9
13C-PCB-70	1.12e+07	0.81 y	1.00	35:35	0.967	0.961	0.971	5780	58.1
13C-PCB-77	1.56e+07	0.79 y	0.94	39:41	1.078	1.073	1.083	8540	85.8
13C-PCB-80	1.75e+07	0.79 y	1.03	36:00	0.978	0.973	0.983	8740	87.9
13C-PCB-81	1.57e+07	0.78 y	0.92	39:05	1.062	1.057	1.067	8780	88.2
13C-PCB-95	8.58e+06	1.61 y	0.74	35:52	0.913	0.908	0.918	9810	98.6
13C-PCB-97	8.44e+06	1.58 y	0.70	38:50	0.989	0.984	0.994	10100	102
13C-PCB-101	9.43e+06	1.68 y	0.78	37:33	0.956	0.951	0.961	10200	102
13C-PCB-104	1.06e+07	1.62 y	1.00	32:46	0.834	0.829	0.837	8970	90.1
13C-PCB-105	1.20e+07	1.56 y	1.37	43:06	0.929	0.924	0.934	7780	78.2
13C-PCB-114	1.32e+07	1.60 y	1.36	42:14	0.911	0.906	0.916	8560	86.0
13C-PCB-118	1.07e+07	1.69 y	0.96	41:35	1.059	1.054	1.064	9460	95.1
13C-PCB-123	1.04e+07	1.54 y	0.89	41:24	1.054	1.049	1.059	9890	99.4
13C-PCB-126	1.14e+07	1.59 y	1.31	45:20	0.978	0.972	0.982	7660	77.0
13C-PCB-127	1.28e+07	1.50 y	1.47	43:27	0.937	0.931	0.941	7630	76.7
13C-PCB-138	1.18e+07	1.24 y	1.10	44:49	0.966	0.961	0.971	9490	95.4
13C-PCB-141	1.06e+07	1.28 y	1.07	43:59	0.948	0.943	0.953	8740	87.8
13C-PCB-153	1.14e+07	1.30 y	1.15	43:15	0.933	0.927	0.937	8740	87.9
13C-PCB-155	7.87e+06	1.29 y	0.84	37:05	0.944	0.939	0.949	7940	79.8
13C-PCB-156	1.20e+07	1.30 y	1.30	48:06	1.037	1.032	1.042	8180	82.3
13C-PCB-157	1.23e+07	1.29 y	1.36	48:22	1.043	1.037	1.047	7960	80.0
13C-PCB-159	1.34e+07	1.30 y	1.25	46:08	0.995	0.989	0.999	9460	95.1
13C-PCB-167	1.29e+07	1.28 y	1.35	46:49	1.009	1.004	1.014	8400	84.4
13C-PCB-169	1.20e+07	1.33 y	1.29	50:31	1.089	1.084	1.094	8240	82.8
13C-PCB-170	4.76e+06	0.47 y	0.54	50:52	1.097	1.093	1.103	7740	77.8
13C-PCB-180	5.88e+06	0.46 y	0.68	49:23	1.065	1.059	1.069	7580	76.2
13C-PCB-188	8.83e+06	0.44 y	0.92	42:52	0.924	0.920	0.930	8490	85.3
13C-PCB-189	5.57e+06	0.44 y	0.72	52:22	1.129	1.125	1.137	6850	68.9
13C-PCB-194	5.65e+06	0.90 y	0.80	53:54	0.995	0.990	1.000	9320	93.7
13C-PCB-202	6.44e+06	0.95 y	0.84	48:17	1.041	1.036	1.046	6770	68.1
13C-PCB-206	5.89e+06	0.78 y	0.65	55:34	1.026	1.019	1.029	11900	120
13C-PCB-208	8.31e+06	0.73 y	1.08	53:09	0.981	0.977	0.987	10100	102
13C-PCB-209	6.04e+06	1.24 y	0.61	56:59	1.052	1.044	1.054	13000	131

108 108 99.8 98.8 85.4 94.6 83.5

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.81e+07	0.74 y	1.02	37:52	1.029	1.024	1.034	9200	92.5
13C-PCB-178	5.66e+06	0.45 y	0.61	45:40	0.985	0.980	0.990	8130	81.8

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.81e+07	0.74 y	1.10	37:52	0.969	0.964	0.974	10400	105
13C-PCB-178	5.66e+06	0.45 y	0.90	45:40	0.925	0.920	0.930	10700	107

* See 1:20 Dilution

RS

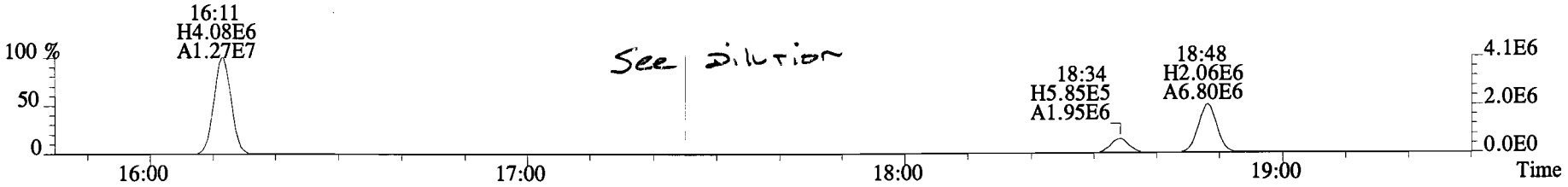
Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	6.45e+06	1.60	y	1.00	26:03	9950
13C-PCB-31	1.40e+07	0.97	y	1.00	29:01	9950
13C-PCB-60	1.93e+07	0.78	y	1.00	36:48	9950
13C-PCB-111	1.17e+07	1.66	y	1.00	39:17	9950
13C-PCB-128	1.13e+07	1.21	y	1.00	46:23	9950
13C-PCB-205	7.56e+06	0.86	y	1.00	54:11	9950

Analyst: DMS

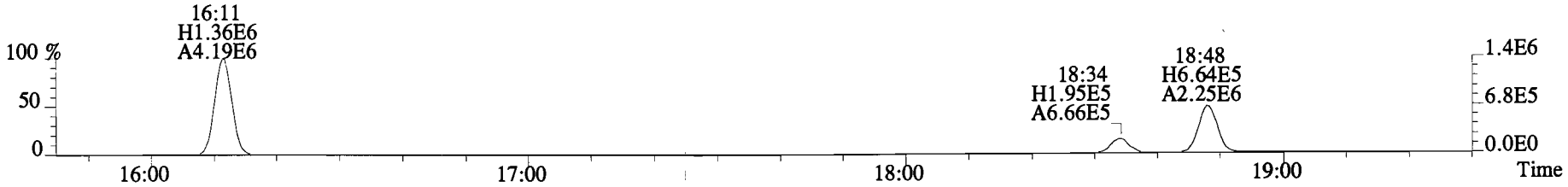
Date: 3/30/15

File:150328E2 #1-867 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1

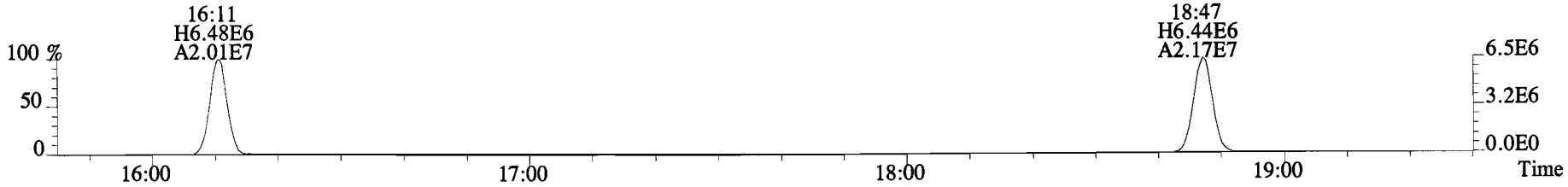
188.0393 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3216.0,0.00%,F,F)



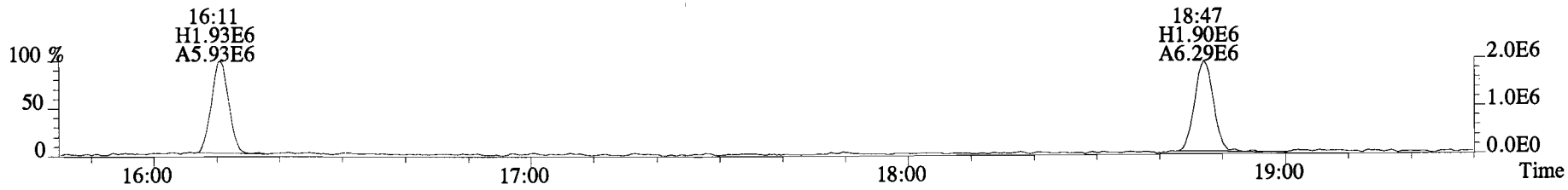
190.0363 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2584.0,0.00%,F,F)



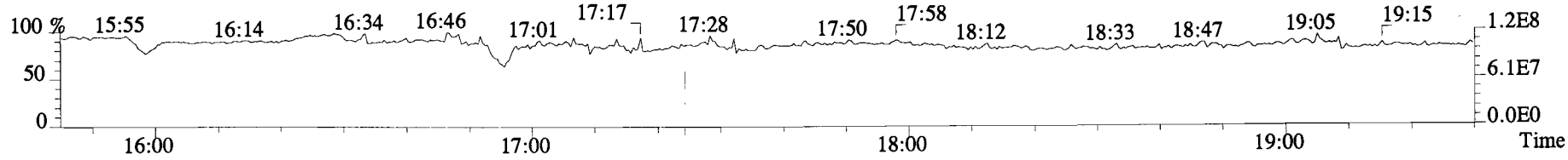
200.0795 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5560.0,0.00%,F,F)



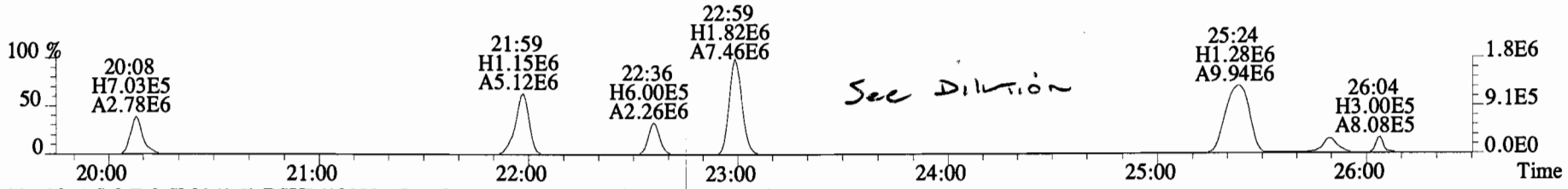
202.0766 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,54200.0,0.00%,F,F)



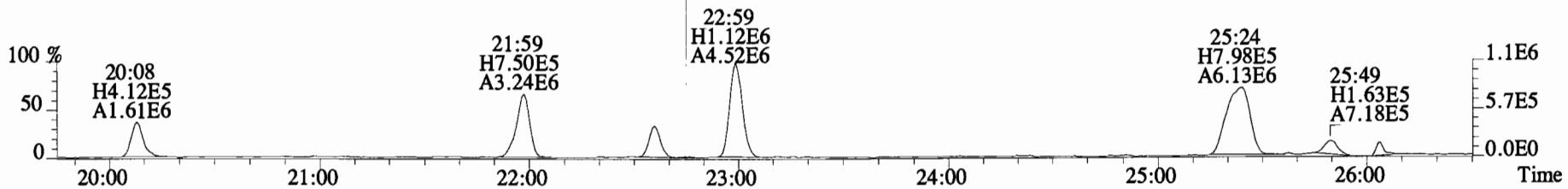
180.9880 S:8



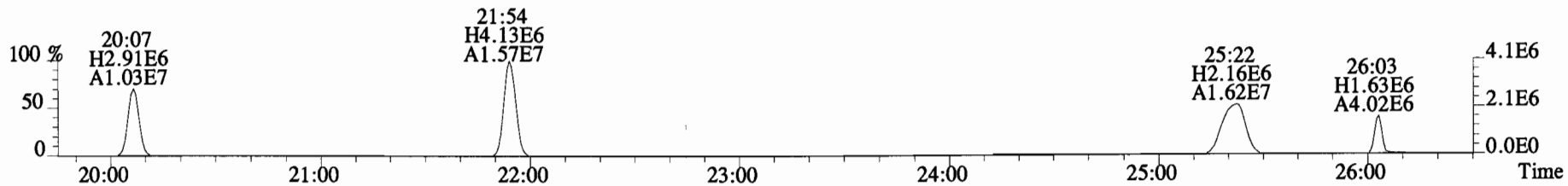
File:150328E2 #1-757 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
222.0003 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3020.0,0.00%,F,F)



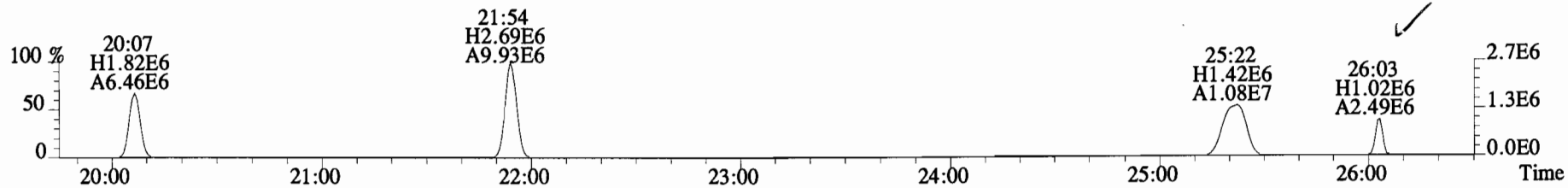
223.9974 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22880.0,0.00%,F,F)



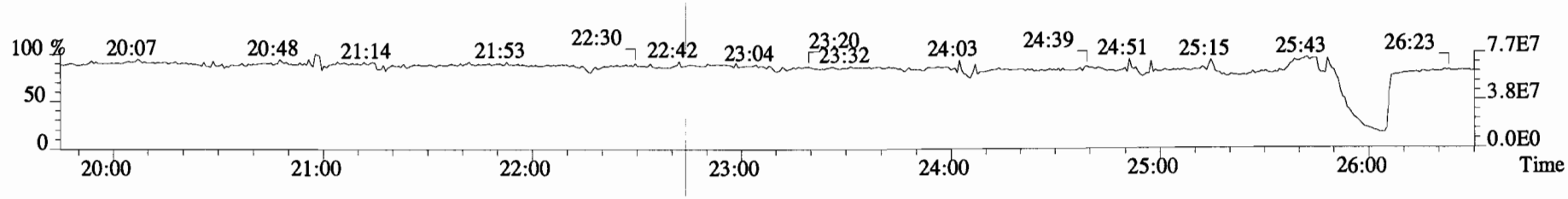
234.0406 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3500.0,0.00%,F,F)



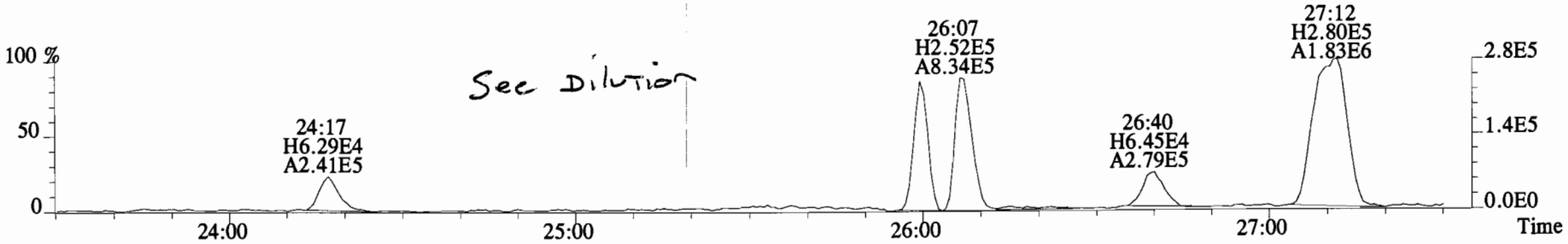
236.0376 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2640.0,0.00%,F,F)



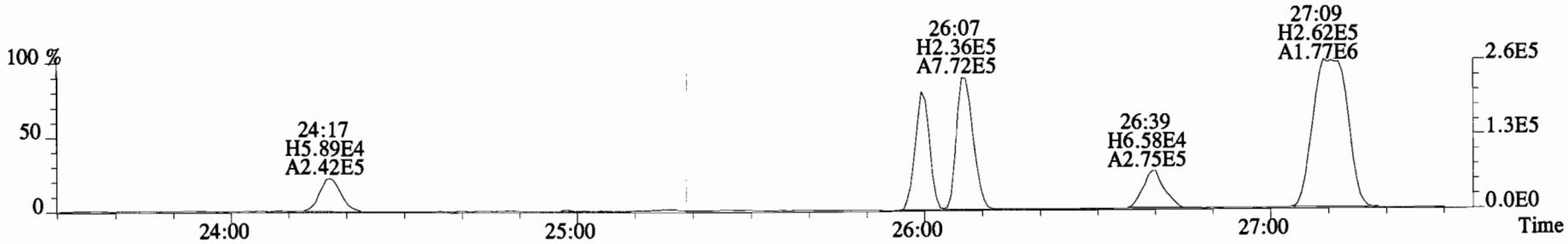
239.9856 S:8 F:2



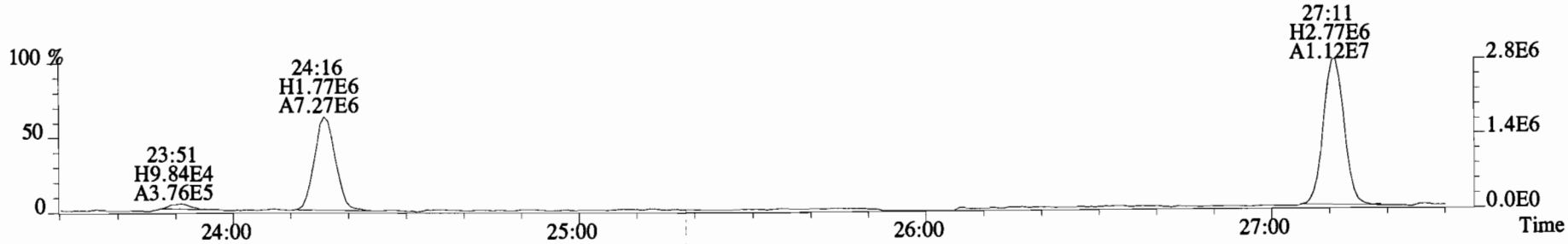
File:150328E2 #1-757 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5588.0,0.00%,F,F)



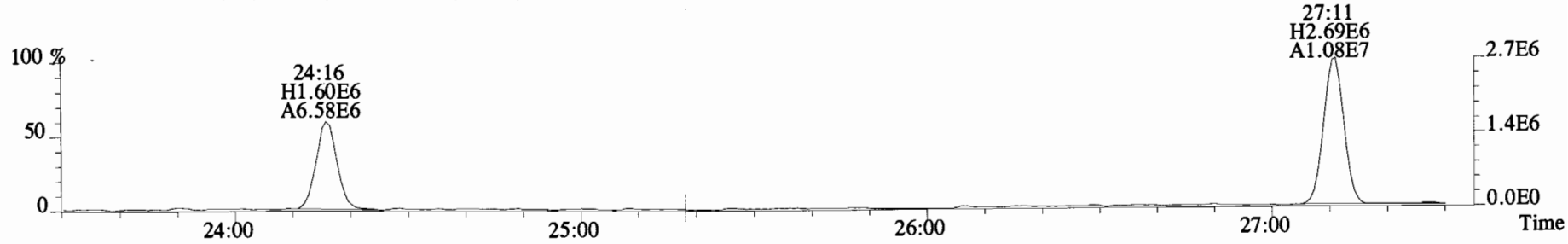
257.9584 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2280.0,0.00%,F,F)



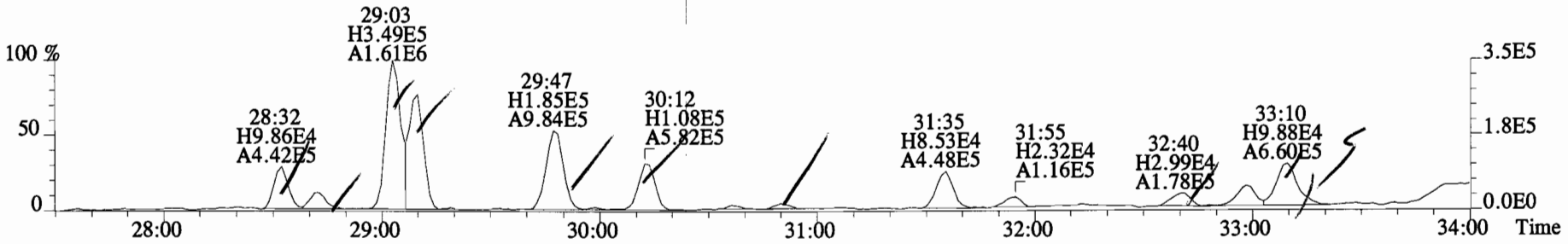
268.0016 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,62408.0,0.00%,F,F)



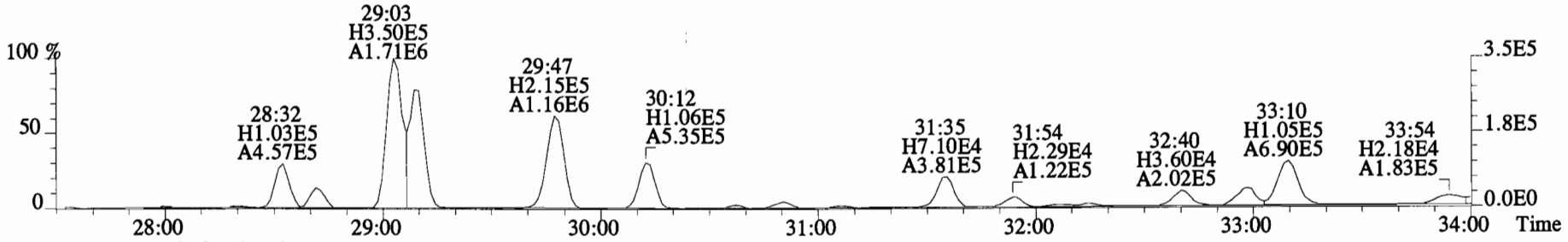
269.9986 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,38848.0,0.00%,F,F)



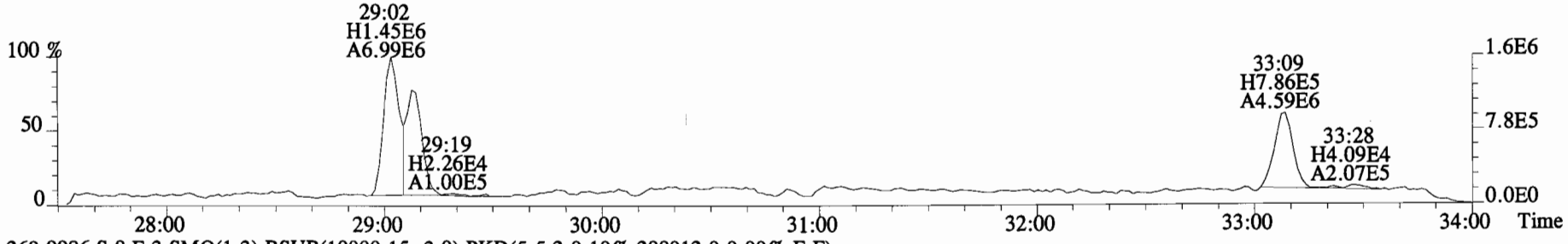
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7648.0,0.00%,F,F)



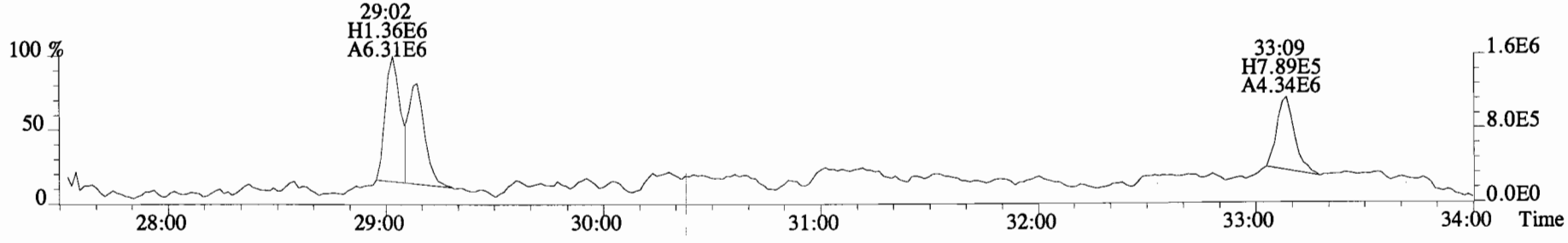
257.9584 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2848.0,0.00%,F,F)



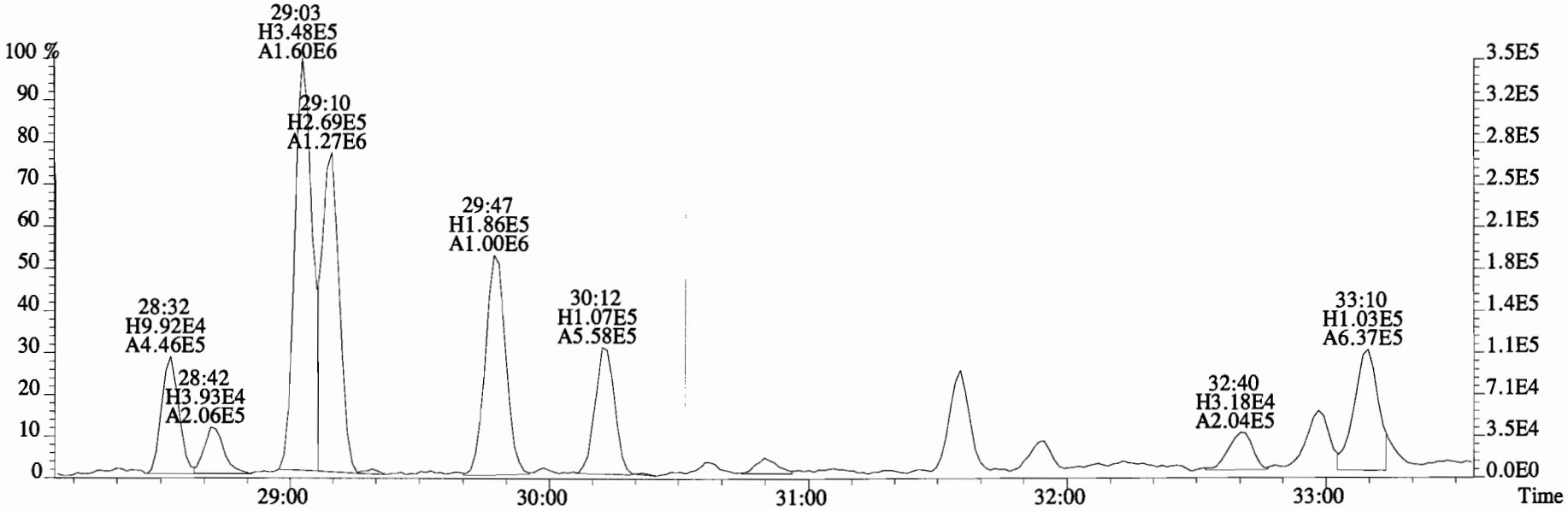
268.0016 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,176120.0,0.00%,F,F)



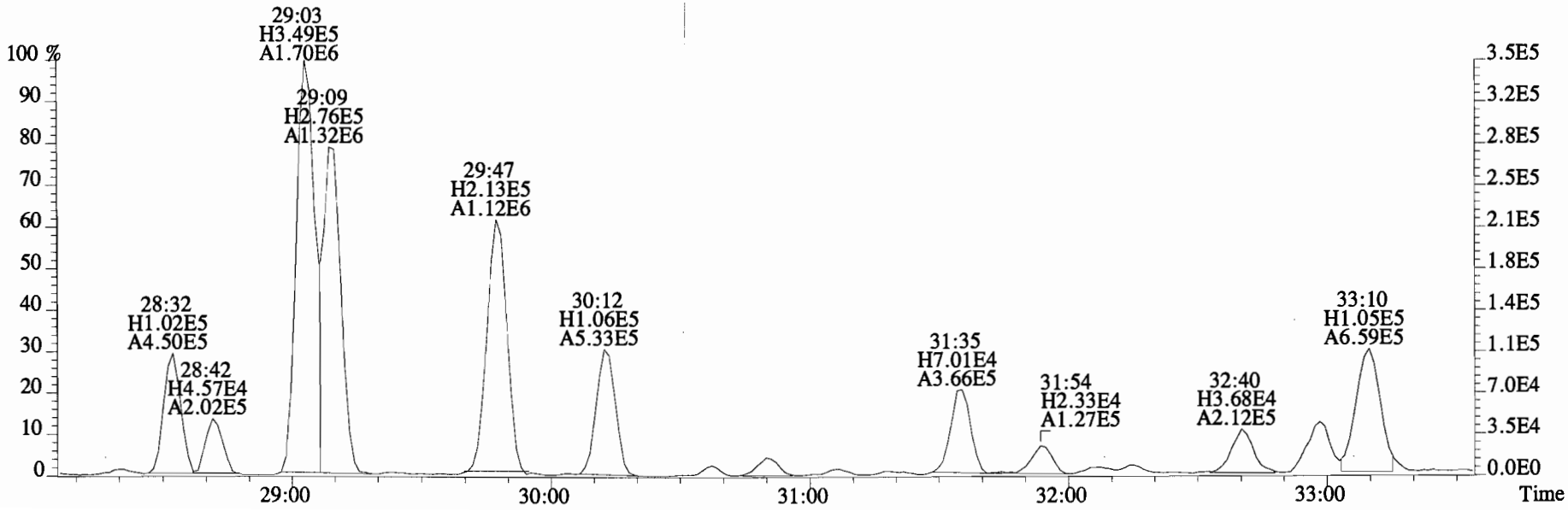
269.9986 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,288012.0,0.00%,F,F)



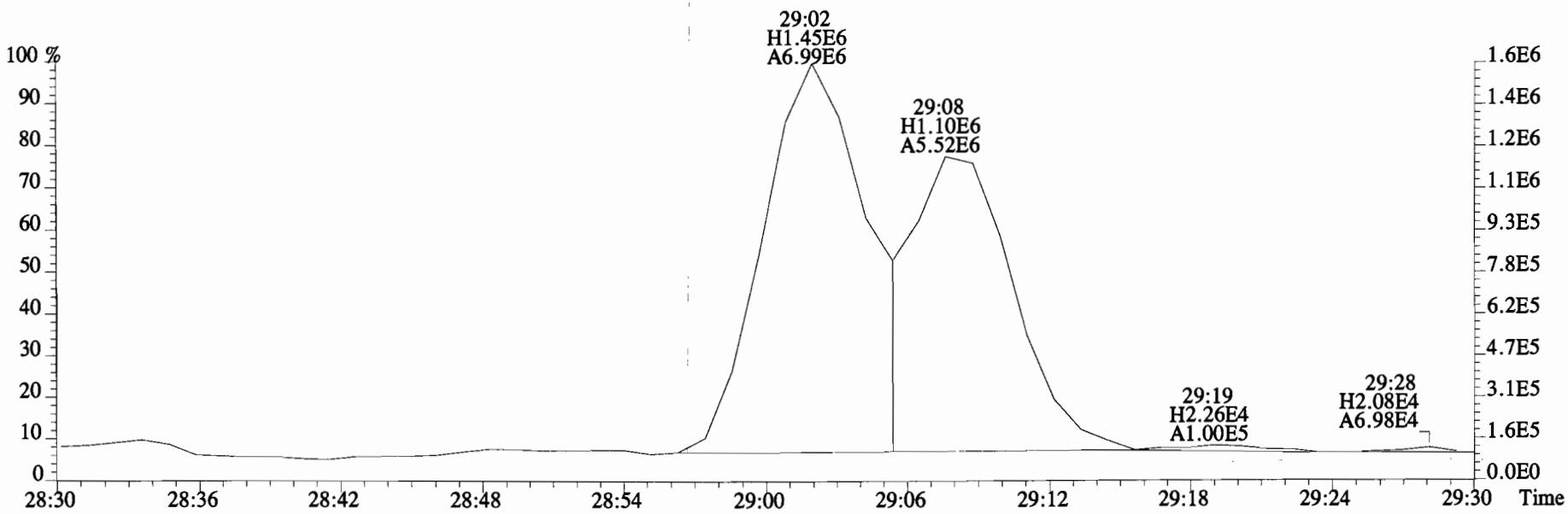
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



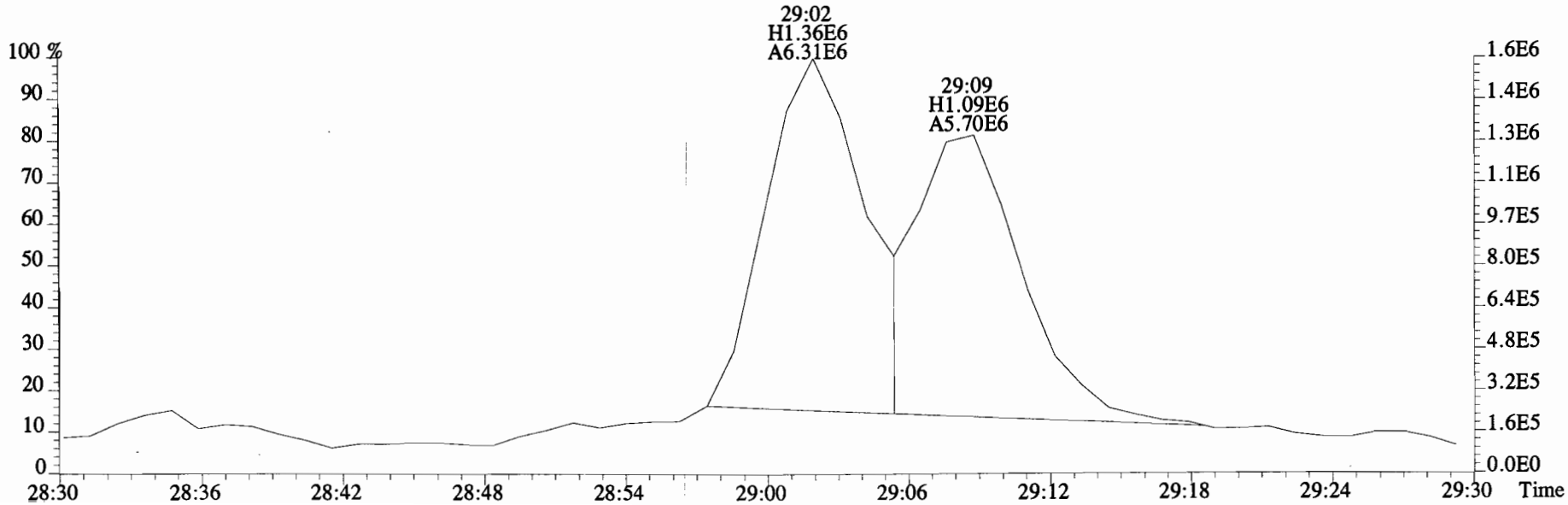
257.9584 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



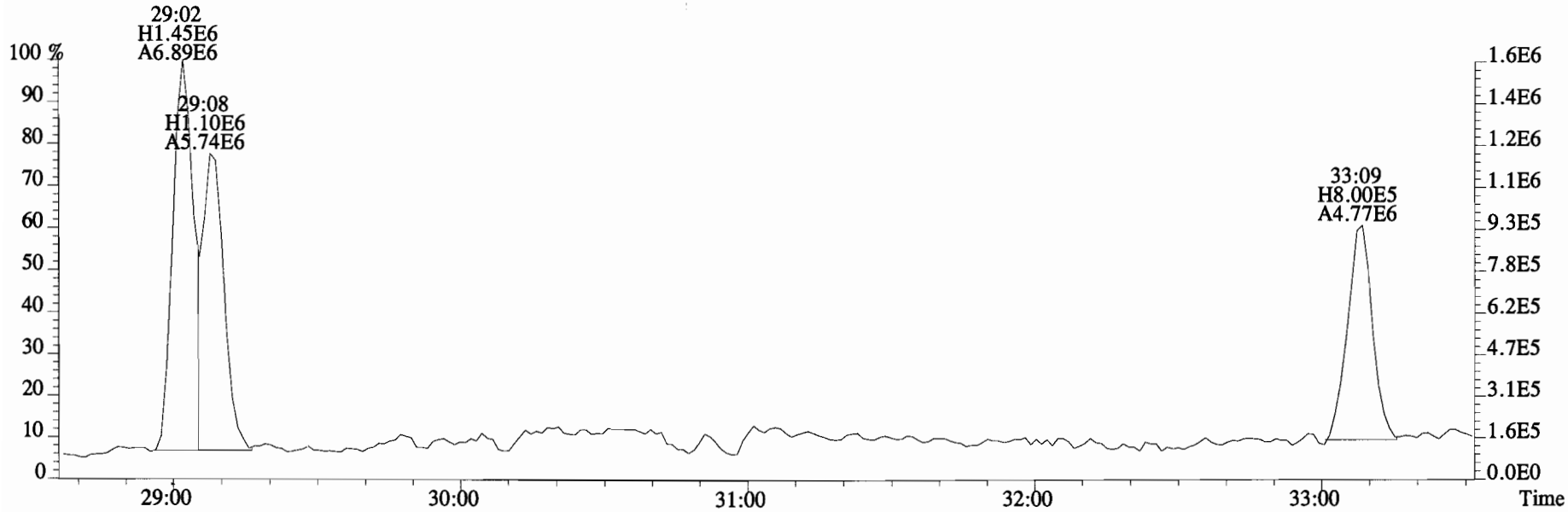
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
268.0016 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,176120.0,0.00%,F,F)



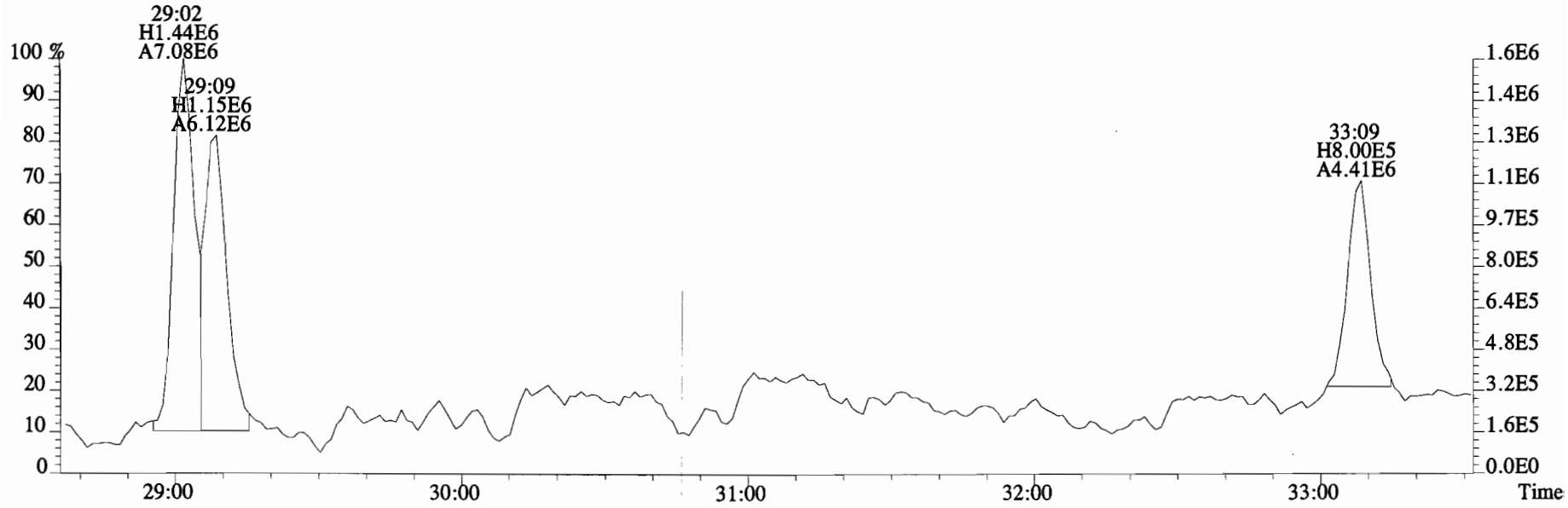
269.9986 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,288012.0,0.00%,F,F)



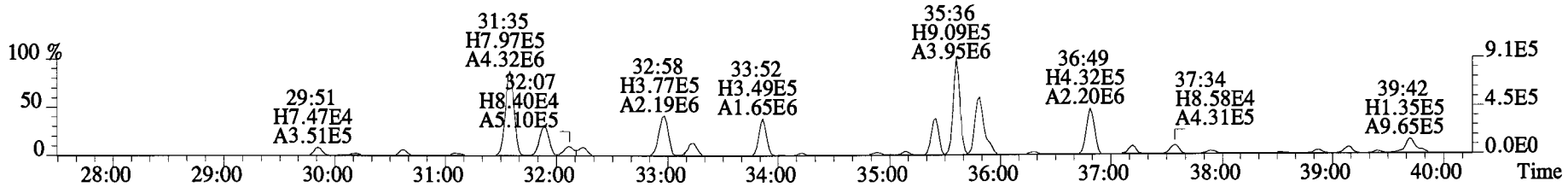
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
268.0016 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,176120.0,0.00%,F,F)



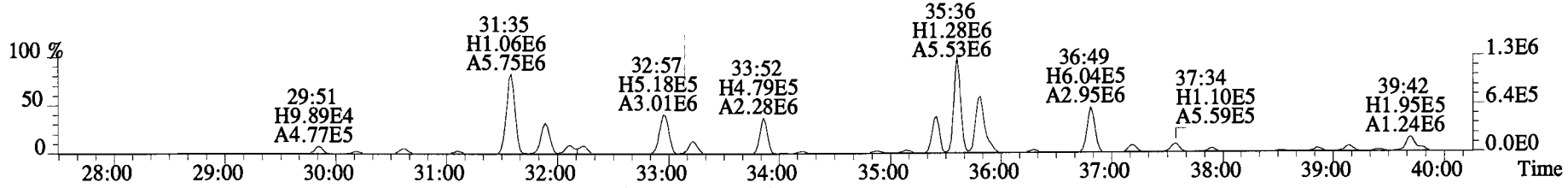
269.9986 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,288012.0,0.00%,F,F)



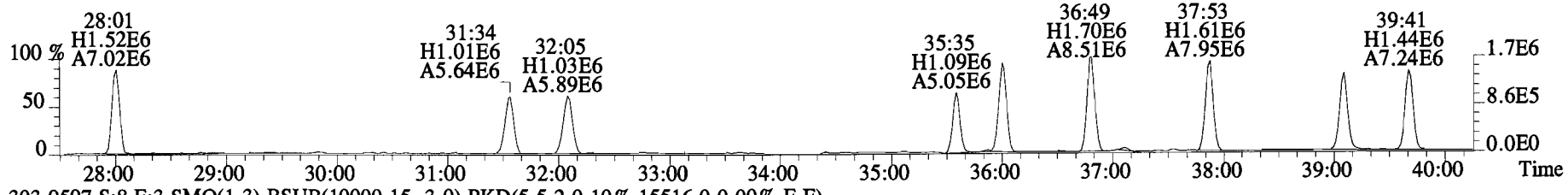
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1980.0,0.00%,F,F)



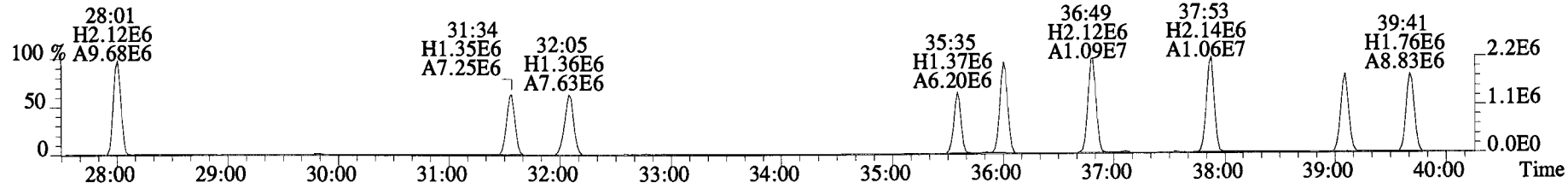
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2652.0,0.00%,F,F)



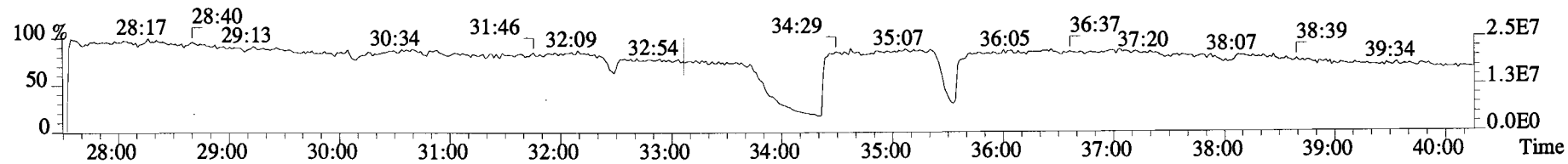
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,31672.0,0.00%,F,F)



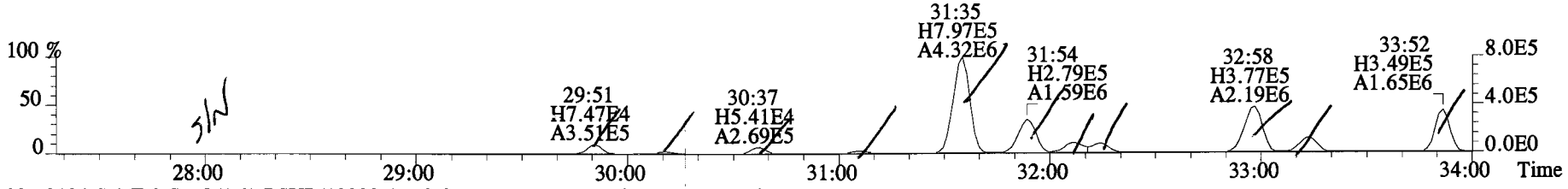
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15516.0,0.00%,F,F)



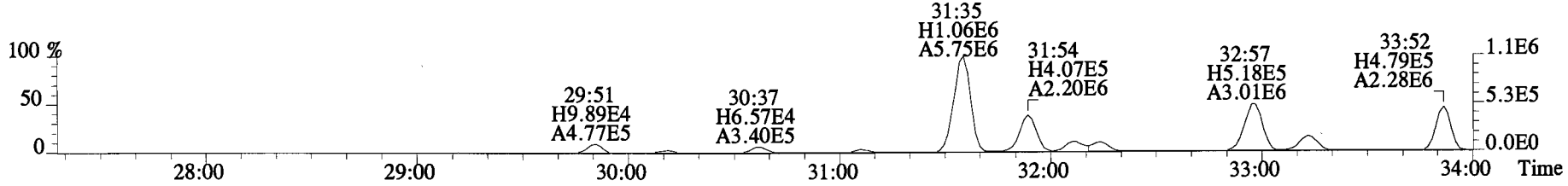
330.9792 S:8 F:3



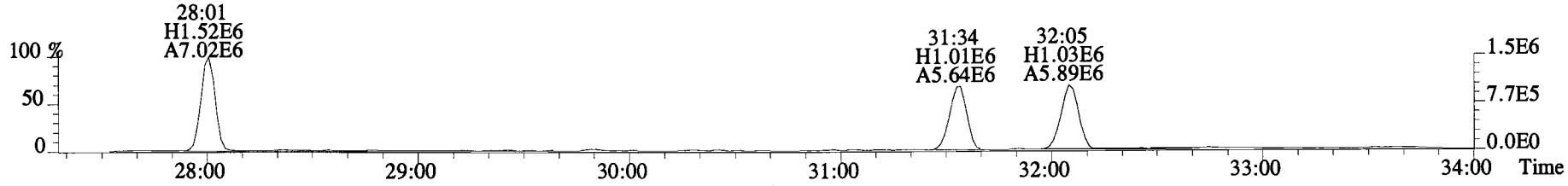
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1980.0,0.00%,F,F)



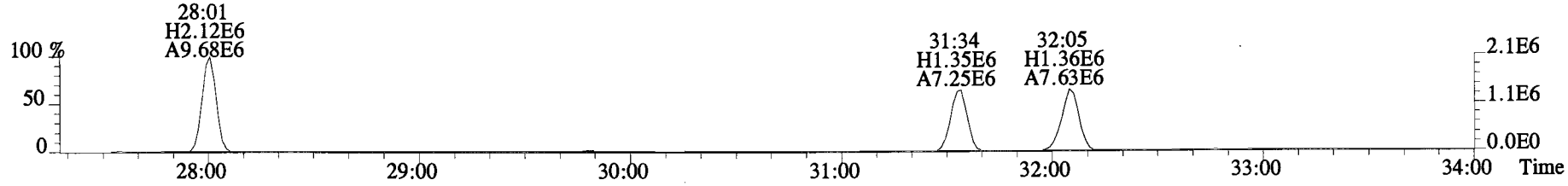
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2652.0,0.00%,F,F)



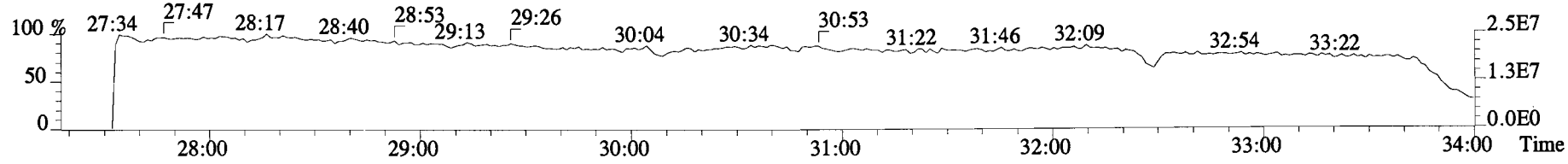
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,31672.0,0.00%,F,F)



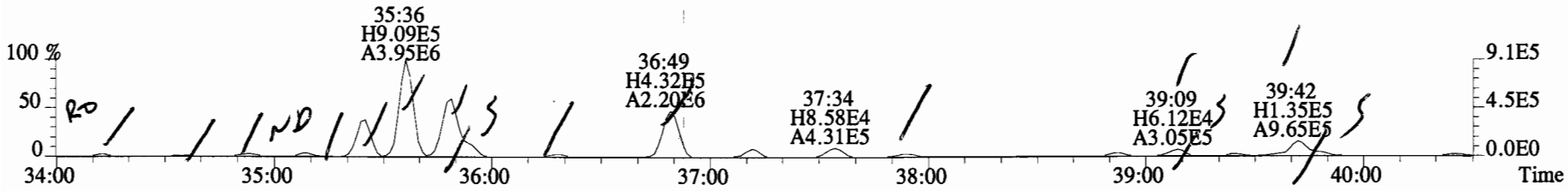
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15516.0,0.00%,F,F)



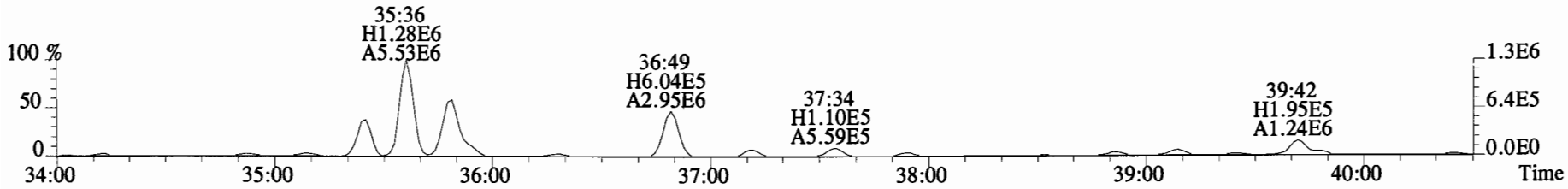
330.9792 S:8 F:3



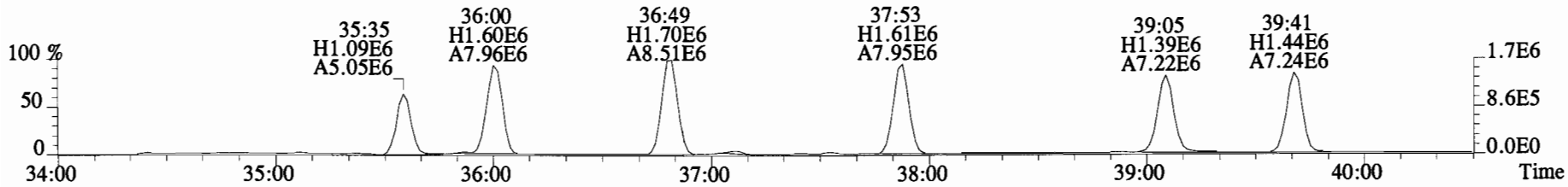
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1980.0,0.00%,F,F)



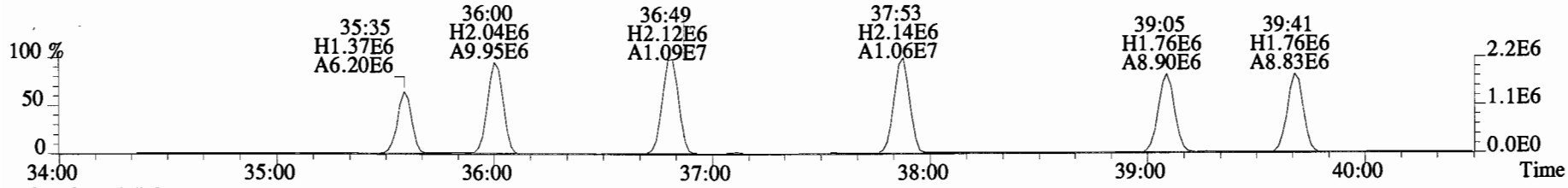
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2652.0,0.00%,F,F)



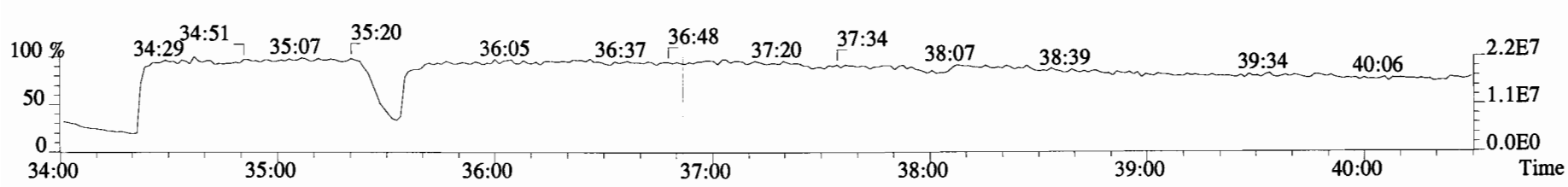
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,31672.0,0.00%,F,F)



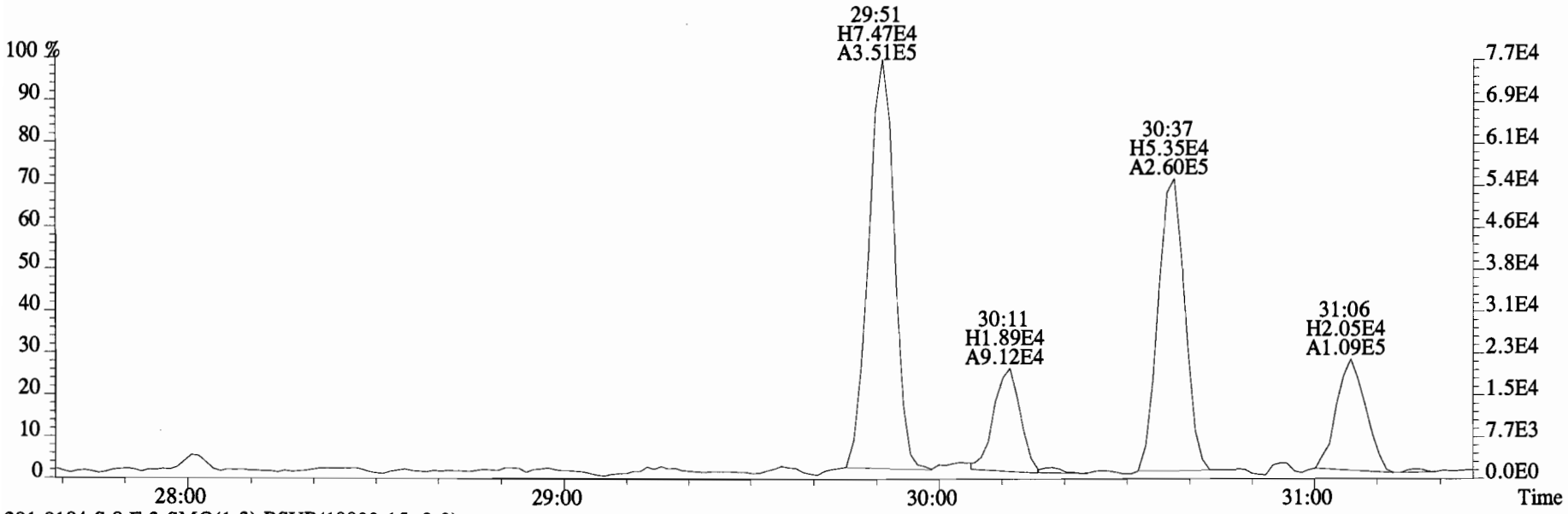
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15516.0,0.00%,F,F)



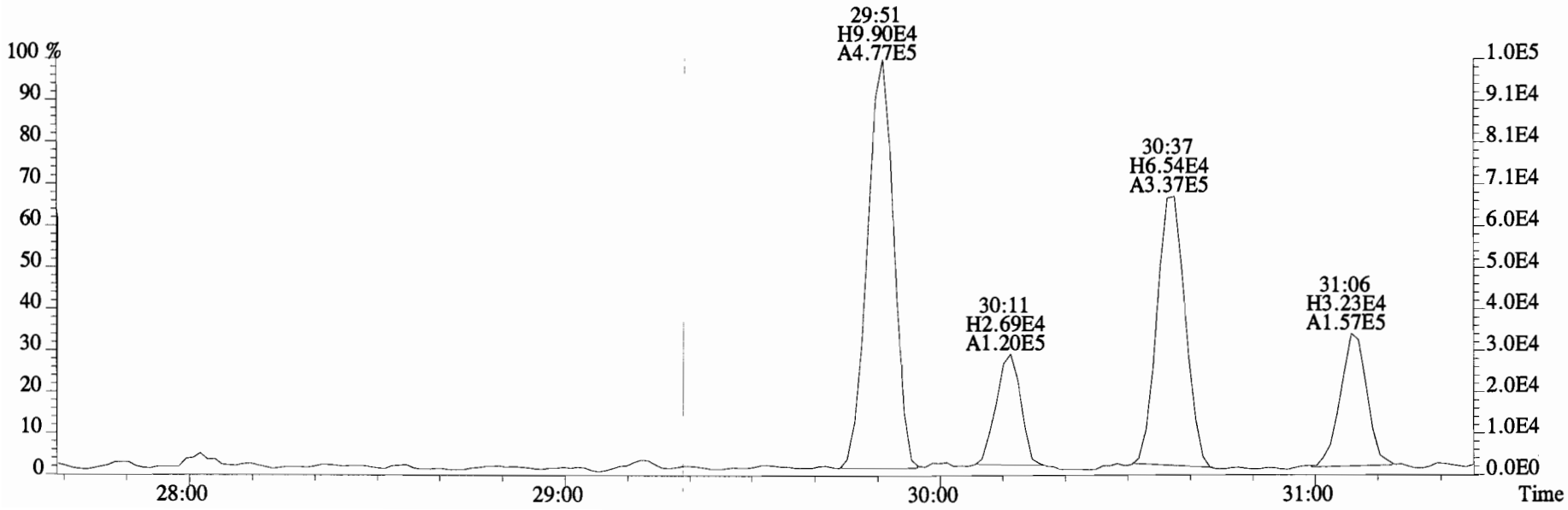
330.9792 S:8 F:3



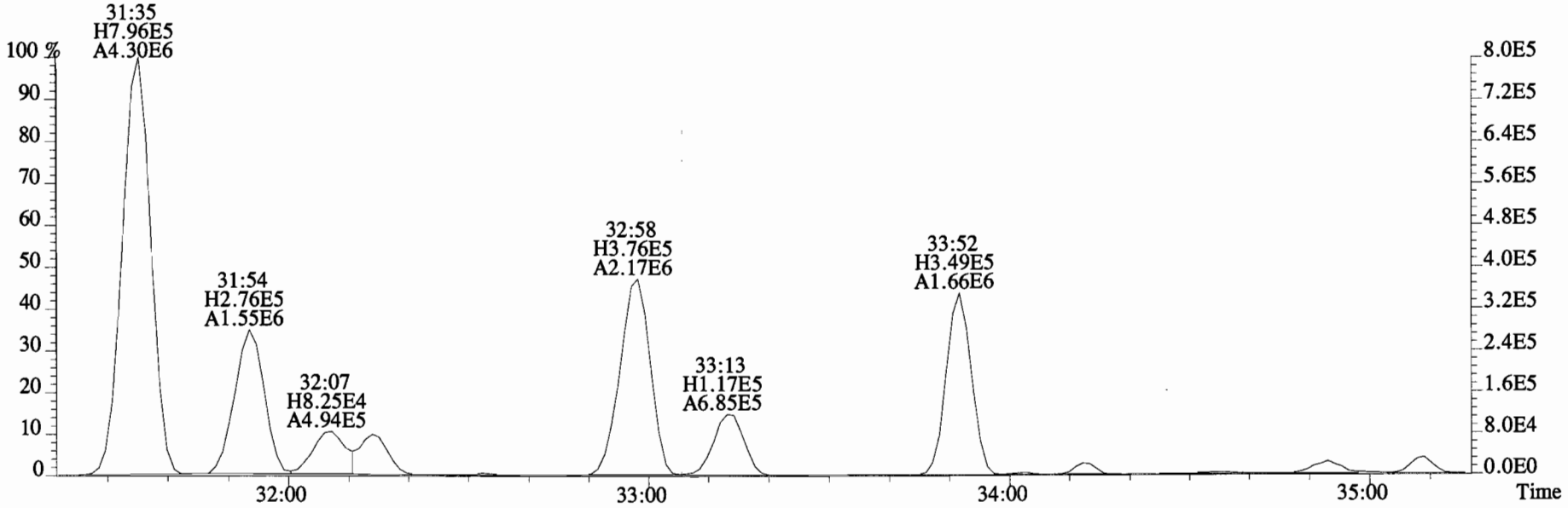
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



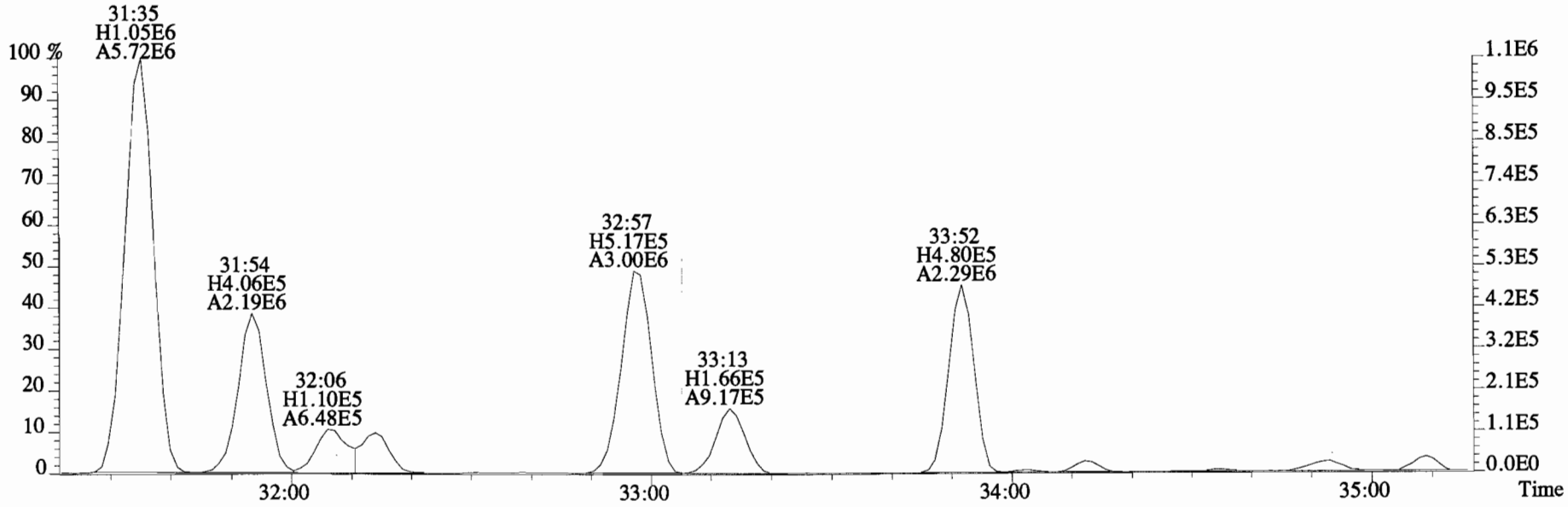
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



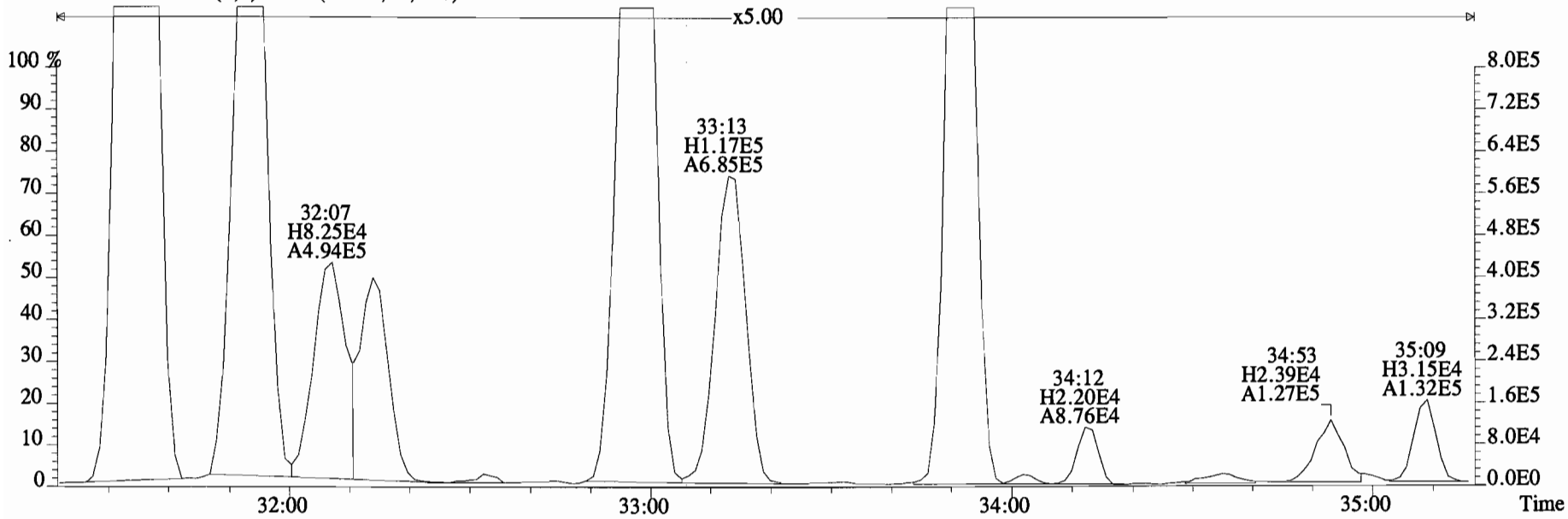
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



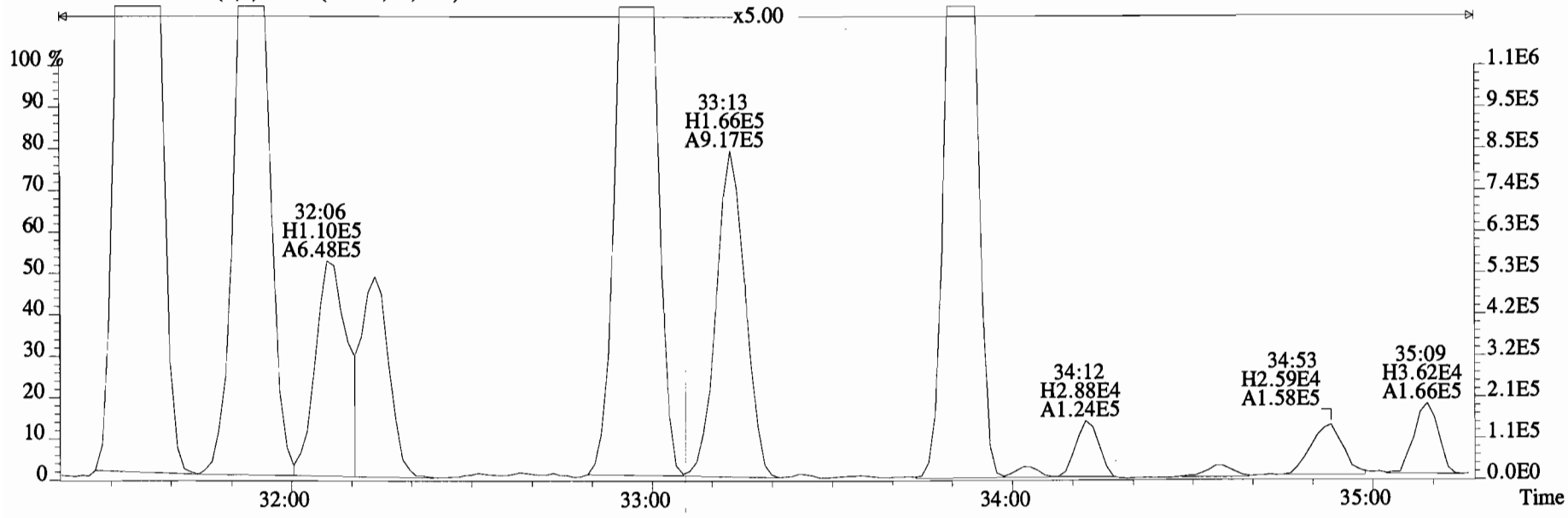
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



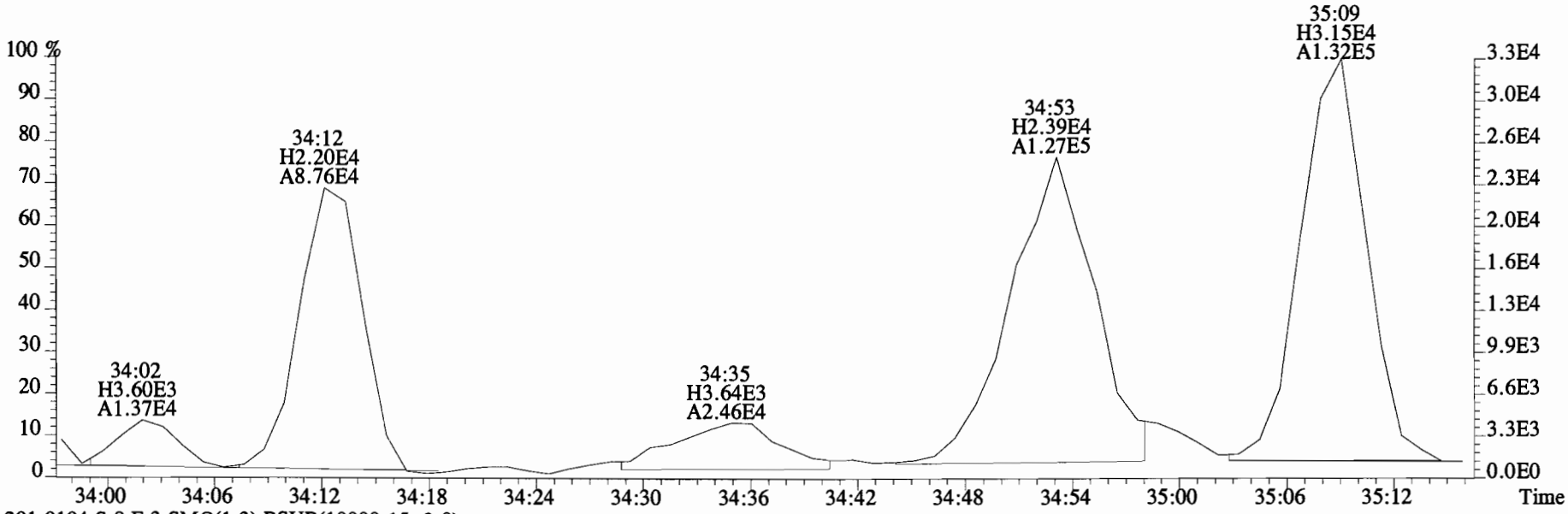
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



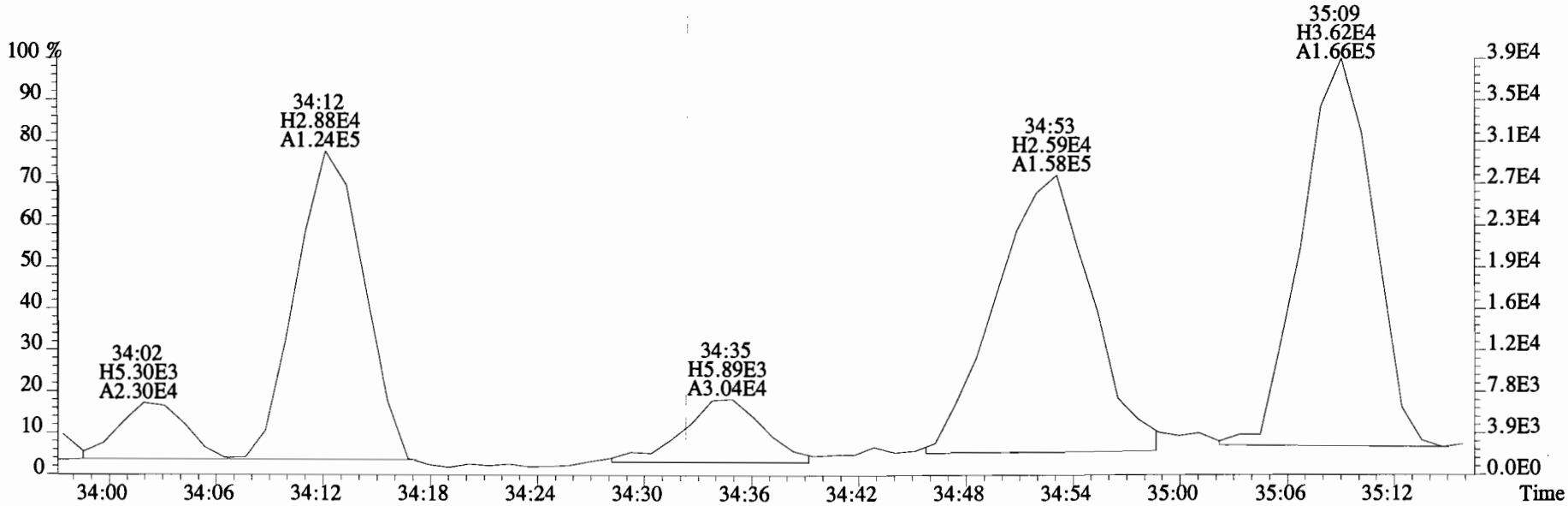
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



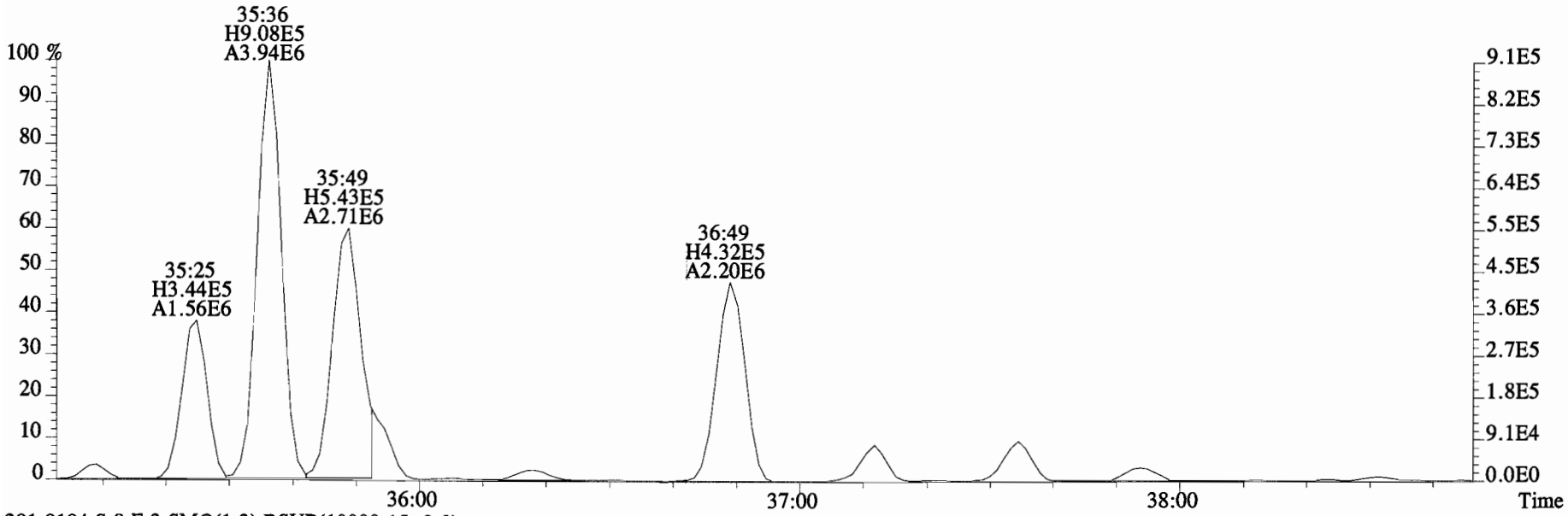
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



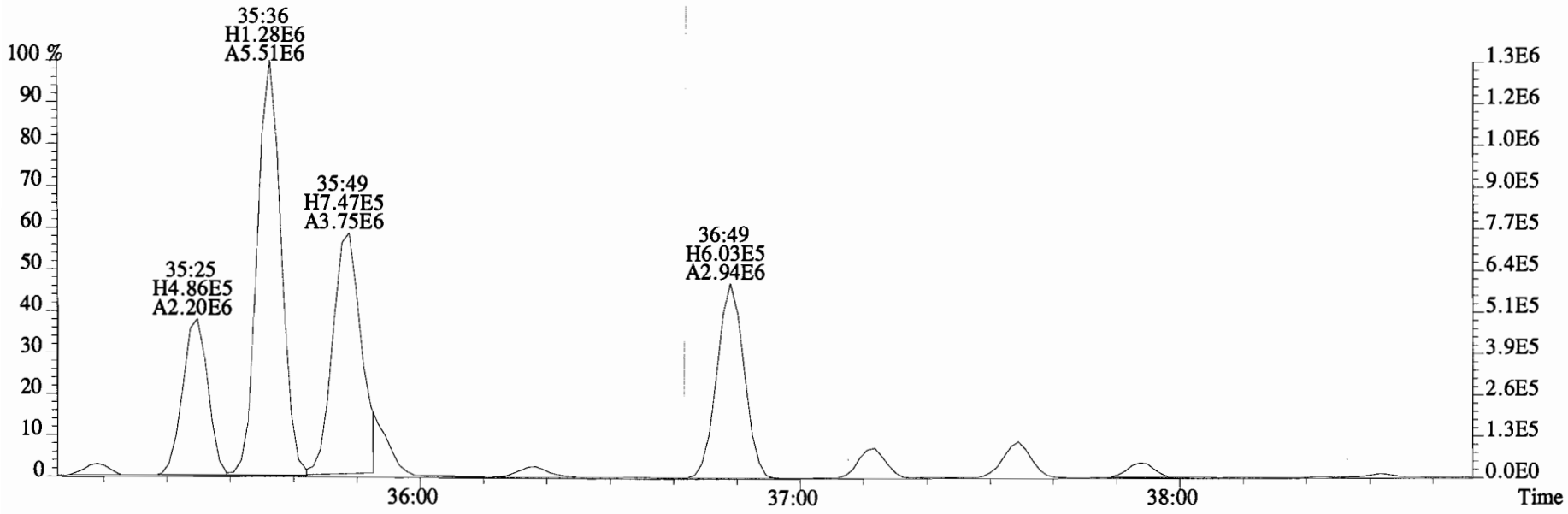
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



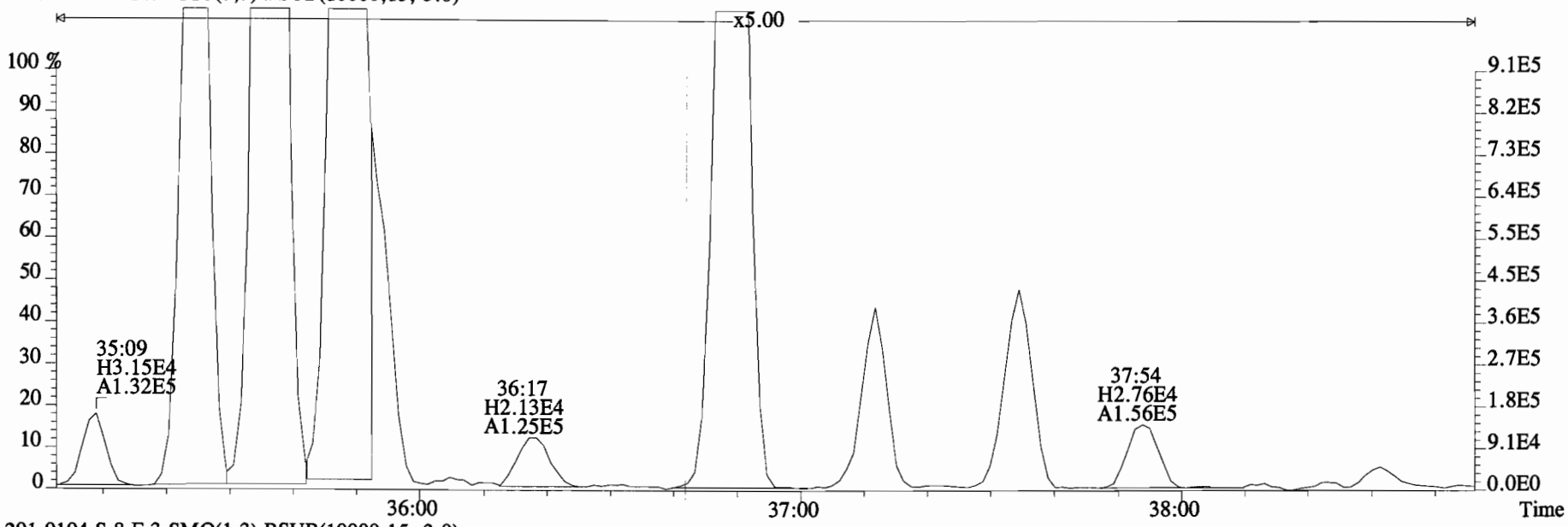
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



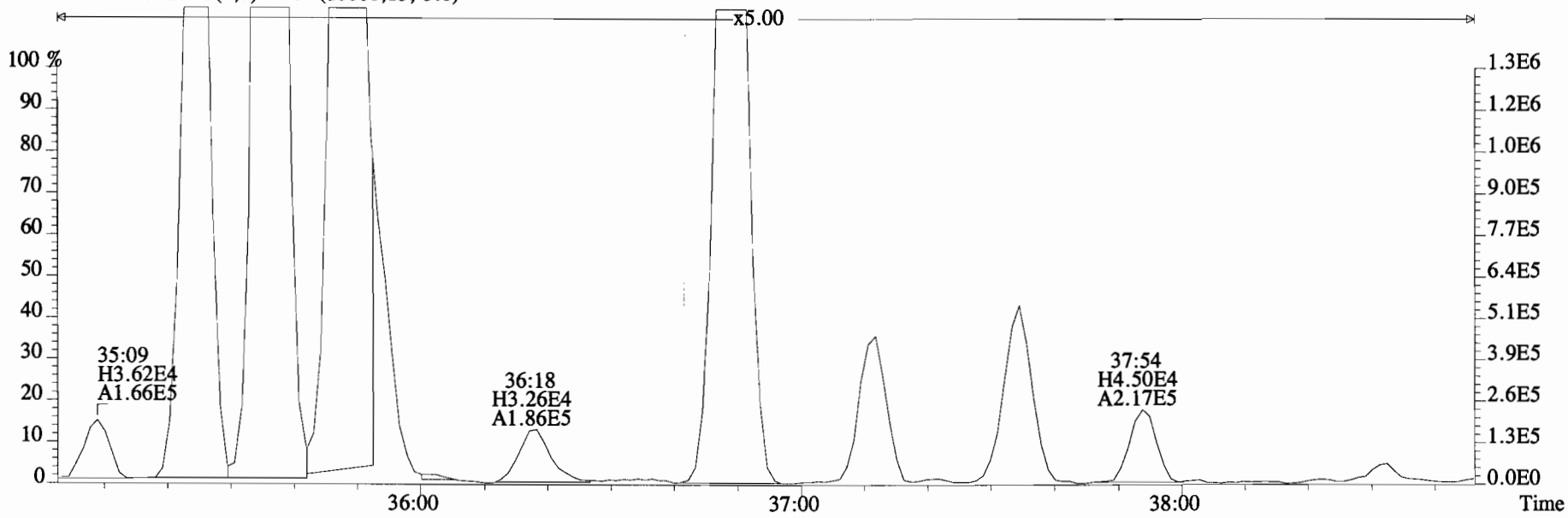
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



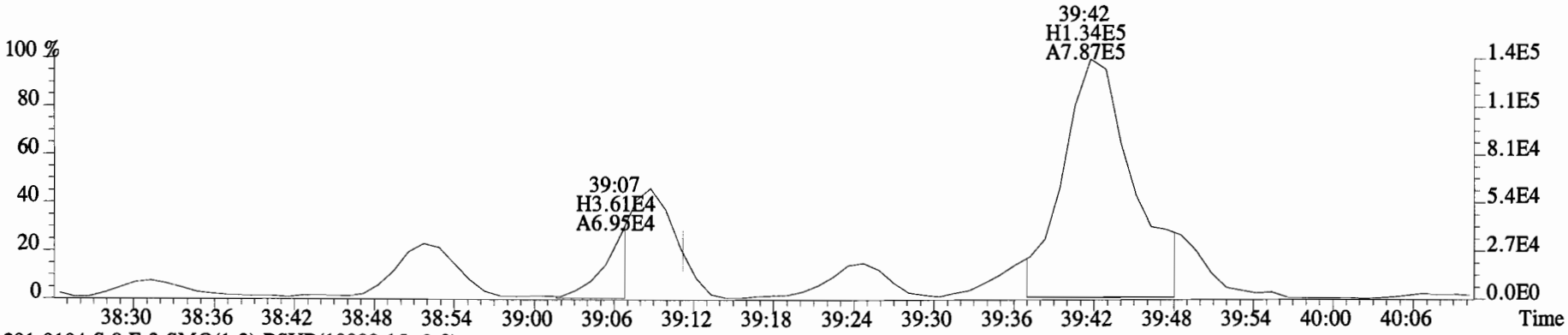
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



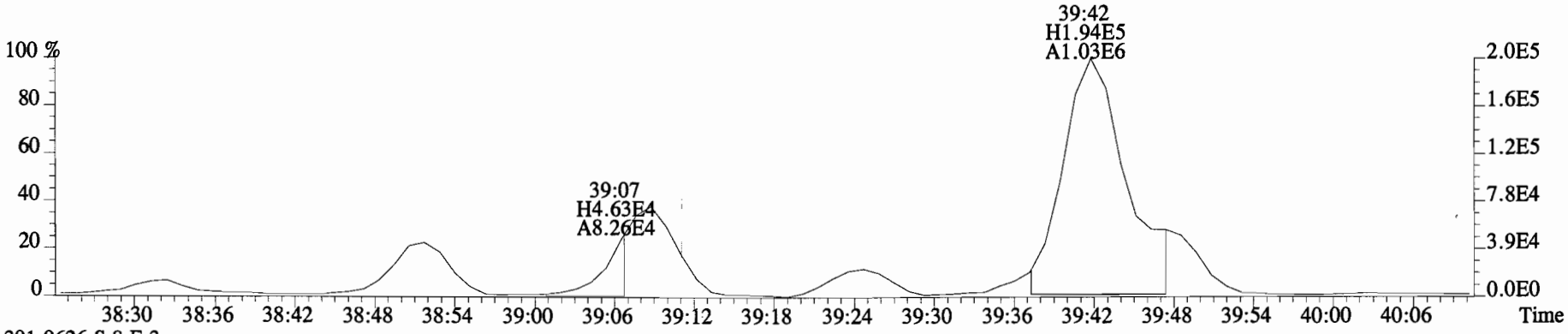
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



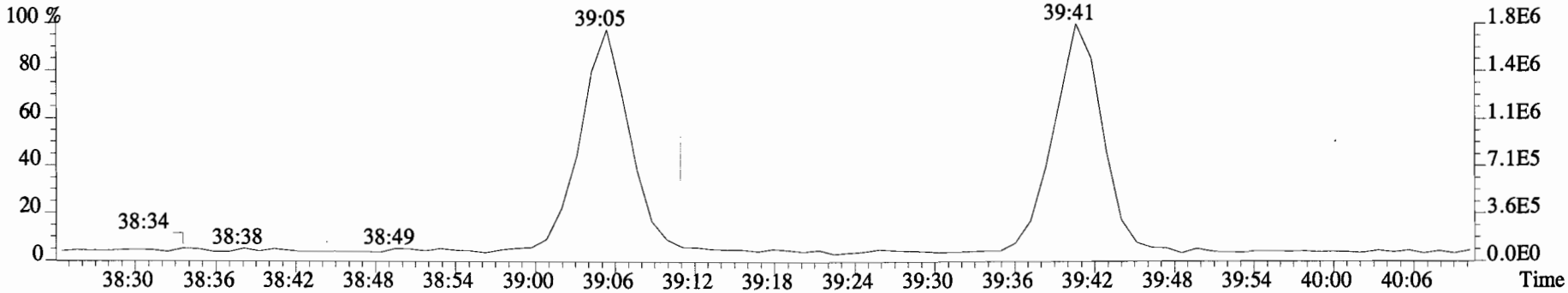
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



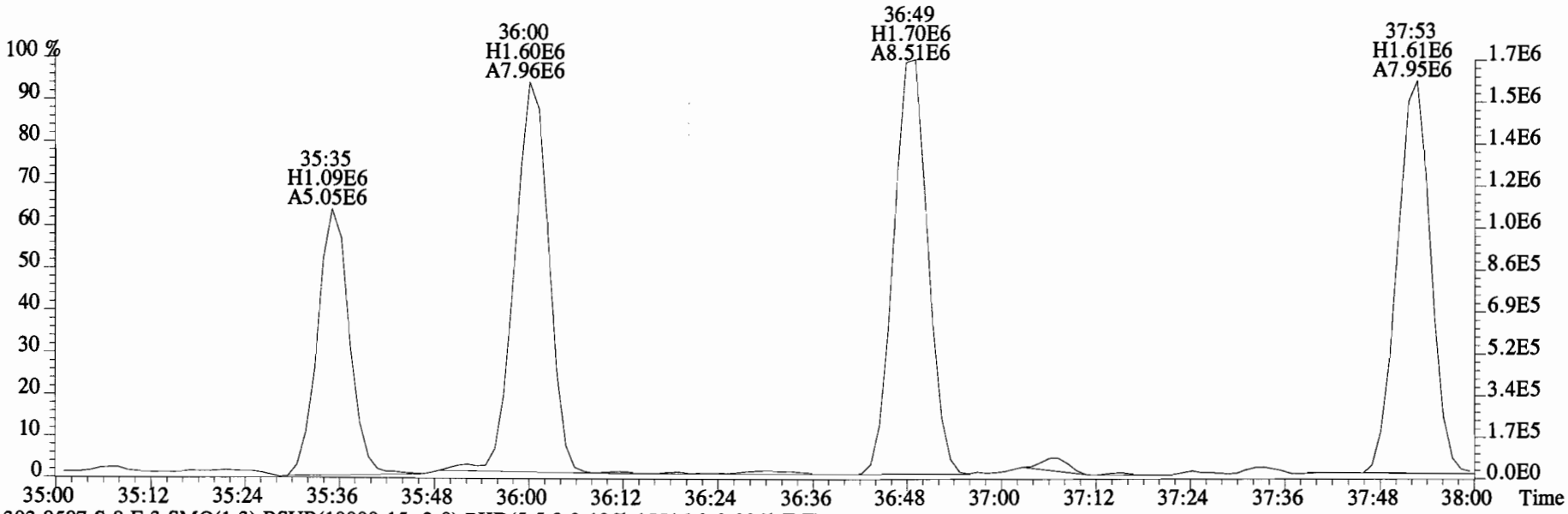
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



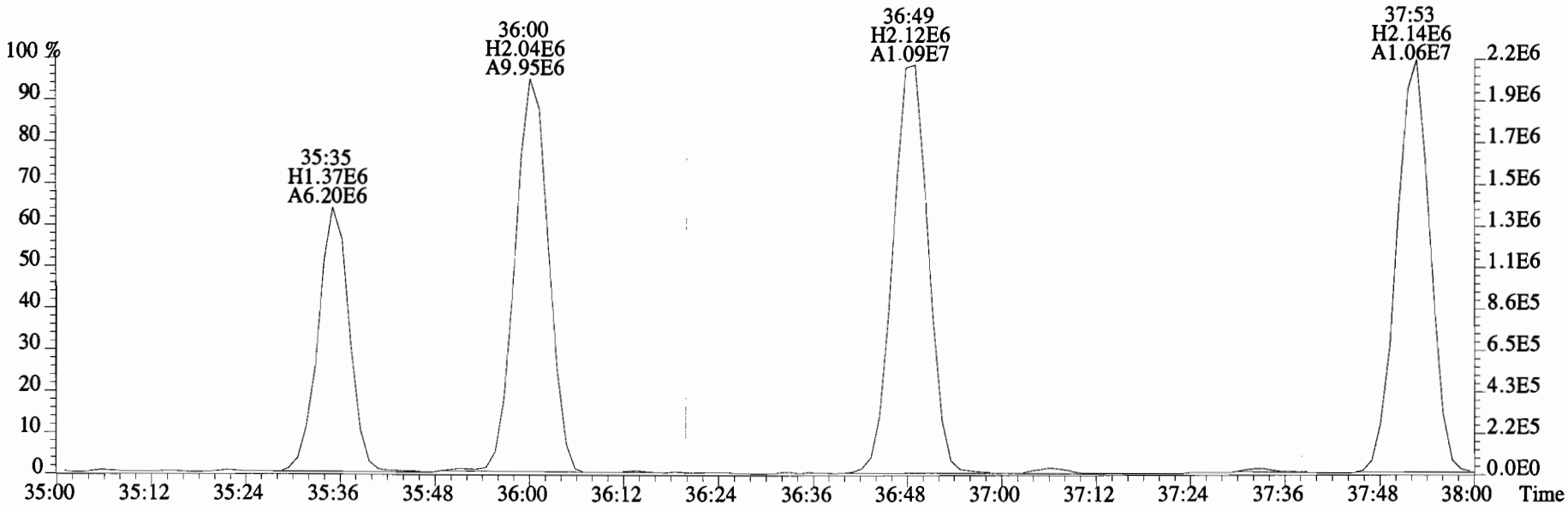
301.9626 S:8 F:3



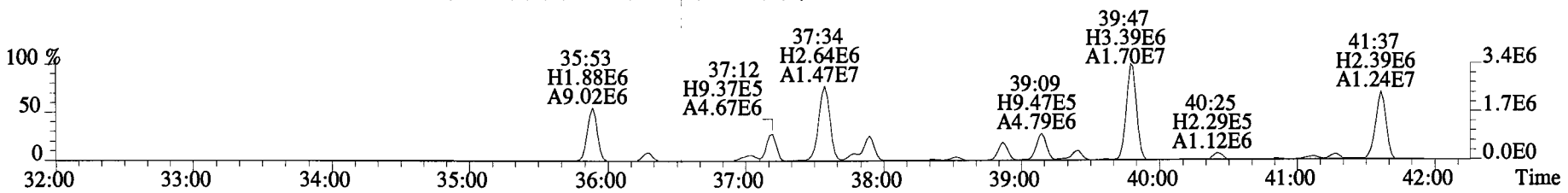
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,31672.0,0.00%,F,F)



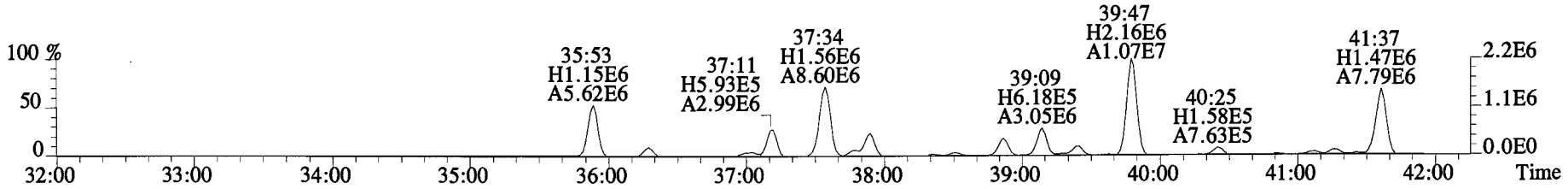
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15516.0,0.00%,F,F)



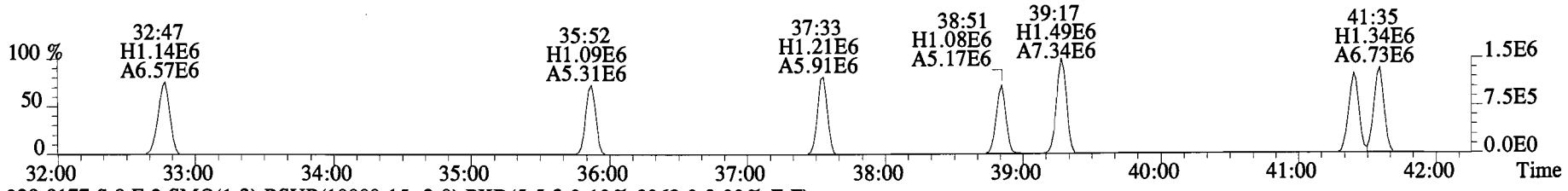
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3624.0,0.00%,F,F)



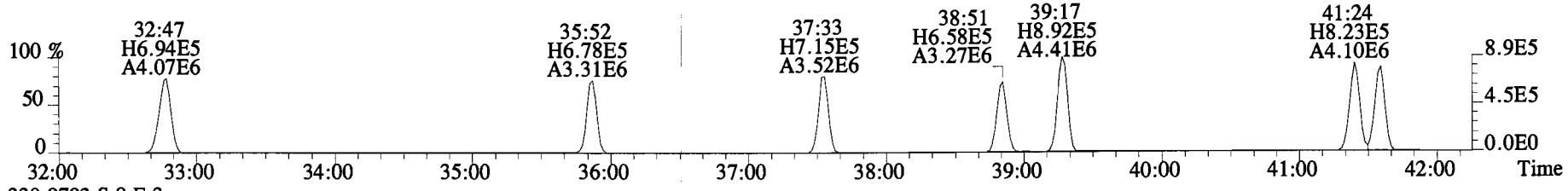
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



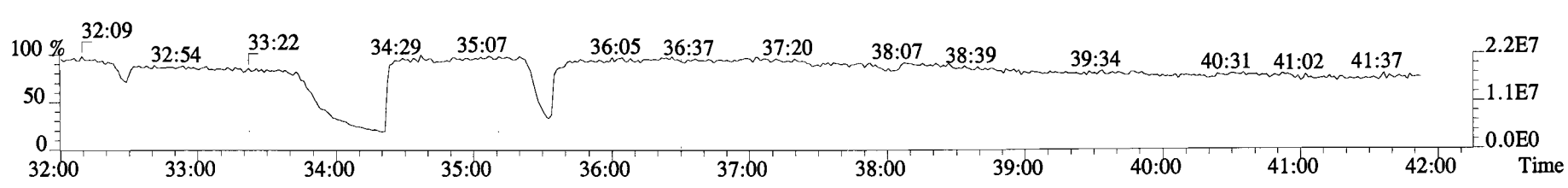
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2492.0,0.00%,F,F)



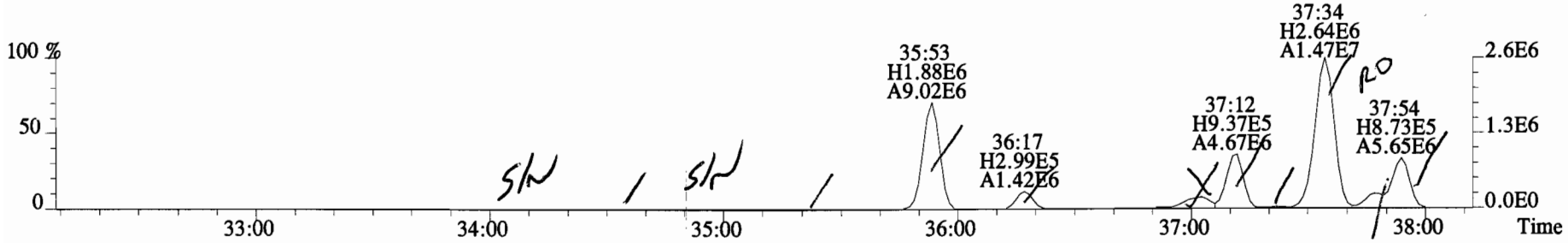
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2068.0,0.00%,F,F)



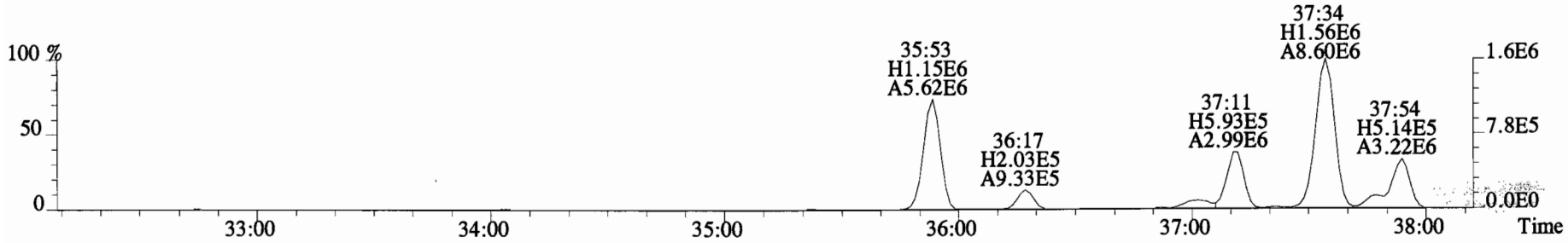
330.9792 S:8 F:3



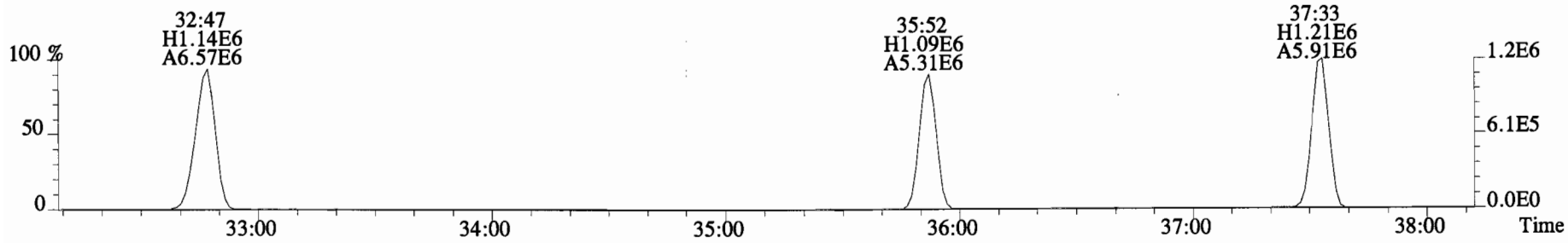
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3624.0,0.00%,F,F)



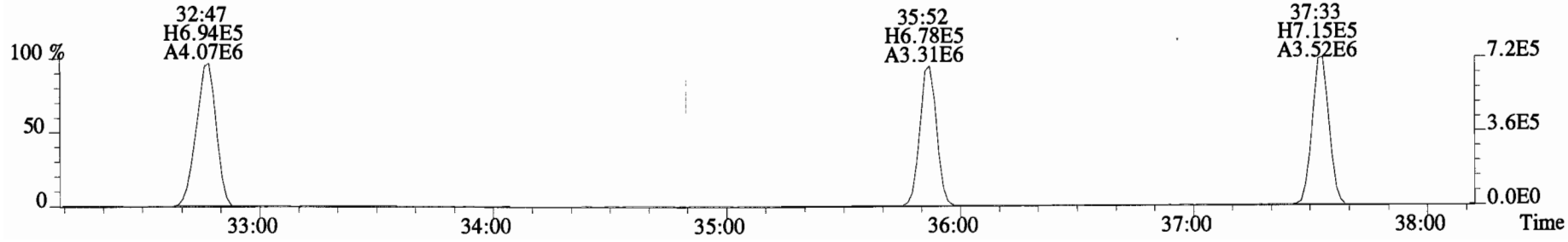
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



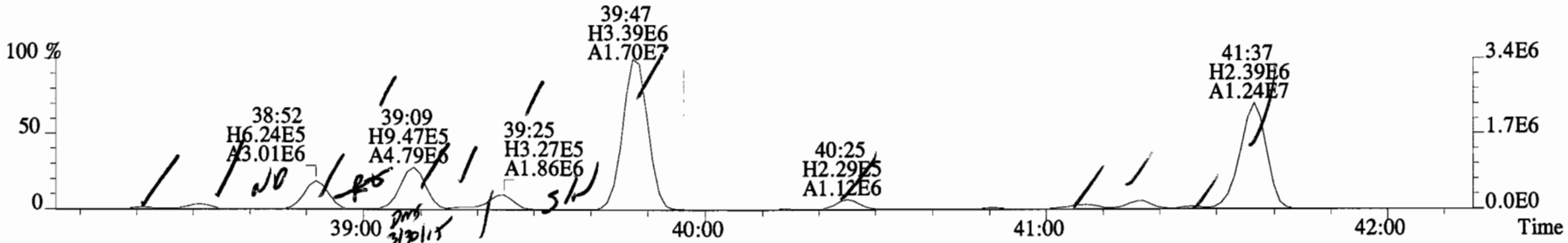
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2492.0,0.00%,F,F)



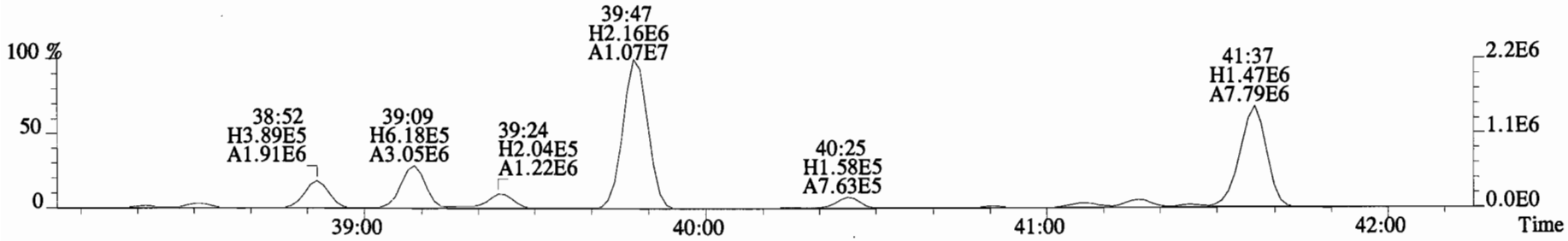
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2068.0,0.00%,F,F)



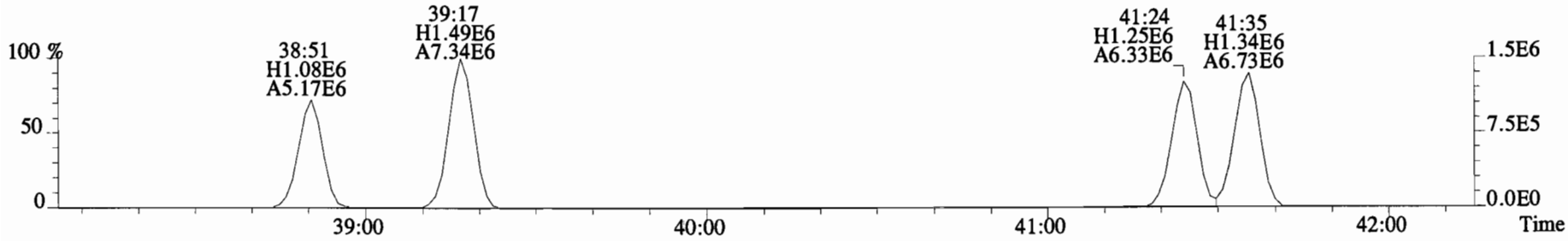
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3624.0,0.00%,F,F)



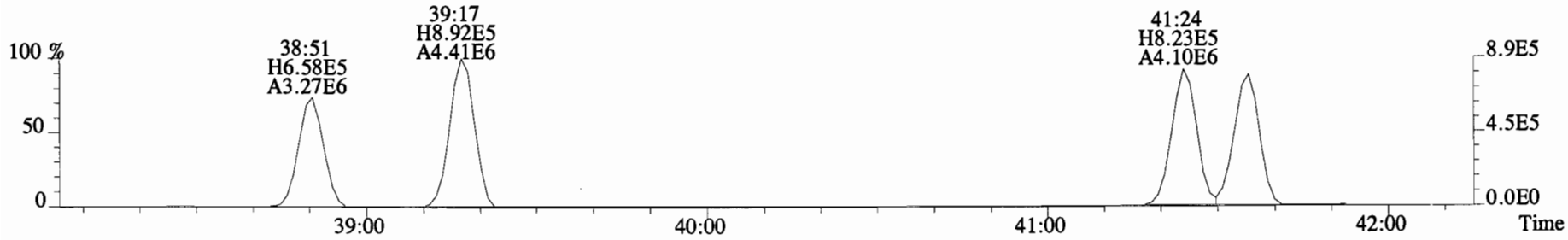
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



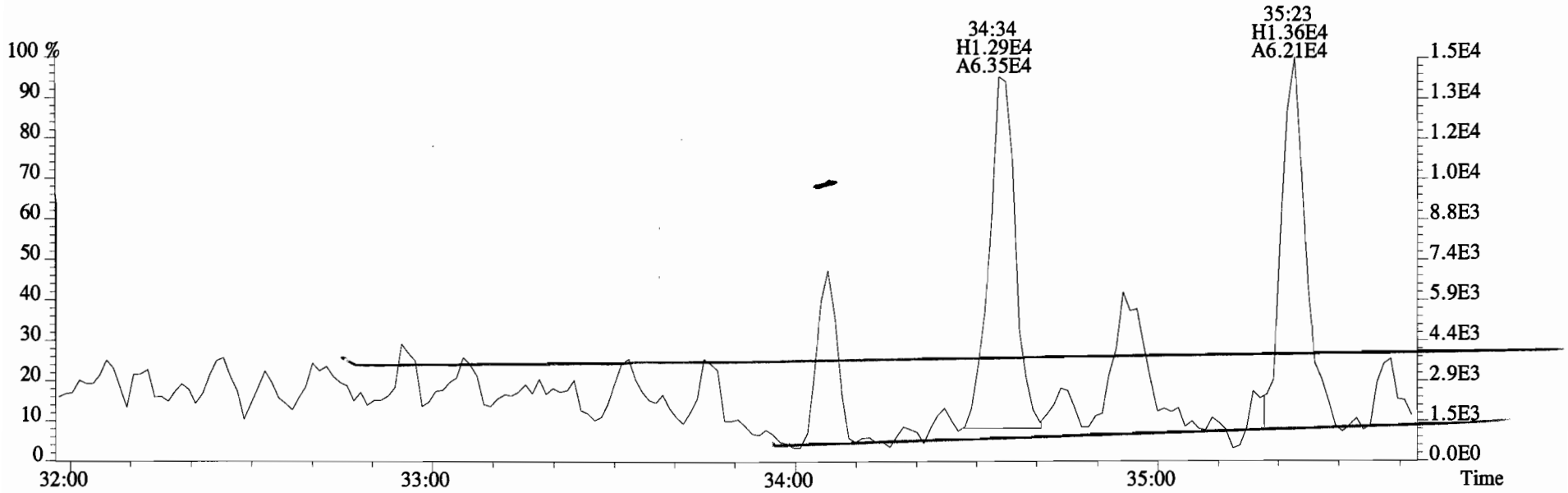
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2492.0,0.00%,F,F)



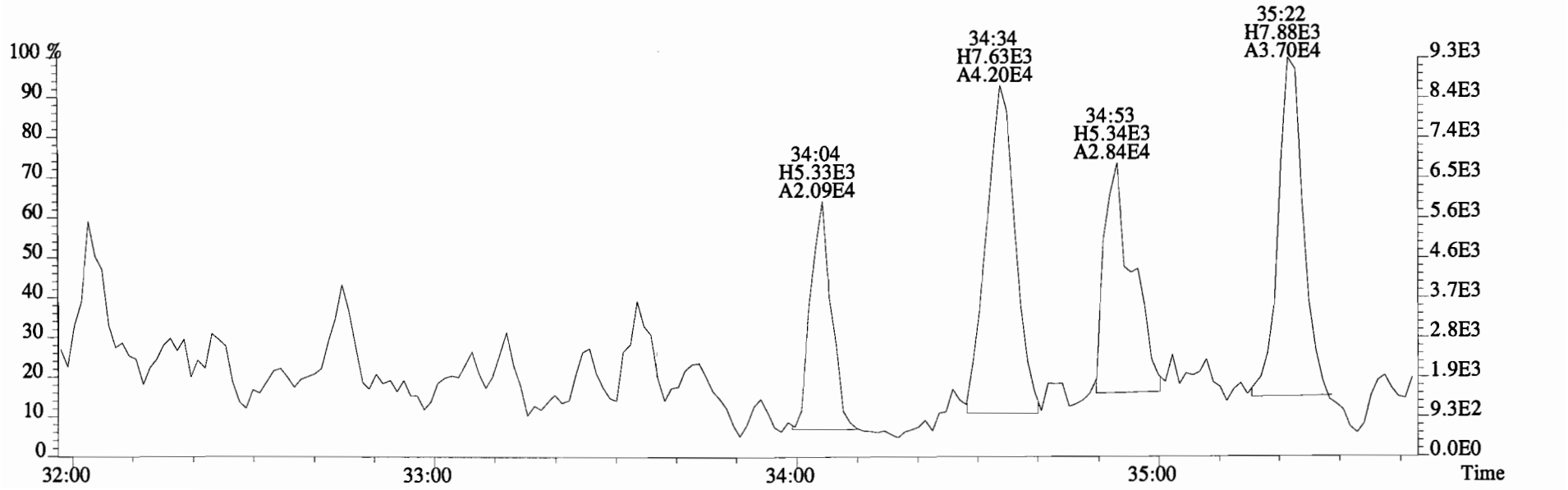
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2068.0,0.00%,F,F)



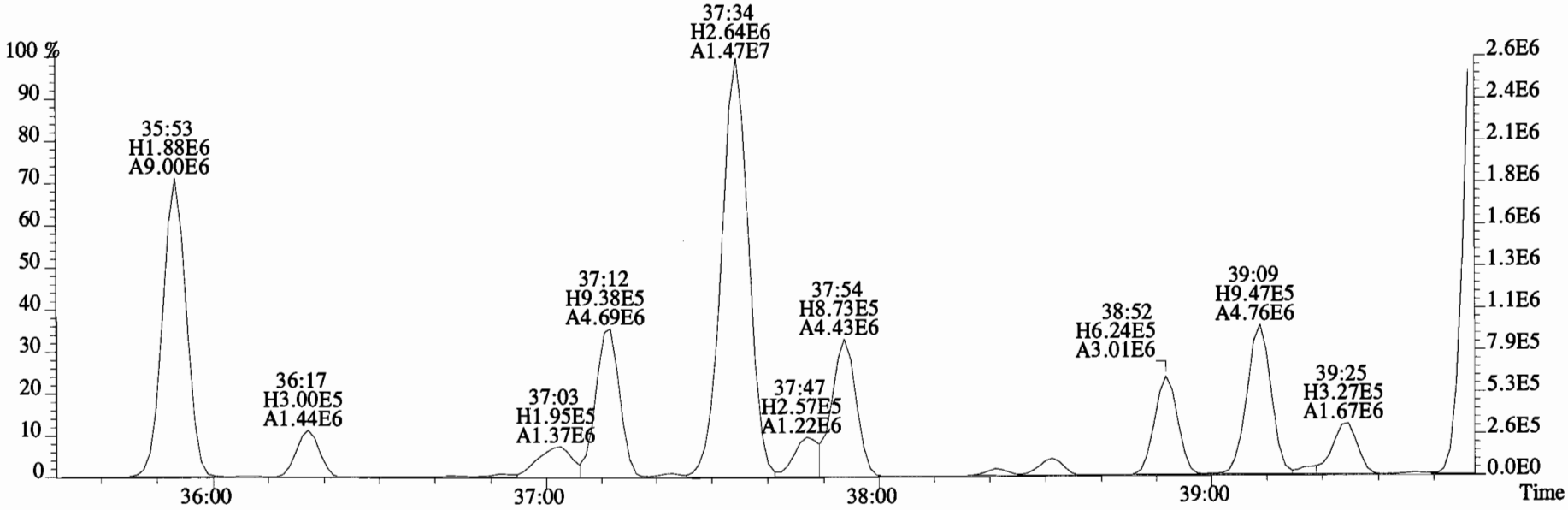
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



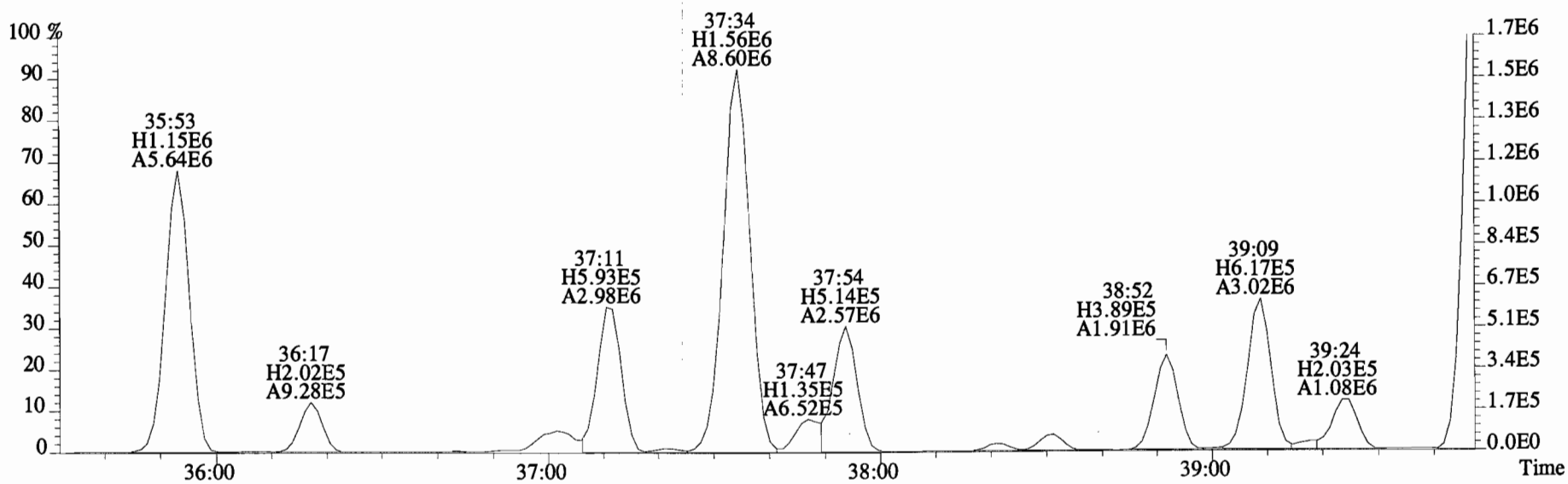
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



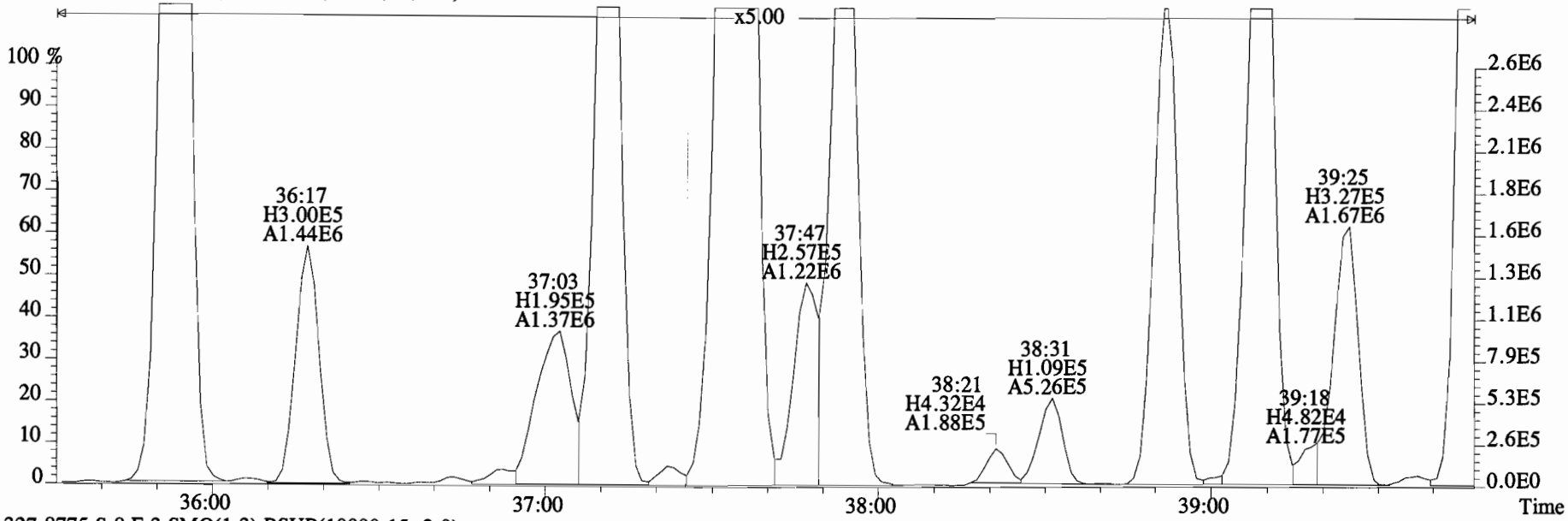
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



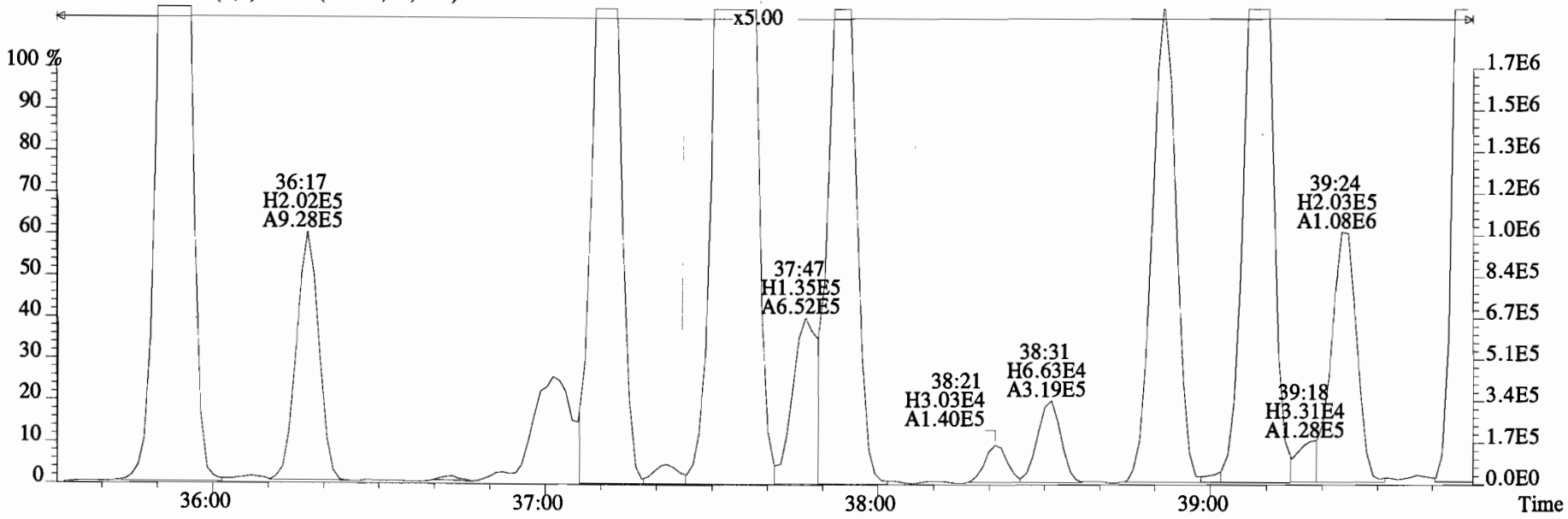
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



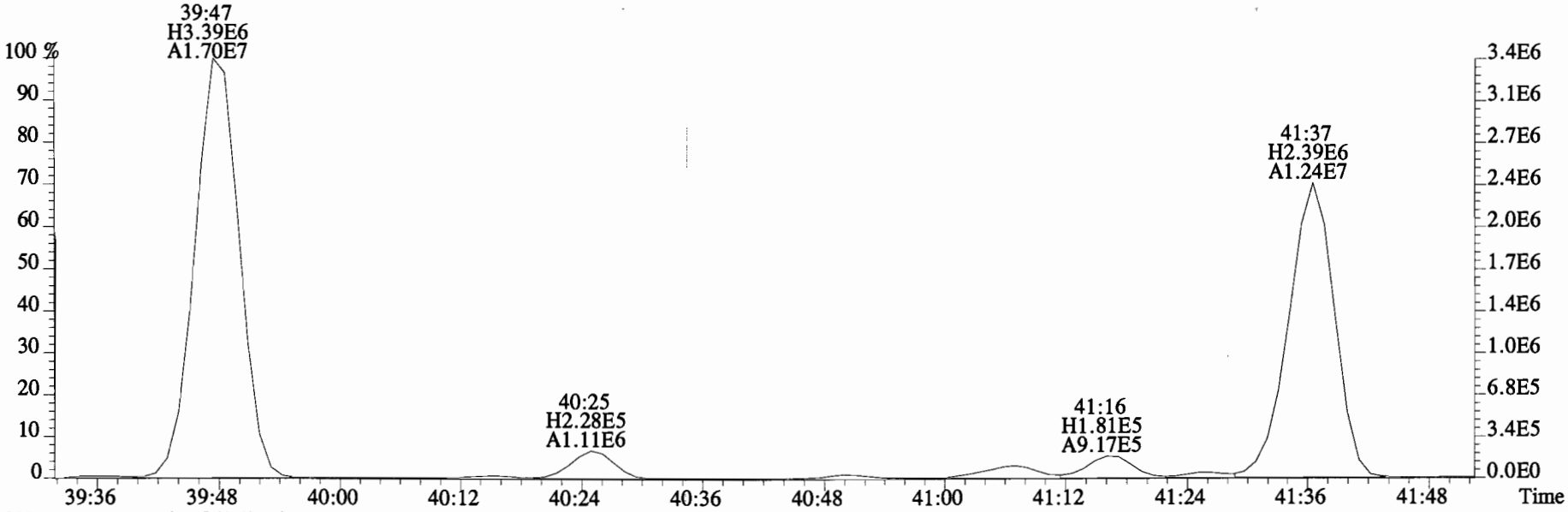
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



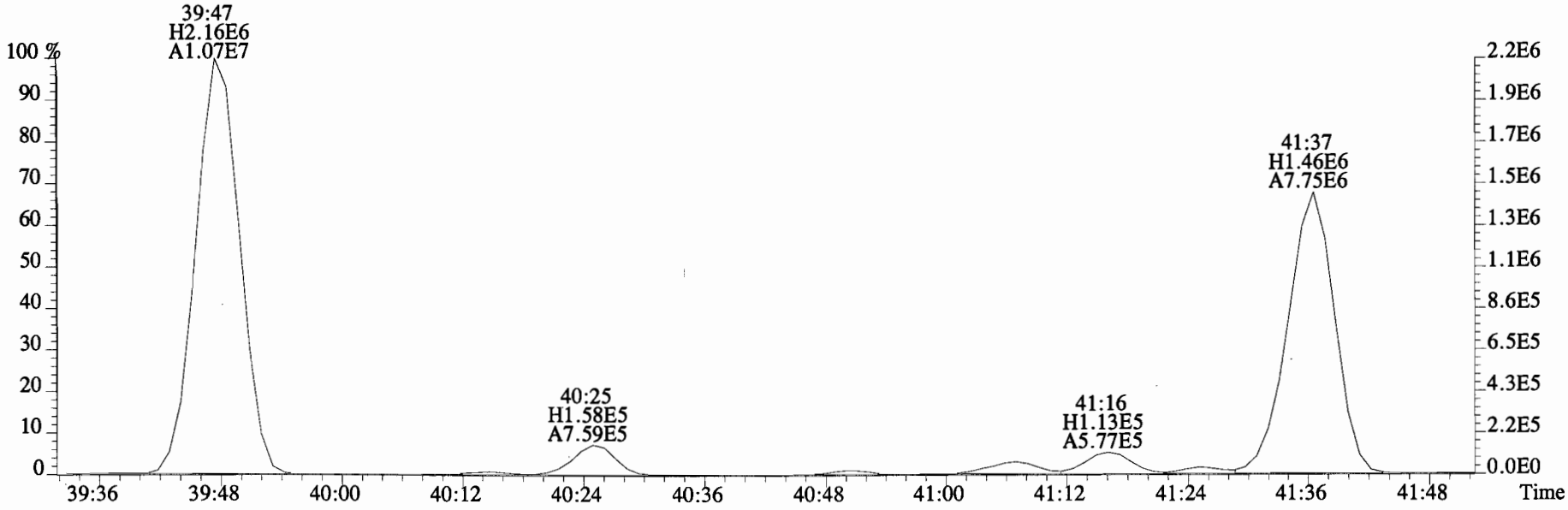
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



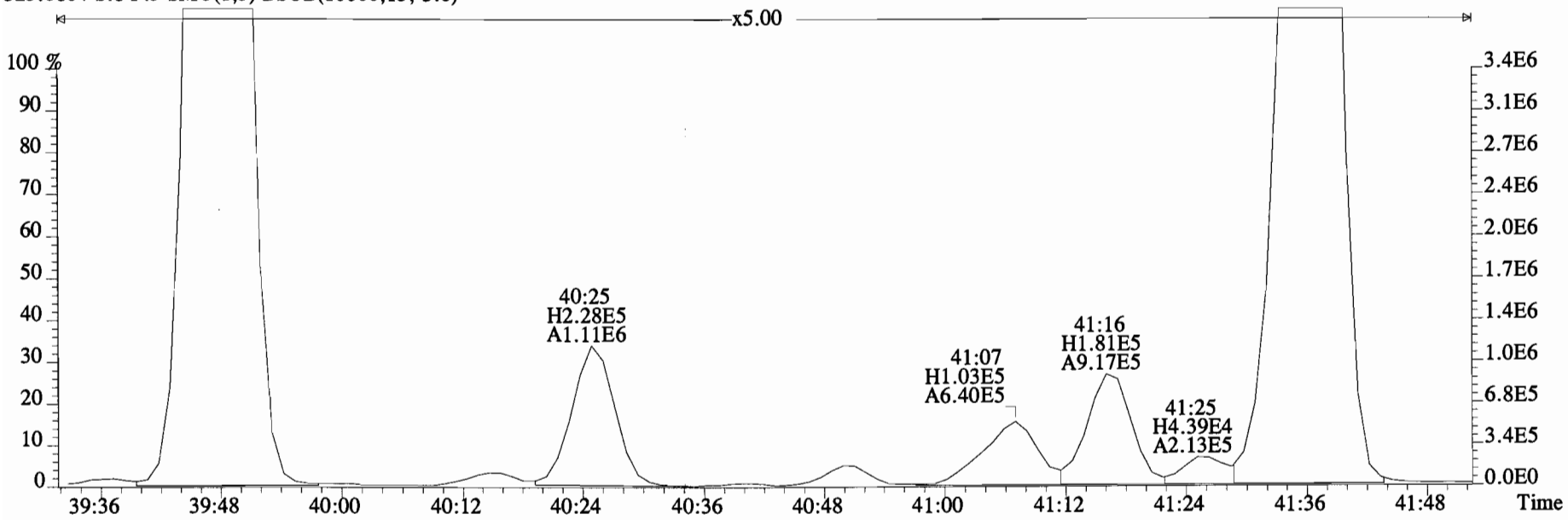
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



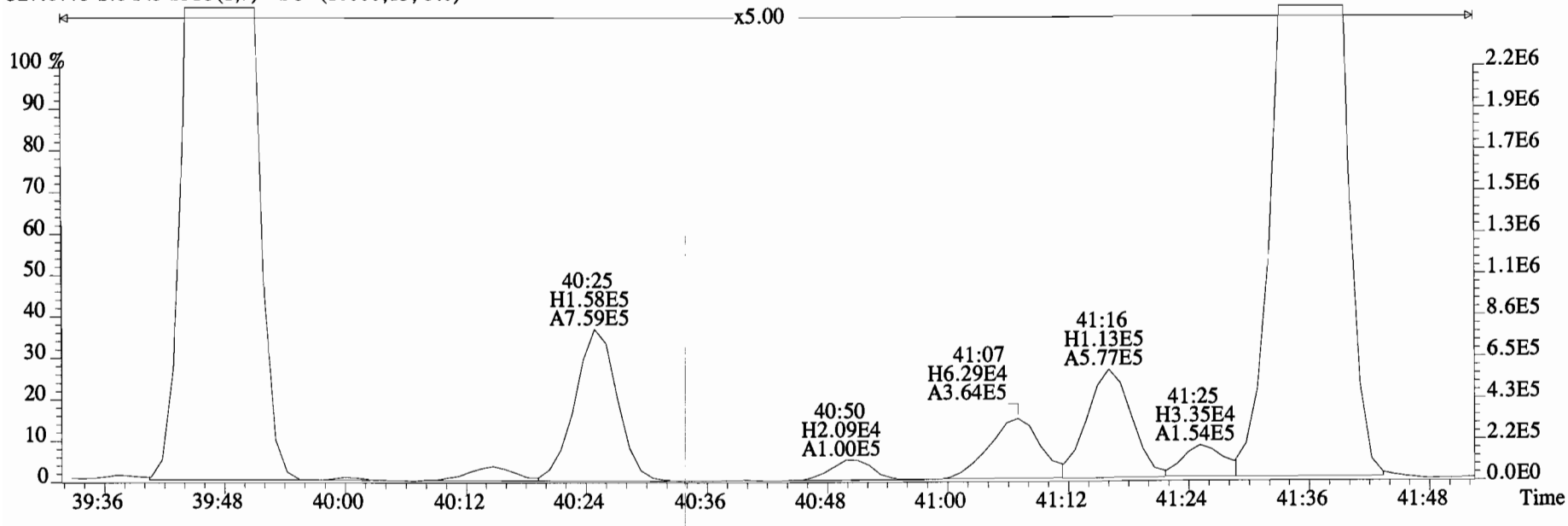
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



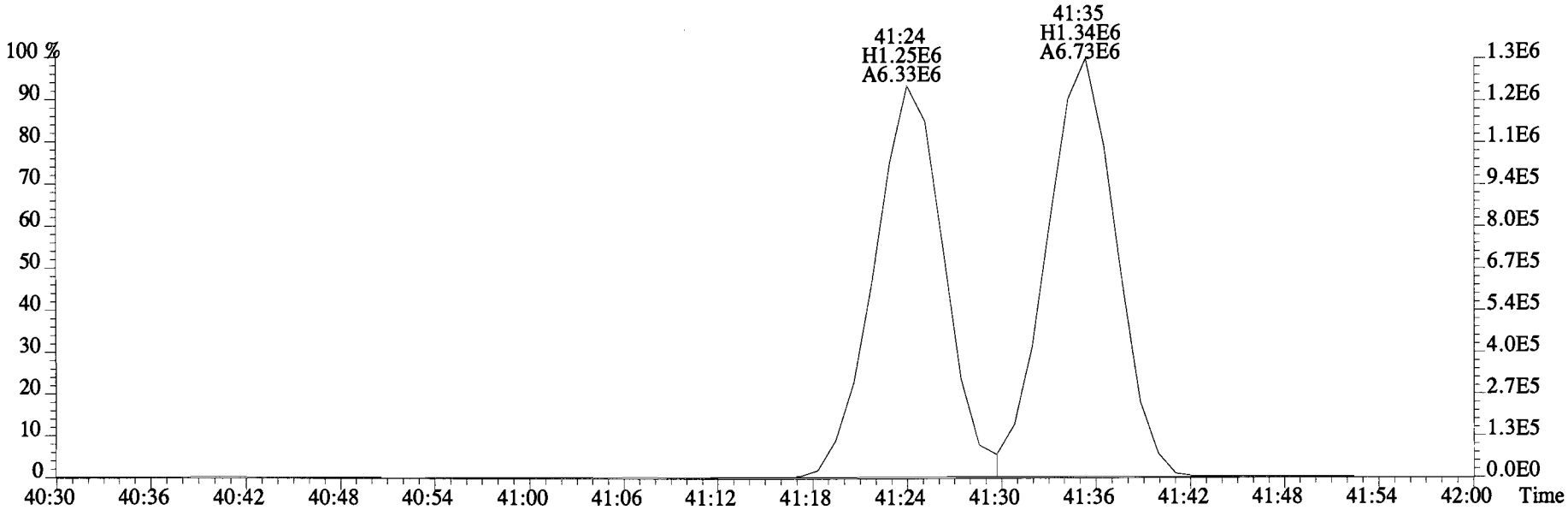
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



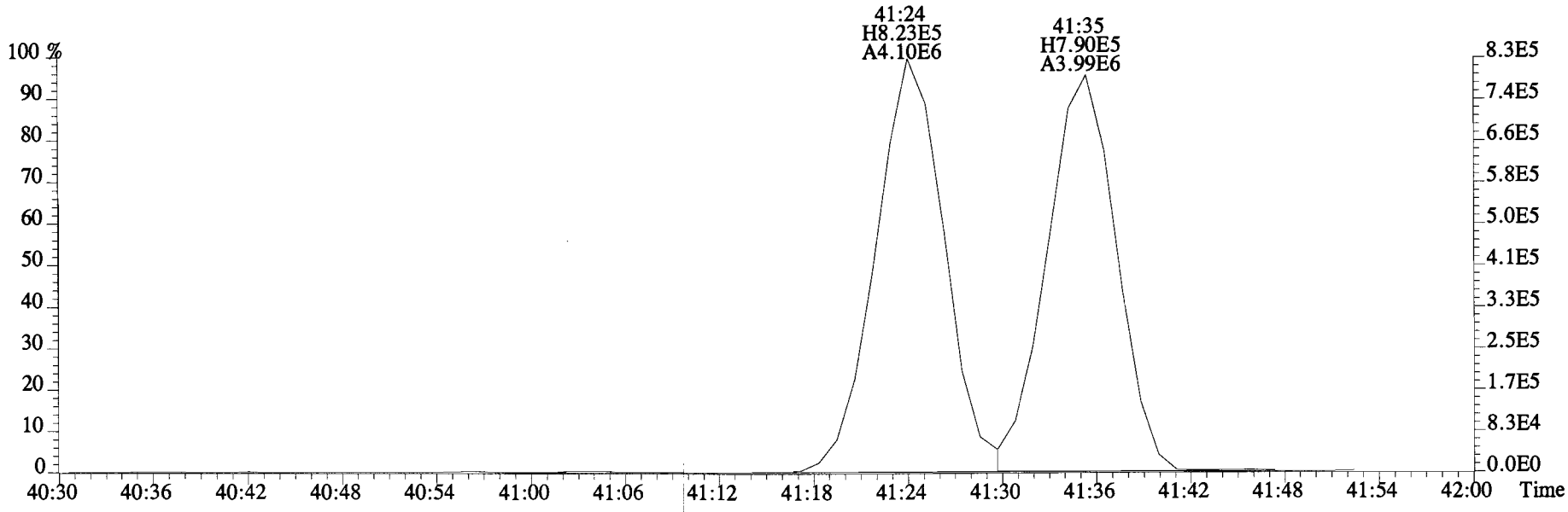
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



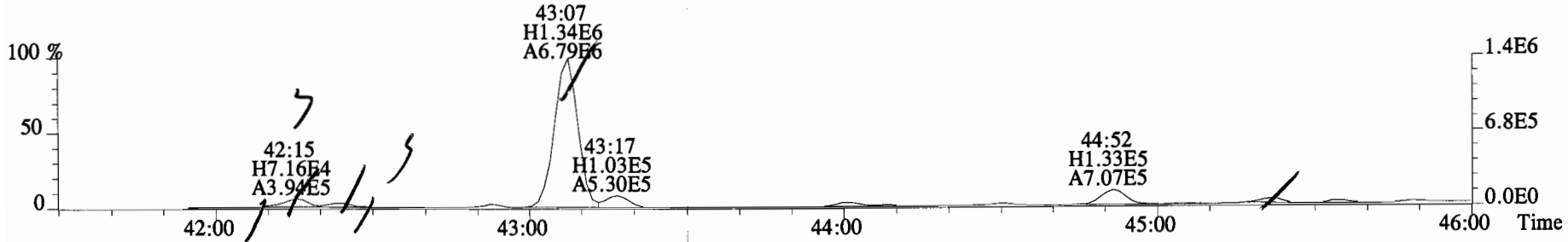
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2492.0,0.00%,F,F)



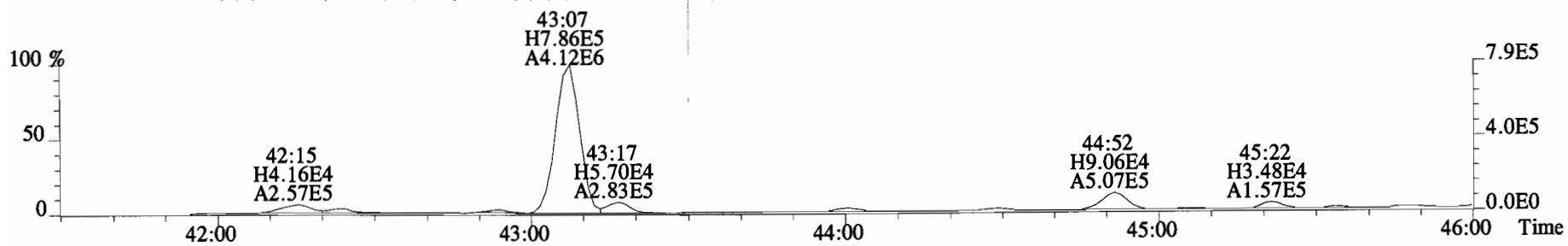
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2068.0,0.00%,F,F)



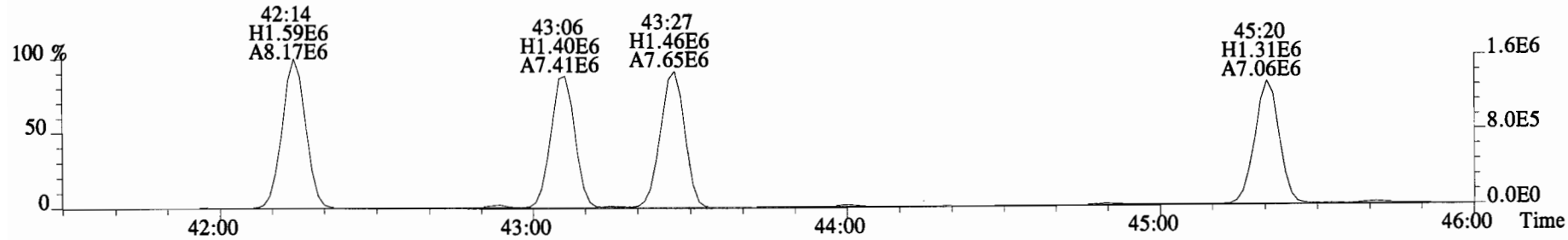
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16652.0,0.00%,F,F)



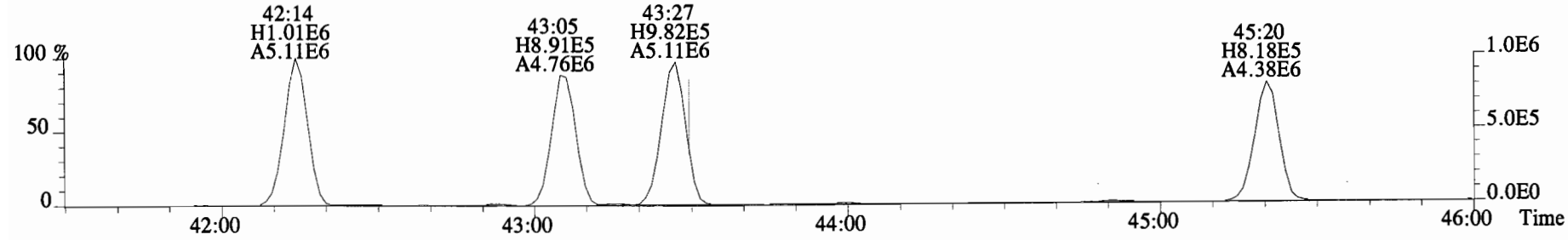
327.8775 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12344.0,0.00%,F,F)



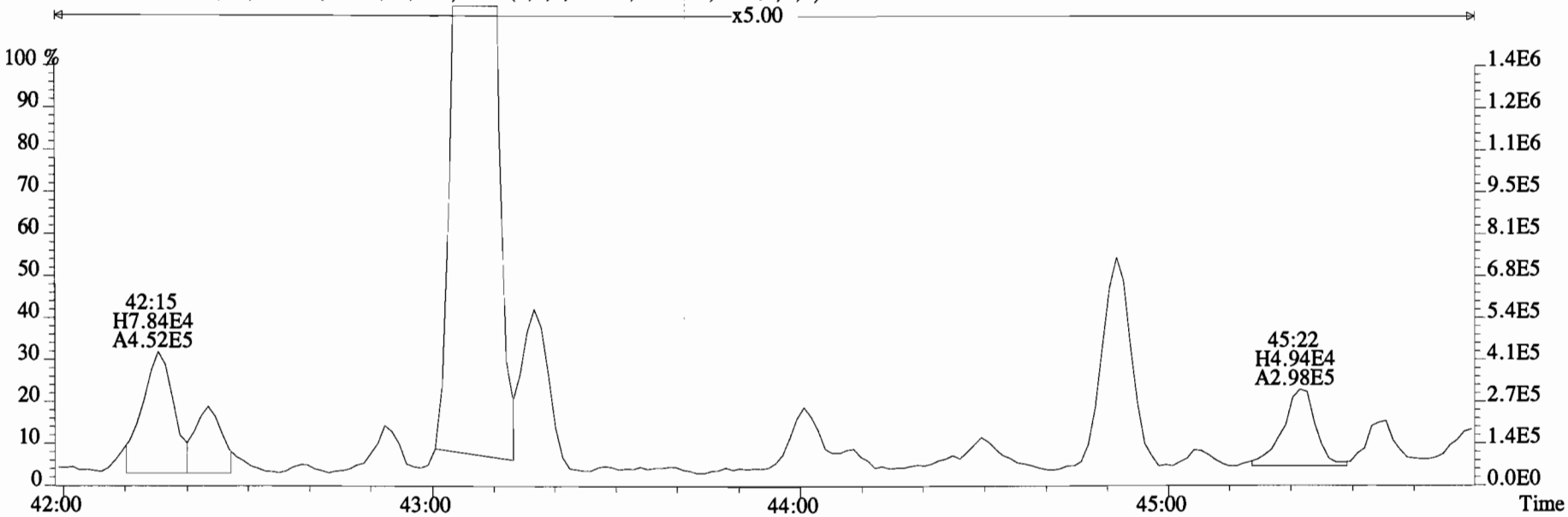
337.9207 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3232.0,0.00%,F,F)



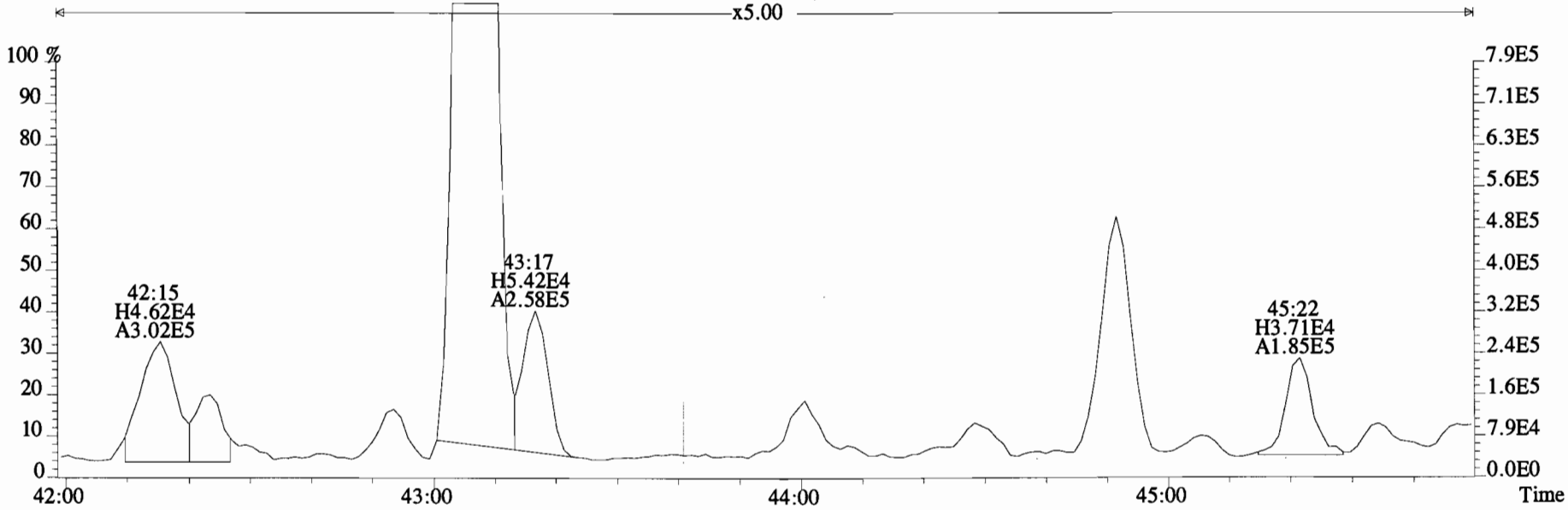
339.9177 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2712.0,0.00%,F,F)



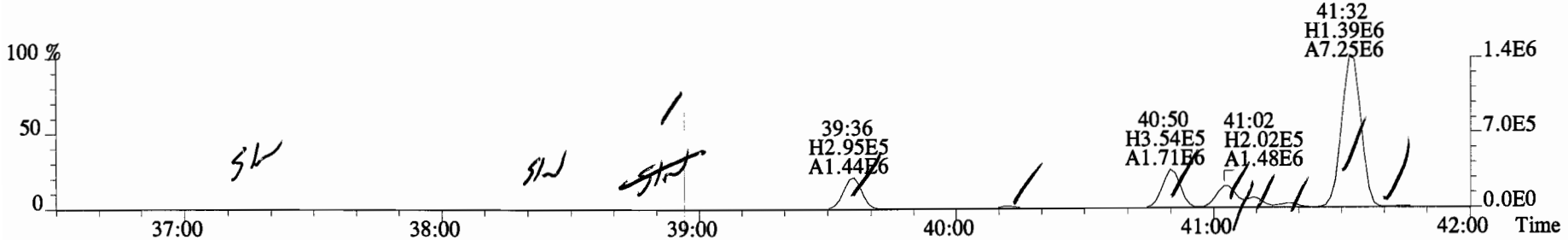
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16652.0,0.00%,F,F)



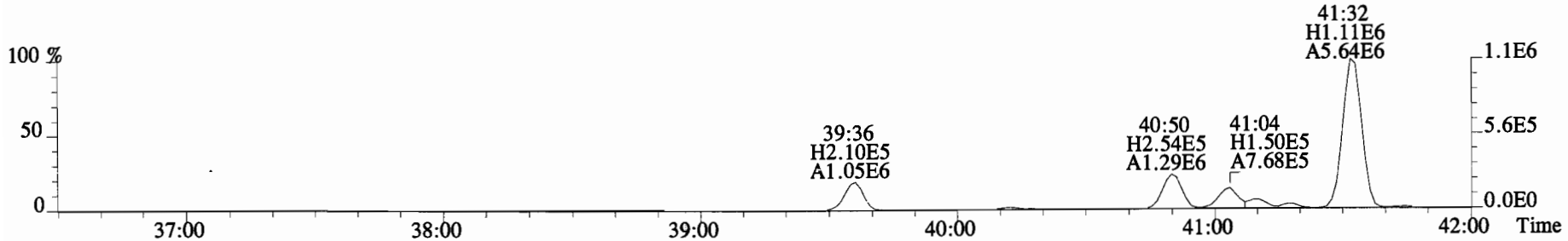
327.8775 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,12344.0,0.00%,F,F)



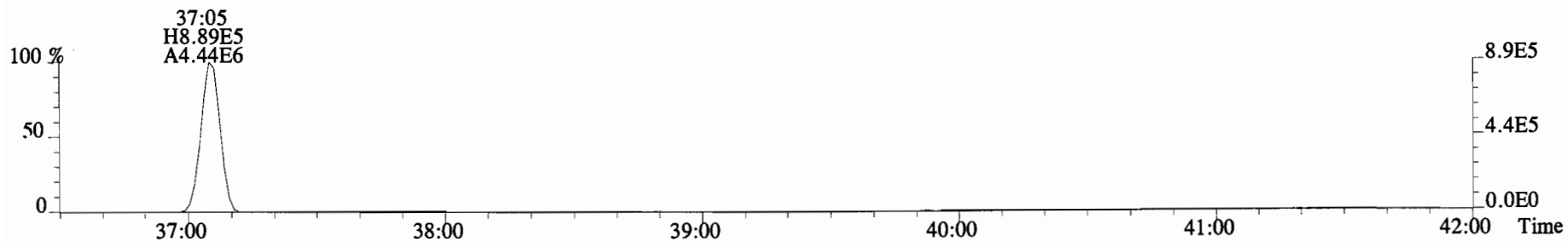
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1560.0,0.00%,F,F)



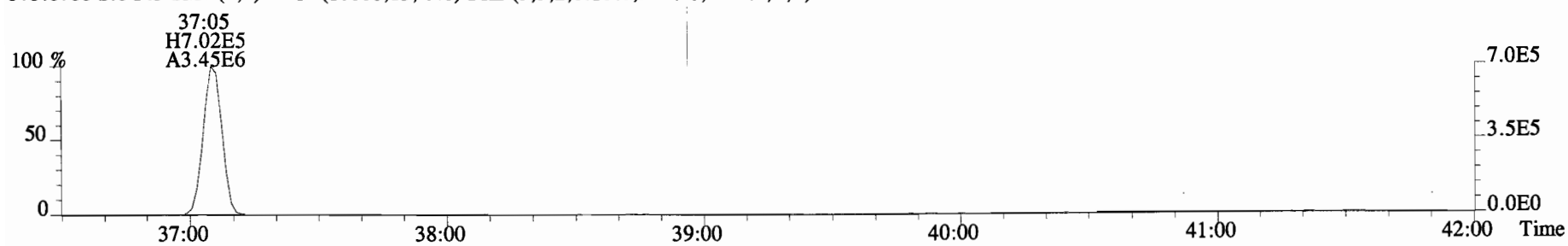
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



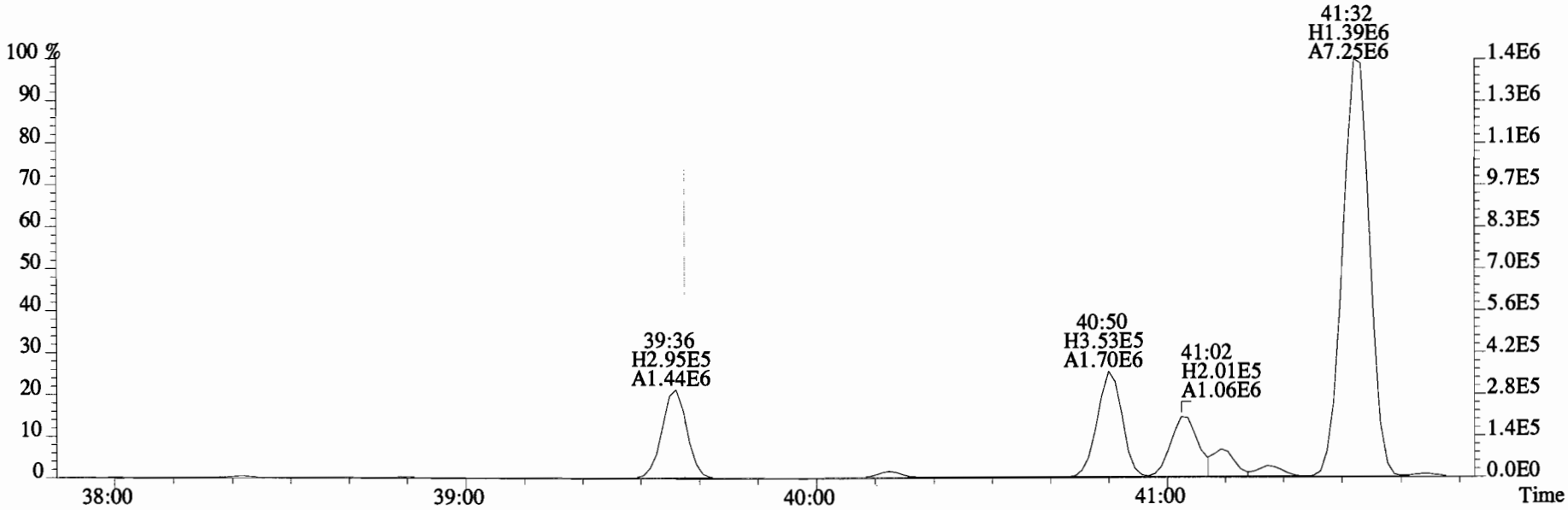
371.8817 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1636.0,0.00%,F,F)



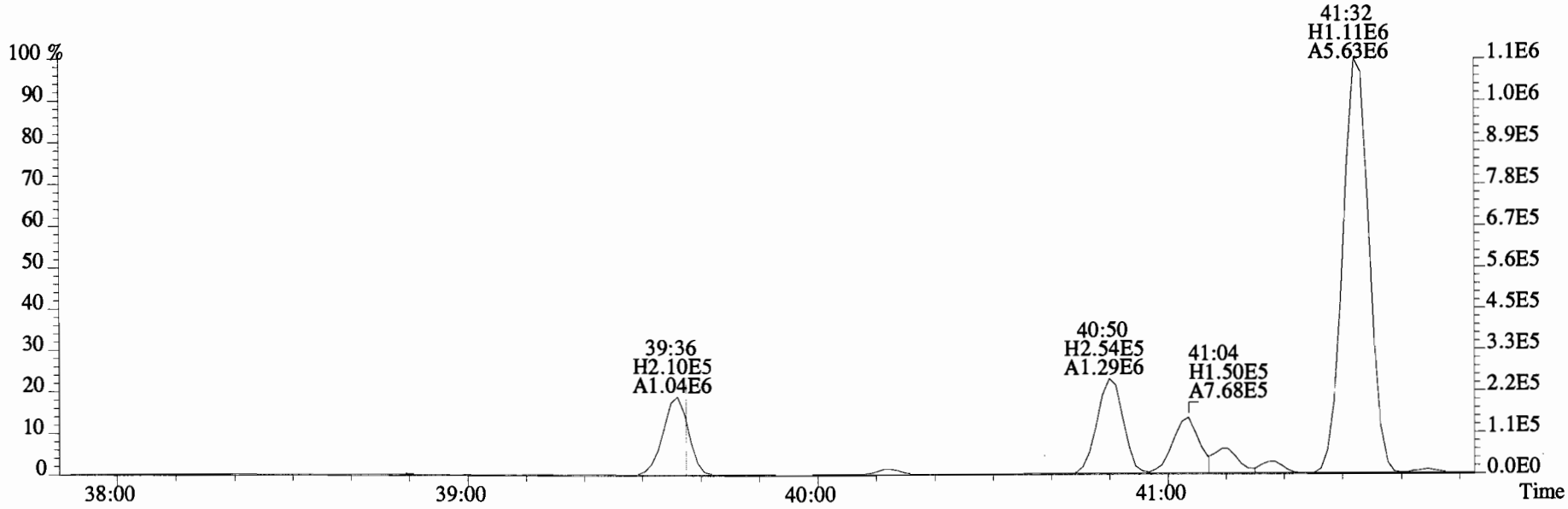
373.8788 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1456.0,0.00%,F,F)



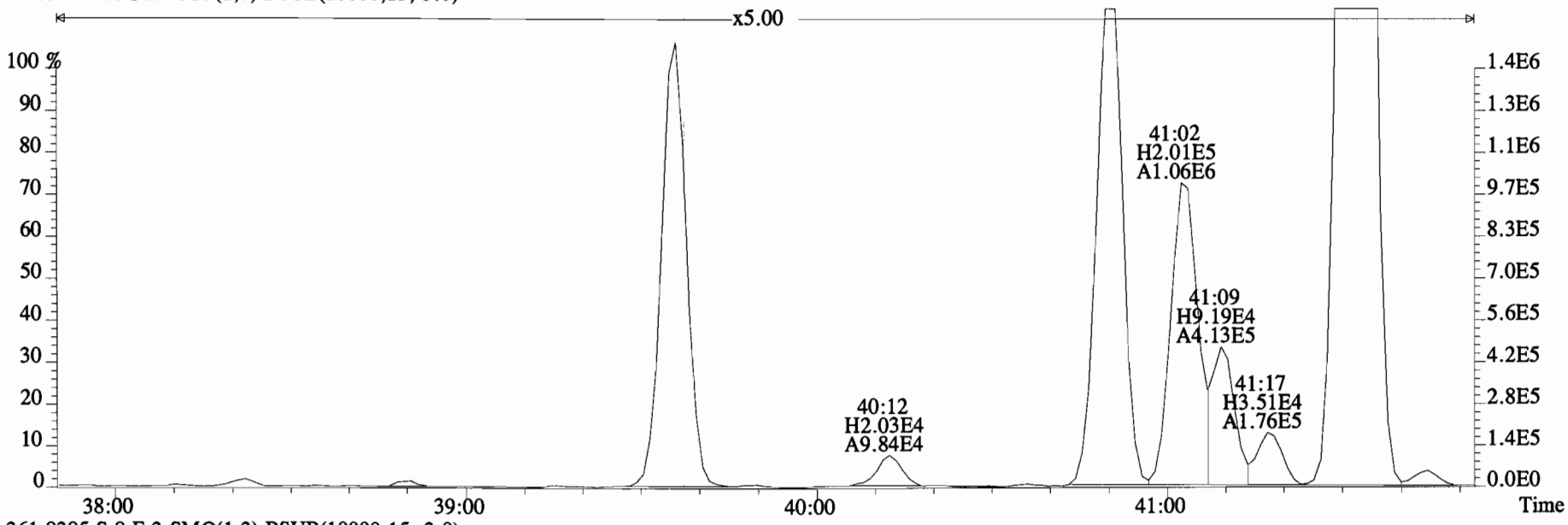
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



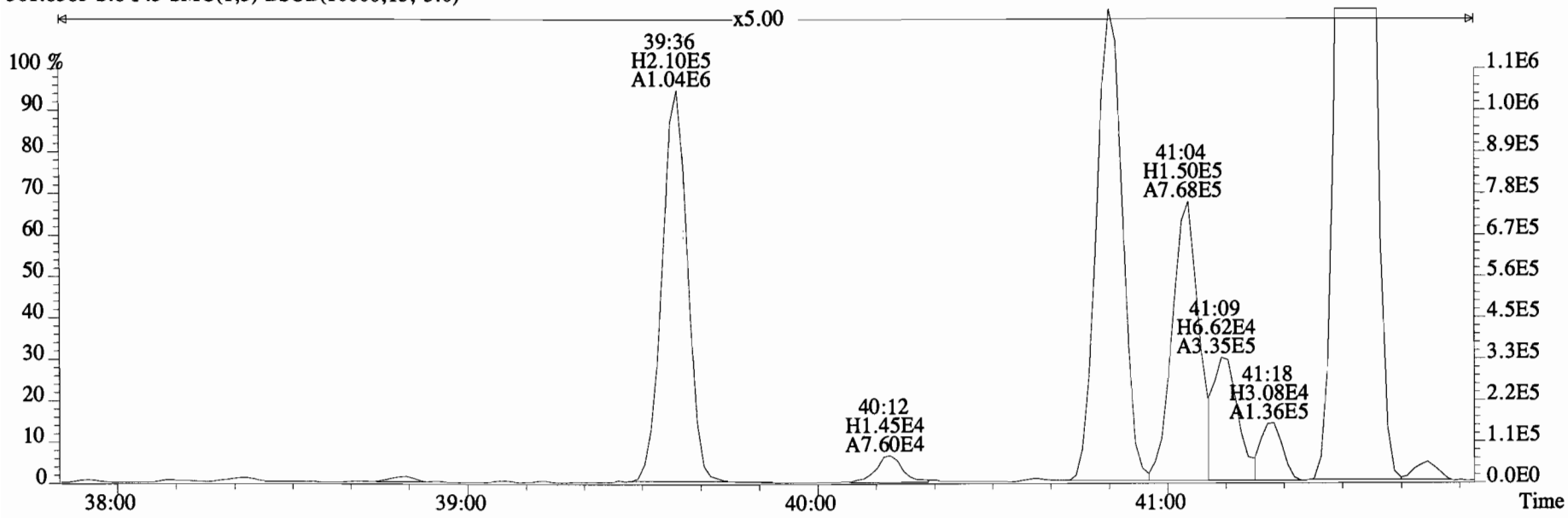
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



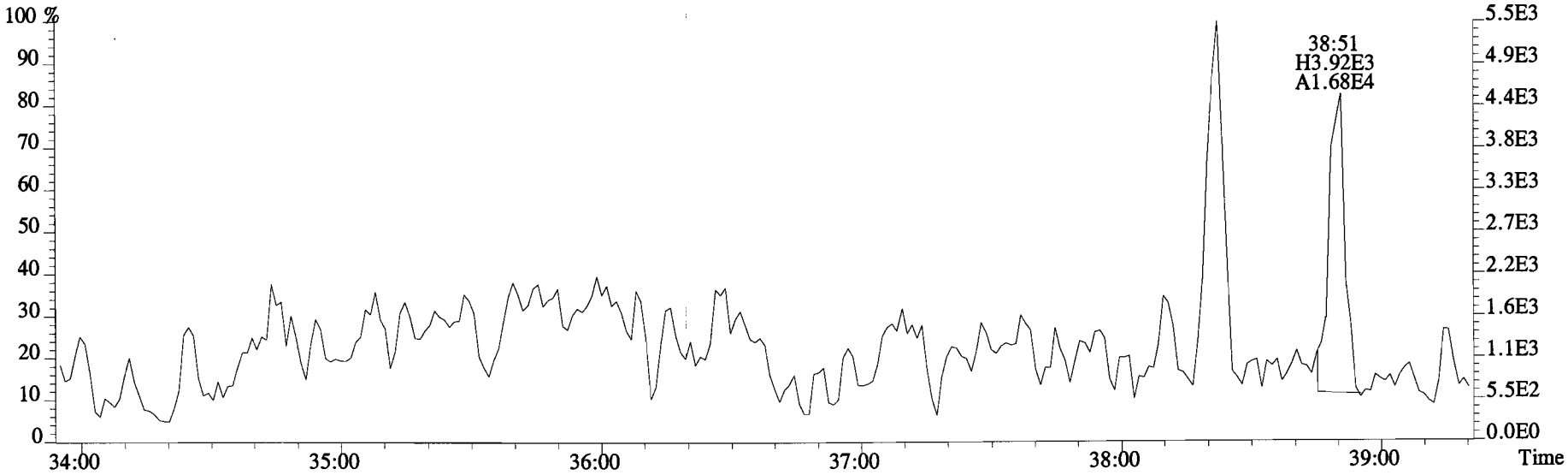
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



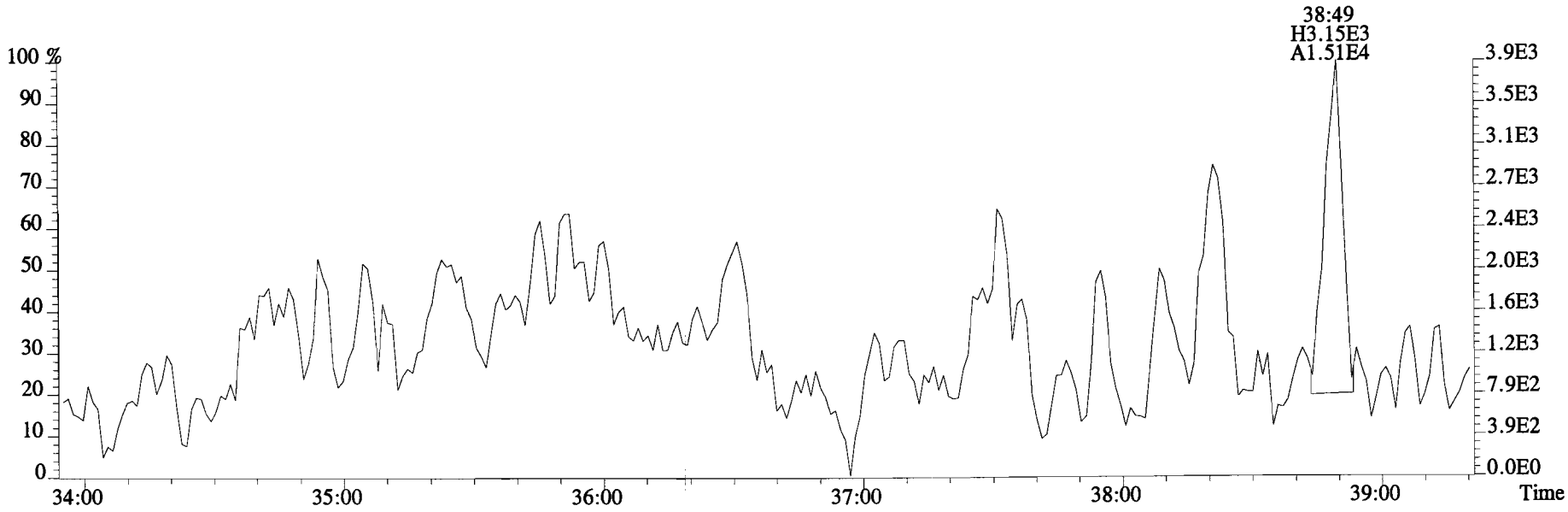
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



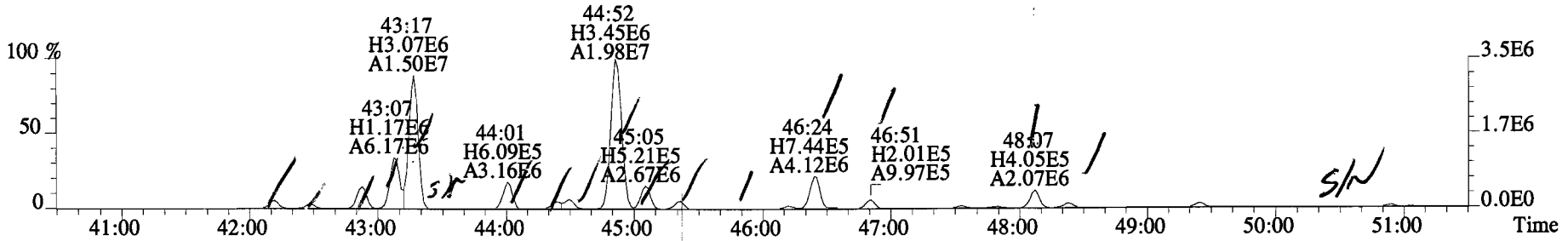
File:150328E2 #1-758 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



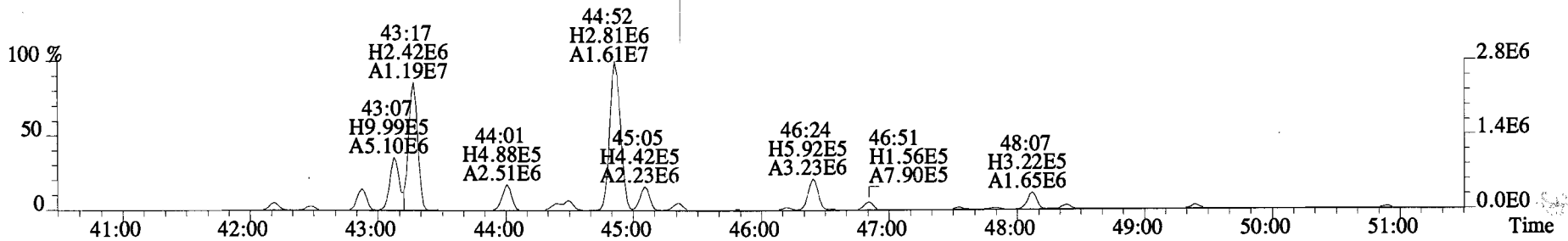
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



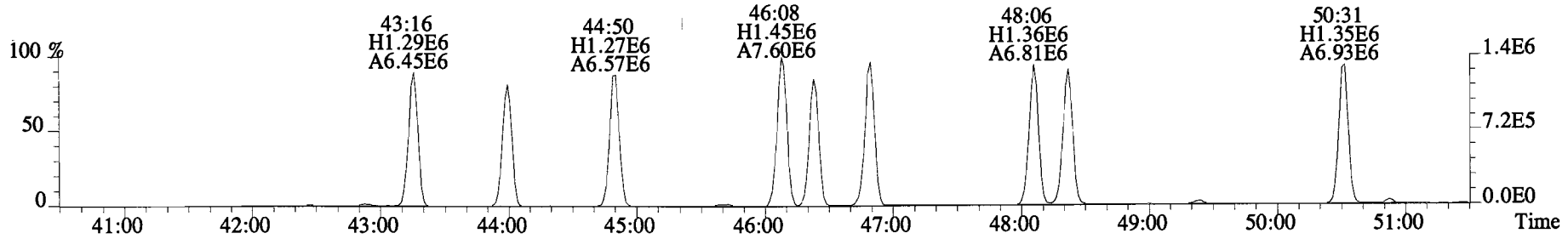
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3756.0,0.00%,F,F)



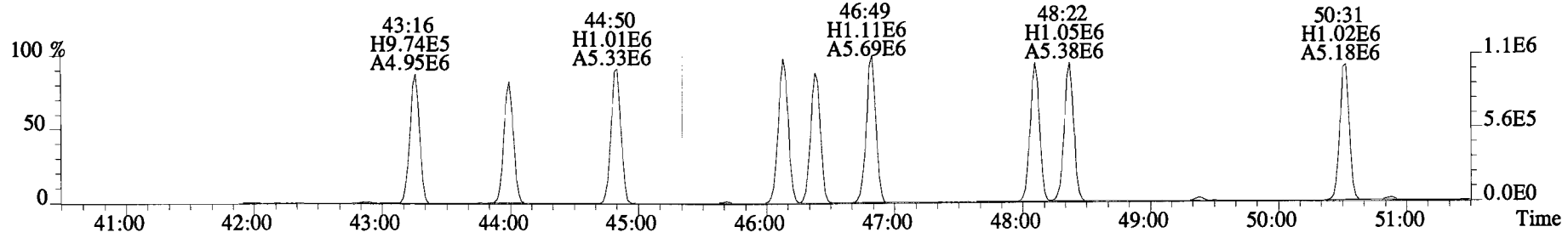
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3176.0,0.00%,F,F)



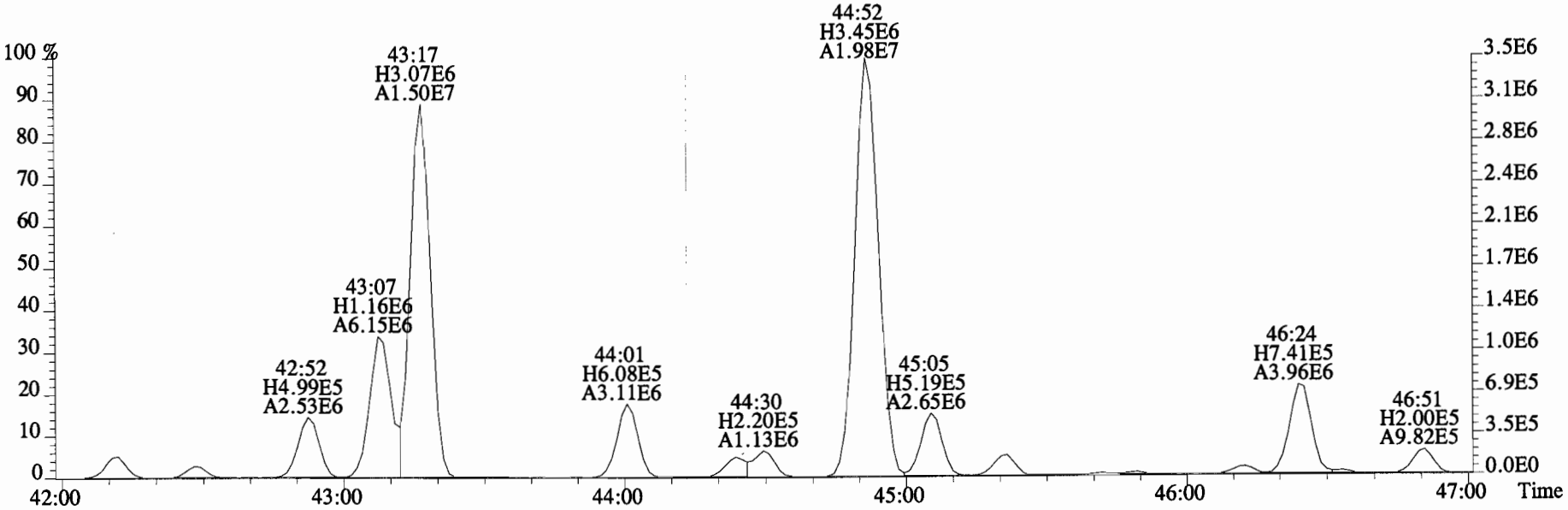
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2628.0,0.00%,F,F)



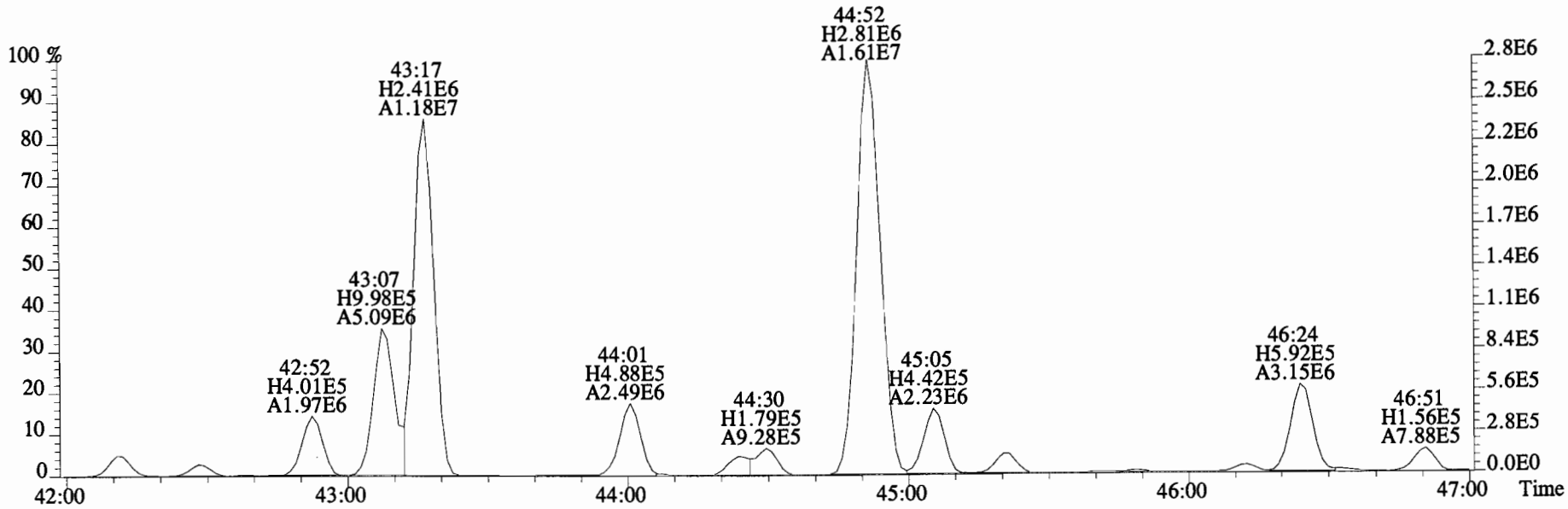
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3412.0,0.00%,F,F)



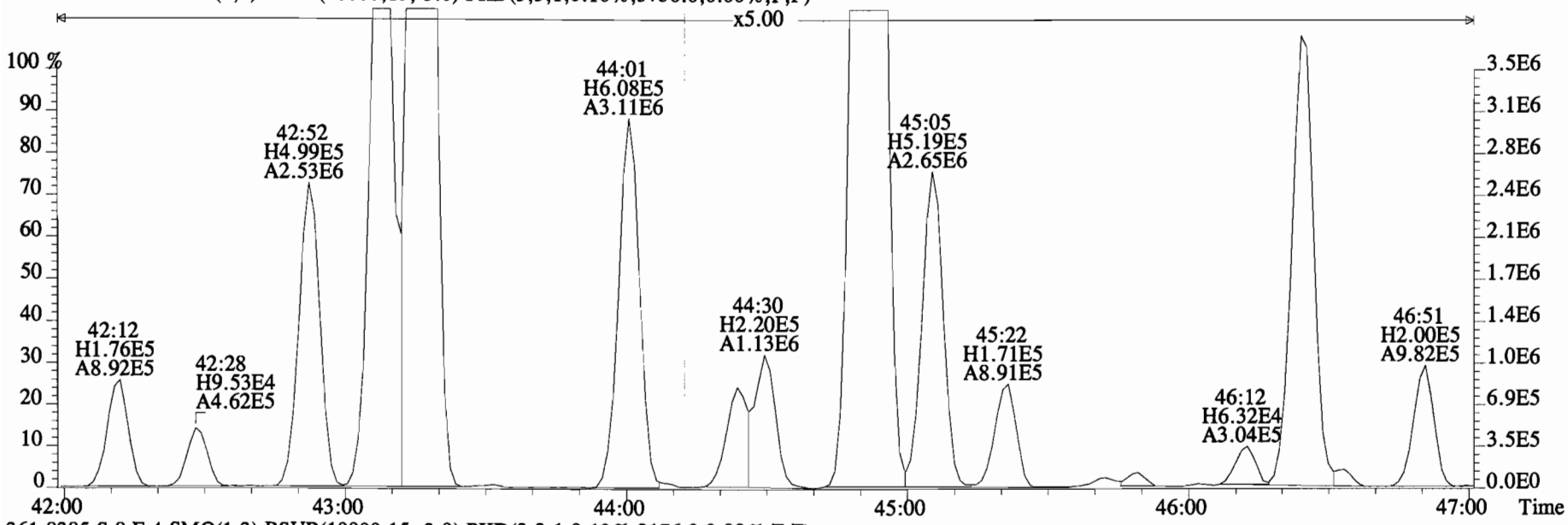
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



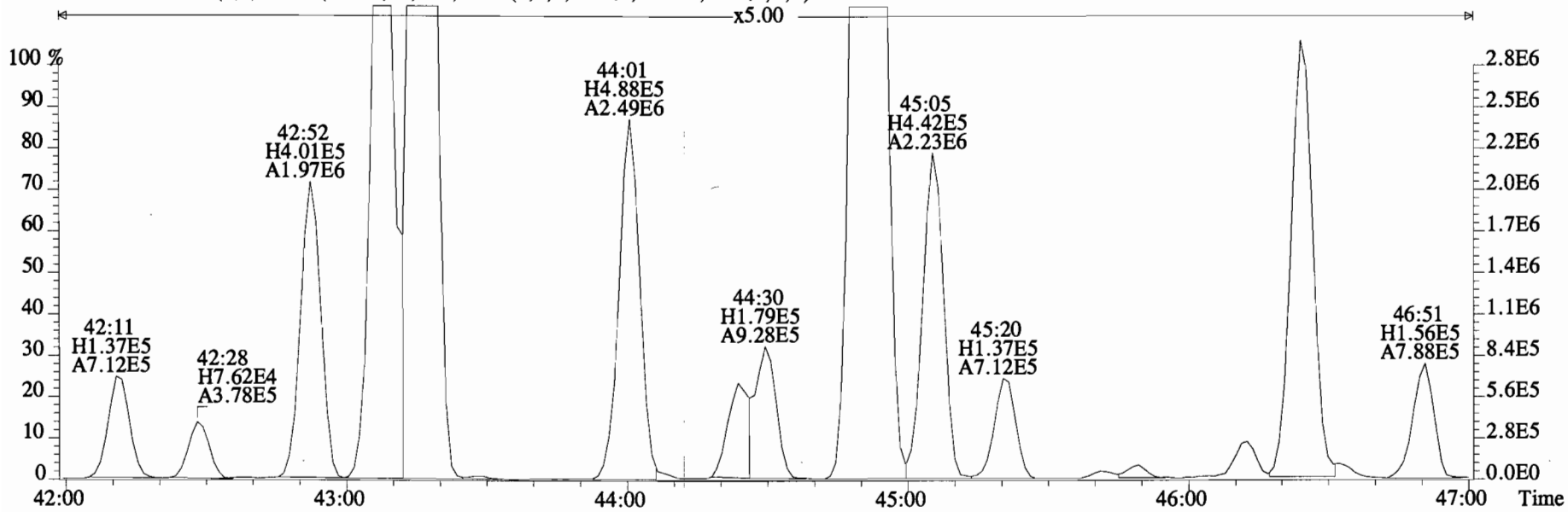
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3176.0,0.00%,F,F)



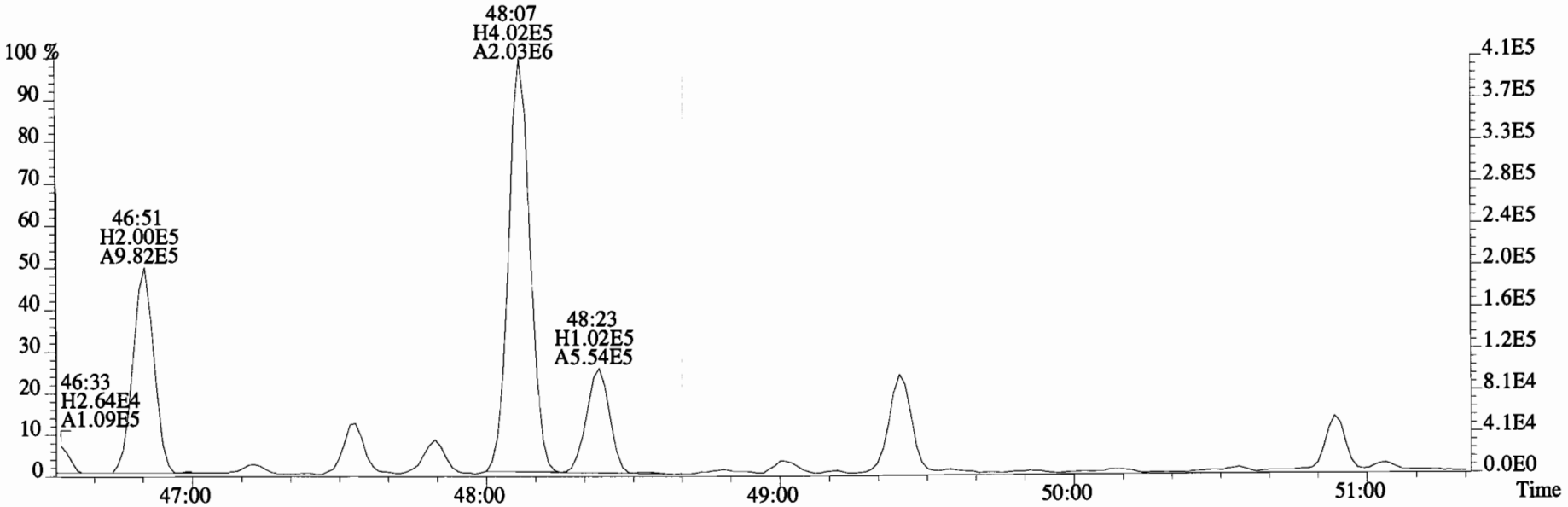
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



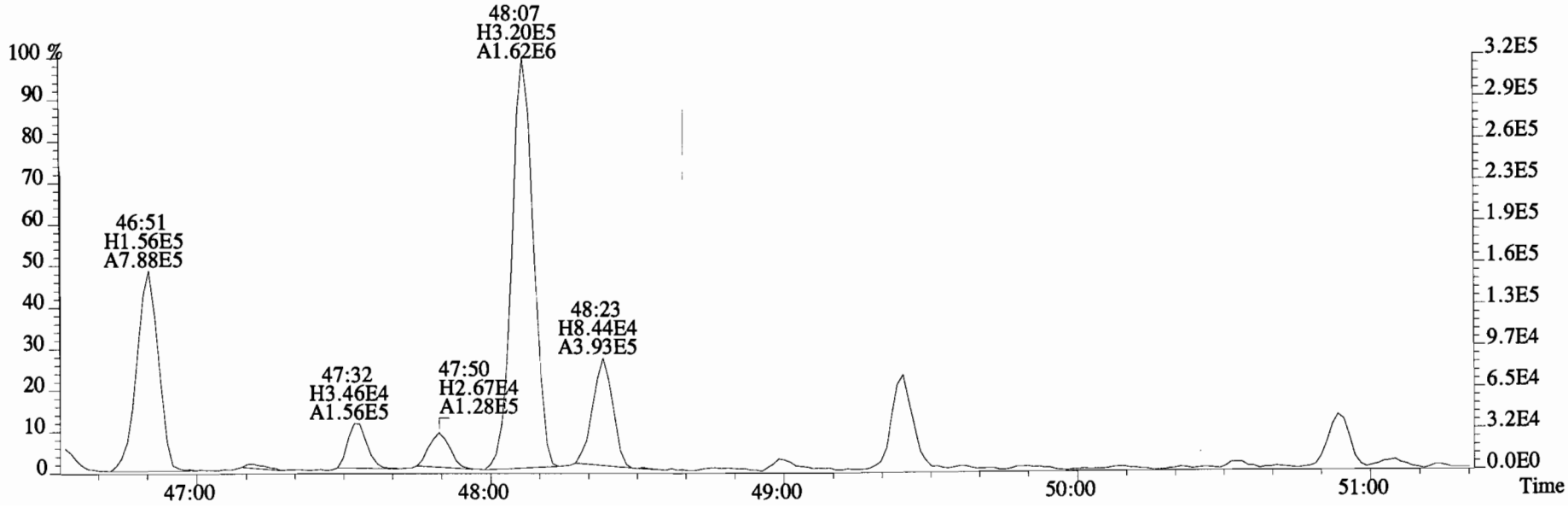
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3176.0,0.00%,F,F)



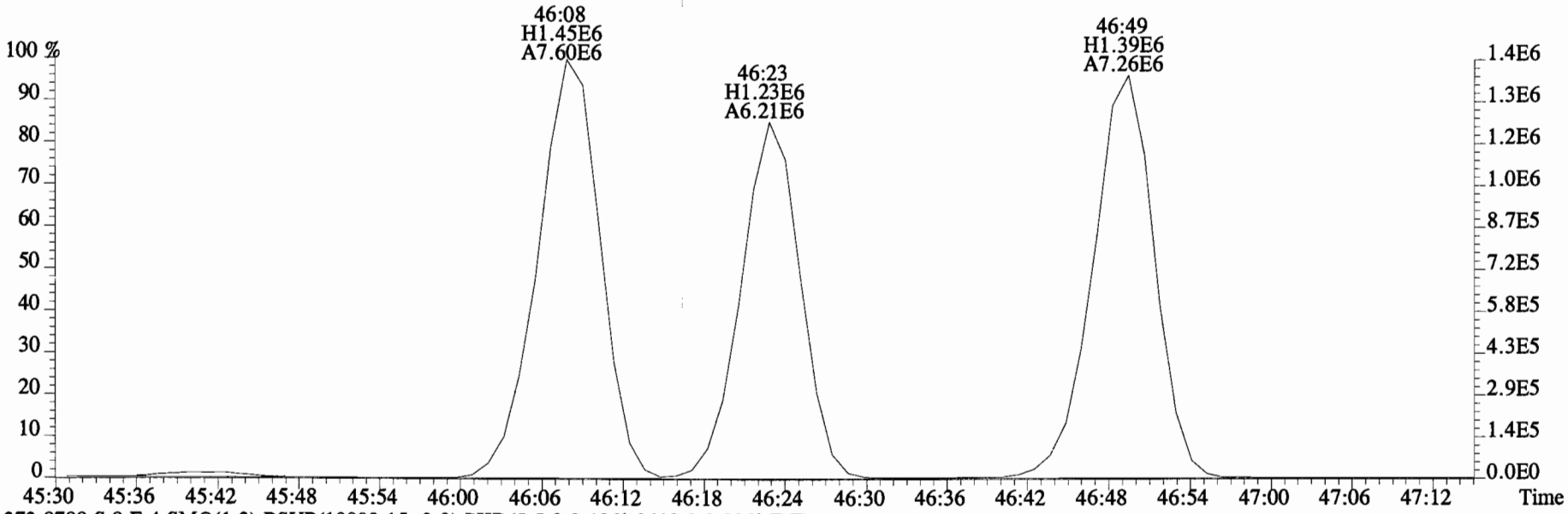
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



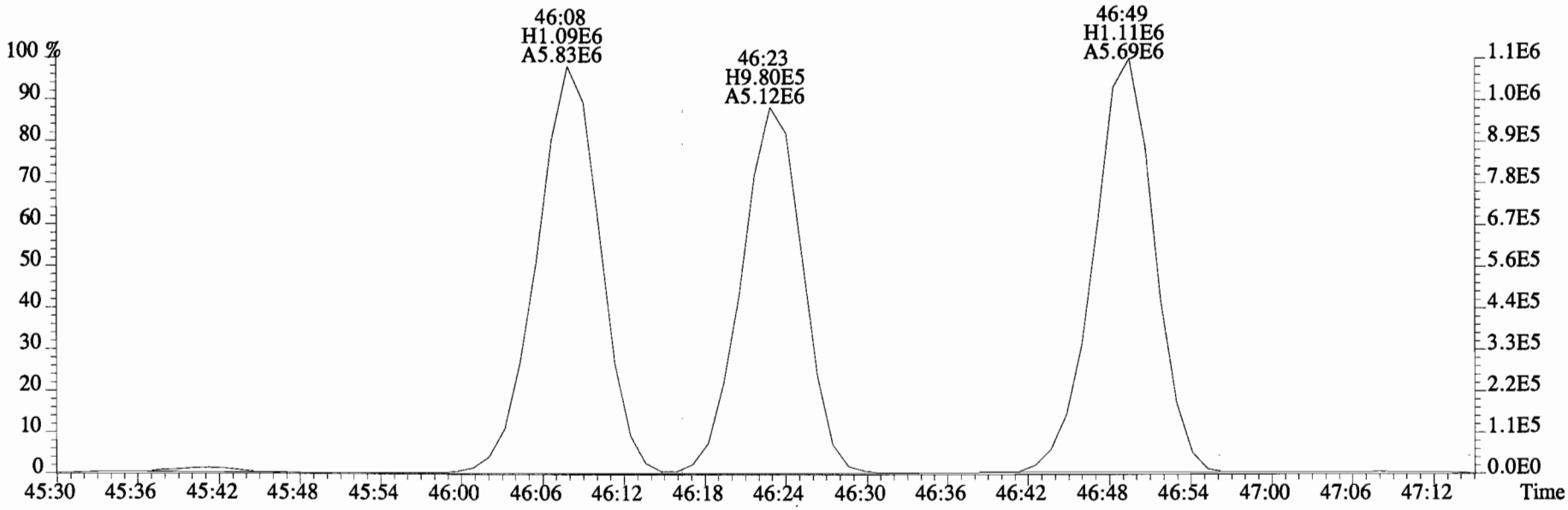
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3176.0,0.00%,F,F)



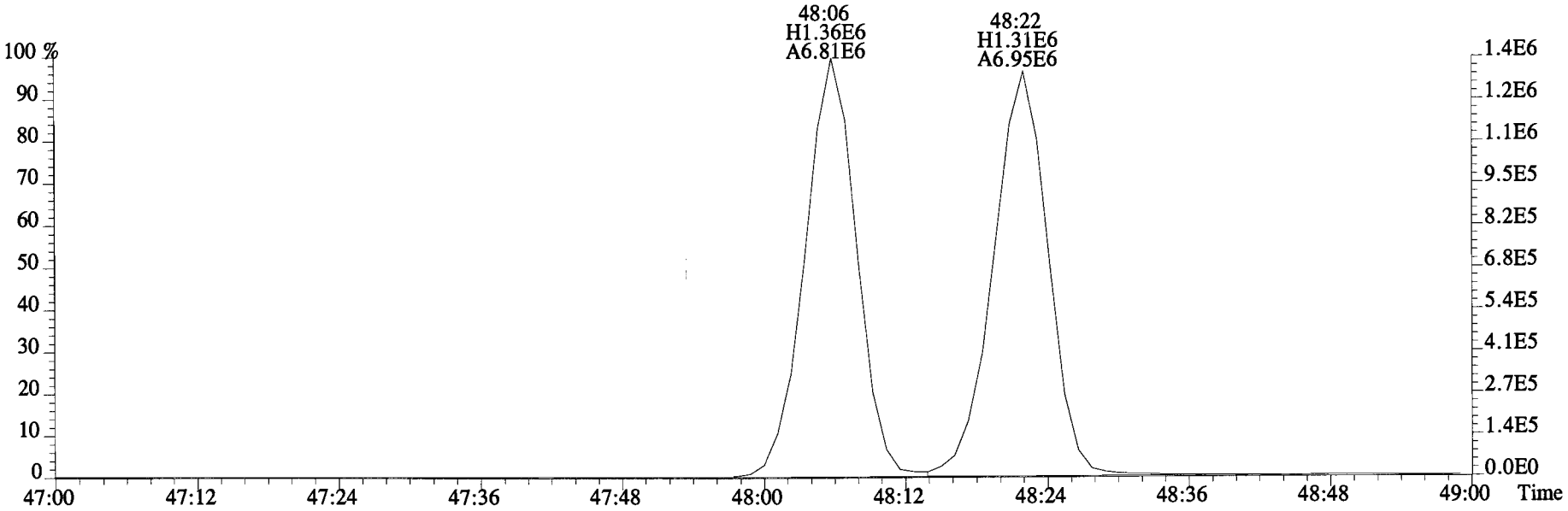
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2628.0,0.00%,F,F)



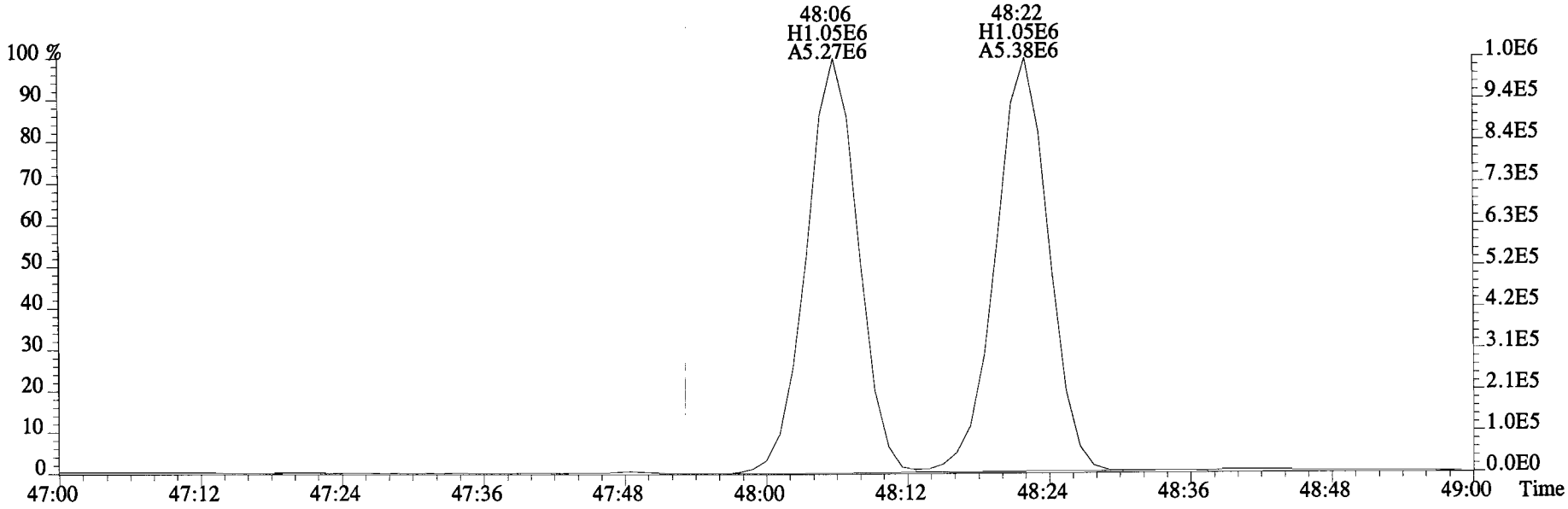
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3412.0,0.00%,F,F)



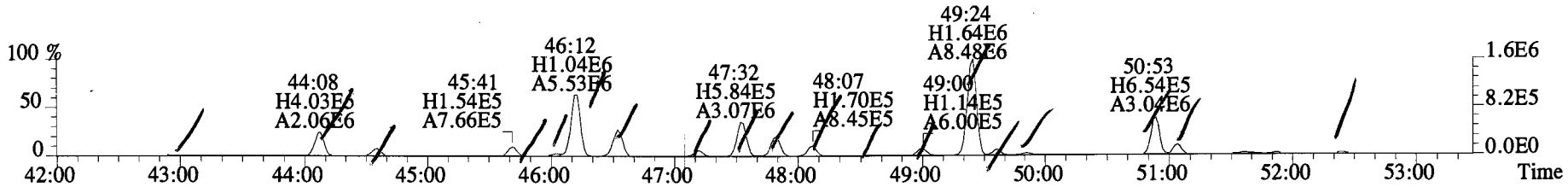
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2628.0,0.00%,F,F)



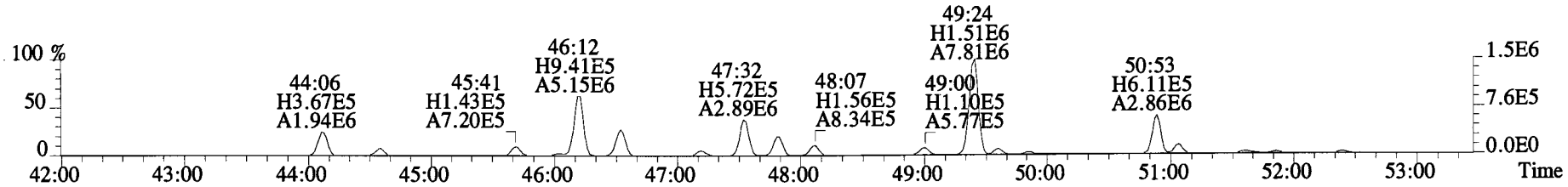
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3412.0,0.00%,F,F)



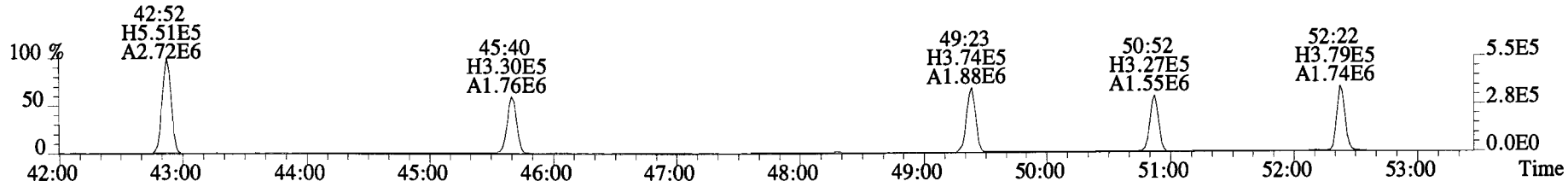
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2524.0,0.00%,F,F)



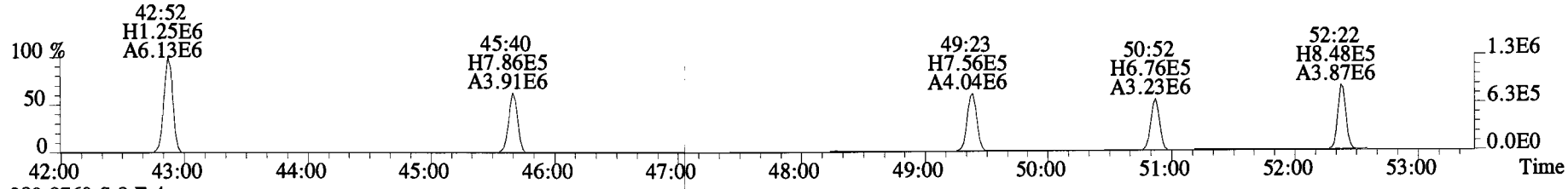
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1912.0,0.00%,F,F)



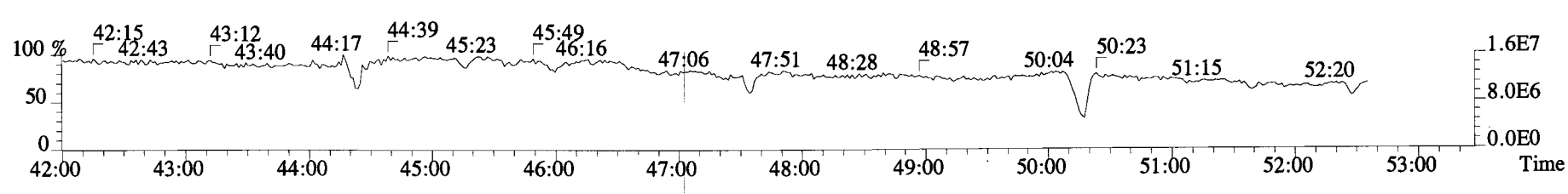
403.8457 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2376.0,0.00%,F,F)



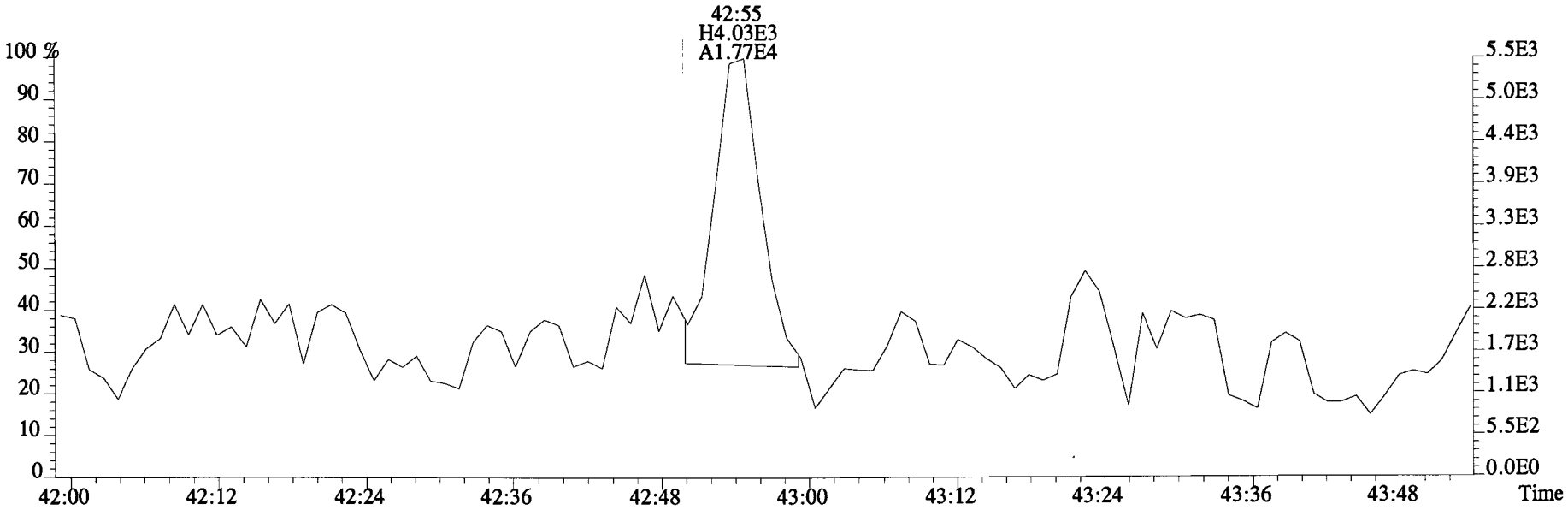
405.8428 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2648.0,0.00%,F,F)



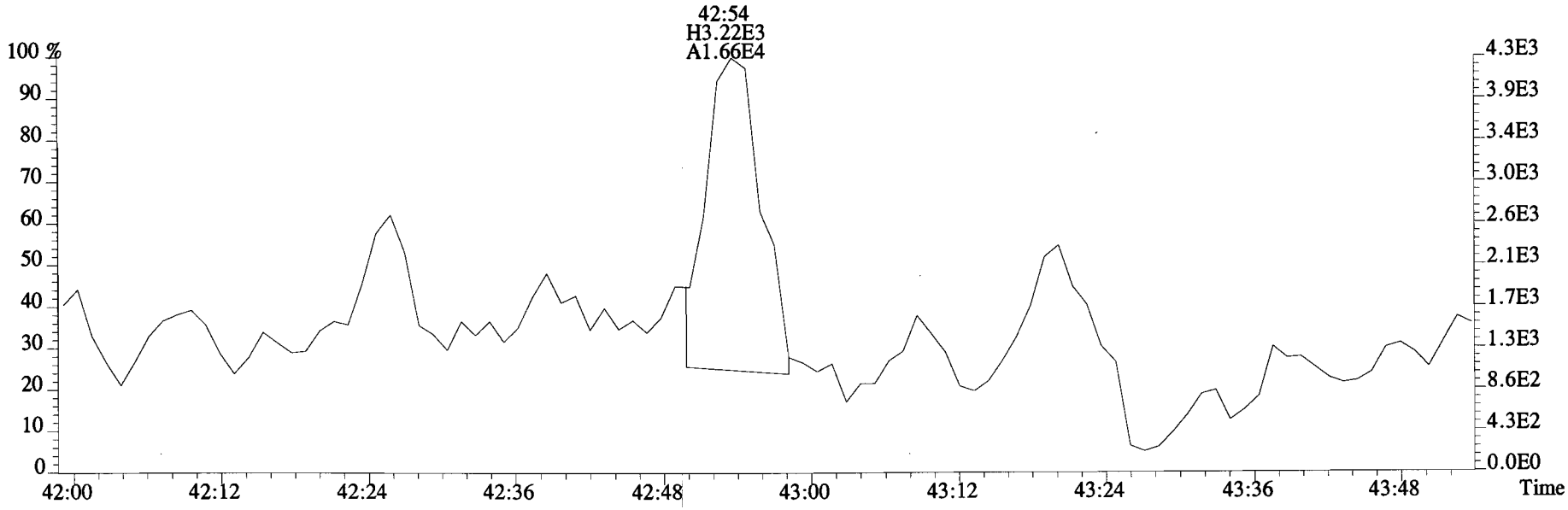
380.9760 S:8 F:4



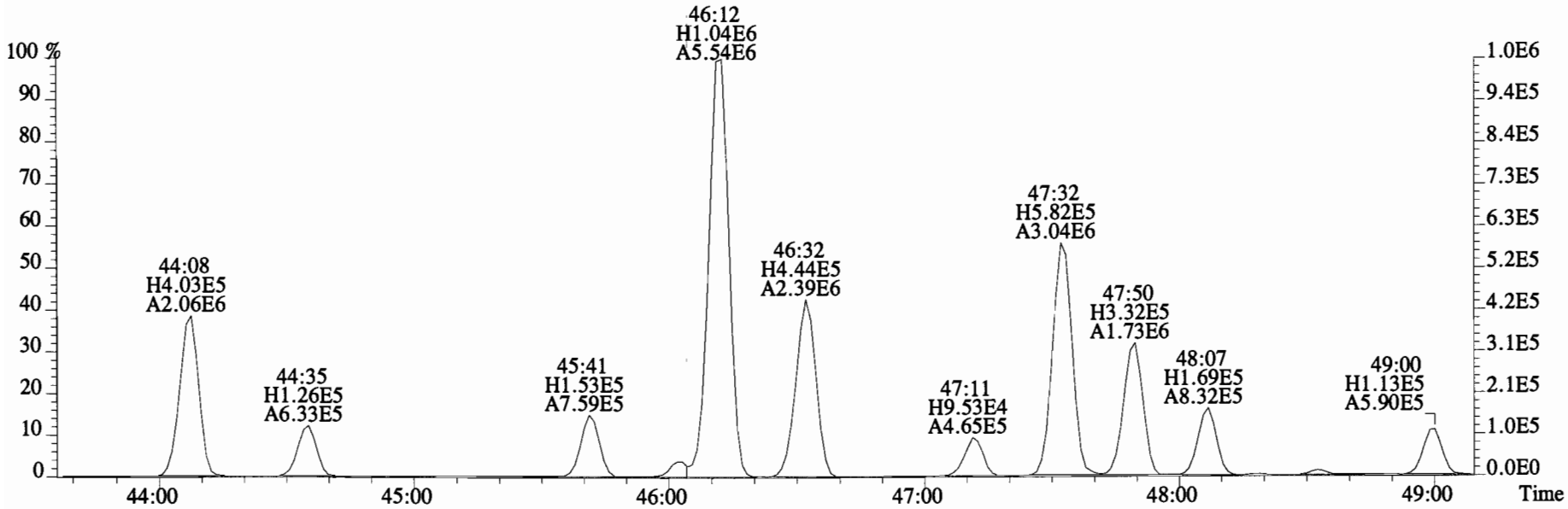
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2524.0,0.00%,F,F)



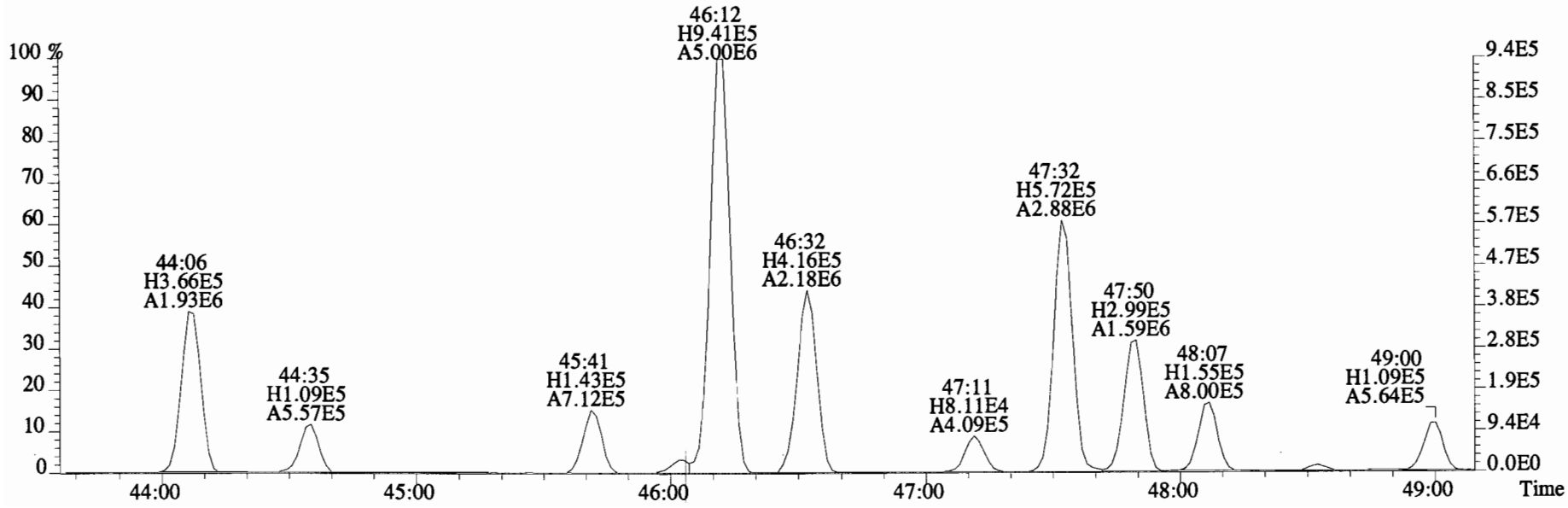
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



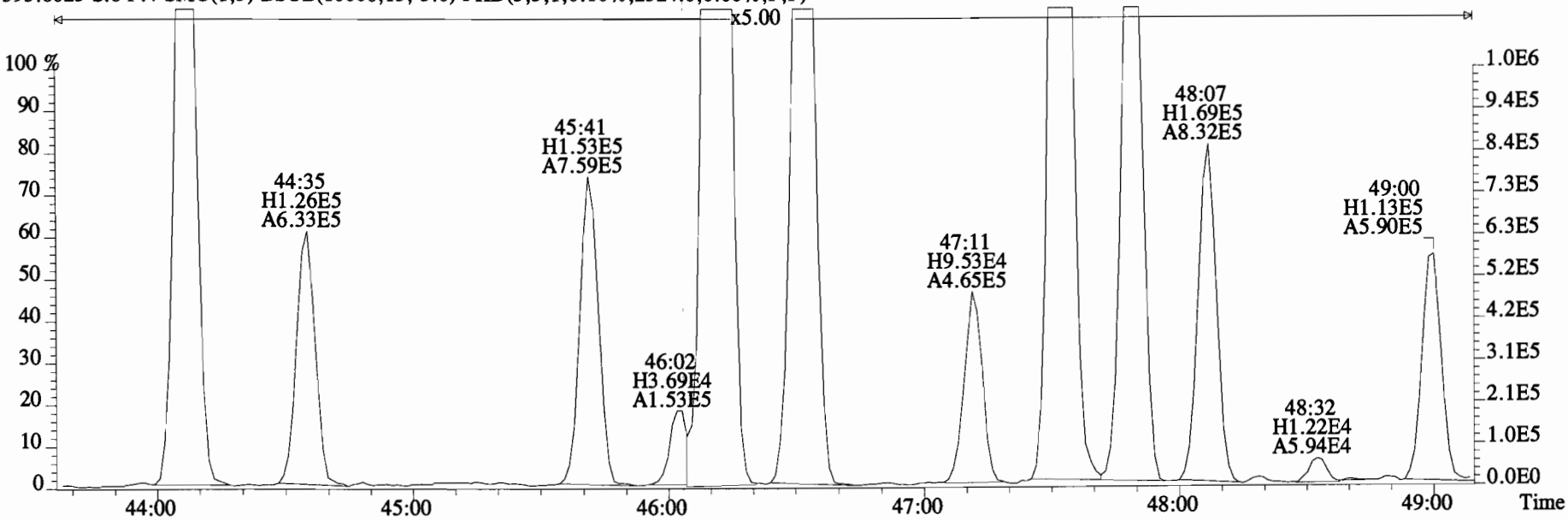
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2524.0,0.00%,F,F)



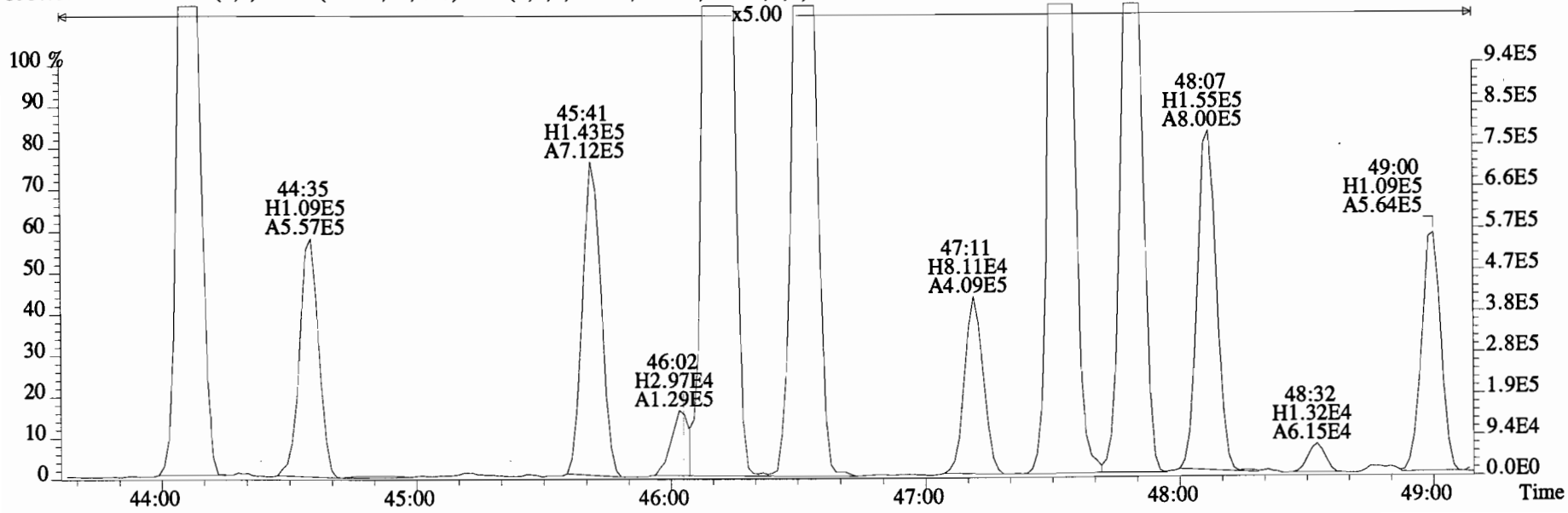
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



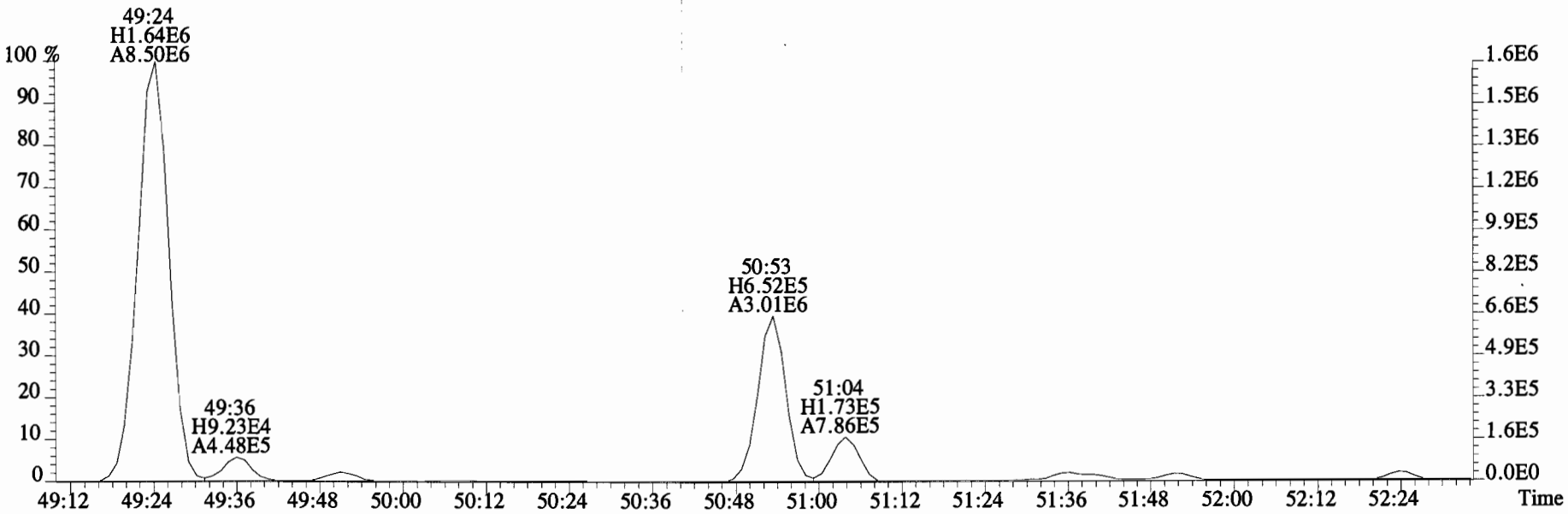
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2524.0,0.00%,F,F)



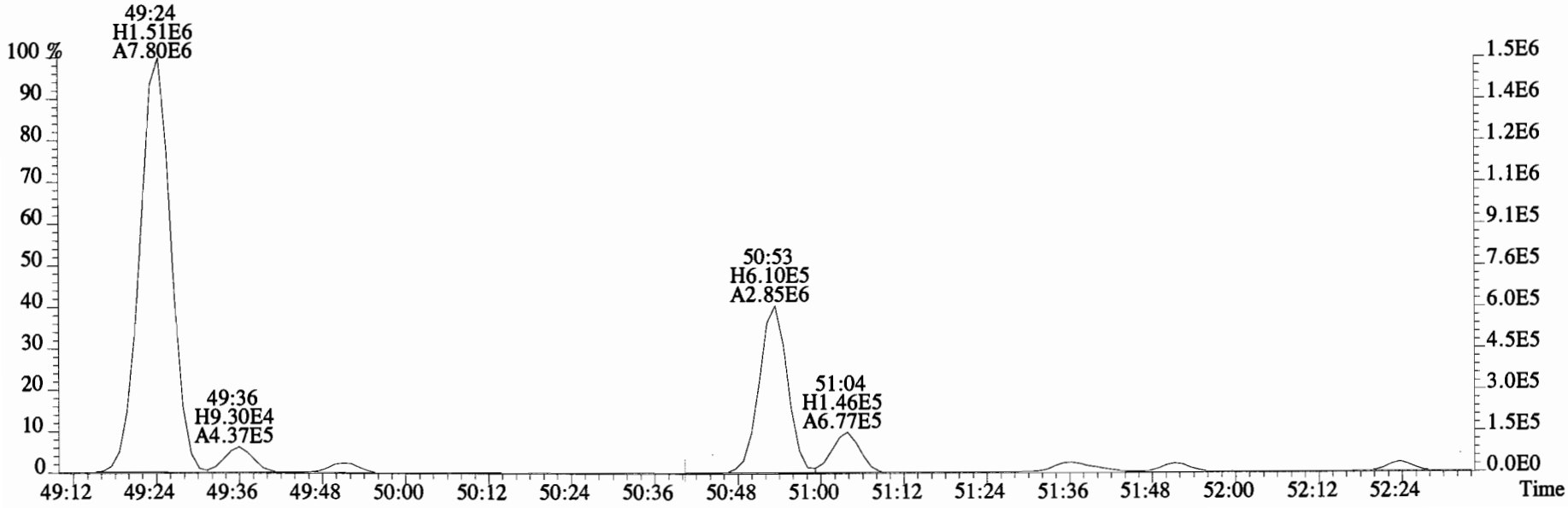
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



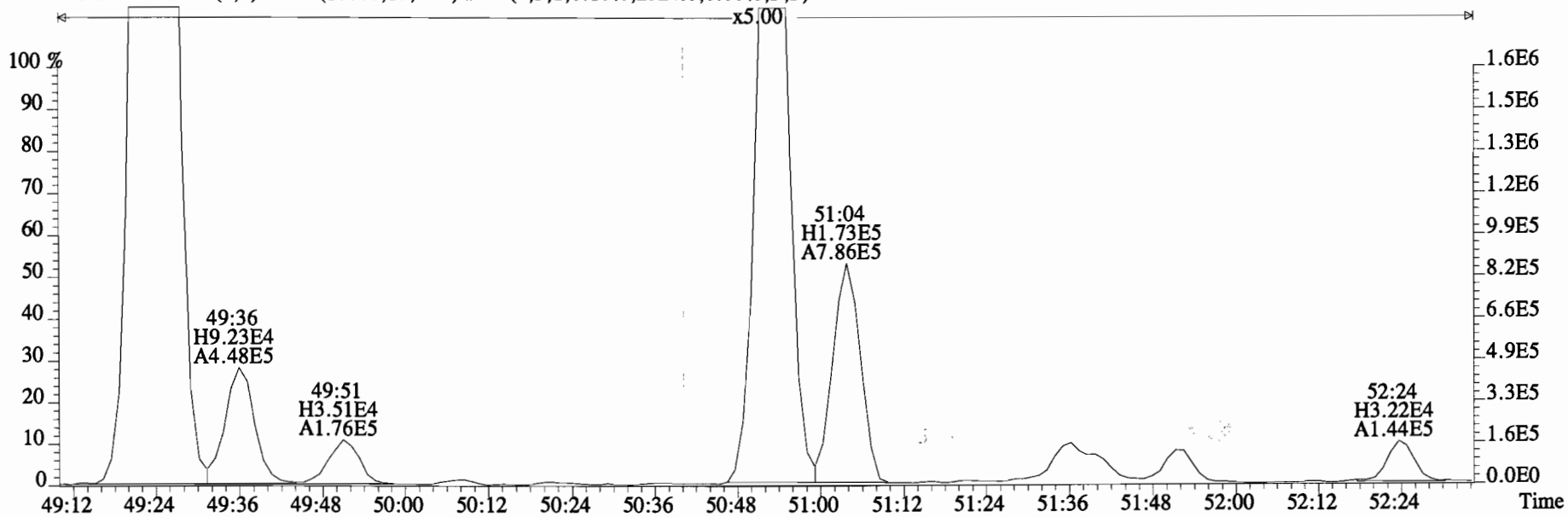
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2524.0,0.00%,F,F)



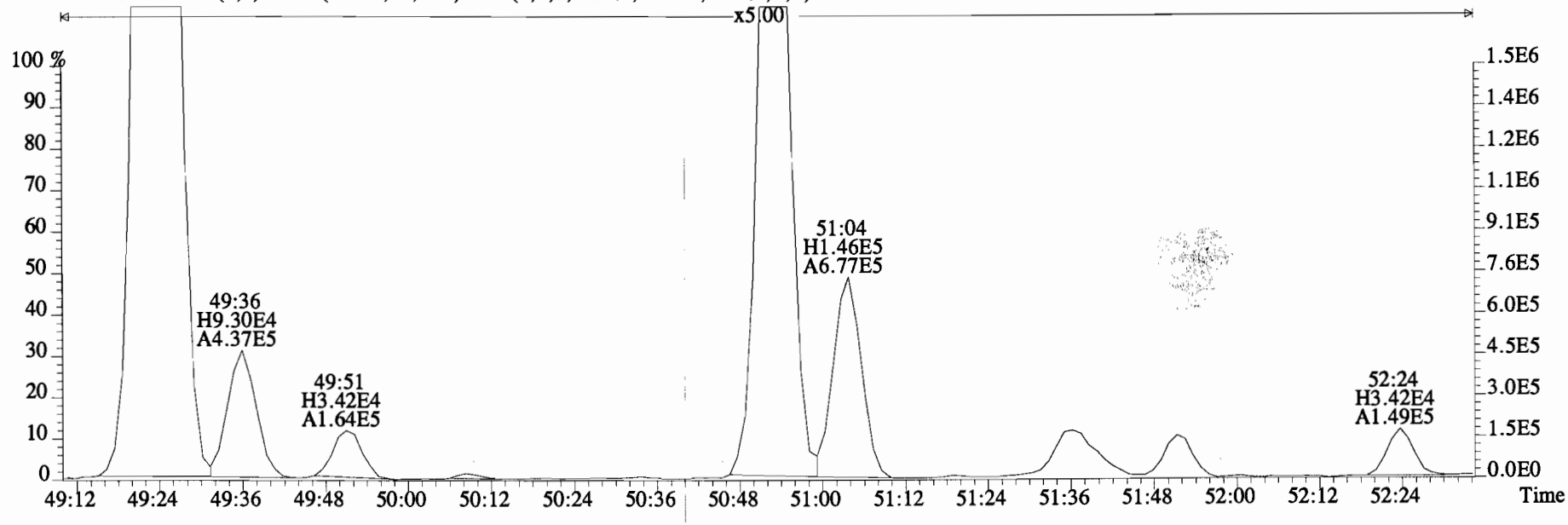
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



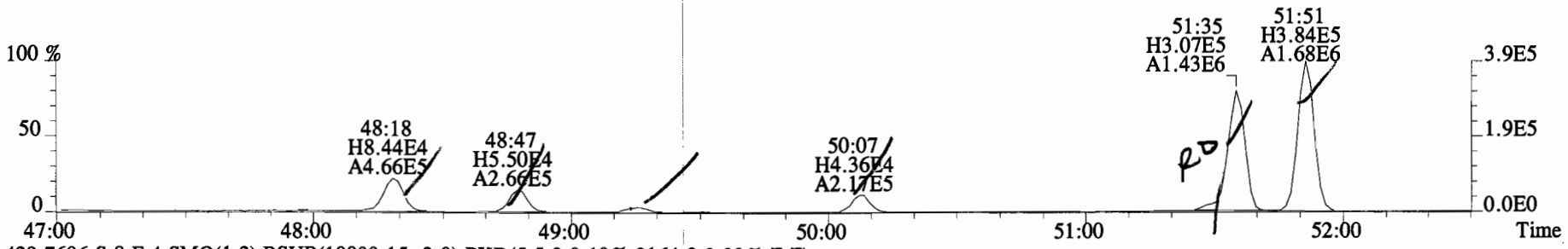
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2524.0,0.00%,F,F)



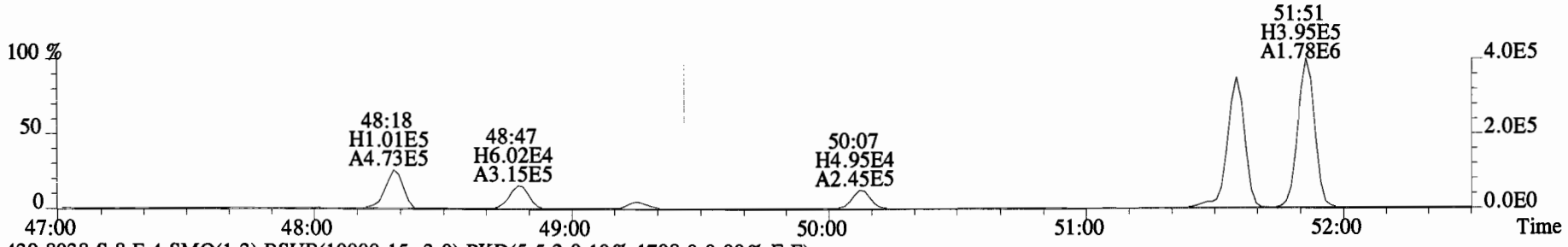
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



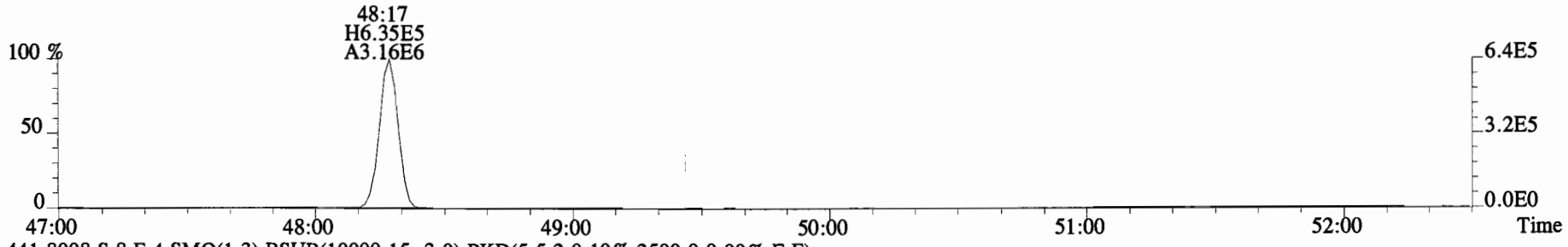
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
427.7635 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2208.0,0.00%,F,F)



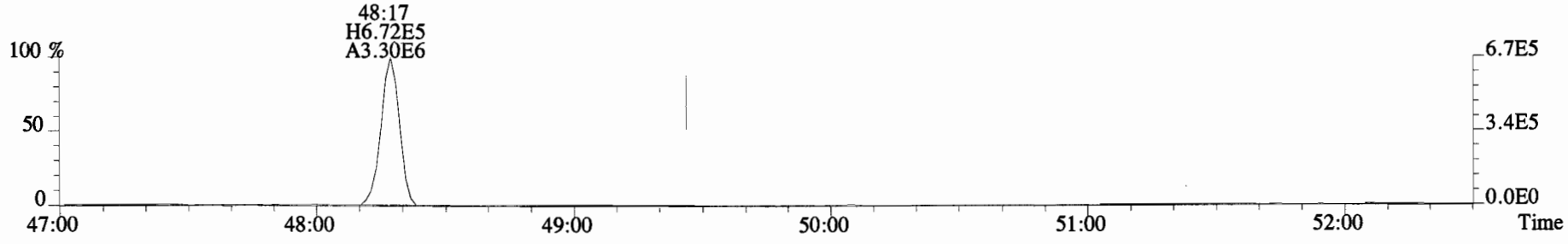
429.7606 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2164.0,0.00%,F,F)



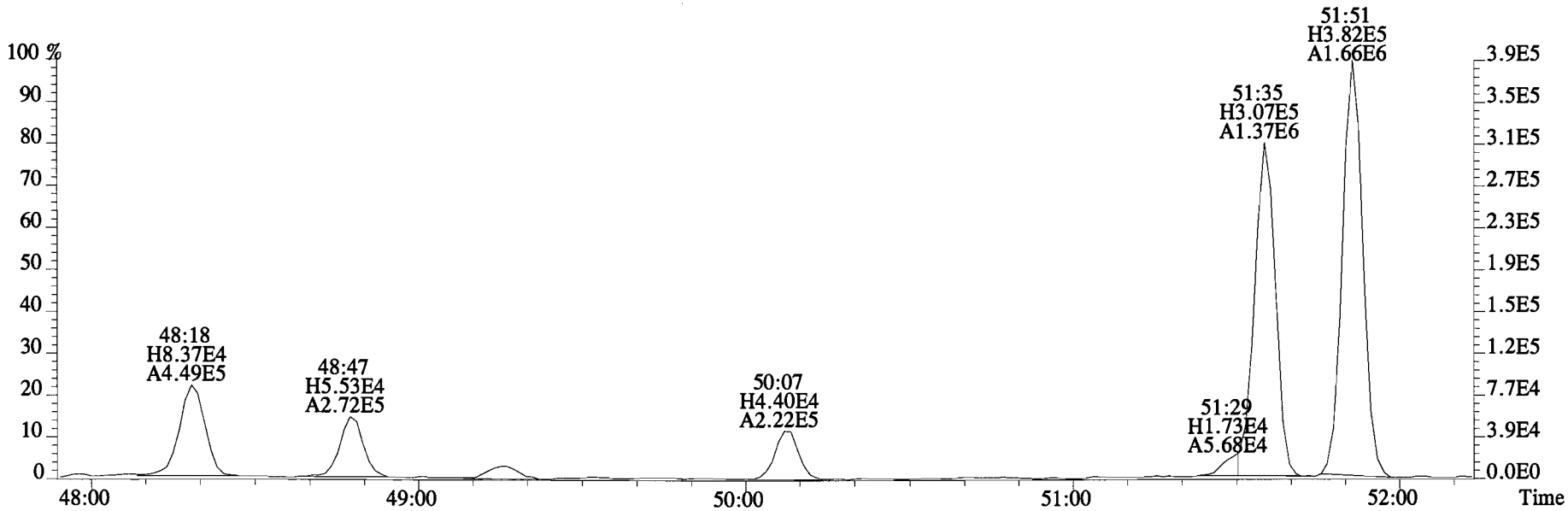
439.8038 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



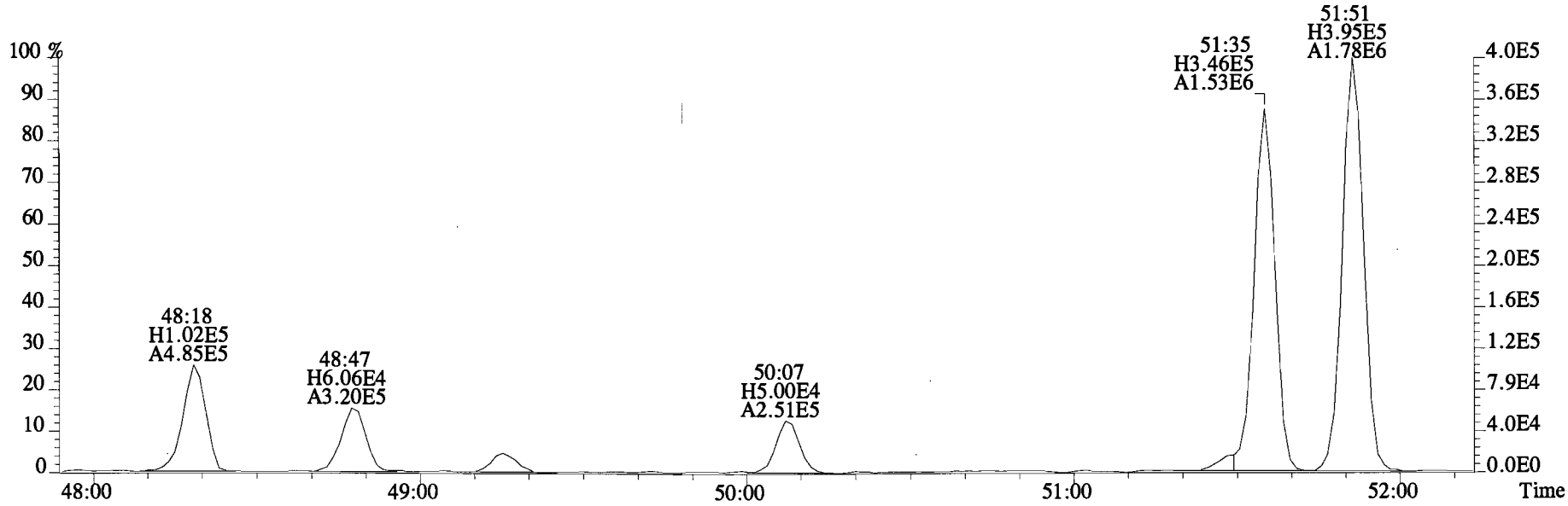
441.8008 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2500.0,0.00%,F,F)



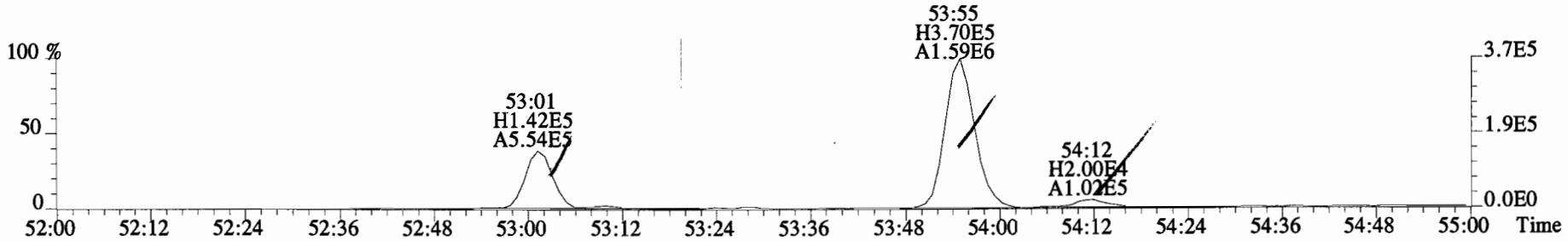
File:150328E2 #1-555 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
427.7635 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0)



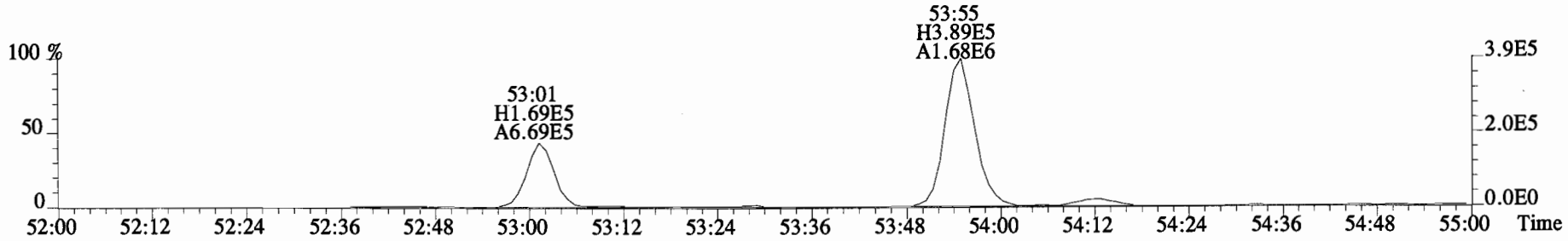
429.7606 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0)



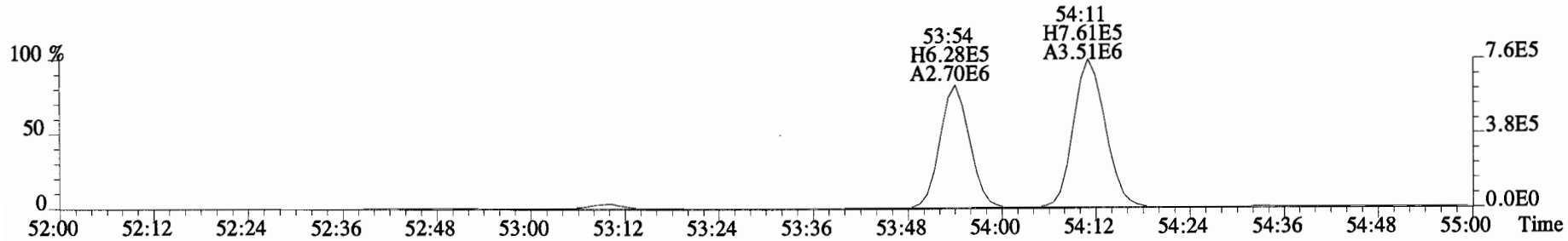
File:150328E2 #1-430 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
427.7635 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3112.0,0.00%,F,F)



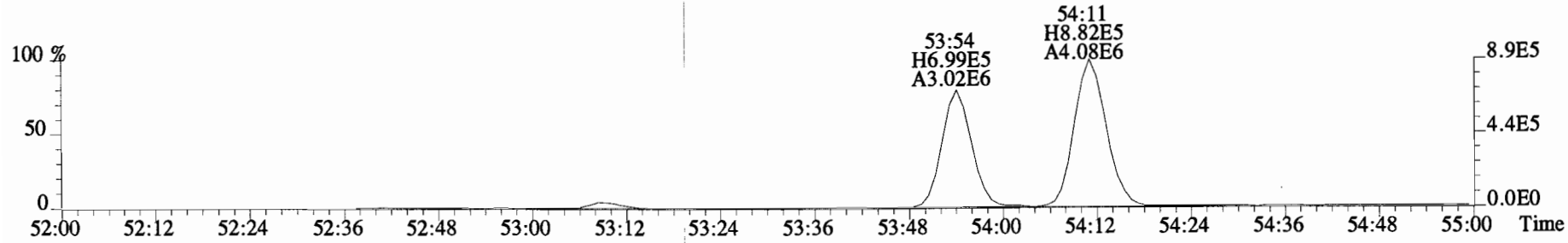
429.7606 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3216.0,0.00%,F,F)



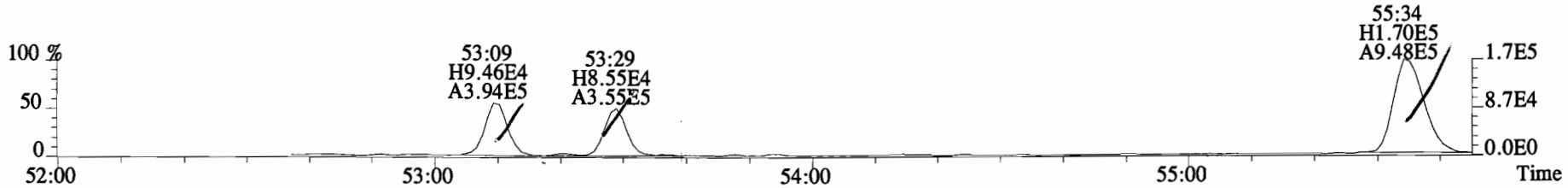
439.8038 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4152.0,0.00%,F,F)



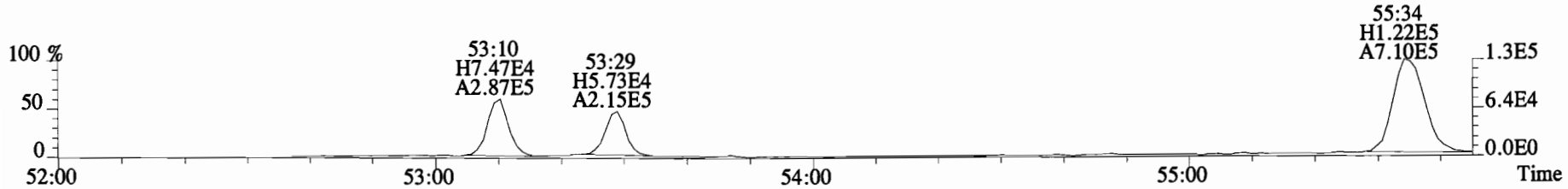
441.8008 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5584.0,0.00%,F,F)



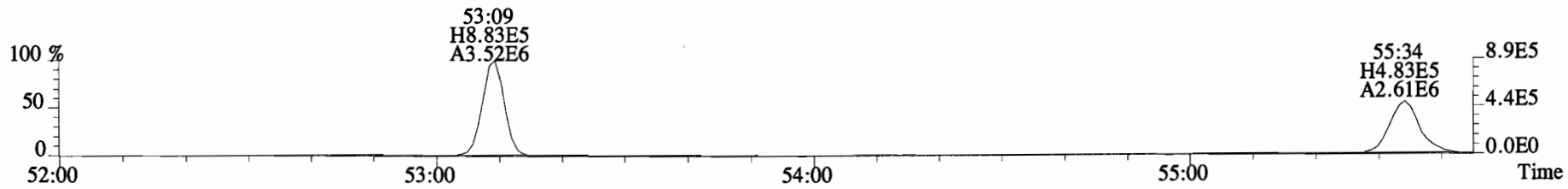
File:150328E2 #1-430 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
463.7216 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4440.0,0.00%,F,F)



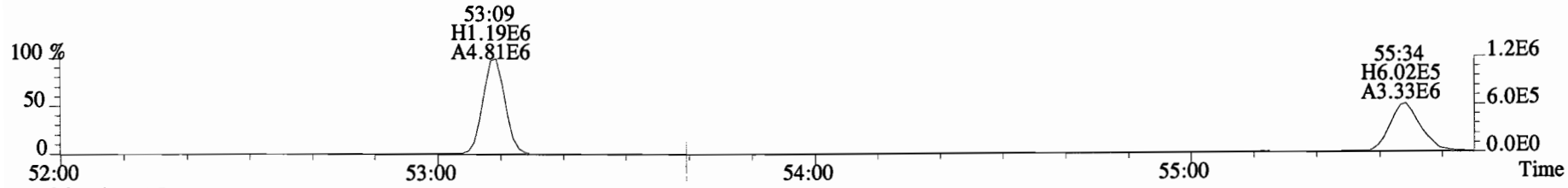
465.7186 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2988.0,0.00%,F,F)



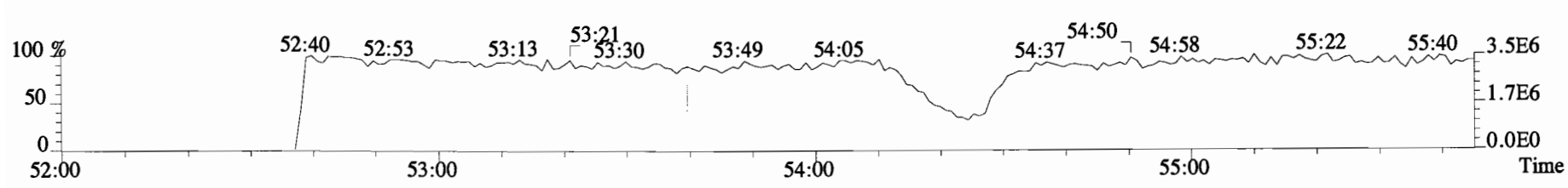
473.7648 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4624.0,0.00%,F,F)



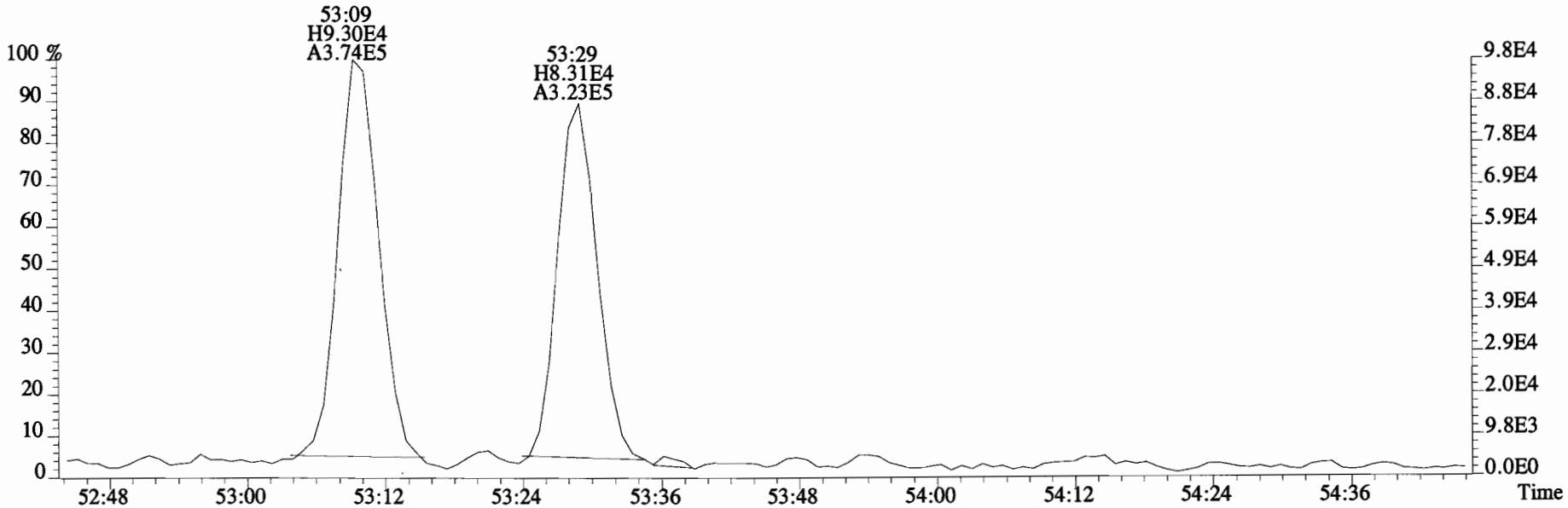
475.7619 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2980.0,0.00%,F,F)



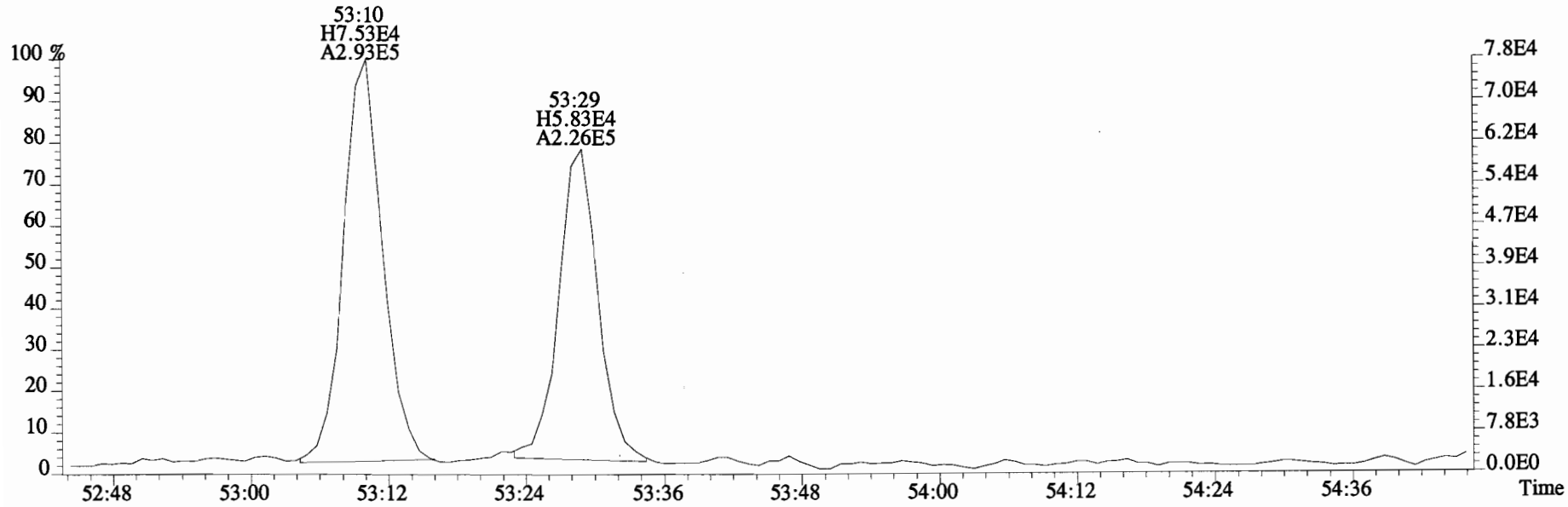
492.9697 S:8 F:5



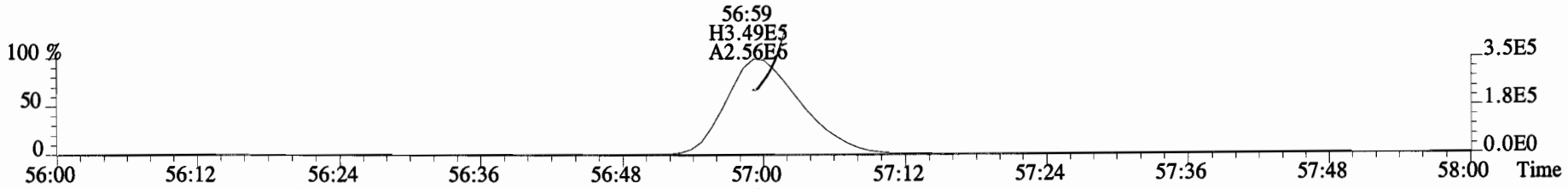
File:150328E2 #1-430 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
463.7216 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4440.0,0.00%,F,F)



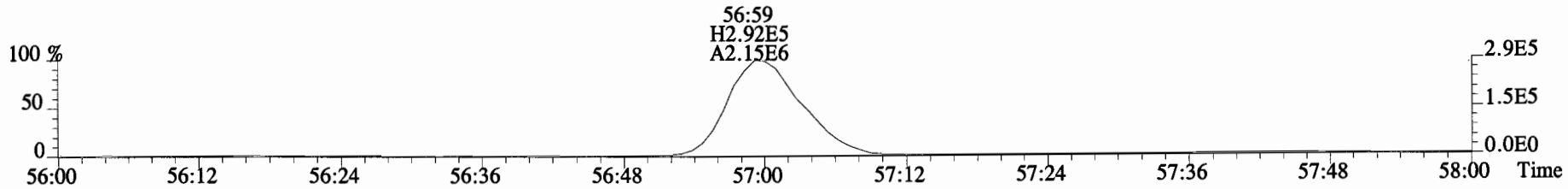
465.7186 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2988.0,0.00%,F,F)



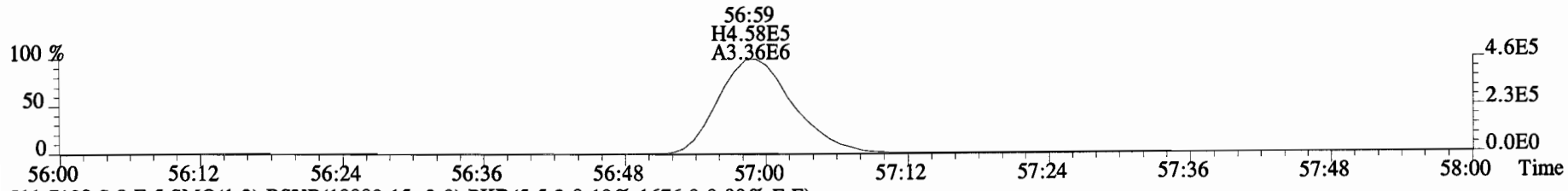
File:150328E2 #1-430 Acq:29-MAR-2015 04:19:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@5X BD-OWS-15-20141203-S Exp:PCB_ZB1
497.6826 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2064.0,0.00%,F,F)



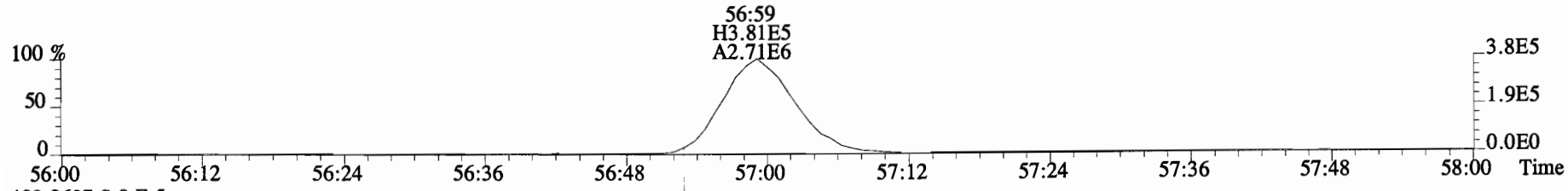
499.6797 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2404.0,0.00%,F,F)



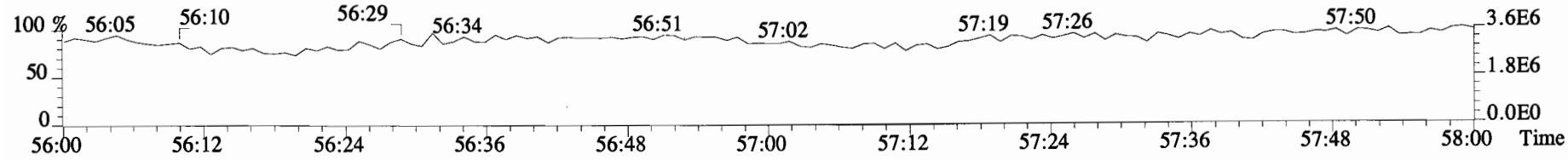
509.7229 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1868.0,0.00%,F,F)



511.7199 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



492.9697 S:8 F:5



Client ID: BD-OWS-15-20141203-S Filename: 150330E1 S:3 Acq:30-MAR-15 10:23:04 ConCal: ST150330E1-1 Page 6 of
Lab ID: 1400915-03RE1@20X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.010 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	1.78e+06	3.07	y	16:10	1.19	5070		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	2.74e+05	2.98	y	18:32	1.18	759		*	2.5	*	0.989	0.984	0.994
Mono	PCB-3	9.10e+05	3.33	y	18:46	1.43	2090		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	5.79e+05	1.36	y	20:07	1.57	2030		*	2.5	*	1.002	0.997	1.007
Di	PCB-7/9	8.65e+05	1.59	y	21:55	1.21	2600		*	2.5	*	0.868	0.866	0.874
Di	PCB-6	4.41e+05	1.67	y	22:33	1.30	1230		*	2.5	*	0.893	0.890	0.899
Di	PCB-5/8	1.44e+06	1.66	y	22:57	1.15	4550		*	2.5	*	0.909	0.907	0.917
Di	PCB-14	*	*	n	NotF	1.11	*		11000	2.5	1060	*	0.949	0.959
Di	PCB-11	1.59e+06	1.75	y	25:16	1.09	5870		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	2.68e+05	1.62	y	25:39	1.19	903		*	2.5	*	1.016	1.011	1.021
Di	PCB-15	6.00e+05	1.51	y	25:58	1.28	1880		*	2.5	*	1.028	1.023	1.033
Tri	PCB-19	9.12e+04	1.19	y	24:14	1.04	559		*	2.5	*	1.000	0.996	1.006
Tri	PCB-30	*	*	n	NotF	1.71	*		1420	2.5	98.1	*	1.032	1.042
Tri	PCB-18	3.16e+05	0.89	y	25:53	0.78	1960		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	2.38e+05	1.19	y	26:03	0.92	1250		*	2.5	*	0.960	0.956	0.966
Tri	PCB-24/27	8.01e+04	1.28	n	26:37	1.19	326	R	*	2.5	*	0.981	0.977	0.987
Tri	PCB-16/32	4.23e+05	1.15	y	27:07	0.94	2180		*	2.5	*	0.999	0.995	1.005
Tri	PCB-34	*	*	n	NotF	1.14	*		*	2.5	*	*	0.955	0.965
Tri	PCB-23	*	*	n	NotF	1.28	*		*	2.5	*	*	0.959	0.969
Tri	PCB-29	*	*	n	NotF	1.08	*		*	2.5	*	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF	1.21	*		*	2.5	*	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF	1.26	*		*	2.5	*	*	0.979	0.989
Tri	PCB-31	*	*	n	NotF	1.28	*		*	2.5	*	*	0.992	1.002
Tri	PCB-28	*	*	n	NotF	1.71	*		*	2.5	*	*	0.995	1.005
Tri	PCB-20/21/33	*	*	n	NotF	1.08	*		*	2.5	*	*	1.017	1.027
Tri	PCB-22	*	*	n	NotF	1.21	*		*	2.5	*	*	1.032	1.042
Tri	PCB-36	*	*	n	NotF	1.14	*		*	2.5	*	*	0.928	0.938
Tri	PCB-39	*	*	n	NotF	1.12	*		*	2.5	*	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF	1.20	*		*	2.5	*	*	0.966	0.976
Tri	PCB-35	*	*	n	NotF	1.23	*		*	2.5	*	*	0.982	0.992
Tri	PCB-37	*	*	n	NotF	1.23	*		*	2.5	*	*	0.995	1.005
Tetra	PCB-54	*	*	n	NotF	1.10	*		*	2.5	*	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF	0.88	*		*	2.5	*	*	1.037	1.047
Tetra	PCB-53	*	*	n	NotF	1.06	*		*	2.5	*	*	0.942	0.952
Tetra	PCB-51	*	*	n	NotF	0.99	*		*	2.5	*	*	0.952	0.962
Tetra	PCB-45	*	*	n	NotF	0.86	*		*	2.5	*	*	0.966	0.976
Tetra	PCB-46	*	*	n	NotF	0.85	*		*	2.5	*	*	0.981	0.991

DMV

Integrations by:

Analyst: DMS

Date: 3/30/15

Reviewed by: M/2 Date: 3/31/15

Client ID: BD-OWS-15-20141203-S Filename: 150330E1 S:3 Acq:30-MAR-15 10:23:04 ConCal: ST150330E1-1
Lab ID: 1400915-03RE1@20X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.0100 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.96e+06	3.07	y	16:10	1.27	7918.64	
Total Di-PCB	5.78e+06	1.36	y	20:07	1.21	19045.4	
Total Tri-PCB	1.07e+06	1.19	y	24:14	1.10	5939.32	
Total Tri-PCB	*	*	n	NotFnd	1.21	*	Sum:5939.32
Total Tetra-PCB	*	*	n	NotFnd	1.09	*	
Total Penta-PCB	*	*	n	NotFnd	1.18	*	
Total Penta-PCB	*	*	n	NotFnd	1.25	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.90	*	
Total Hexa-PCB	*	*	n	NotFnd	1.11	*	Sum:0.00000
Total Hepta-PCB	*	*	n	NotFnd	1.42	*	
Total Octa-PCB	*	*	n	NotFnd	0.96	*	
Total Octa-PCB	*	*	n	NotFnd	1.33	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	1.01	*	
Total Deca-PCB	*	*	n	NotFnd	1.17	*	

Total PCB Conc:33229.1889490

Integrations
by
Analyst: DMS

Date: 3/30/15

Client ID: BD-OWS-15-20141203-S Filename: 150330E1 S:3 Acq:30-MAR-15 10:23:04 ConCal: ST150330E1-1
Lab ID: 1400915-03RE1@20X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:2.0100 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.93e+06	3.10	y	0.87	16:09	0.622	0.629	0.635	10800	108
13C-PCB-3	3.04e+06	3.18	y	0.91	18:45	0.723	0.725	0.733	10700	108
13C-PCB-4	1.81e+06	1.68	y	0.59	20:05	0.774	0.775	0.783	9930	99.8
13C-PCB-9	2.74e+06	1.60	y	0.90	21:52	0.843	0.842	0.850	9830	98.8
13C-PCB-11	2.48e+06	1.53	y	0.94	25:15	0.973	0.968	0.978	8500	85.4
13C-PCB-19	1.56e+06	0.97	y	0.53	24:14	0.934	0.930	0.940	9410	94.6
13C-PCB-28	2.15e+06	0.88	n	0.93	29:06	1.004	0.999	1.009	9880	99.2
13C-PCB-32	2.06e+06	0.92	y	0.80	27:08	1.046	1.040	1.050	8310	83.5
13C-PCB-37	2.02e+06	1.04	y	0.84	32:59	1.138	1.131	1.143	10300	103
13C-PCB-47	1.62e+06	0.95	n	0.81	32:01	0.872	0.866	0.874	9170	92.2
13C-PCB-52	1.68e+06	0.72	y	0.77	31:30	0.858	0.853	0.861	10000	101
13C-PCB-54	1.96e+06	0.79	y	0.97	27:58	0.761	0.758	0.766	9300	93.5
13C-PCB-70	2.12e+06	0.90	n	1.00	35:30	0.966	0.961	0.971	9770	98.2
13C-PCB-77	2.34e+06	0.82	y	0.94	39:37	1.078	1.073	1.083	11400	115
13C-PCB-80	2.44e+06	0.87	y	1.03	35:55	0.978	0.972	0.982	10900	109
13C-PCB-81	1.73e+06	0.60	n	0.92	39:01	1.062	1.057	1.067	8640	86.8
13C-PCB-95	9.14e+05	1.88	n	0.74	35:48	0.913	0.908	0.918	8600	86.4
13C-PCB-97	1.06e+06	1.53	y	0.70	38:47	0.989	0.984	0.994	10500	105
13C-PCB-101	8.70e+05	2.01	n	0.78	37:29	0.956	0.951	0.961	7740	77.8
13C-PCB-104	1.35e+06	1.78	y	1.00	32:40	0.833	0.828	0.836	9390	94.4
13C-PCB-105	1.43e+06	1.72	y	1.37	43:02	0.929	0.924	0.934	8150	81.9
13C-PCB-114	1.78e+06	1.71	y	1.36	42:10	0.911	0.905	0.915	10200	102
13C-PCB-118	1.16e+06	1.96	n	0.96	41:31	1.059	1.054	1.064	8440	84.8
13C-PCB-123	1.45e+06	1.33	y	0.89	41:20	1.054	1.050	1.060	11300	113
13C-PCB-126	1.48e+06	1.44	y	1.31	45:16	0.977	0.972	0.982	8810	88.6
13C-PCB-127	1.68e+06	1.76	y	1.47	43:22	0.936	0.931	0.941	8870	89.2
13C-PCB-138	1.36e+06	1.27	y	1.10	44:45	0.966	0.961	0.971	9670	97.2
13C-PCB-141	1.44e+06	1.32	y	1.07	43:55	0.948	0.943	0.953	10400	105
13C-PCB-153	1.42e+06	1.30	y	1.15	43:11	0.932	0.927	0.937	9640	96.8
13C-PCB-155	1.00e+06	1.13	y	0.84	37:01	0.944	0.939	0.949	8340	83.8
13C-PCB-156	1.74e+06	1.26	y	1.30	48:01	1.037	1.032	1.042	10500	105
13C-PCB-157	1.73e+06	1.23	y	1.36	48:17	1.043	1.038	1.048	9920	99.7
13C-PCB-159	1.55e+06	1.14	y	1.25	46:03	0.994	0.989	0.999	9680	97.3
13C-PCB-167	1.69e+06	1.25	y	1.35	46:44	1.009	1.004	1.014	9760	98.1
13C-PCB-169	1.52e+06	1.32	y	1.29	50:27	1.089	1.083	1.093	9200	92.5
13C-PCB-170	5.98e+05	0.54	n	0.54	50:48	1.097	1.089	1.101	8590	86.4
13C-PCB-180	8.17e+05	0.41	y	0.68	49:18	1.065	1.060	1.070	9320	93.7
13C-PCB-188	1.04e+06	0.43	y	0.92	42:49	0.924	0.919	0.929	8840	88.9
13C-PCB-189	9.00e+05	0.44	y	0.72	52:18	1.129	1.120	1.132	9790	98.4
13C-PCB-194	1.05e+06	0.82	y	0.80	53:49	0.995	0.990	1.000	9220	92.7
13C-PCB-202	8.44e+05	0.74	n	0.84	48:13	1.041	1.036	1.046	7850	78.9
13C-PCB-206	8.77e+05	0.65	n	0.65	55:27	1.025	1.021	1.031	9490	95.4
13C-PCB-208	1.53e+06	0.79	y	1.08	53:05	0.981	0.976	0.986	9950	100
13C-PCB-209	9.08e+05	1.12	y	0.61	56:48	1.050	1.045	1.055	10500	105

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.25e+06	0.70	y	1.02	37:48	1.029	1.023	1.034	10200	102
13C-PCB-178	7.08e+05	0.54	n	0.61	45:36	0.985	0.979	0.990	8990	90.4

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.25e+06	0.70	y	1.10	37:48	0.969	0.964	0.974	11700	118
13C-PCB-178	7.08e+05	0.54	n	0.90	45:36	0.925	0.920	0.930	9590	96.4

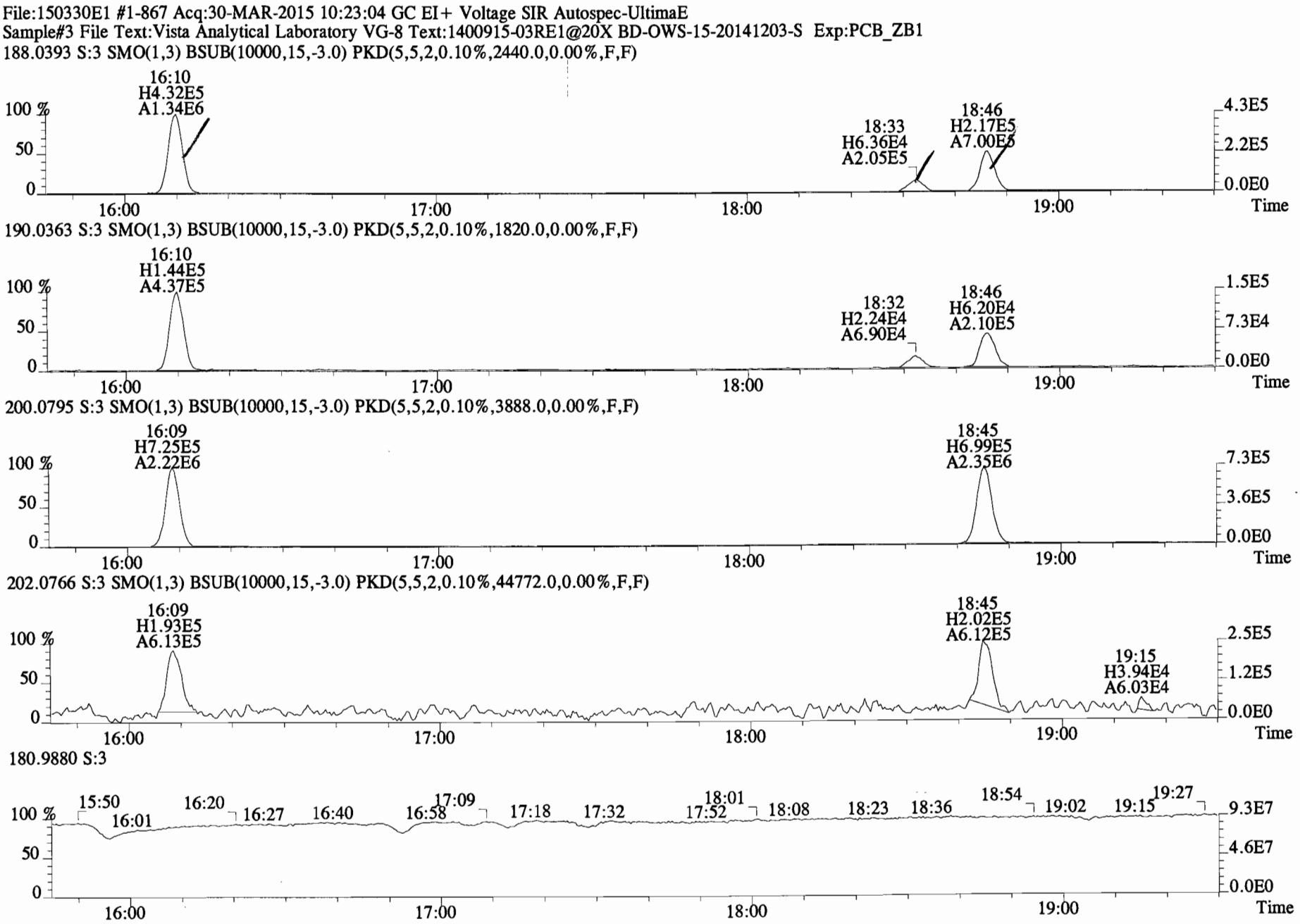
RS

	Name	Resp	RA		RRF	RT	Conc
*	13C-PCB-15	3.09e+06	1.61	y	1.00	25:57	9950
	13C-PCB-31	2.33e+06	0.89	y	1.00	28:59	9950
	13C-PCB-60	2.16e+06	0.64	n	1.00	36:44	9950
	13C-PCB-111	1.43e+06	1.56	y	1.00	39:13	9950
	13C-PCB-128	1.28e+06	1.26	y	1.00	46:19	9950
	13C-PCB-205	1.41e+06	0.94	y	1.00	54:06	9950

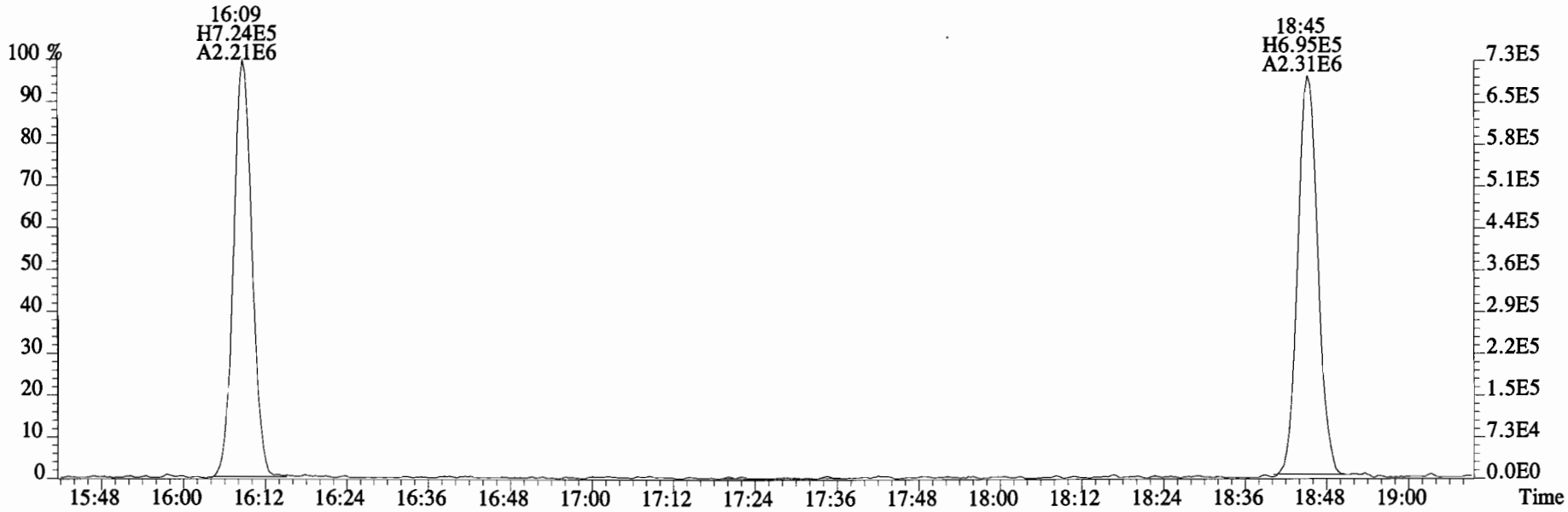
*: used only.

Analyst: DMS

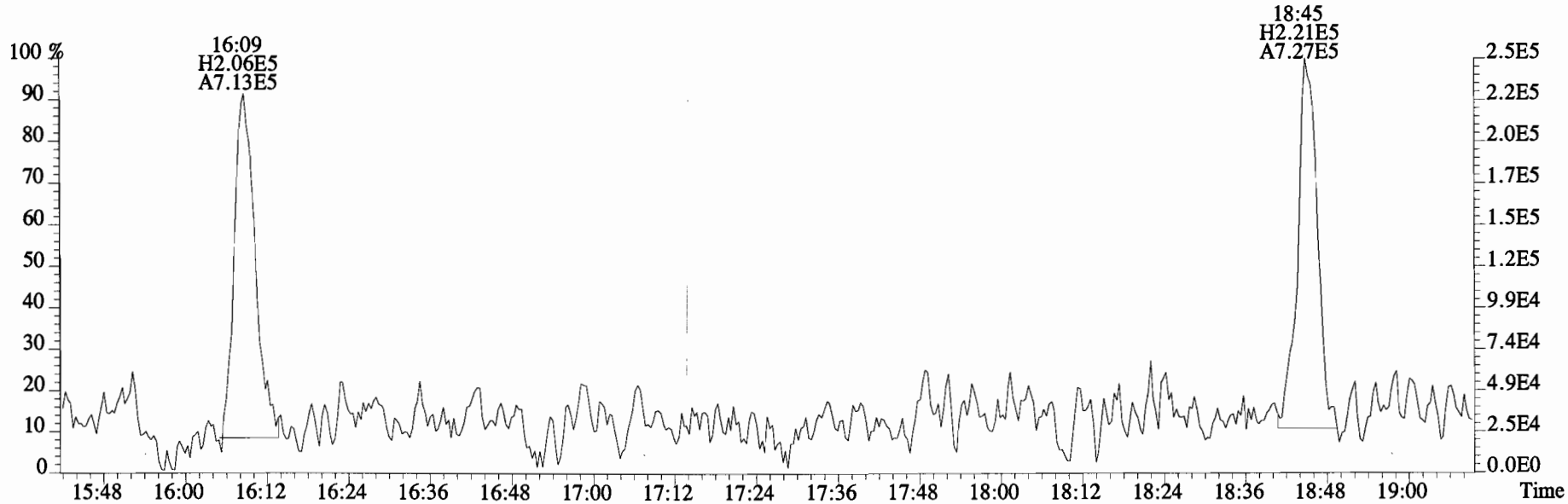
Date: 3/30/15


File:150330E1 #1-867 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
188.0393 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)
16:10
H4.32E5
A1.34E6
18:33
H6.36E4
A2.05E5
18:46
H2.17E5
A7.00E5
190.0363 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1820.0,0.00%,F,F)
16:10
H1.44E5
A4.37E5
18:32
H2.24E4
A6.90E4
18:46
H6.20E4
A2.10E5
200.0795 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)
16:09
H7.25E5
A2.22E6
18:45
H6.99E5
A2.35E6
202.0766 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44772.0,0.00%,F,F)
16:09
H1.93E5
A6.13E5
18:45
H2.02E5
A6.12E5
19:15
H3.94E4
A6.03E4
180.9880 S:3
15:50
16:01
16:20
16:27
16:40
16:58
17:09
17:18
17:32
17:52
18:01
18:08
18:23
18:36
18:54
19:02
19:15
19:27
100 %
50
0
16:00
17:00
18:00
19:00
Time
4.3E5
2.2E5
0.0E0
1.5E5
7.3E4
7.3E5
3.6E5
2.5E5
1.2E5
9.3E7
4.6E7

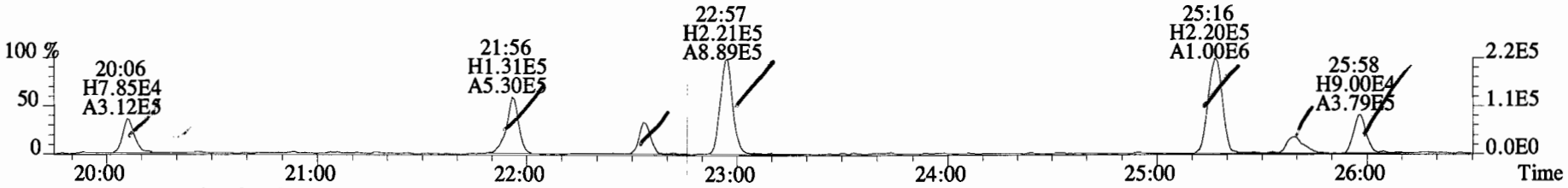
File:150330E1 #1-867 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
200.0795 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)



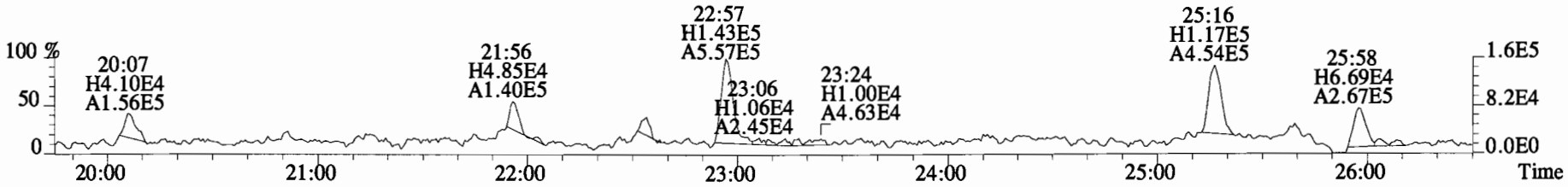
202.0766 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44772.0,0.00%,F,F)



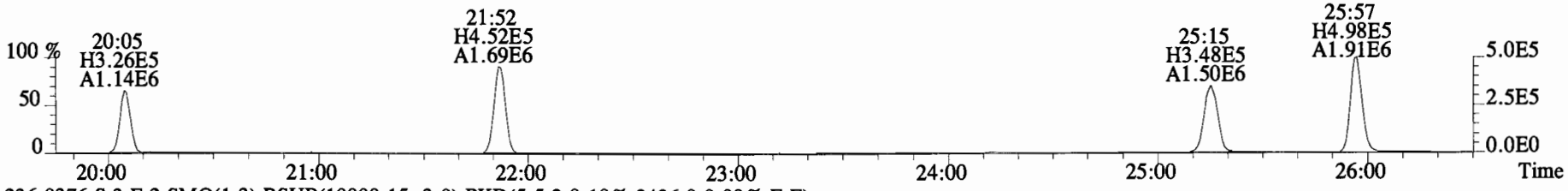
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3400.0,0.00%,F,F)



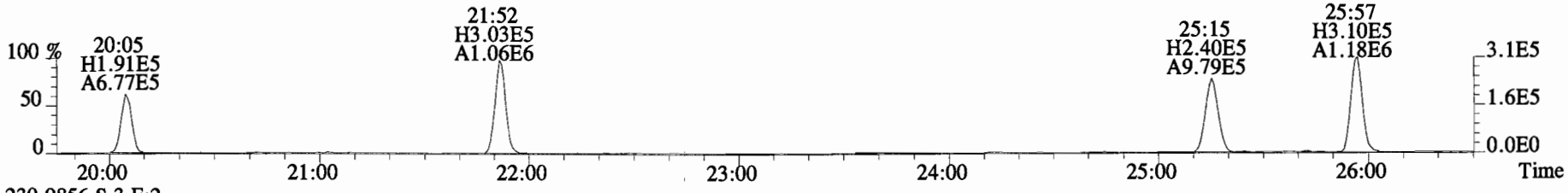
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27312.0,0.00%,F,F)



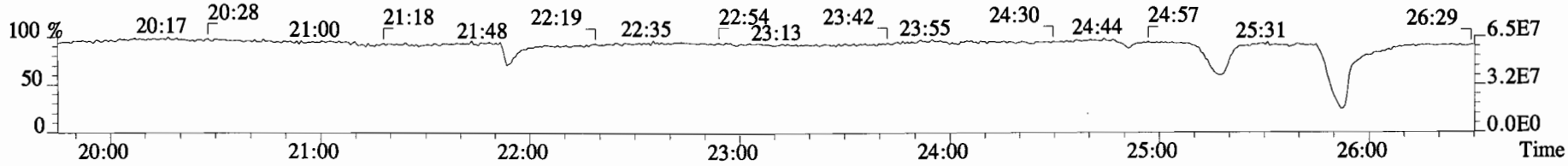
234.0406 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3132.0,0.00%,F,F)



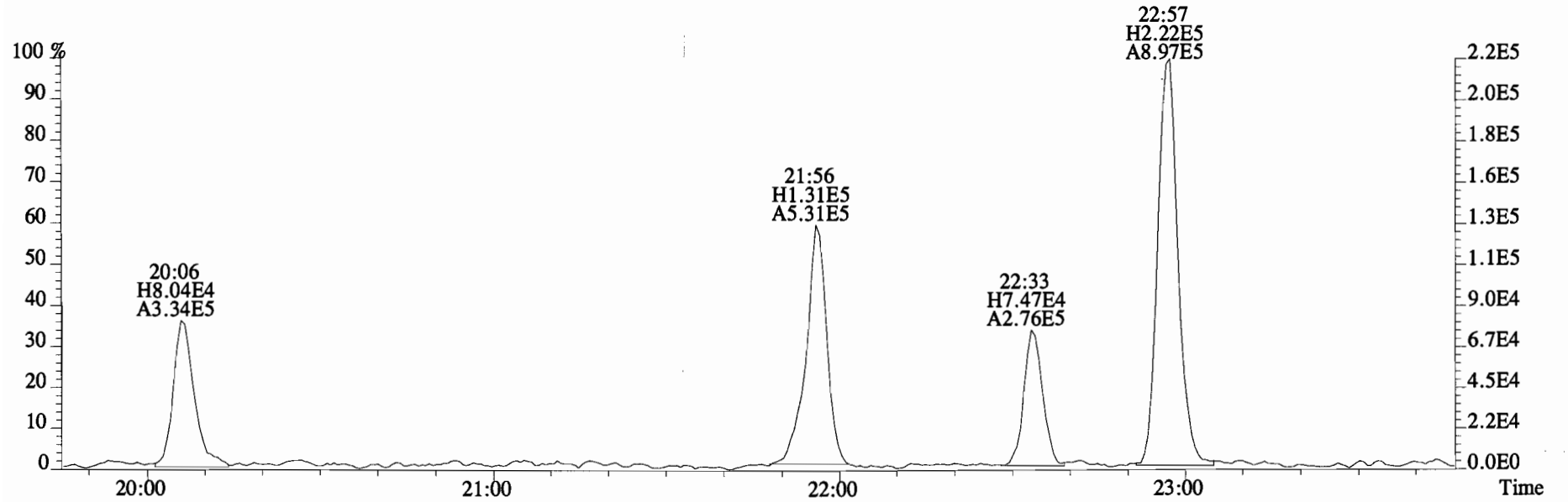
236.0376 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2436.0,0.00%,F,F)



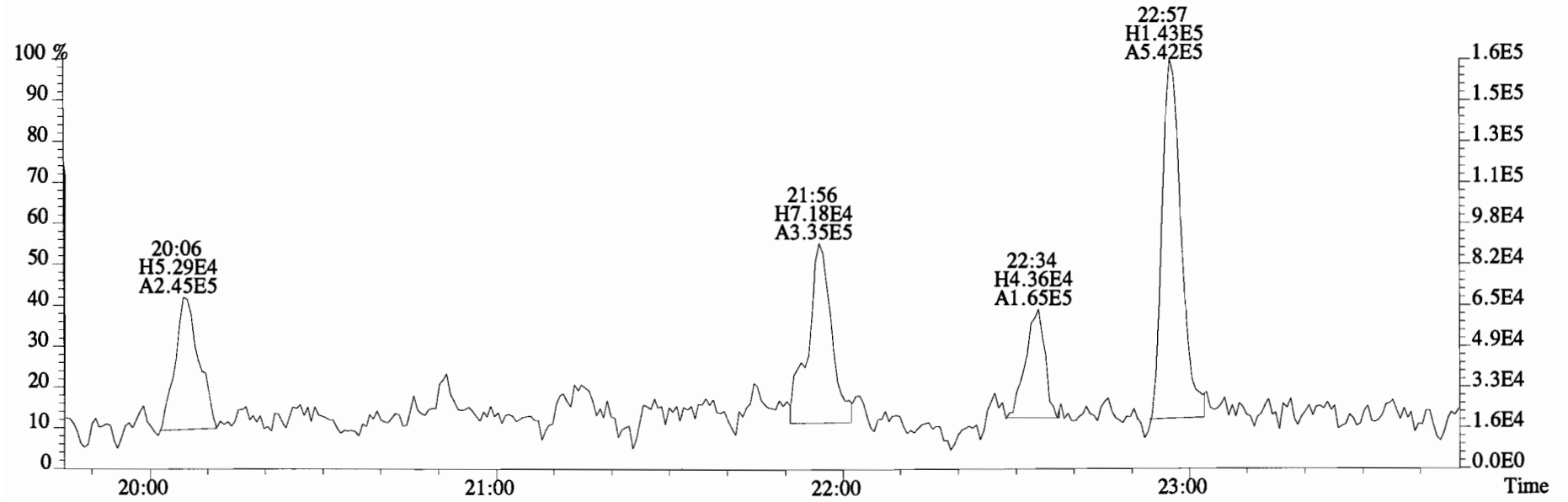
230.9856 S:3 F:2



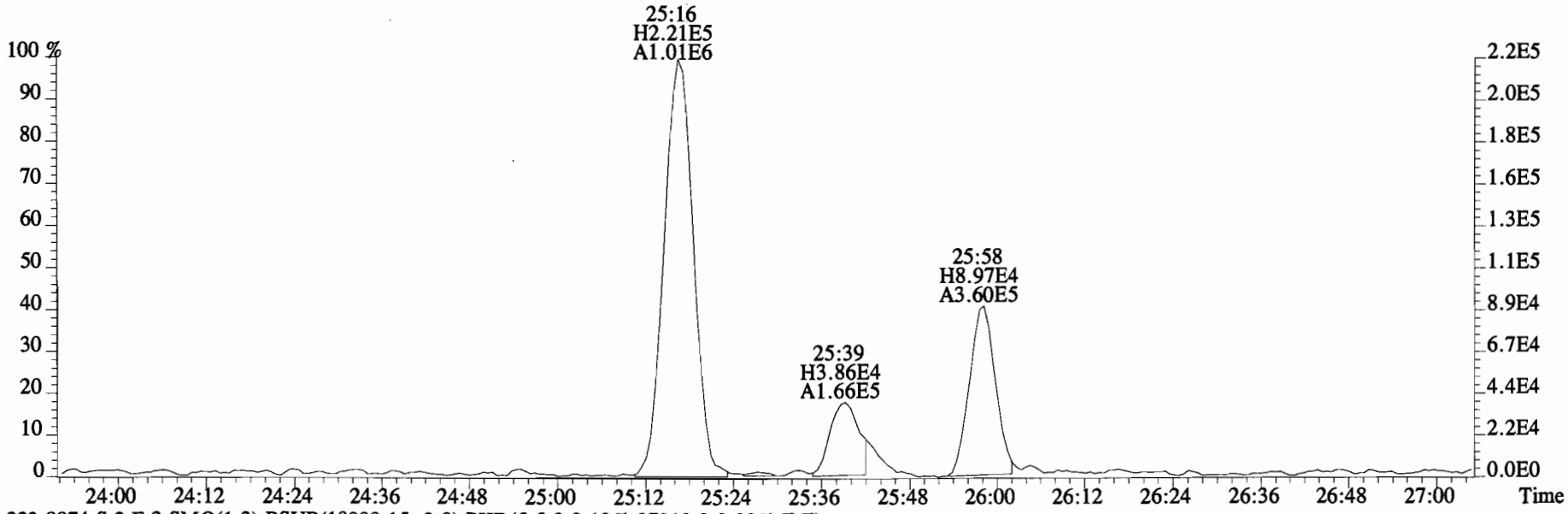
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3400.0,0.00%,F,F)



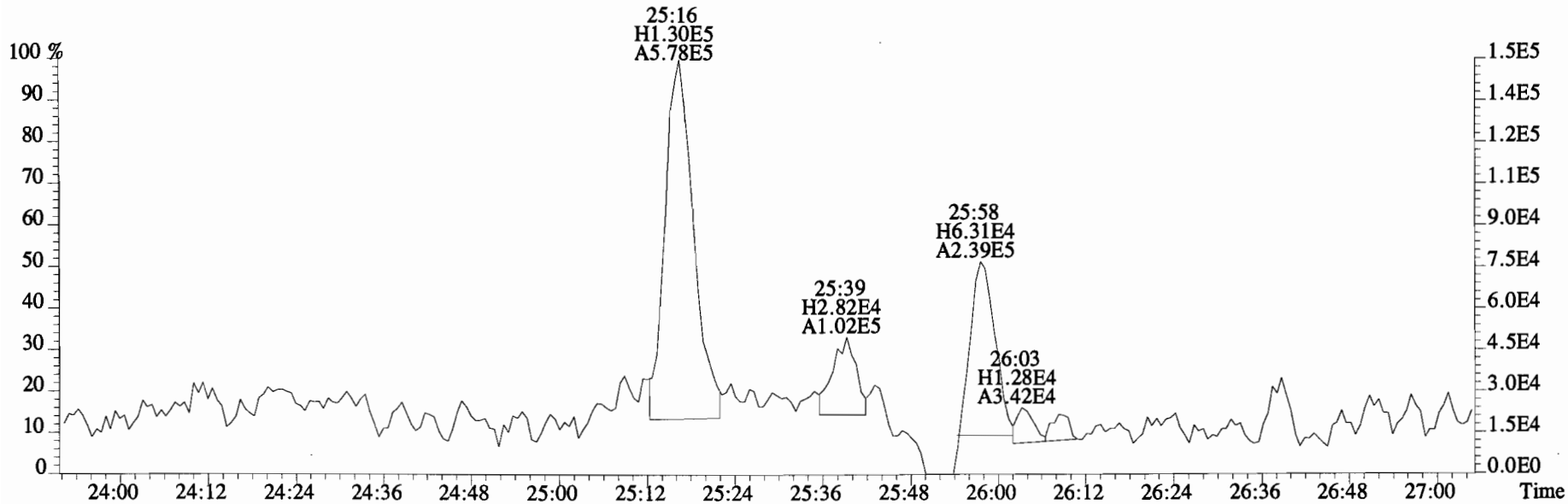
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27312.0,0.00%,F,F)



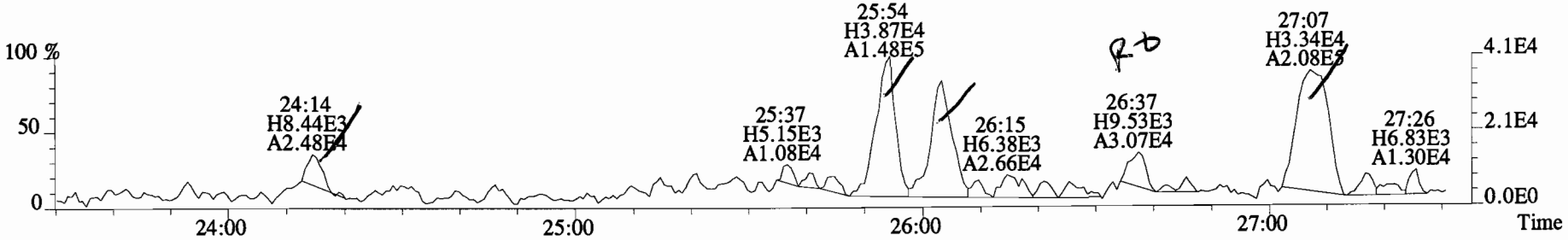
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3400.0,0.00%,F,F)



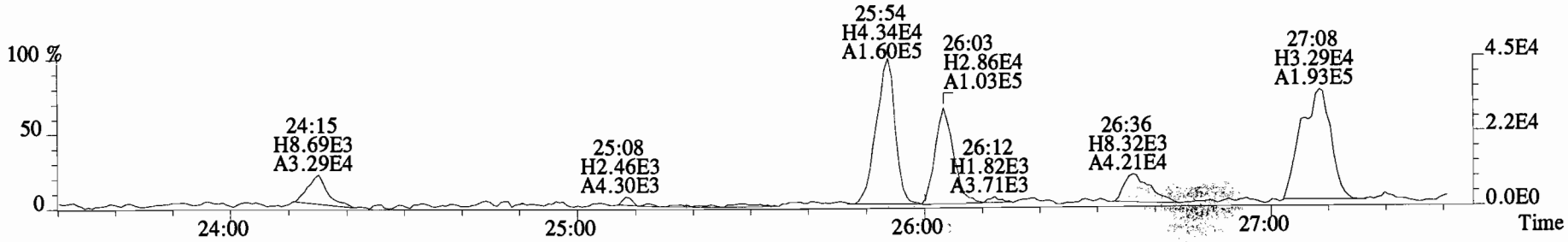
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27312.0,0.00%,F,F)



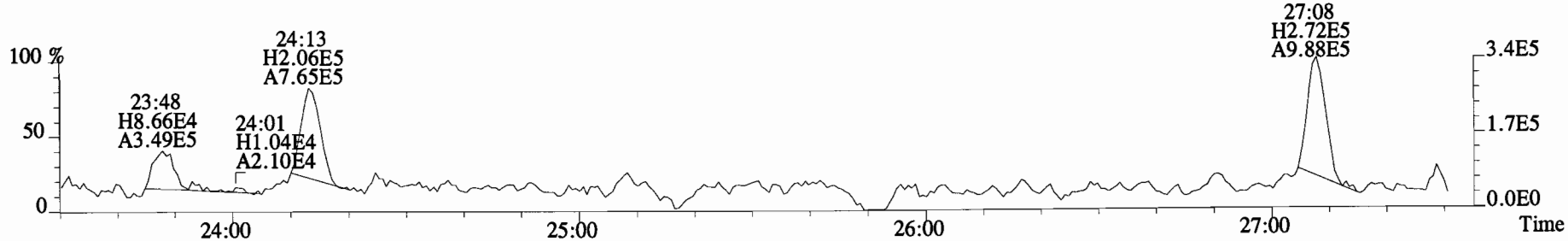
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5472.0,0.00%,F,F)



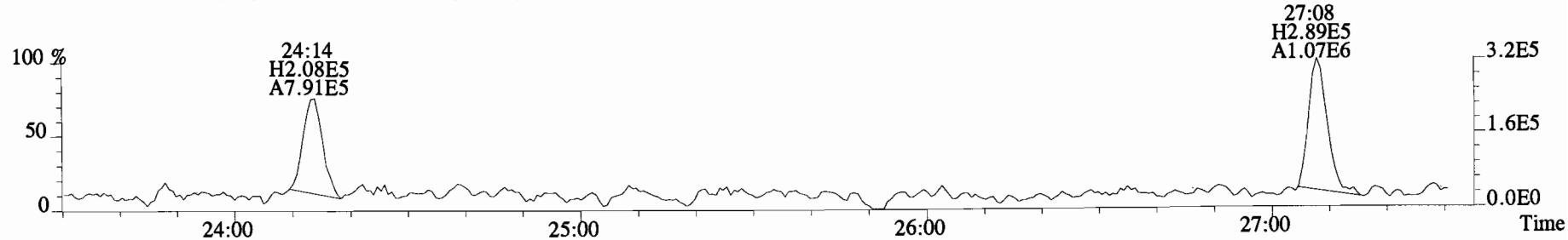
257.9584 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1928.0,0.00%,F,F)



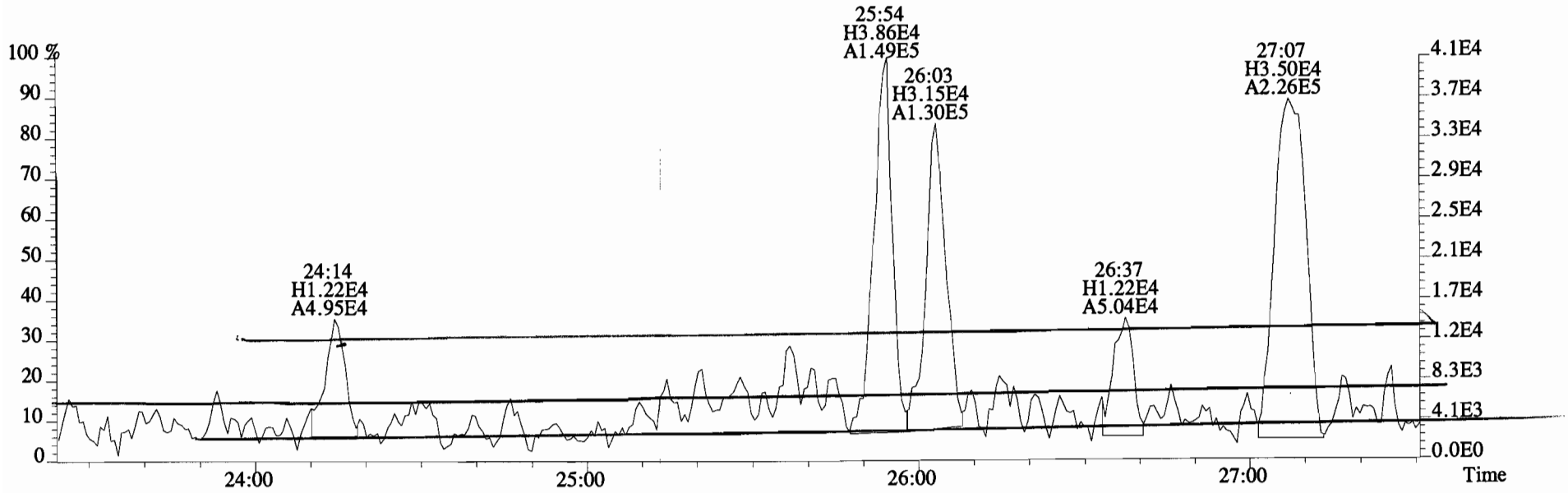
268.0016 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,66744.0,0.00%,F,F)



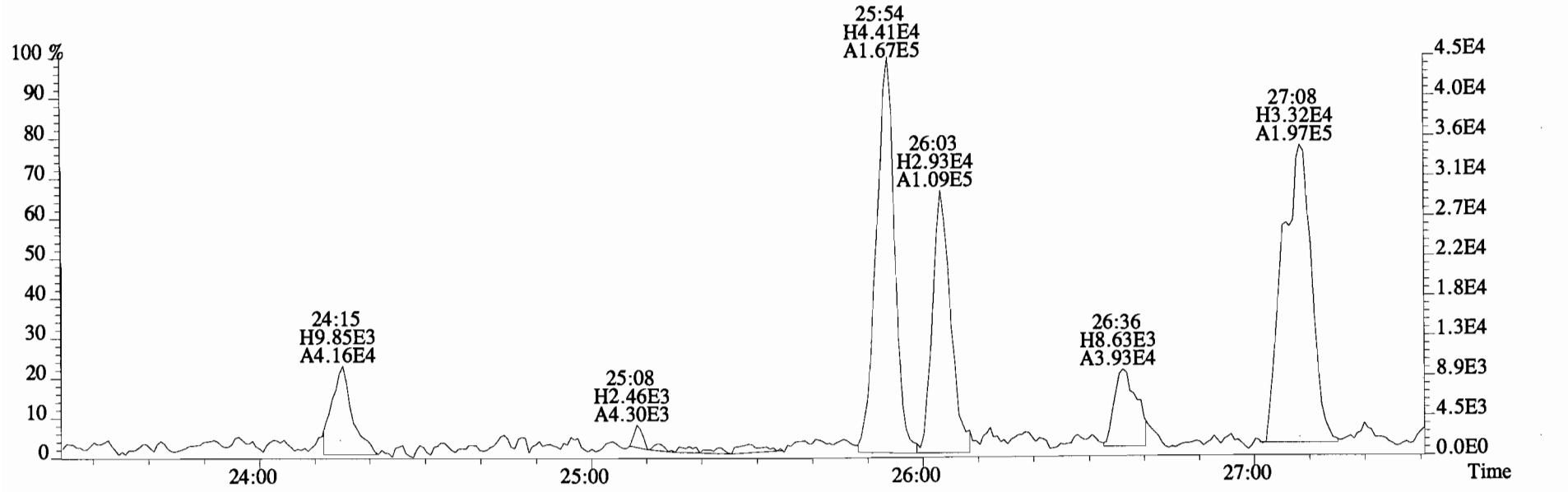
269.9986 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,43336.0,0.00%,F,F)



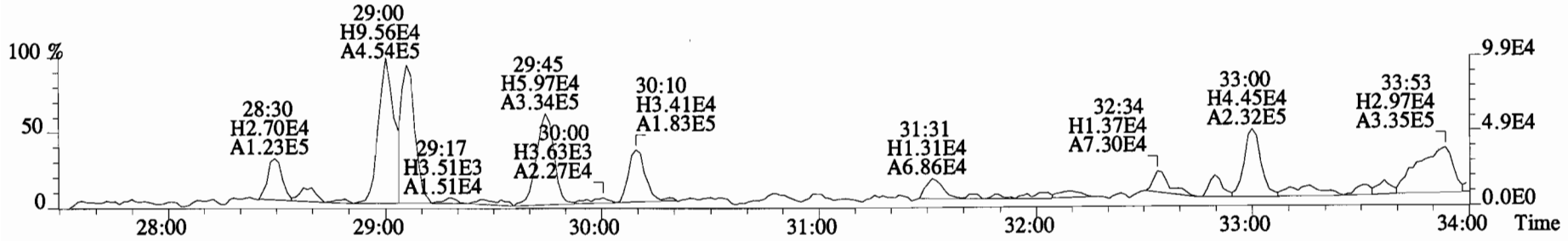
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5472.0,0.00%,F,F)



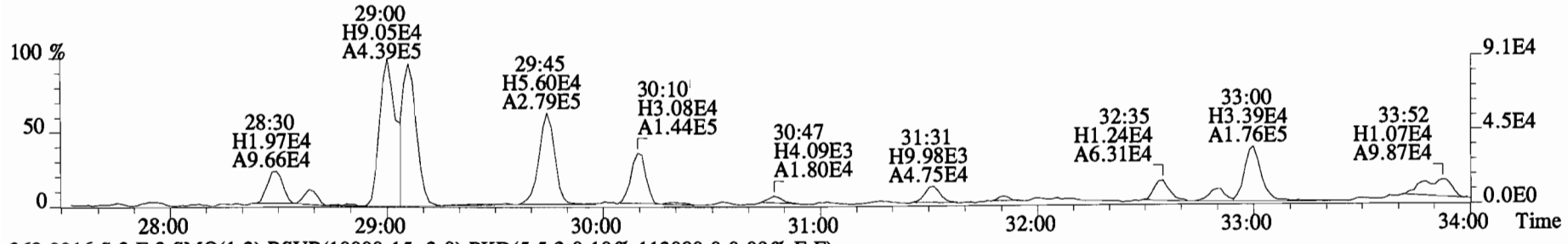
257.9584 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1928.0,0.00%,F,F)



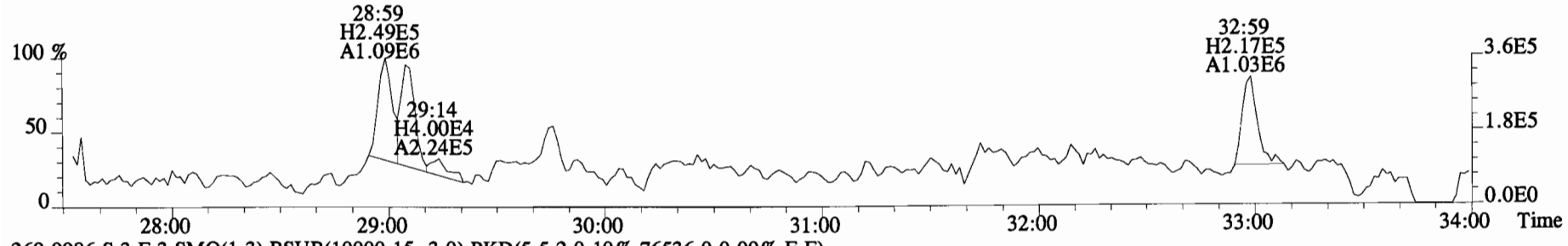
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
255.9613 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8432.0,0.00%,F,F)



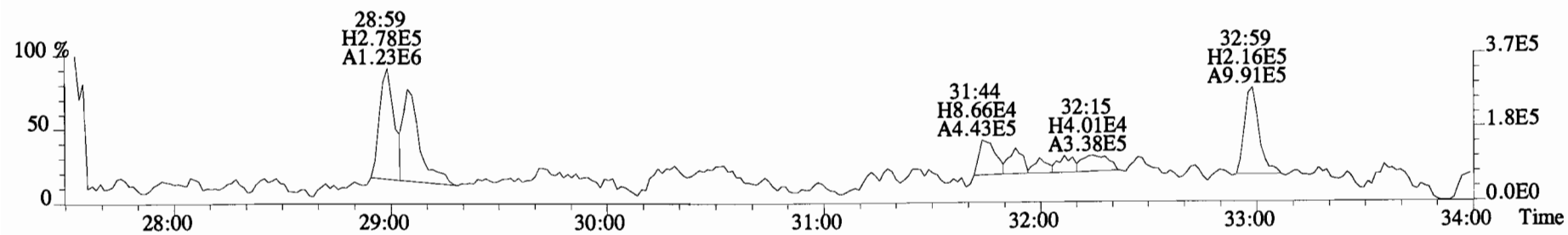
257.9584 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2652.0,0.00%,F,F)



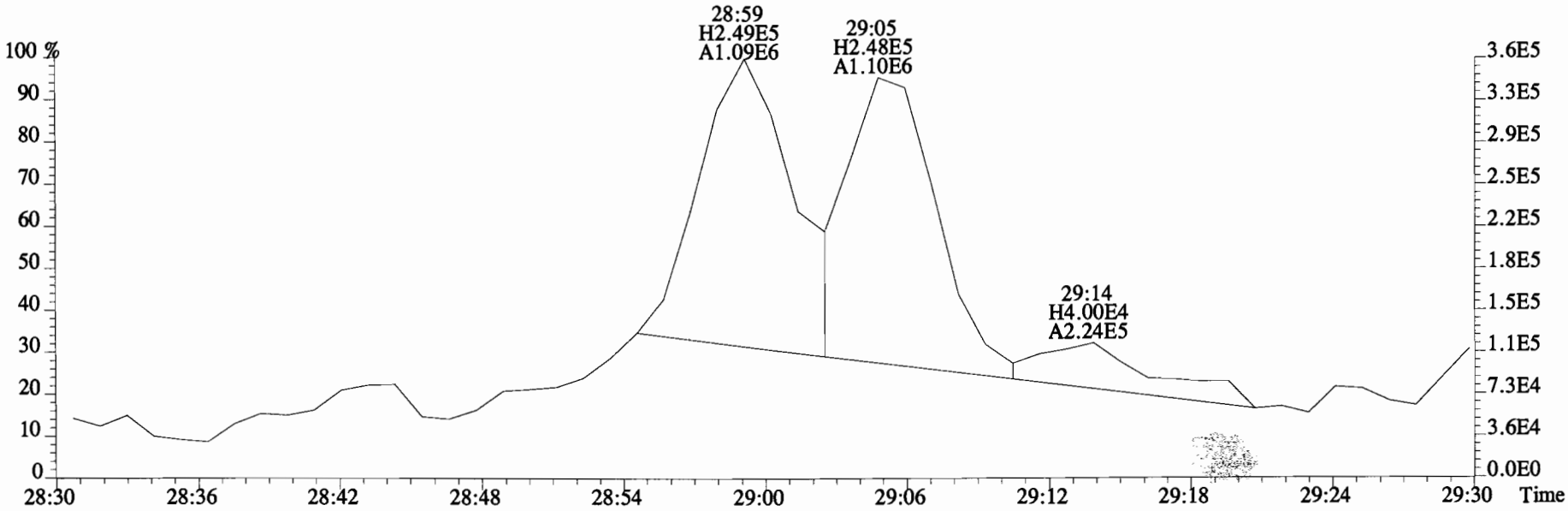
268.0016 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,113080.0,0.00%,F,F)



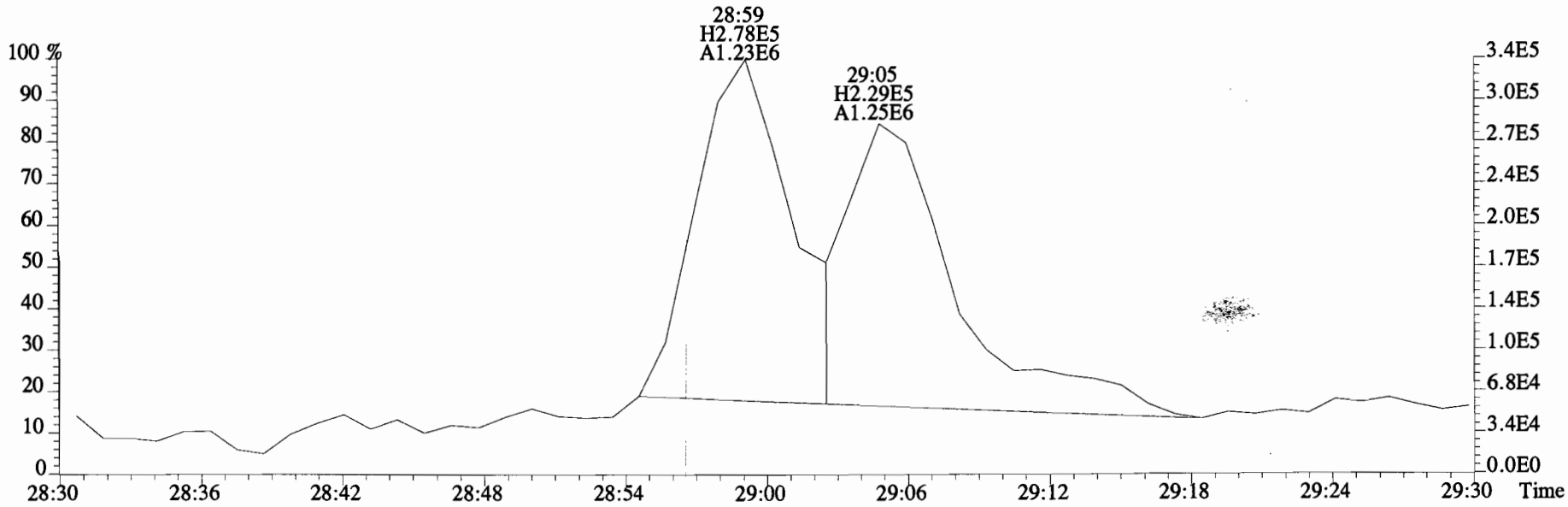
269.9986 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,76536.0,0.00%,F,F)



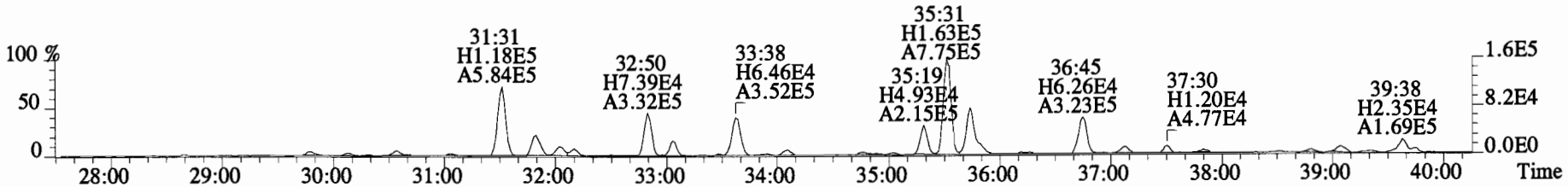
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
268.0016 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,113080.0,0.00%,F,F)



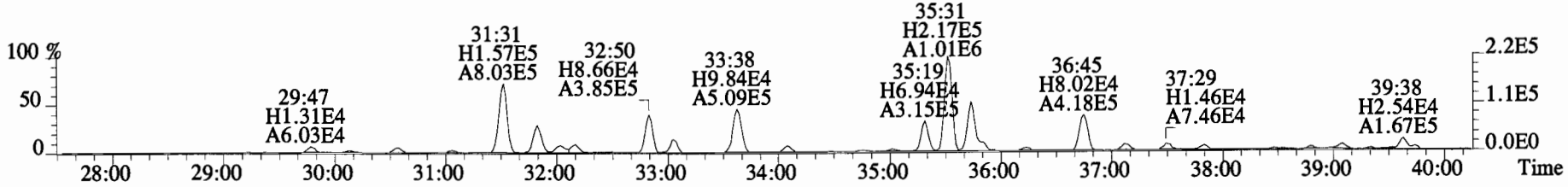
269.9986 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,76536.0,0.00%,F,F)



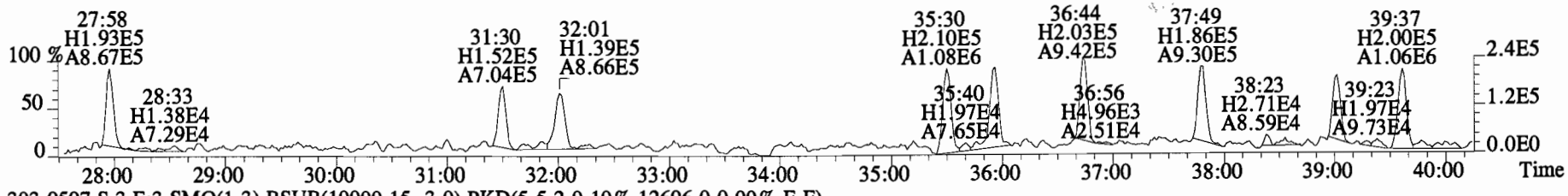
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)



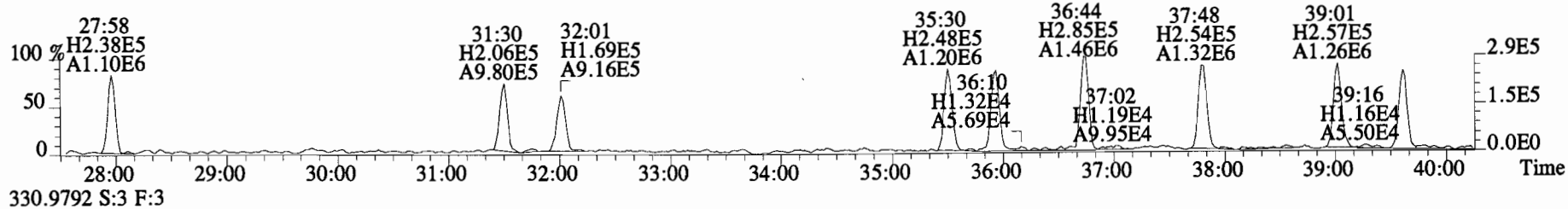
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2884.0,0.00%,F,F)



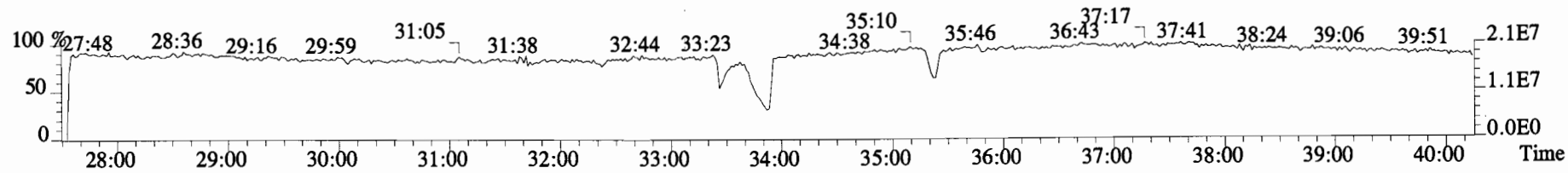
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,28912.0,0.00%,F,F)



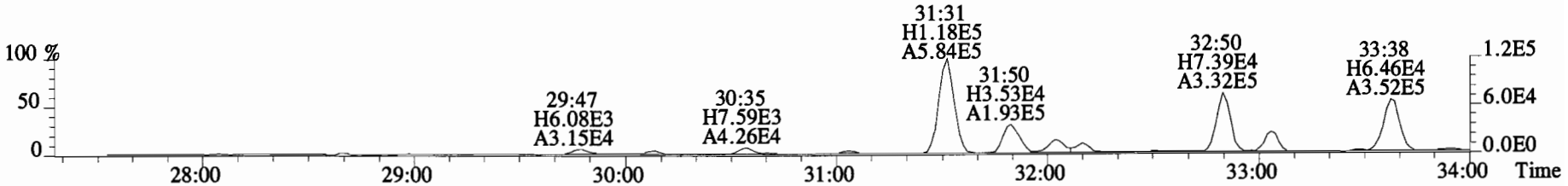
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12696.0,0.00%,F,F)



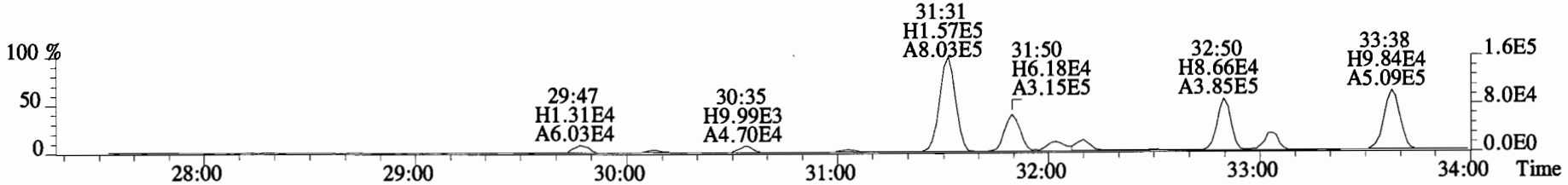
330.9792 S:3 F:3



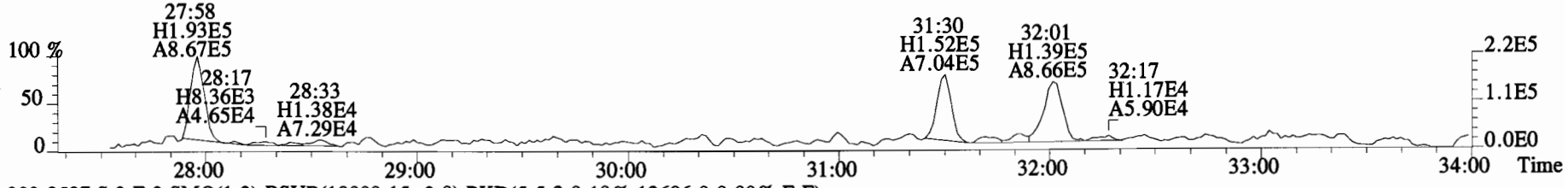
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)



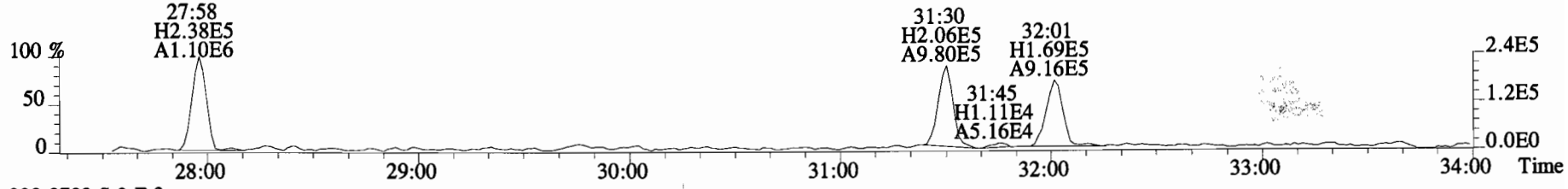
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2884.0,0.00%,F,F)



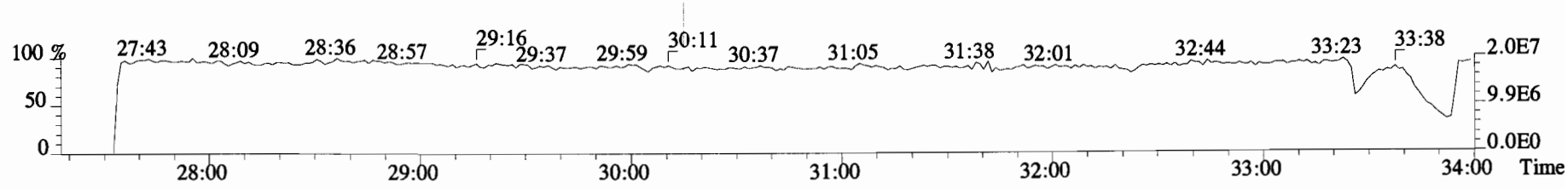
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,28912.0,0.00%,F,F)



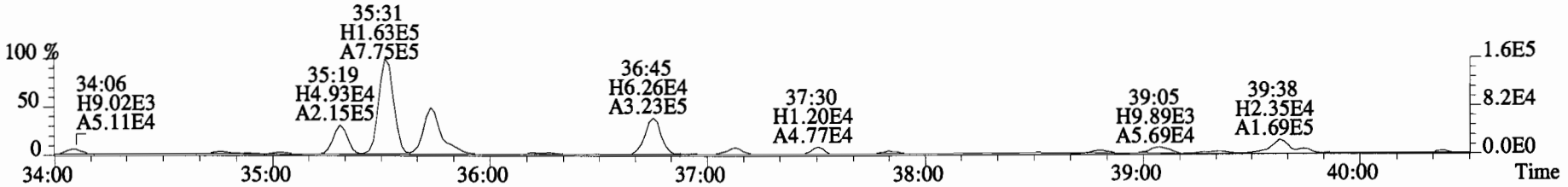
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12696.0,0.00%,F,F)



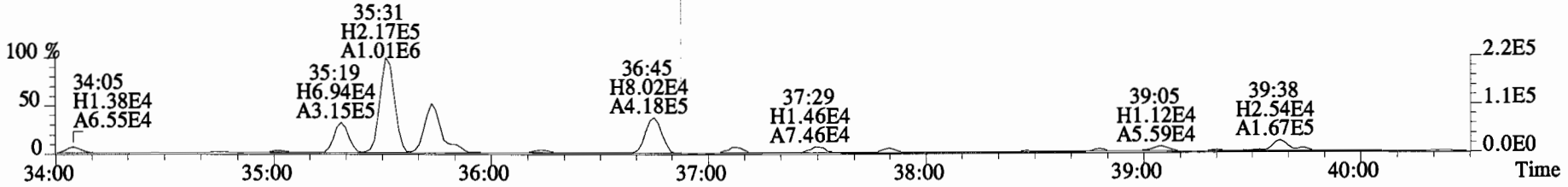
330.9792 S:3 F:3



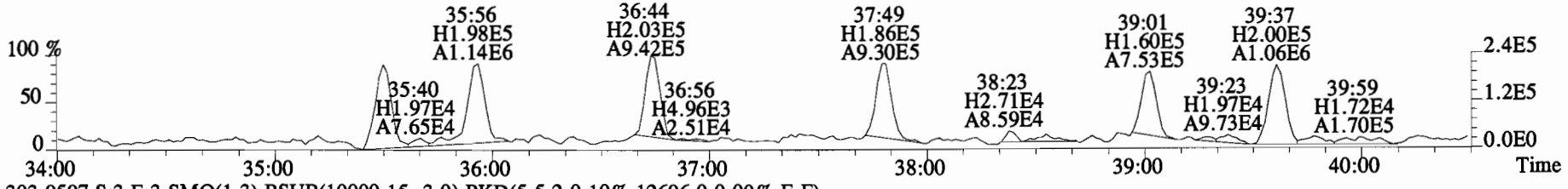
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)



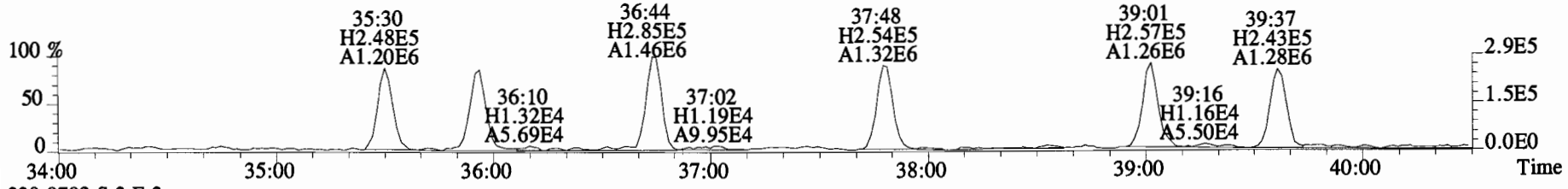
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2884.0,0.00%,F,F)



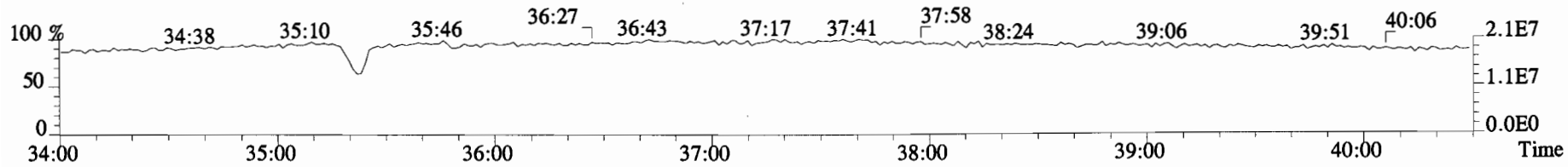
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,28912.0,0.00%,F,F)



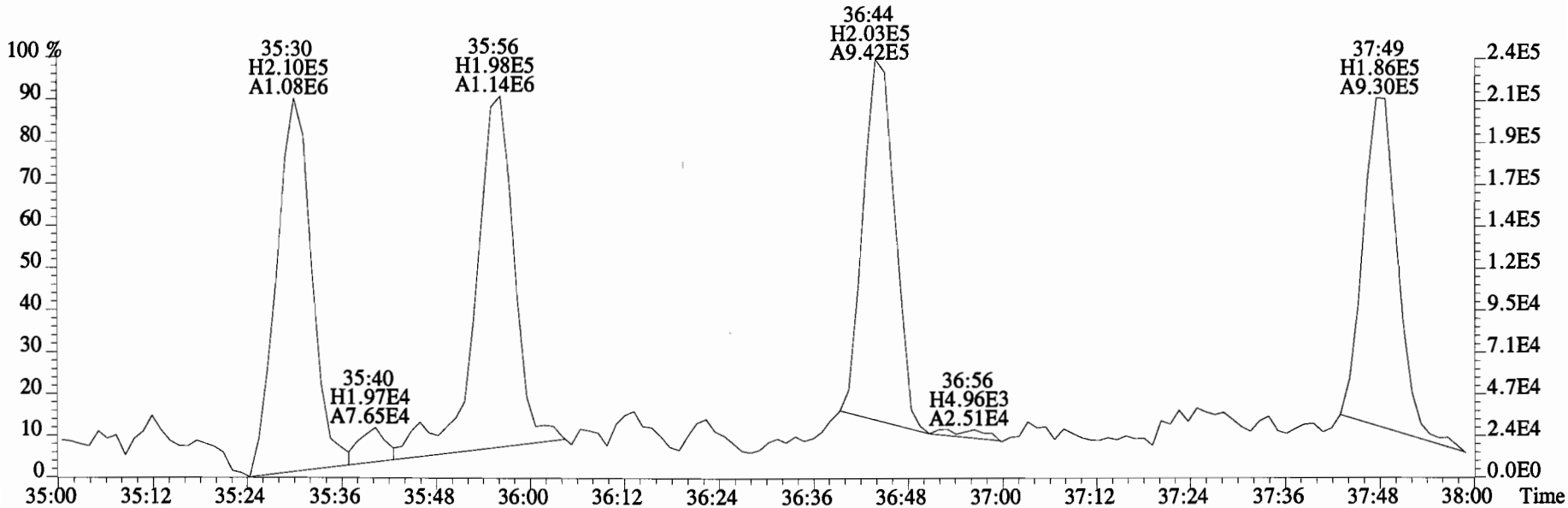
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12696.0,0.00%,F,F)



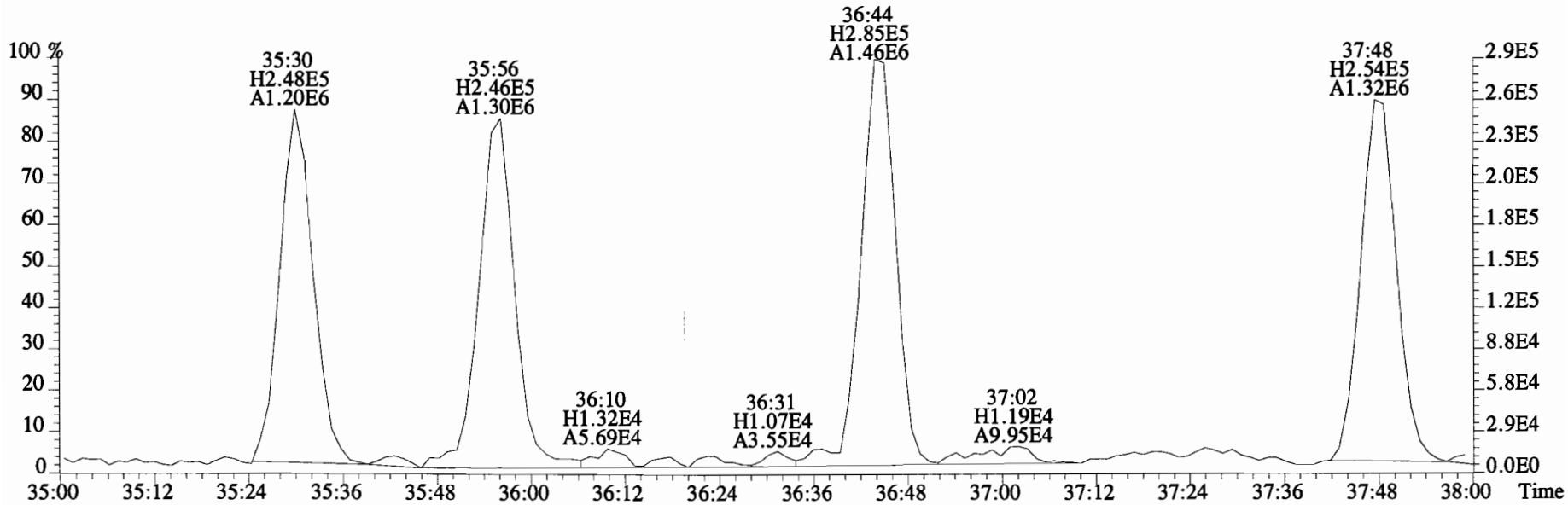
330.9792 S:3 F:3



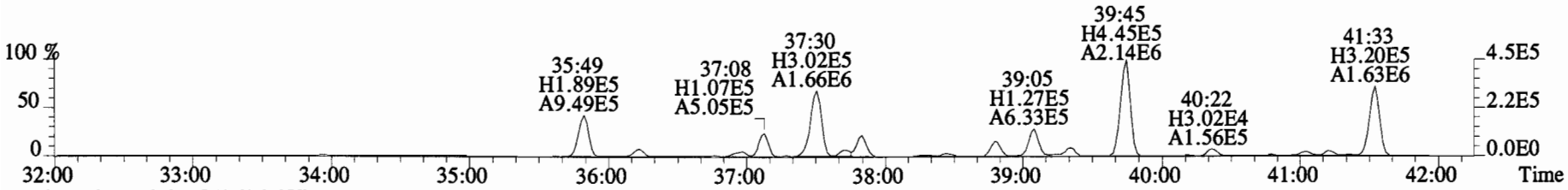
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,28912.0,0.00%,F,F)



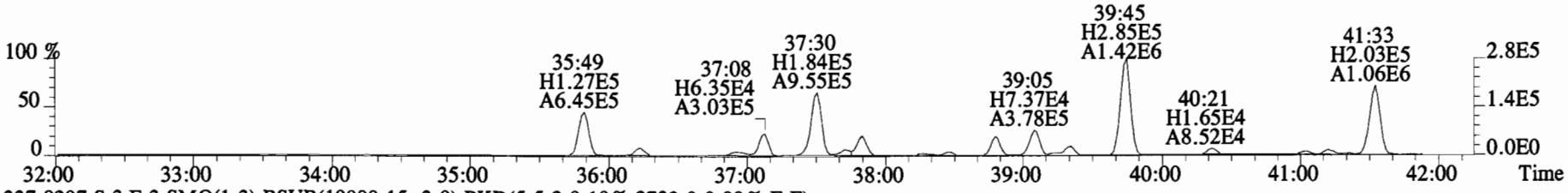
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12696.0,0.00%,F,F)



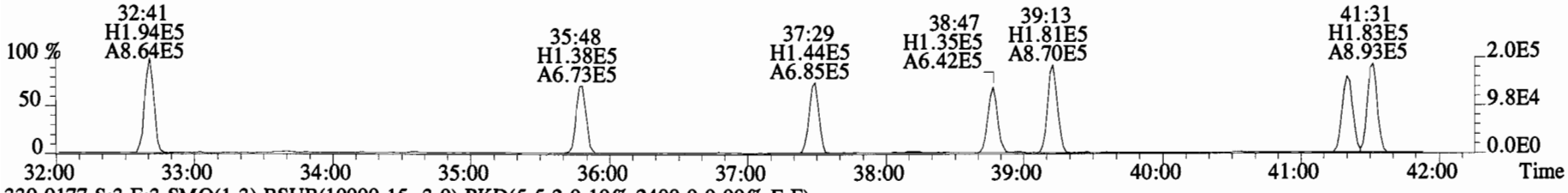
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



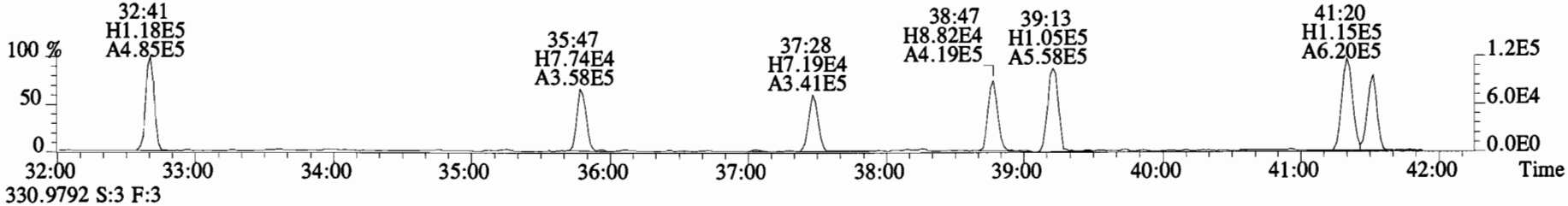
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2220.0,0.00%,F,F)



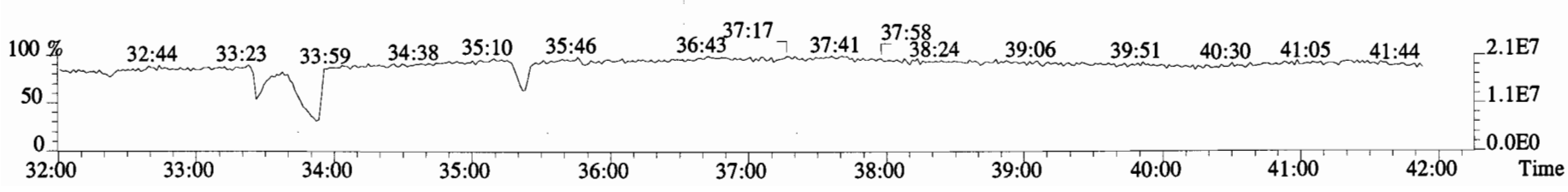
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2732.0,0.00%,F,F)



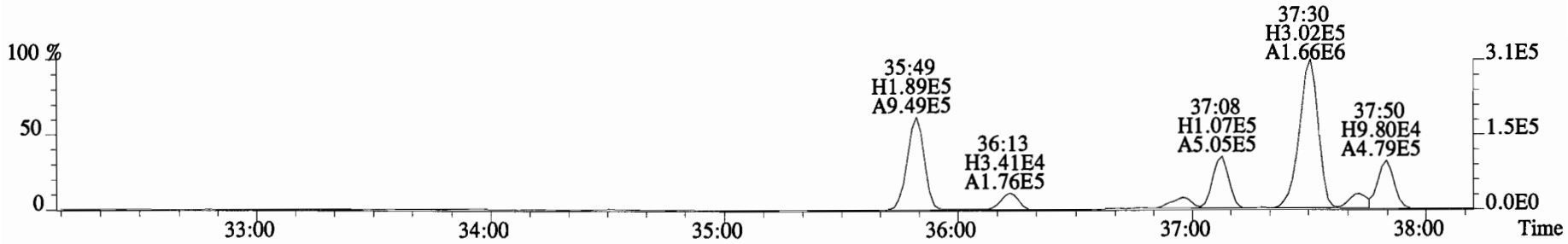
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



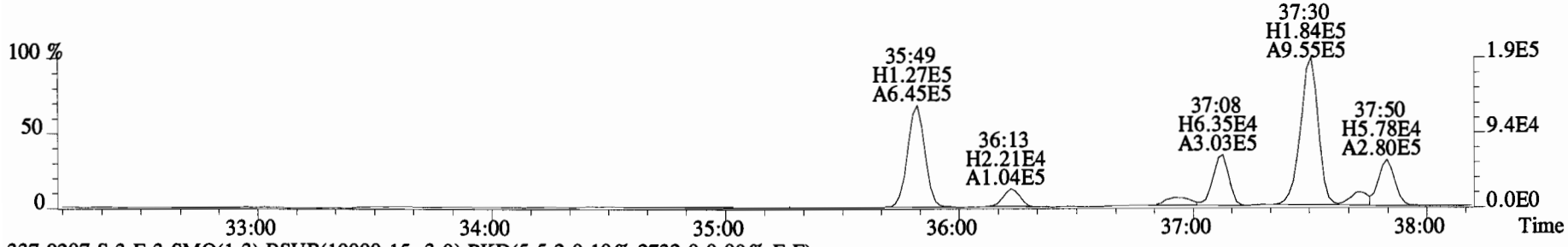
330.9792 S:3 F:3



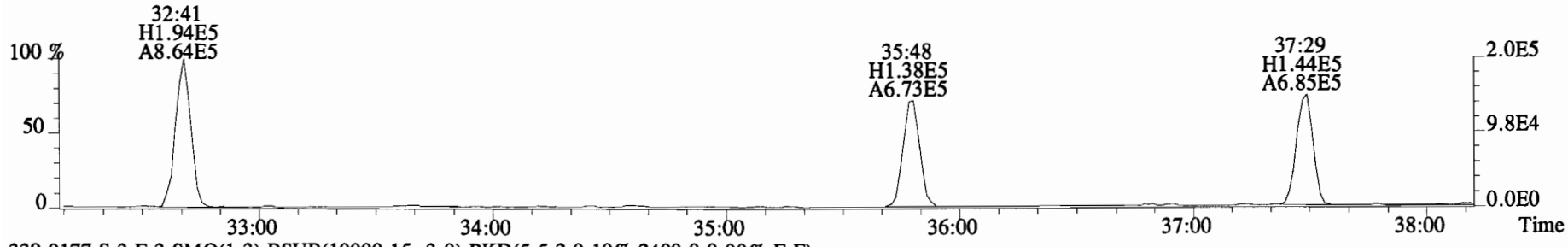
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



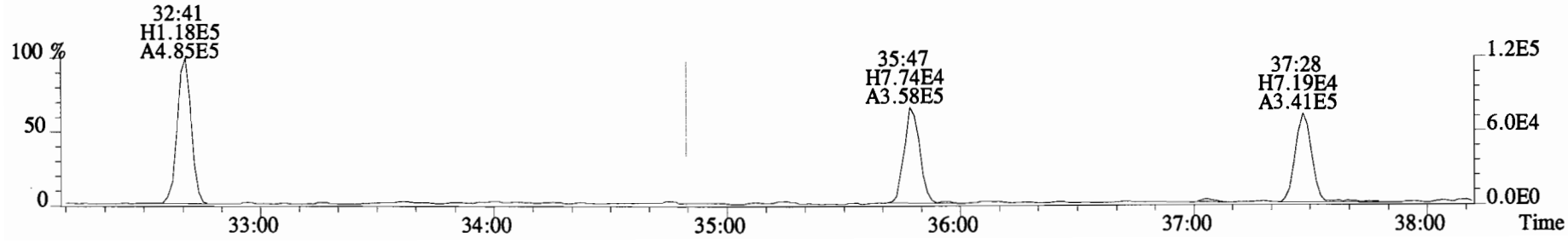
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2220.0,0.00%,F,F)



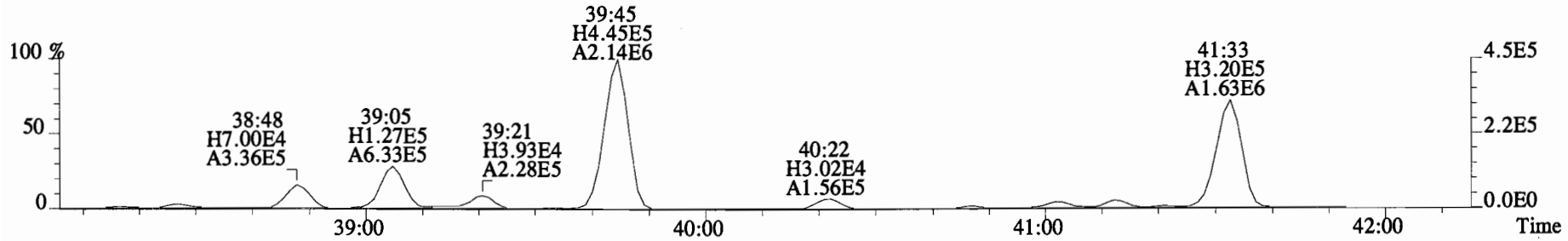
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2732.0,0.00%,F,F)



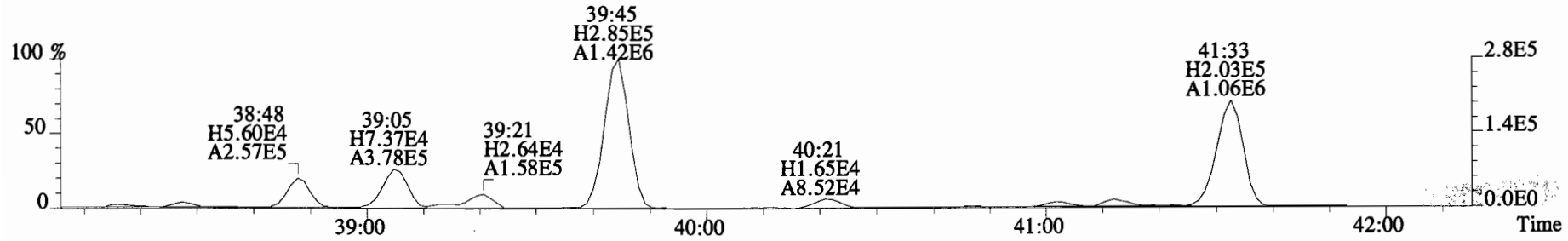
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



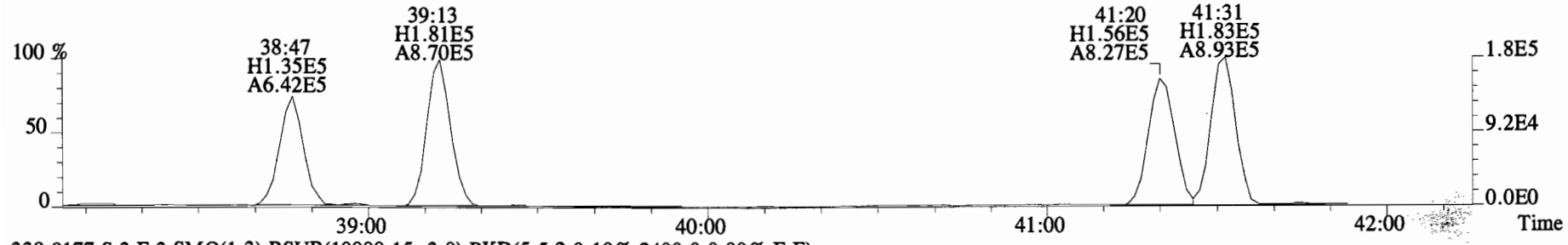
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



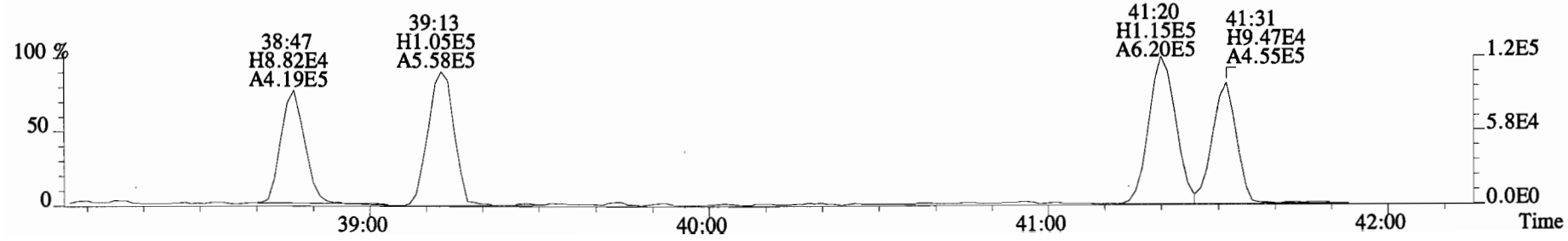
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2220.0,0.00%,F,F)



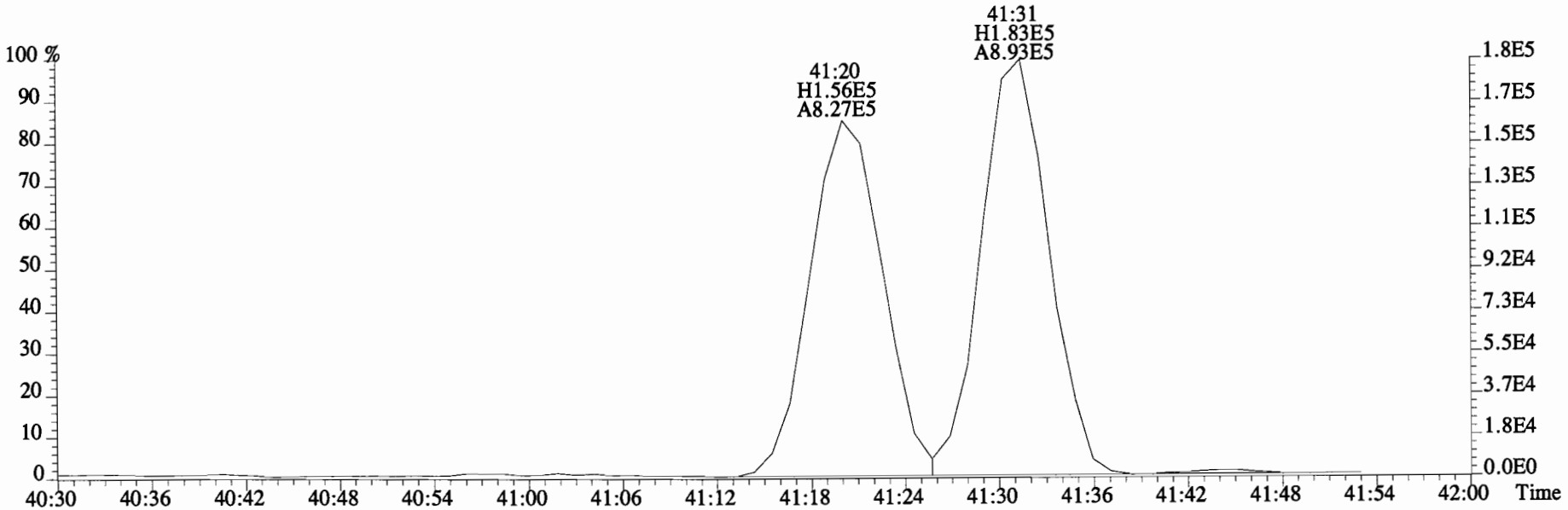
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2732.0,0.00%,F,F)



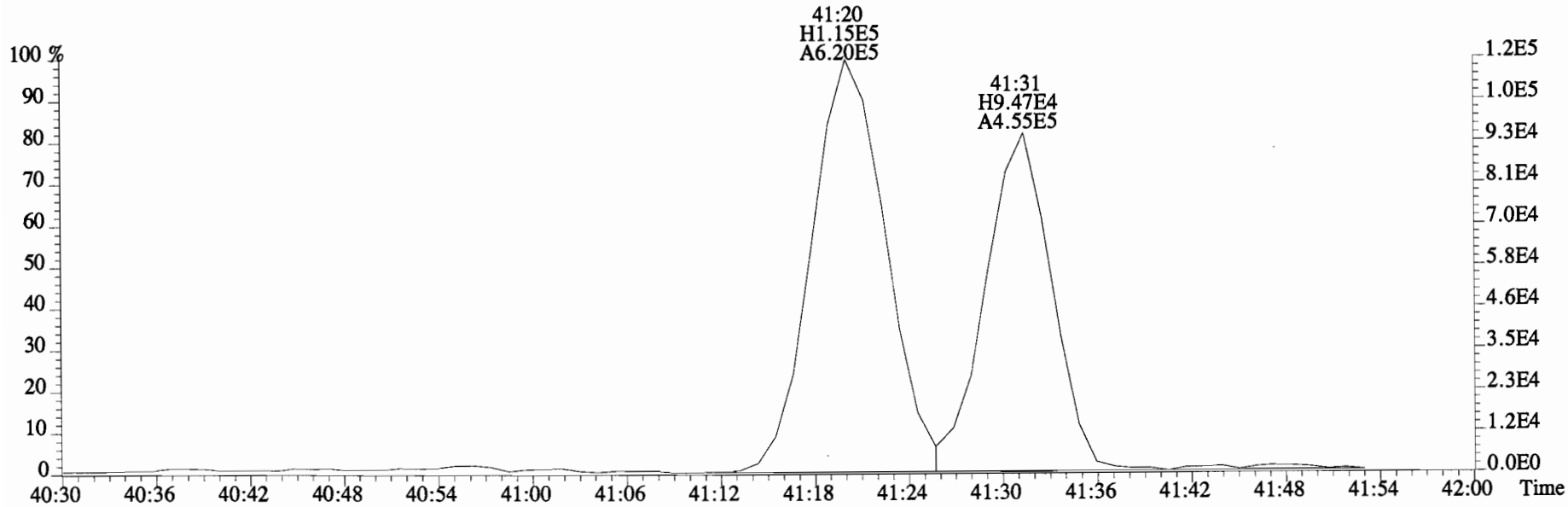
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



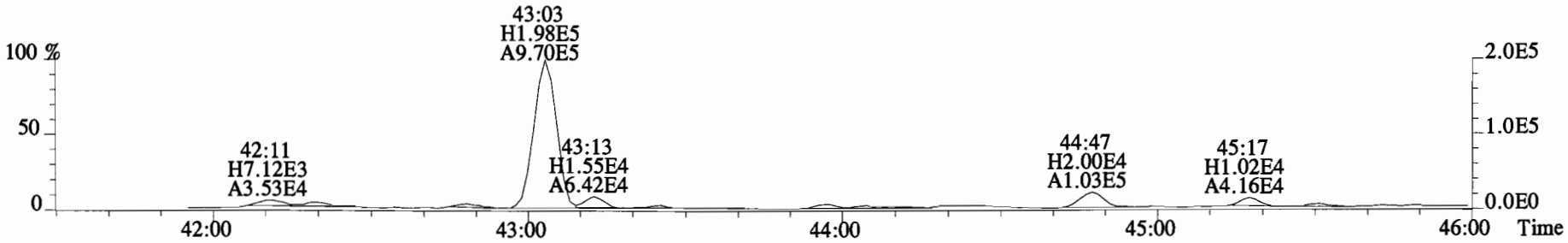
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2732.0,0.00%,F,F)



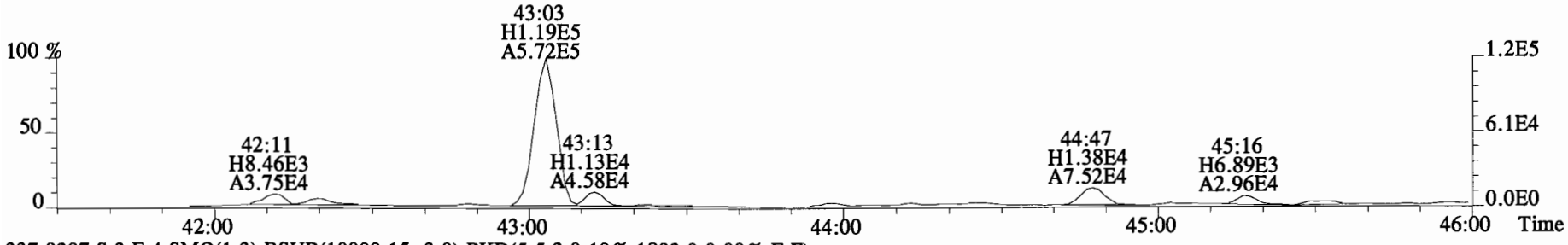
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2400.0,0.00%,F,F)



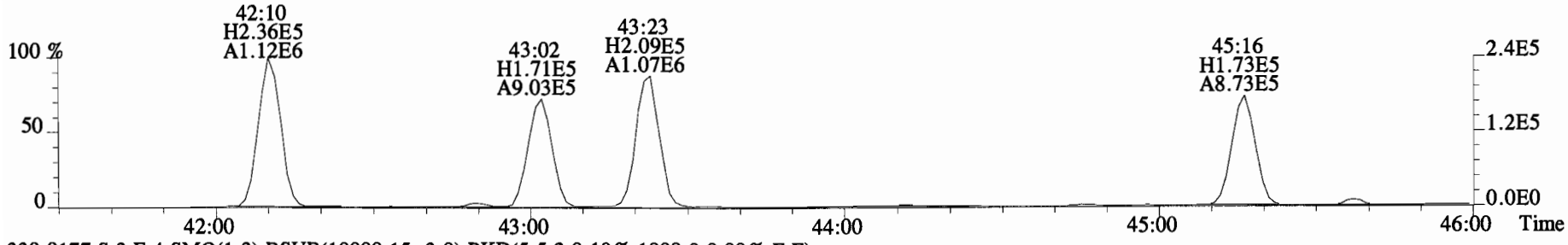
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
325.8804 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4944.0,0.00%,F,F)



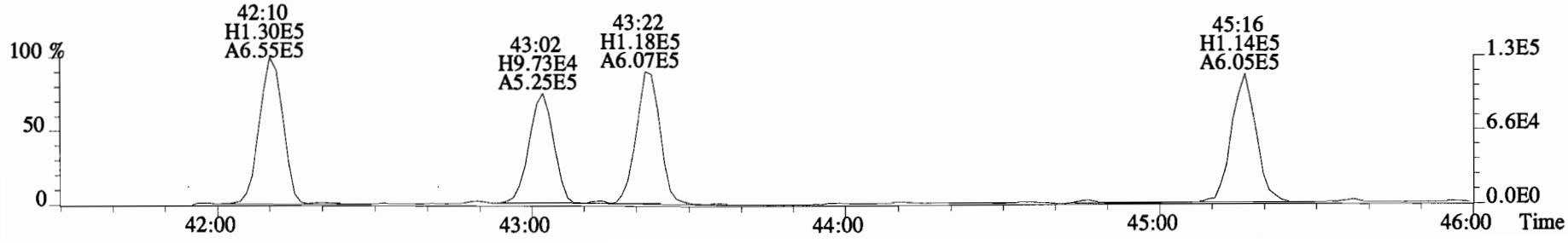
327.8775 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2572.0,0.00%,F,F)



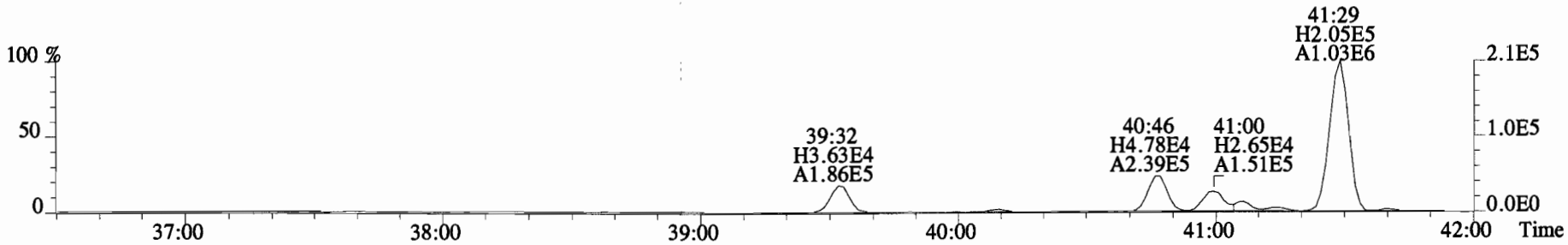
337.9207 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1892.0,0.00%,F,F)



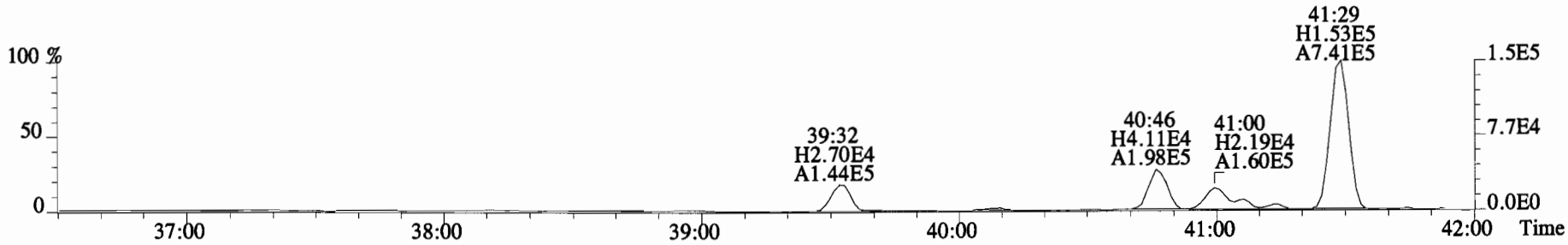
339.9177 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1808.0,0.00%,F,F)



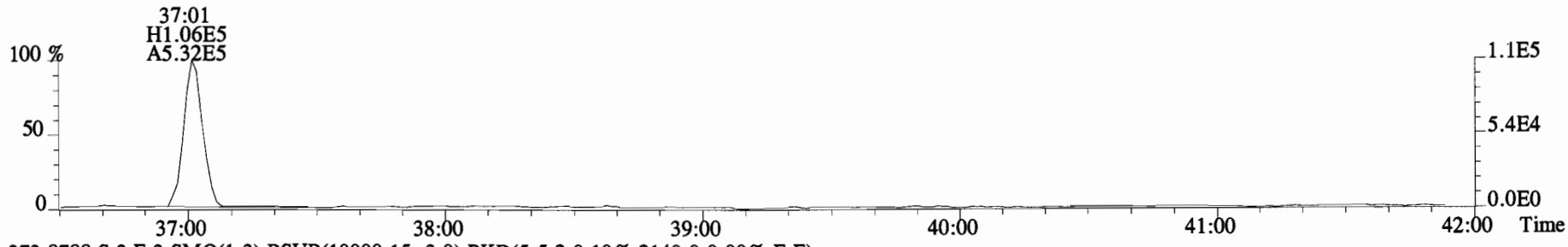
File:150330E1 #1-758 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2348.0,0.00%,F,F)



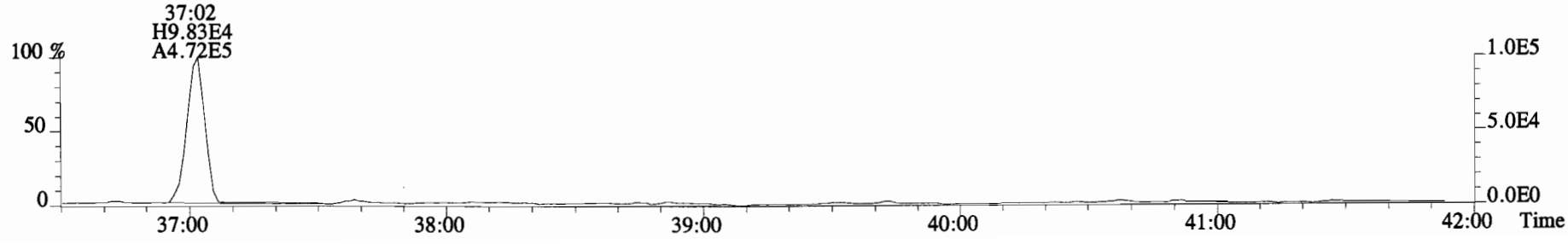
361.8385 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1992.0,0.00%,F,F)



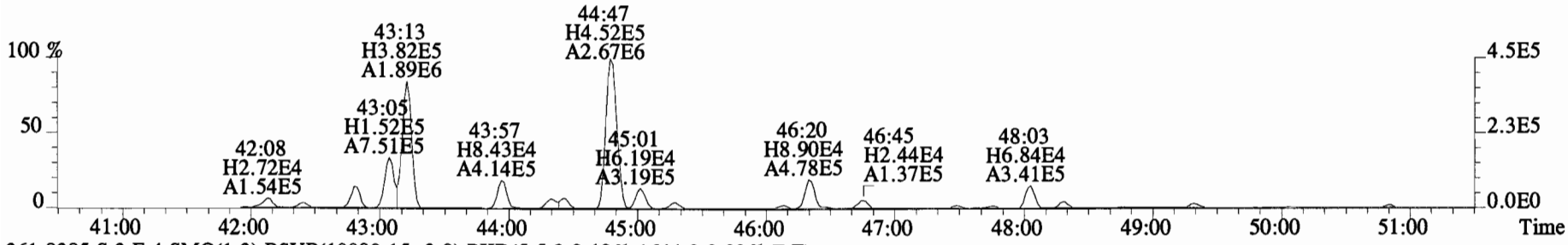
371.8817 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2276.0,0.00%,F,F)



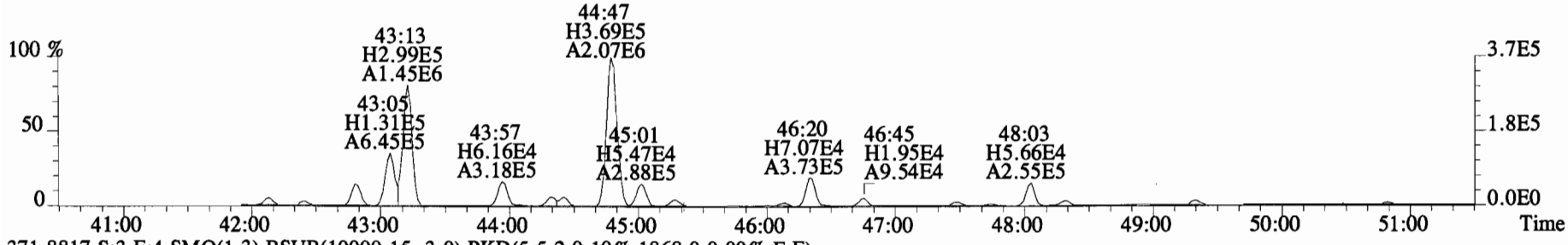
373.8788 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2140.0,0.00%,F,F)



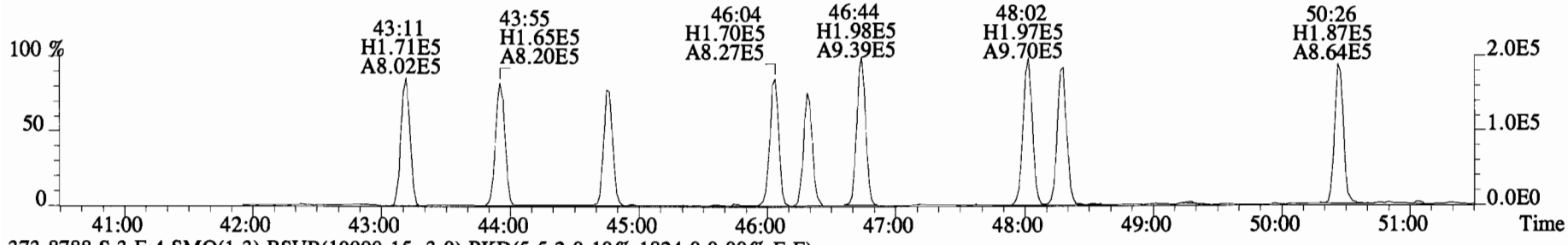
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1960.0,0.00%,F,F)



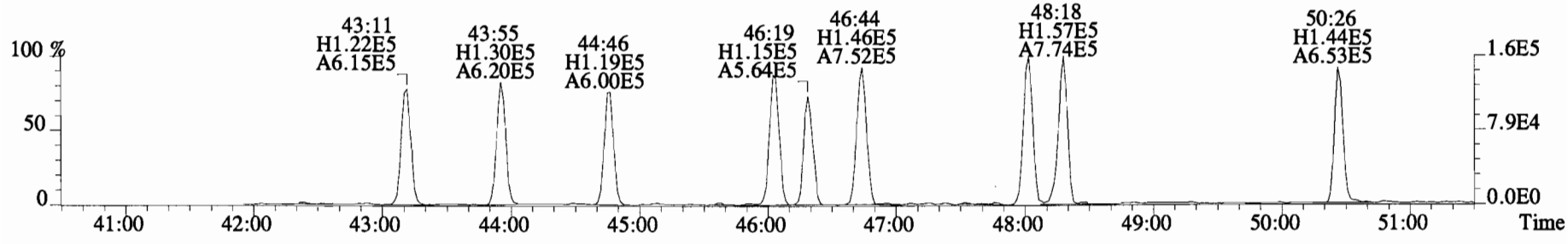
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1644.0,0.00%,F,F)



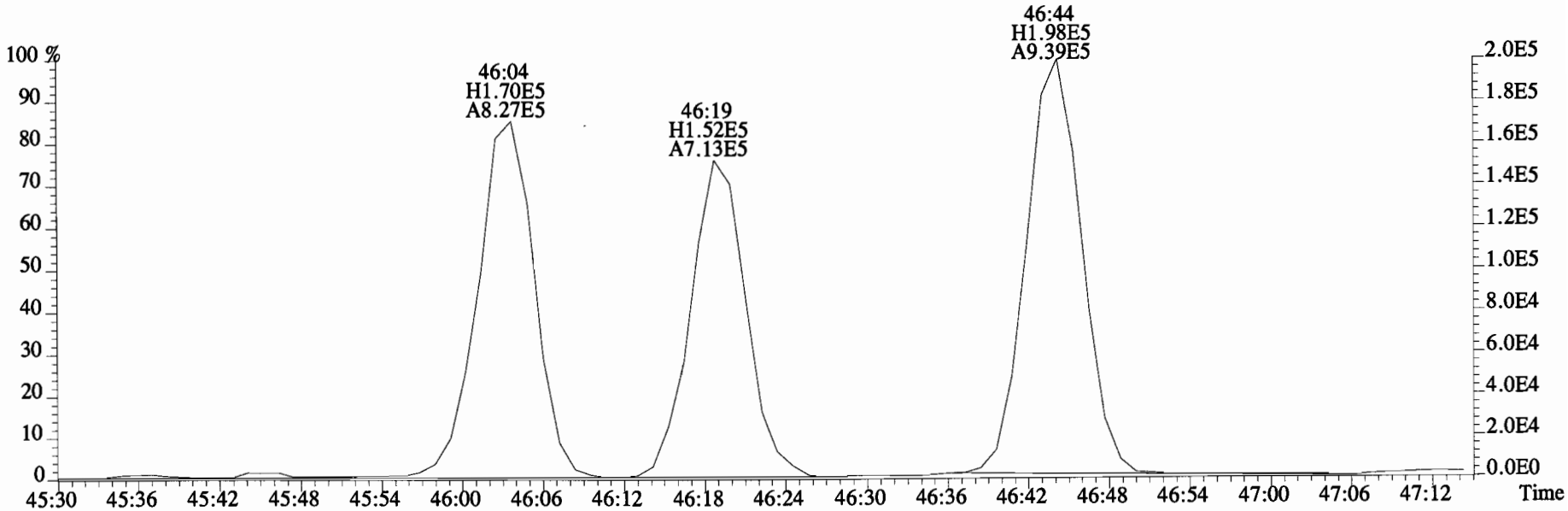
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1868.0,0.00%,F,F)



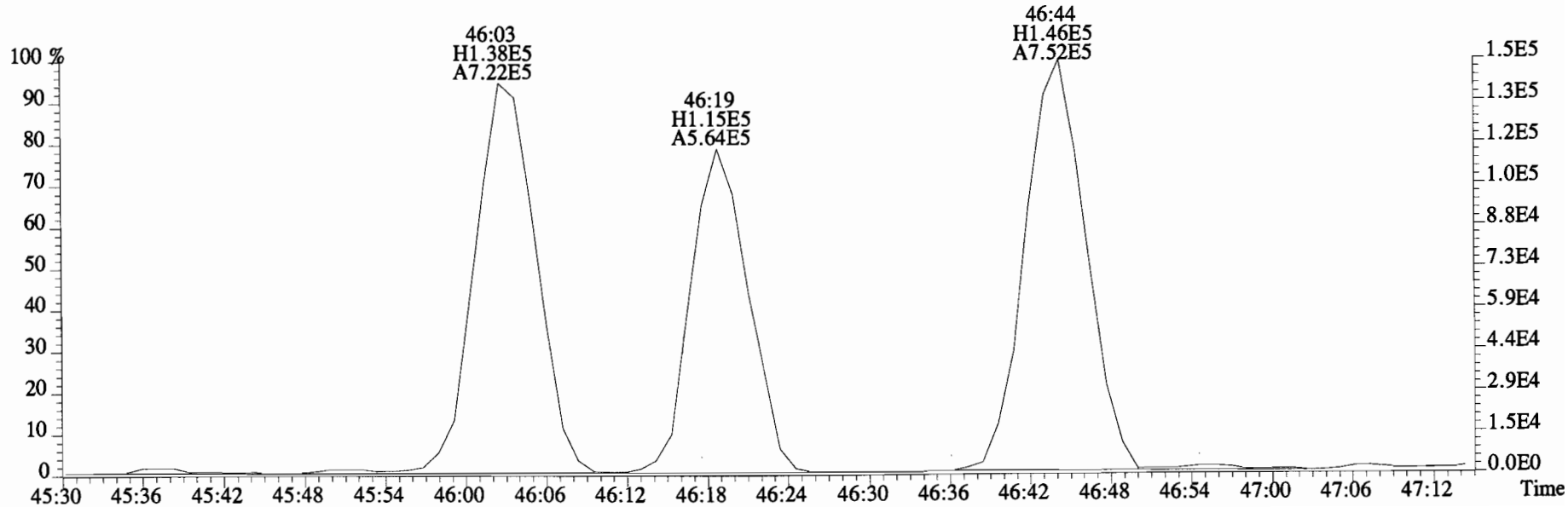
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



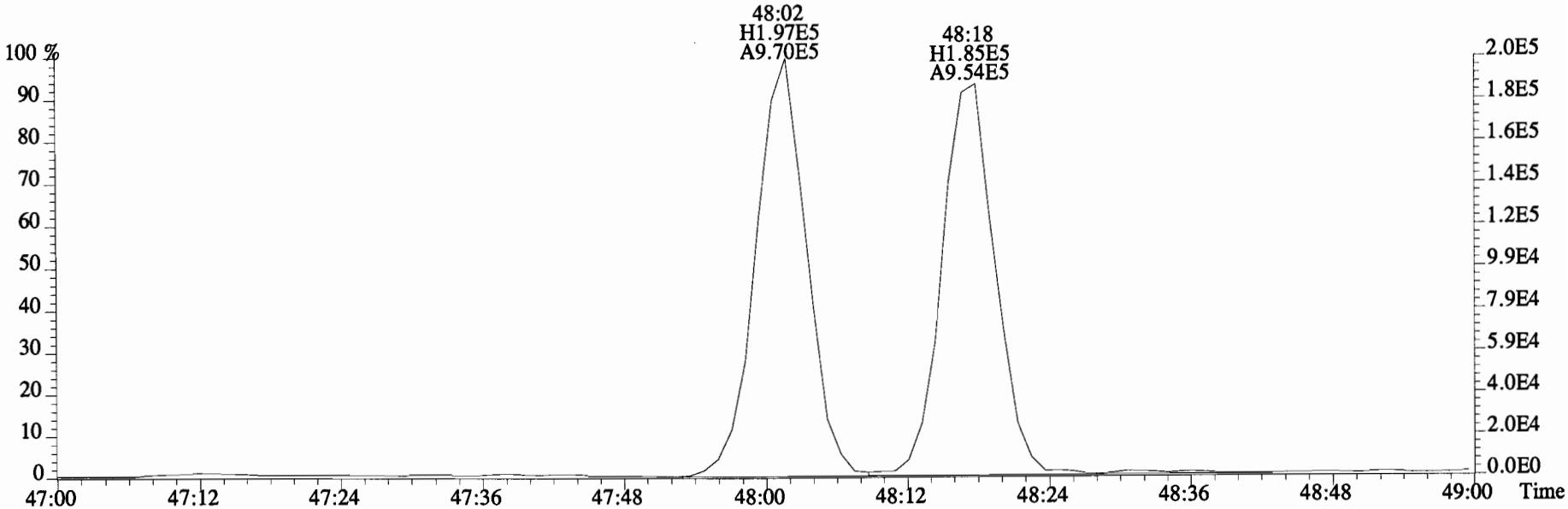
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1868.0,0.00%,F,F)



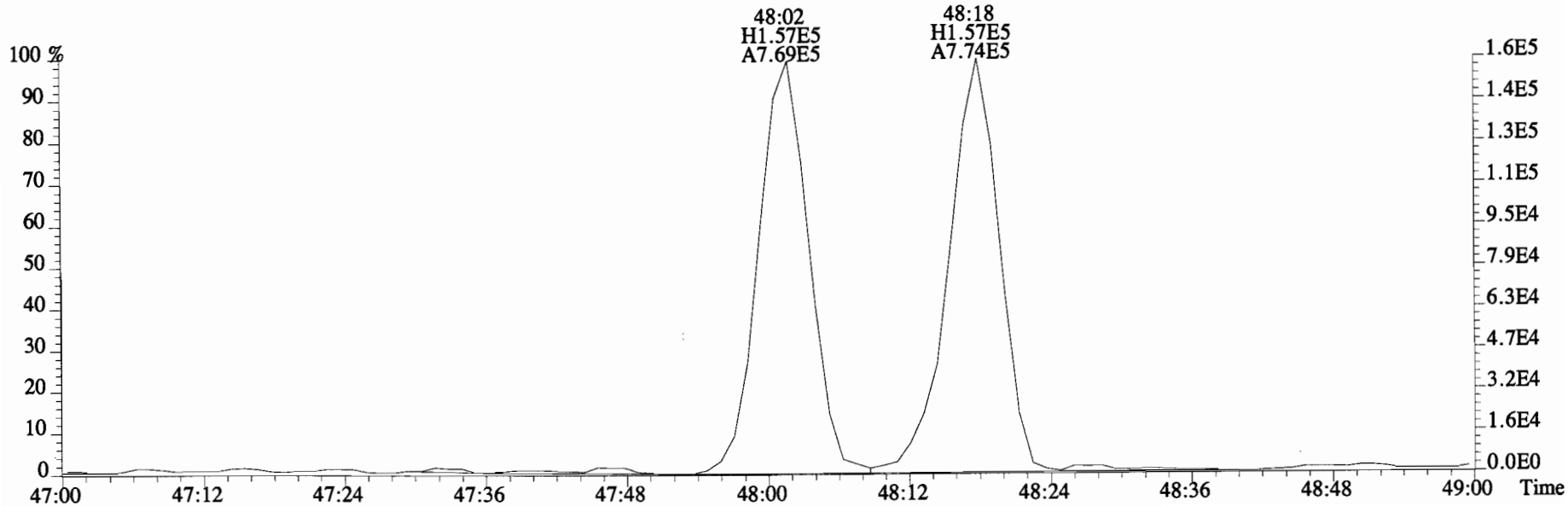
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



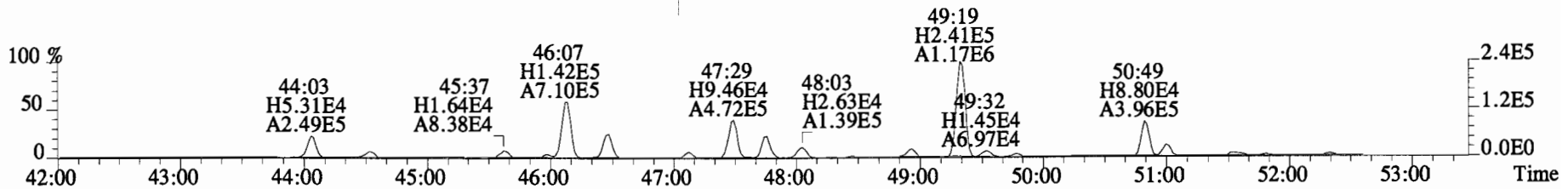
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1868.0,0.00%,F,F)



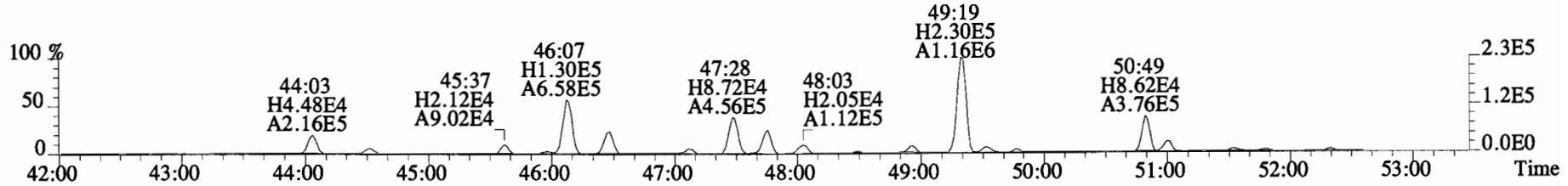
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



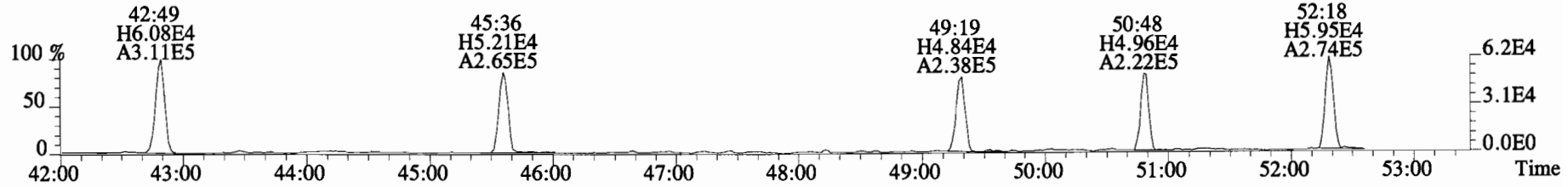
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1604.0,0.00%,F,F)



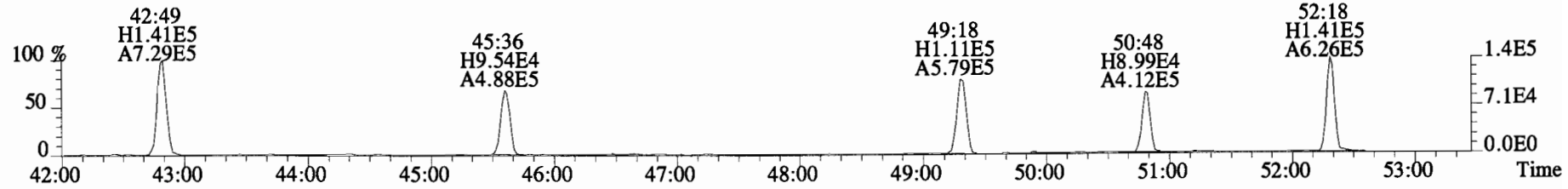
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1556.0,0.00%,F,F)



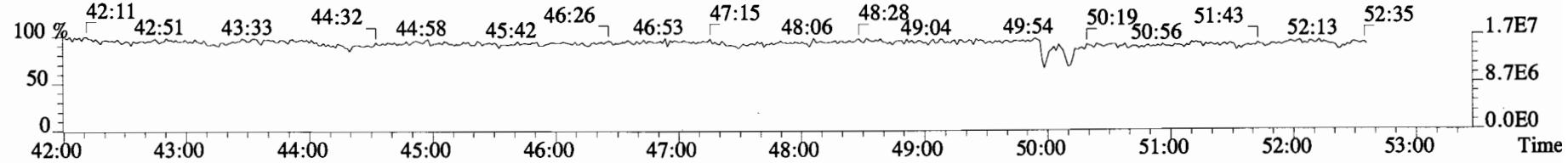
403.8457 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1316.0,0.00%,F,F)



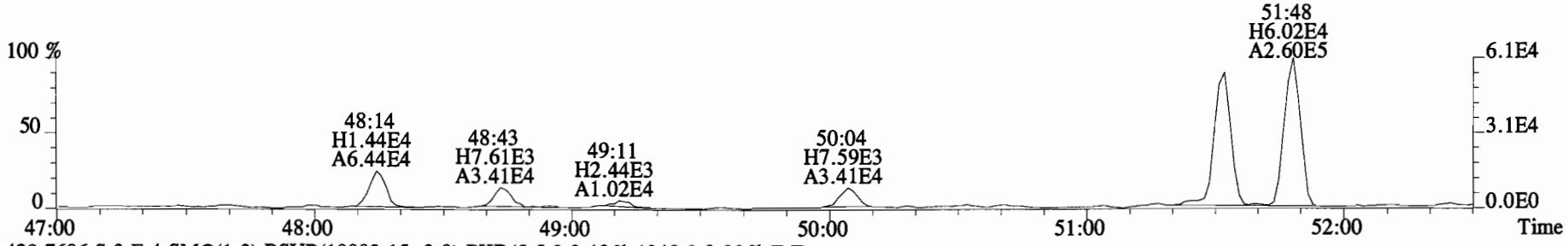
405.8428 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1296.0,0.00%,F,F)



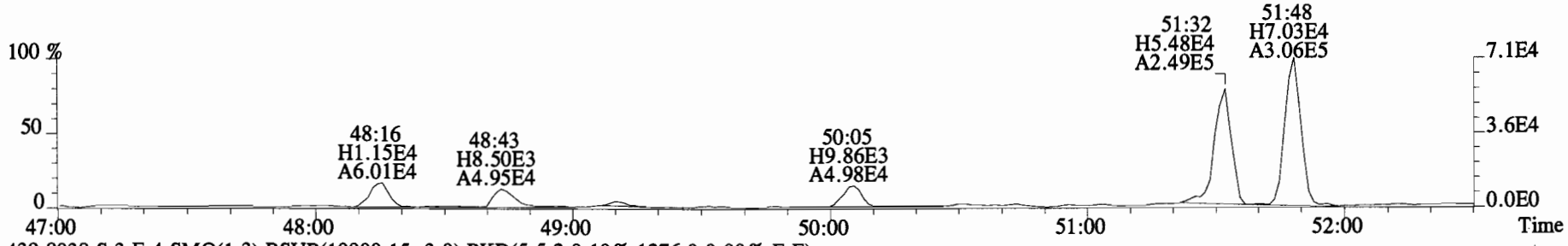
380.9760 S:3 F:4



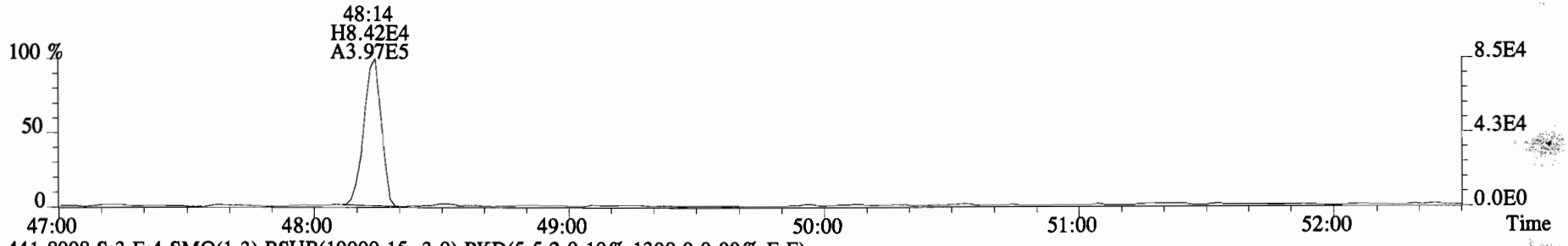
File:150330E1 #1-555 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
427.7635 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1240.0,0.00%,F,F)



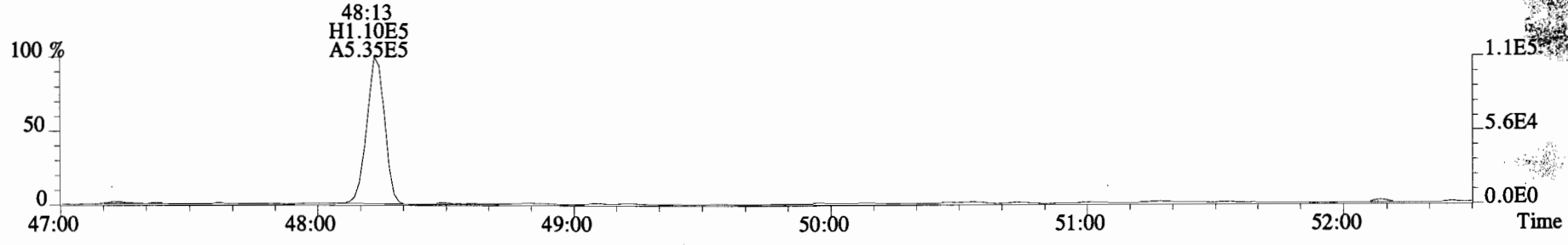
429.7606 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1348.0,0.00%,F,F)



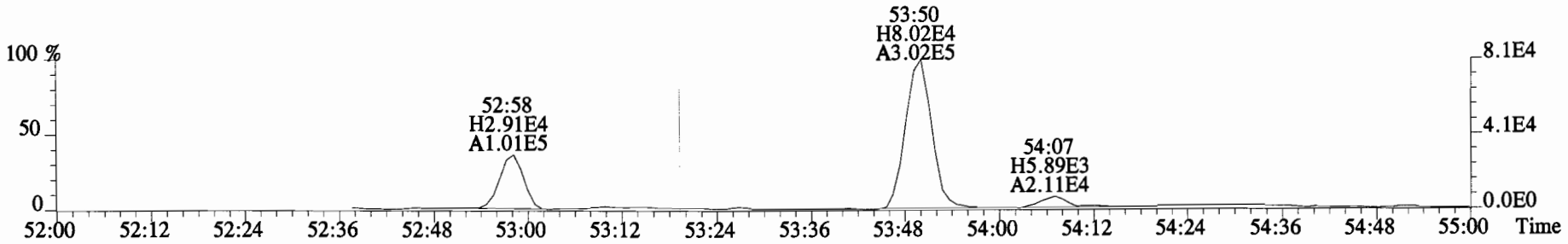
439.8038 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1276.0,0.00%,F,F)



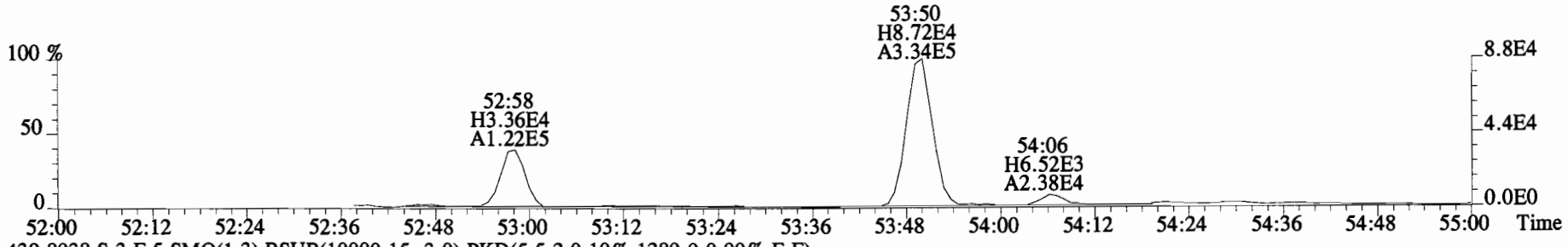
441.8008 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1308.0,0.00%,F,F)



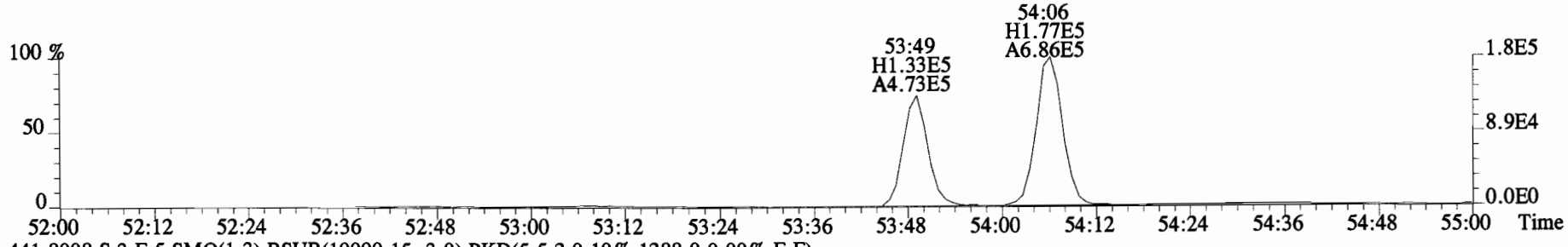
File:150330E1 #1-429 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
427.7635 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1276.0,0.00%,F,F)



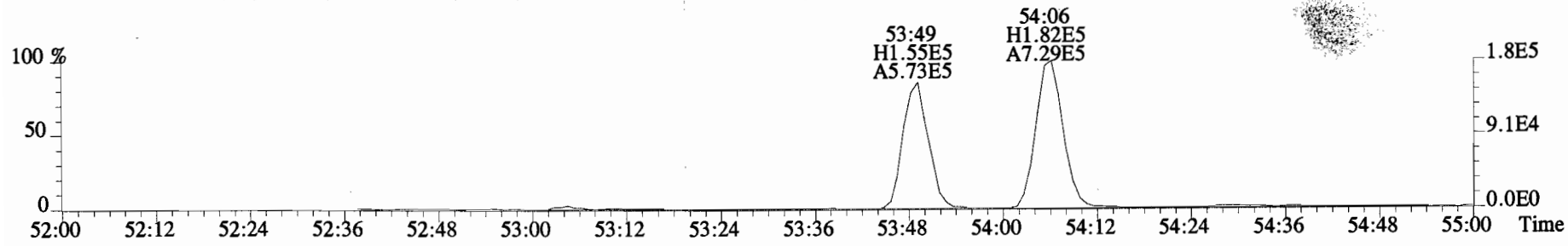
429.7606 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1472.0,0.00%,F,F)



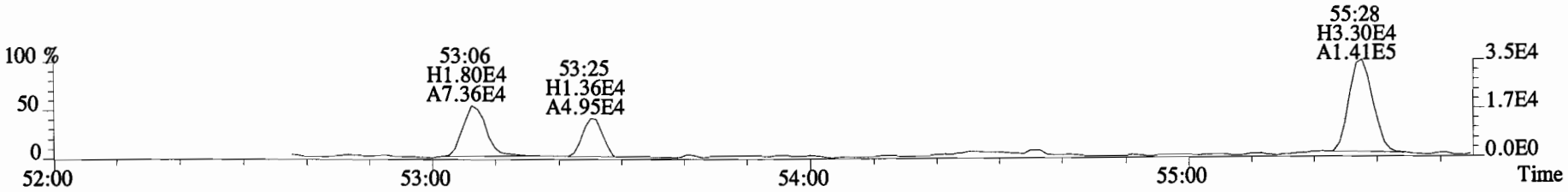
439.8038 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1280.0,0.00%,F,F)



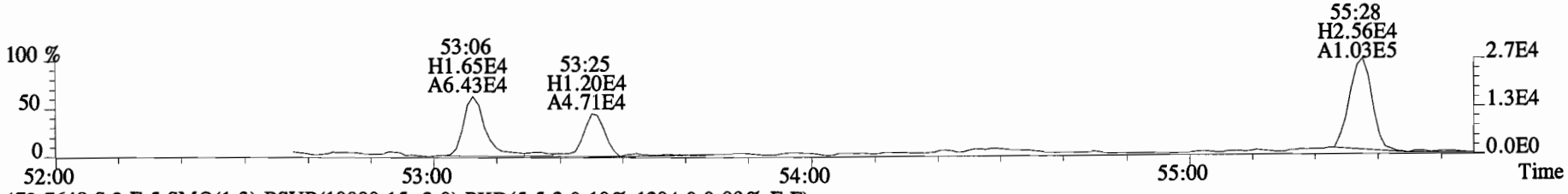
441.8008 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1288.0,0.00%,F,F)



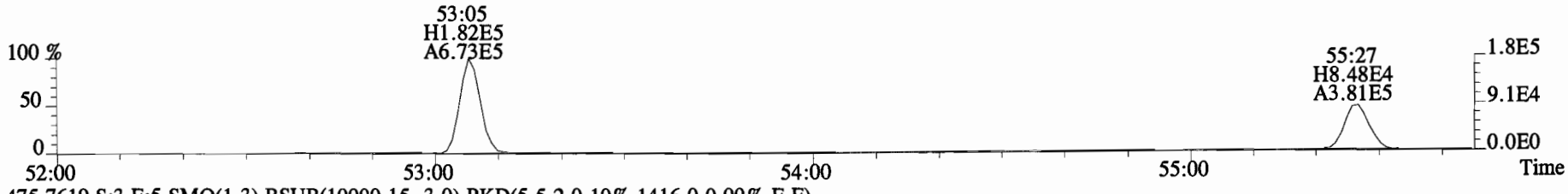
File:150330E1 #1-429 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
463.7216 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1244.0,0.00%,F,F)



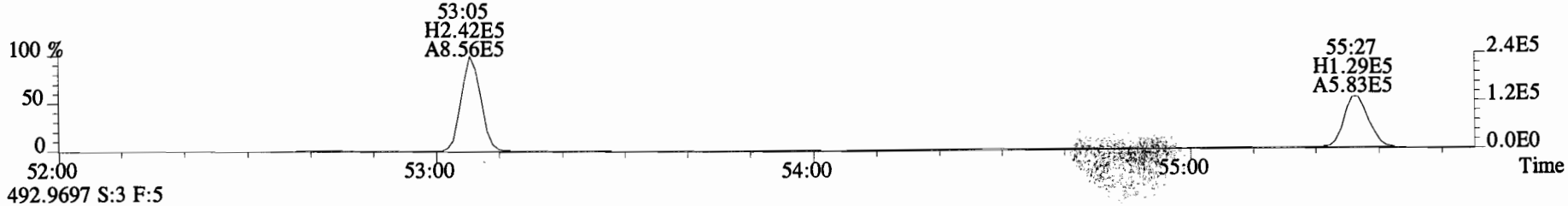
465.7186 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1140.0,0.00%,F,F)



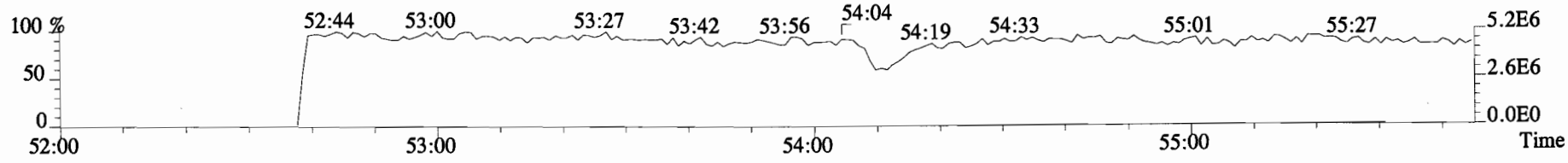
473.7648 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1204.0,0.00%,F,F)



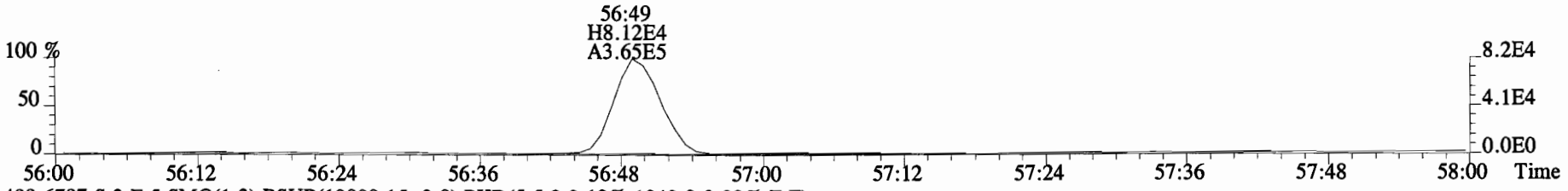
475.7619 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1416.0,0.00%,F,F)



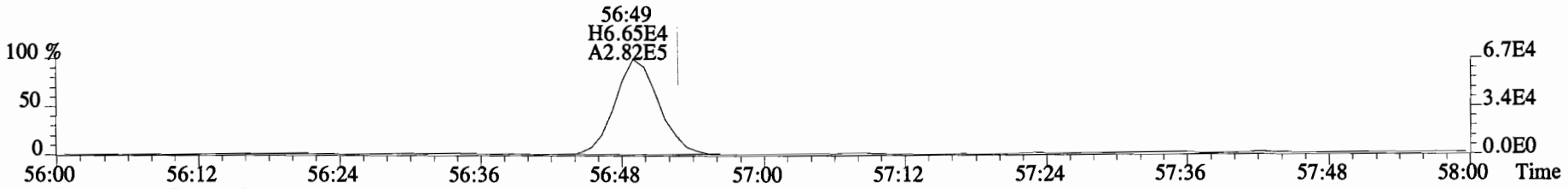
492.9697 S:3 F:5



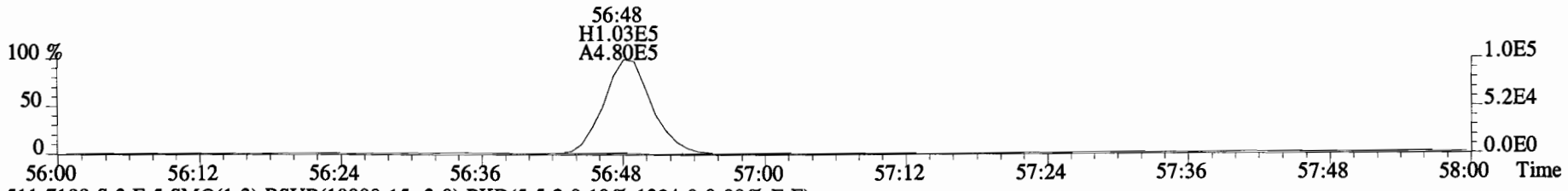
File:150330E1 #1-429 Acq:30-MAR-2015 10:23:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-03RE1@20X BD-OWS-15-20141203-S Exp:PCB_ZB1
497.6826 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1244.0,0.00%,F,F)



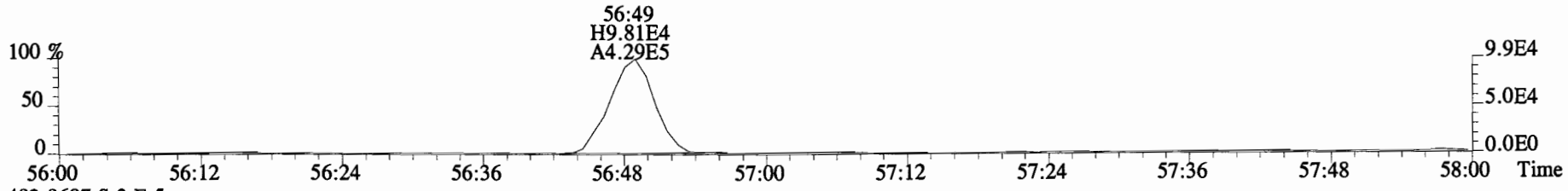
499.6797 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1040.0,0.00%,F,F)



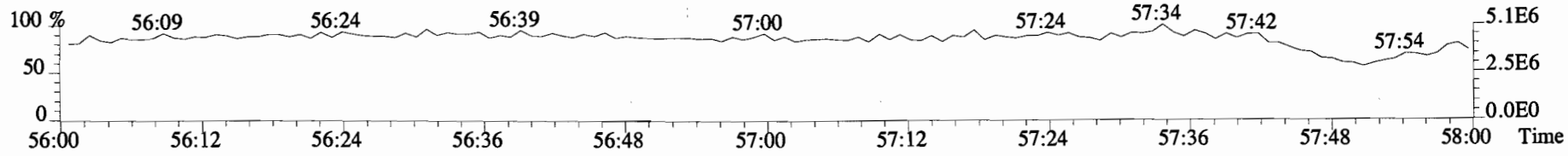
509.7229 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1292.0,0.00%,F,F)



511.7199 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1324.0,0.00%,F,F)



492.9697 S:3 F:5



Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1

Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	1.81e+06	2.99	y 16:12	1.19	139		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	1.83e+06	2.92	y 18:35	1.18	132		*	2.5	*	0.989	0.984	0.994
Mono	PCB-3	2.16e+06	3.01	y 18:48	1.43	130		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	3.39e+06	1.66	y 20:08	1.57	304		*	2.5	*	1.001	0.997	1.007
Di	PCB-7/9	1.40e+06	1.78	y 21:57	1.21	110		*	2.5	*	0.868	0.866	0.874
Di	PCB-6	2.76e+06	1.48	y 22:36	1.30	202		*	2.5	*	0.893	0.890	0.899
Di	PCB-5/8	1.27e+07	1.65	y 23:00	1.15	1050		*	2.5	*	0.909	0.907	0.917
Di	PCB-14	*	*	n NotF	1.11	*		18700	2.5	42.3	*	0.949	0.959
Di	PCB-11	3.14e+07	1.67	y 25:19	1.09	2790		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	2.84e+06	1.63	y 25:41	1.19	230		*	2.5	*	1.015	1.011	1.021
Di	PCB-15	2.17e+07	1.65	y 26:01	1.28	1640		*	2.5	*	1.028	1.023	1.033
Tri	PCB-19	1.92e+06	1.09	y 24:18	1.04	331		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n NotF	1.71	*		2210	2.5	4.84	*	1.032	1.042
Tri	PCB-18	1.88e+07	1.05	y 25:56	0.78	2720		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	6.88e+06	1.07	y 26:06	0.92	843		*	2.5	*	0.960	0.956	0.966
Tri	PCB-24/27	2.62e+06	1.14	y 26:40	1.19	249		*	2.5	*	0.981	0.977	0.987
Tri	PCB-16/32	1.65e+07	1.05	y 27:11	0.94	1980		*	2.5	*	1.000	0.995	1.005
Tri	PCB-34	2.90e+05	1.10	y 27:59	1.14	23.0		*	2.5	*	0.960	0.955	0.965
Tri	PCB-23	*	*	n NotF	1.28	*		8990	2.5	16.5	*	0.959	0.969
Tri	PCB-29	3.55e+05	1.11	y 28:20	1.08	29.6		*	2.5	*	0.972	0.967	0.977
Tri	PCB-26	1.03e+07	1.05	y 28:32	1.21	770		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	3.78e+06	1.02	y 28:41	1.26	269		*	2.5	*	0.984	0.979	0.989
Tri	PCB-31	4.77e+07	1.03	y 29:03	1.28	3340		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	5.14e+07	1.06	y 29:10	1.71	2700		*	2.5	*	1.001	0.995	1.005
Tri	PCB-20/21/33	2.78e+07	1.03	y 29:47	1.08	2310		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	1.61e+07	1.02	y 30:12	1.21	1200		*	2.5	*	1.036	1.032	1.042
Tri	PCB-36	1.19e+06	1.06	y 30:51	1.14	104		*	2.5	*	0.932	0.928	0.938
Tri	PCB-39	6.98e+05	1.12	y 31:19	1.12	62.5		*	2.5	*	0.947	0.943	0.953
Tri	PCB-38	2.65e+06	1.15	y 32:06	1.20	221		*	2.5	*	0.970	0.966	0.976
Tri	PCB-35	9.05e+06	1.02	y 32:39	1.23	734		*	2.5	*	0.987	0.982	0.992
Tri	PCB-37	5.01e+07	1.03	y 33:06	1.23	4070		*	2.5	*	1.001	0.995	1.005
Tetra	PCB-54	5.58e+05	0.76	y 28:02	1.10	67.6		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-50	1.86e+05	0.77	y 29:11	0.88	28.3		*	2.5	*	1.042	1.037	1.047
Tetra	PCB-53	2.59e+07	0.78	y 29:51	1.06	3750		*	2.5	*	0.946	0.942	0.952
Tetra	PCB-51	6.67e+06	0.77	y 30:11	0.99	1040		*	2.5	*	0.956	0.952	0.962
Tetra	PCB-45	8.85e+06	0.75	y 30:36	0.86	1580		*	2.5	*	0.969	0.966	0.976
Tetra	PCB-46	4.91e+06	0.75	y 31:06	0.85	896		*	2.5	*	0.985	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/30/15

Reviewed by: [signature] Date: 3/31/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	1.12e+09	0.78	y 31:34	1.28	134000		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-73	*	*	n NotF¶	1.35	*		3310	2.5	9.07	*	1.000	1.010
Tetra	PCB-43/49	2.45e+08	0.77	y 31:54	0.99	38000		*	2.5	*	1.011	1.005	1.015
Tetra	PCB-47	5.40e+07	0.78	y 32:06	1.06	7490		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	1.51e+07	0.78	y 32:14	1.23	1800		*	2.5	*	1.005	0.999	1.009
Tetra	PCB-65	*	*	n NotF¶	1.22	*		3310	2.5	10.6	*	1.008	1.018
Tetra	PCB-62	*	*	n NotF¶	1.22	*		3310	2.5	10.7	*	1.011	1.021
Tetra	PCB-44	3.57e+08	0.77	y 32:56	0.86	61000		*	2.5	*	1.026	1.021	1.031
Tetra	PCB-42/59	4.24e+07	0.77	y 33:10	1.14	5470		*	2.5	*	1.034	1.028	1.038
Tetra	PCB-41/64/71/72	2.15e+08	0.77	y 33:43	1.21	26100		*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	1.99e+06	0.77	y 33:57	1.35	216		*	2.5	*	1.058	1.054	1.064
Tetra	PCB-40	2.39e+07	0.78	y 34:09	0.70	5010		*	2.5	*	1.064	1.061	1.071
Tetra	PCB-57	1.59e+06	0.76	y 34:31	0.98	182		*	2.5	*	0.970	0.965	0.975
Tetra	PCB-67	8.80e+06	0.78	y 34:50	1.11	894		*	2.5	*	0.979	0.974	0.984
Tetra	PCB-58	1.73e+06	0.73	y 34:58	0.93	210		*	2.5	*	0.983	0.977	0.987
Tetra	PCB-63	1.20e+07	0.79	y 35:06	0.95	1410		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-74	1.93e+08	0.78	y 35:24	1.24	17500		*	2.5	*	0.995	0.990	1.000
Tetra	PCB-61/70	1.03e+09	0.78	y 35:36	0.95	122000		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-76/66	3.71e+08	0.81	y 35:49	1.04	39900		*	2.5	*	1.007	1.001	1.011
Tetra	PCB-80	*	*	n NotF¶	1.19	*		3310	2.5	7.21	*	0.996	1.006
Tetra	PCB-55	1.91e+07	0.80	y 36:18	1.04	1930		*	2.5	*	1.008	1.005	1.015
Tetra	PCB-56/60	1.81e+08	0.77	y 36:49	1.01	18900		*	2.5	*	1.022	1.019	1.029
Tetra	PCB-79	4.31e+07	0.80	y 37:55	1.08	4210		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	*	*	n NotF¶	1.27	*		3310	2.5	10.2	*	0.982	0.992
Tetra	PCB-81	7.05e+07	0.82	y 39:10	1.33	8310		*	2.5	*	1.001	0.995	1.005
Tetra	PCB-77	2.20e+08	0.78	y 39:44	1.10	30500		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	3.49e+05	0.96	n 32:45	1.18	64.1	R	*	2.5	*	0.999	0.996	1.006
Penta	PCB-96	5.29e+06	1.69	y 33:59	1.14	1010		*	2.5	*	1.037	1.034	1.044
Penta	PCB-103	1.08e+07	1.62	y 34:31	0.96	2440		*	2.5	*	1.053	1.050	1.060
Penta	PCB-100	4.30e+06	1.60	y 34:53	0.94	997		*	2.5	*	1.065	1.061	1.071
Penta	PCB-94	5.69e+06	1.57	y 35:21	1.06	1500		*	2.5	*	0.986	0.980	0.990
Penta	PCB-95/98/102	1.68e+09	1.63	y 35:53	1.22	382000		*	2.5	*	1.000	0.995	1.005
Penta	PCB-93	*	*	n NotF¶	0.84	*		3730	2.5	41.0	*	0.997	1.007
Penta	PCB-88/91	2.13e+08	1.60	y 36:17	1.12	53200		*	2.5	*	1.012	1.005	1.015
Penta	PCB-121	*	*	n NotF¶	1.62	*		3730	2.5	21.4	*	1.009	1.019
Penta	PCB-84/92	7.82e+08	1.61	y 37:12	1.05	207000		*	2.5	*	0.990	0.985	0.995
Penta	PCB-89	9.56e+06	1.63	y 37:22	1.13	2340		*	2.5	*	0.995	0.991	1.001

Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	2.31e+09	1.61	y 37:36	1.10	581000		*	2.5	*	1.001	0.995	1.005
Penta	PCB-113	9.67e+06	1.60	y 37:48	1.41	1900		*	2.5	*	1.006	1.002	1.012
Penta	PCB-99	7.43e+08	1.62	y 37:55	1.34	154000		*	2.5	*	1.009	1.004	1.014
Penta	PCB-119	3.59e+07	1.61	y 38:22	1.53	7740		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	8.88e+07	1.63	y 38:32	1.28	22900		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.52	*		3730	2.5	28.1	*	0.990	1.000
Penta	PCB-97	5.35e+08	1.61	y 38:53	1.18	149000		*	2.5	*	1.000	0.995	1.005
Penta	PCB-86	*	*	n NotF¶	0.84	*		3730	2.5	50.6	*	0.999	1.009
Penta	PCB-87/117/125	8.78e+08	1.61	y 39:10	1.55	187000		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	3.15e+07	1.71	y 39:19	1.63	6370		*	2.5	*	1.012	1.006	1.016
Penta	PCB-85/116	2.71e+08	1.58	y 39:26	1.30	68700		*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	8.13e+06	1.69	y 39:37	1.68	1600		*	2.5	*	1.019	1.016	1.026
Penta	PCB-110	2.74e+09	1.61	y 39:50	1.56	581000		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	1.78e+08	1.60	y 40:27	0.76	68300		*	2.5	*	0.976	0.971	0.981
Penta	PCB-124	1.26e+08	1.61	y 41:09	1.47	24900		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	1.46e+08	1.62	y 41:19	1.32	32000		*	2.5	*	0.997	0.991	1.001
Penta	PCB-123	3.32e+07	1.53	y 41:29	1.17	8250		*	2.5	*	1.001	0.996	1.006
Penta	PCB-106/118	2.02e+09	1.62	y 41:40	1.17	546000		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	6.37e+07	1.68	y 42:19	1.30	10300		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	3.52e+07	1.62	y 42:27	1.12	6570		*	2.5	*	1.004	0.999	1.009
Penta	PCB-105	1.14e+09	1.65	y 43:11	1.30	216000		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.33	*		60100	2.5	390	*	0.996	1.006
Penta	PCB-126	5.48e+07	1.66	y 45:27	1.18	13500		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	1.08e+05	1.13	y 37:08	1.11	29.5		*	2.5	*	1.001	0.966	1.006
Hexa	PCB-150	2.57e+06	1.30	y 38:22	1.00	779		*	2.5	*	1.034	1.030	1.040
Hexa	PCB-152	1.76e+06	1.27	y 38:51	1.12	477		*	2.5	*	1.047	1.043	1.053
Hexa	PCB-145	6.48e+05	1.13	y 39:18	1.20	164		*	2.5	*	1.059	1.055	1.065
Hexa	PCB-136	3.41e+08	1.29	y 39:37	1.18	87700		*	2.5	*	1.068	1.064	1.074
Hexa	PCB-148	8.68e+05	1.28	y 39:46	0.74	353		*	2.5	*	1.072	1.066	1.076
Hexa	PCB-154	1.56e+07	1.27	y 40:15	0.86	5510		*	2.5	*	1.085	1.080	1.090
Hexa	PCB-151	4.64e+08	1.28	y 40:52	0.75	188000		*	2.5	*	1.102	1.097	1.107
Hexa	PCB-135	2.50e+08	1.29	y 41:06	0.79	95600		*	2.5	*	1.108	1.103	1.113
Hexa	PCB-144	9.63e+07	1.30	y 41:13	0.76	38300		*	2.5	*	1.111	1.105	1.117
Hexa	PCB-147	2.35e+07	1.28	y 41:21	0.82	8700		*	2.5	*	1.115	1.109	1.121
Hexa	PCB-139/149	1.52e+09	1.29	y 41:35	0.76	605000		*	2.5	*	1.121	1.116	1.128
Hexa	PCB-140	5.42e+06	1.31	y 41:48	0.72	2280		*	2.5	*	1.127	1.121	1.133
Hexa	PCB-134/143	1.70e+08	1.26	y 42:14	0.92	55100		*	2.5	*	0.975	0.970	0.980

Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hexa	PCB-133/142	8.47e+07	1.26	y 42:32	0.82	30700		*	2.5	*	0.982	0.977-0.987
Hexa	PCB-131	*	*	n NotF	0.91	*		37700	2.5	417	*	0.981-0.991
Hexa	PCB-146/165	4.99e+08	1.26	y 42:57	1.25	119000		*	2.5	*	0.991	0.986-0.996
Hexa	PCB-132/161	1.10e+09	1.26	y 43:11	1.10	294000		*	2.5	*	0.997	0.992-1.002
Hexa	PCB-153	3.37e+09	1.27	y 43:21	1.25	802000		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-168	3.72e+06	1.07	y 43:34	1.45	762		*	2.5	*	1.005	1.001-1.011
Hexa	PCB-141	7.07e+08	1.26	y 44:05	1.09	212000		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-137	1.24e+08	1.28	y 44:28	1.06	37900		*	2.5	*	1.009	1.004-1.014
Hexa	PCB-130	1.82e+08	1.25	y 44:34	0.96	61200		*	2.5	*	1.011	1.006-1.016
Hexa	PCB-138/163/164	3.67e+09	1.27	y 44:56	1.29	979000		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-158/160	4.40e+08	1.27	y 45:10	1.34	113000		*	2.5	*	1.006	1.001-1.011
Hexa	PCB-129	1.41e+08	1.27	y 45:25	0.85	56900		*	2.5	*	1.011	1.007-1.017
Hexa	PCB-166	1.24e+07	1.27	y 45:54	1.19	3480		*	2.5	*	0.992	0.988-0.998
Hexa	PCB-159	*	*	n NotF	1.11	*		37700	2.5	375	*	0.996-1.006
Hexa	PCB-128/162	5.27e+08	1.26	y 46:29	1.05	167000		*	2.5	*	1.005	1.002-1.012
Hexa	PCB-167	1.63e+08	1.27	y 46:56	1.20	41300		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-156	3.65e+08	1.27	y 48:14	1.14	107000		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-157	9.12e+07	1.34	y 48:29	1.16	24700		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-169	8.59e+05	1.32	y 50:40	1.12	314		*	2.5	*	1.000	0.995-1.005
Hepta	PCB-188	*	*	n NotF	1.58	*	See 1.5 Dilution	*	2.5	*	*	0.996-1.006
Hepta	PCB-184	*	*	n NotF	1.63	*		*	2.5	*	*	1.006-1.016
Hepta	PCB-179	*	*	n NotF	1.30	*		*	2.5	*	*	1.024-1.034
Hepta	PCB-176	*	*	n NotF	1.48	*		*	2.5	*	*	1.035-1.045
Hepta	PCB-186	*	*	n NotF	1.45	*		*	2.5	*	*	1.050-1.060
Hepta	PCB-178	*	*	n NotF	1.03	*		*	2.5	*	*	1.061-1.071
Hepta	PCB-175	*	*	n NotF	1.01	*		*	2.5	*	*	1.069-1.079
Hepta	PCB-182/187	*	*	n NotF	1.25	*		*	2.5	*	*	1.073-1.083
Hepta	PCB-183	*	*	n NotF	1.21	*		*	2.5	*	*	1.081-1.091
Hepta	PCB-185	*	*	n NotF	1.80	*		*	2.5	*	*	0.951-0.961
Hepta	PCB-174	*	*	n NotF	1.38	*		*	2.5	*	*	0.958-0.968
Hepta	PCB-181	*	*	n NotF	1.38	*		*	2.5	*	*	0.960-0.970
Hepta	PCB-177	*	*	n NotF	1.26	*		*	2.5	*	*	0.963-0.973
Hepta	PCB-171	*	*	n NotF	1.58	*		*	2.5	*	*	0.970-0.980
Hepta	PCB-173	*	*	n NotF	1.11	*		*	2.5	*	*	0.978-0.988
Hepta	PCB-172	*	*	n NotF	1.63	*		*	2.5	*	*	0.987-0.997
Hepta	PCB-192	*	*	n NotF	1.74	*		*	2.5	*	*	0.991-1.001
Hepta	PCB-180	*	*	n NotF	1.34	*		*	2.5	*	*	0.995-1.005

Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF	1.72	*	See 1:5 Dilution	*	2.5	*	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF	1.69	*		*	2.5	*	*	1.004	1.014
Hepta	PCB-170	*	*	n	NotF	1.60	*		*	2.5	*	*	0.995	1.005
Hepta	PCB-190	*	*	n	NotF	2.21	*		*	2.5	*	*	0.998	1.008
Hepta	PCB-189	*	*	n	NotF	1.55	*		*	2.5	*	*	0.995	1.005
Octa	PCB-202	1.03e+08	0.92	y	48:24	1.08	52100		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	6.15e+07	0.92	y	48:53	1.15	29300		*	2.5	*	1.010	1.005	1.015
Octa	PCB-204	2.11e+05	0.79	y	49:04	1.14	102		*	2.5	*	1.014	1.008	1.018
Octa	PCB-197	1.52e+07	0.90	y	49:22	1.07	7730		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	5.00e+07	0.93	y	50:13	1.06	25700		*	2.5	*	1.038	1.032	1.044
Octa	PCB-198	1.86e+07	0.90	y	51:35	0.76	13500		*	2.5	*	1.066	1.059	1.069
Octa	PCB-199	2.76e+08	0.93	y	51:41	0.80	189000		*	2.5	*	1.068	1.061	1.071
Octa	PCB-196/203	3.10e+08	0.93	y	51:57	0.80	212000		*	2.5	*	1.074	1.066	1.076
Octa	PCB-195	8.84e+07	0.92	y	53:07	1.23	70100		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	2.38e+08	0.92	y	54:01	1.21	191000		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	1.40e+07	0.92	y	54:19	1.54	8810		*	2.5	*	1.006	1.001	1.011
Nona	PCB-208	5.12e+07	1.39	y	53:15	0.93	39900		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	2.02e+07	1.39	y	53:34	1.08	13600		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	1.12e+08	1.36	y	55:43	1.02	146000		*	2.5	*	1.001	0.995	1.005
Deca	PCB-209	1.87e+07	1.20	y	57:04	1.17	16700		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.8946 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	5.80e+06	2.99	y	16:12	1.27	400.985	
Total Di-PCB	7.61e+07	1.66	y	20:08	1.21	6333.86	
Total Tri-PCB	4.68e+07	1.09	y	24:18	1.10	6130.55	
Total Tri-PCB	2.22e+08	1.10	y	27:59	1.21	15838.9	Sum:21969.5
Total Tetra-PCB	4.27e+09	0.76	y	28:02	1.09	532096	
Total Penta-PCB	1.29e+10	1.69	y	33:59	1.18	3092190	
Total Penta-PCB	1.29e+09	1.69	y	42:01	1.25	246987	Sum:3339180
Total Hexa-PCB	2.72e+09	1.13	y	37:08	0.90	1033350	
Total Hexa-PCB	1.16e+10	1.26	y	42:14	1.11	3104390	Sum:4137740
Total Hepta-PCB	*	*	n	NotFnd	1.42	*	2489230 * see 1:5 Dilution
Total Octa-PCB	8.35e+08	0.92	y	48:24	0.96	529617	
Total Octa-PCB	3.40e+08	0.92	y	53:07	1.33	269802	Sum:799419
Total Nona-PCB	1.84e+08	1.39	y	53:15	1.01	199091	
Total Deca-PCB	1.87e+07	1.20	y	57:04	1.17	16711.5	

Total PCB Conc:9052625.27583 + 2489232.13 = 11,541,857

Integrations by Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150318E1 S:7 Acq:18-MAR-15 16:26:29 ConCal: ST150318E1-1
Lab ID: 1400915-04RE1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.8946 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL		Conc	Rec
13C-PCB-1	1.15e+08	3.25 y	0.87	16:11	0.622	0.629	0.635	OK	10200	96.4
13C-PCB-3	1.23e+08	3.30 y	0.91	18:47	0.722	0.725	0.733		10400	98.9
13C-PCB-4	7.50e+07	1.61 y	0.59	20:07	0.774	0.775	0.783		9870	93.5
13C-PCB-9	1.11e+08	1.59 y	0.90	21:55	0.843	0.842	0.850		9540	90.4
13C-PCB-11	1.09e+08	1.59 y	0.94	25:18	0.973	0.968	0.978		8980	85.1
13C-PCB-19	5.87e+07	1.10 y	0.53	24:16	0.933	0.930	0.940		8520	80.7
13C-PCB-28	1.17e+08	1.06 y	0.93	29:09	1.004	0.999	1.009		10900	104
13C-PCB-32	9.35e+07	1.10 y	0.80	27:11	1.046	1.040	1.050		9060	85.9
13C-PCB-37	1.06e+08	1.11 y	0.84	33:05	1.139	1.131	1.143		10900	104
13C-PCB-47	7.19e+07	0.80 y	0.81	32:05	0.871	0.866	0.874		9800	92.8
13C-PCB-52	6.85e+07	0.79 y	0.77	31:34	0.857	0.853	0.861		9820	93.0
13C-PCB-54	7.89e+07	0.81 y	0.97	28:01	0.761	0.758	0.766		8990	85.2
13C-PCB-70	9.40e+07	0.81 y	1.00	35:35	0.967	0.961	0.971		10400	98.6
13C-PCB-77	6.92e+07	0.81 y	0.94	39:43	1.079	1.073	1.083		8130	77.0
13C-PCB-80	1.00e+08	0.81 y	1.03	36:01	0.978	0.972	0.982		10700	102
13C-PCB-81	6.72e+07	0.80 y	0.92	39:08	1.063	1.057	1.067		8070	76.5
13C-PCB-95	3.79e+07	1.61 y	0.74	35:52	0.912	0.908	0.918		12300	116
13C-PCB-97	3.20e+07	1.60 y	0.70	38:52	0.988	0.984	0.994		10900	103
13C-PCB-101	3.81e+07	1.60 y	0.78	37:34	0.955	0.951	0.961		11700	110
13C-PCB-104	4.86e+07	1.61 y	1.00	32:46	0.833	0.828	0.836		11600	110
13C-PCB-105	4.28e+07	1.63 y	1.37	43:10	0.929	0.924	0.934		11800	112
13C-PCB-114	5.04e+07	1.66 y	1.36	42:18	0.910	0.905	0.915		13900	132
13C-PCB-118	3.32e+07	1.63 y	0.96	41:39	1.059	1.054	1.064		8310	78.7
13C-PCB-123	3.63e+07	1.59 y	0.89	41:27	1.054	1.050	1.060		9740	92.3
13C-PCB-126	3.62e+07	1.61 y	1.31	45:26	0.978	0.972	0.982		10400	98.7
13C-PCB-127	4.70e+07	1.63 y	1.47	43:32	0.937	0.931	0.941		12000	114
13C-PCB-138	3.06e+07	1.33 y	1.10	44:55	0.967	0.961	0.971		10500	99.3
13C-PCB-141	3.25e+07	1.32 y	1.07	44:04	0.948	0.943	0.953		11400	108
13C-PCB-153	3.56e+07	1.31 y	1.15	43:20	0.933	0.927	0.937		11700	111
13C-PCB-155	3.48e+07	1.23 y	0.84	37:06	0.943	0.939	0.949		9950	94.2
13C-PCB-156	3.17e+07	1.28 y	1.30	48:13	1.038	1.032	1.042		9210	87.2
13C-PCB-157	3.35e+07	1.33 y	1.36	48:29	1.043	1.038	1.048		9300	88.1
13C-PCB-159	3.18e+07	1.31 y	1.25	46:15	0.995	0.989	0.999		9610	91.0
13C-PCB-167	3.48e+07	1.32 y	1.35	46:55	1.010	1.004	1.014		9690	91.8
13C-PCB-169	2.59e+07	1.29 y	1.29	50:40	1.090	1.083	1.093		7570	71.7
13C-PCB-170	1.15e+07	0.48 y	0.54	50:59	1.097	1.089	1.101		8000	75.8
13C-PCB-180	1.56e+07	0.48 y	0.68	49:31	1.066	1.060	1.070		8570	81.2
13C-PCB-188	2.74e+07	0.46 y	0.92	42:56	0.924	0.919	0.929		11300	107
13C-PCB-189	9.42e+06	0.47 y	0.72	52:30	1.130	1.120	1.132		4950	46.9
13C-PCB-194	1.09e+07	0.96 y	0.80	54:00	0.994	0.990	1.000		9930	94.1
13C-PCB-202	1.93e+07	0.92 y	0.84	48:23	1.041	1.036	1.046		8670	82.1
13C-PCB-206	7.94e+06	0.79 y	0.65	55:41	1.025	1.021	1.031		8920	84.5
13C-PCB-208	1.45e+07	0.78 y	1.08	53:14	0.980	0.976	0.986		9810	92.9
13C-PCB-209	1.01e+07	1.24 y	0.61	57:03	1.051	1.045	1.055		12000	114

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.57e+07	0.81 y	1.02	37:54	1.029	1.023	1.034	9340	88.5
*13C-PCB-178	1.63e+07	0.48 y	0.61	45:45	0.985	0.979	0.990	9990	94.6

91.0

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.57e+07	0.81 y	1.10	37:54	0.968	0.964	0.974	12200	116
13C-PCB-178	1.63e+07	0.48 y	0.90	45:45	0.924	0.920	0.930	12300	117

RS

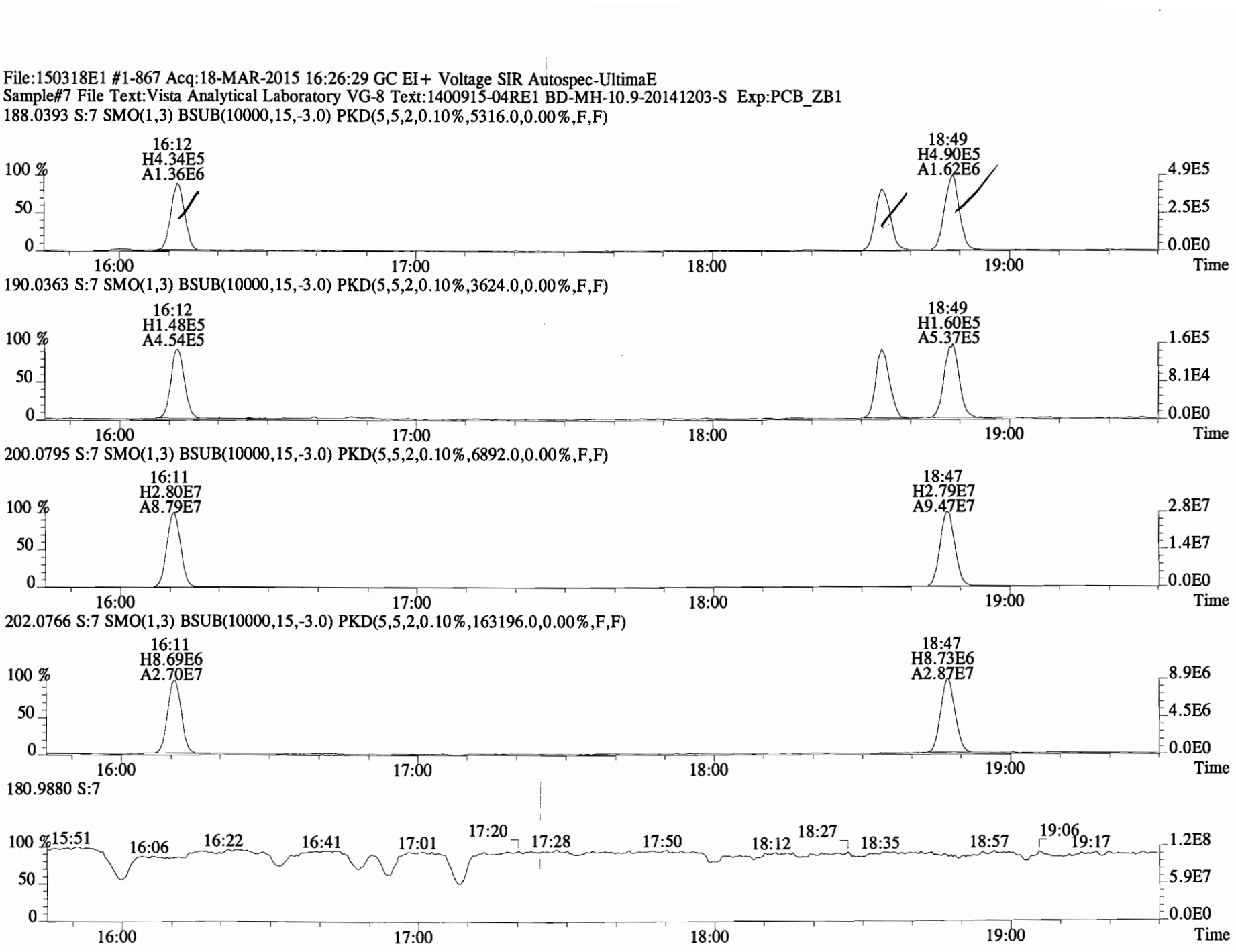
Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.37e+08	1.60	y	1.00	26:00	10600
13C-PCB-31	1.21e+08	1.07	y	1.00	29:02	10600
13C-PCB-60	9.53e+07	0.80	y	1.00	36:49	10600
13C-PCB-111	4.40e+07	1.57	y	1.00	39:20	10600
13C-PCB-128	2.80e+07	1.30	y	1.00	46:28	10600
13C-PCB-205	1.45e+07	0.92	y	1.00	54:18	10600

* = See 1:5 Dilution

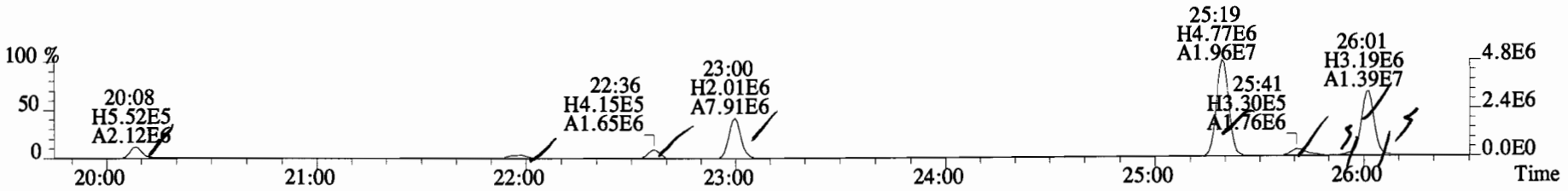
86.3
84.7
92.3
72.8

Analyst: DMS

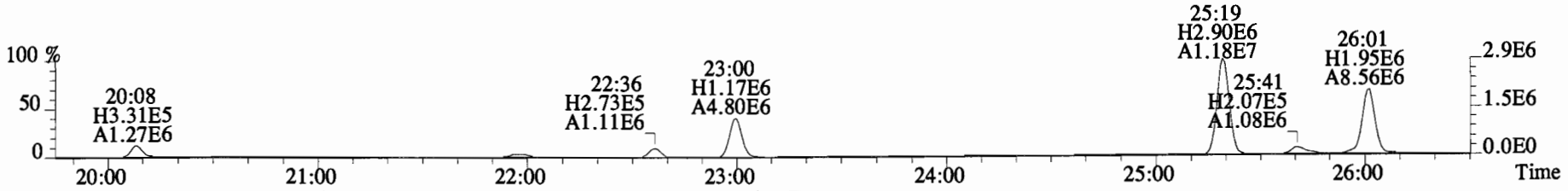
Date: 3/27/15


File:150318E1 #1-867 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
188.0393 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5316.0,0.00%,F,F)
16:12
H4.34E5
A1.36E6
18:49
H4.90E5
A1.62E6
100 %
50
0
4.9E5
2.5E5
0.0E0
16:00
17:00
18:00
19:00
Time
190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3624.0,0.00%,F,F)
16:12
H1.48E5
A4.54E5
18:49
H1.60E5
A5.37E5
1.6E5
8.1E4
200.0795 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6892.0,0.00%,F,F)
16:11
H2.80E7
A8.79E7
18:47
H2.79E7
A9.47E7
2.8E7
1.4E7
202.0766 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,163196.0,0.00%,F,F)
16:11
H8.69E6
A2.70E7
18:47
H8.73E6
A2.87E7
8.9E6
4.5E6
180.9880 S:7
15:51
16:06
16:22
16:41
17:01
17:20
17:28
17:50
18:12
18:27
18:35
18:57
19:06
19:17
1.2E8
5.9E7

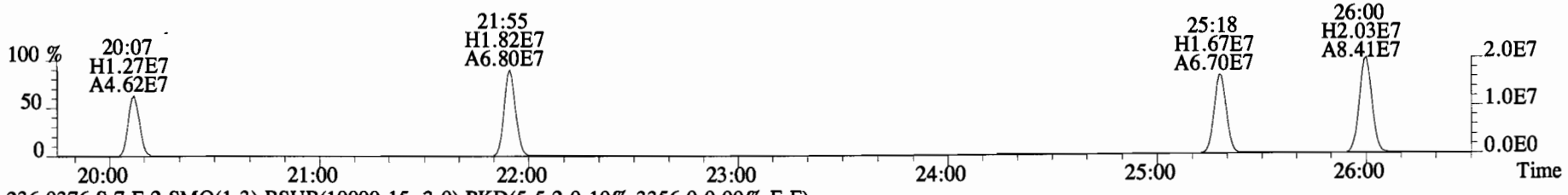
File:150318E1 #1-757 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4244.0,0.00%,F,F)



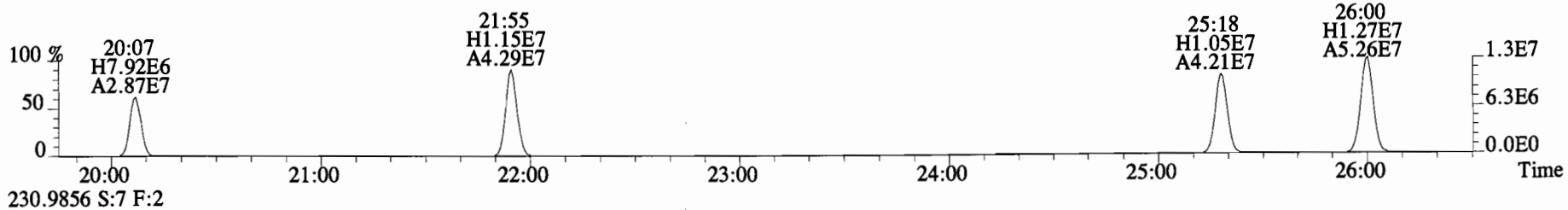
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18656.0,0.00%,F,F)



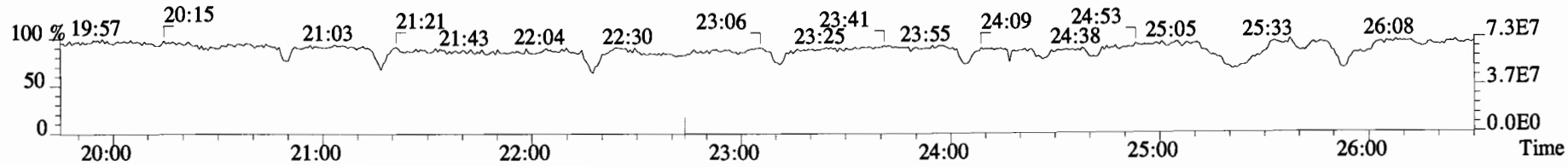
234.0406 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6612.0,0.00%,F,F)



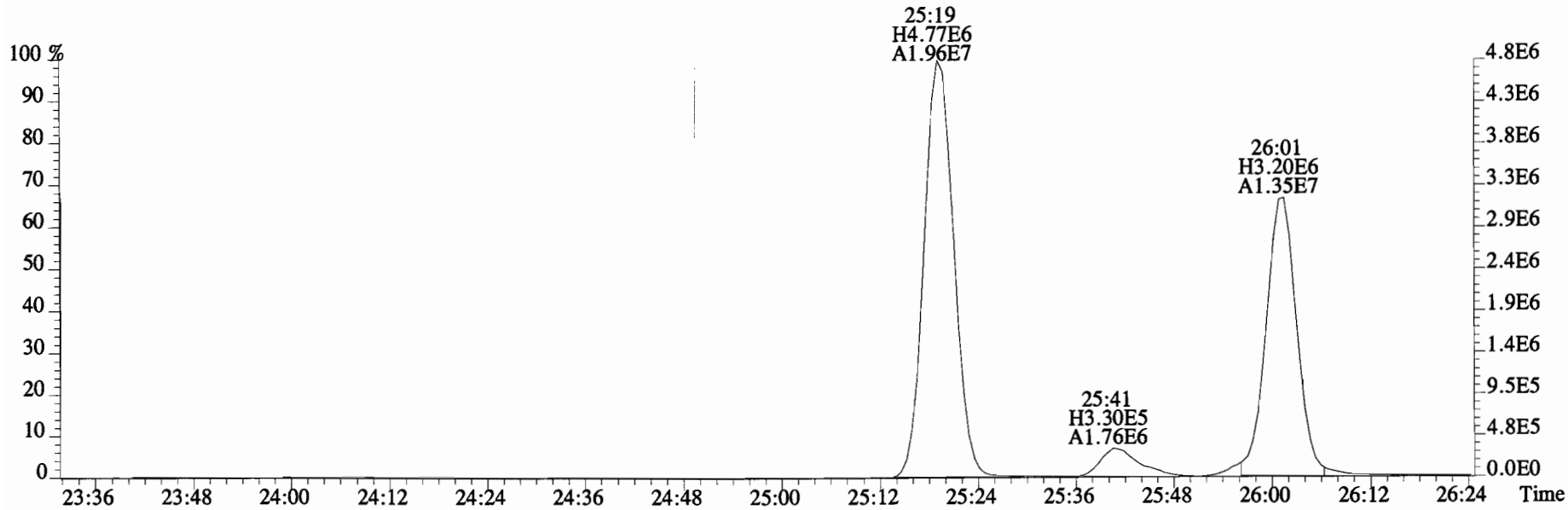
236.0376 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3356.0,0.00%,F,F)



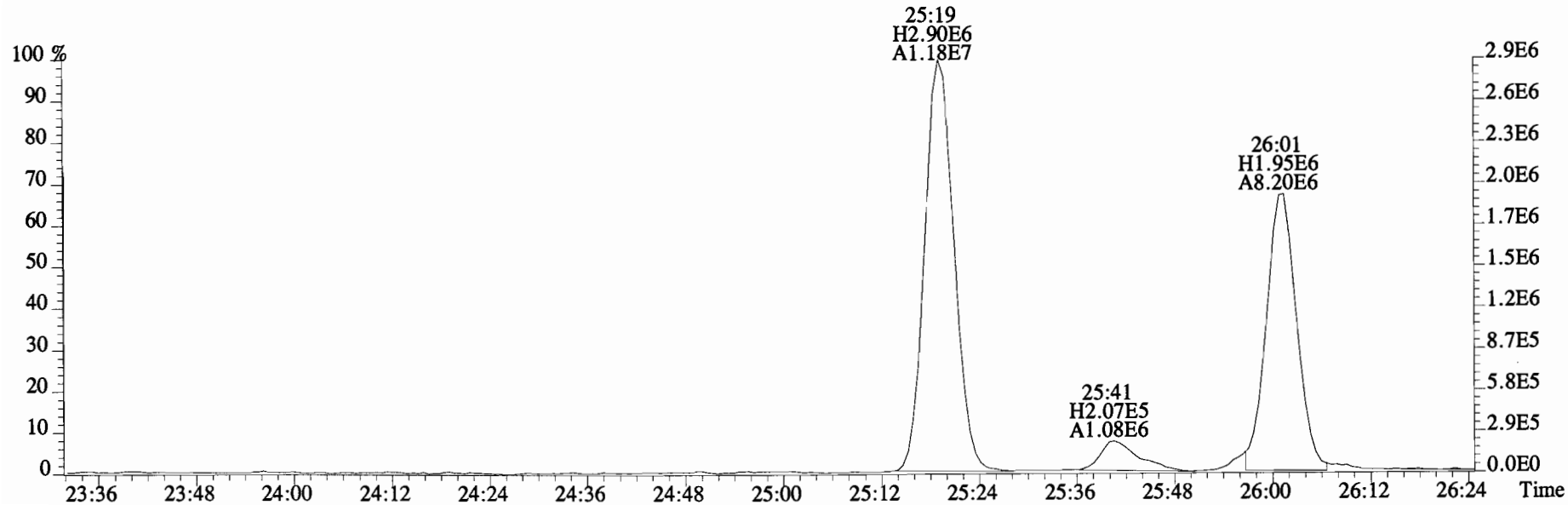
230.9856 S:7 F:2



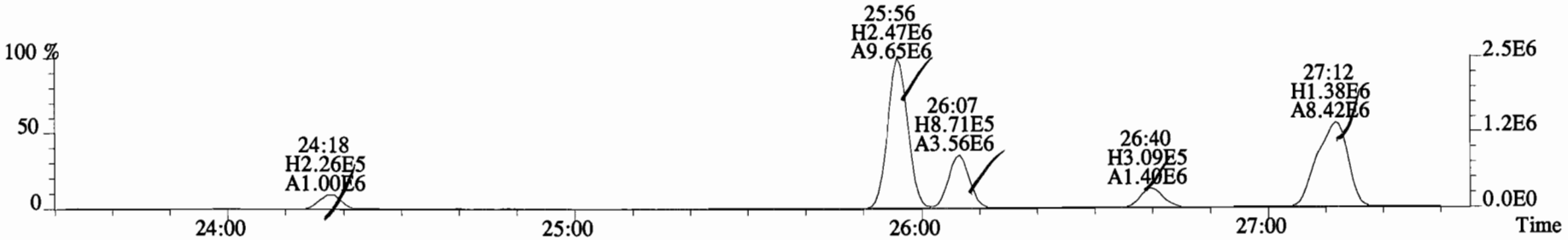
File:150318E1 #1-757 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4244.0,0.00%,F,F)



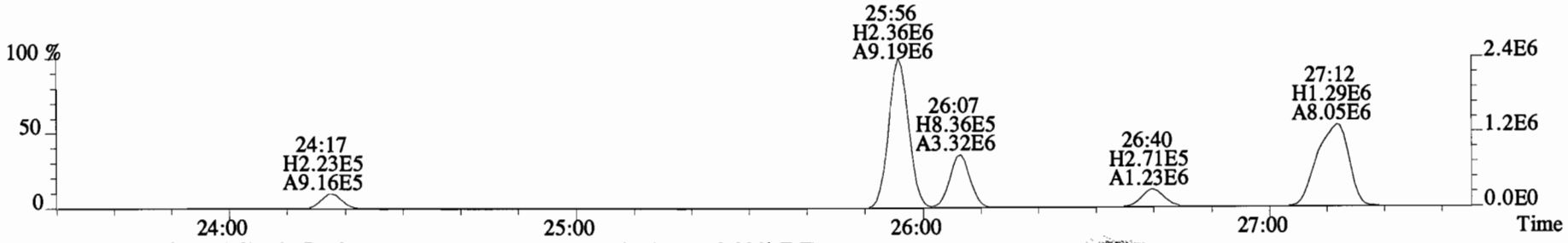
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18656.0,0.00%,F,F)



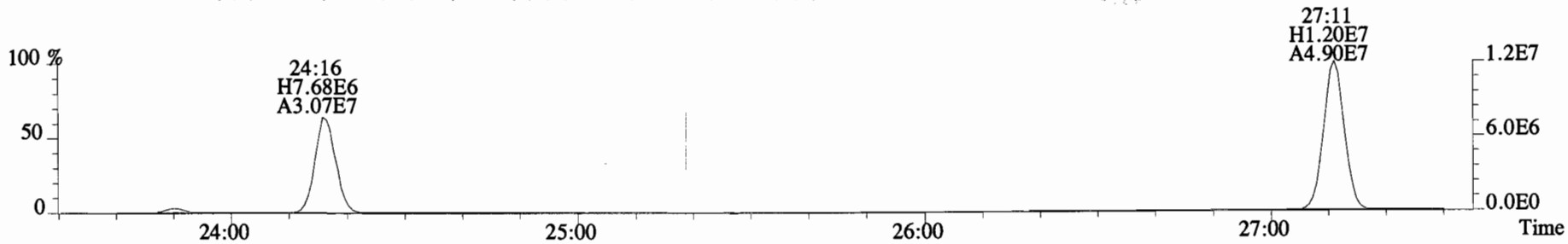
File:150318E1 #1-757 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7520.0,0.00%,F,F)



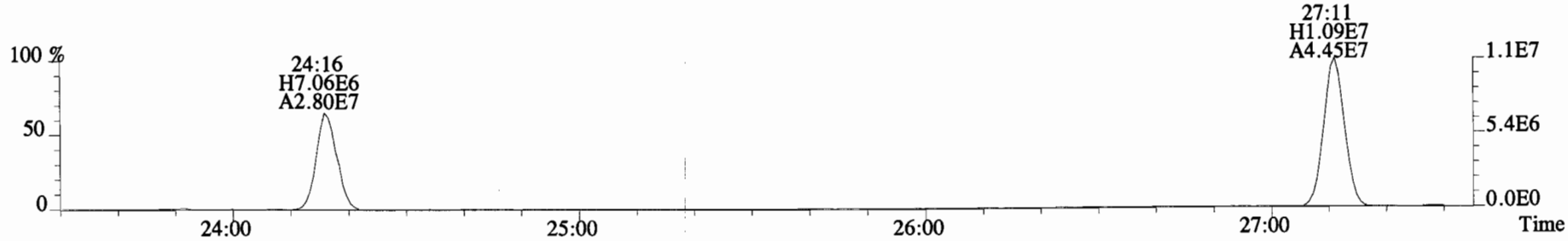
257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2208.0,0.00%,F,F)



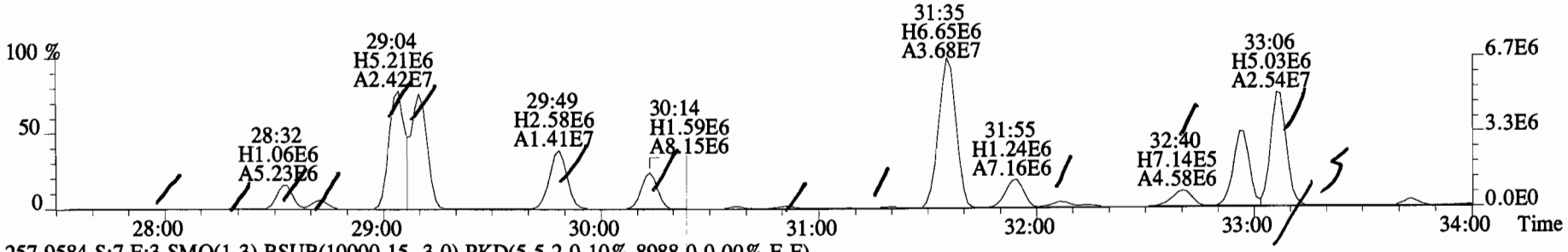
268.0016 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,34276.0,0.00%,F,F)



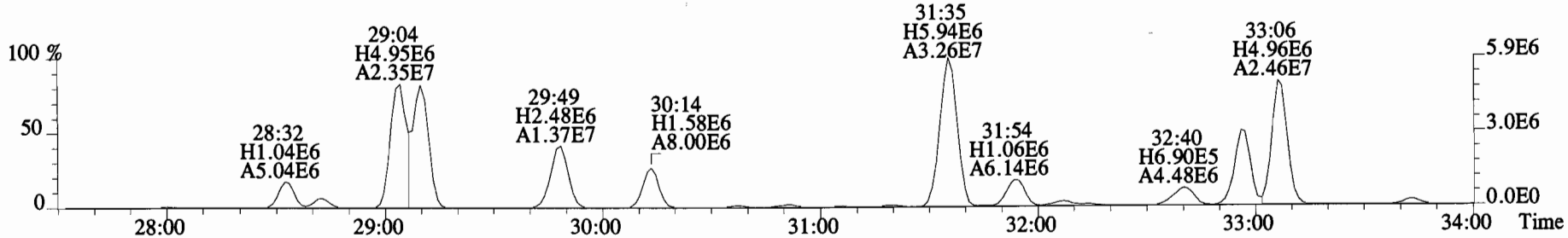
269.9986 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,29756.0,0.00%,F,F)



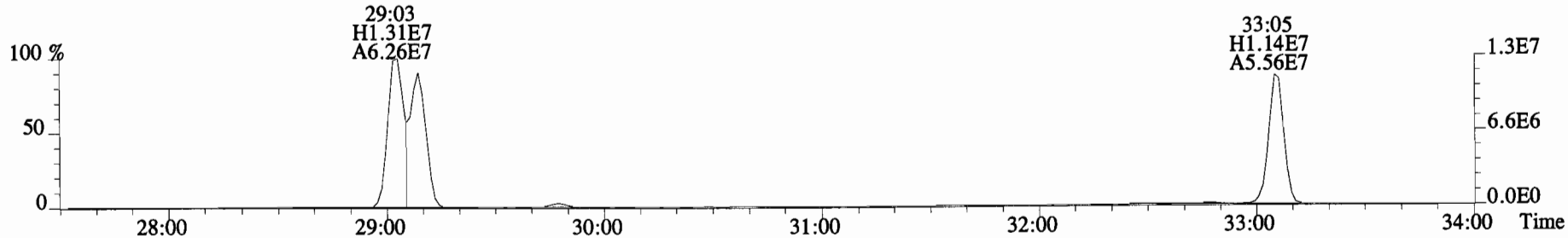
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18760.0,0.00%,F,F)



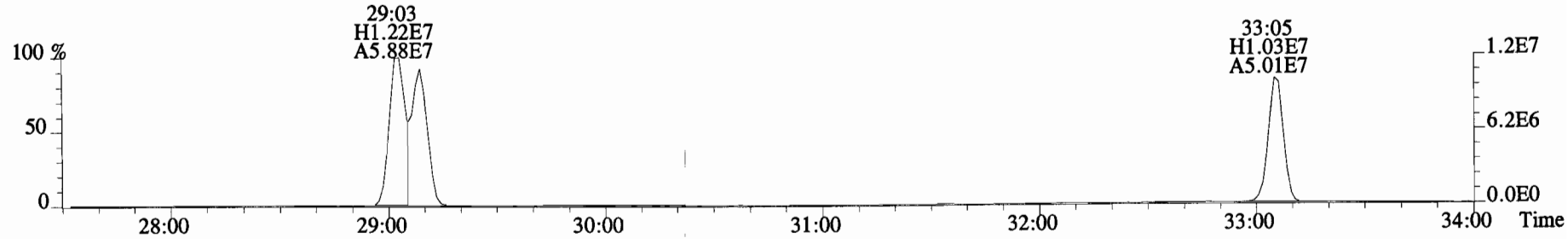
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8988.0,0.00%,F,F)



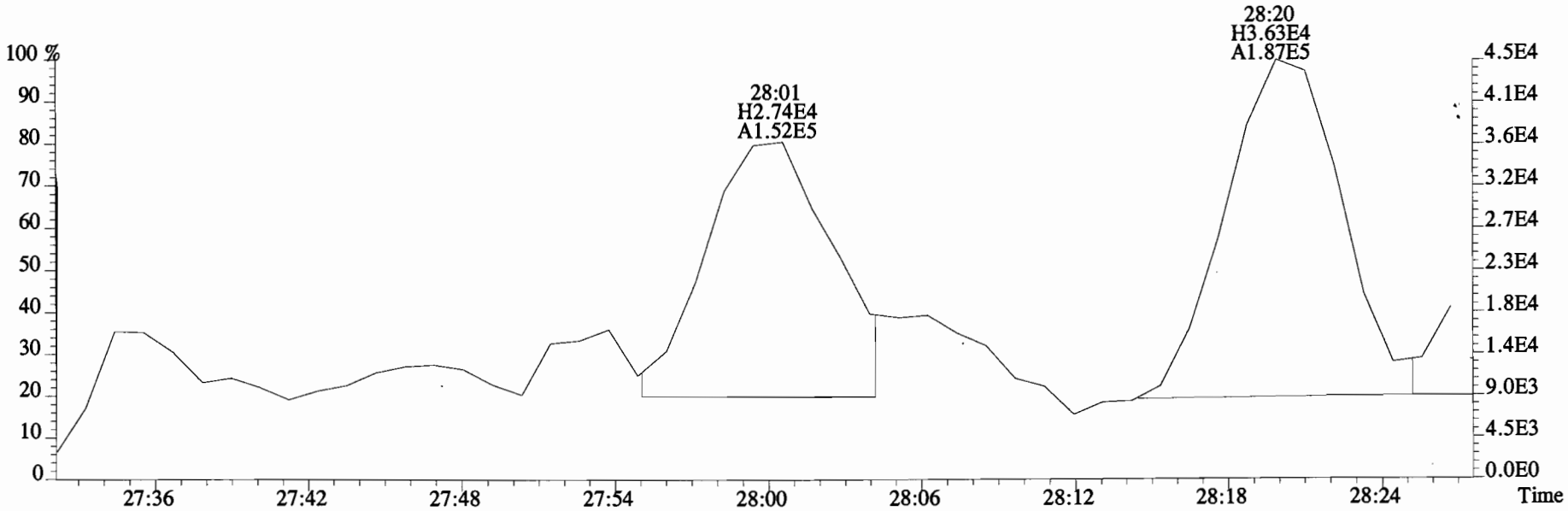
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,79928.0,0.00%,F,F)



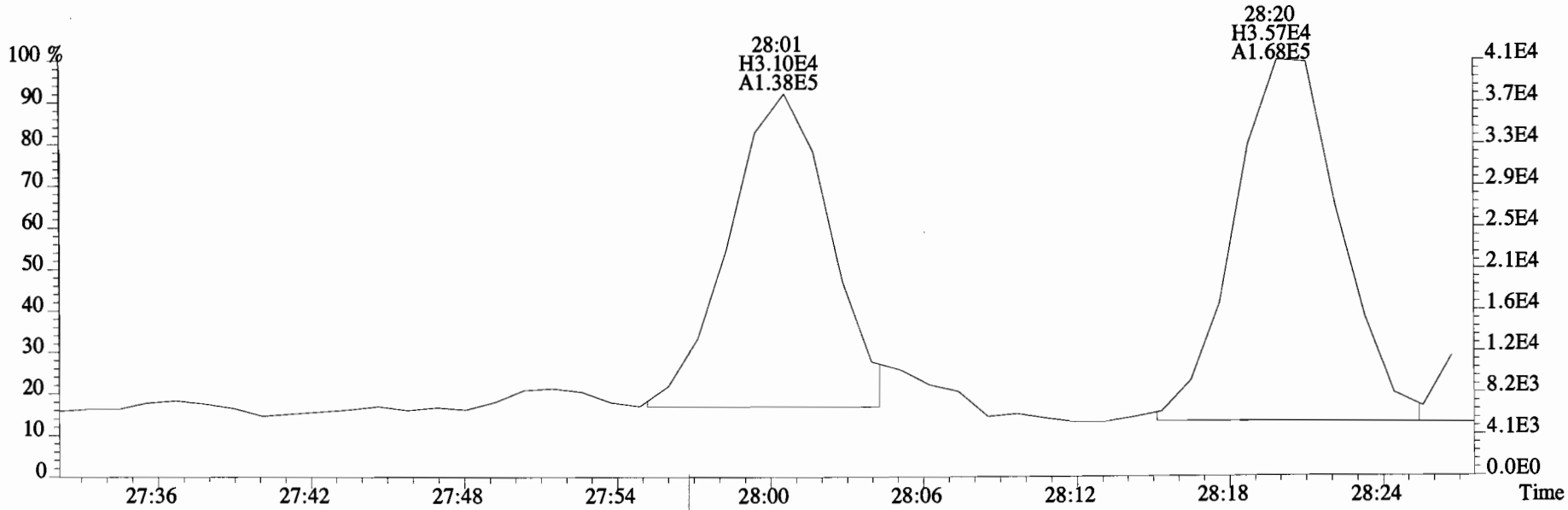
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,86504.0,0.00%,F,F)



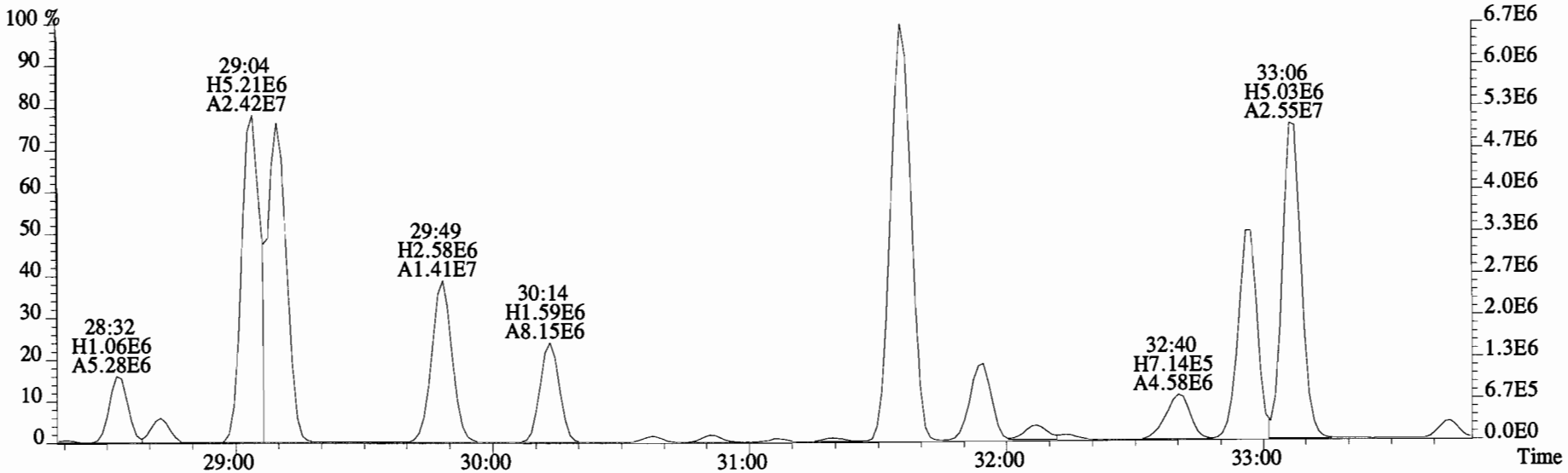
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18760.0,0.00%,F,F)



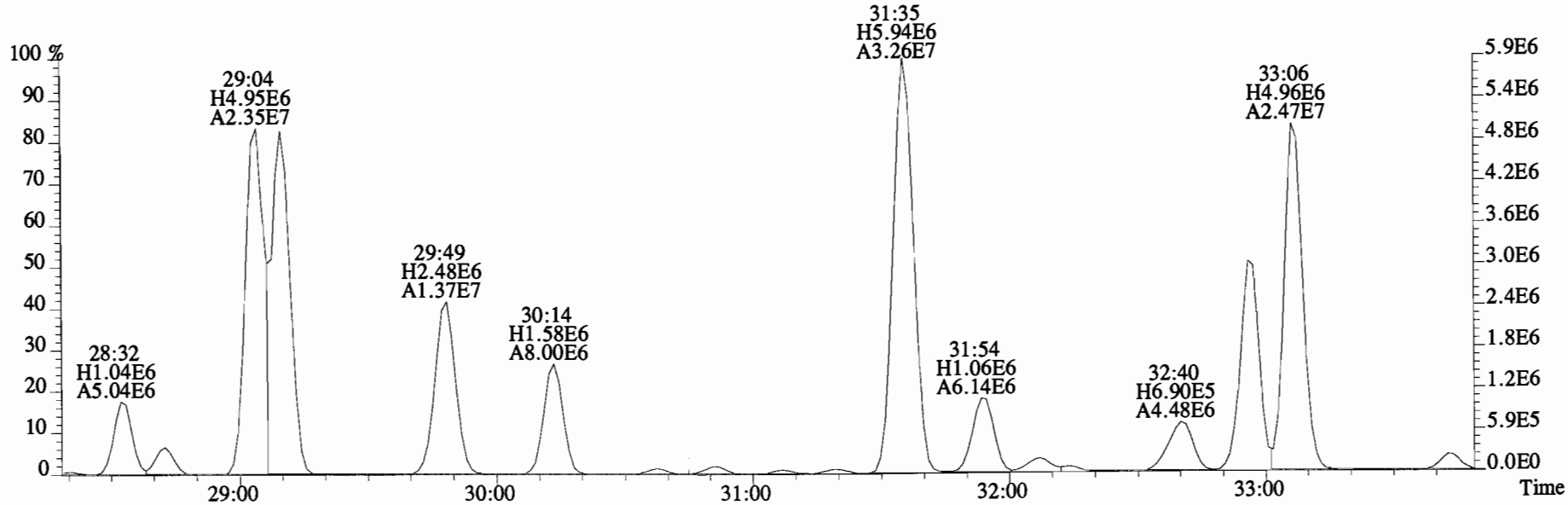
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8988.0,0.00%,F,F)



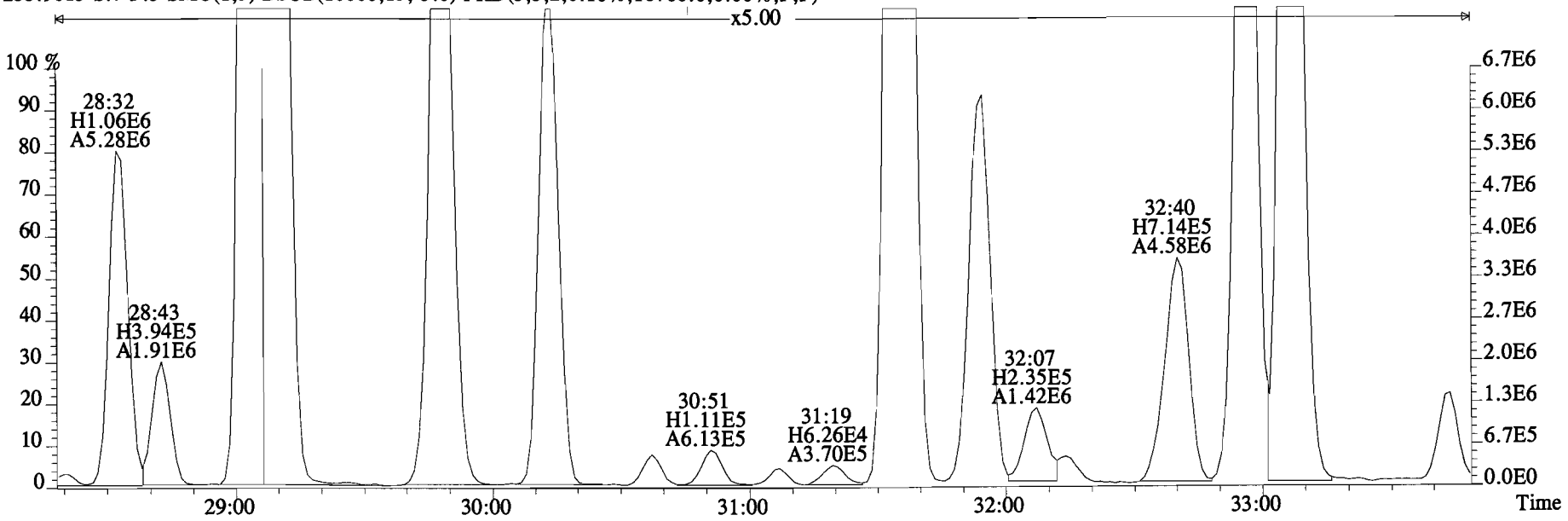
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18760.0,0.00%,F,F)



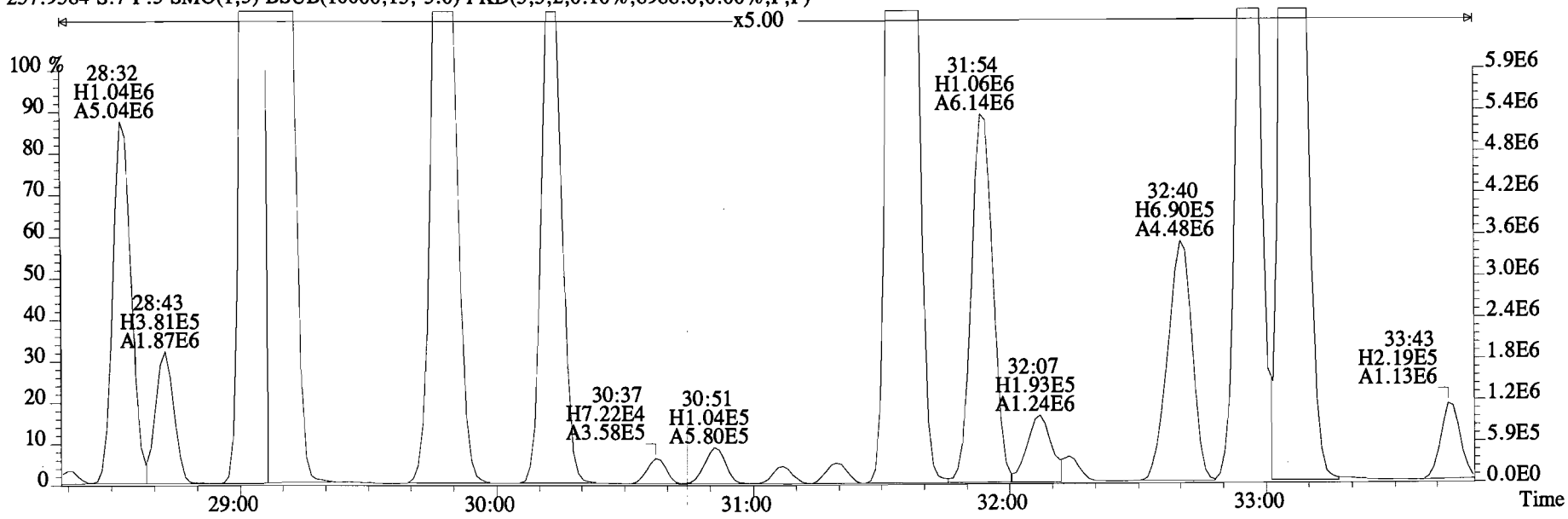
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8988.0,0.00%,F,F)



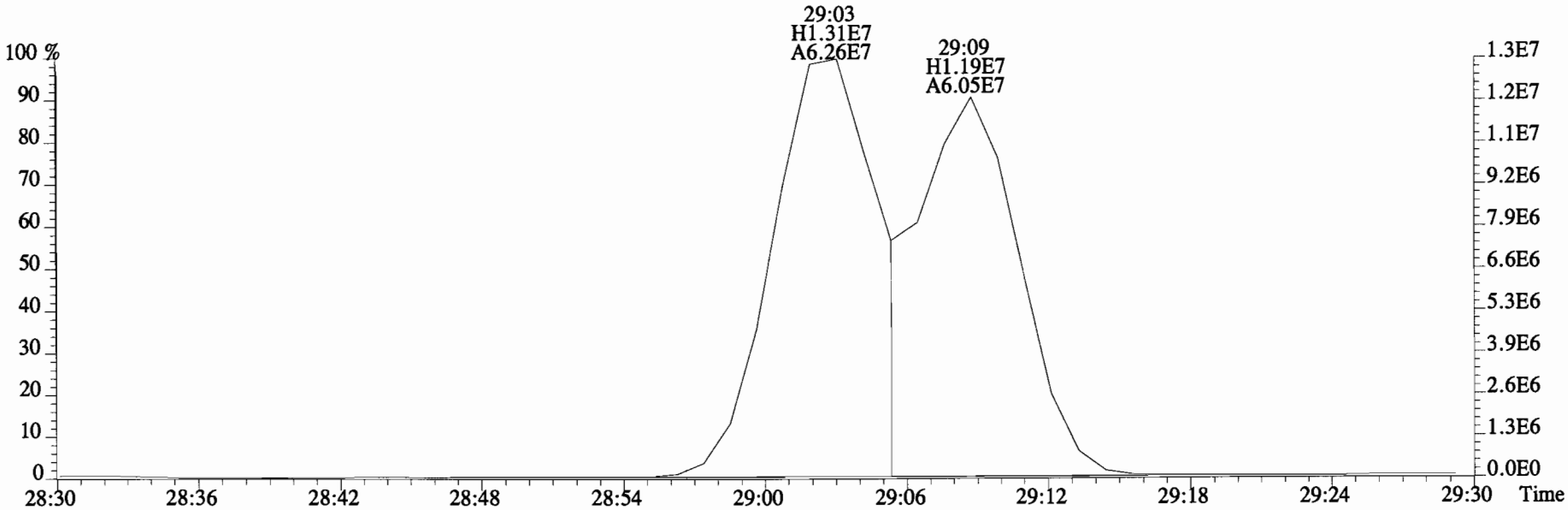
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18760.0,0.00%,F,F)



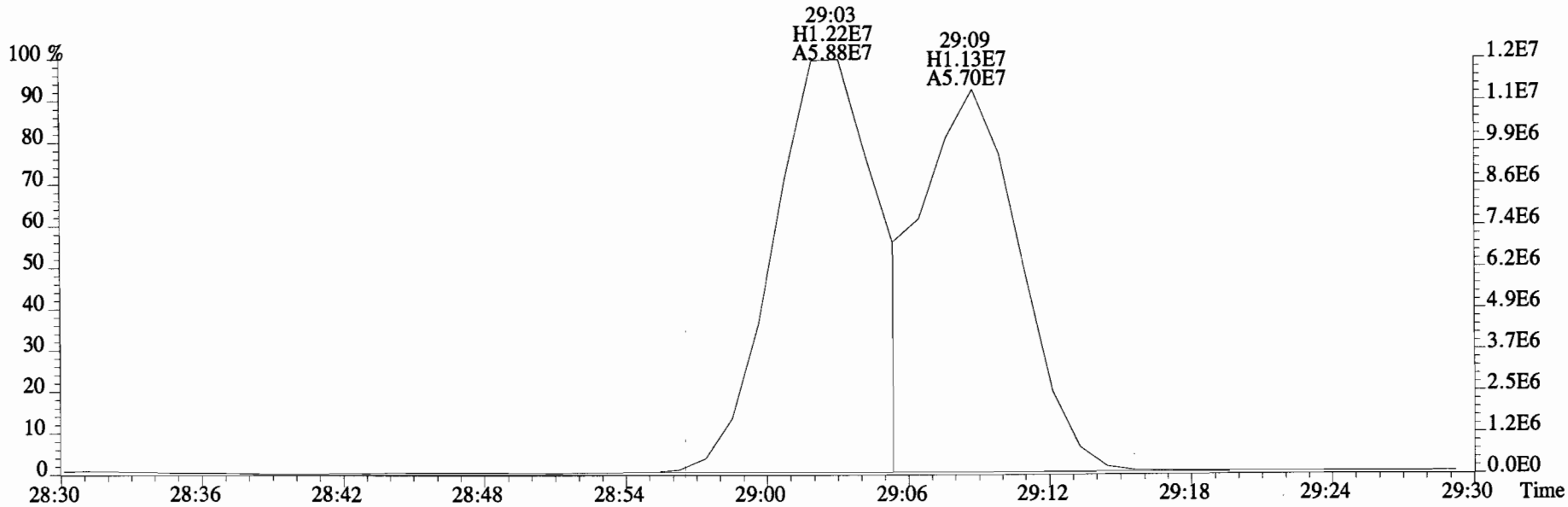
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8988.0,0.00%,F,F)



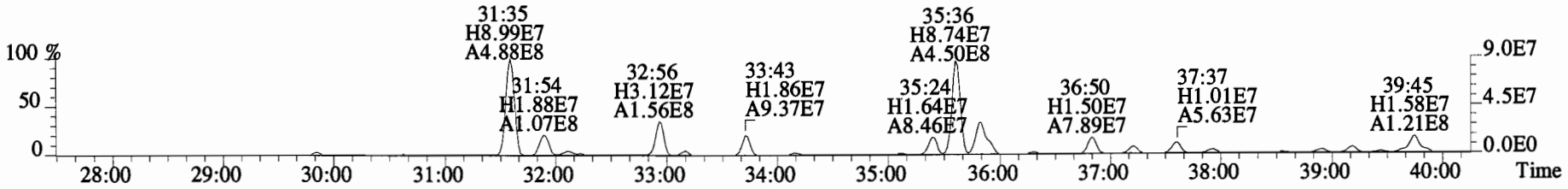
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,79928.0,0.00%,F,F)



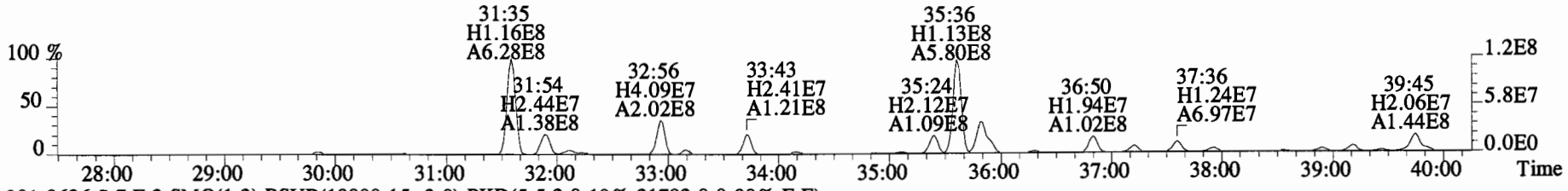
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,86504.0,0.00%,F,F)



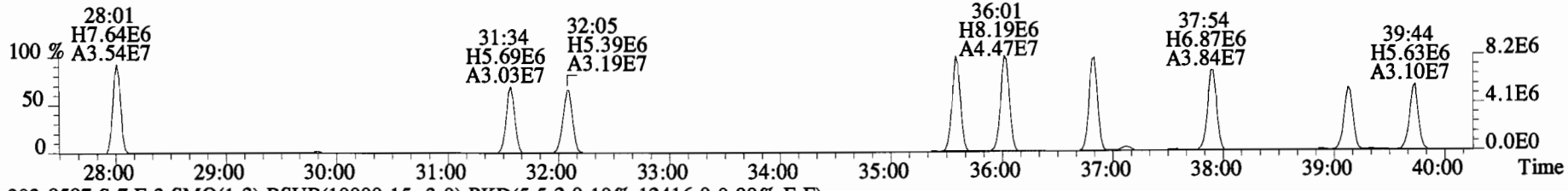
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



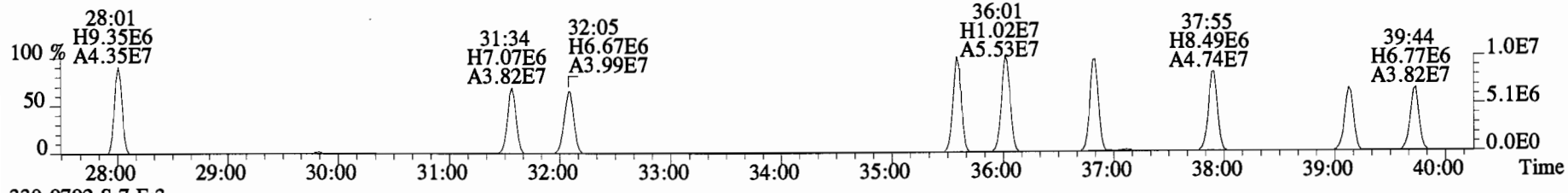
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



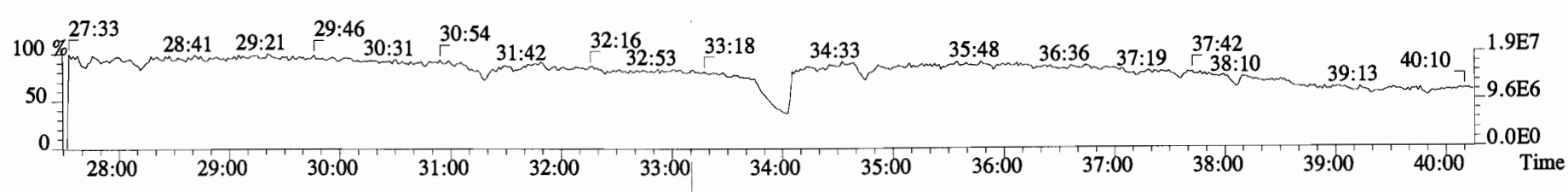
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,21792.0,0.00%,F,F)



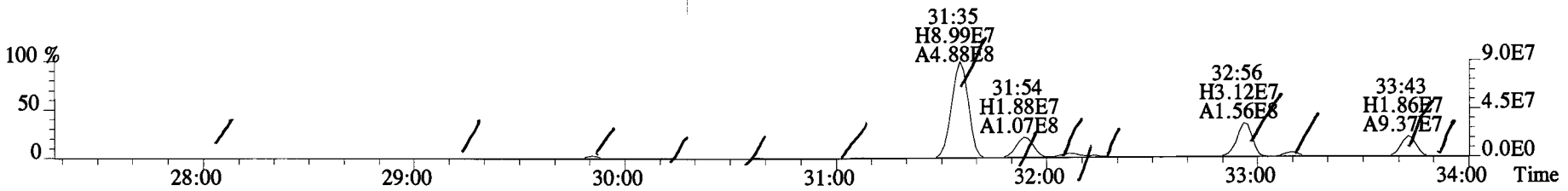
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12416.0,0.00%,F,F)



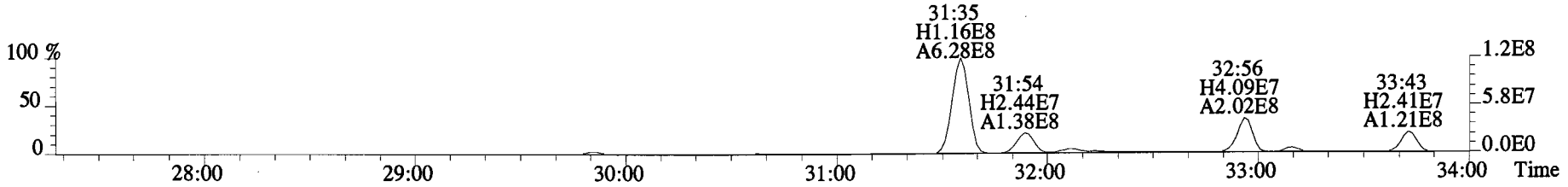
330.9792 S:7 F:3



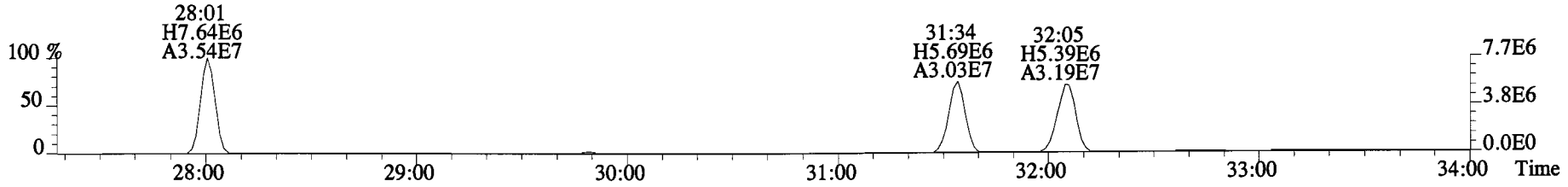
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



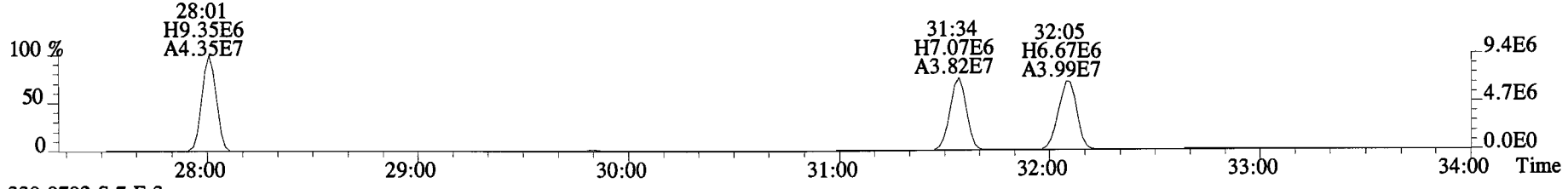
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



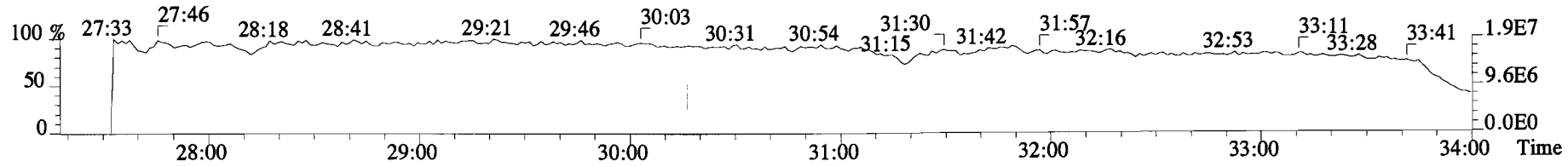
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,21792.0,0.00%,F,F)



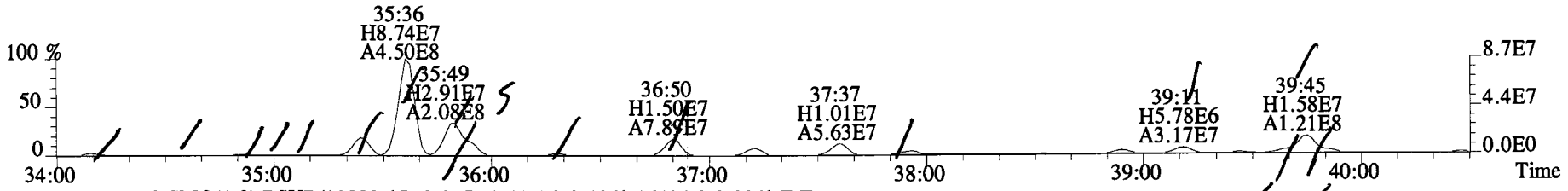
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12416.0,0.00%,F,F)



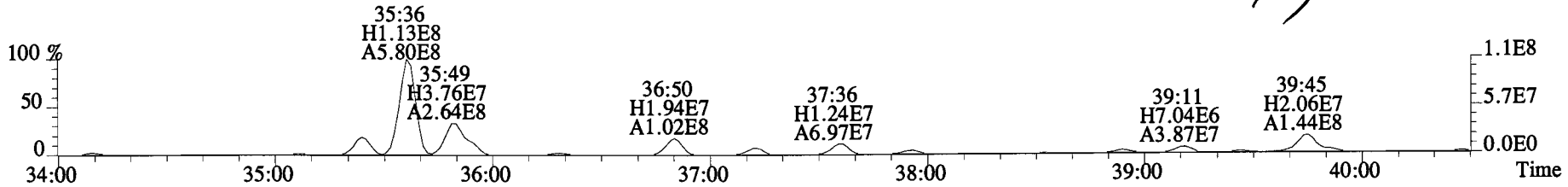
330.9792 S:7 F:3



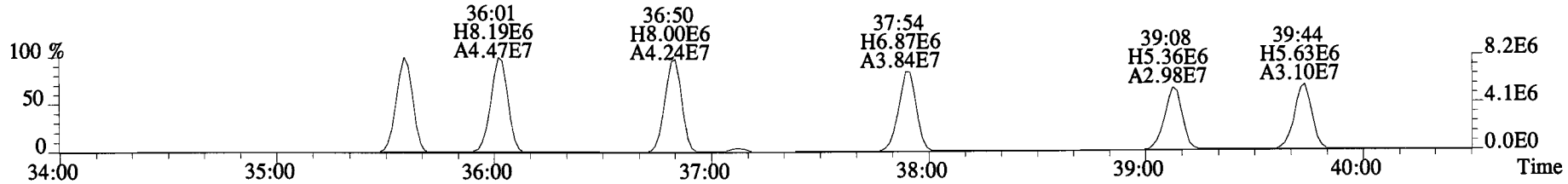
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



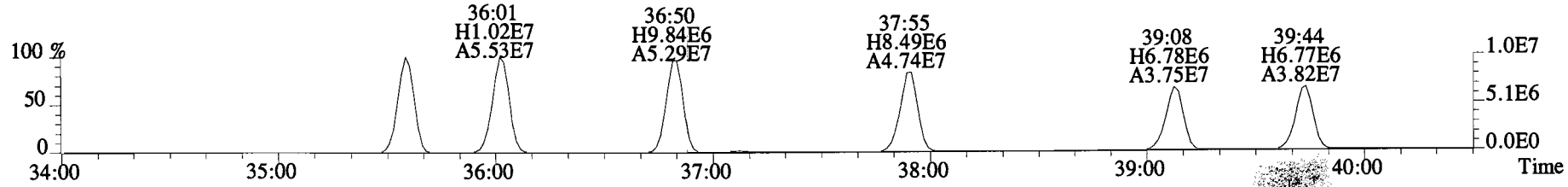
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



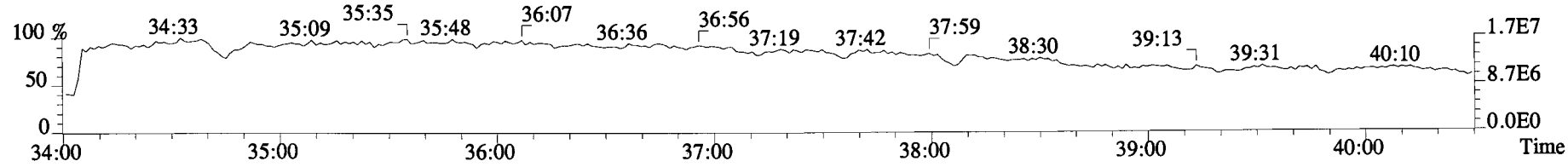
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,21792.0,0.00%,F,F)



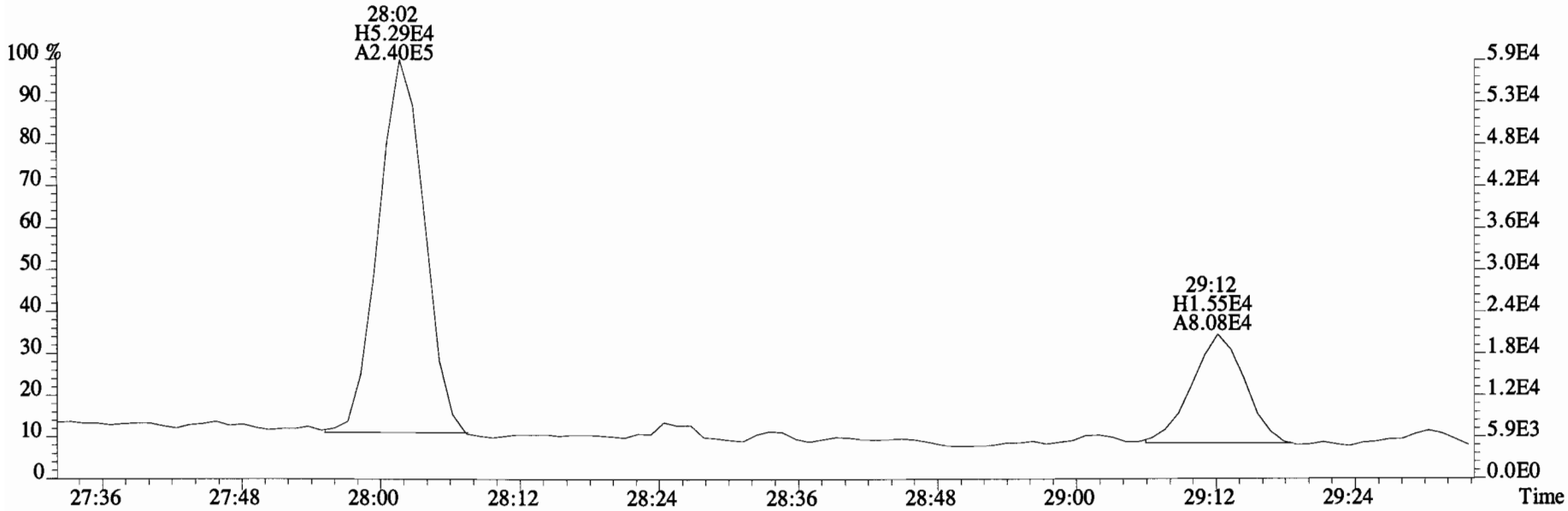
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12416.0,0.00%,F,F)



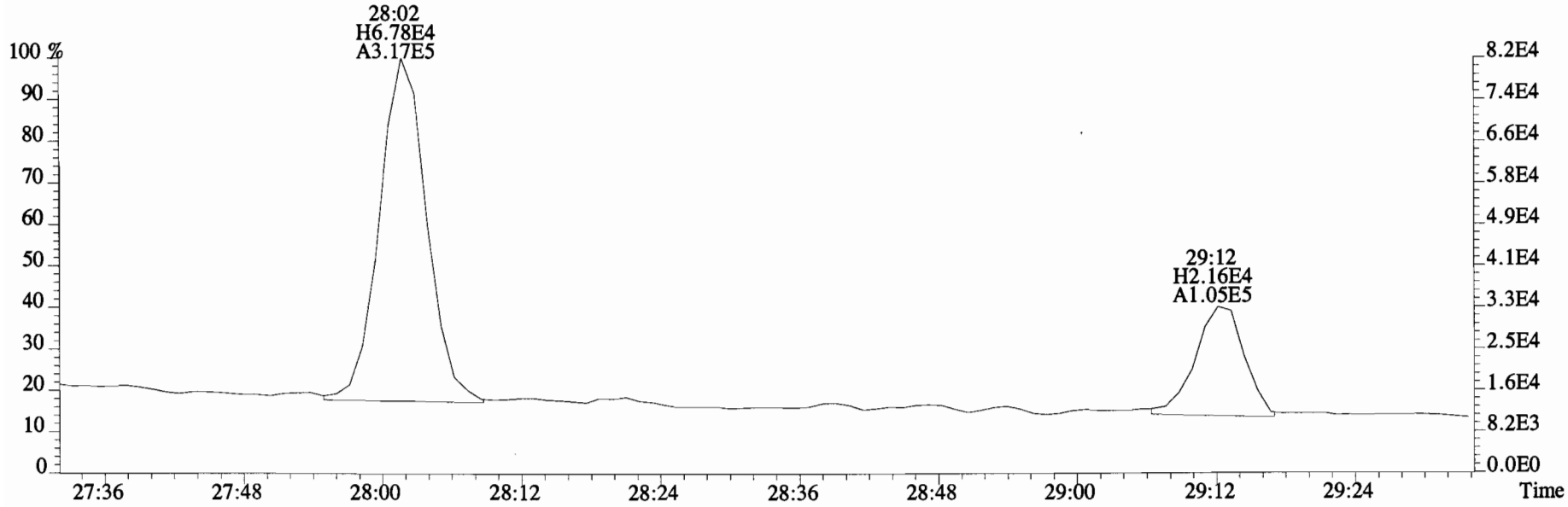
330.9792 S:7 F:3

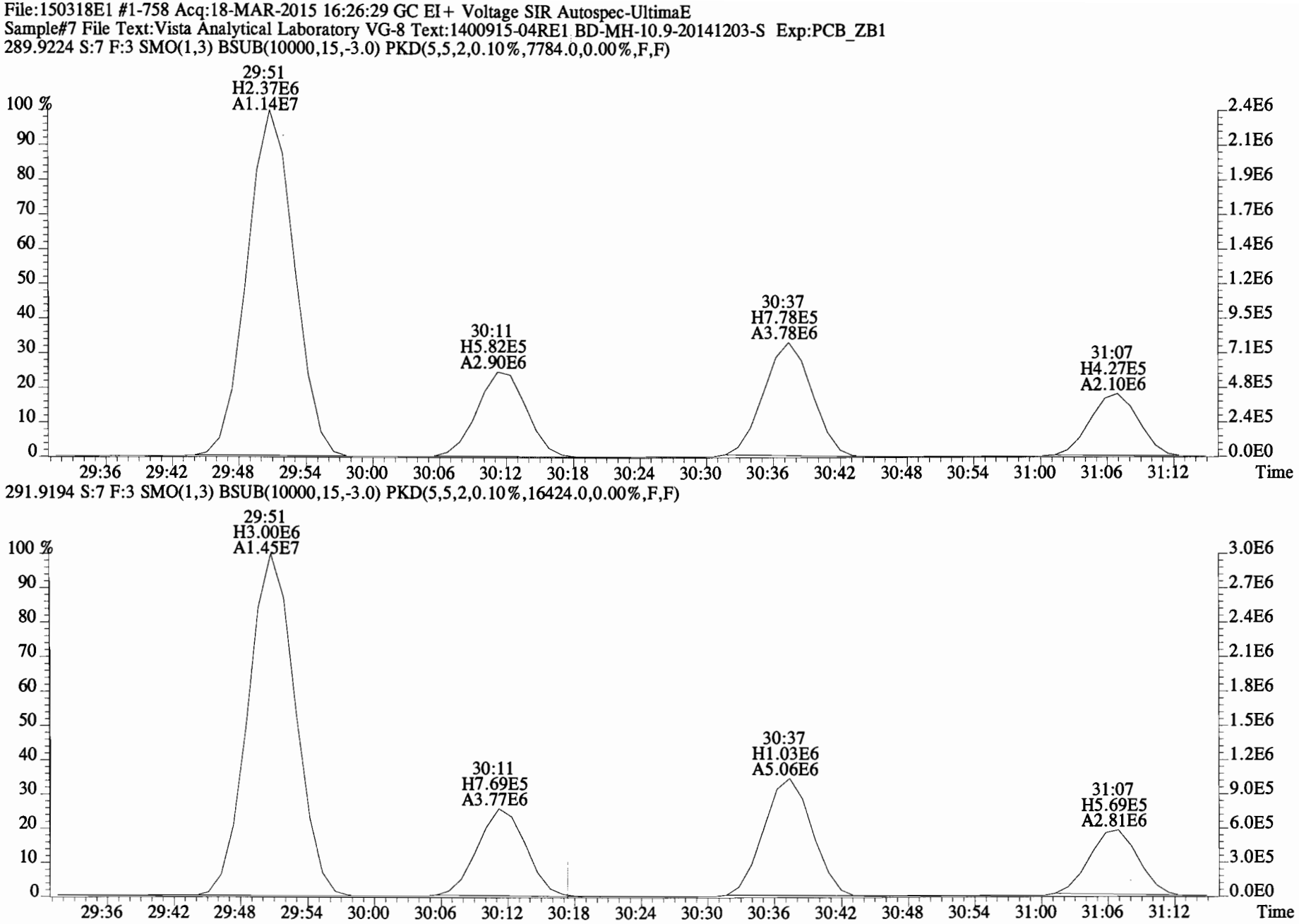


File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1 -
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)

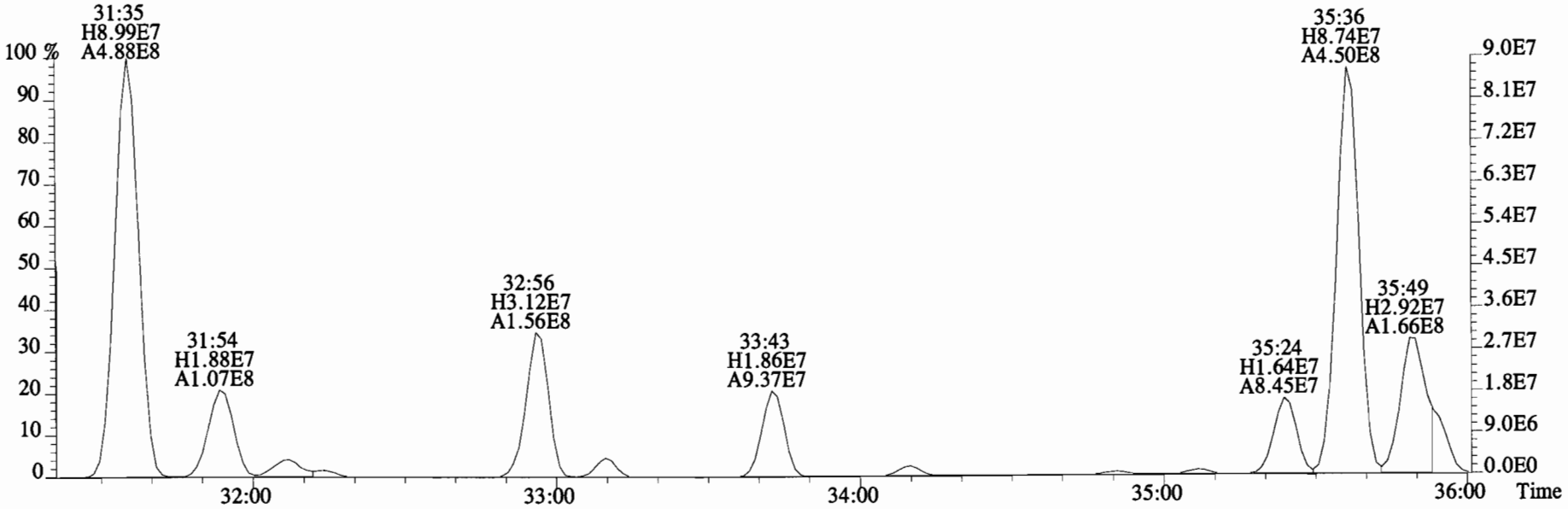


291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)

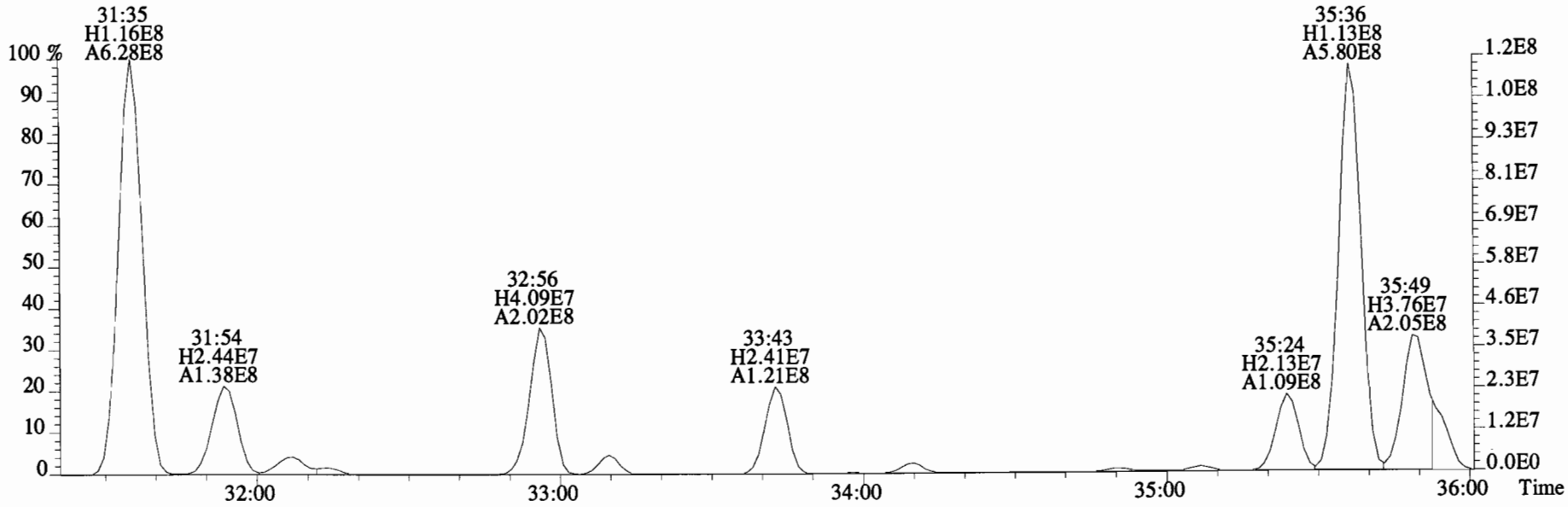



File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)
29:51
H2.37E6
A1.14E7
30:11
H5.82E5
A2.90E6
30:37
H7.78E5
A3.78E6
31:07
H4.27E5
A2.10E6
100 %
Time
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)
29:51
H3.00E6
A1.45E7
30:11
H7.69E5
A3.77E6
30:37
H1.03E6
A5.06E6
31:07
H5.69E5
A2.81E6
100 %
Time

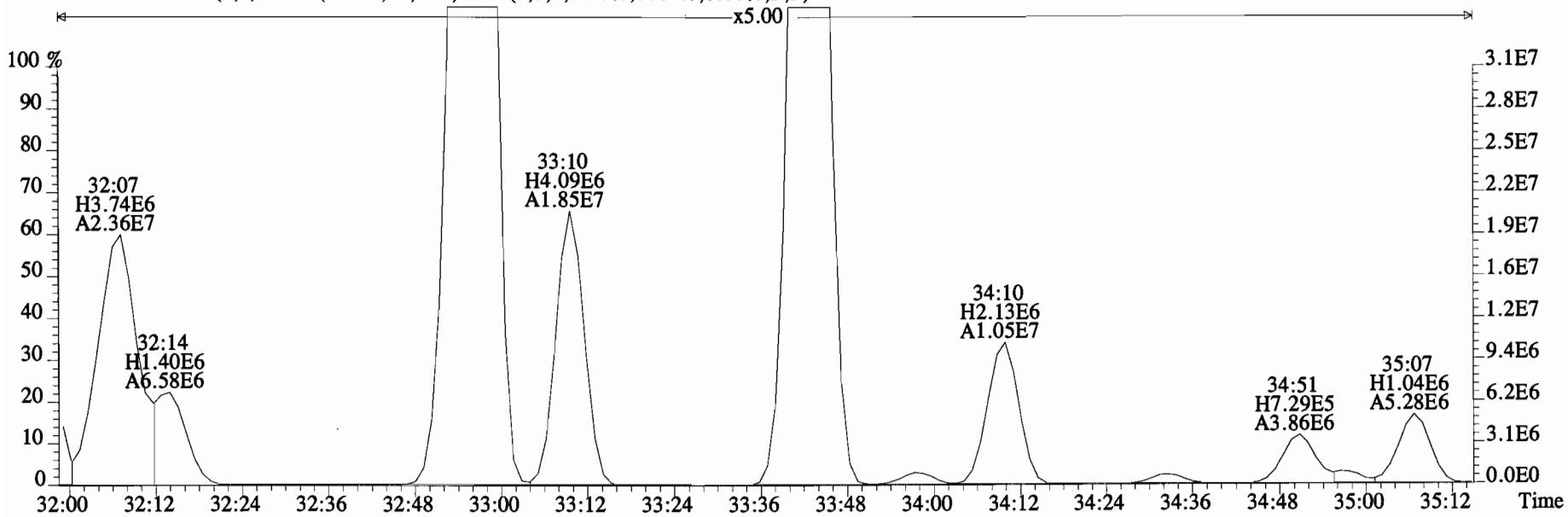
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



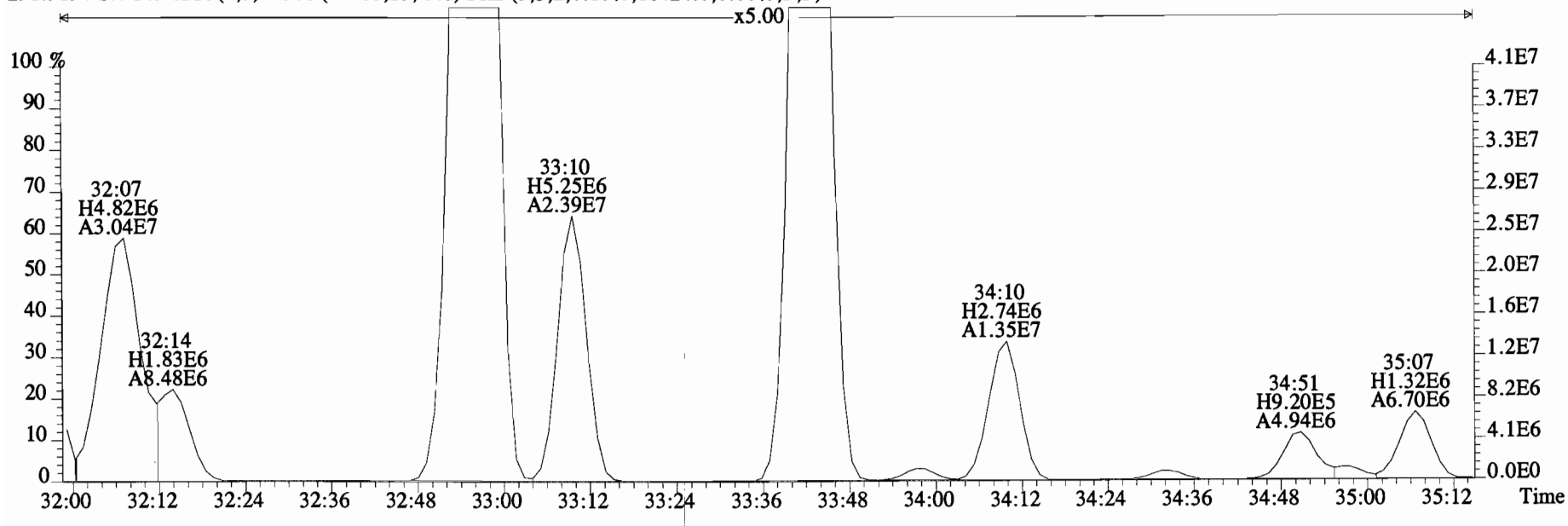
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



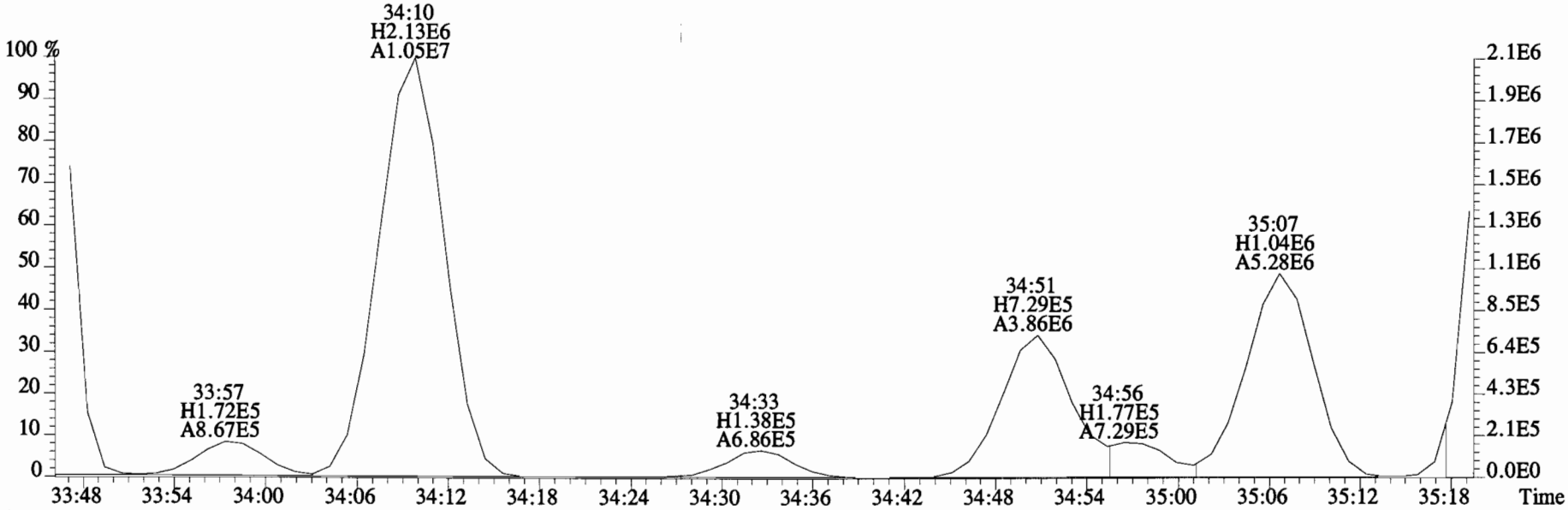
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



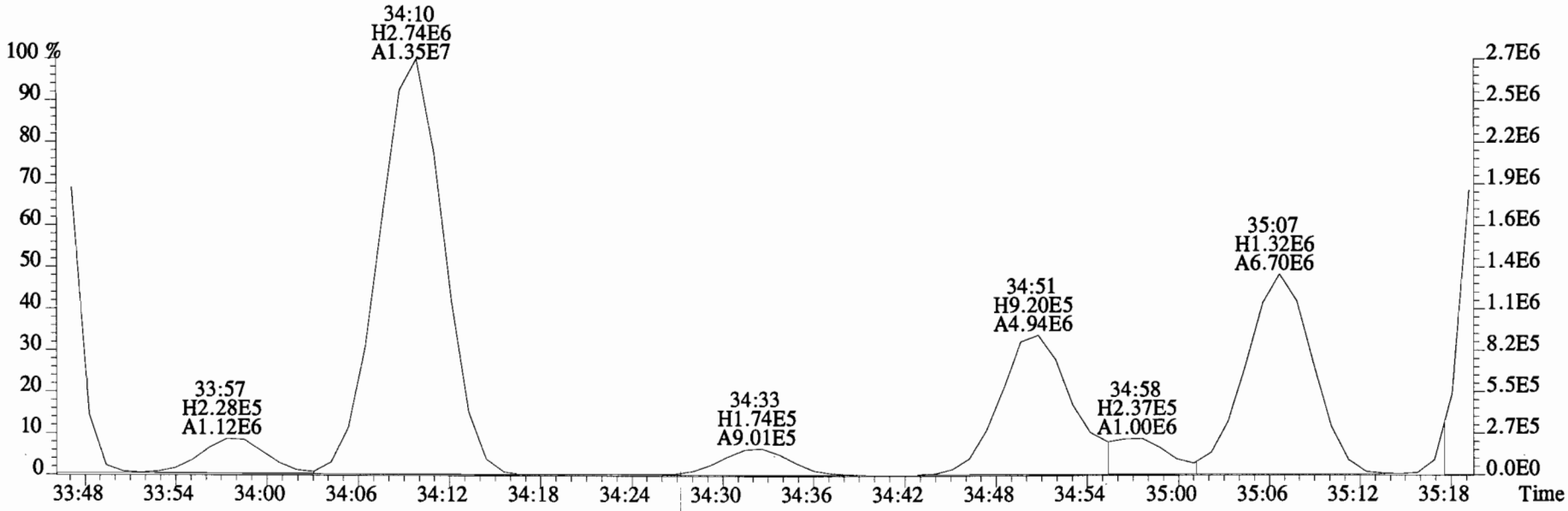
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



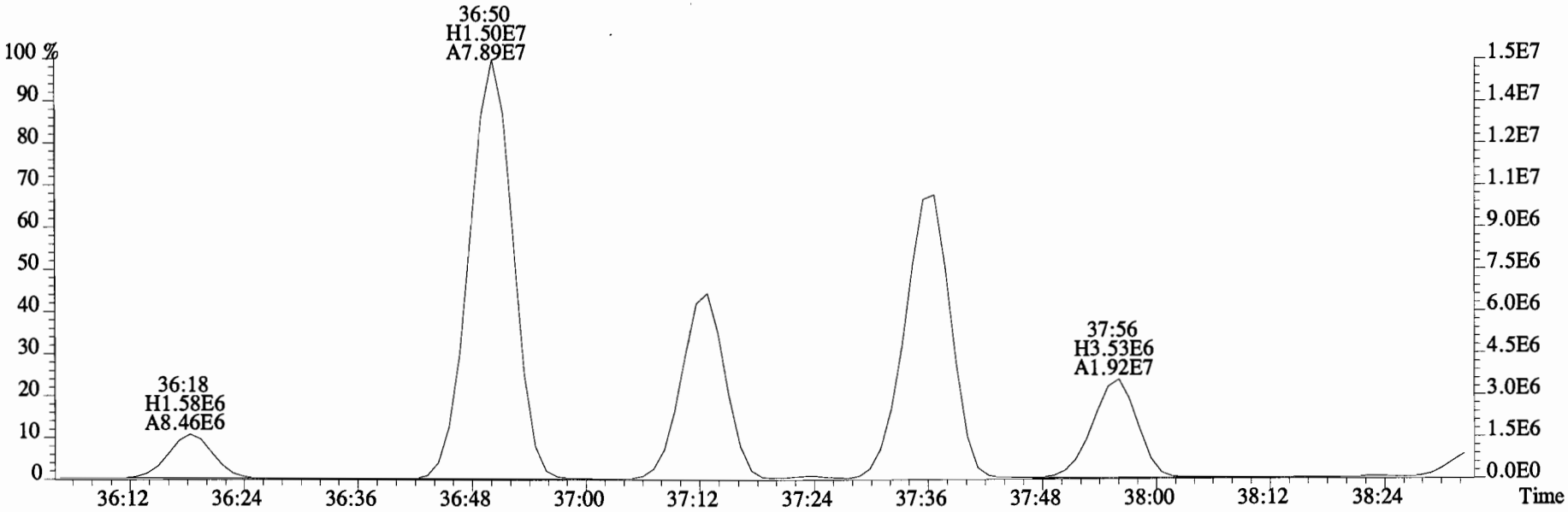
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



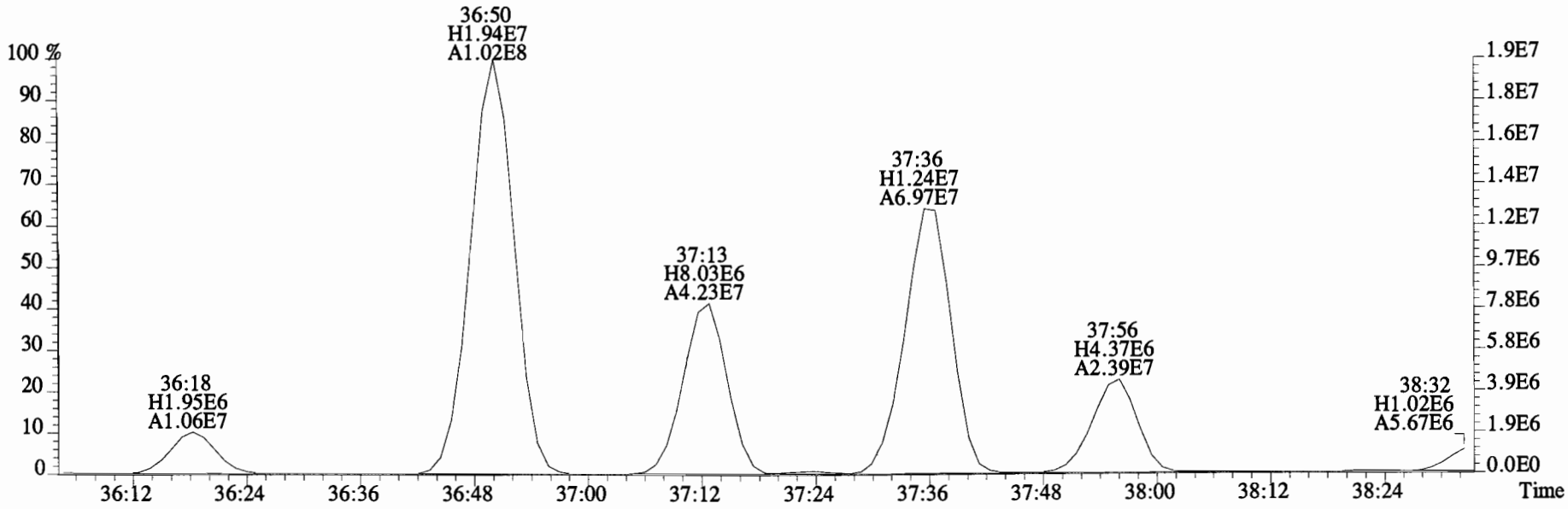
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



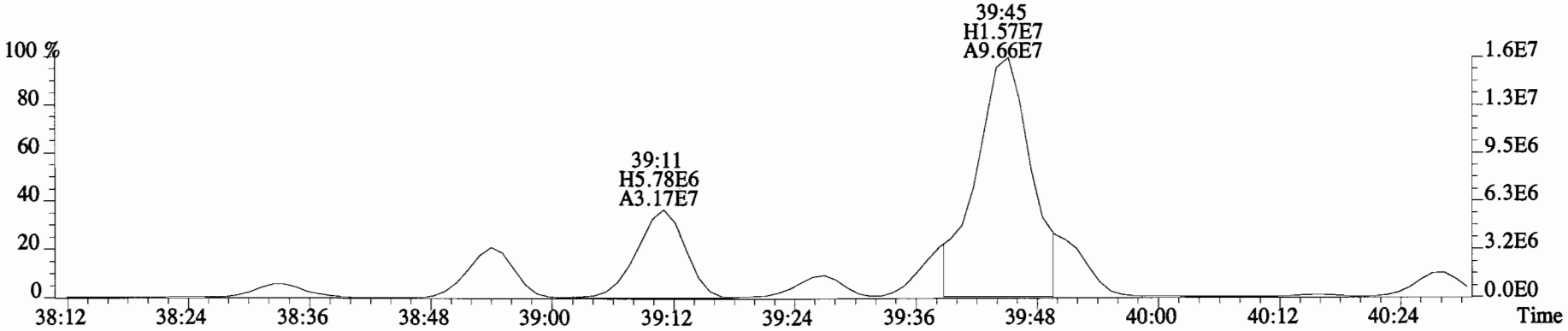
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



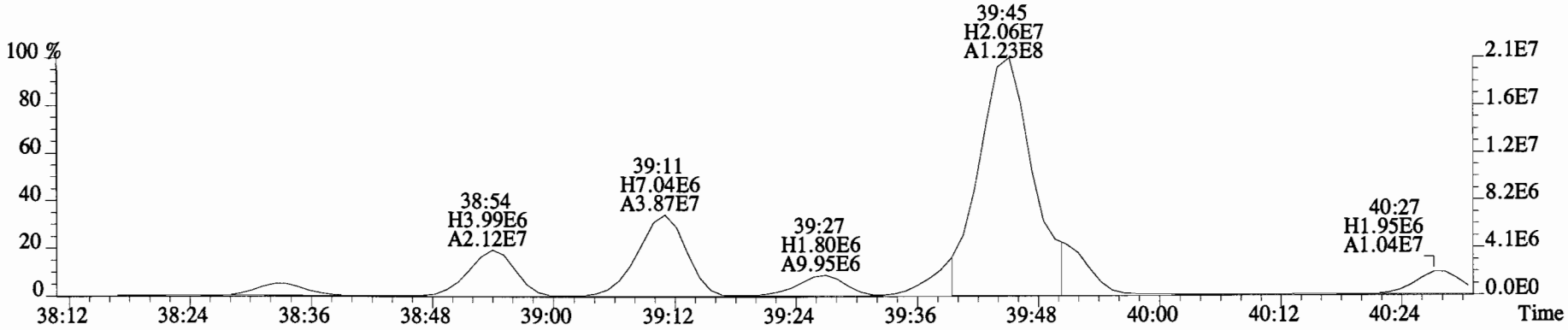
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



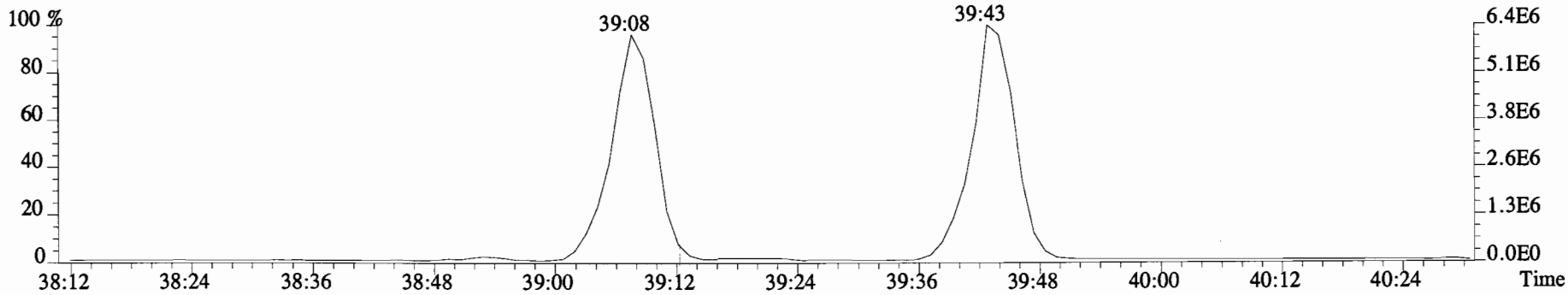
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



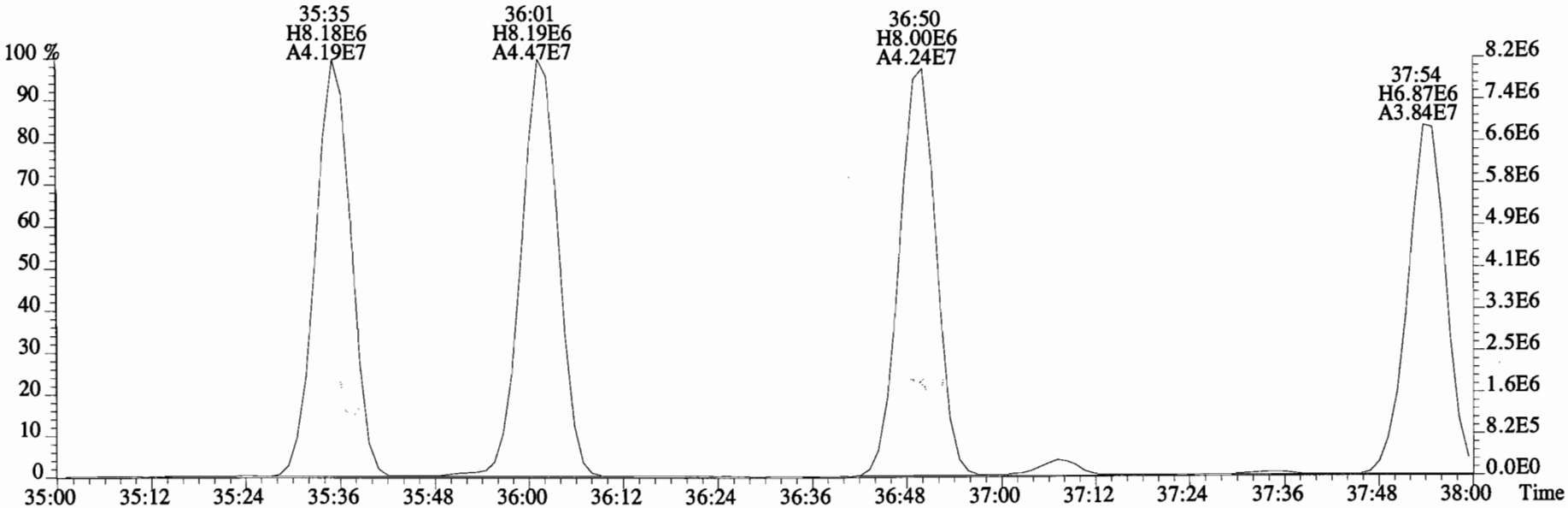
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16424.0,0.00%,F,F)



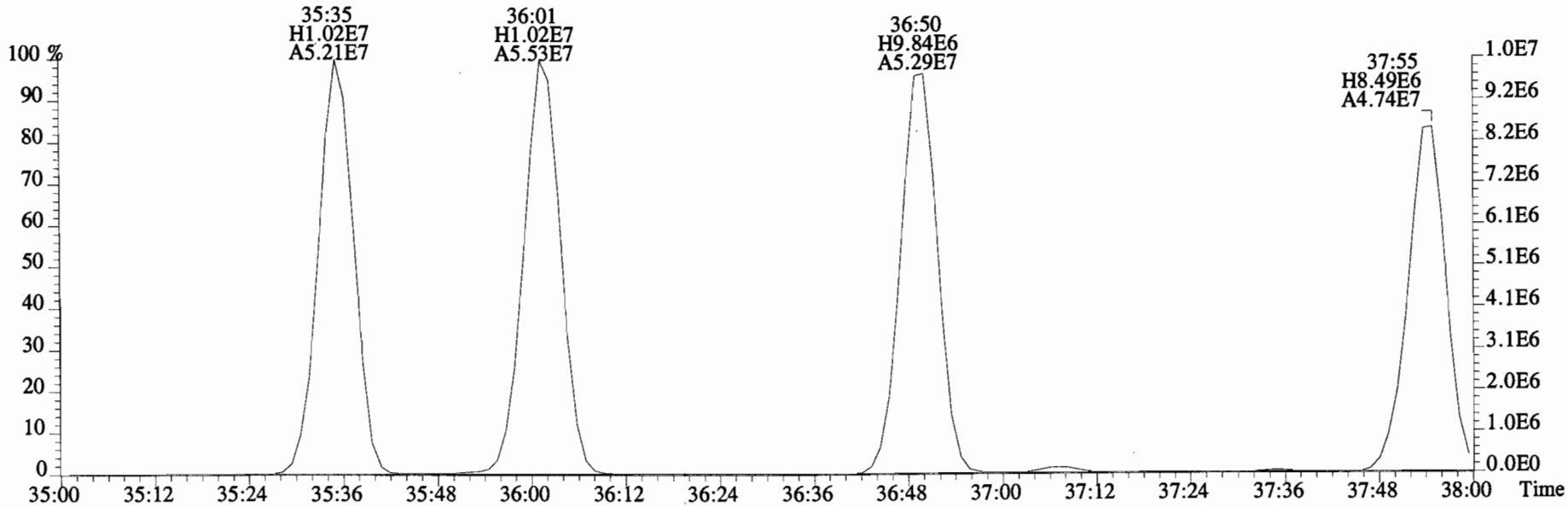
301.9626 S:7 F:3



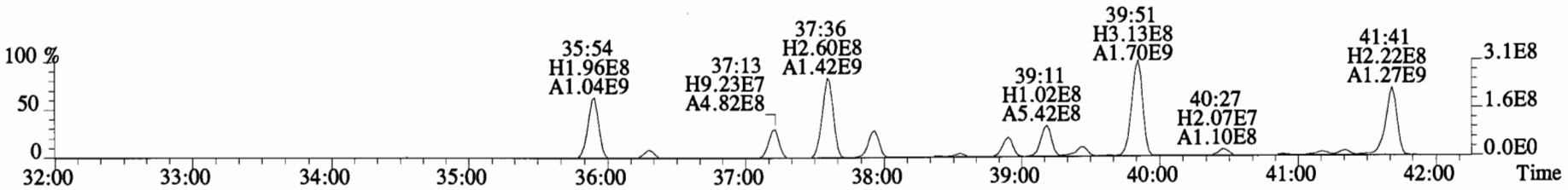
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,21792.0,0.00%,F,F)



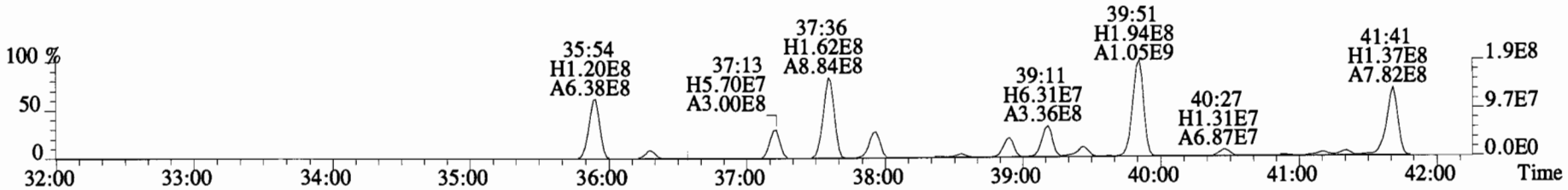
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12416.0,0.00%,F,F)



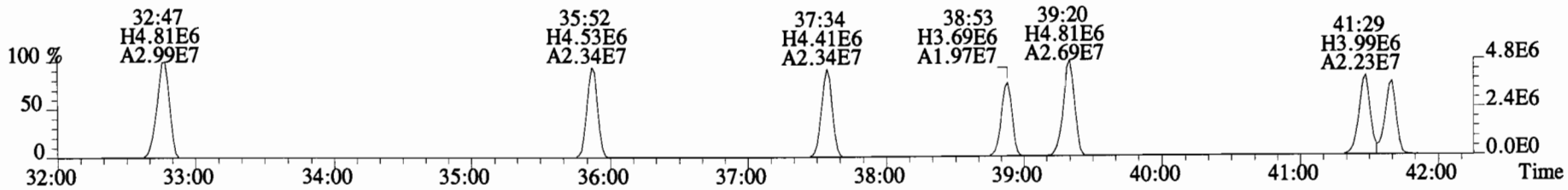
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5376.0,0.00%,F,F)



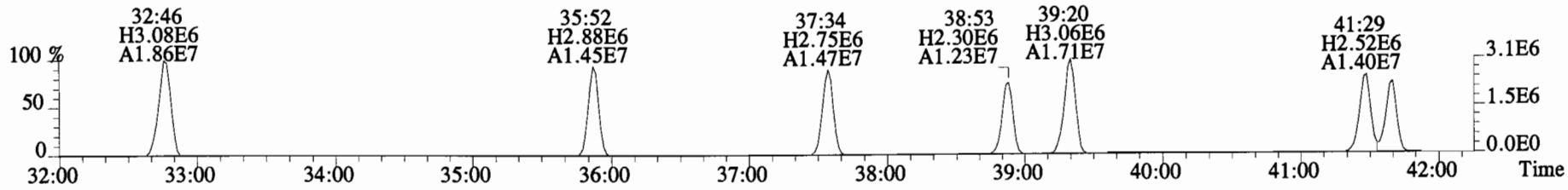
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3728.0,0.00%,F,F)



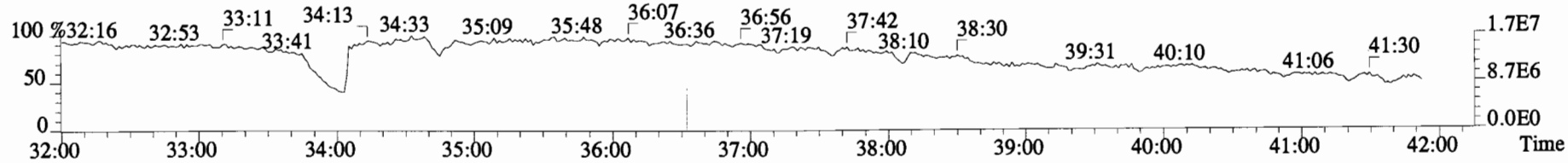
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2840.0,0.00%,F,F)



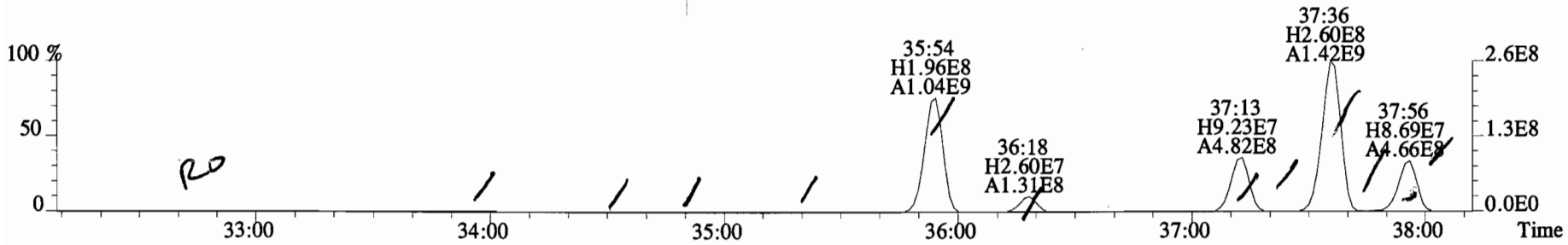
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2568.0,0.00%,F,F)



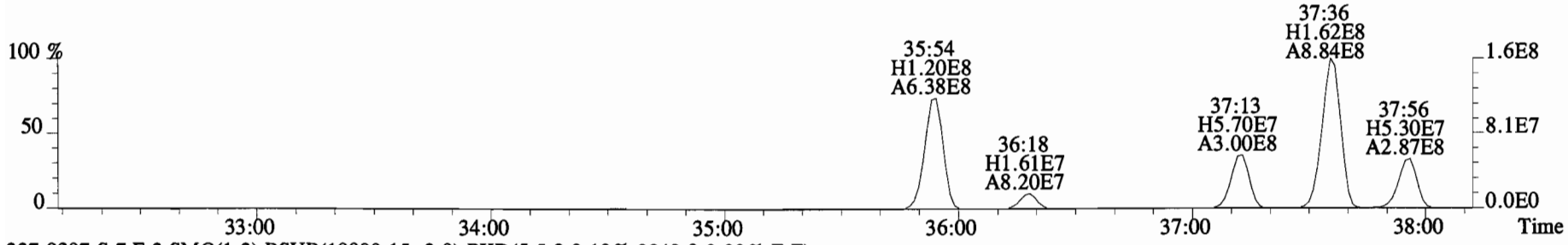
330.9792 S:7 F:3



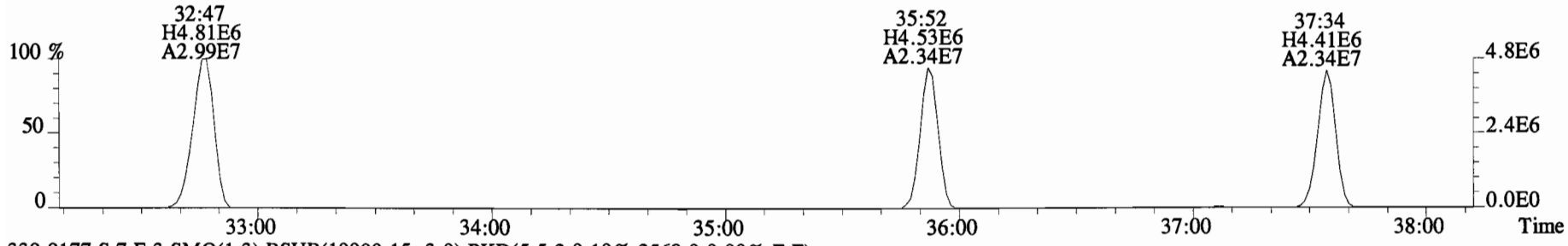
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5376.0,0.00%,F,F)



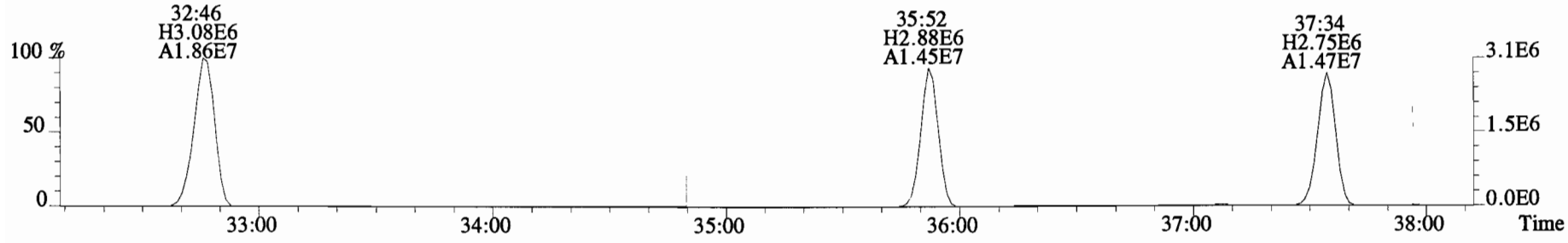
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3728.0,0.00%,F,F)



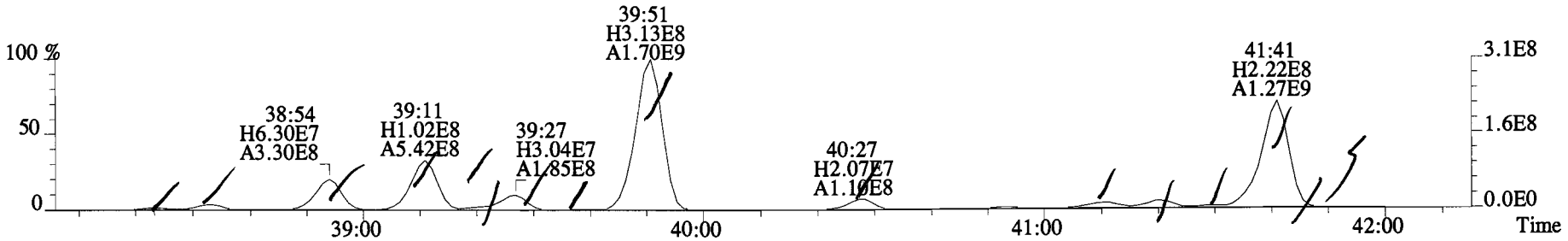
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2840.0,0.00%,F,F)



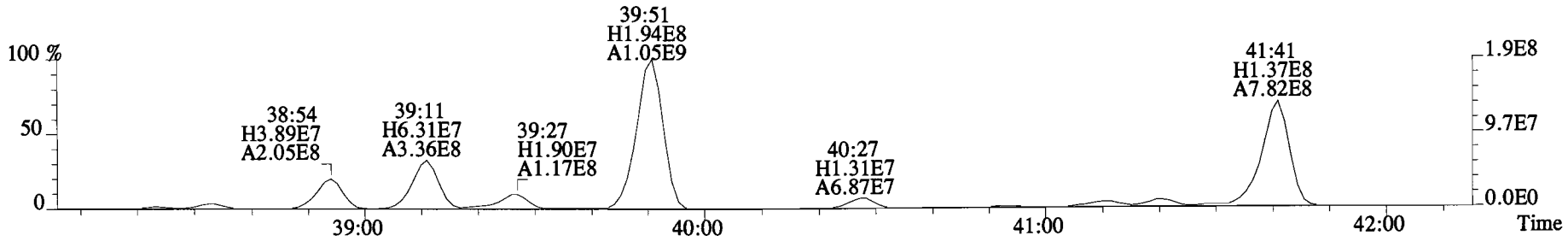
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2568.0,0.00%,F,F)



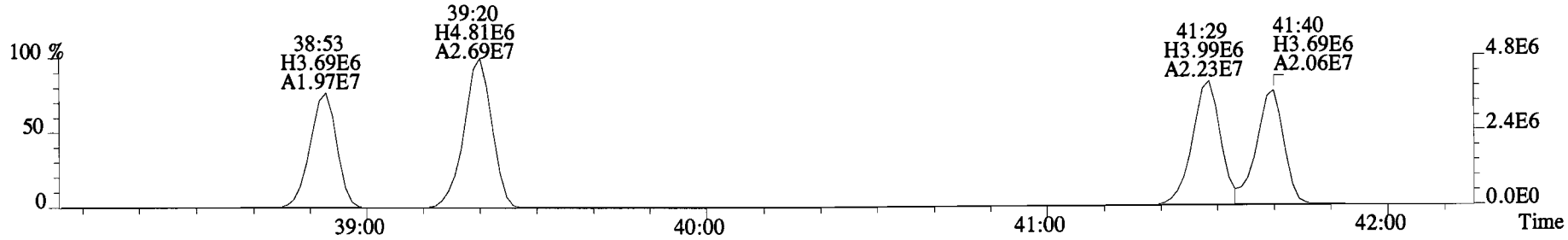
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5376.0,0.00%,F,F)



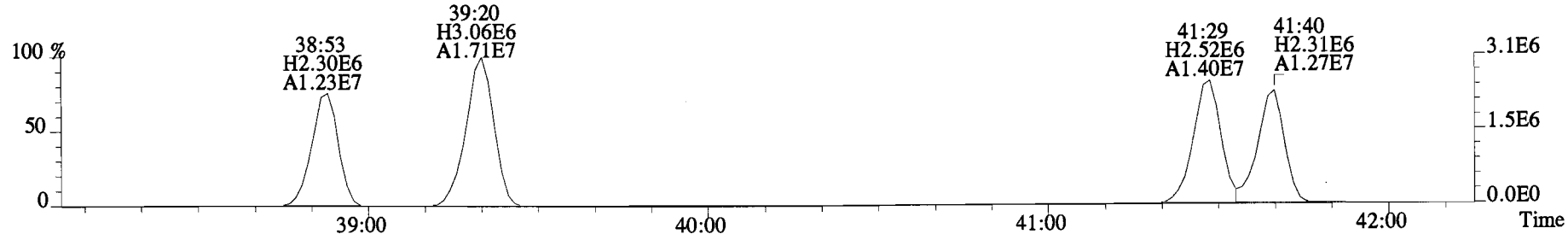
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3728.0,0.00%,F,F)



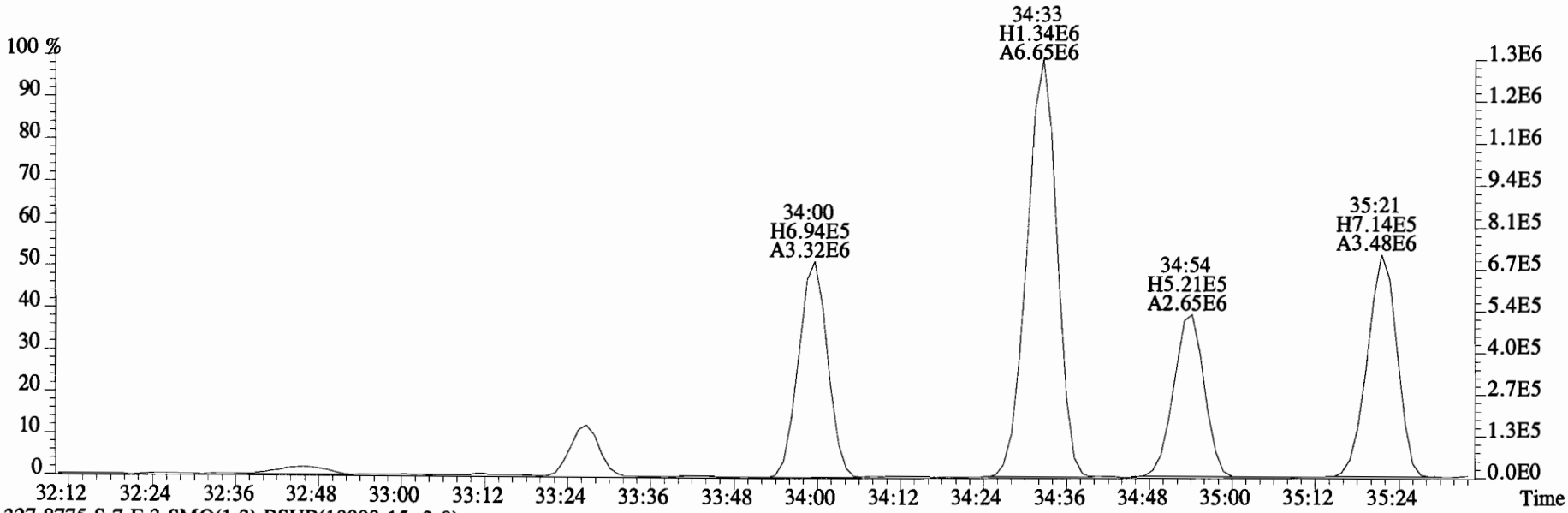
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2840.0,0.00%,F,F)



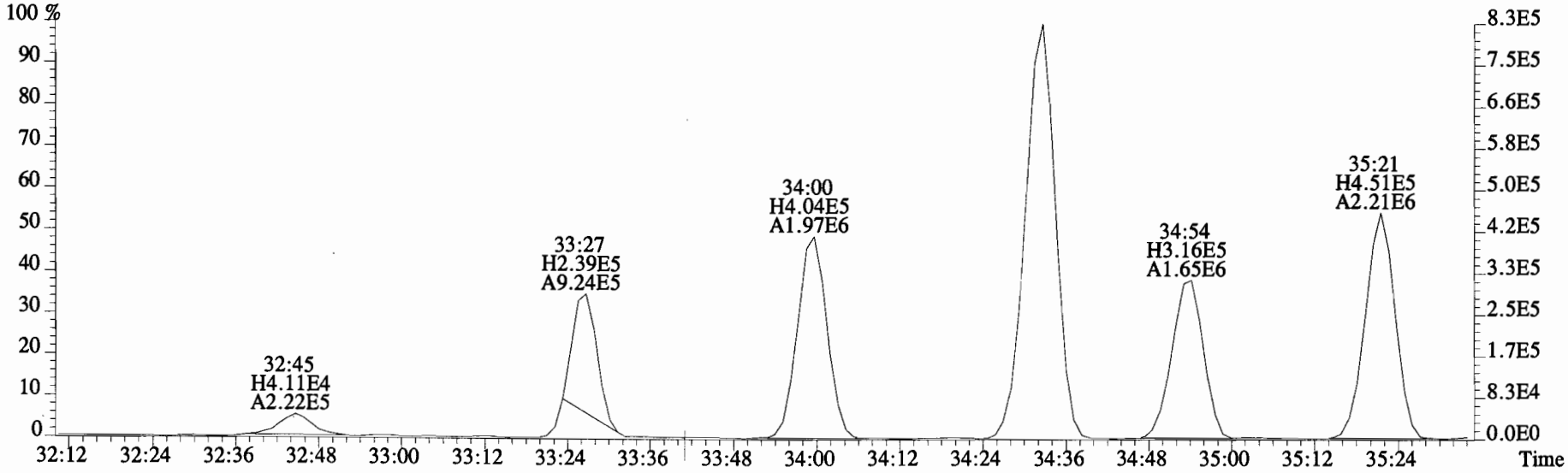
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2568.0,0.00%,F,F)



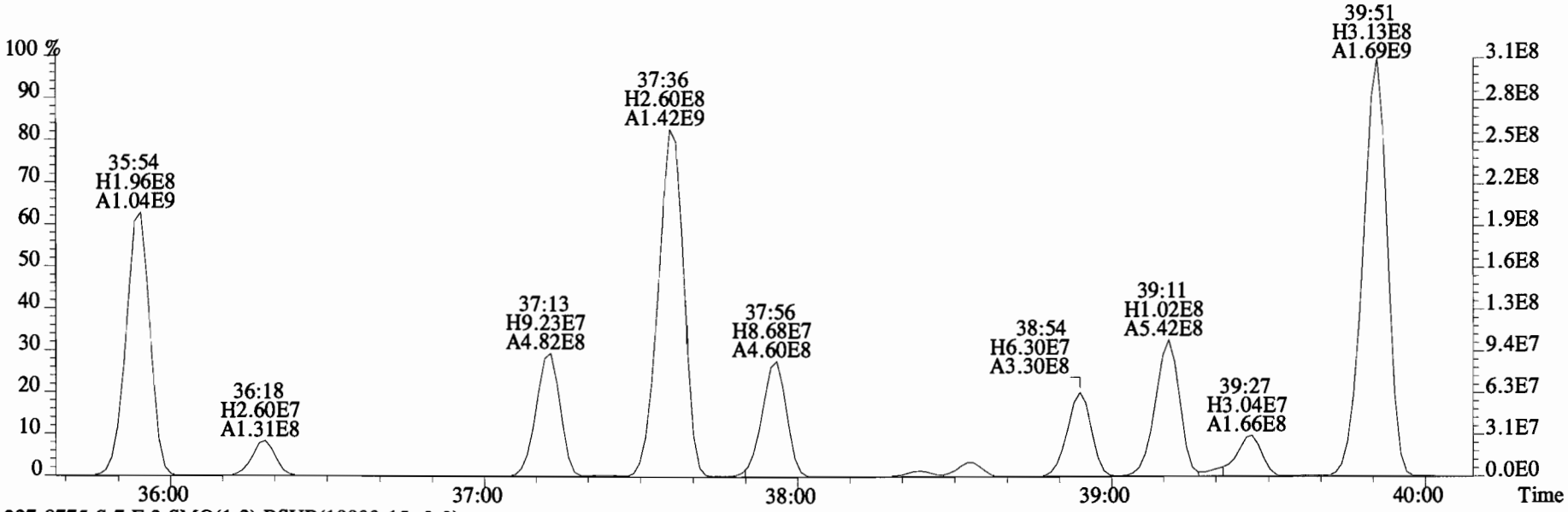
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



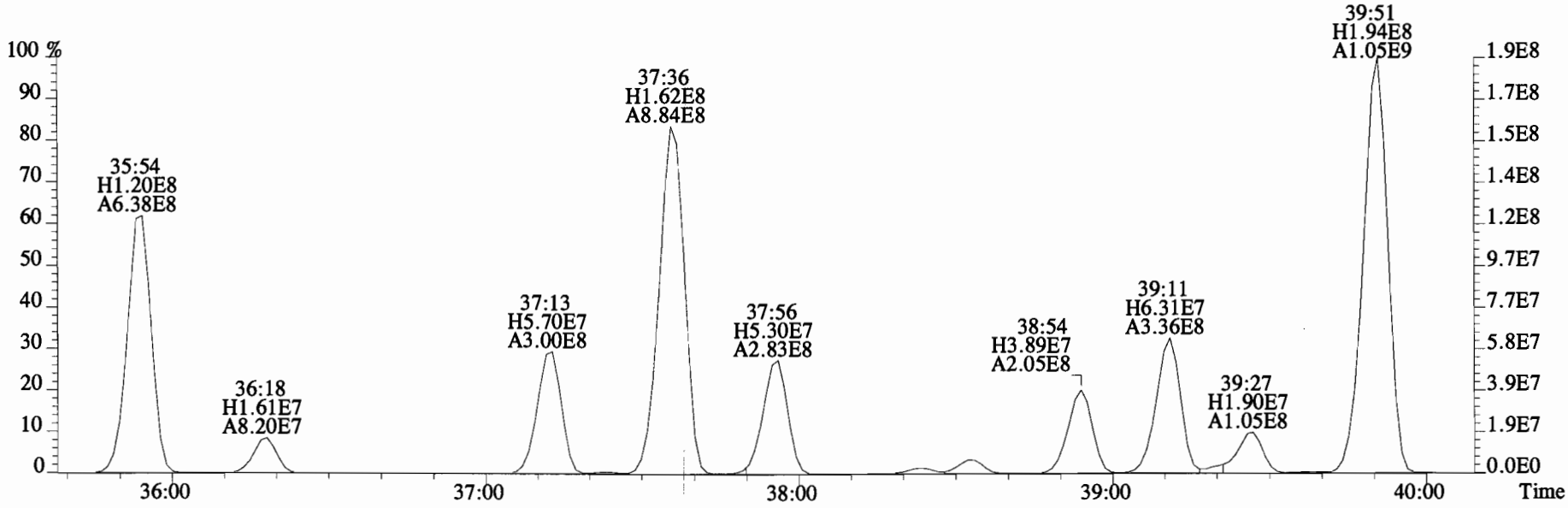
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



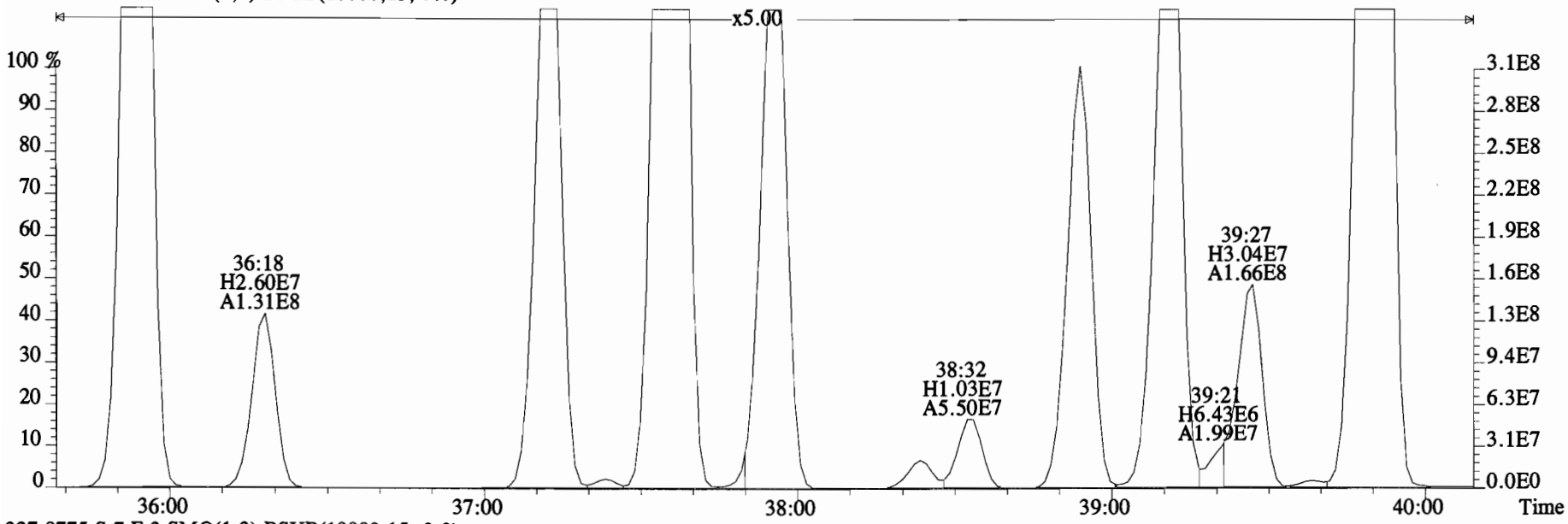
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



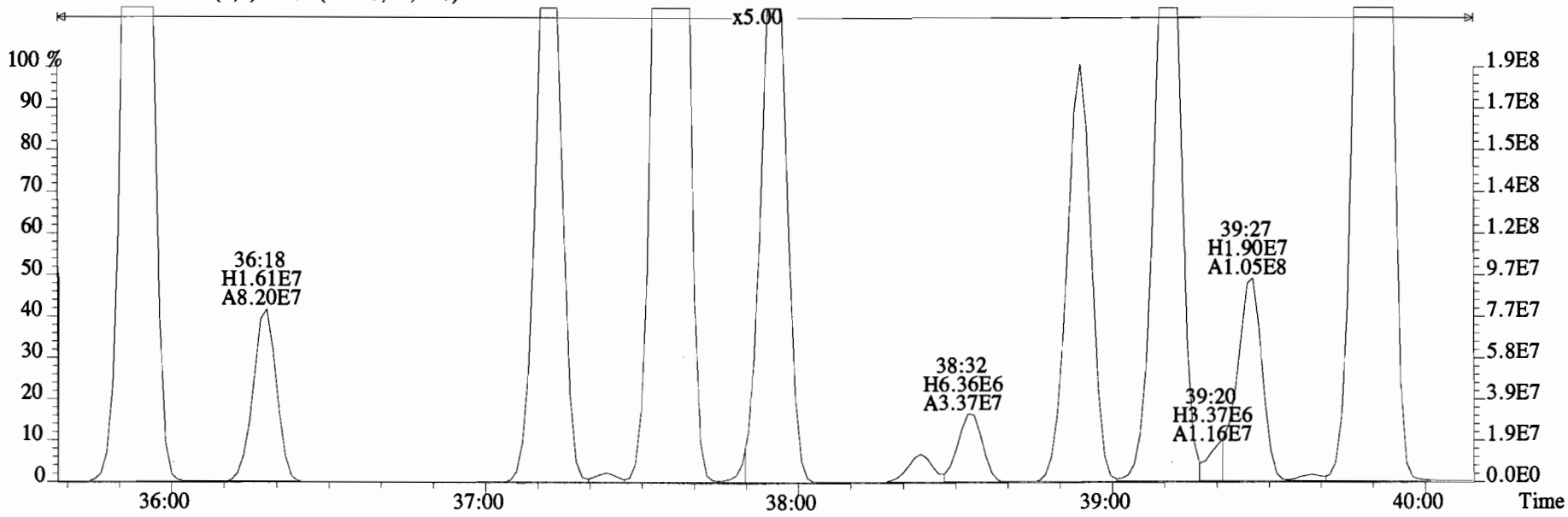
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)

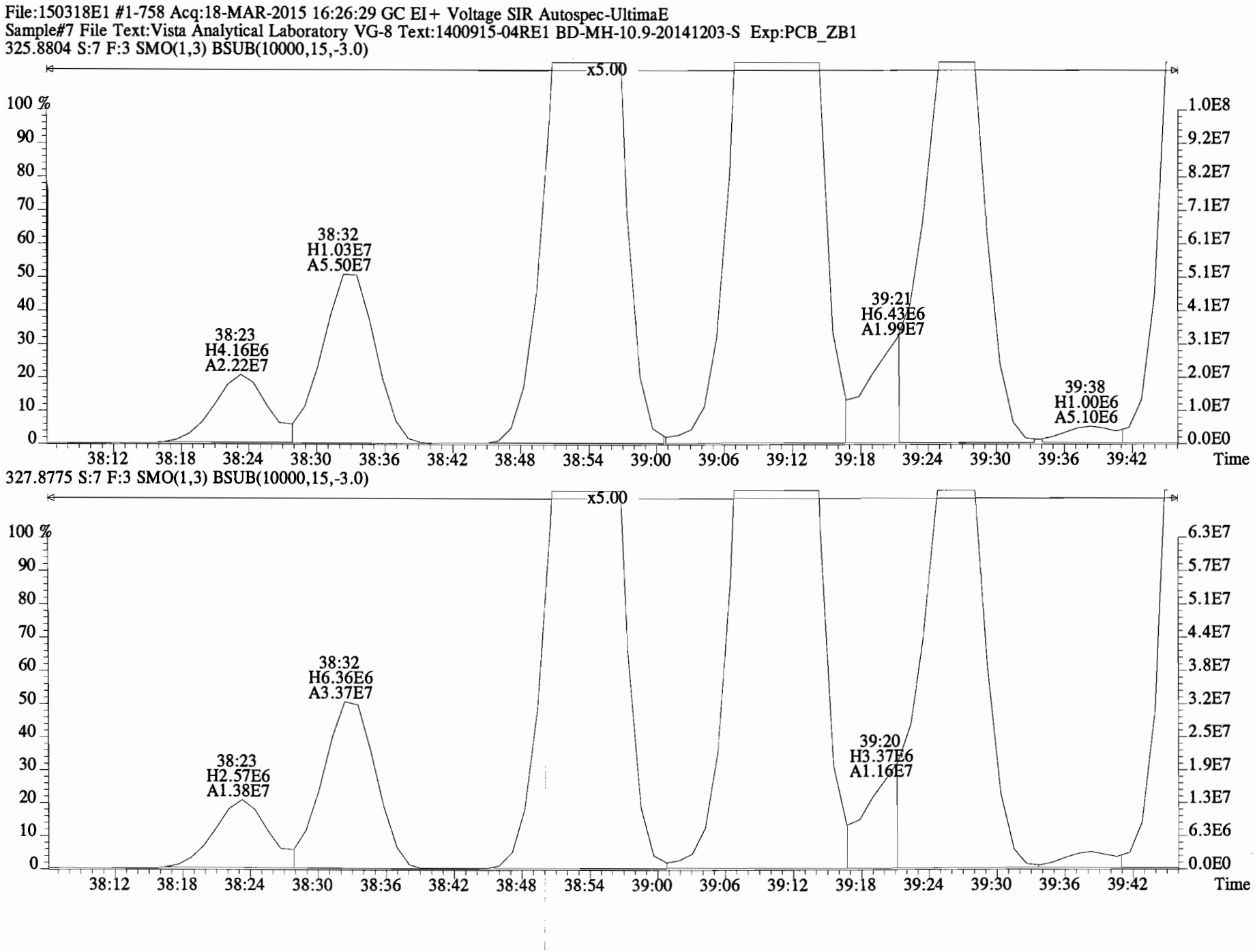


File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)

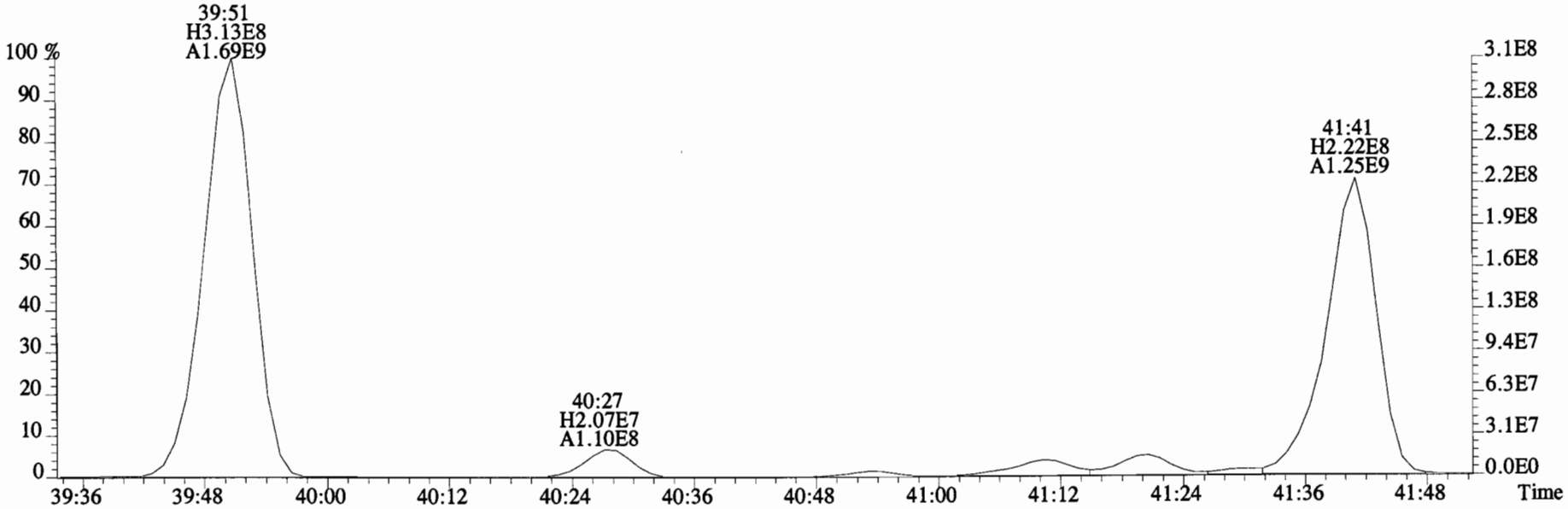


327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)

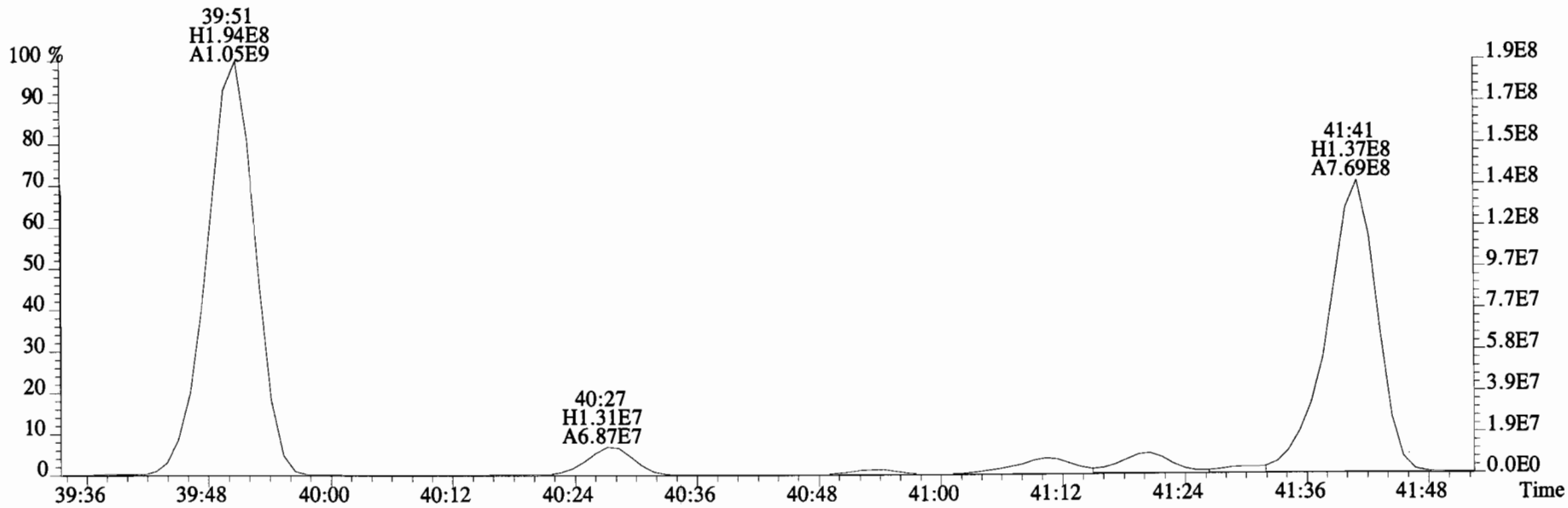



File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)
x5.00
38:23
H4.16E6
A2.22E7
38:32
H1.03E7
A5.50E7
39:21
H6.43E6
A1.99E7
39:38
H1.00E6
A5.10E6
Time
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)
x5.00
38:23
H2.57E6
A1.38E7
38:32
H6.36E6
A3.37E7
39:20
H3.37E6
A1.16E7
Time

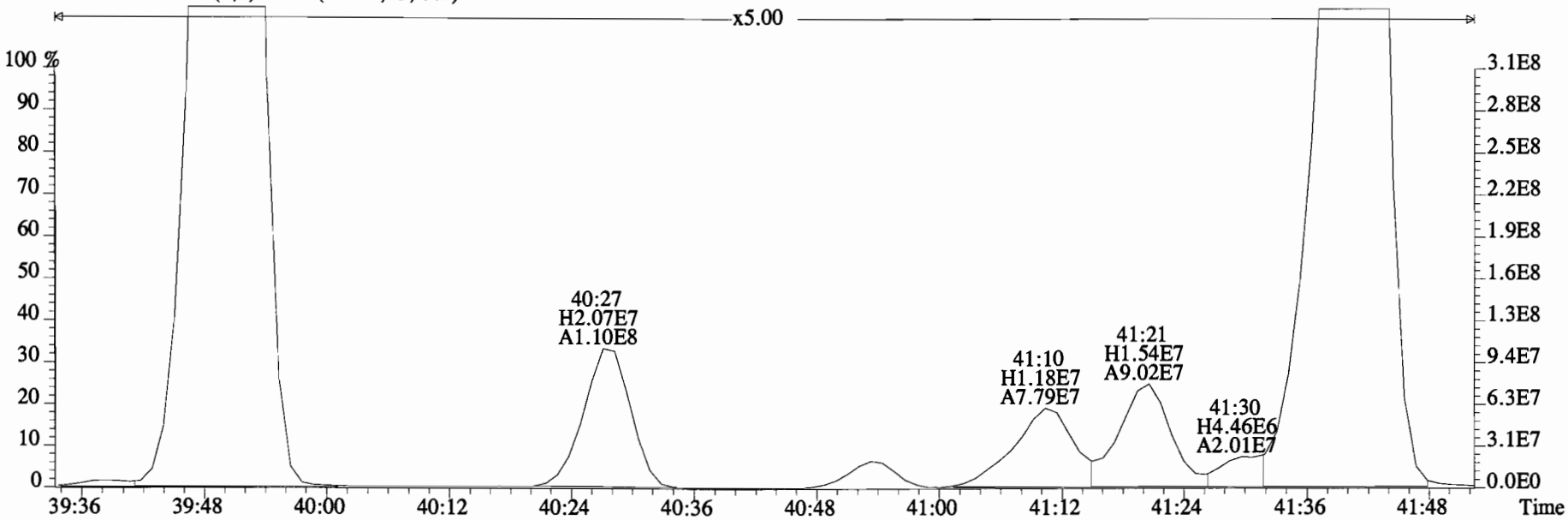
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



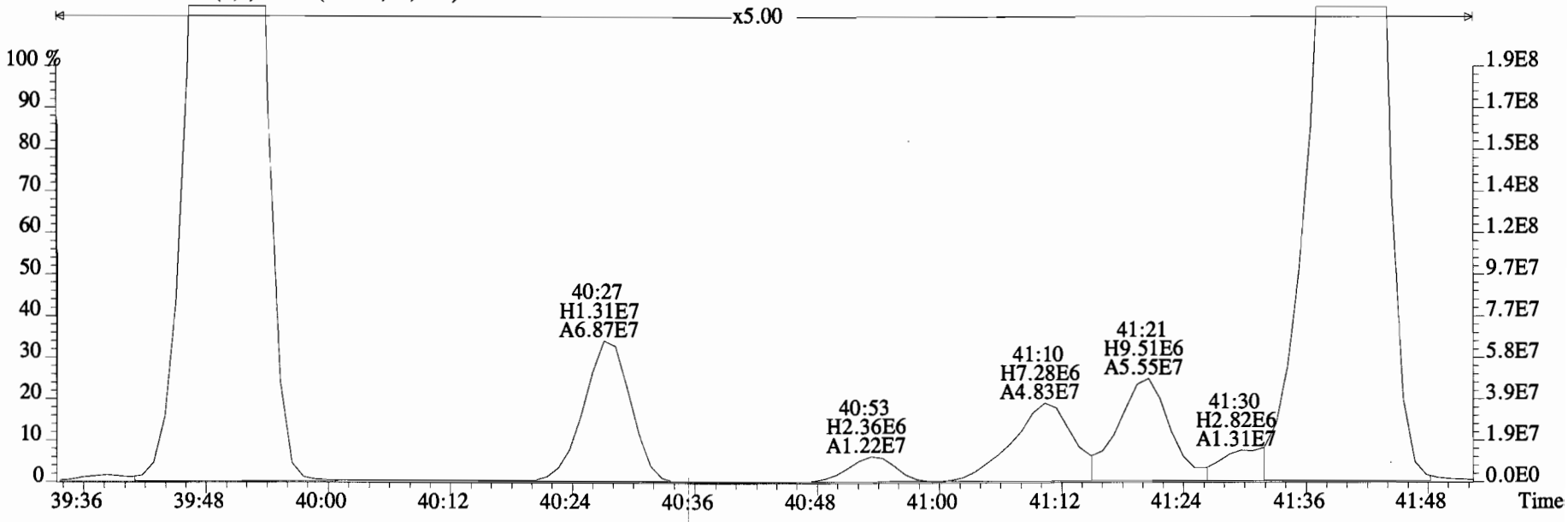
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



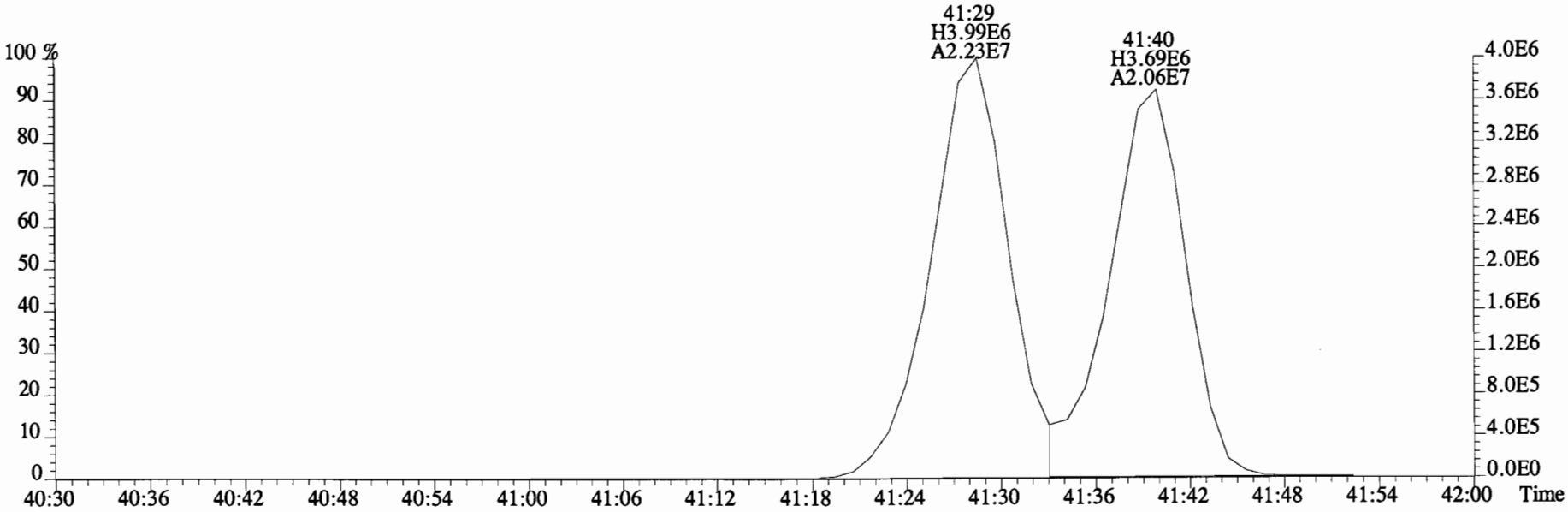
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



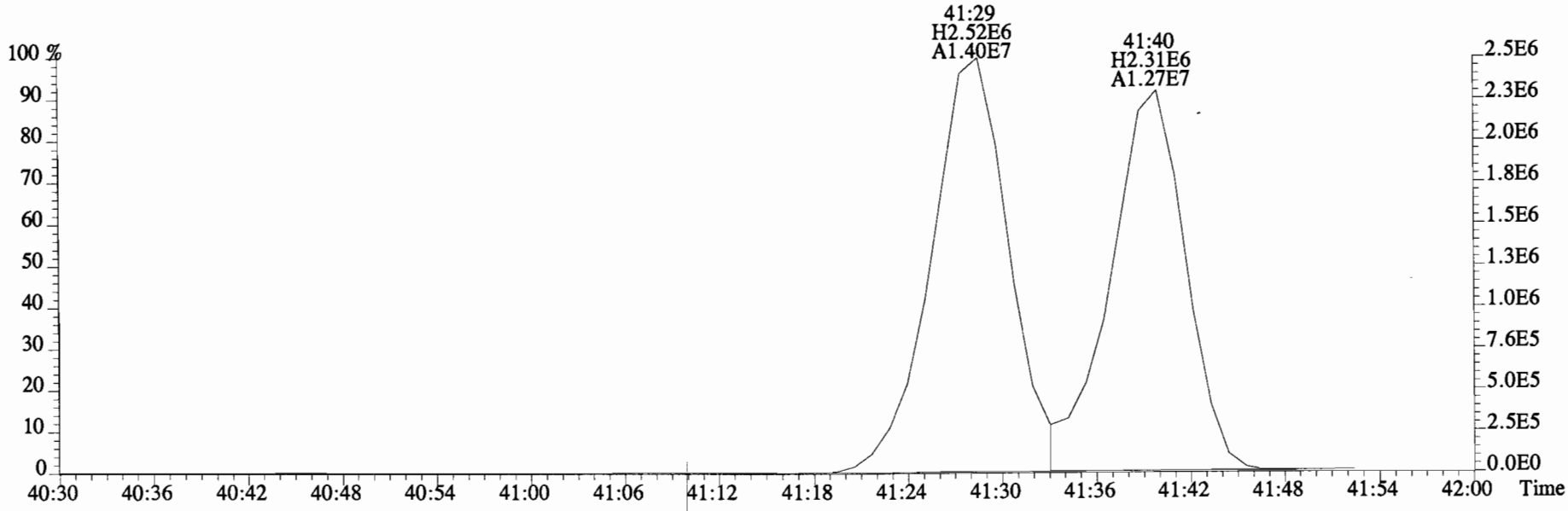
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



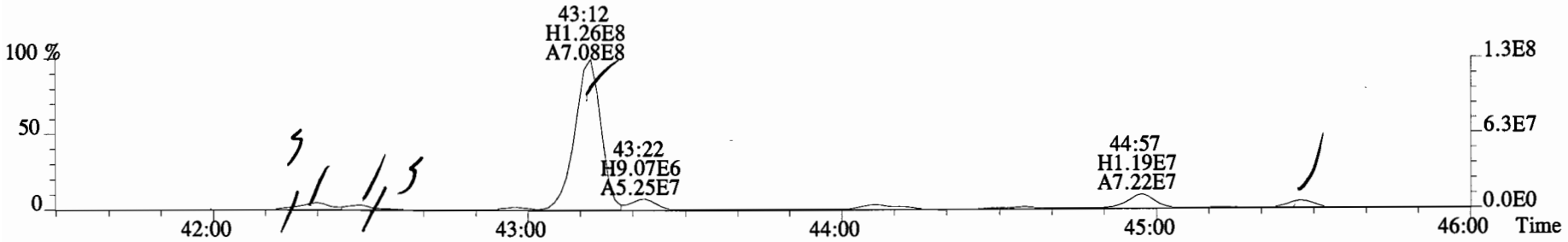
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2840.0,0.00%,F,F)



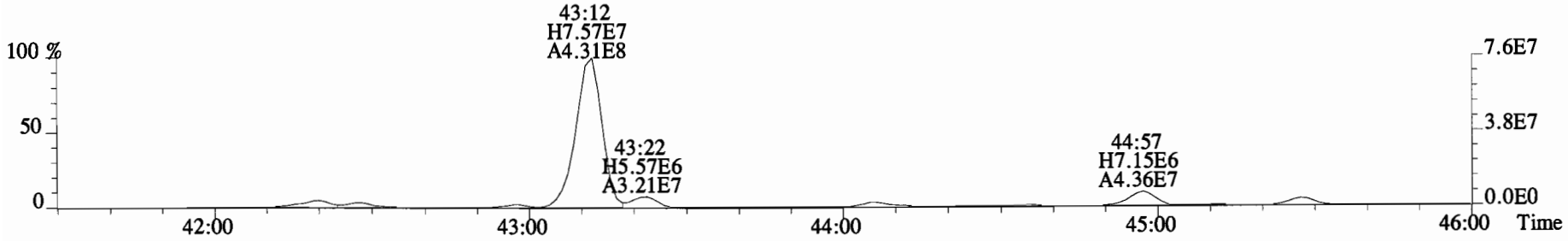
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2568.0,0.00%,F,F)



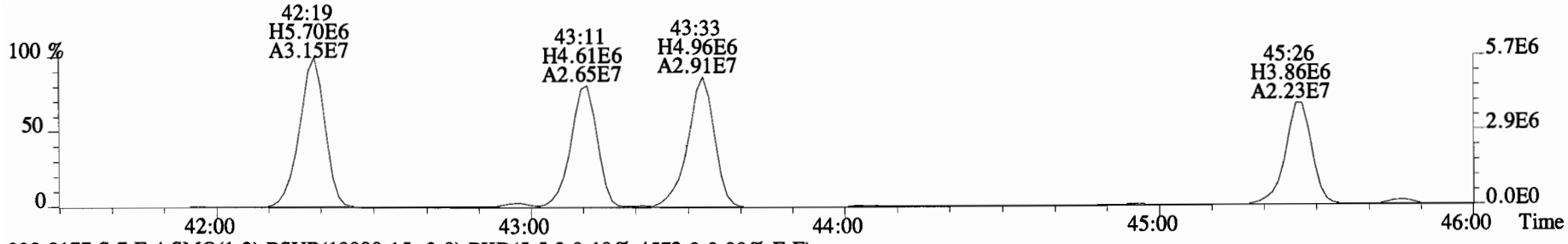
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,194708.0,0.00%,F,F)



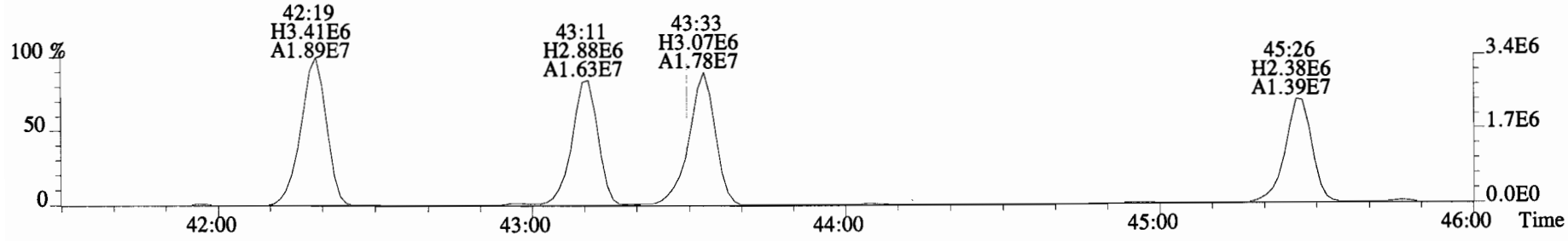
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,103428.0,0.00%,F,F)



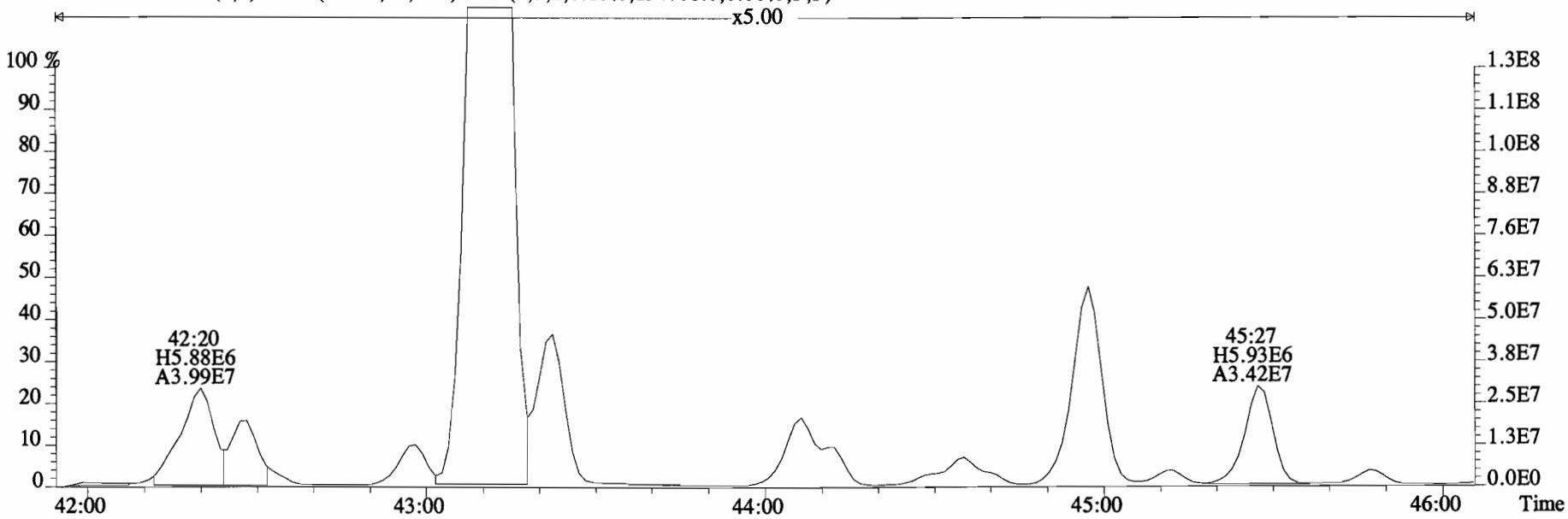
337.9207 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5192.0,0.00%,F,F)



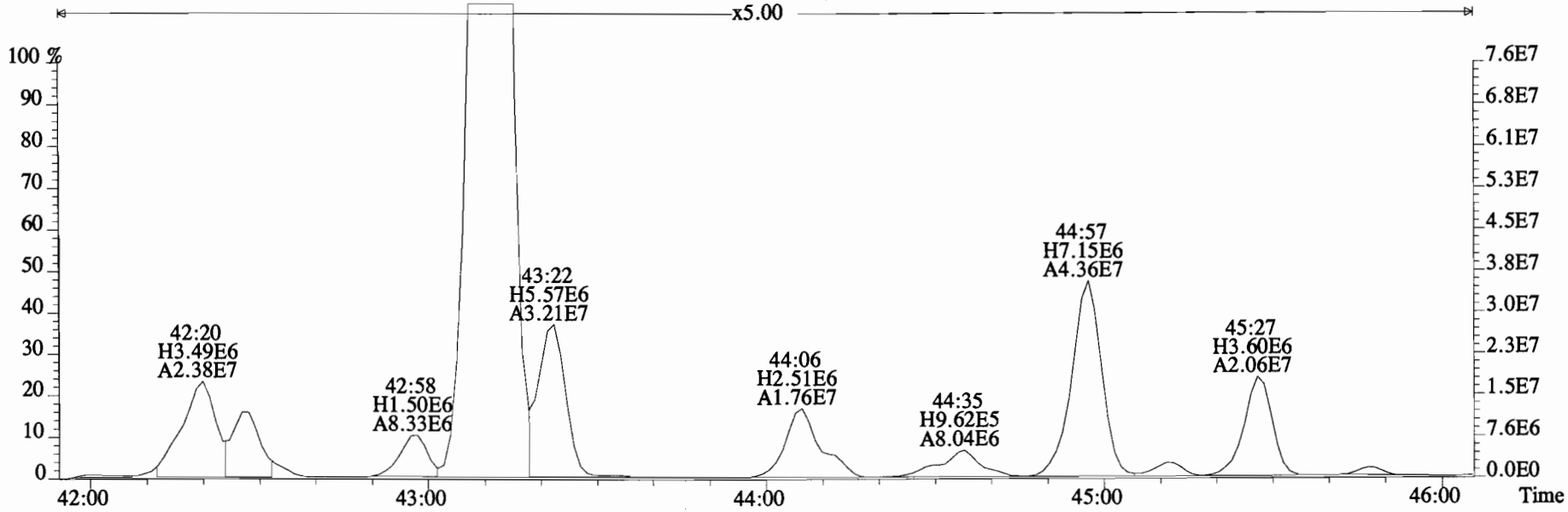
339.9177 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4572.0,0.00%,F,F)



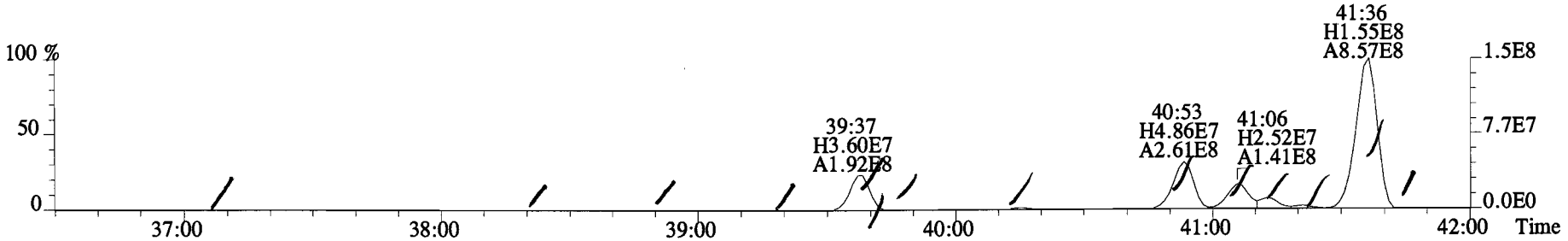
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,194708.0,0.00%,F,F)



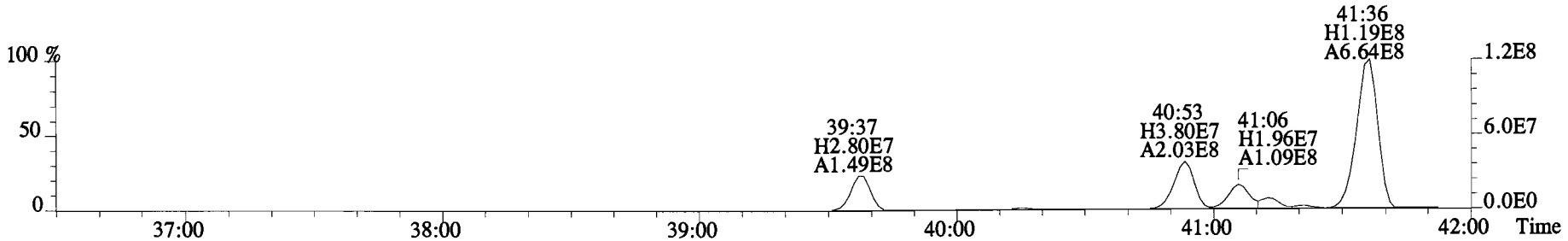
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,103428.0,0.00%,F,F)



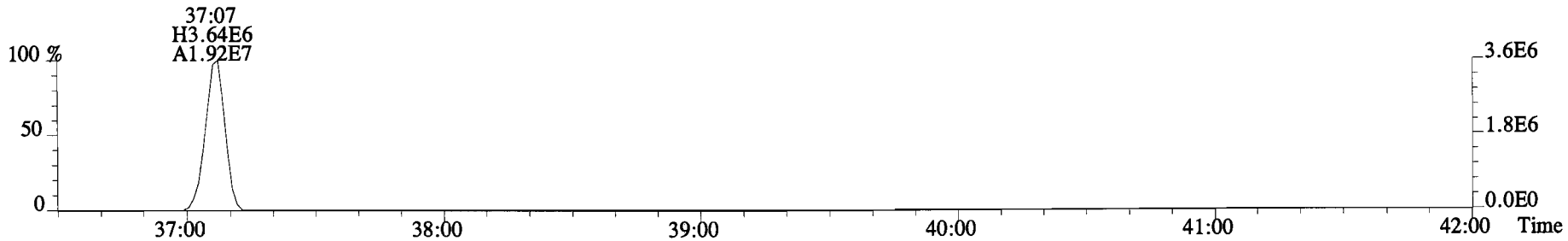
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1852.0,0.00%,F,F)



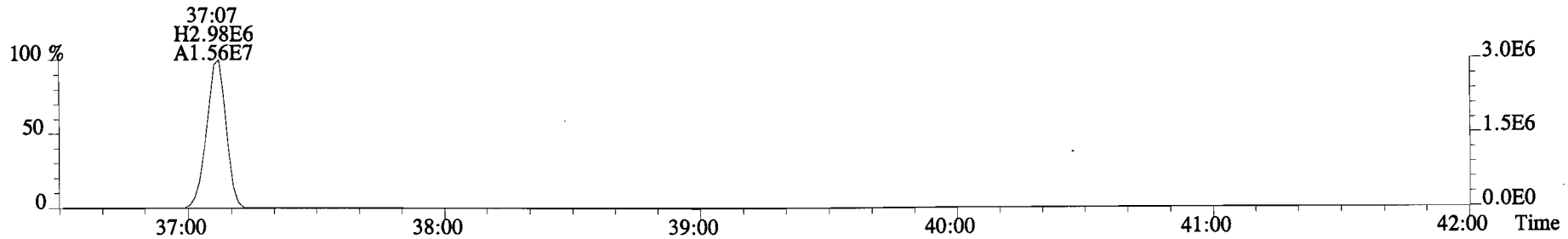
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1872.0,0.00%,F,F)



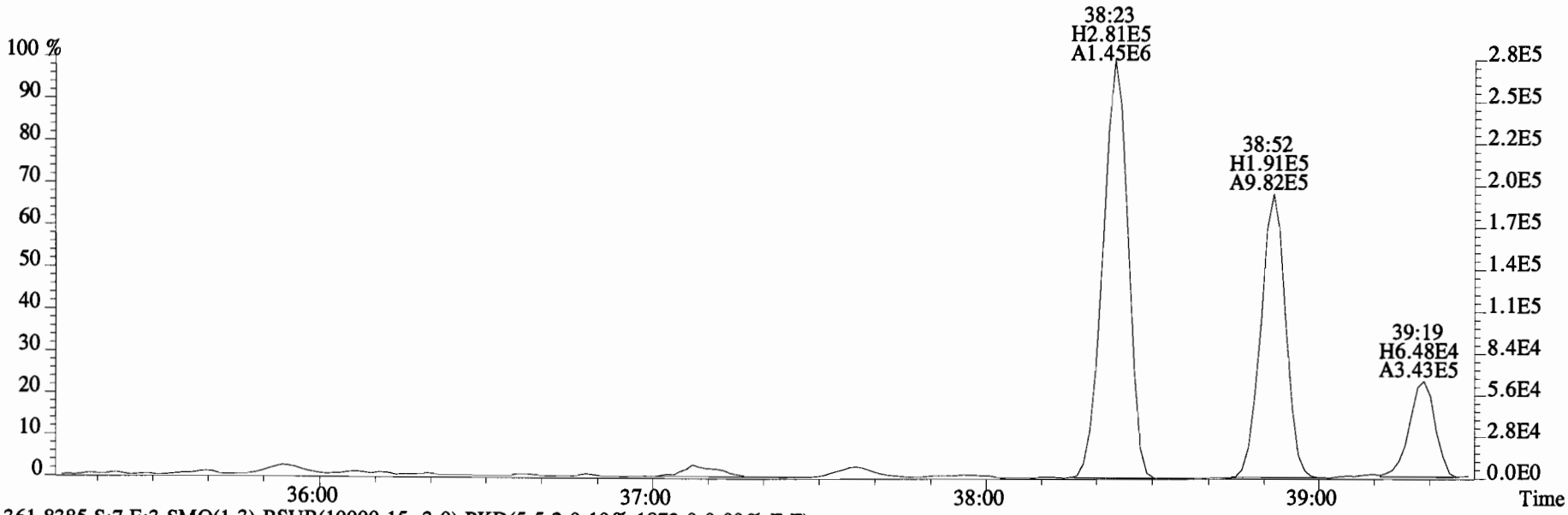
371.8817 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2356.0,0.00%,F,F)



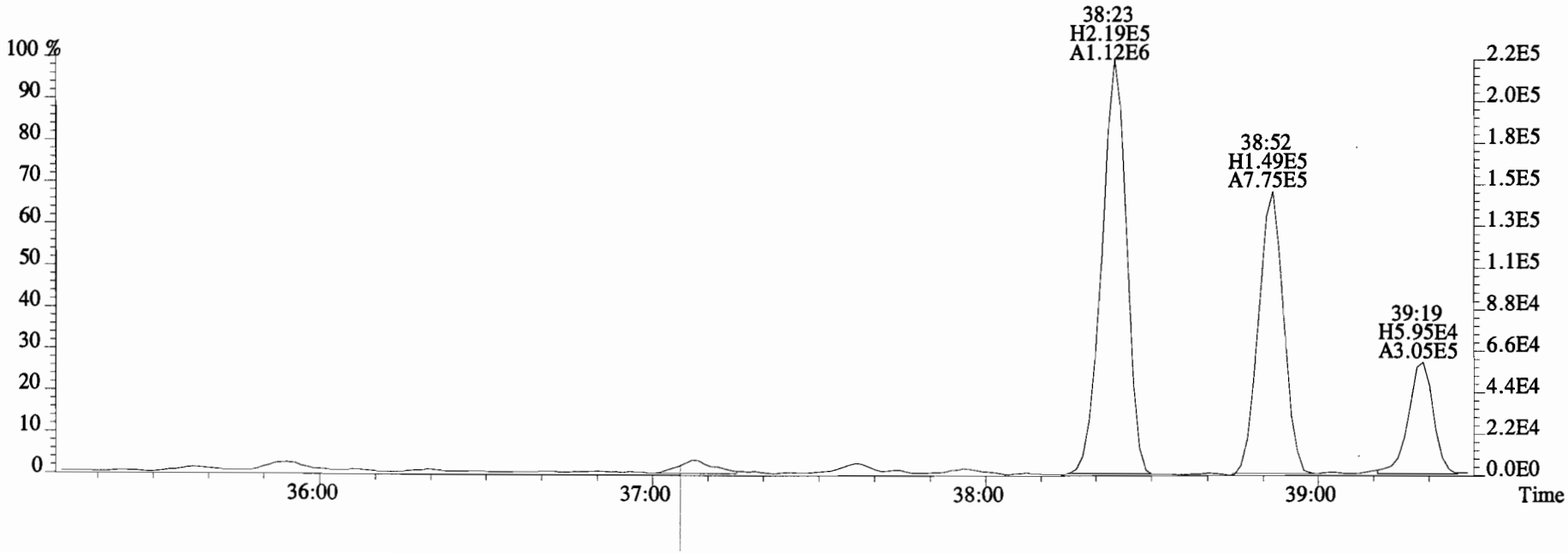
373.8788 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2252.0,0.00%,F,F)



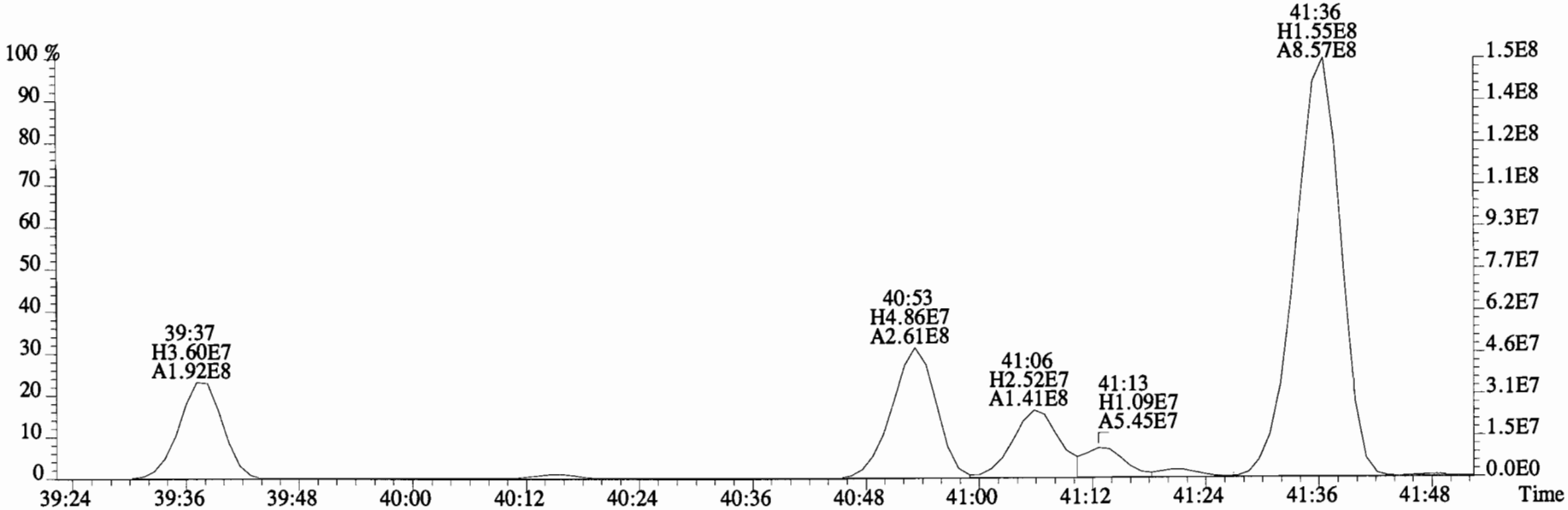
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1852.0,0.00%,F,F)



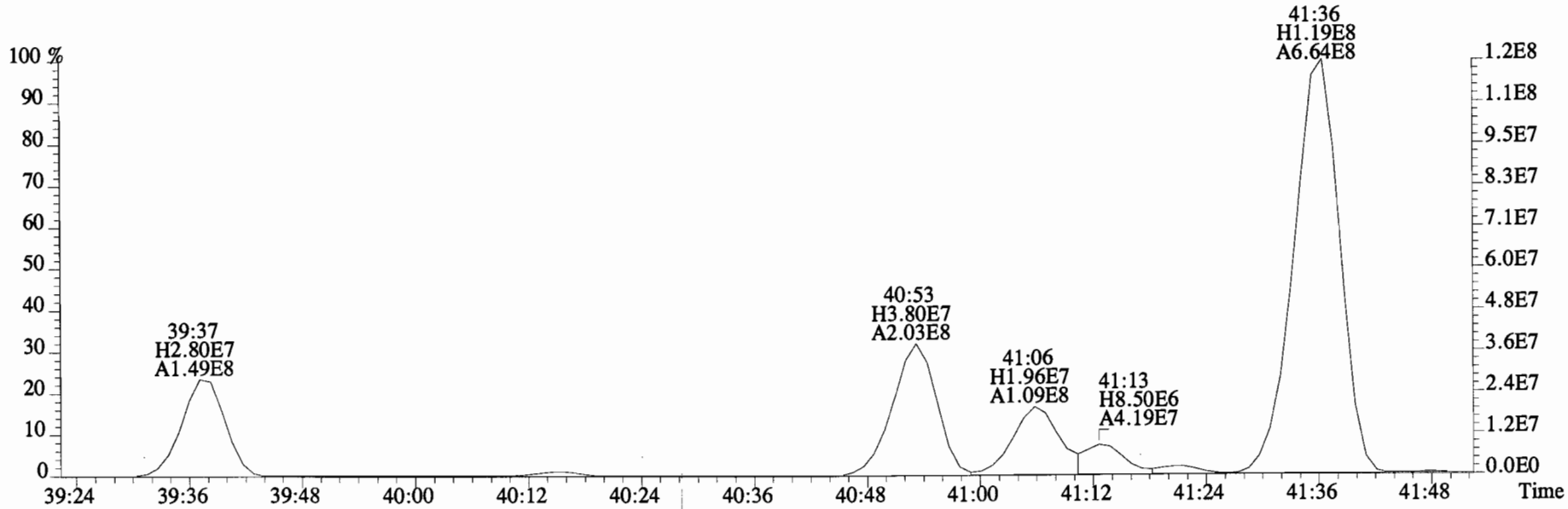
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1872.0,0.00%,F,F)



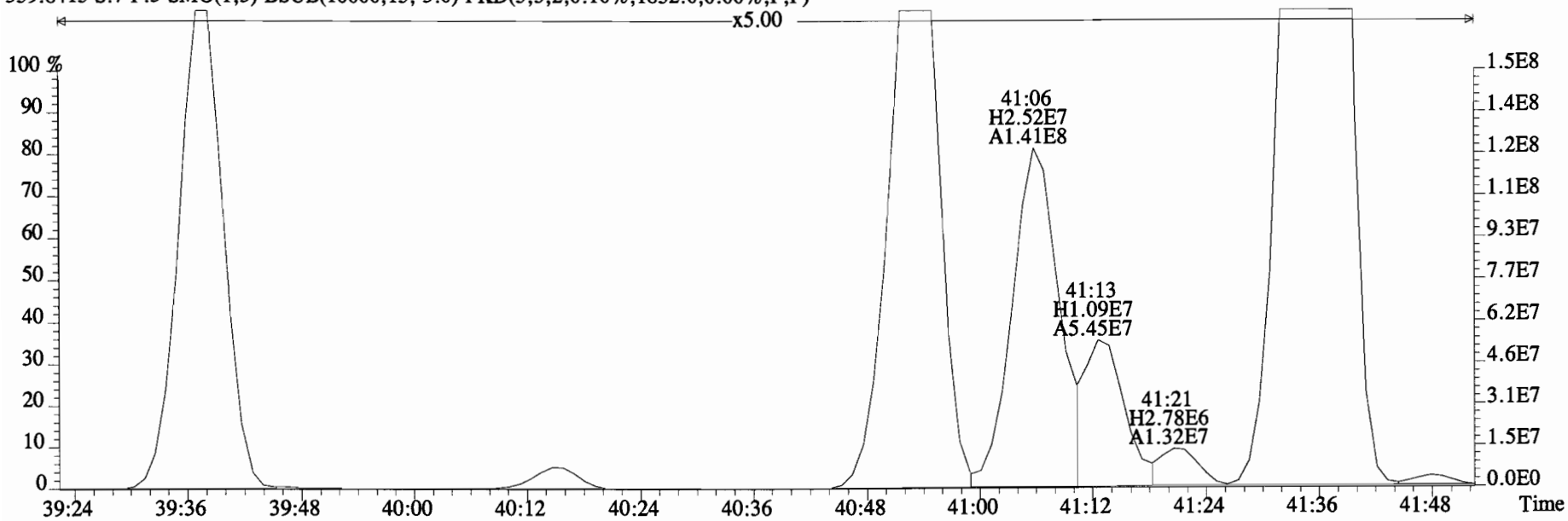
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1852.0,0.00%,F,F)



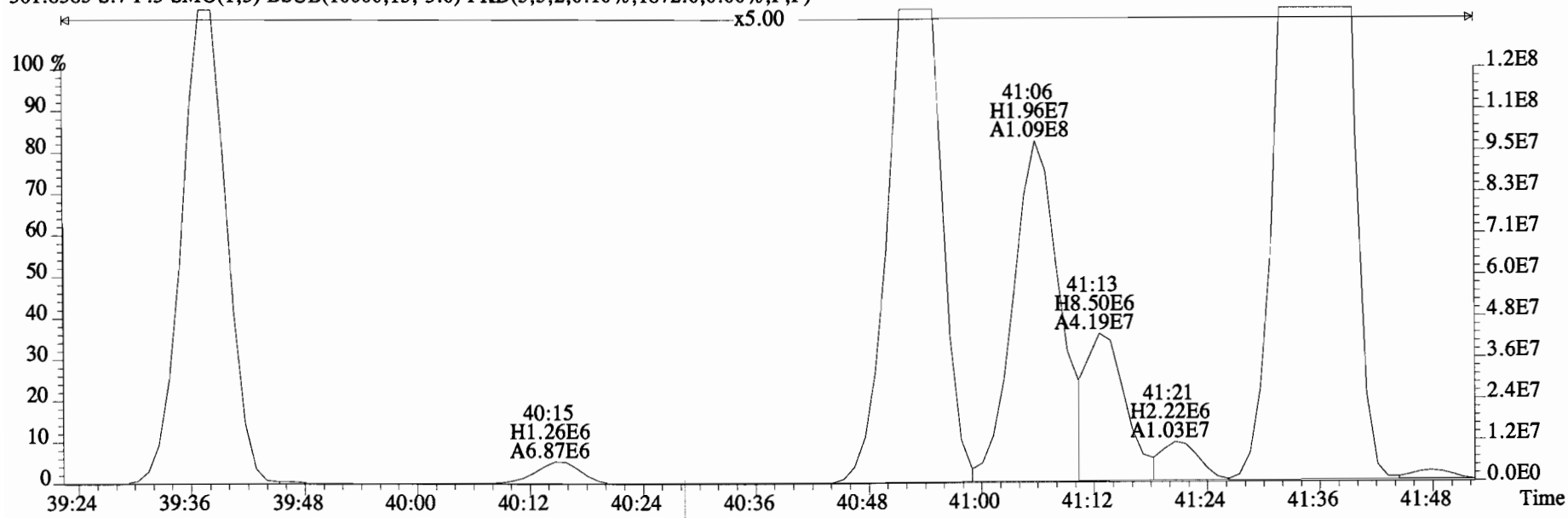
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1872.0,0.00%,F,F)



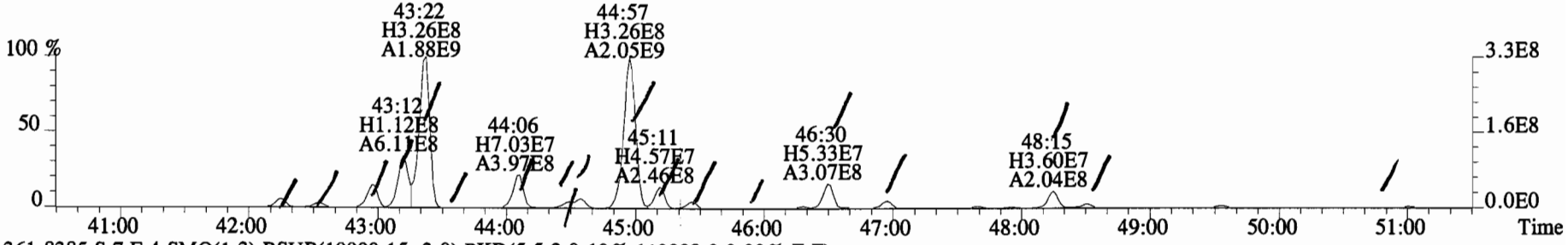
File:150318E1 #1-758 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1852.0,0.00%,F,F)



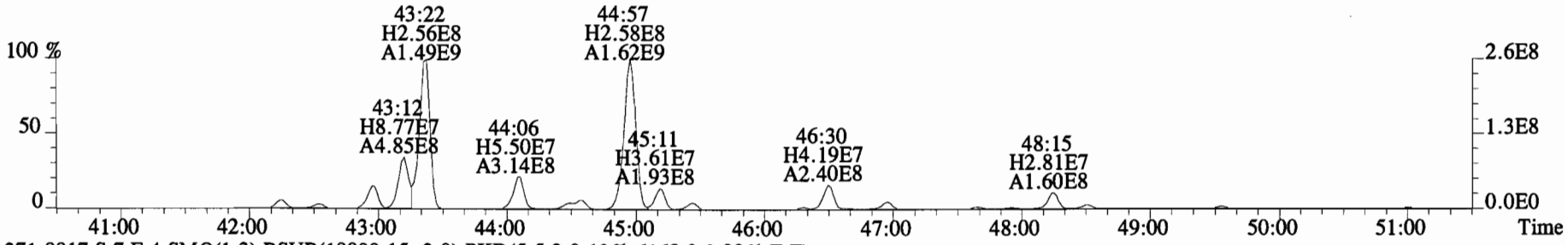
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1872.0,0.00%,F,F)



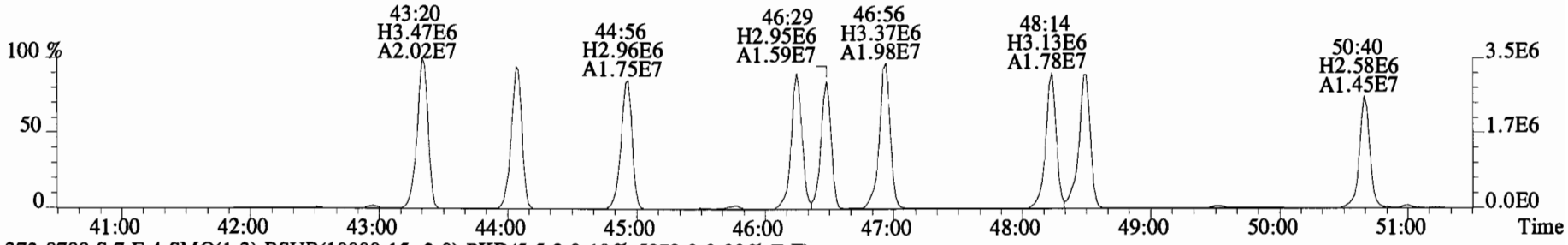
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



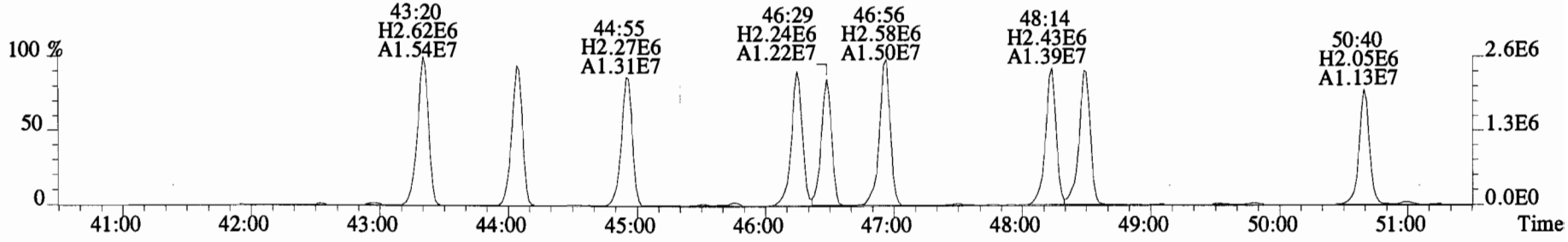
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



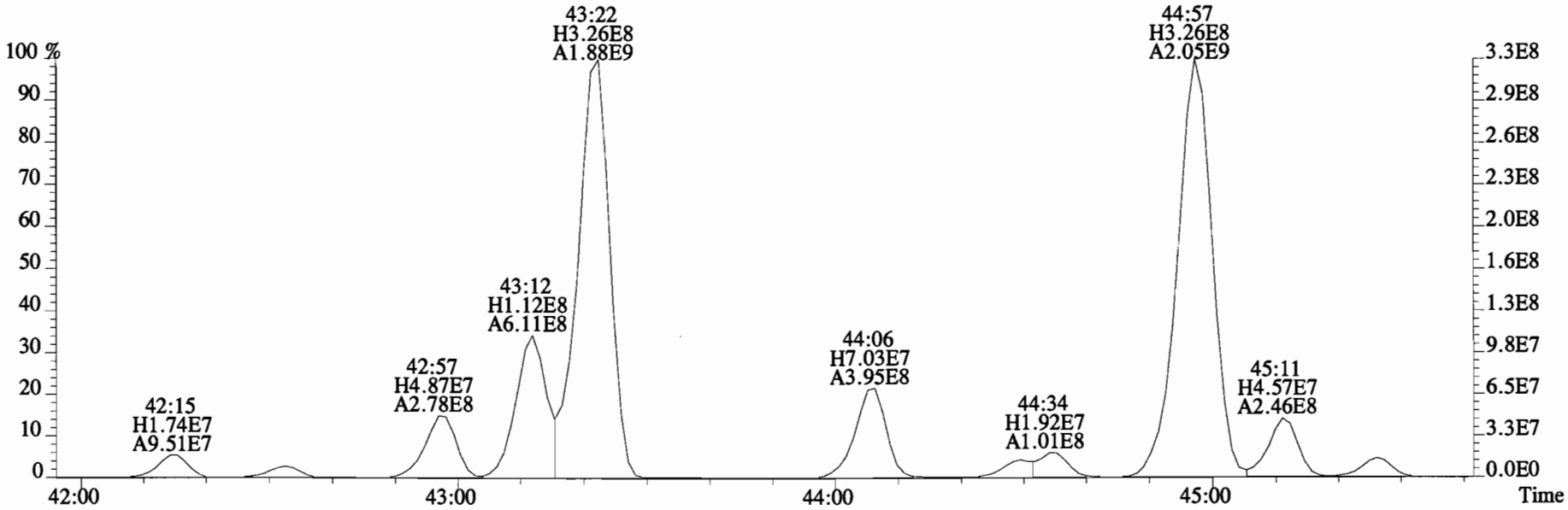
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6168.0,0.00%,F,F)



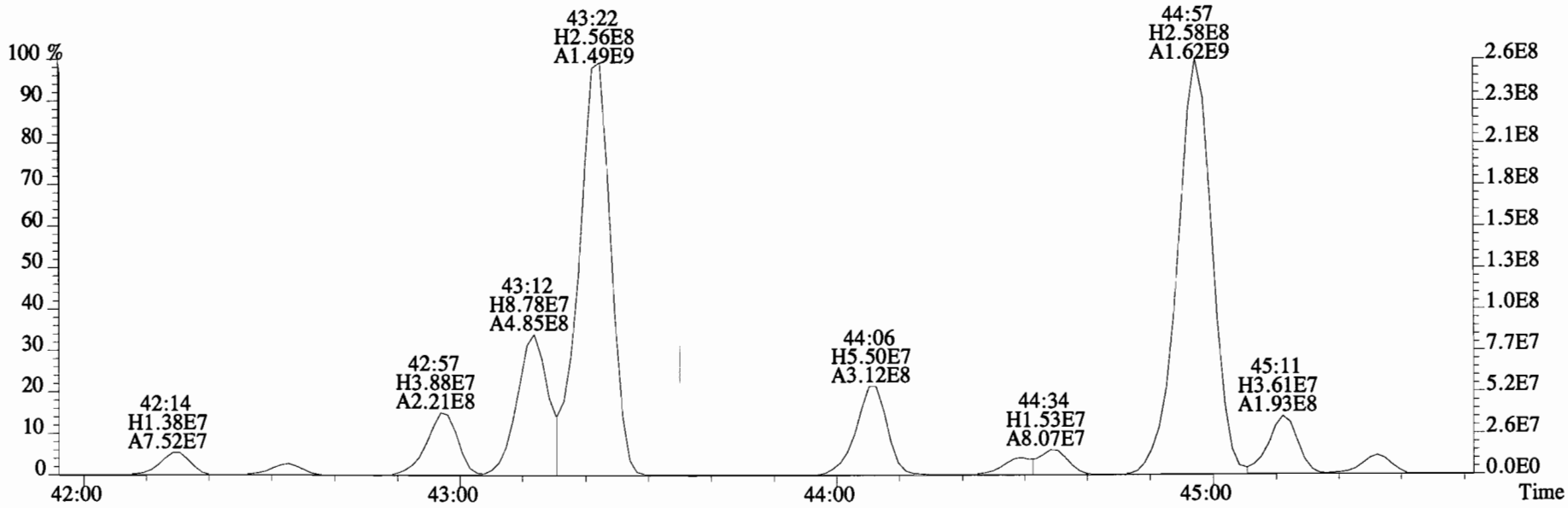
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5972.0,0.00%,F,F)



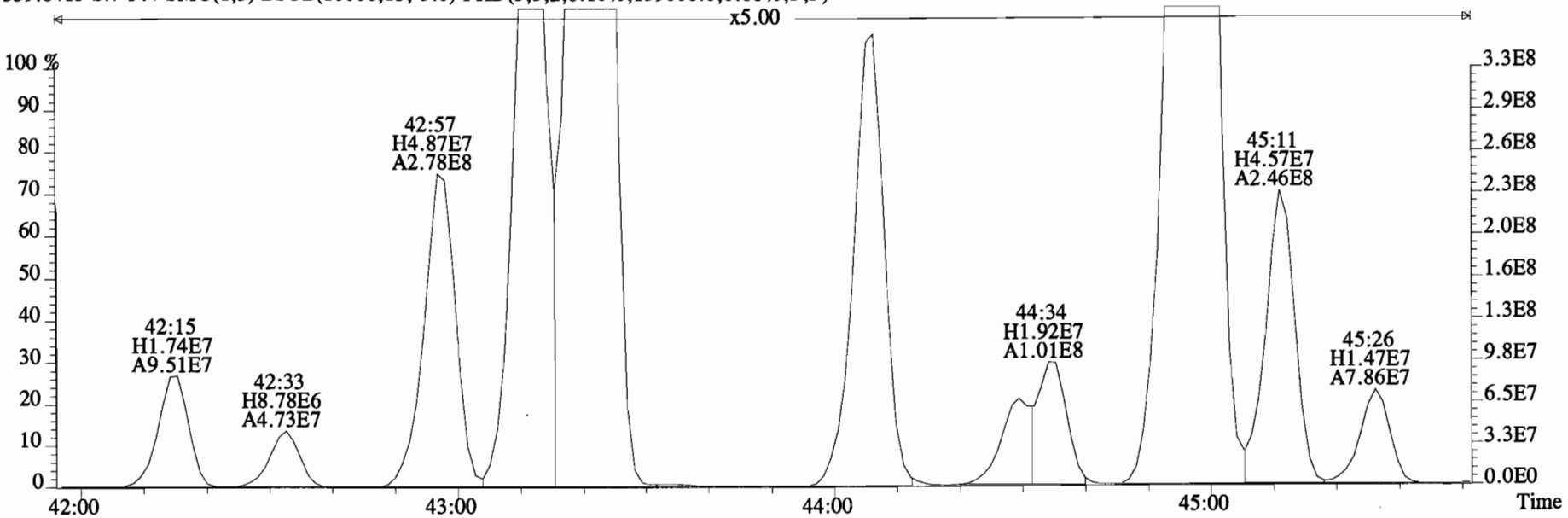
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



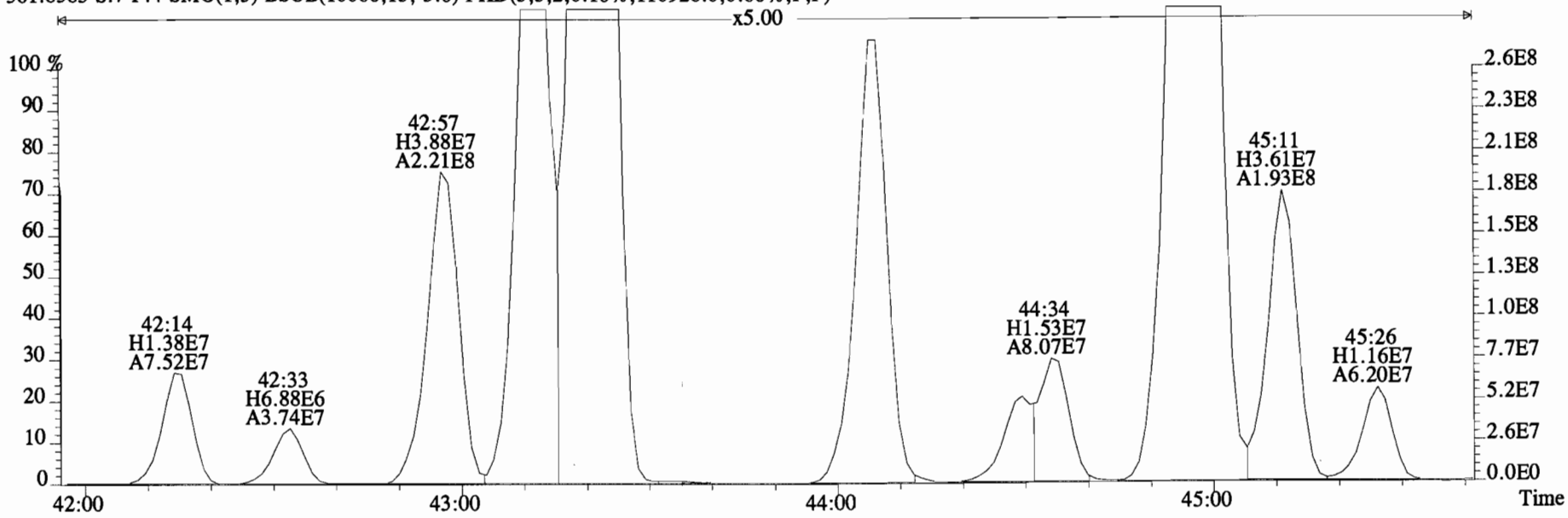
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



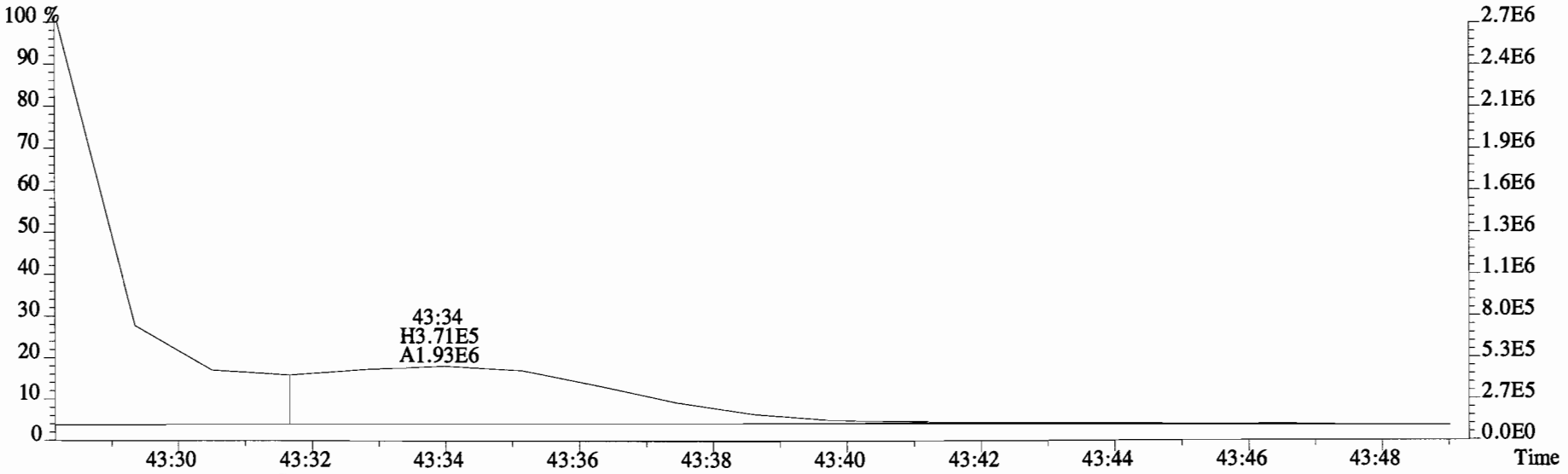
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



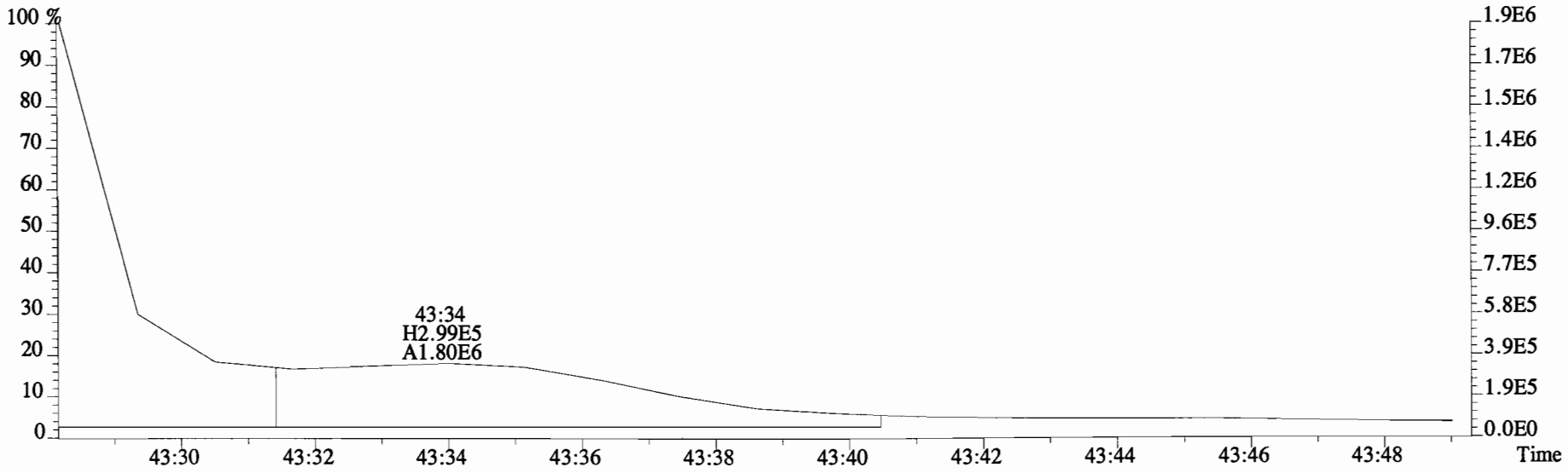
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



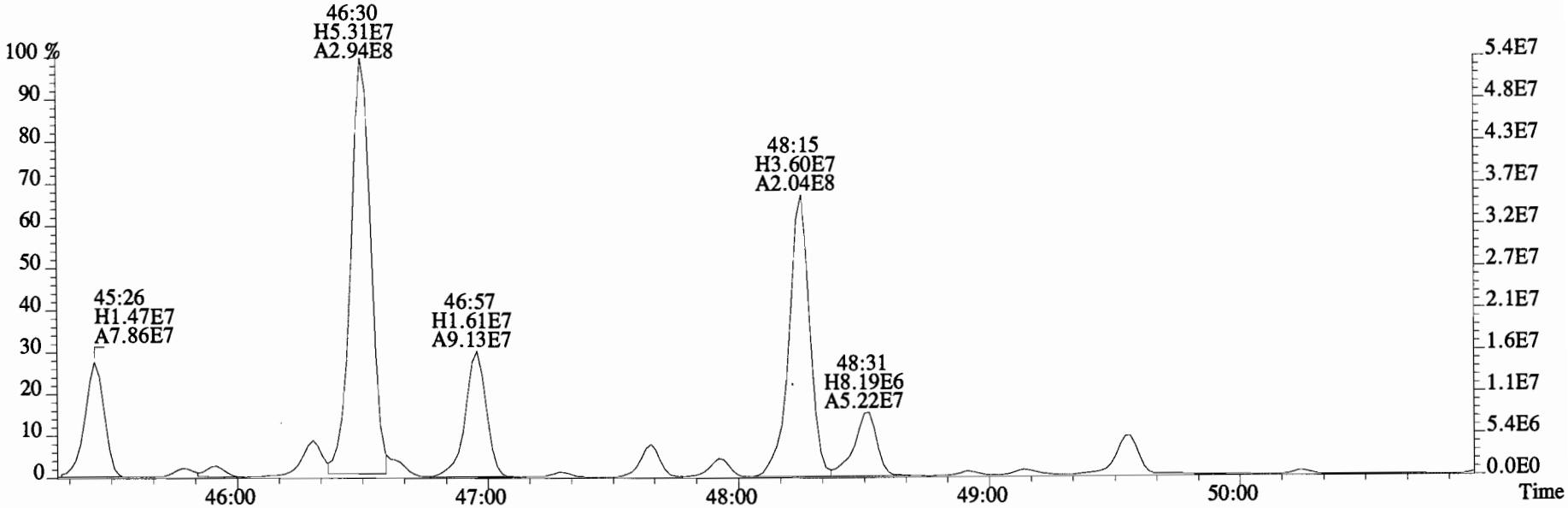
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



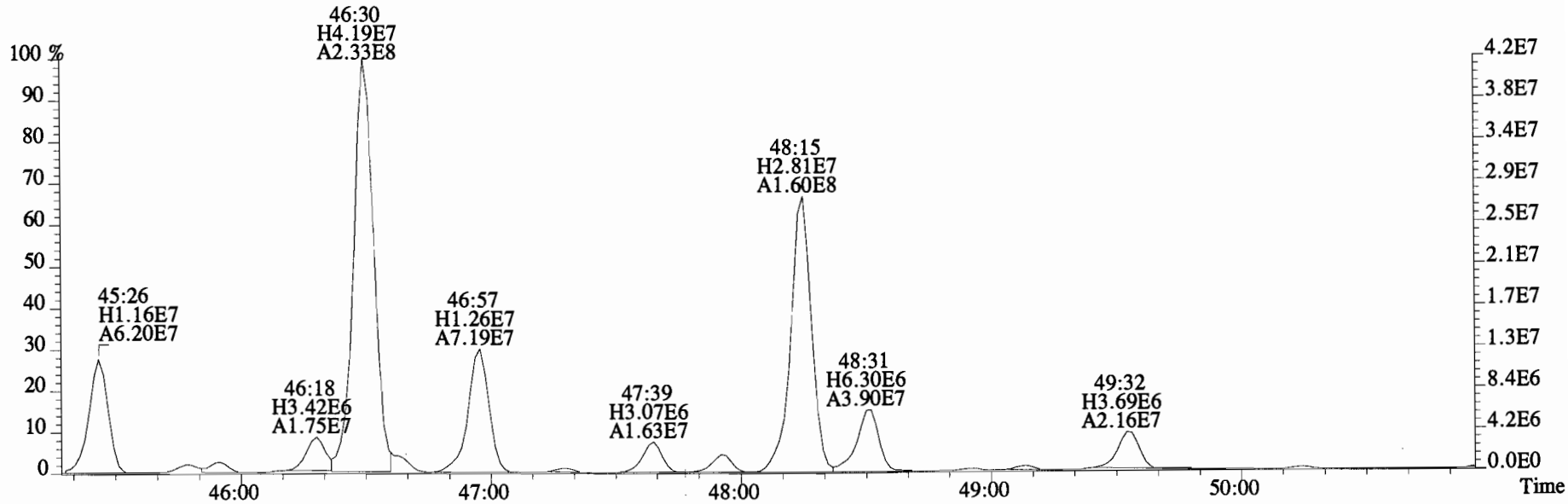
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



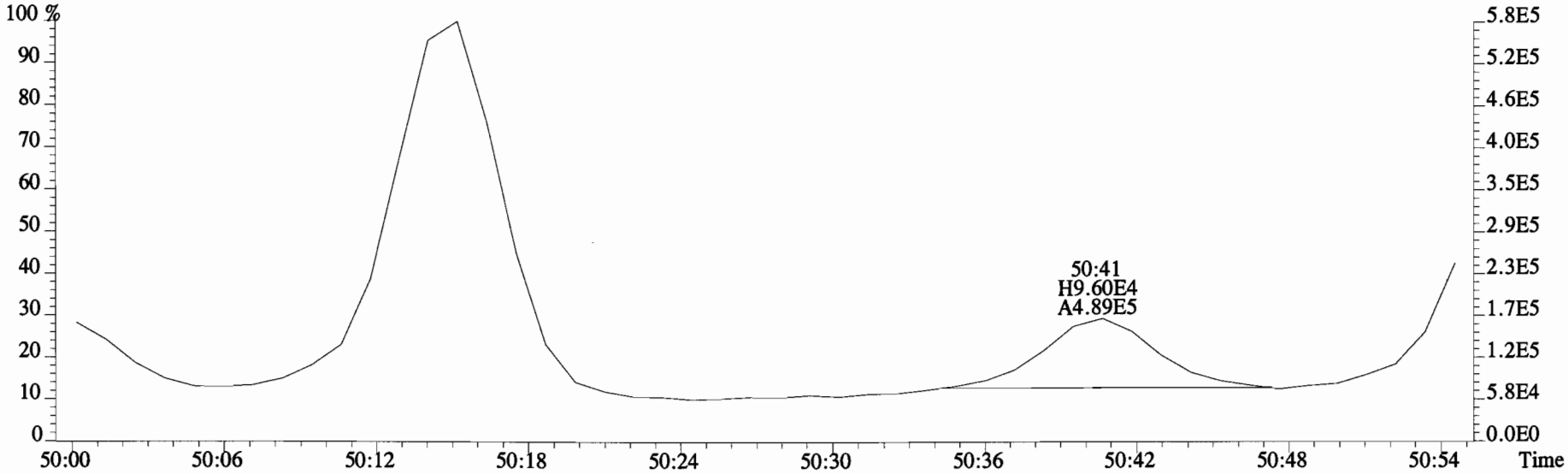
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



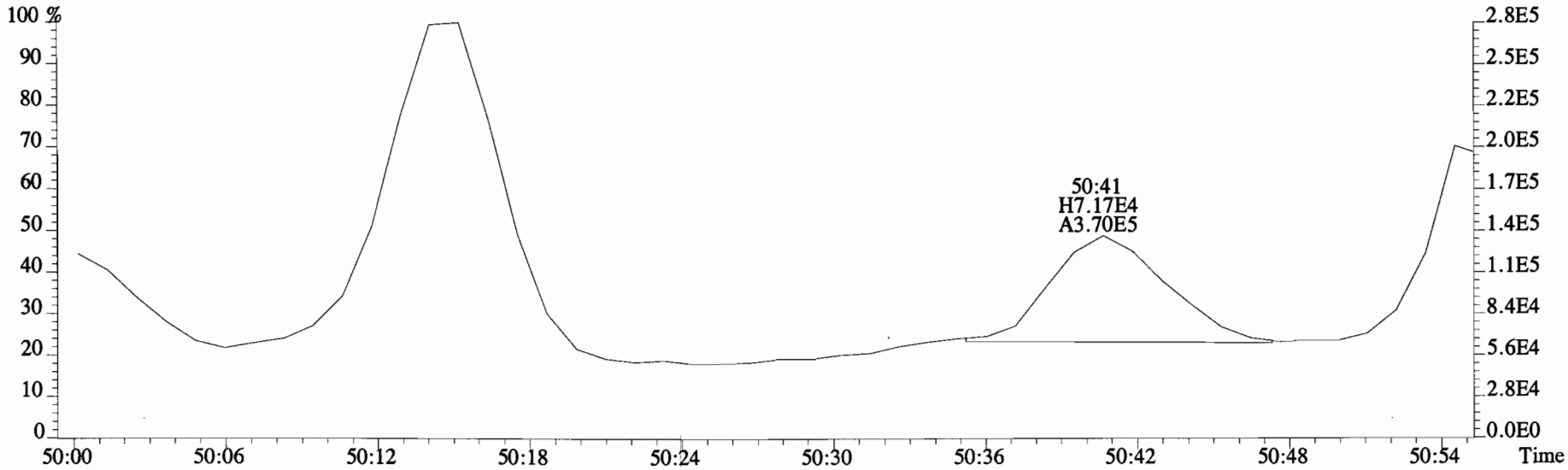
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



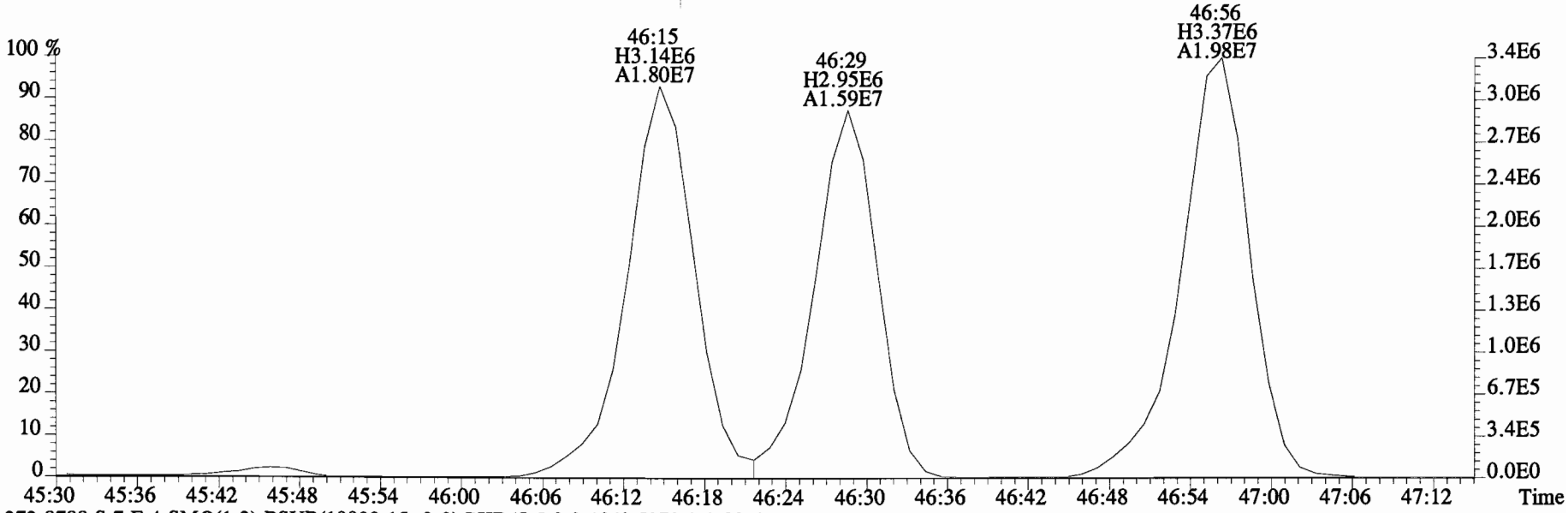
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,139008.0,0.00%,F,F)



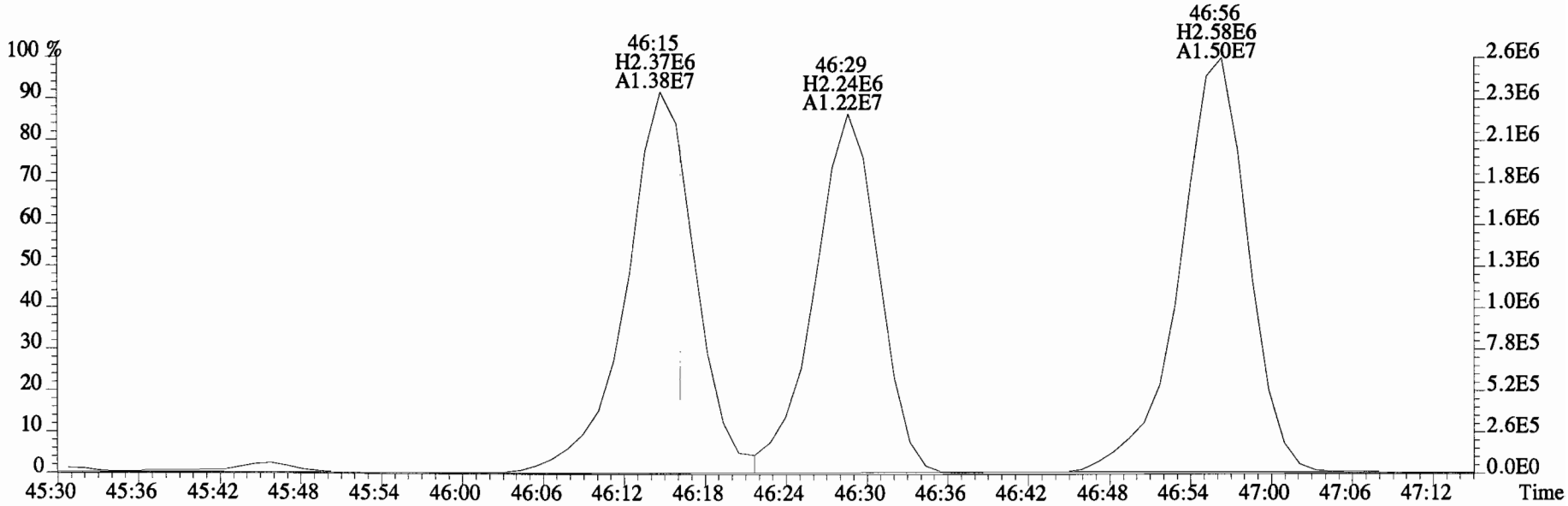
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,110928.0,0.00%,F,F)



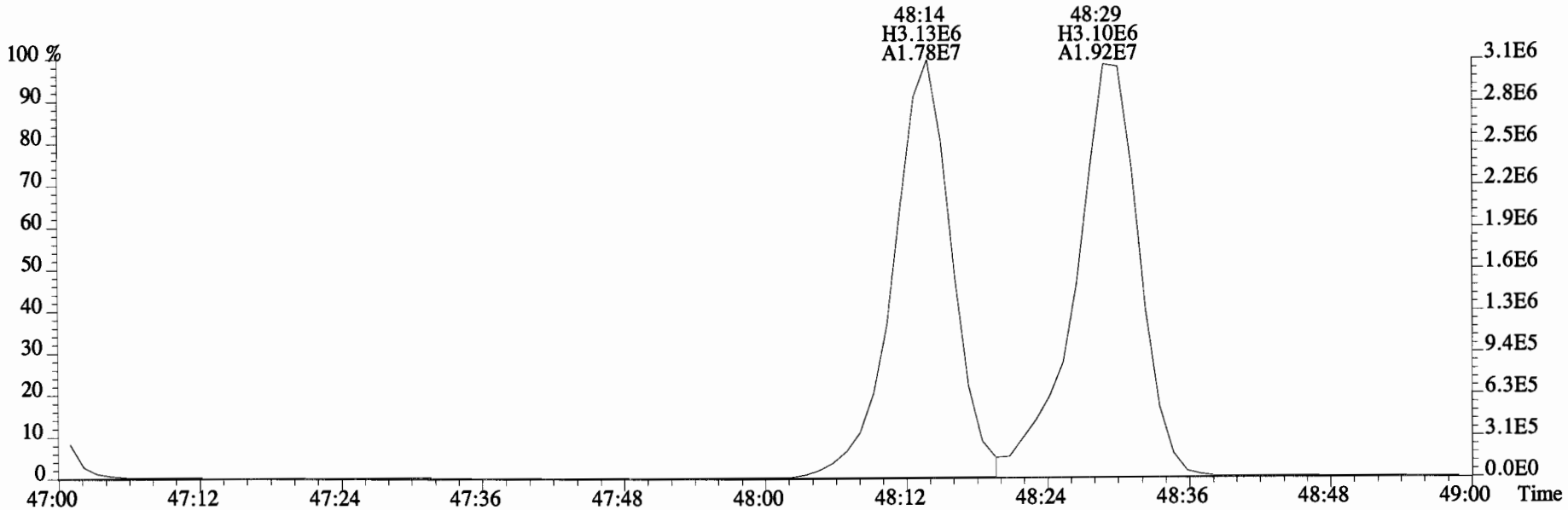
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6168.0,0.00%,F,F)



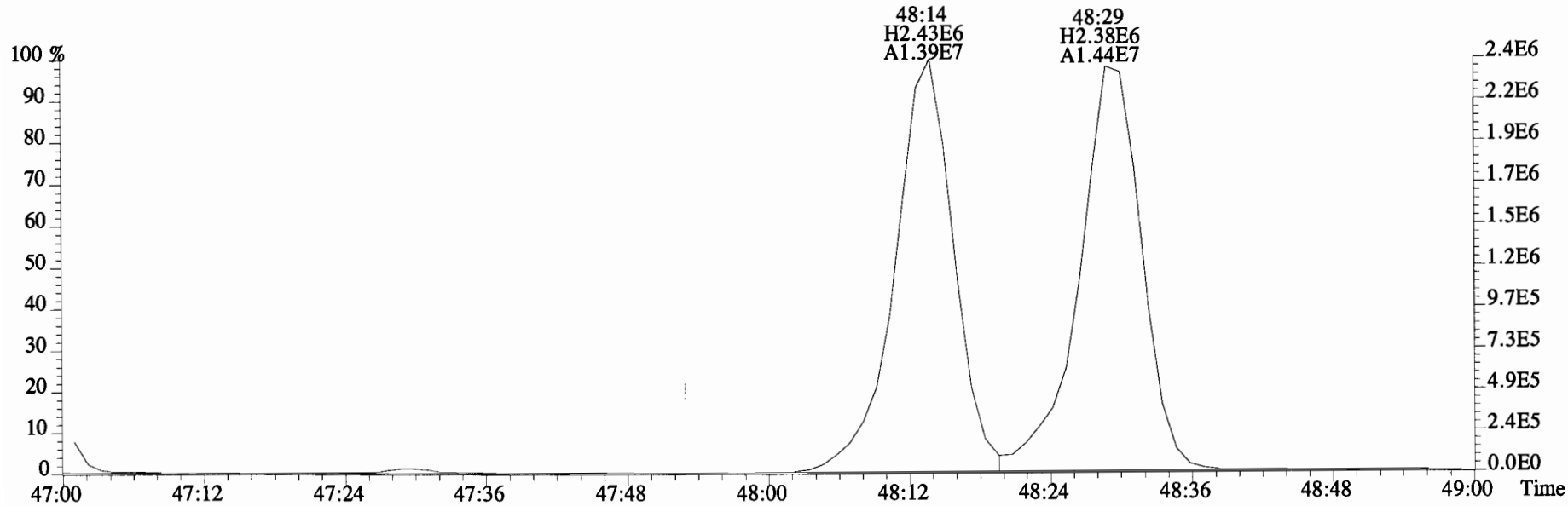
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5972.0,0.00%,F,F)

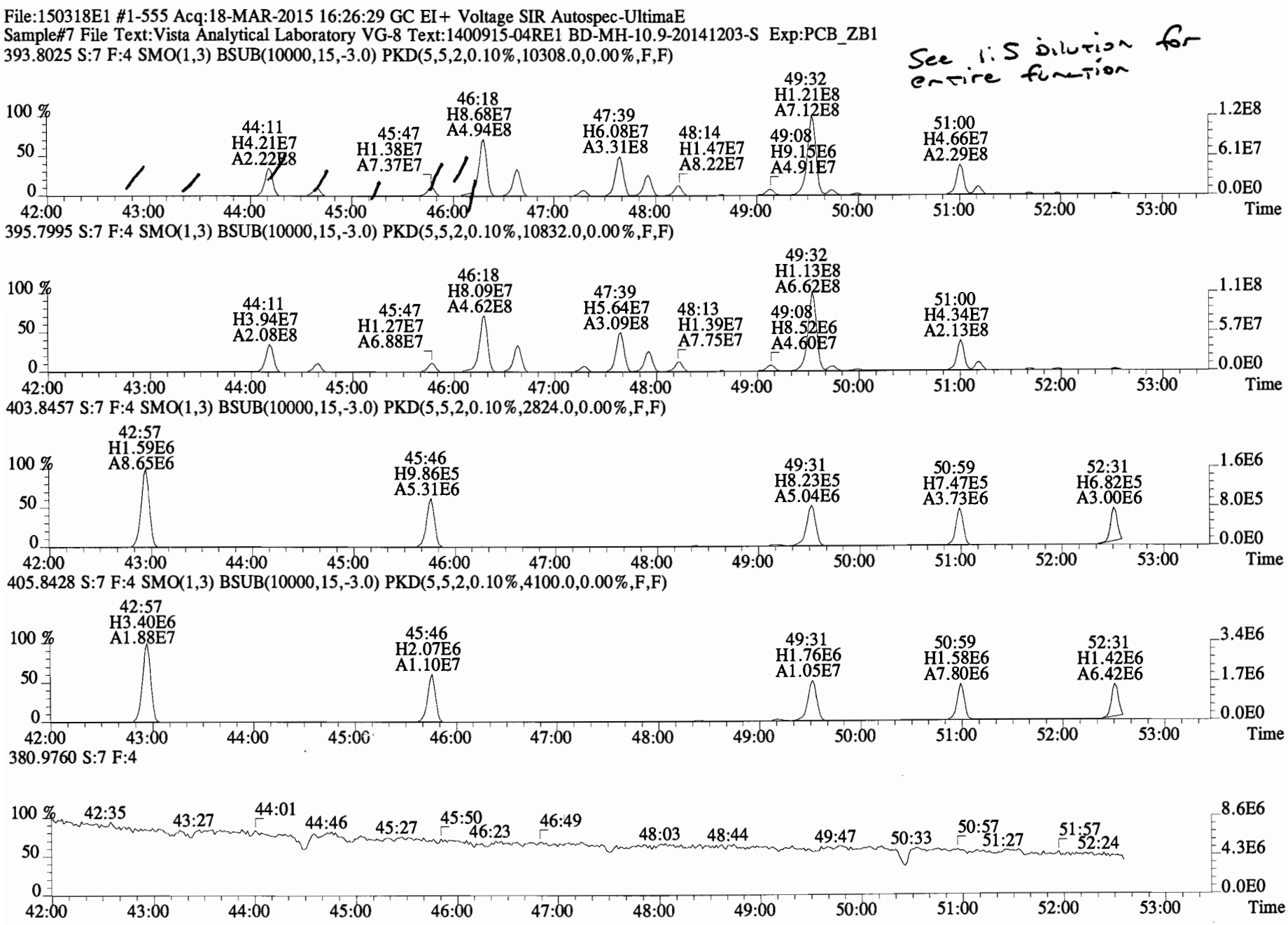


File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6168.0,0.00%,F,F)

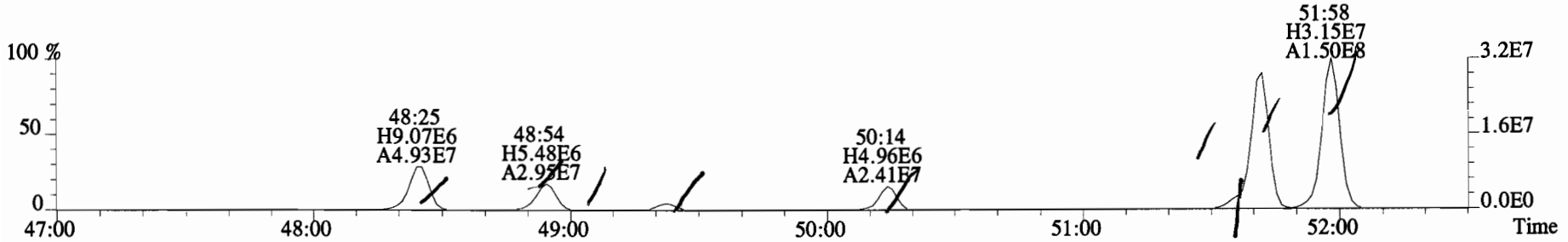


373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5972.0,0.00%,F,F)

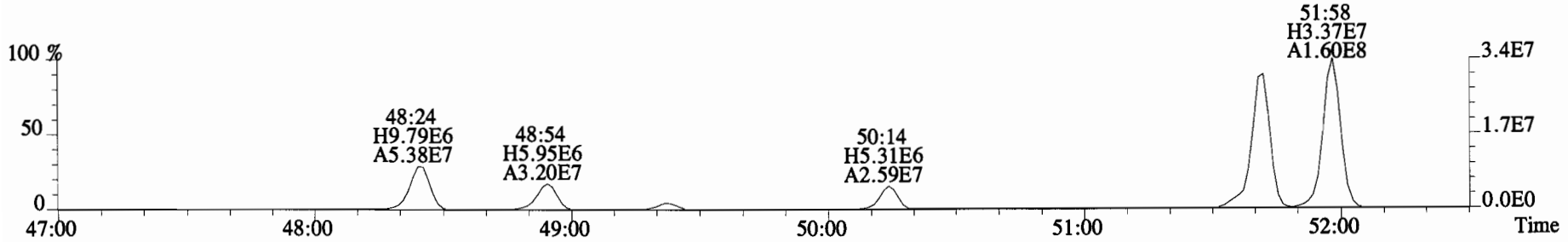



File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,10308.0,0.00%,F,F)
See I.S dilution for entire function
44:11 H4.21E7 A2.22E8
45:47 H1.38E7 A7.37E7
46:18 H8.68E7 A4.94E8
47:39 H6.08E7 A3.31E8
48:14 H1.47E7 A8.22E7
49:08 H9.15E6 A4.91E7
49:32 H1.21E8 A7.12E8
51:00 H4.66E7 A2.29E8
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,10832.0,0.00%,F,F)
44:11 H3.94E7 A2.08E8
45:47 H1.27E7 A6.88E7
46:18 H8.09E7 A4.62E8
47:39 H5.64E7 A3.09E8
48:13 H1.39E7 A7.75E7
49:08 H8.52E6 A4.60E7
49:32 H1.13E8 A6.62E8
51:00 H4.34E7 A2.13E8
403.8457 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2824.0,0.00%,F,F)
42:57 H1.59E6 A8.65E6
45:46 H9.86E5 A5.31E6
49:31 H8.23E5 A5.04E6
50:59 H7.47E5 A3.73E6
52:31 H6.82E5 A3.00E6
405.8428 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4100.0,0.00%,F,F)
42:57 H3.40E6 A1.88E7
45:46 H2.07E6 A1.10E7
49:31 H1.76E6 A1.05E7
50:59 H1.58E6 A7.80E6
52:31 H1.42E6 A6.42E6
380.9760 S:7 F:4
42:35
43:27
44:01
44:46
45:27
45:50
46:23
46:49
48:03
48:44
49:47
50:33
50:57
51:27
51:57
52:24
100 %
50
0
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
52:00
53:00
Time
1.2E8
6.1E7
0.0E0
1.1E8
5.7E7
1.6E6
8.0E5
3.4E6
1.7E6
8.6E6
4.3E6

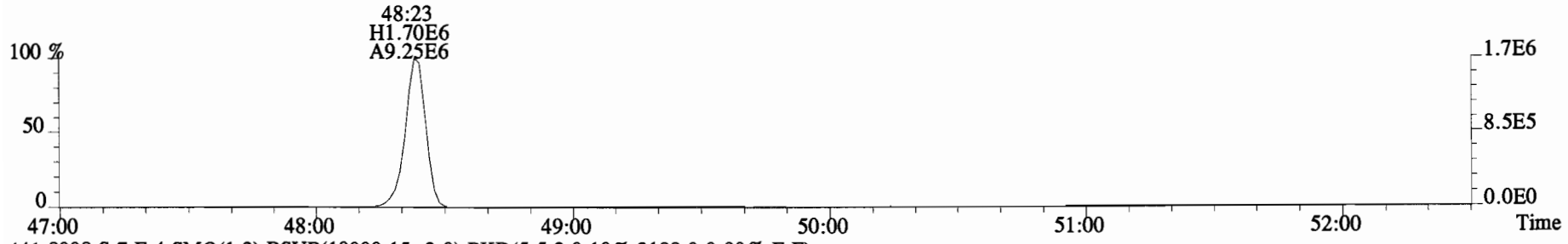
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2824.0,0.00%,F,F)



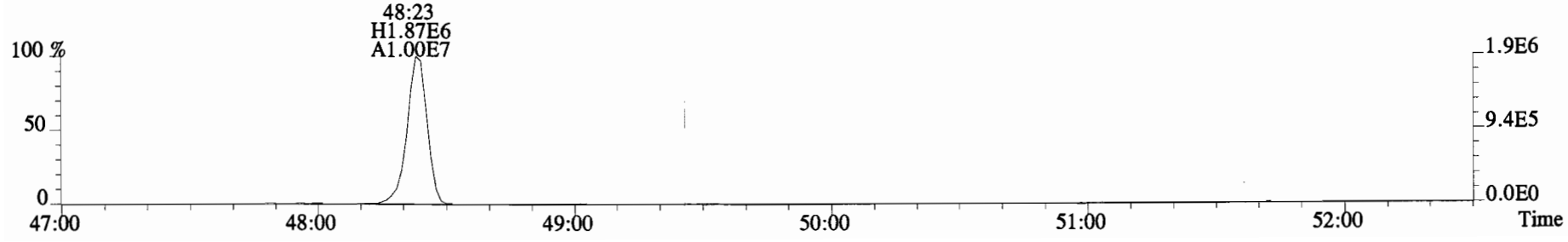
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2316.0,0.00%,F,F)



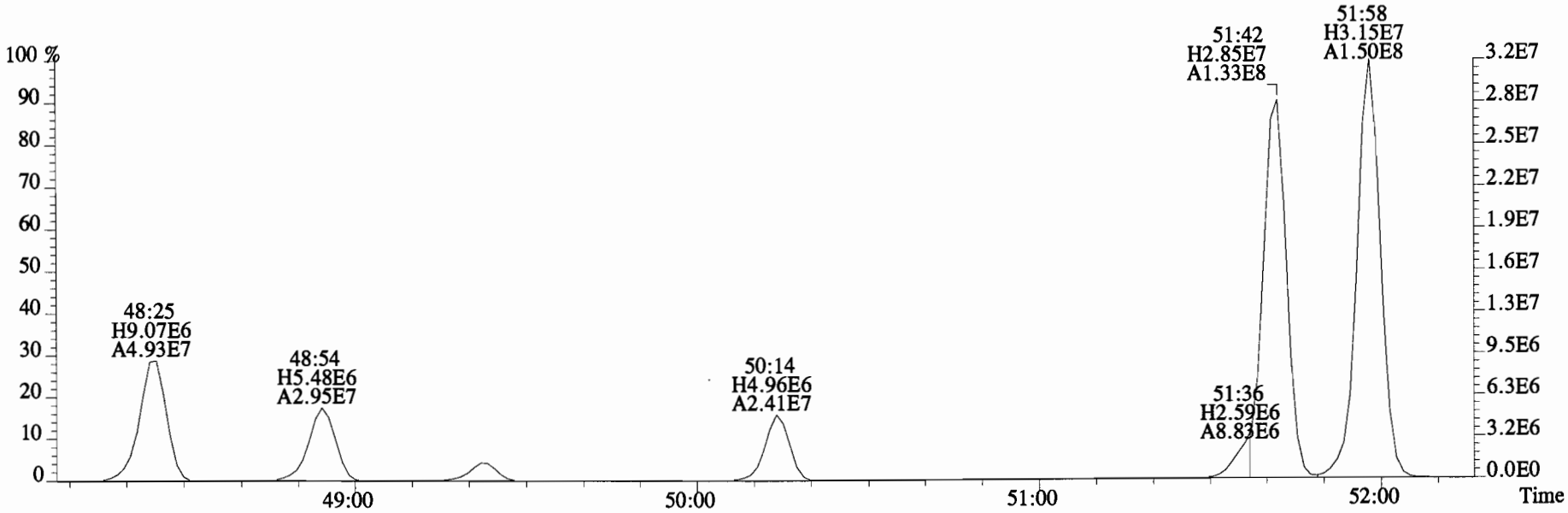
439.8038 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2656.0,0.00%,F,F)



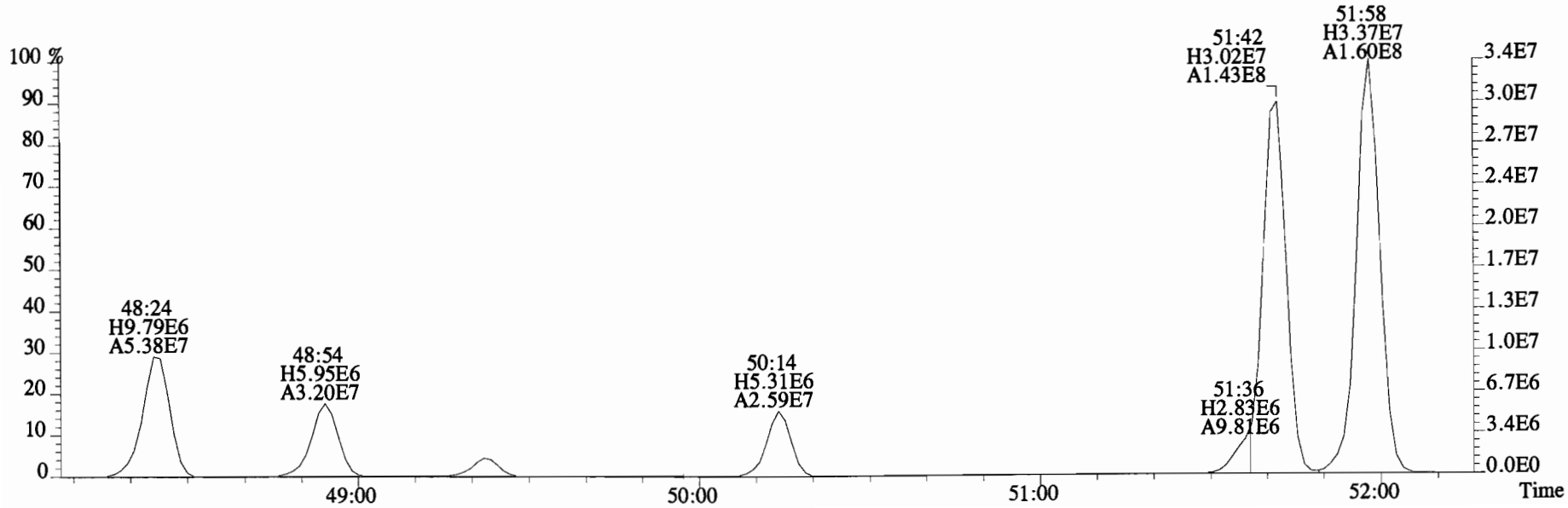
441.8008 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3188.0,0.00%,F,F)



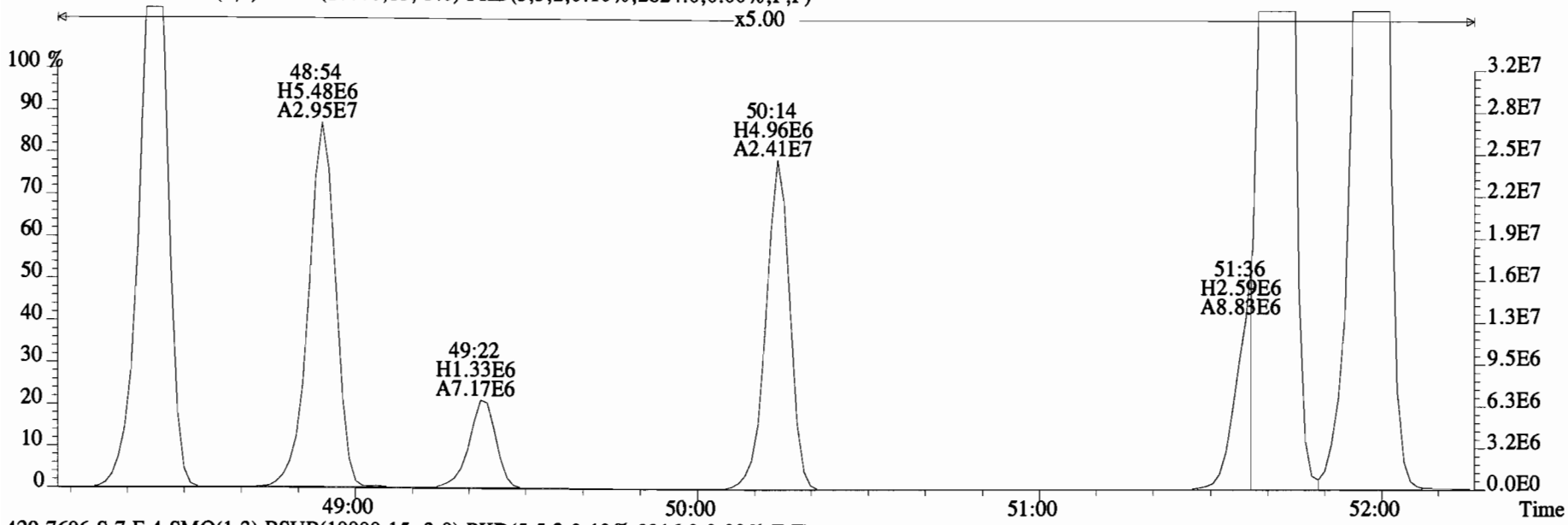
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2824.0,0.00%,F,F)



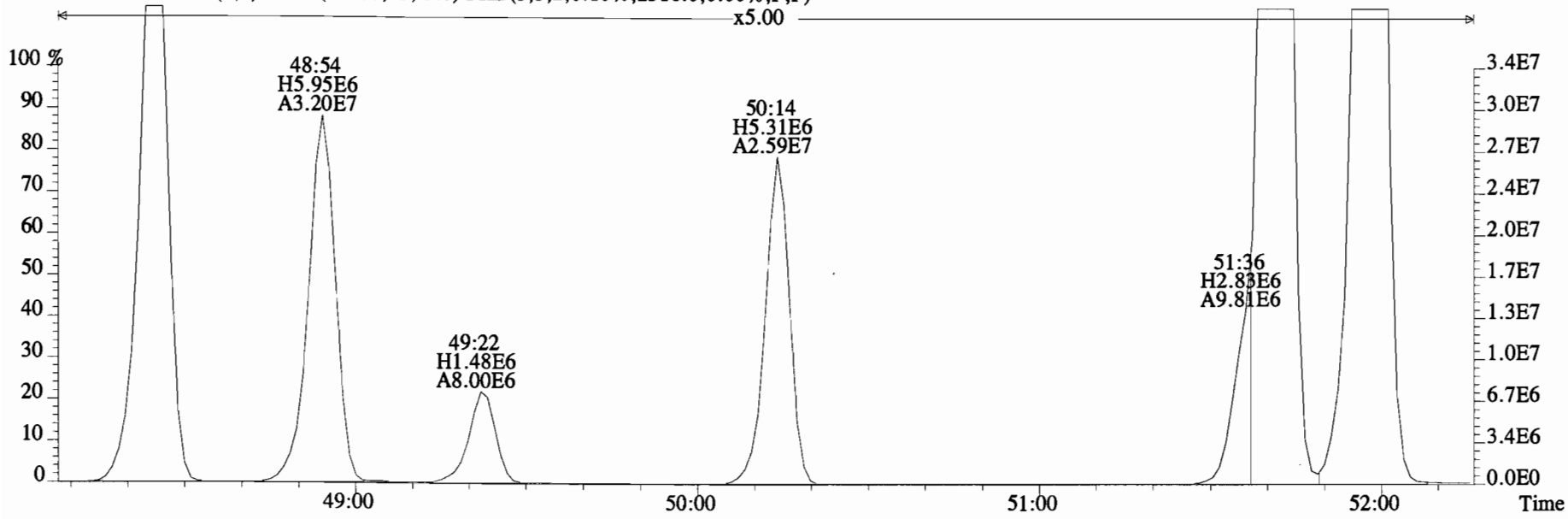
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2316.0,0.00%,F,F)



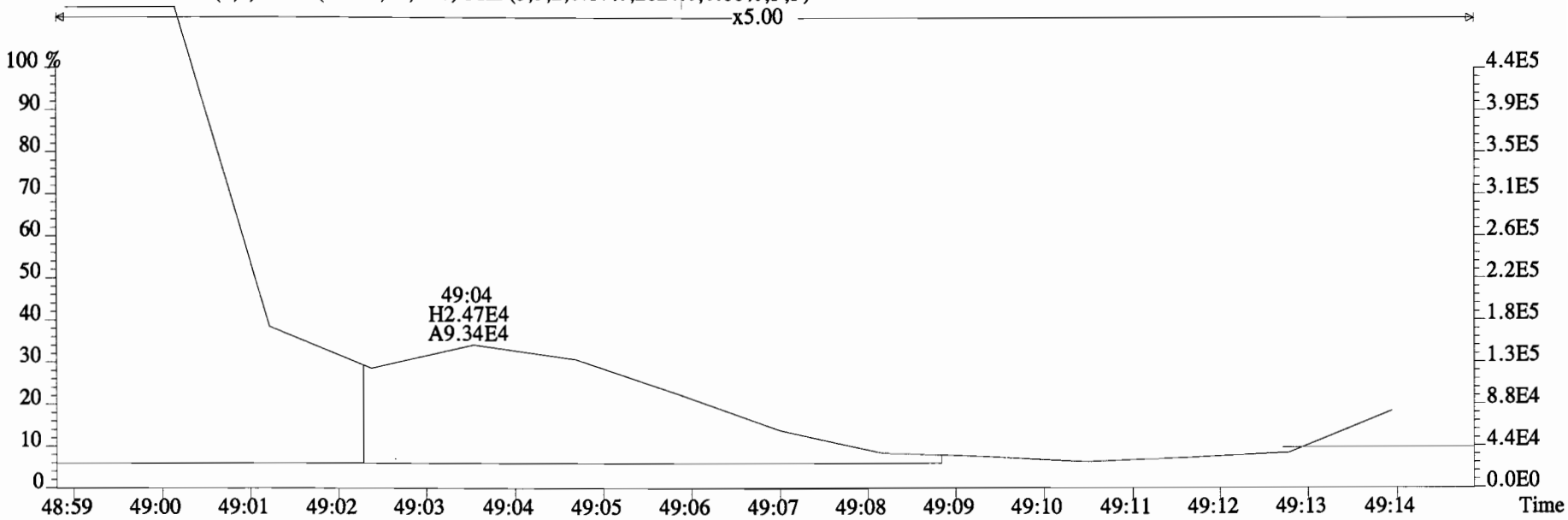
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2824.0,0.00%,F,F)



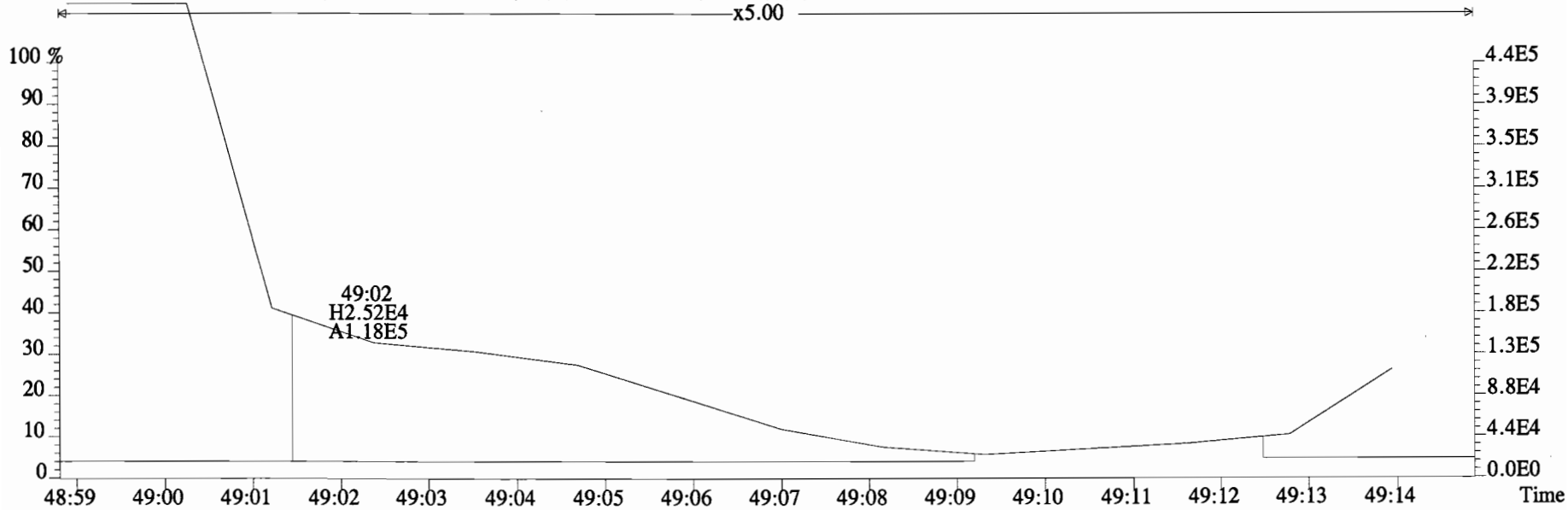
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2316.0,0.00%,F,F)



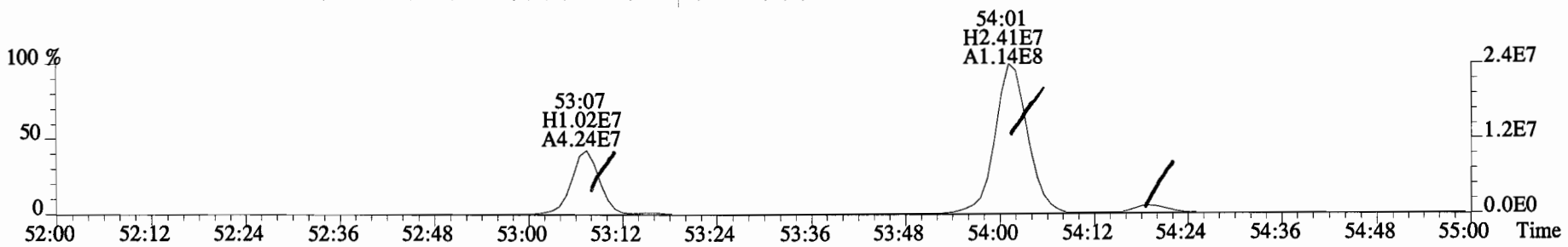
File:150318E1 #1-555 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2824.0,0.00%,F,F)



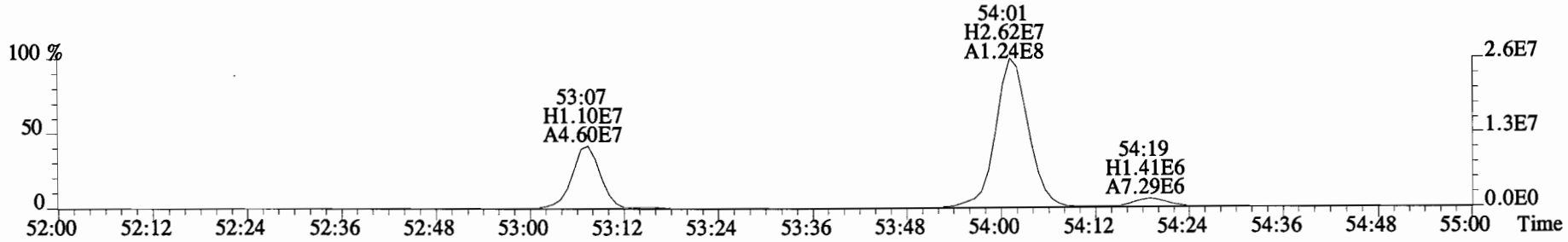
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2316.0,0.00%,F,F)



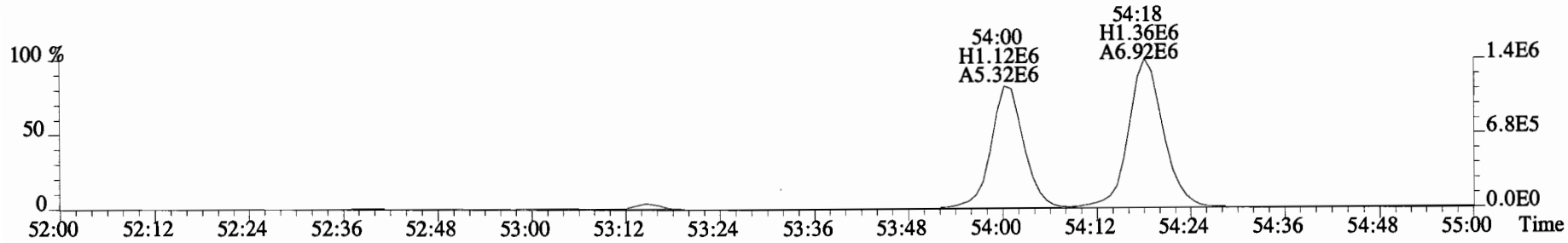
File:150318E1 #1-430 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6752.0,0.00%,F,F)



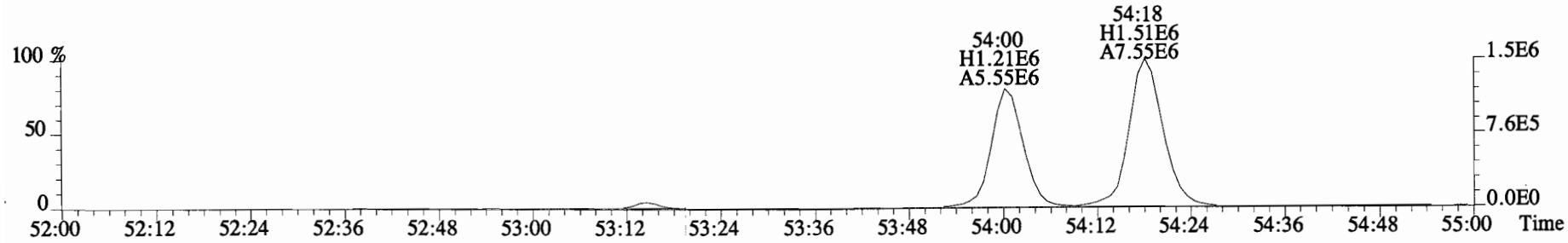
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8768.0,0.00%,F,F)



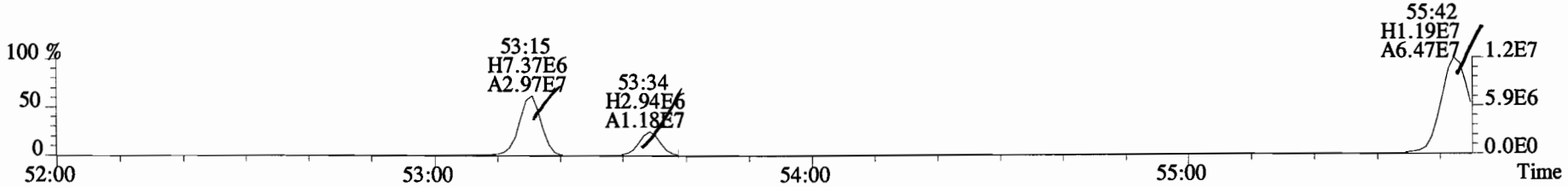
439.8038 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3552.0,0.00%,F,F)



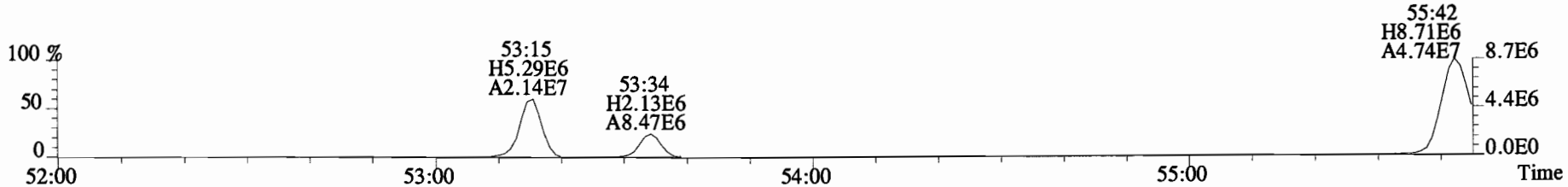
441.8008 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4808.0,0.00%,F,F)



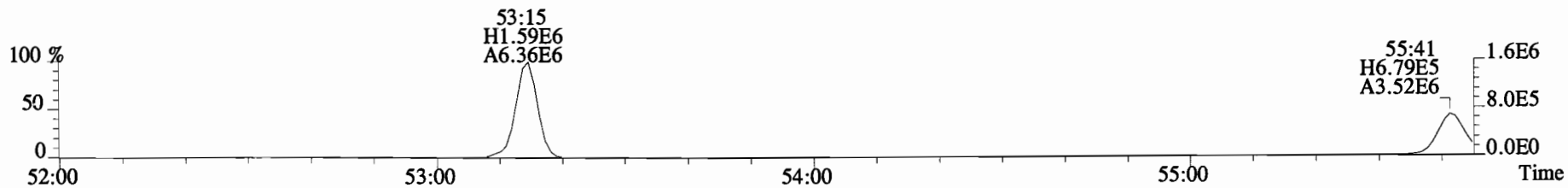
File:150318E1 #1-430 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2248.0,0.00%,F,F)



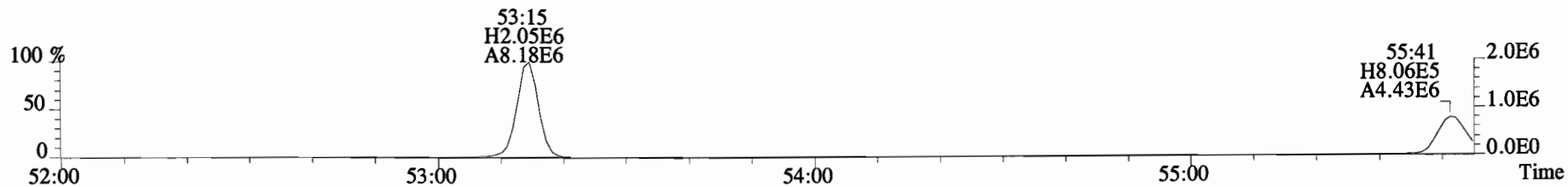
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2596.0,0.00%,F,F)



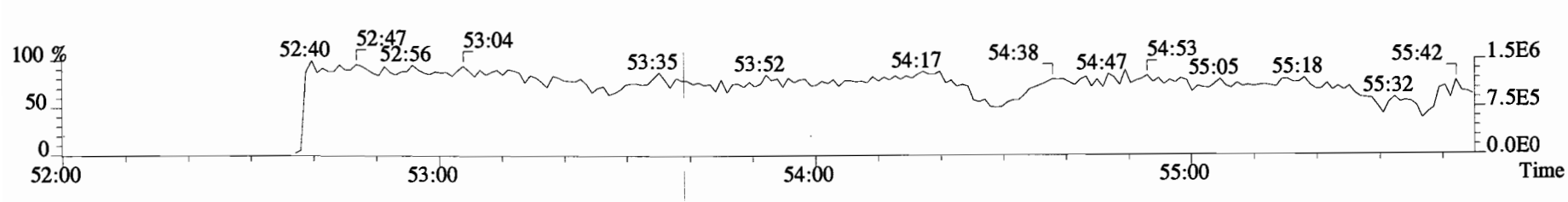
473.7648 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2900.0,0.00%,F,F)



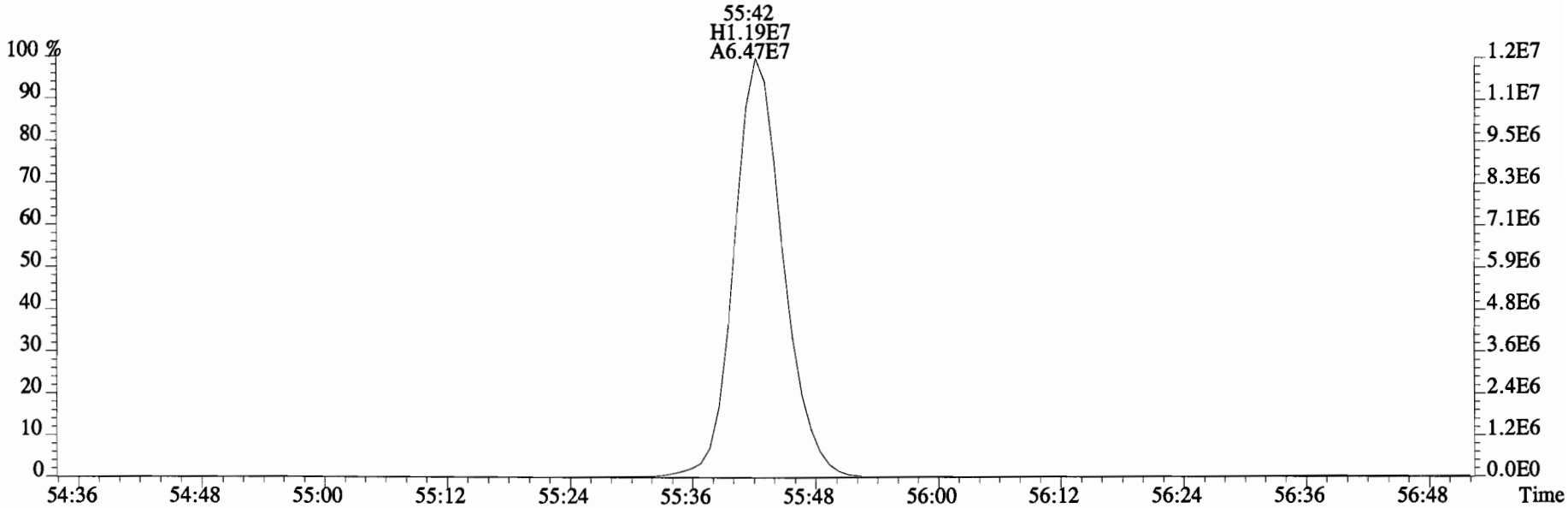
475.7619 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3336.0,0.00%,F,F)



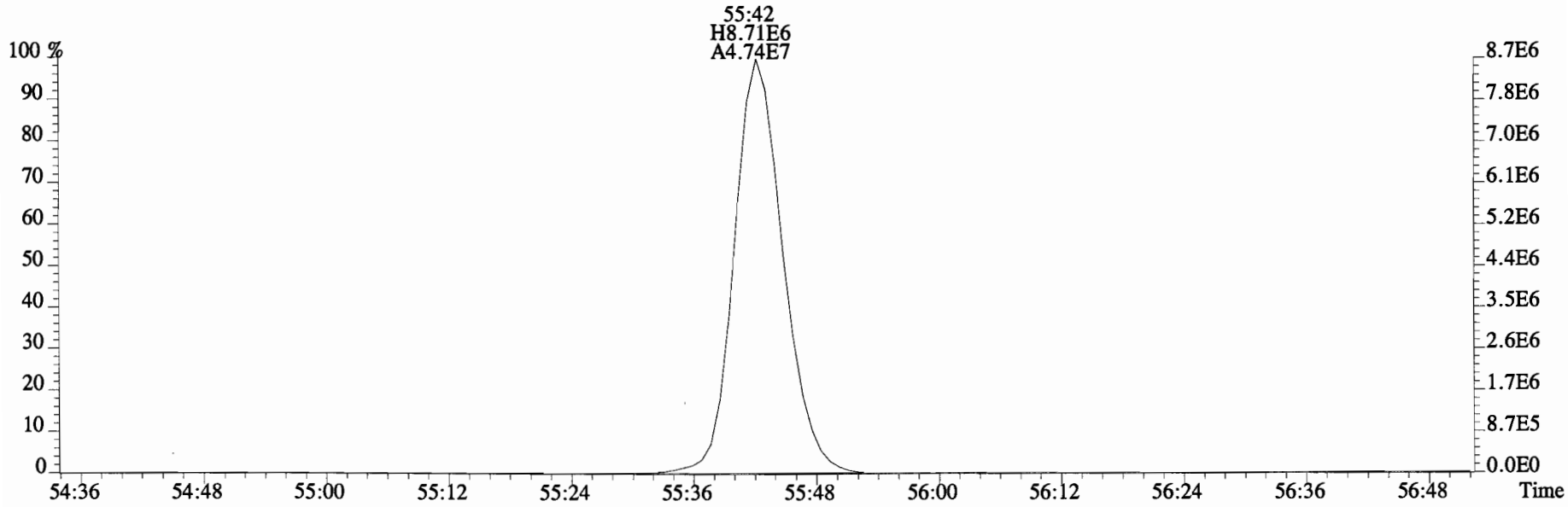
492.9697 S:7 F:5



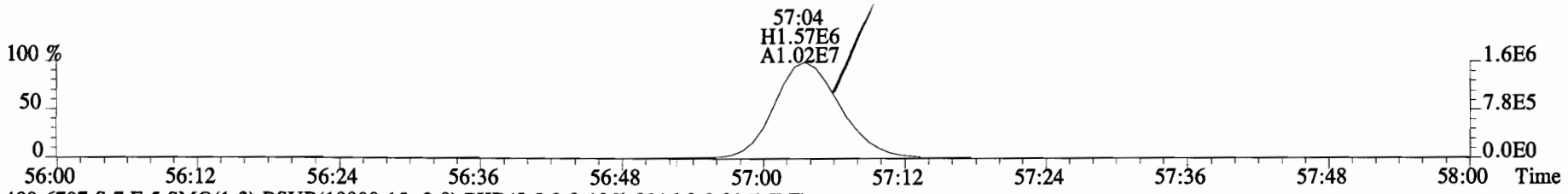
File:150318E1 #1-430 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2248.0,0.00%,F,F)



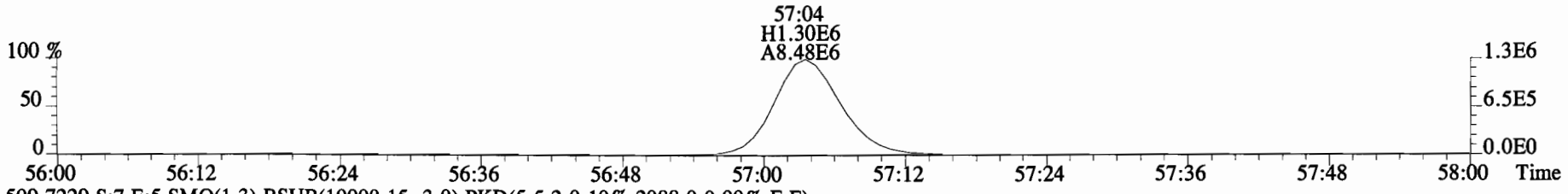
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2596.0,0.00%,F,F)



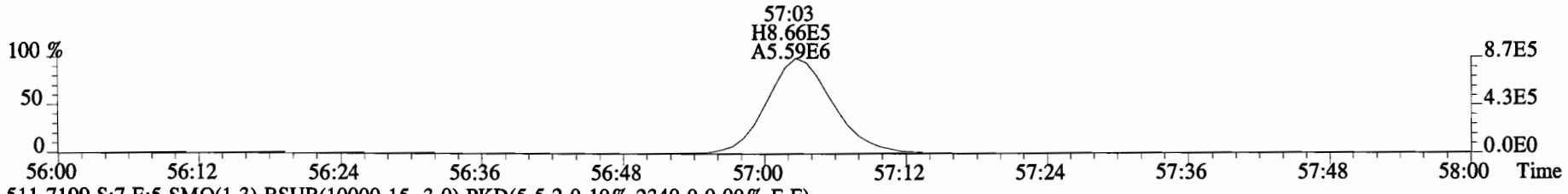
File:150318E1 #1-430 Acq:18-MAR-2015 16:26:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1 BD-MH-10.9-20141203-S Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2224.0,0.00%,F,F)



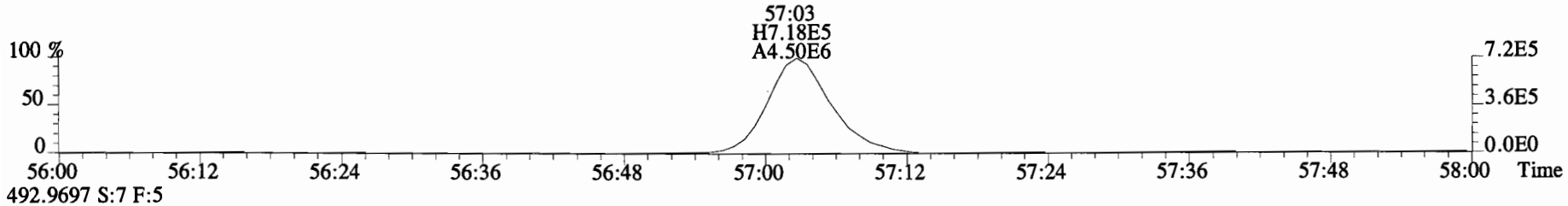
499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2216.0,0.00%,F,F)



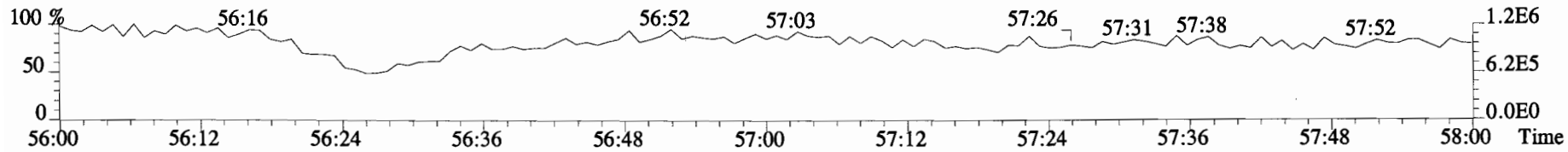
509.7229 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2088.0,0.00%,F,F)



511.7199 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2340.0,0.00%,F,F)



492.9697 S:7 F:5



Client ID: BD-MH-10.9-20141203-S Filename: 150328E2 S:9 Acq:29-MAR-15 05:23:38 ConCal: ST150328E2-2

Lab ID: 1400915-04RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n	NotF¶	0.82	*	DNV	*	2.5	*	*	0.977	0.987
Hexa	PCB-131	*	*	n	NotF¶	0.91	*		*	2.5	*	*	0.981	0.991
Hexa	PCB-146/165	*	*	n	NotF¶	1.25	*		*	2.5	*	*	0.986	0.996
Hexa	PCB-132/161	*	*	n	NotF¶	1.10	*		*	2.5	*	*	0.991	1.001
Hexa	PCB-153	*	*	n	NotF¶	1.25	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-168	*	*	n	NotF¶	1.45	*		*	2.5	*	*	1.000	1.010
Hexa	PCB-141	*	*	n	NotF¶	1.09	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-137	*	*	n	NotF¶	1.06	*		*	2.5	*	*	1.004	1.014
Hexa	PCB-130	*	*	n	NotF¶	0.96	*		*	2.5	*	*	1.006	1.016
Hexa	PCB-138/163/164	*	*	n	NotF¶	1.29	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-158/160	*	*	n	NotF¶	1.34	*		*	2.5	*	*	1.001	1.011
Hexa	PCB-129	*	*	n	NotF¶	0.85	*		*	2.5	*	*	1.006	1.016
Hexa	PCB-166	*	*	n	NotF¶	1.19	*		*	2.5	*	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF¶	1.11	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-128/162	*	*	n	NotF¶	1.05	*		*	2.5	*	*	1.001	1.011
Hexa	PCB-167	*	*	n	NotF¶	1.20	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-156	*	*	n	NotF¶	1.14	*		*	2.5	*	*	0.996	1.006
Hexa	PCB-157	*	*	n	NotF¶	1.16	*		*	2.5	*	*	0.995	1.005
Hexa	PCB-169	*	*	n	NotF¶	1.12	*		*	2.5	*	*	0.995	1.005
Hepta	PCB-188	9.43e+05	1.08	y	42:53	1.58	507		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-184	4.35e+05	1.02	y	43:19	1.63	227		*	2.5	*	1.010	1.006	1.016
Hepta	PCB-179	2.12e+08	1.07	y	44:07	1.30	138000		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	6.17e+07	1.06	y	44:34	1.48	35500		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	5.66e+04	1.04	y	45:10	1.45	33.1		*	2.5	*	1.054	1.049	1.059
Hepta	PCB-178	7.21e+07	1.08	y	45:40	1.03	59200		*	2.5	*	1.065	1.060	1.070
Hepta	PCB-175	1.39e+07	1.06	y	46:01	1.01	11600		*	2.5	*	1.073	1.069	1.079
Hepta	PCB-182/187	5.04e+08	1.07	y	46:11	1.25	342000		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	2.27e+08	1.06	y	46:31	1.21	159000		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	4.75e+07	1.05	y	47:10	1.80	32800		*	2.5	*	0.955	0.951	0.961
Hepta	PCB-174	3.65e+08	1.07	y	47:32	1.38	329000		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	1.19e+06	1.18	y	47:39	1.38	1070		*	2.5	*	0.965	0.960	0.970
Hepta	PCB-177	1.90e+08	1.07	y	47:49	1.26	188000		*	2.5	*	0.968	0.964	0.974
Hepta	PCB-171	8.92e+07	1.07	y	48:06	1.58	70100		*	2.5	*	0.974	0.970	0.980
Hepta	PCB-173	5.85e+06	1.08	y	48:31	1.11	6550		*	2.5	*	0.982	0.978	0.988
Hepta	PCB-172	5.41e+07	1.08	y	48:59	1.63	41200		*	2.5	*	0.992	0.987	0.997
Hepta	PCB-192	*	*	n	NotF¶	1.74	*		7400	2.5	101	*	0.991	1.001
Hepta	PCB-180	7.89e+08	1.07	y	49:23	1.34	729000		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/30/15

4/2 3/31/15

Client ID: BD-MH-10.9-20141203-S Filename: 150328E2 S:9 Acq:29-MAR-15 05:23:38 ConCal: ST150328E2-2
Lab ID: 1400915-04RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.895 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hepta	PCB-193	4.52e+07	1.06	y 49:36	1.72	32700		*	2.5	*	1.004	1.000-1.010
Hepta	PCB-191	1.56e+07	1.08	y 49:51	1.69	11400		*	2.5	*	1.009	1.005-1.015
Hepta	PCB-170	2.51e+08	1.07	y 50:54	1.60	242000		*	2.5	*	1.000	0.995-1.005
Hepta	PCB-190	6.98e+07	1.08	y 51:04	2.21	48600		*	2.5	*	1.004	0.999-1.009
Hepta	PCB-189	1.16e+07	1.11	y 52:24	1.55	10300		*	2.5	*	1.000	0.995-1.005
Octa	PCB-202	*	*	n NotFnd	1.08	*	DNU	*	2.5	*	*	0.995-1.005
Octa	PCB-201	*	*	n NotFnd	1.15	*		*	2.5	*	*	1.005-1.015
Octa	PCB-204	*	*	n NotFnd	1.14	*		*	2.5	*	*	1.009-1.019
Octa	PCB-197	*	*	n NotFnd	1.07	*		*	2.5	*	*	1.015-1.025
Octa	PCB-200	*	*	n NotFnd	1.06	*		*	2.5	*	*	1.034-1.044
Octa	PCB-198	*	*	n NotFnd	0.76	*		*	2.5	*	*	1.062-1.072
Octa	PCB-199	*	*	n NotFnd	0.80	*		*	2.5	*	*	1.064-1.074
Octa	PCB-196/203	*	*	n NotFnd	0.80	*		*	2.5	*	*	1.070-1.080
Octa	PCB-195	*	*	n NotFnd	1.23	*		*	2.5	*	*	0.979-0.989
Octa	PCB-194	*	*	n NotFnd	1.21	*		*	2.5	*	*	0.995-1.005
Octa	PCB-205	*	*	n NotFnd	1.54	*		*	2.5	*	*	1.000-1.010
Nona	PCB-208	*	*	n NotFnd	0.93	*		*	2.5	*	*	0.995-1.005
Nona	PCB-207	*	*	n NotFnd	1.08	*		*	2.5	*	*	1.001-1.011
Nona	PCB-206	*	*	n NotFnd	1.02	*		*	2.5	*	*	0.995-1.005
Deca	PCB-209	*	*	n NotFnd	1.17	*		*	2.5	*	*	0.995-1.005

Analyst: DMS

Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150328E2 S:9 Acq:29-MAR-15 05:23:38 ConCal: ST150328E2-2
Lab ID: 1400915-04RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.8946 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.27	*	
Total Di-PCB	*	*	n	NotFnd	1.21	*	
Total Tri-PCB	*	*	n	NotFnd	1.10	*	
Total Tri-PCB	*	*	n	NotFnd	1.21	*	Sum:0.00000
Total Tetra-PCB	*	*	n	NotFnd	1.09	*	
Total Penta-PCB	*	*	n	NotFnd	1.18	*	
Total Penta-PCB	*	*	n	NotFnd	1.25	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.90	*	
Total Hexa-PCB	*	*	n	NotFnd	1.11	*	Sum:0.00000
Total Hepta-PCB	3.03e+09	1.08	y	42:53	1.42	2489230	
Total Octa-PCB	*	*	n	NotFnd	0.96	*	
Total Octa-PCB	*	*	n	NotFnd	1.33	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	1.01	*	
Total Deca-PCB	*	*	n	NotFnd	1.17	*	

Total PCB Conc:2489232.12657

Integrations by Analyst: DMS
Date: 3/30/15

Client ID: BD-MH-10.9-20141203-S Filename: 150328E2 S:9 Acq:29-MAR-15 05:23:38 ConCal: ST150328E2-2
Lab ID: 1400915-04RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.8946 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	*	*	n	0.87	NotFnd	*	0.620	0.626	*	*
13C-PCB-3	*	*	n	0.91	NotFnd	*	0.719	0.727	*	*
13C-PCB-4	*	*	n	0.59	NotFnd	*	0.771	0.779	*	*
13C-PCB-9	2.84e+07	1.58	y	0.90	21:54	0.843	0.839	0.847	9660	91.6
13C-PCB-11	3.05e+07	1.57	y	0.94	25:17	0.973	0.968	0.978	9920	94.0
13C-PCB-19	1.56e+07	1.15	y	0.53	24:16	0.934	0.929	0.939	8960	84.9
13C-PCB-28	1.24e+07	0.94	y	0.93	29:08	1.004	0.999	1.009	10300	97.8
13C-PCB-32	2.52e+07	1.10	y	0.80	27:10	1.046	1.041	1.051	9660	91.5
13C-PCB-37	1.16e+07	1.02	y	0.84	33:01	1.138	1.131	1.143	10700	101
13C-PCB-47	1.76e+07	0.75	y	0.81	32:03	0.871	0.867	0.875	9480	89.8
13C-PCB-52	1.58e+07	0.79	y	0.77	31:32	0.857	0.853	0.861	8970	85.0
13C-PCB-54	1.88e+07	0.78	y	0.97	27:60	0.761	0.757	0.765	8480	80.3
13C-PCB-70	2.16e+07	0.75	y	1.00	35:33	0.967	0.961	0.971	9490	89.9
13C-PCB-77	2.28e+07	0.77	y	0.94	39:40	1.079	1.073	1.083	10600	101
13C-PCB-80	2.29e+07	0.79	y	1.03	35:59	0.978	0.973	0.983	9720	92.1
13C-PCB-81	2.20e+07	0.81	y	0.92	39:04	1.062	1.057	1.067	10500	99.1
13C-PCB-95	1.08e+07	1.57	y	0.74	35:50	0.913	0.908	0.918	9600	91.0
13C-PCB-97	1.12e+07	1.61	y	0.70	38:50	0.989	0.984	0.994	10500	99.9
13C-PCB-101	1.20e+07	1.59	y	0.78	37:32	0.956	0.951	0.961	10100	95.5
13C-PCB-104	1.43e+07	1.63	y	1.00	32:41	0.833	0.829	0.837	9440	89.5
13C-PCB-105	1.65e+07	1.61	y	1.37	43:05	0.929	0.924	0.934	8710	82.5
13C-PCB-114	1.77e+07	1.56	y	1.36	42:14	0.911	0.906	0.916	9330	88.4
13C-PCB-118	1.48e+07	1.63	y	0.96	41:34	1.059	1.054	1.064	10200	96.3
13C-PCB-123	1.48e+07	1.65	y	0.89	41:24	1.054	1.049	1.059	11000	104
13C-PCB-126	1.45e+07	1.55	y	1.31	45:20	0.977	0.972	0.982	8000	75.8
13C-PCB-127	1.77e+07	1.57	y	1.47	43:26	0.937	0.931	0.941	8650	82.0
13C-PCB-138	1.56e+07	1.29	y	1.10	44:49	0.966	0.961	0.971	10300	97.1
13C-PCB-141	1.54e+07	1.30	y	1.07	43:59	0.948	0.943	0.953	10300	97.8
13C-PCB-153	1.70e+07	1.30	y	1.15	43:15	0.932	0.927	0.937	10700	101
13C-PCB-155	1.03e+07	1.35	y	0.84	37:04	0.944	0.939	0.949	8100	76.8
13C-PCB-156	1.80e+07	1.34	y	1.30	48:06	1.037	1.032	1.042	10000	94.7
13C-PCB-157	1.89e+07	1.28	y	1.36	48:22	1.043	1.037	1.047	10100	95.2
13C-PCB-159	1.71e+07	1.27	y	1.25	46:07	0.994	0.989	0.999	9900	93.8
13C-PCB-167	1.82e+07	1.34	y	1.35	46:48	1.009	1.004	1.014	9700	91.9
13C-PCB-169	1.63e+07	1.28	y	1.29	50:31	1.089	1.084	1.094	9110	86.3
13C-PCB-170	6.86e+06	0.47	y	0.54	50:52	1.097	1.093	1.103	9110	86.3
13C-PCB-180	8.49e+06	0.49	y	0.68	49:23	1.065	1.059	1.069	8950	84.7
13C-PCB-188	1.24e+07	0.46	y	0.92	42:52	0.924	0.920	0.930	9750	92.3
13C-PCB-189	7.64e+06	0.43	y	0.72	52:24	1.130	1.125	1.137	7680	72.8
13C-PCB-194	*	*	n	0.80	NotFnd	*	0.990	1.000	*	*
13C-PCB-202	9.37e+06	0.92	y	0.84	48:17	1.041	1.036	1.046	8050	76.3
13C-PCB-206	*	*	n	0.65	NotFnd	*	1.019	1.029	*	*
13C-PCB-208	*	*	n	1.08	NotFnd	*	0.977	0.987	*	*
13C-PCB-209	6.92e+06	1.16	y	0.61	56:54	1.056	1.044	1.054	15500	147

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.38e+07	0.80	y	1.02	37:51	1.029	1.024	1.034	10200	97.1
13C-PCB-178	8.18e+06	0.46	y	0.61	45:40	0.985	0.980	0.990	9600	91.0

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.38e+07	0.80	y	1.10	37:51	0.969	0.964	0.974	10300	97.9
13C-PCB-178	8.18e+06	0.46	y	0.90	45:40	0.925	0.920	0.930	11300	107

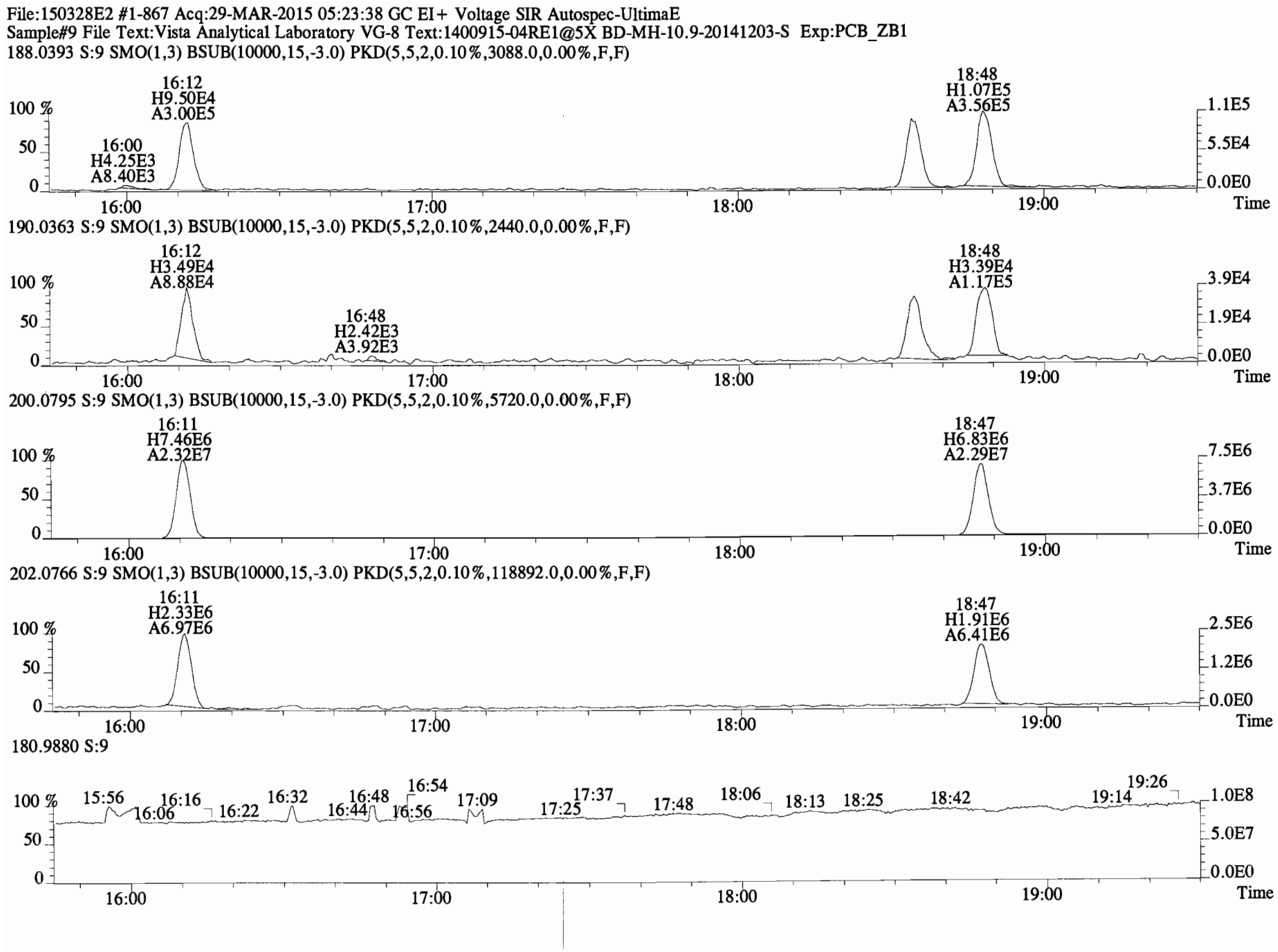
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	3.46e+07	1.61	y	1.00	25:59	10600
13C-PCB-31	1.36e+07	1.02	y	1.00	29:01	10600
13C-PCB-60	2.41e+07	0.78	y	1.00	36:47	10600
13C-PCB-111	1.60e+07	1.53	y	1.00	39:16	10600
13C-PCB-128	1.47e+07	1.30	y	1.00	46:23	10600
13C-PCB-205	7.71e+06	0.92	y	1.00	53:53	10600

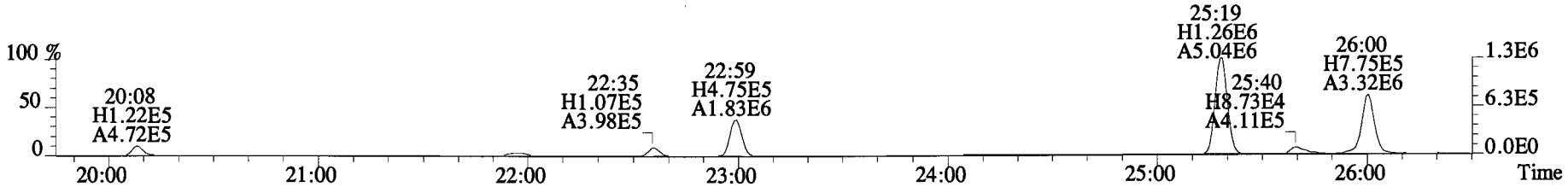
x used only

Analyst: DMS

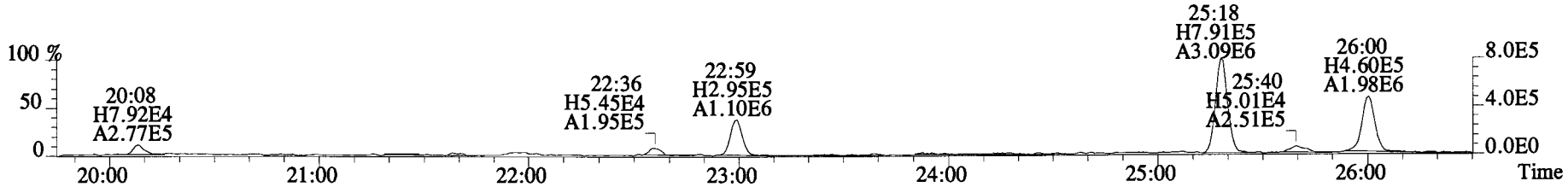
Date: 3/30/15


File:150328E2 #1-867 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
188.0393 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3088.0,0.00%,F,F)
16:12 H9.50E4 A3.00E5
16:00 H4.25E3 A8.40E3
18:48 H1.07E5 A3.56E5
100 %
50
0
1.1E5
5.5E4
0.0E0
16:00
17:00
18:00
19:00
Time
190.0363 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)
16:12 H3.49E4 A8.88E4
16:48 H2.42E3 A3.92E3
18:48 H3.39E4 A1.17E5
3.9E4
1.9E4
200.0795 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5720.0,0.00%,F,F)
16:11 H7.46E6 A2.32E7
18:47 H6.83E6 A2.29E7
7.5E6
3.7E6
202.0766 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,118892.0,0.00%,F,F)
16:11 H2.33E6 A6.97E6
18:47 H1.91E6 A6.41E6
2.5E6
1.2E6
180.9880 S:9
15:56 16:06 16:16 16:22 16:32 16:44 16:48 16:54 16:56 17:09 17:25 17:37 17:48 18:06 18:13 18:25 18:42 19:14 19:26
1.0E8
5.0E7

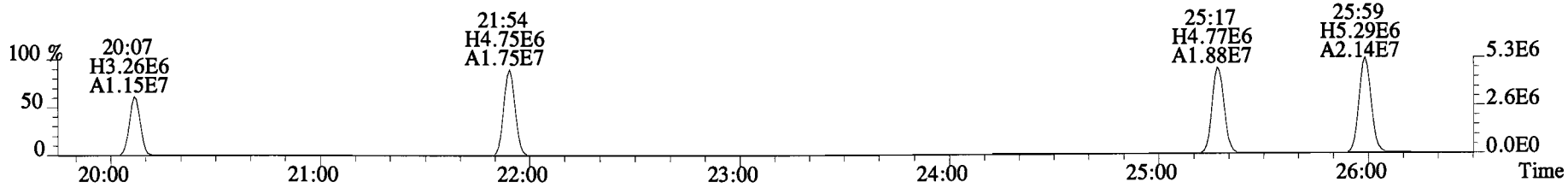
File:150328E2 #1-757 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
222.0003 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2912.0,0.00%,F,F)



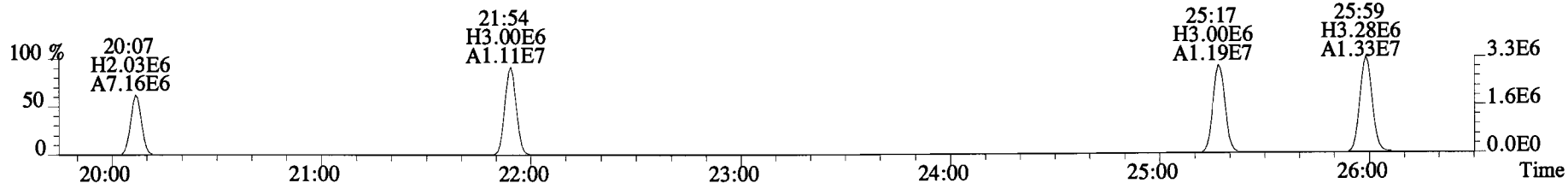
223.9974 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15920.0,0.00%,F,F)



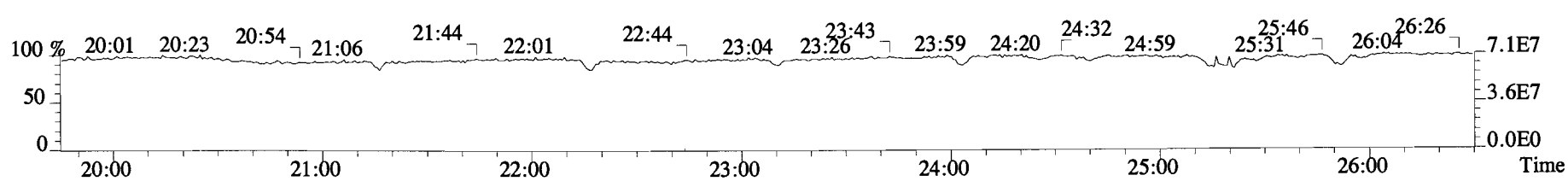
234.0406 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4228.0,0.00%,F,F)



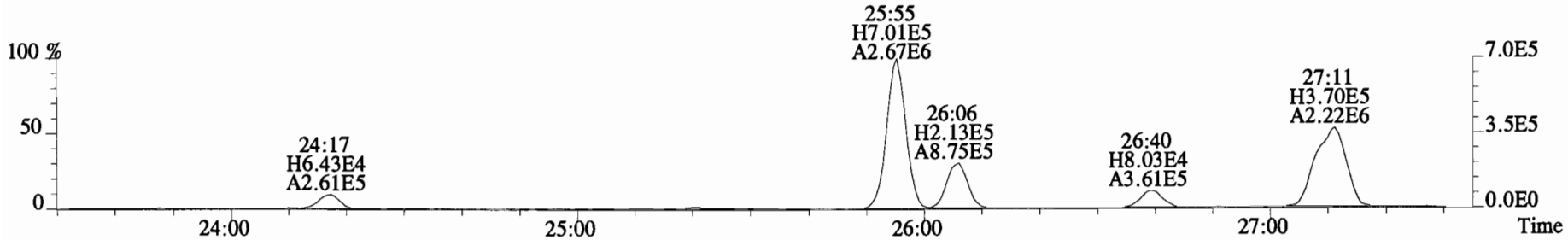
236.0376 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3064.0,0.00%,F,F)



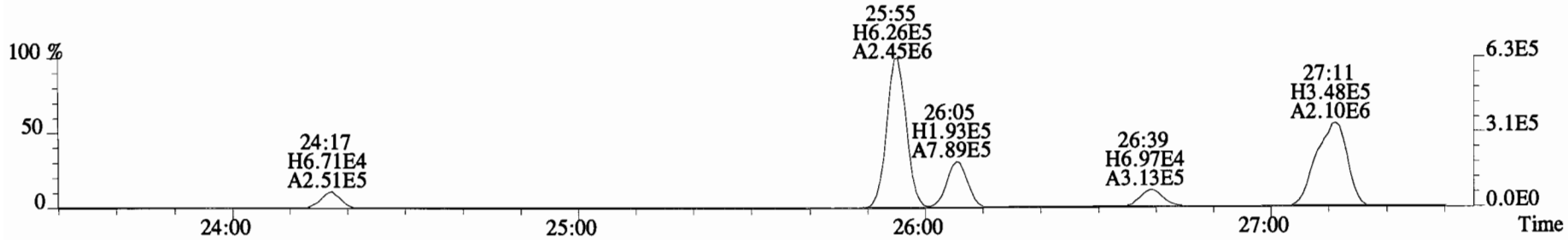
230.9856 S:9 F:2



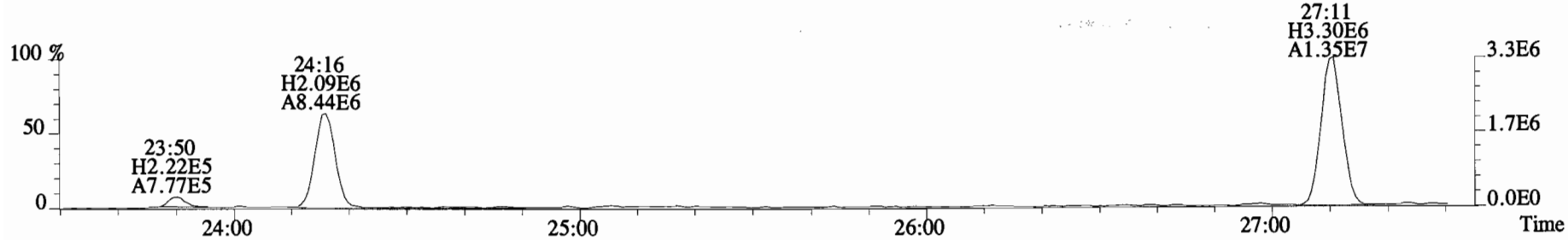
File:150328E2 #1-757 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4564.0,0.00%,F,F)



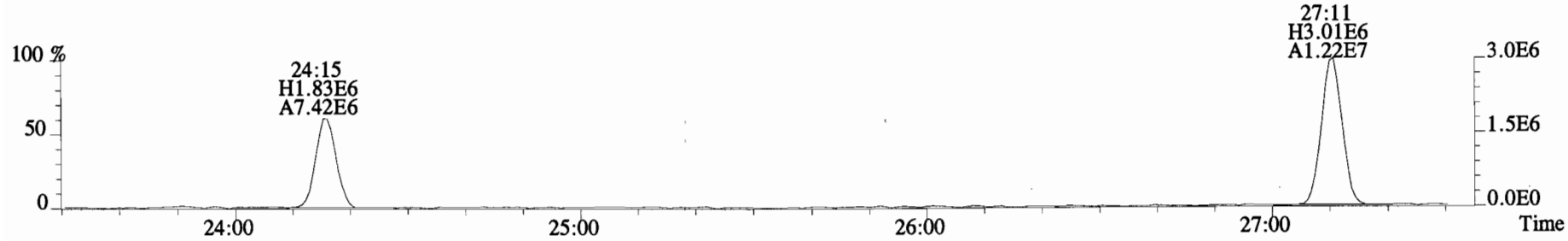
257.9584 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2260.0,0.00%,F,F)



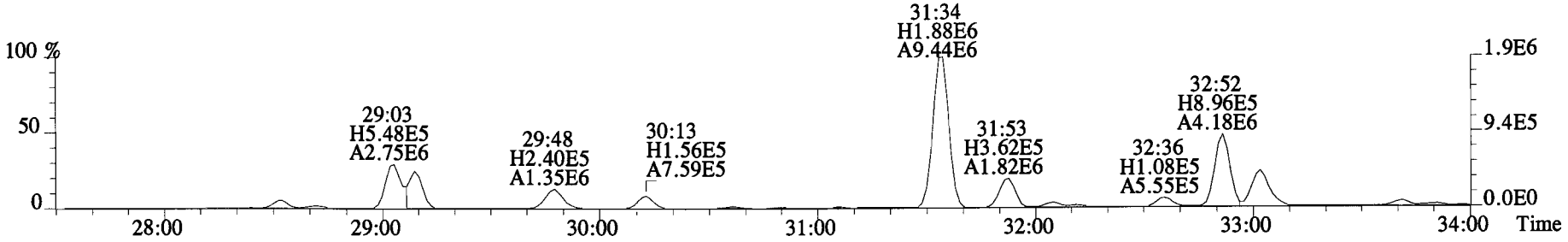
268.0016 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44832.0,0.00%,F,F)



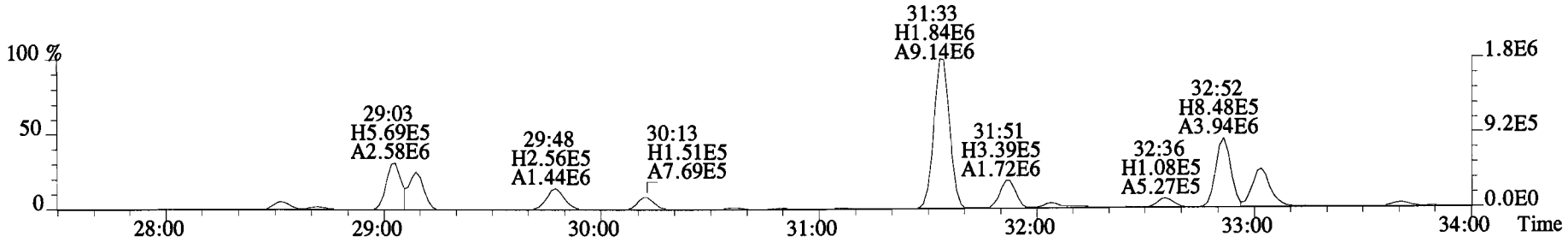
269.9986 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,29344.0,0.00%,F,F)



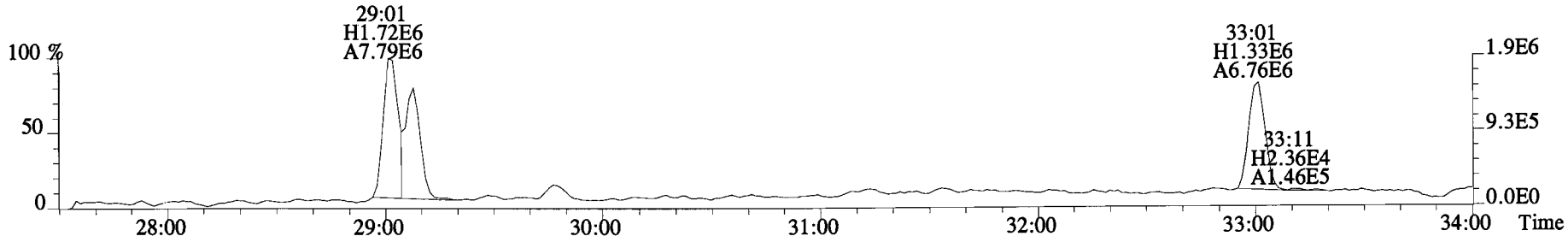
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
255.9613 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4896.0,0.00%,F,F)



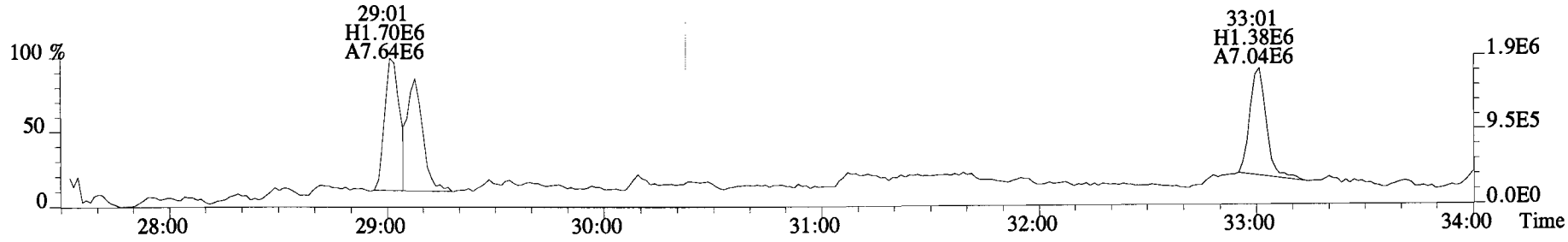
257.9584 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3416.0,0.00%,F,F)



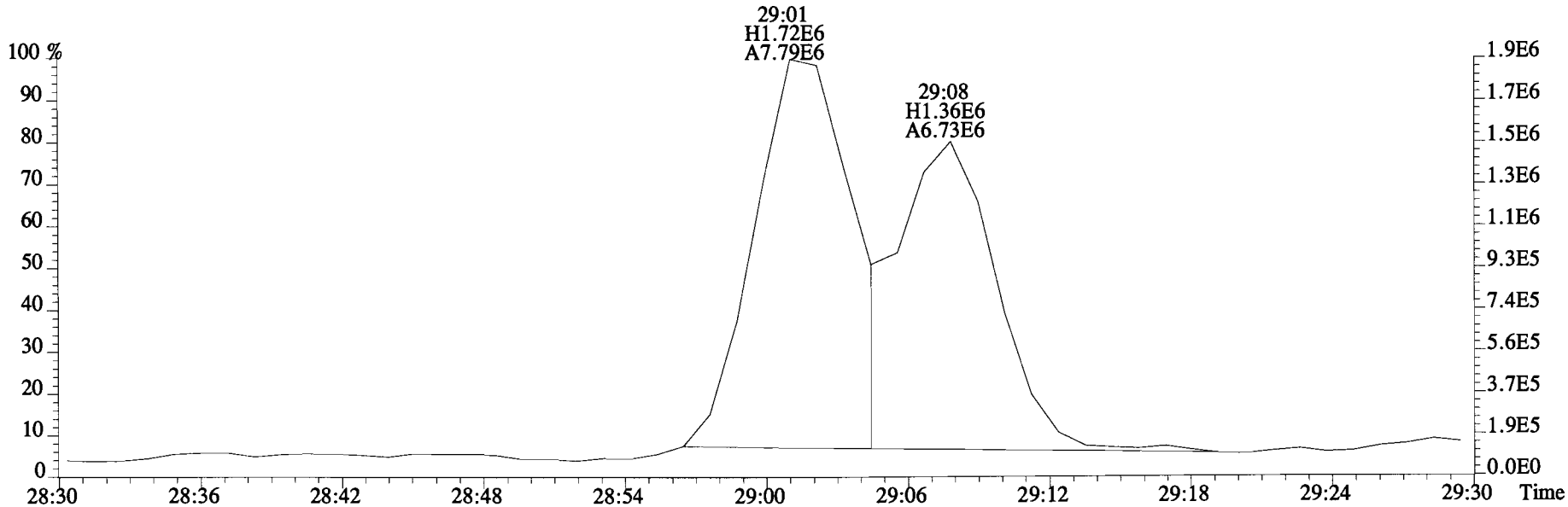
268.0016 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,201924.0,0.00%,F,F)



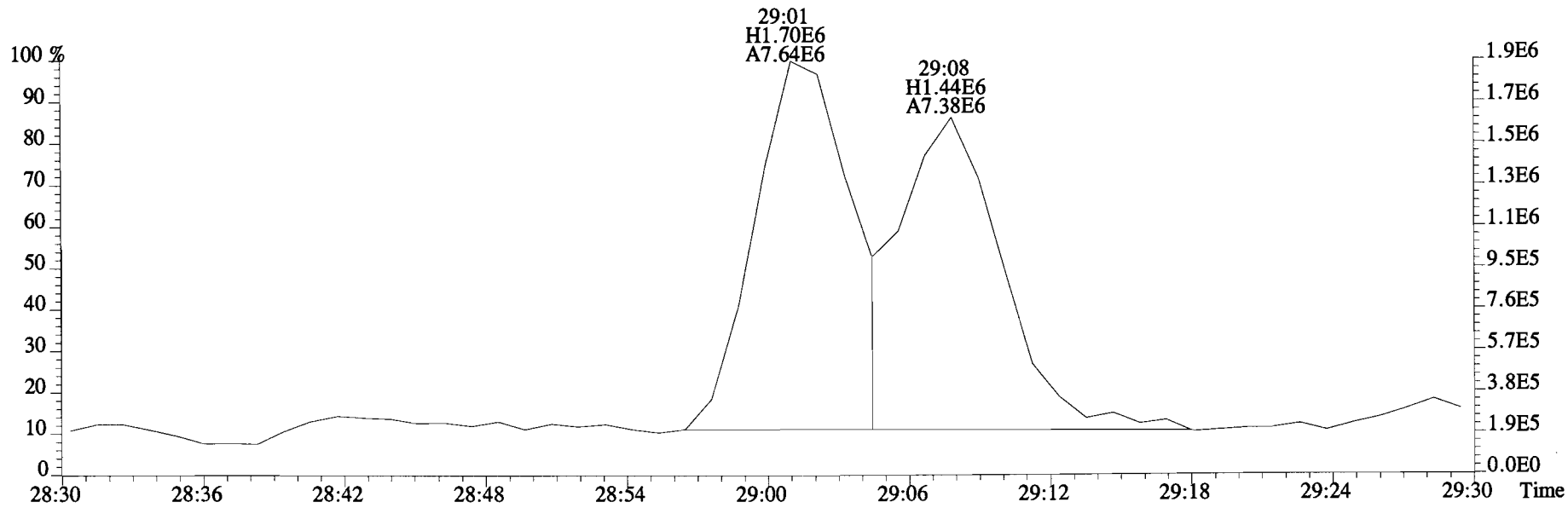
269.9986 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,370924.0,0.00%,F,F)



File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
268.0016 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,201924.0,0.00%,F,F)

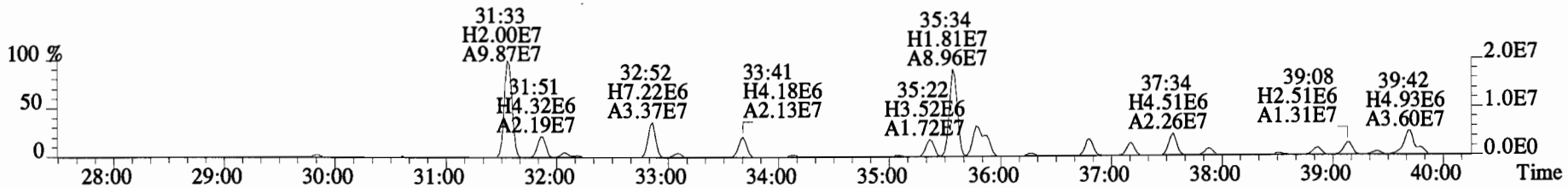


269.9986 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,370924.0,0.00%,F,F)

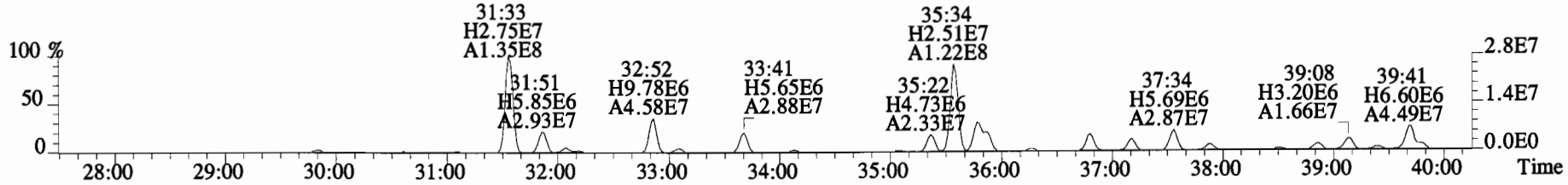


File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1

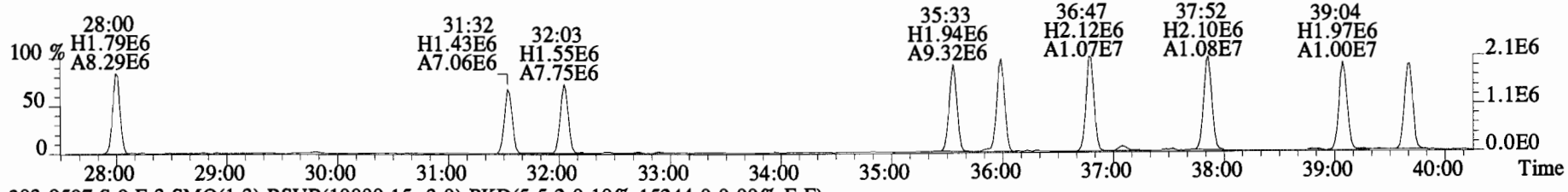
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4312.0,0.00%,F,F)



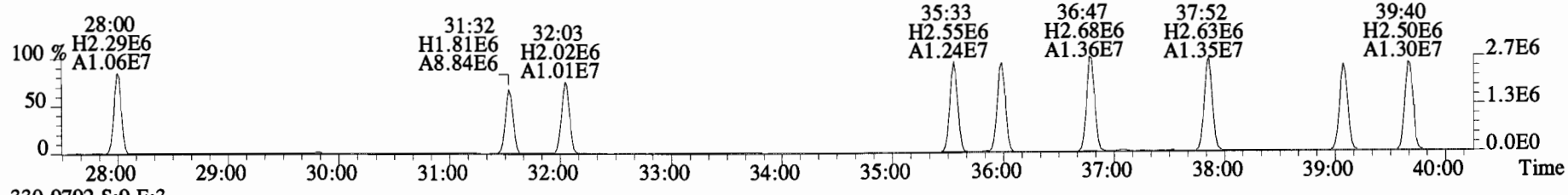
291.9194 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6192.0,0.00%,F,F)



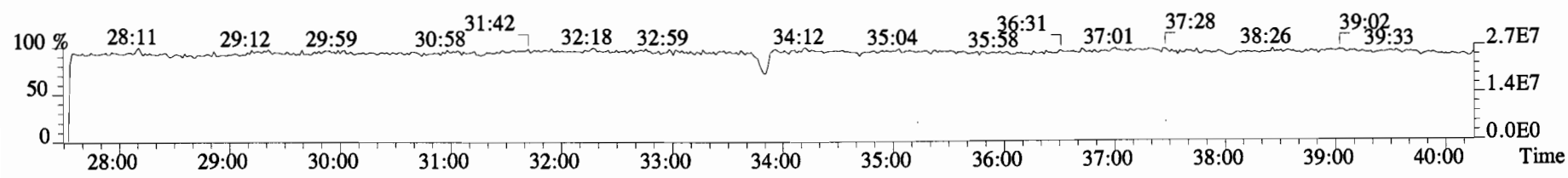
301.9626 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25508.0,0.00%,F,F)



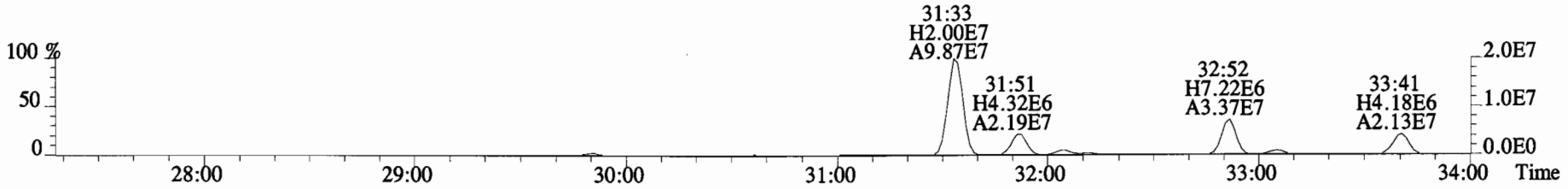
303.9597 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15244.0,0.00%,F,F)



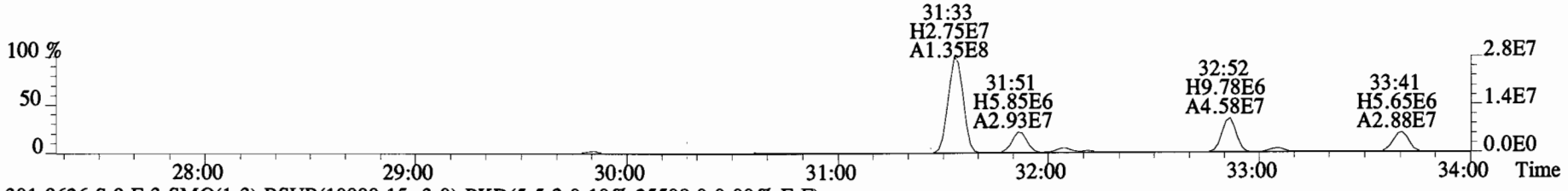
330.9792 S:9 F:3



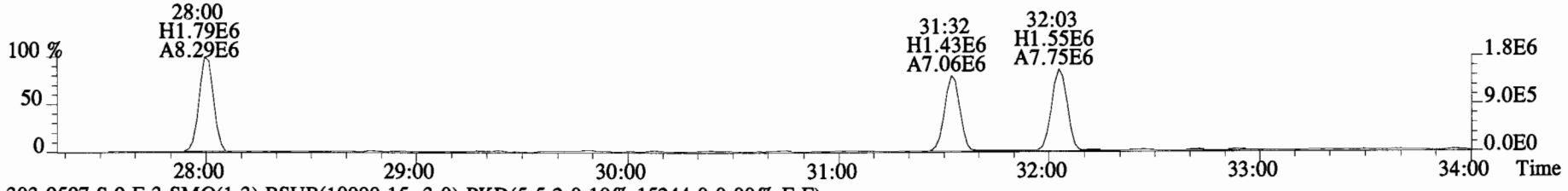
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4312.0,0.00%,F,F)



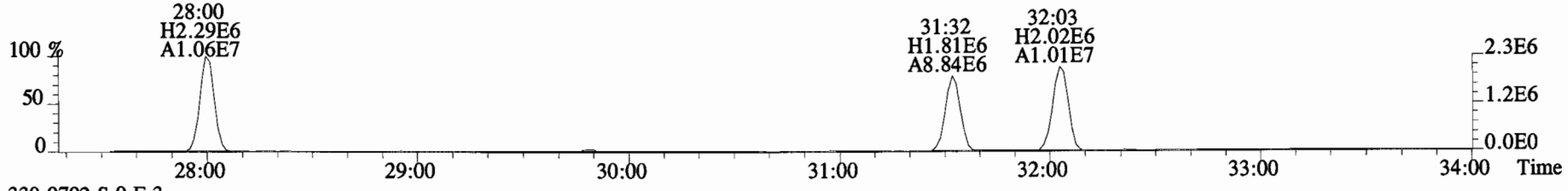
291.9194 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6192.0,0.00%,F,F)



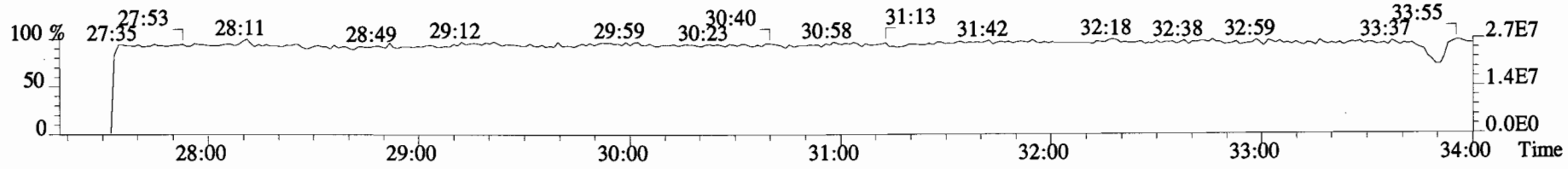
301.9626 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25508.0,0.00%,F,F)



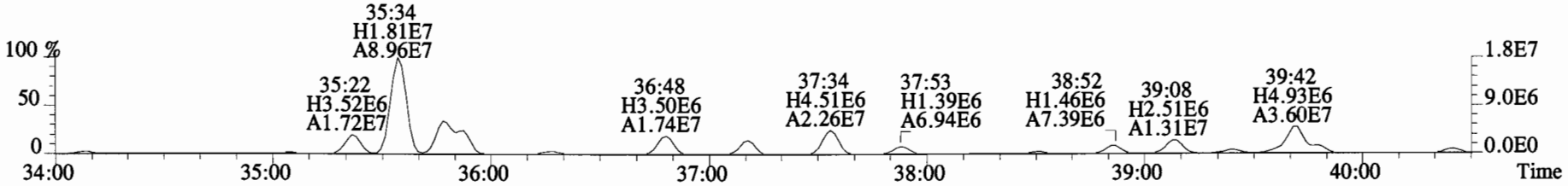
303.9597 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15244.0,0.00%,F,F)



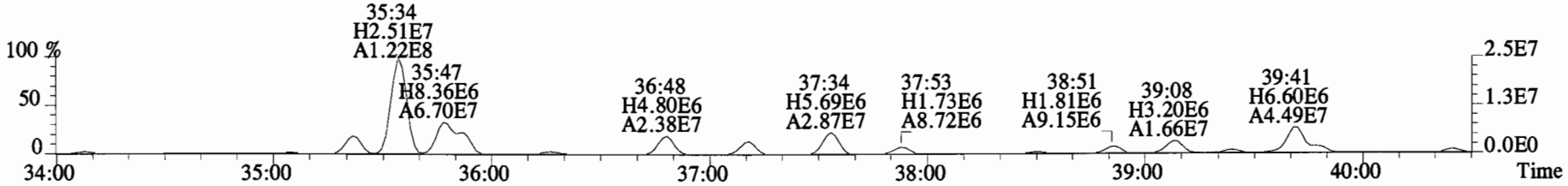
330.9792 S:9 F:3



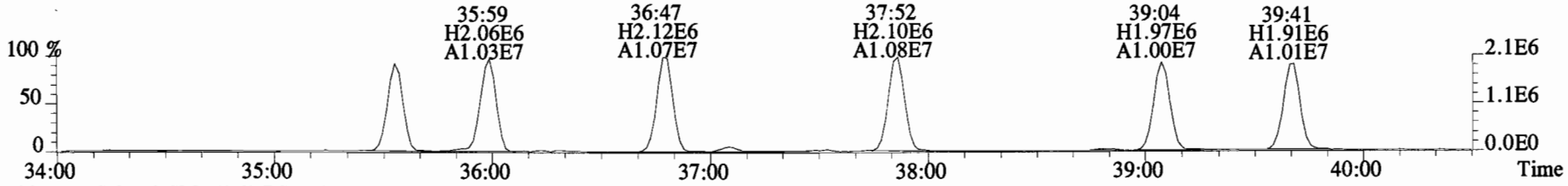
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4312.0,0.00%,F,F)



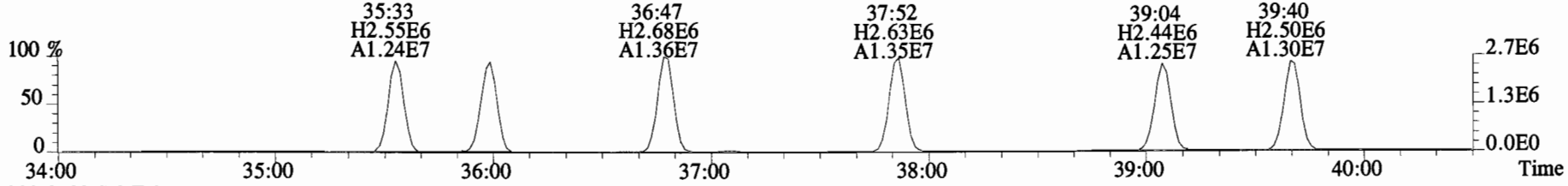
291.9194 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6192.0,0.00%,F,F)



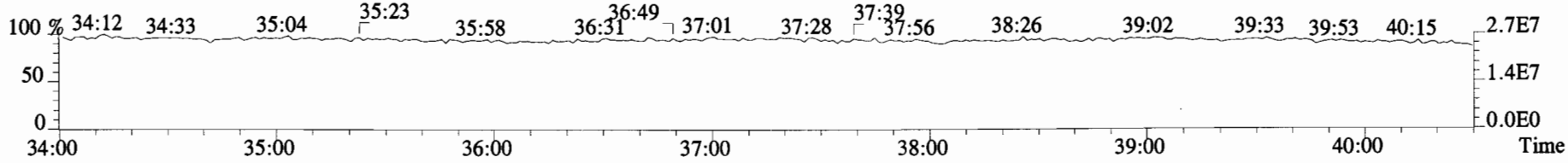
301.9626 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25508.0,0.00%,F,F)



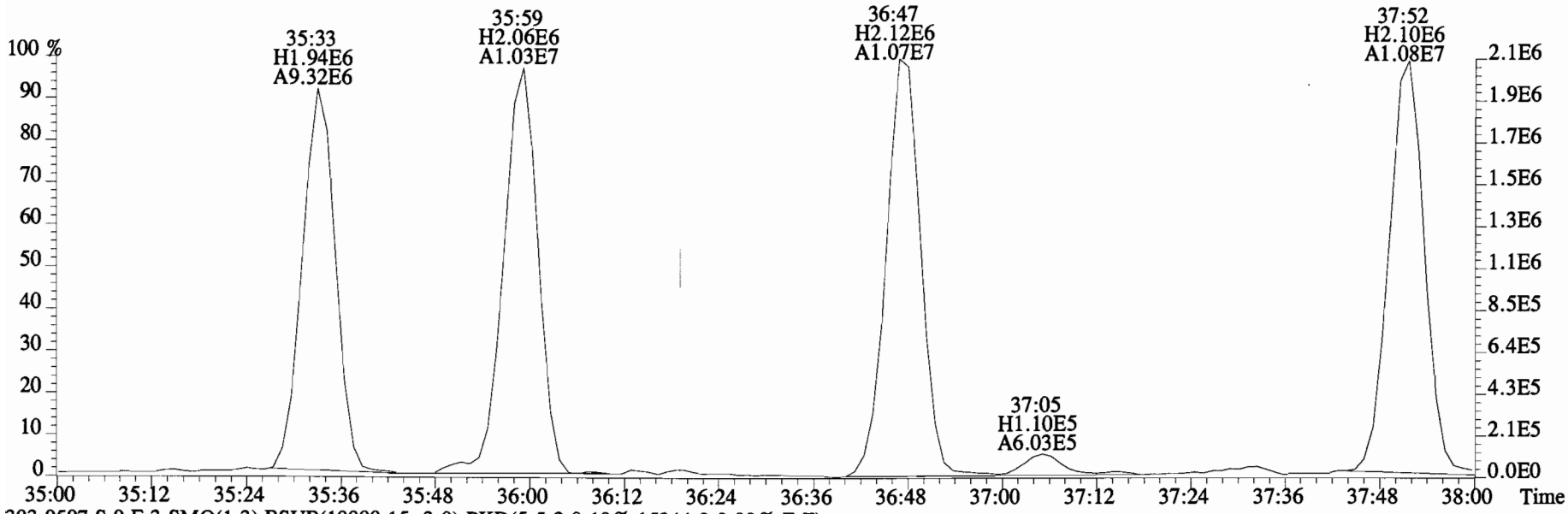
303.9597 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15244.0,0.00%,F,F)



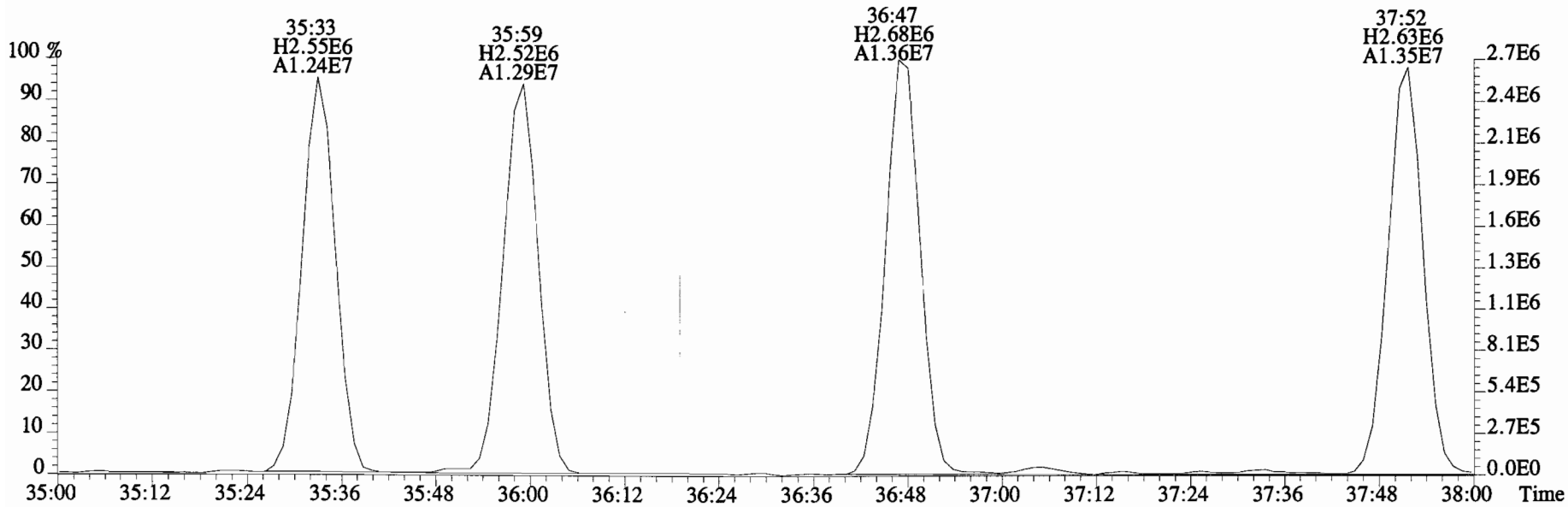
330.9792 S:9 F:3



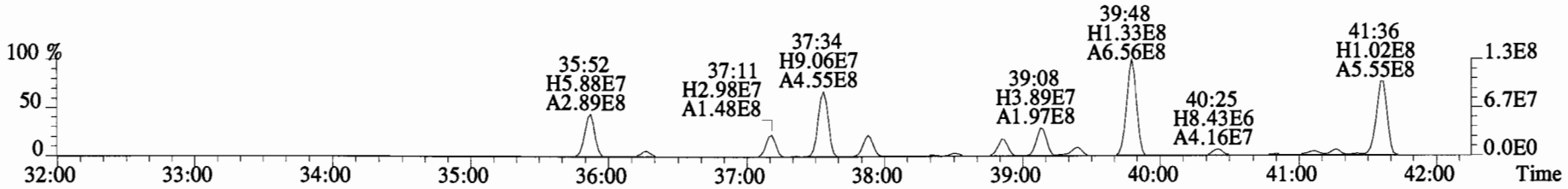
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
301.9626 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25508.0,0.00%,F,F)



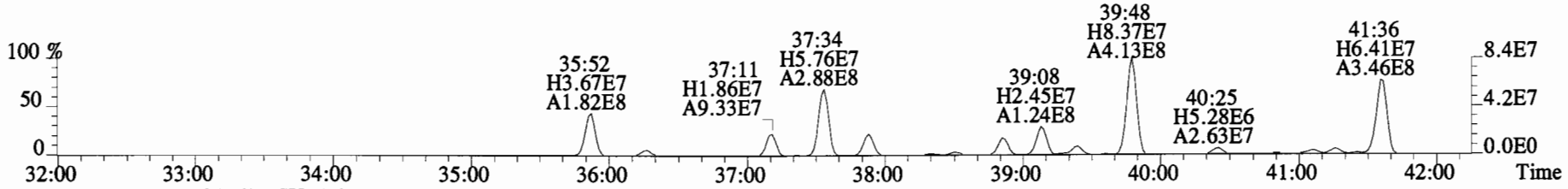
303.9597 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15244.0,0.00%,F,F)



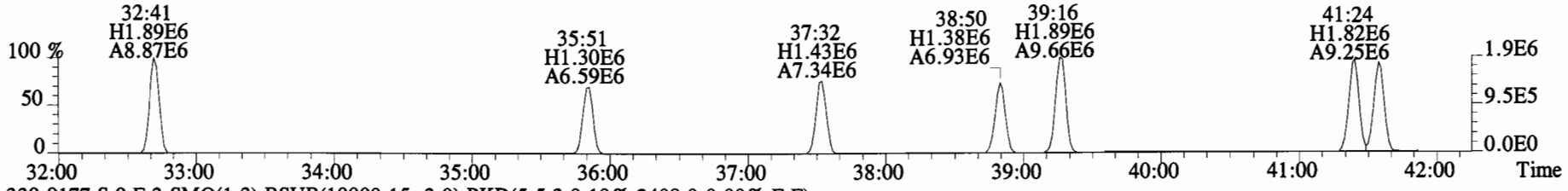
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3940.0,0.00%,F,F)



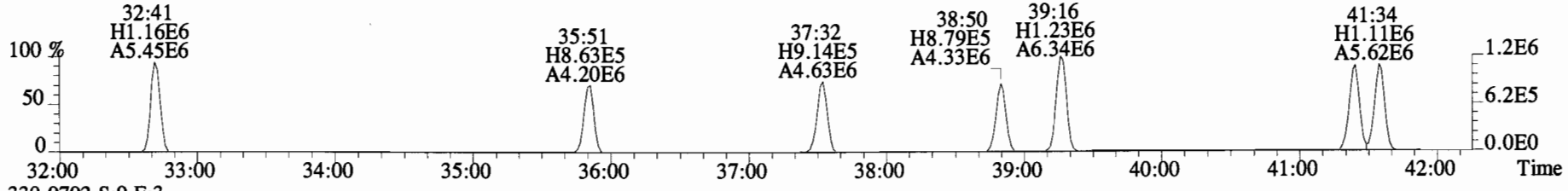
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2984.0,0.00%,F,F)



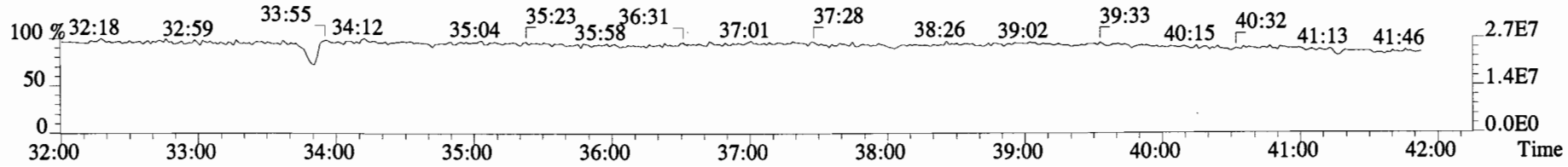
337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2472.0,0.00%,F,F)



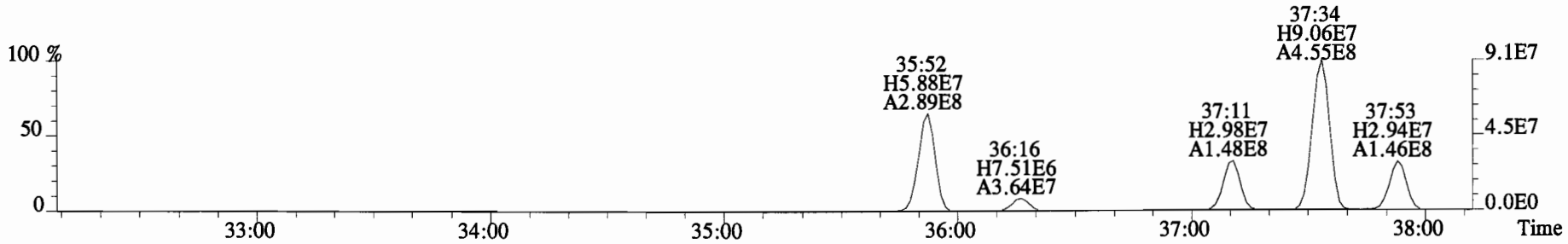
339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2408.0,0.00%,F,F)



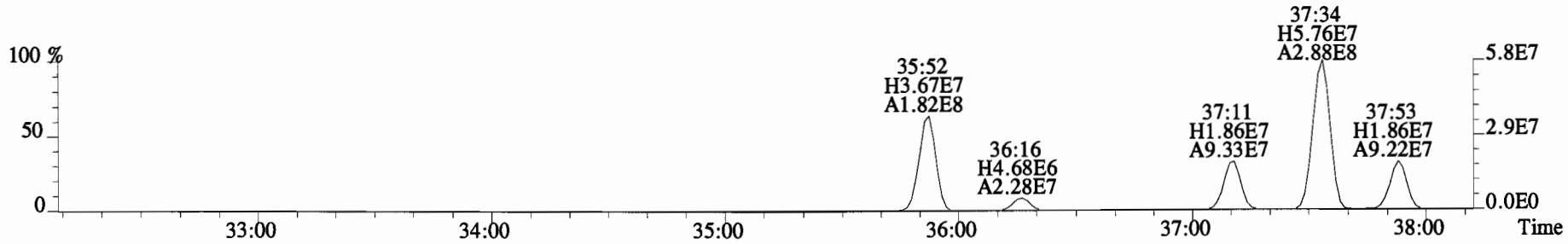
330.9792 S:9 F:3



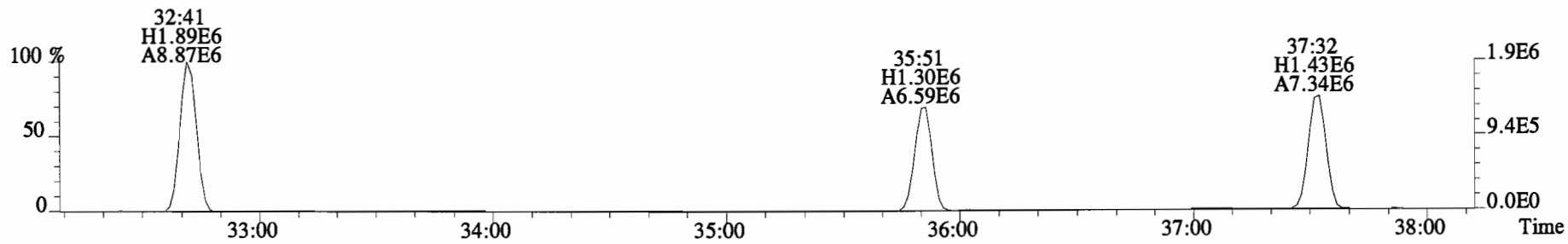
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3940.0,0.00%,F,F)



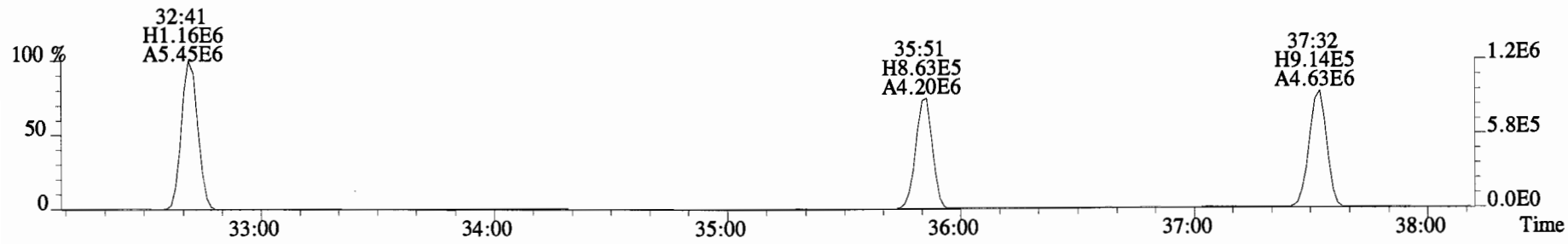
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2984.0,0.00%,F,F)



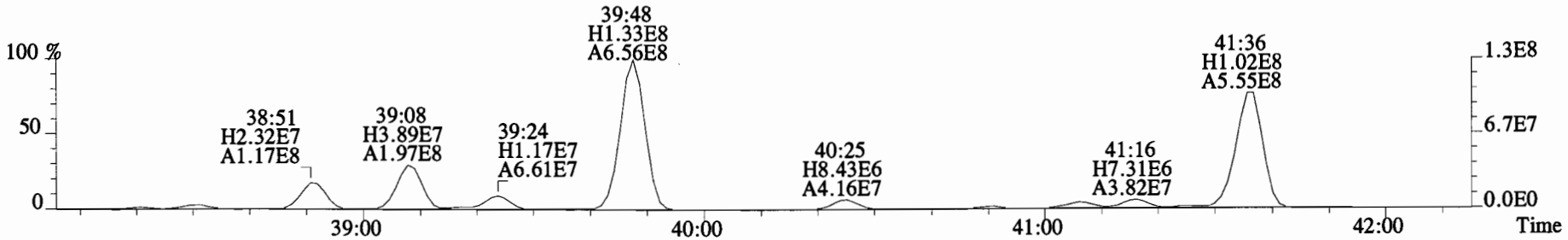
337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2472.0,0.00%,F,F)



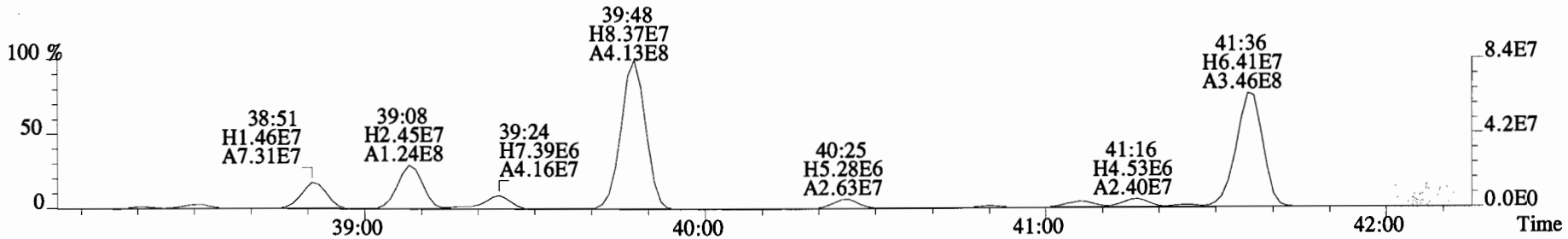
339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2408.0,0.00%,F,F)



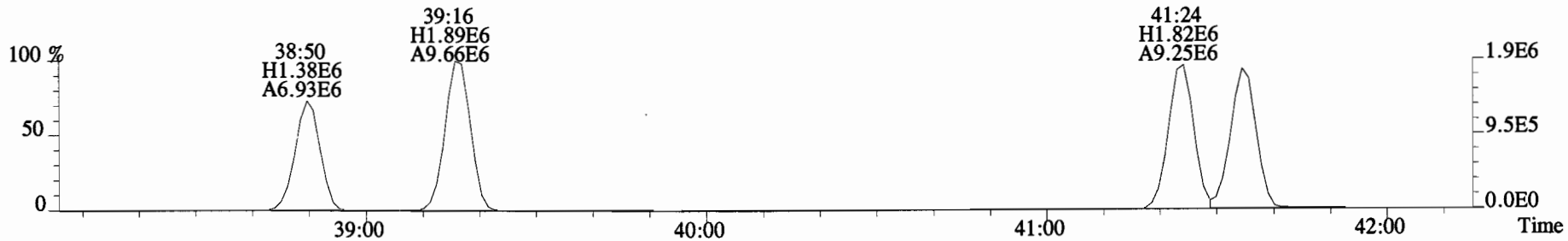
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3940.0,0.00%,F,F)



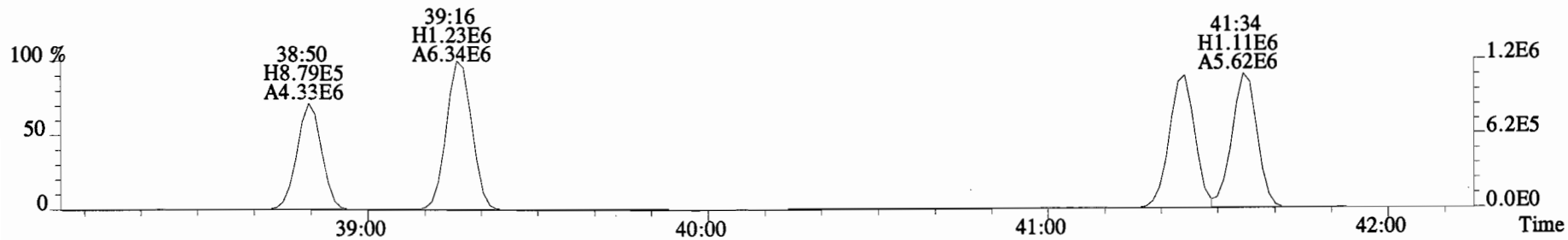
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2984.0,0.00%,F,F)



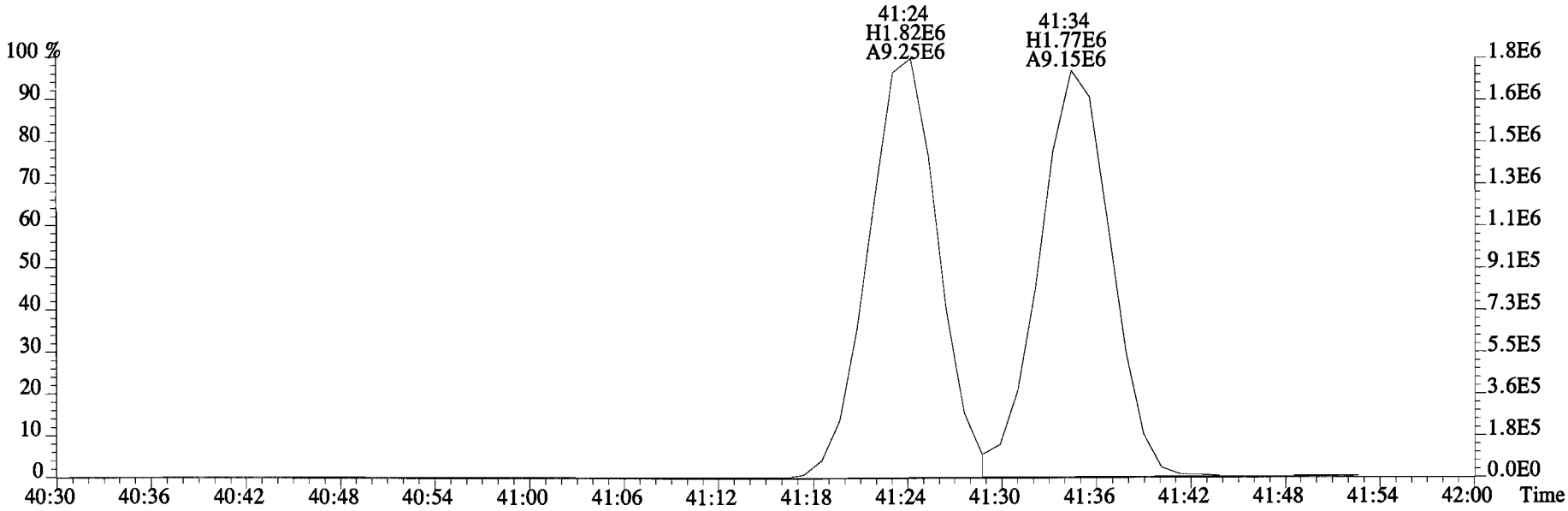
337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2472.0,0.00%,F,F)



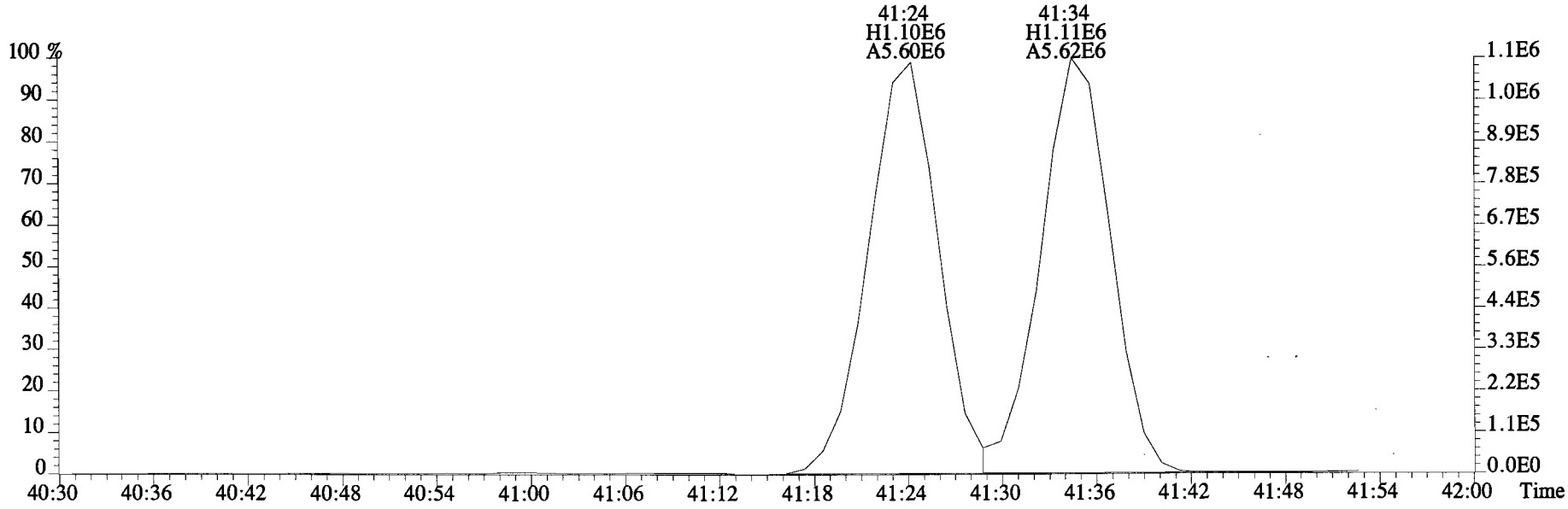
339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2408.0,0.00%,F,F)



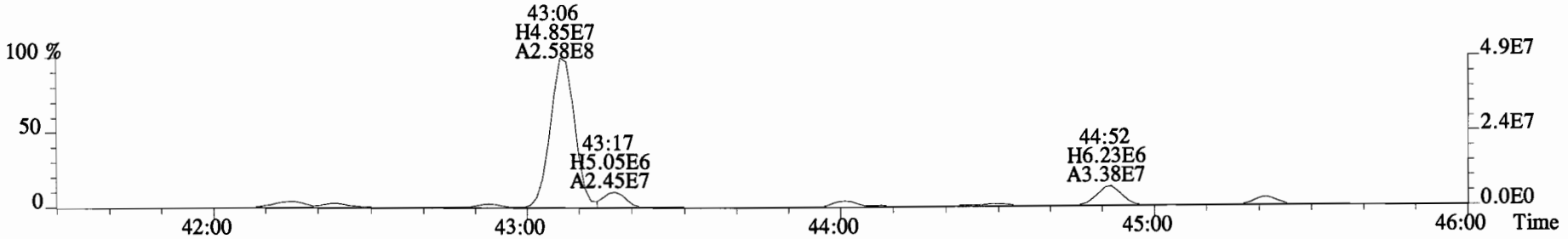
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2472.0,0.00%,F,F)



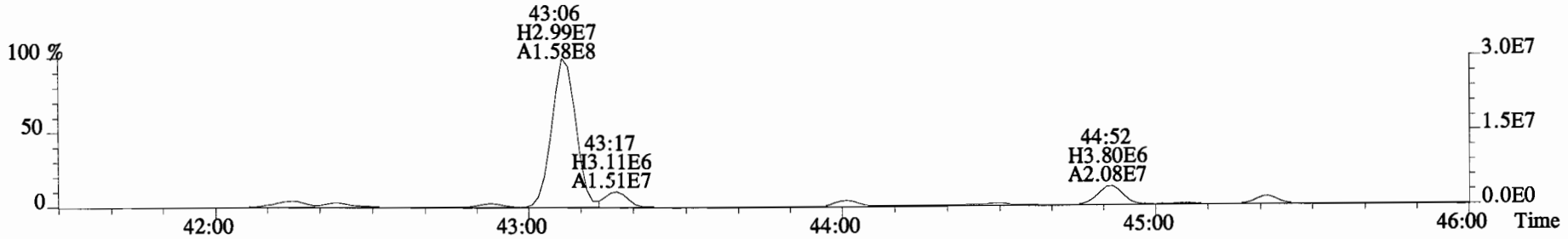
339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2408.0,0.00%,F,F)



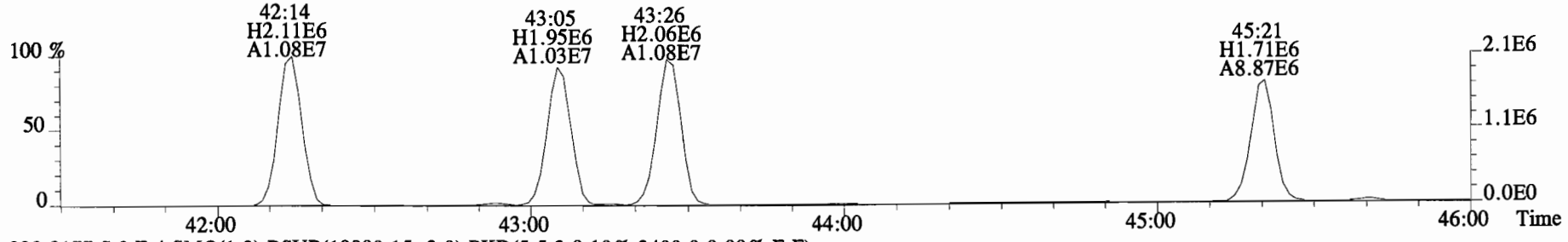
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
325.8804 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,75428.0,0.00%,F,F)



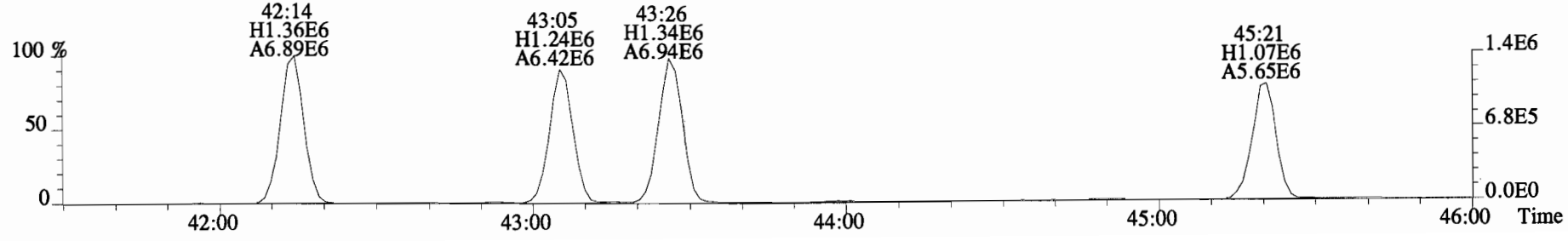
327.8775 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44276.0,0.00%,F,F)



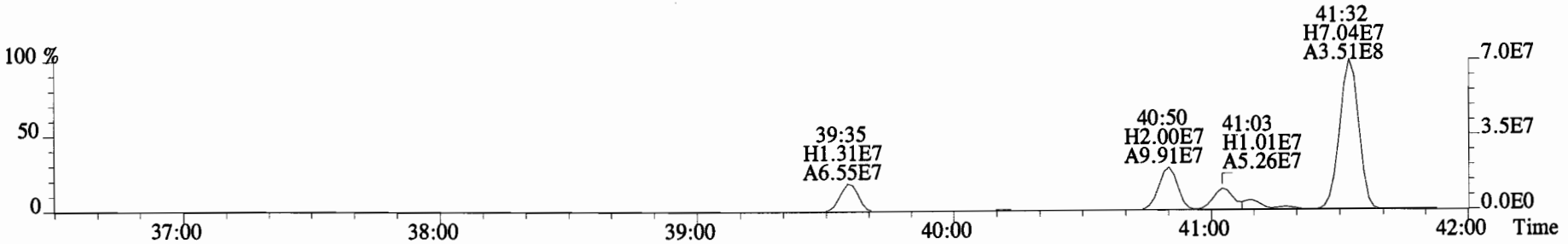
337.9207 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3032.0,0.00%,F,F)



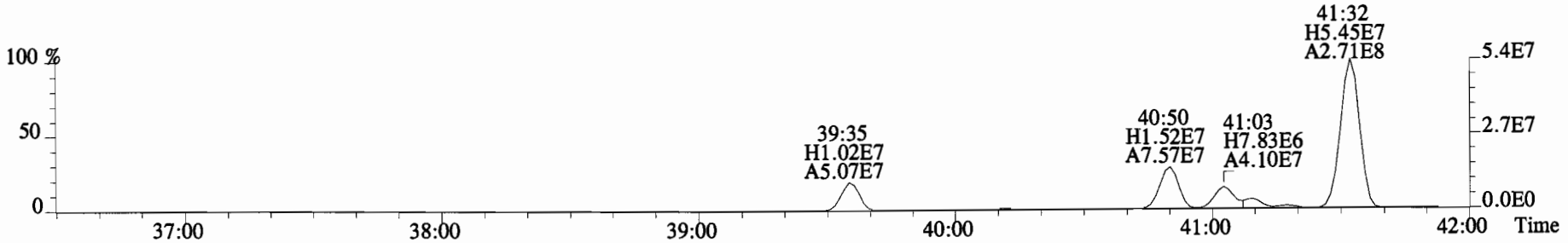
339.9177 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3400.0,0.00%,F,F)



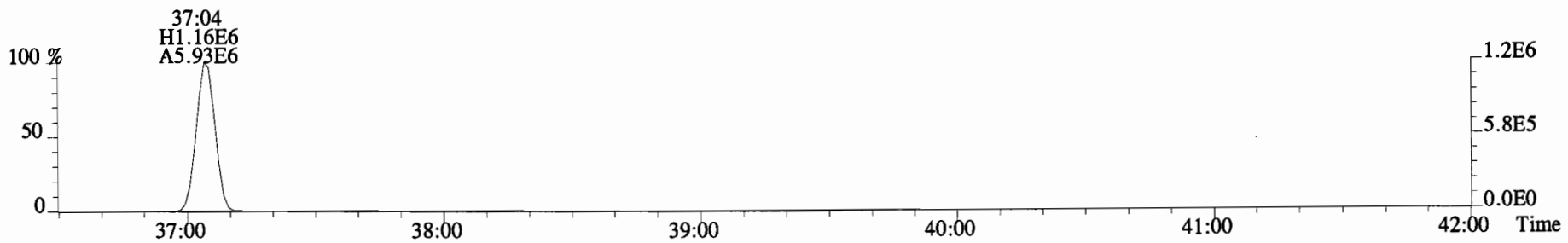
File:150328E2 #1-758 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1680.0,0.00%,F,F)



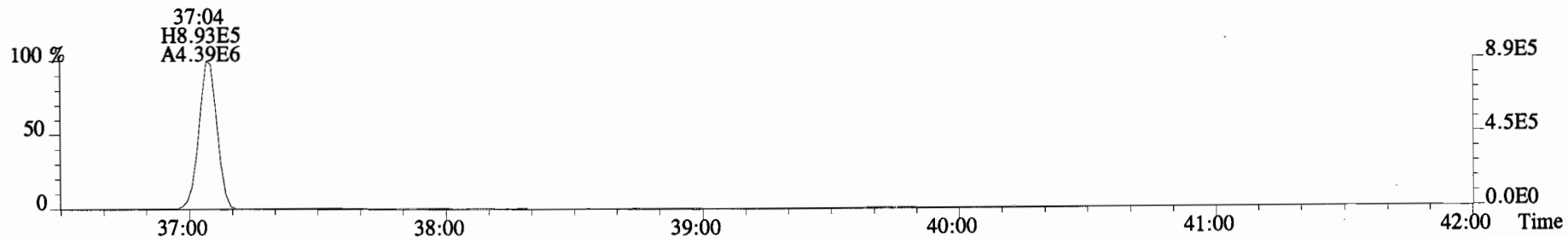
361.8385 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2072.0,0.00%,F,F)



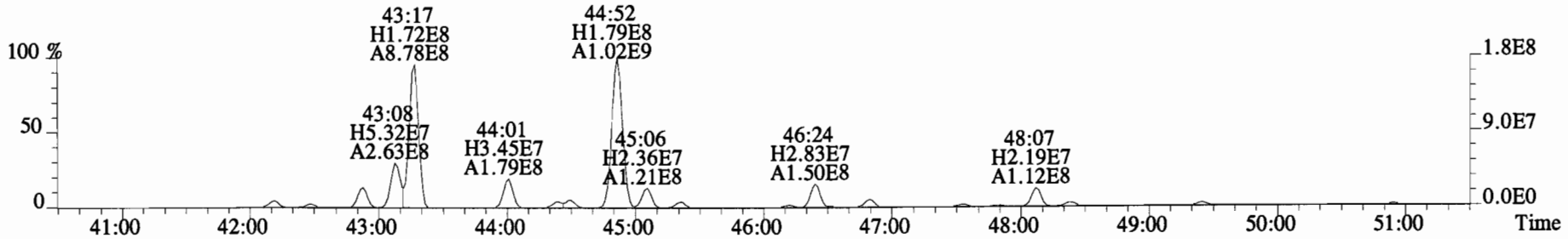
371.8817 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



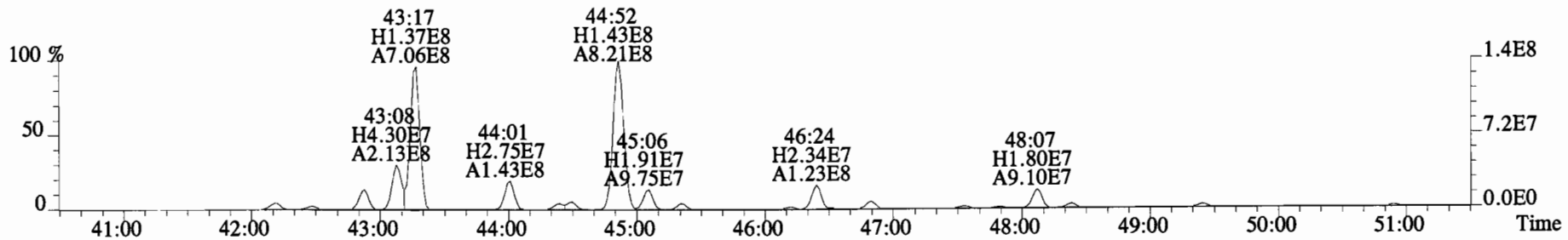
373.8788 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1872.0,0.00%,F,F)



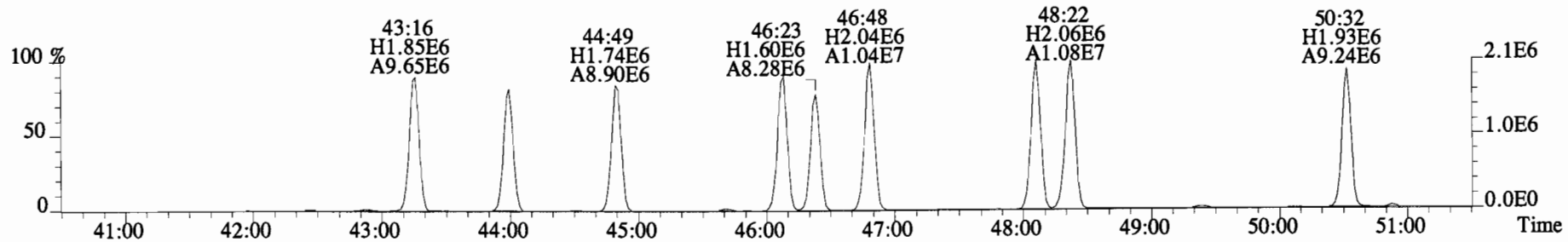
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
359.8415 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44396.0,0.00%,F,F)



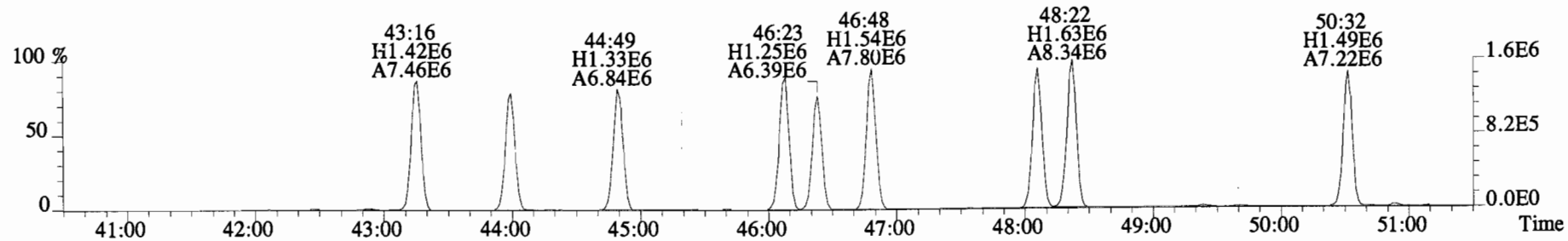
361.8385 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,38384.0,0.00%,F,F)



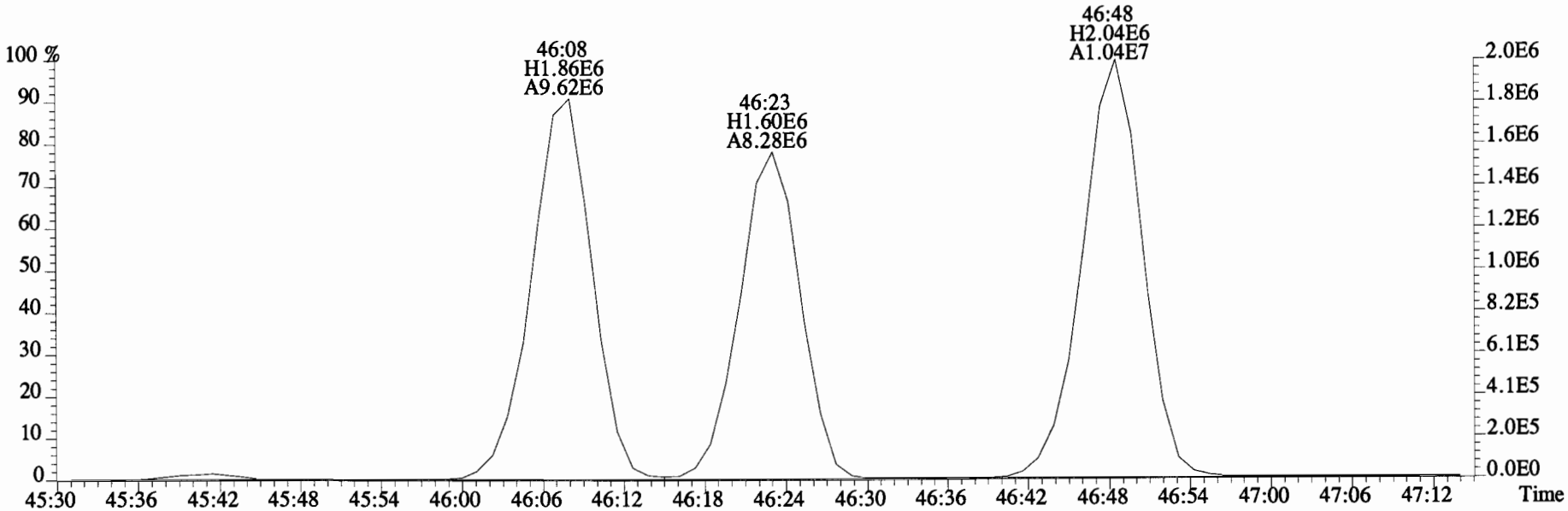
371.8817 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5064.0,0.00%,F,F)



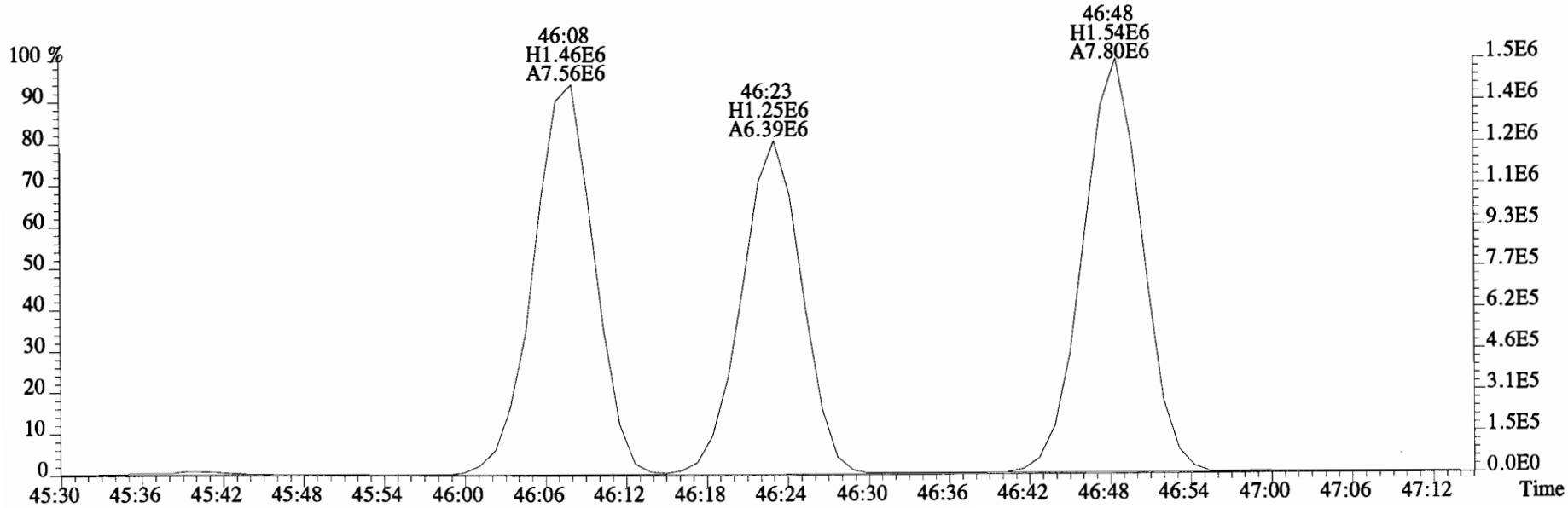
373.8788 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3636.0,0.00%,F,F)



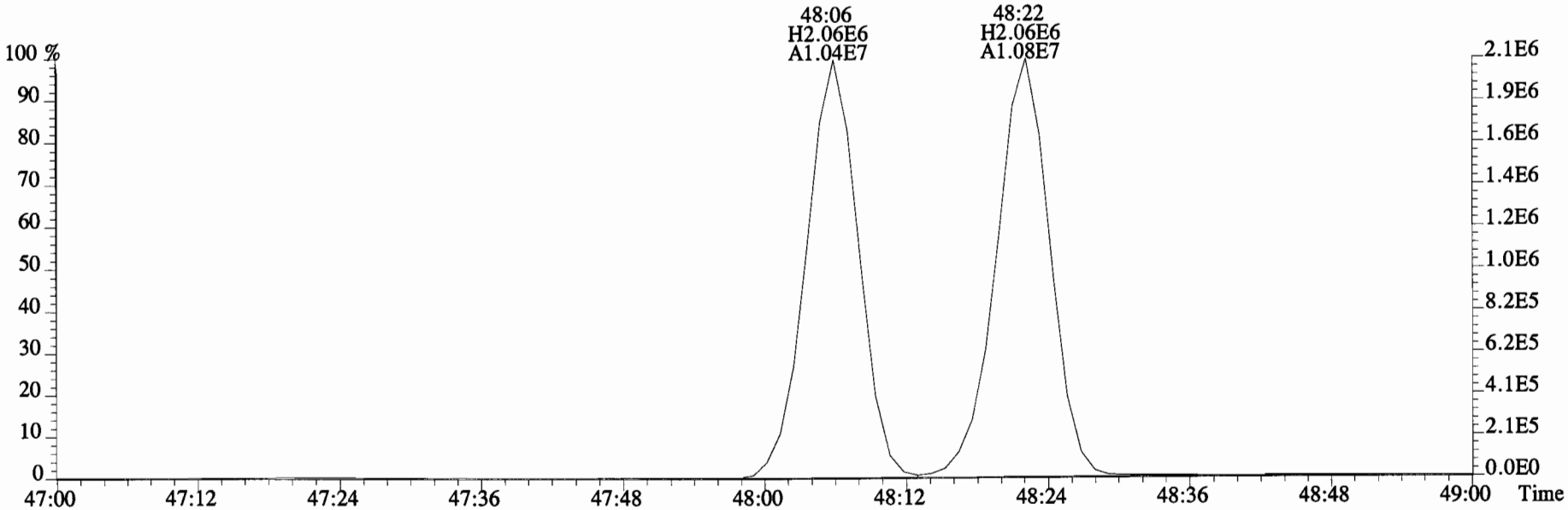
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
371.8817 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5064.0,0.00%,F,F)



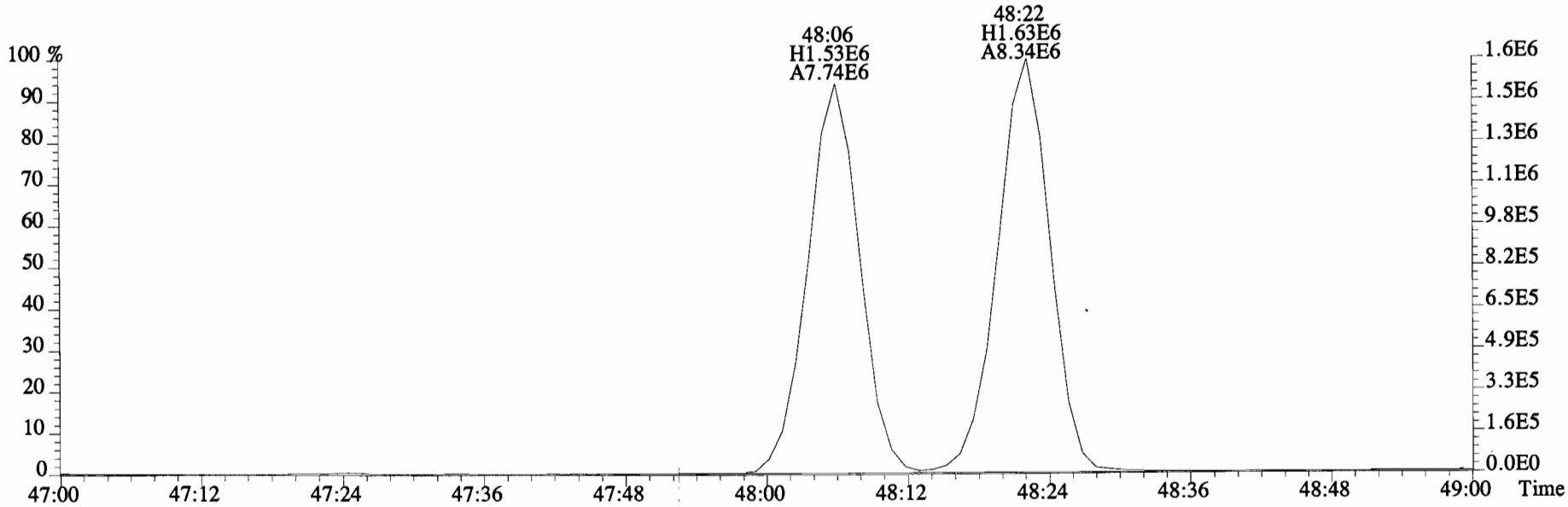
373.8788 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3636.0,0.00%,F,F)



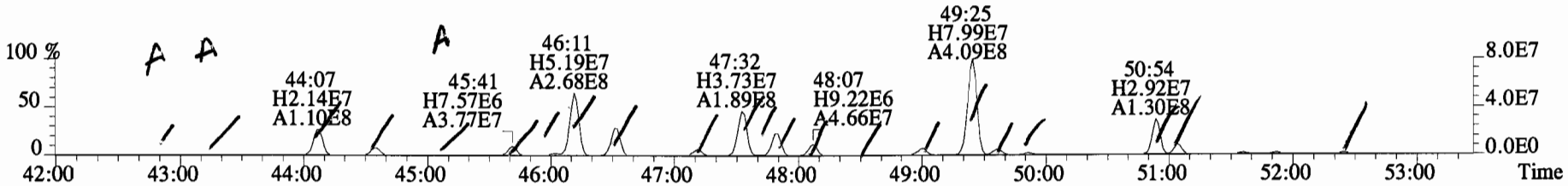
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
371.8817 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5064.0,0.00%,F,F)



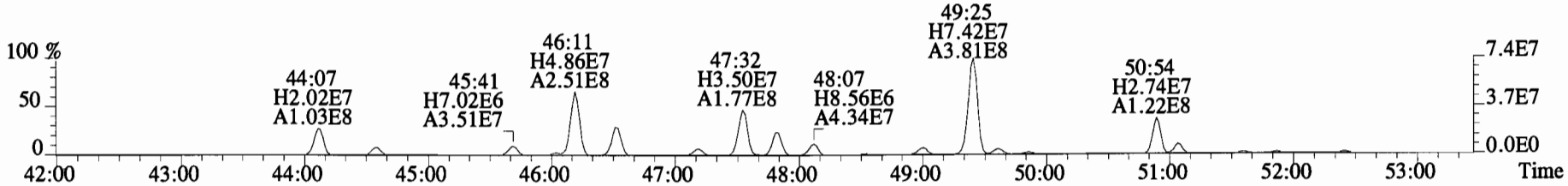
373.8788 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3636.0,0.00%,F,F)



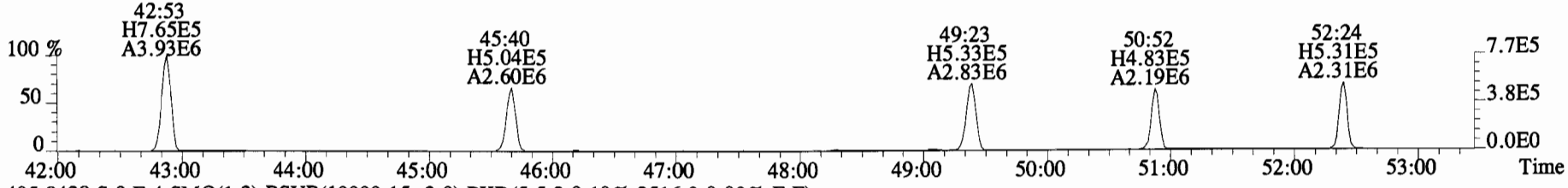
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6680.0,0.00%,F,F)



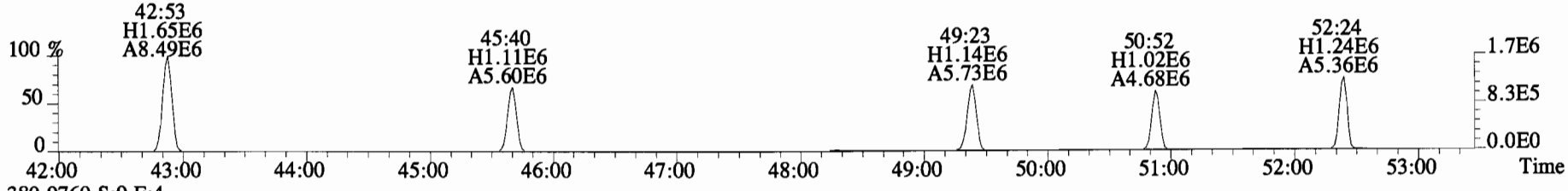
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7400.0,0.00%,F,F)



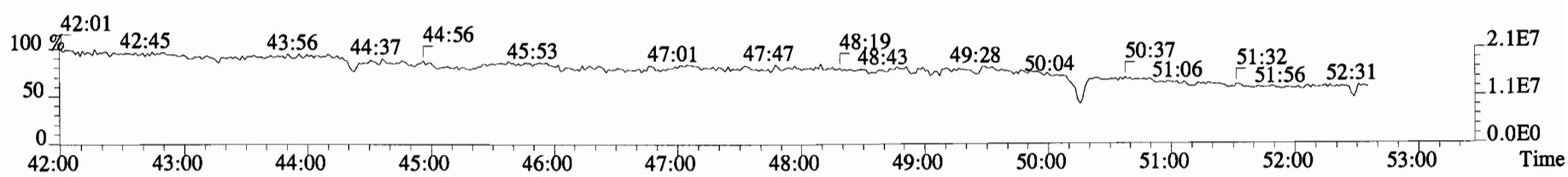
403.8457 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2376.0,0.00%,F,F)



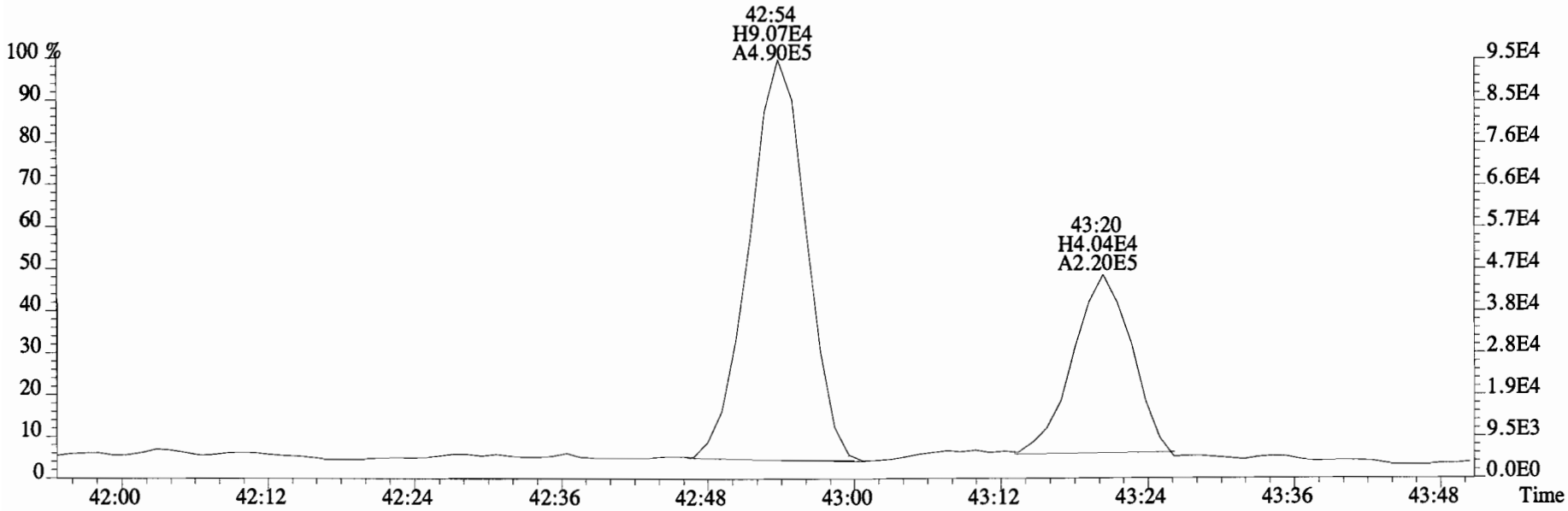
405.8428 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2516.0,0.00%,F,F)



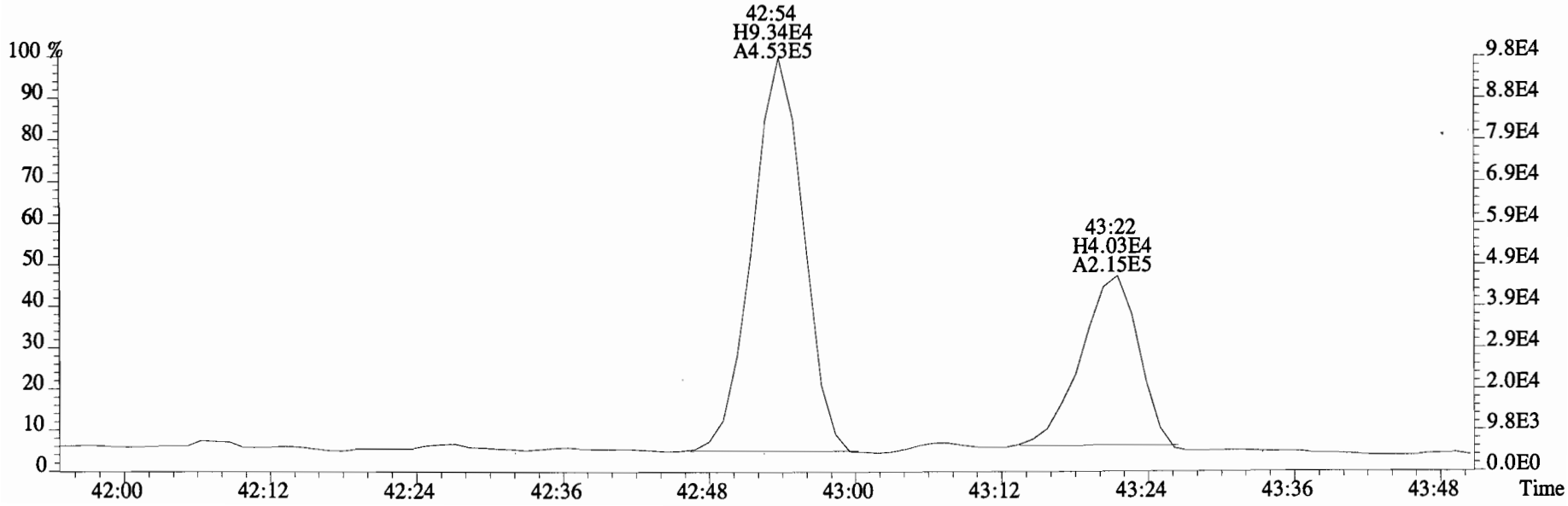
380.9760 S:9 F:4



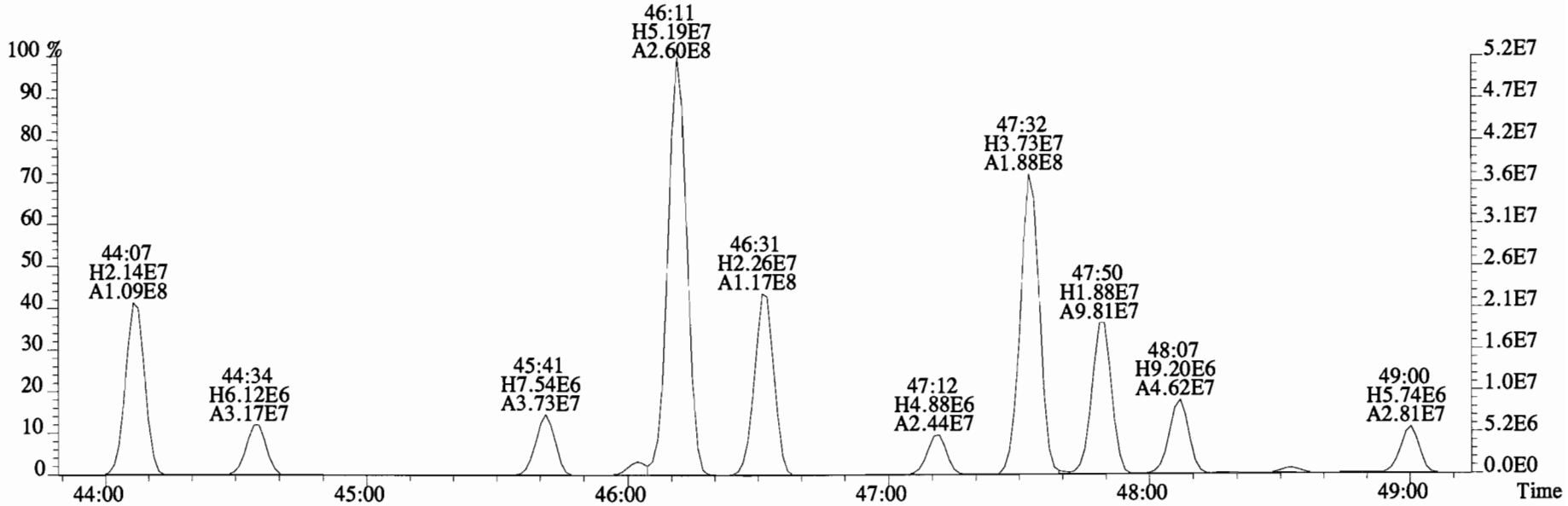
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6680.0,0.00%,F,F)



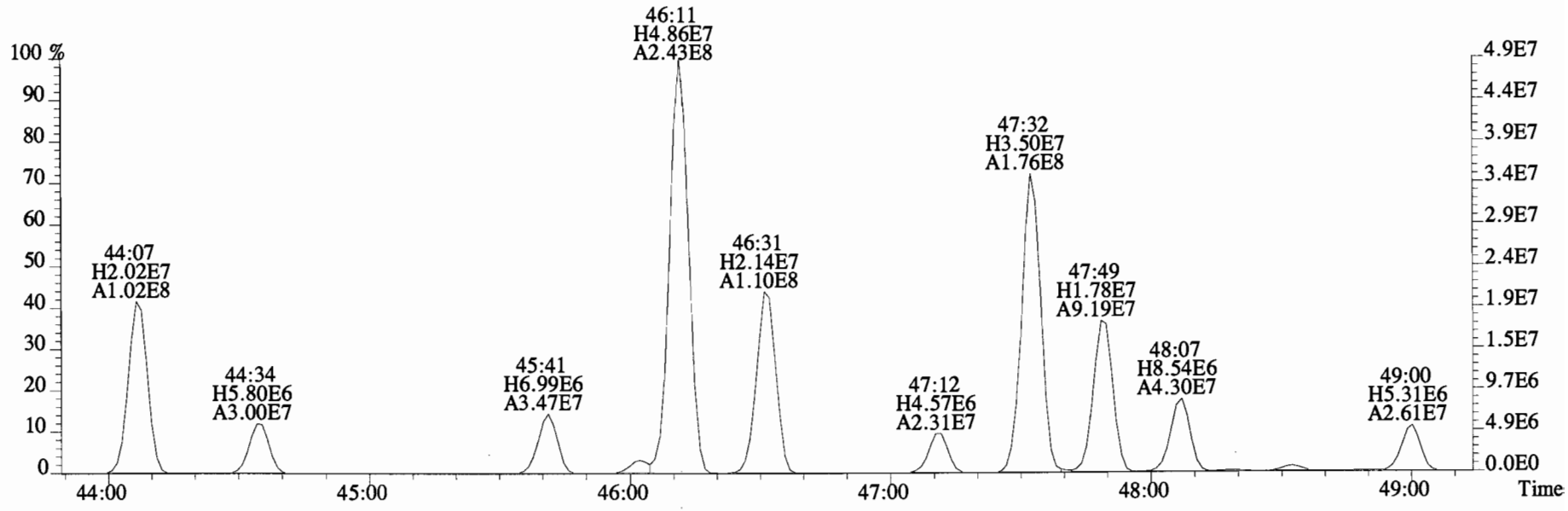
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7400.0,0.00%,F,F)



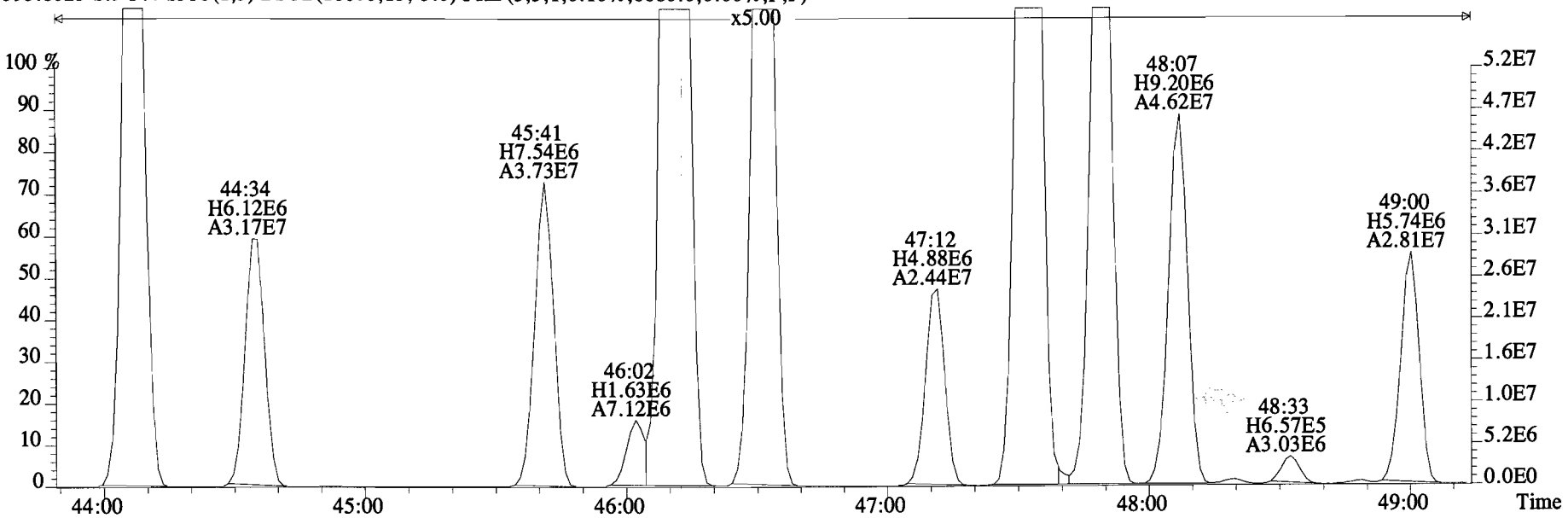
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6680.0,0.00%,F,F)



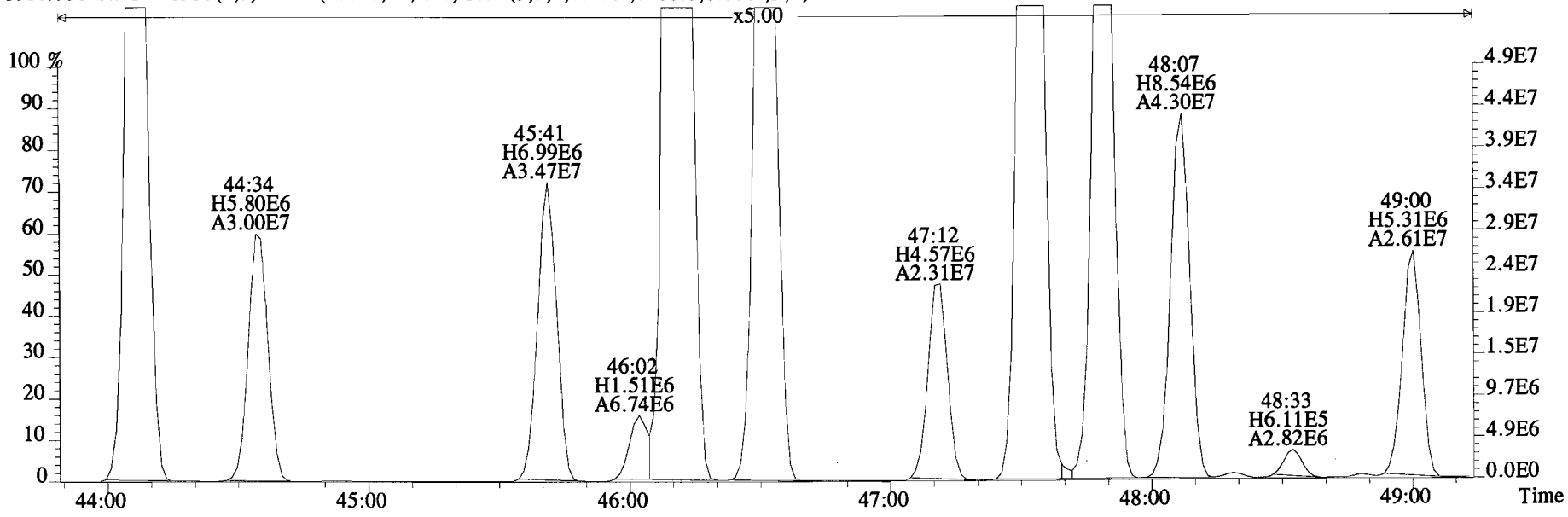
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7400.0,0.00%,F,F)



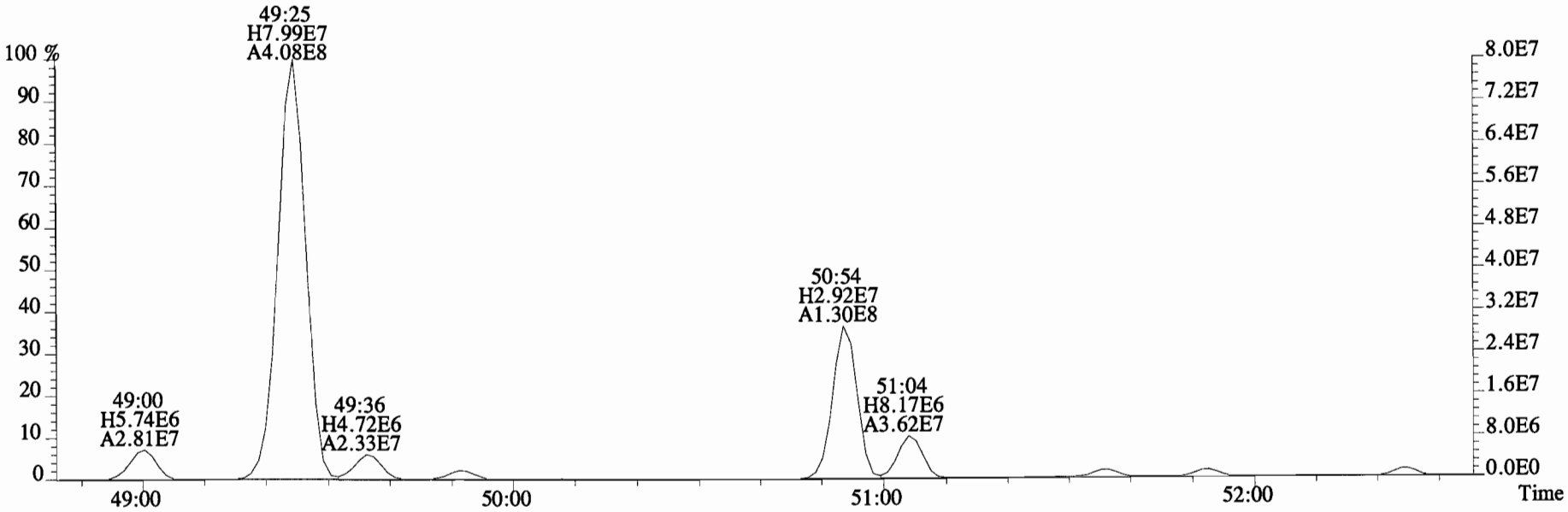
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6680.0,0.00%,F,F)



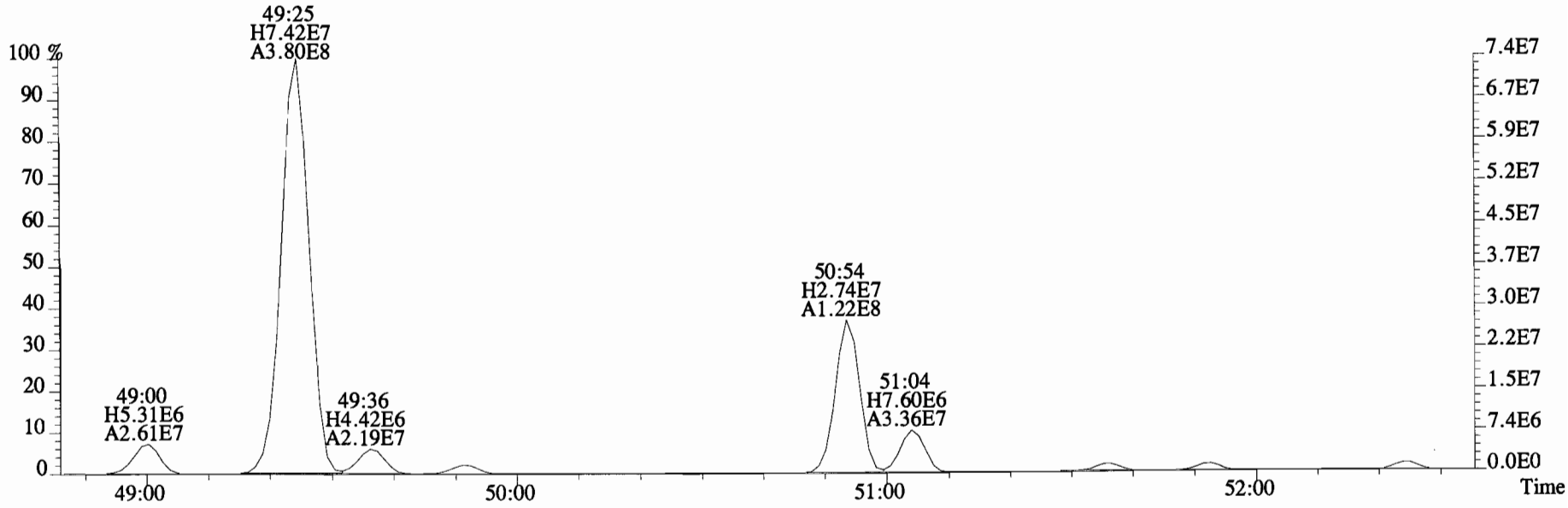
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7400.0,0.00%,F,F)



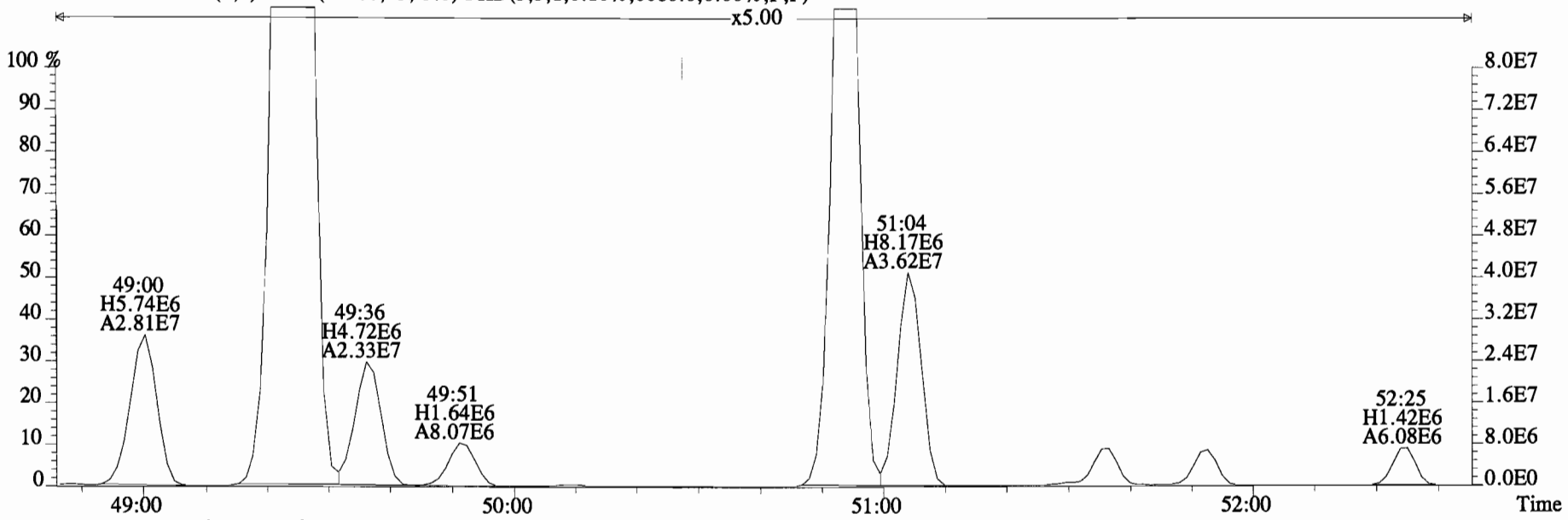
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6680.0,0.00%,F,F)



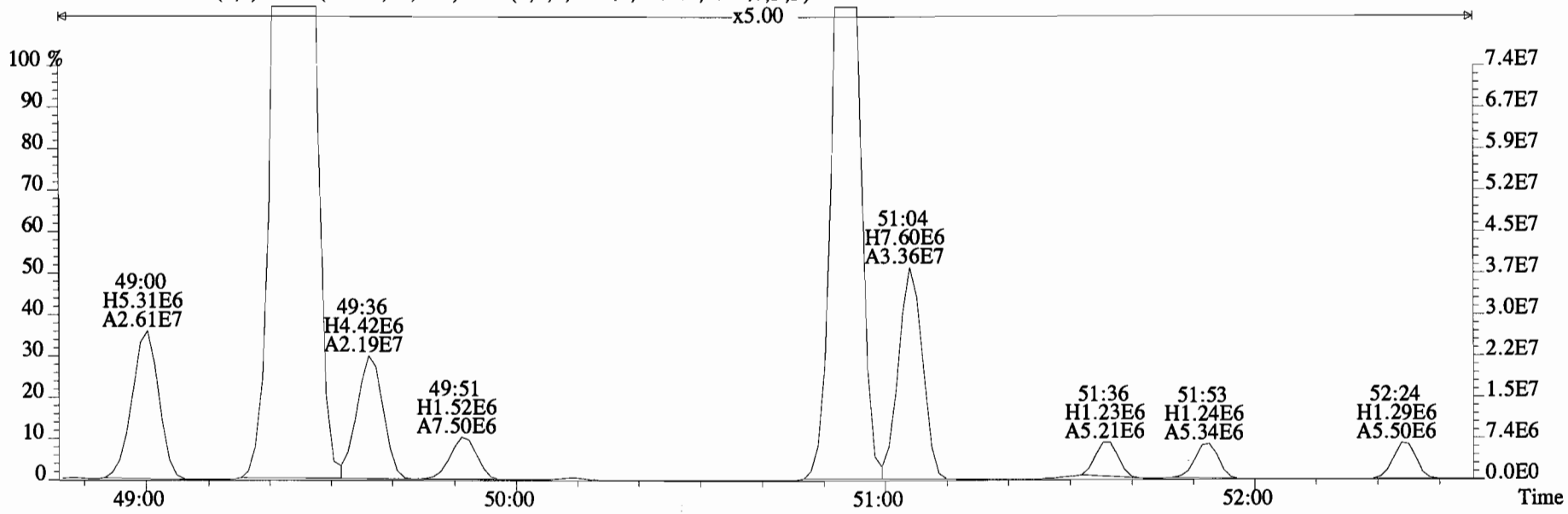
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7400.0,0.00%,F,F)



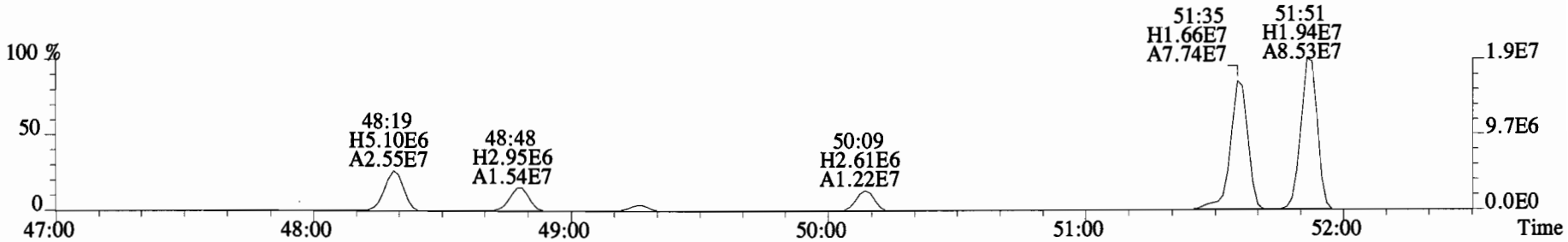
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6680.0,0.00%,F,F)



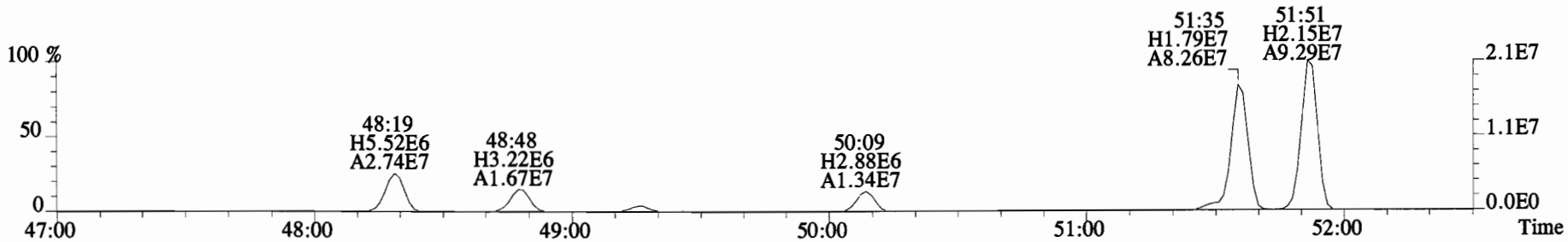
395.7995 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7400.0,0.00%,F,F)



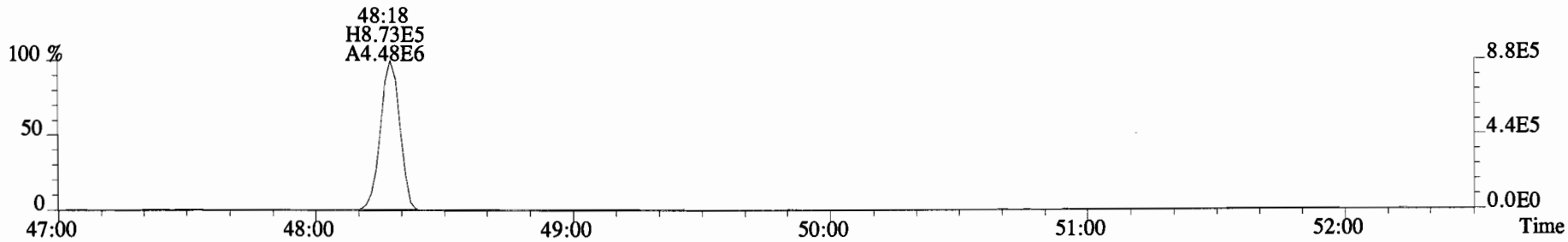
File:150328E2 #1-555 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2132.0,0.00%,F,F)



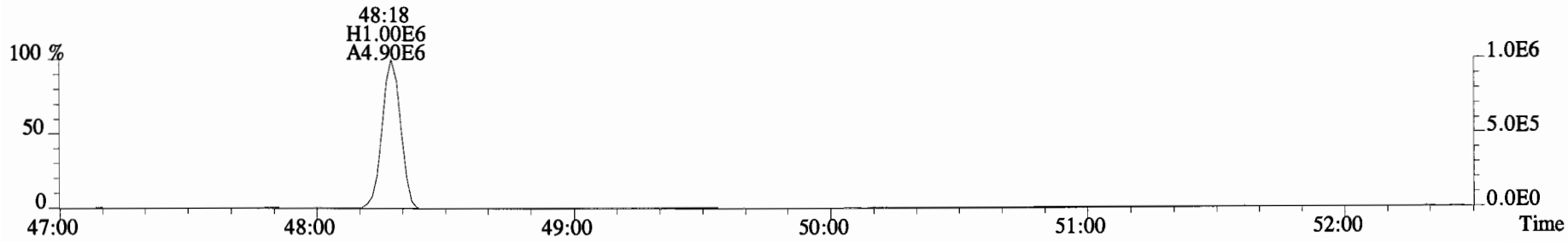
429.7606 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1640.0,0.00%,F,F)



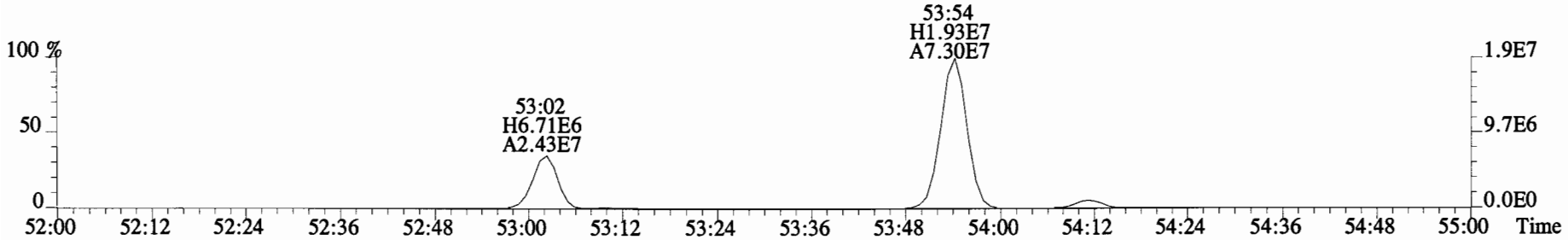
439.8038 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2344.0,0.00%,F,F)



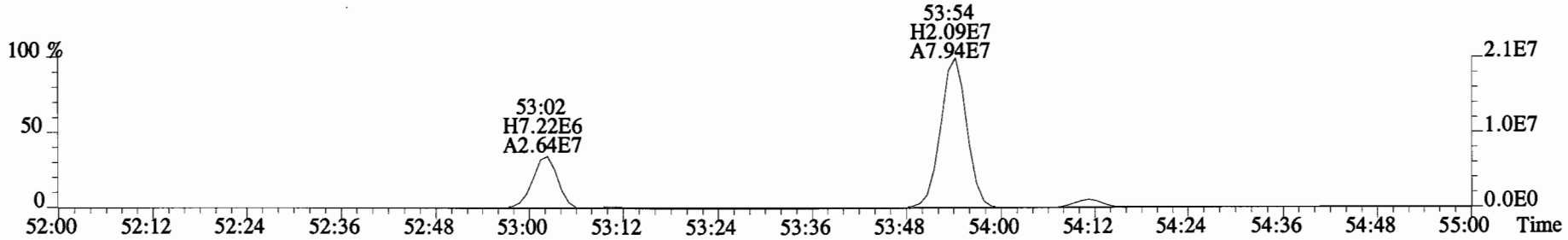
441.8008 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1964.0,0.00%,F,F)



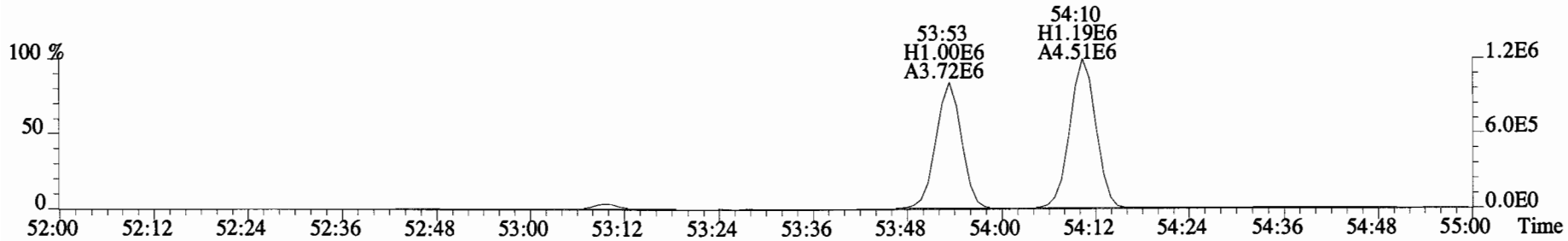
File:150328E2 #1-429 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
427.7635 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4304.0,0.00%,F,F)



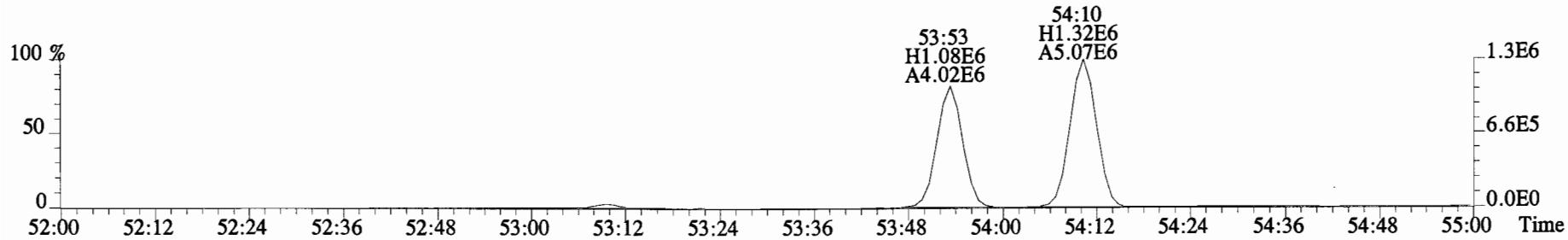
429.7606 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4092.0,0.00%,F,F)



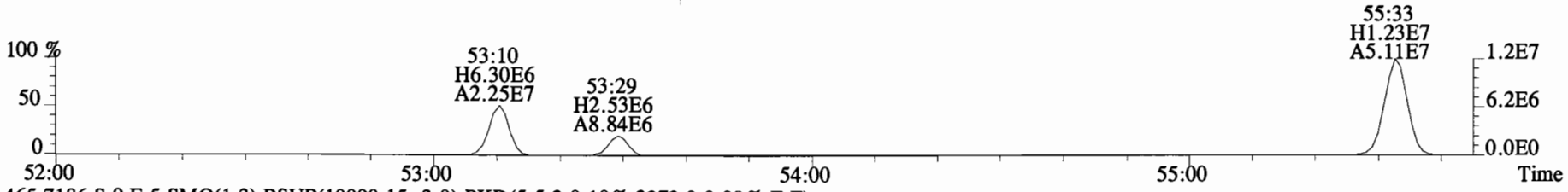
439.8038 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3564.0,0.00%,F,F)



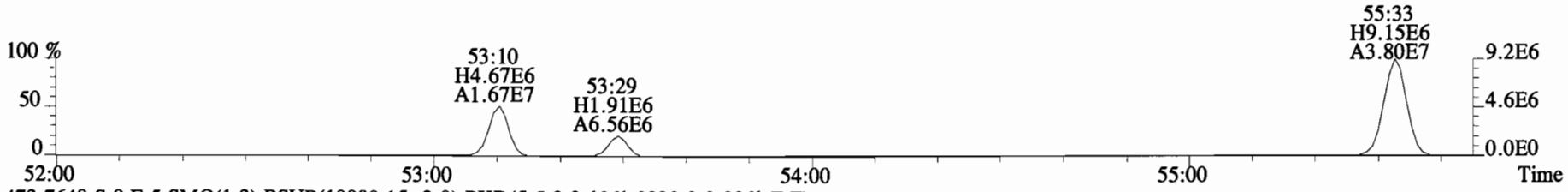
441.8008 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3844.0,0.00%,F,F)



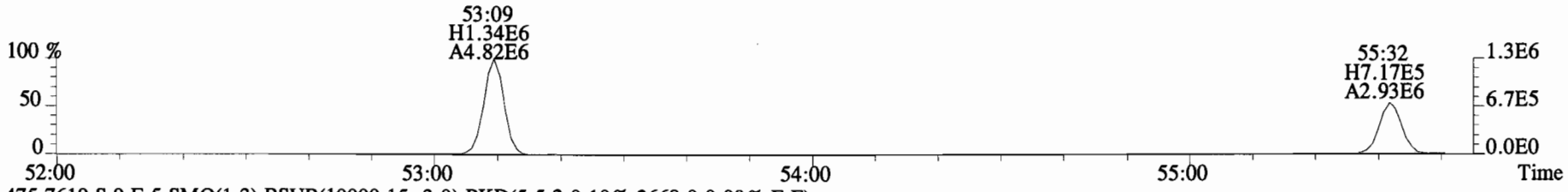
File:150328E2 #1-429 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
463.7216 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2016.0,0.00%,F,F)



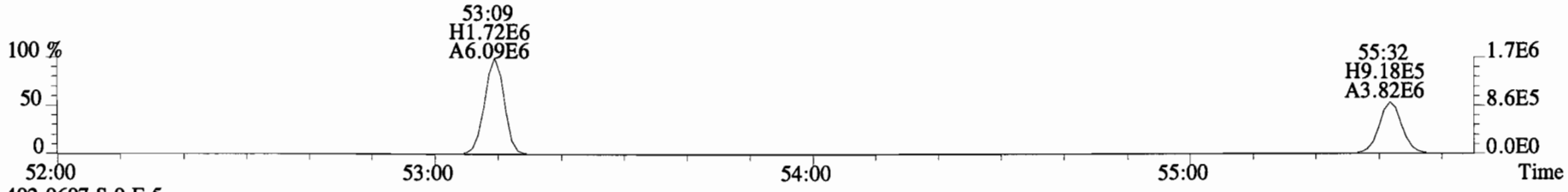
465.7186 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2272.0,0.00%,F,F)



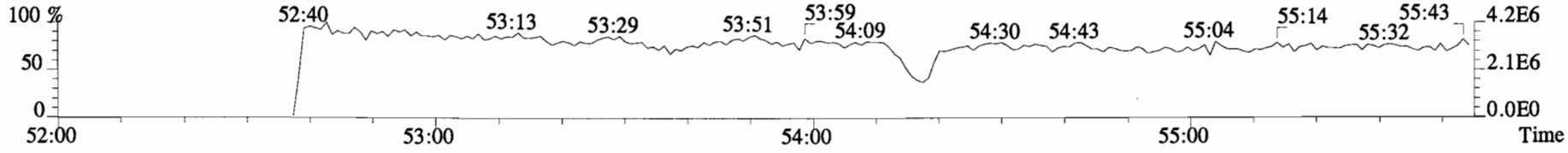
473.7648 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2932.0,0.00%,F,F)



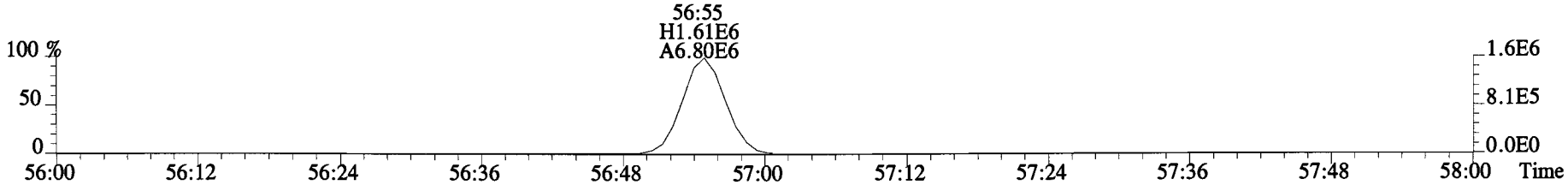
475.7619 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2668.0,0.00%,F,F)



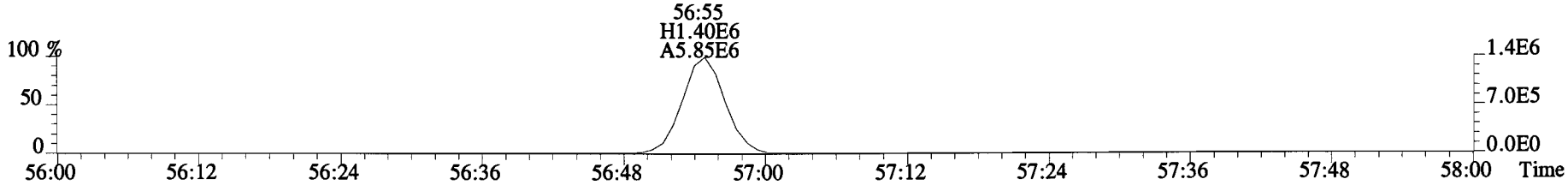
492.9697 S:9 F:5



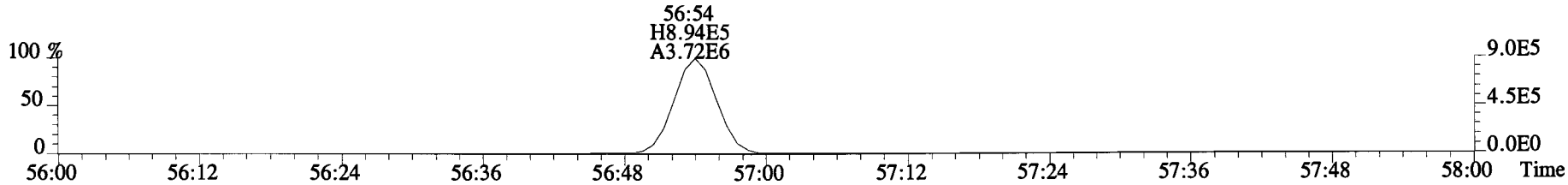
File:150328E2 #1-429 Acq:29-MAR-2015 05:23:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1400915-04RE1@5X BD-MH-10.9-20141203-S Exp:PCB_ZB1
497.6826 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1980.0,0.00%,F,F)



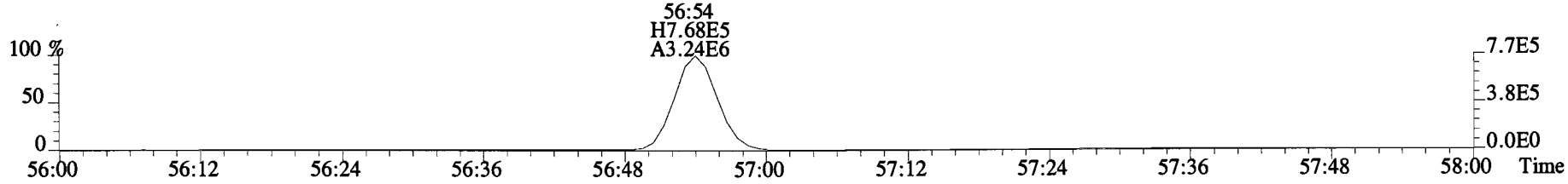
499.6797 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1760.0,0.00%,F,F)



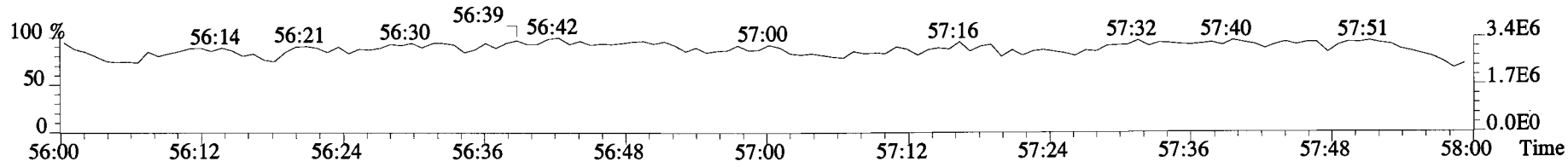
509.7229 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1644.0,0.00%,F,F)



511.7199 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1944.0,0.00%,F,F)



492.9697 S:9 F:5



Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.957 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	4.95e+05	2.91	y	16:11	1.19	170		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	3.31e+05	3.05	y	18:33	1.18	116		*	2.5	*	0.988	0.984	0.994
Mono	PCB-3	4.77e+05	2.72	y	18:47	1.43	139		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	3.89e+05	1.75	y	20:07	1.57	174		*	2.5	*	1.001	0.997	1.007
Di	PCB-7/9	*	*	n	NotF	1.21	*		18200	2.5	167	*	0.866	0.874
Di	PCB-6	4.23e+05	1.40	y	22:35	1.30	146		*	2.5	*	0.893	0.890	0.899
Di	PCB-5/8	1.70e+06	1.51	y	22:58	1.15	667		*	2.5	*	0.908	0.907	0.917
Di	PCB-14	*	*	n	NotF	1.11	*		18200	2.5	215	*	0.949	0.959
Di	PCB-11	4.65e+06	1.63	y	25:18	1.09	1800		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	3.19e+05	1.41	y	25:43	1.19	112		*	2.5	*	1.017	1.011	1.021
Di	PCB-15	2.22e+06	1.60	y	26:00	1.28	727		*	2.5	*	1.028	1.023	1.033
Tri	PCB-19	2.58e+05	1.23	n	24:16	1.04	211	R	*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n	NotF	1.71	*		2500	2.5	25.5	*	1.032	1.042
Tri	PCB-18	9.56e+05	1.13	y	25:55	0.78	656		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	9.11e+05	1.14	y	26:05	0.92	530		*	2.5	*	0.960	0.956	0.966
Tri	PCB-24/27	4.12e+05	1.06	y	26:38	1.19	186		*	2.5	*	0.980	0.977	0.987
Tri	PCB-16/32	2.02e+06	1.08	y	27:09	0.94	1150		*	2.5	*	0.999	0.995	1.005
Tri	PCB-34	*	*	n	NotF	1.14	*		3660	2.5	35.8	*	0.955	0.965
Tri	PCB-23	*	*	n	NotF	1.28	*		3660	2.5	31.8	*	0.959	0.969
Tri	PCB-29	*	*	n	NotF	1.08	*		3660	2.5	37.7	*	0.967	0.977
Tri	PCB-26	1.09e+06	1.09	y	28:30	1.21	423		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	4.20e+05	1.29	n	28:40	1.26	157	R	*	2.5	*	0.985	0.979	0.989
Tri	PCB-31	4.67e+06	1.09	y	29:01	1.28	1710		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	4.00e+06	1.08	y	29:08	1.71	1100		*	2.5	*	1.001	0.995	1.005
Tri	PCB-20/21/33	2.30e+06	1.07	y	29:46	1.08	998		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	1.40e+06	1.16	y	30:11	1.21	545		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	*	*	n	NotF	1.14	*		3660	2.5	47.0	*	0.928	0.938
Tri	PCB-39	*	*	n	NotF	1.12	*		3660	2.5	48.2	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF	1.20	*		3660	2.5	44.8	*	0.966	0.976
Tri	PCB-35	4.43e+05	1.06	y	32:39	1.23	167		*	2.5	*	0.986	0.982	0.992
Tri	PCB-37	2.60e+06	1.03	y	33:07	1.23	985		*	2.5	*	1.001	0.995	1.005
Tetra	PCB-54	3.26e+04	0.58	n	27:59	1.10	18.2	R	*	2.5	*	1.000	0.996	1.006
Tetra	PCB-50	*	*	n	NotF	0.88	*		3800	2.5	56.4	*	1.037	1.047
Tetra	PCB-53	1.20e+06	0.80	y	29:49	1.06	778		*	2.5	*	0.946	0.942	0.952
Tetra	PCB-51	3.28e+05	0.70	y	30:09	0.99	229		*	2.5	*	0.956	0.952	0.962
Tetra	PCB-45	8.28e+05	0.76	y	30:35	0.86	662		*	2.5	*	0.970	0.966	0.976
Tetra	PCB-46	3.87e+05	0.86	y	31:05	0.85	316		*	2.5	*	0.986	0.981	0.991

Integrations by:
Analyst: DMS
Date: 3/27/15

Reviewed by: [signature] Date: 3/31/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.957 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	2.40e+07	0.78	y	31:33	1.28	12900		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.35	*		3800	2.5	49.4	*	1.000	1.010
Tetra	PCB-43/49	6.01e+06	0.82	y	31:51	0.99	4170		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	1.60e+06	0.80	y	32:05	1.06	993		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	9.32e+05	0.79	y	32:13	1.23	500		*	2.5	*	1.005	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.22	*		3800	2.5	53.4	*	1.008	1.018
Tetra	PCB-62	*	*	n	NotF	1.22	*		3800	2.5	53.6	*	1.011	1.021
Tetra	PCB-44	9.23e+06	0.78	y	32:56	0.86	7070		*	2.5	*	1.027	1.021	1.031
Tetra	PCB-42/59	2.11e+06	0.83	y	33:12	1.14	1220		*	2.5	*	1.035	1.028	1.038
Tetra	PCB-41/64/71/72	1.30e+07	0.79	y	33:44	1.21	7100		*	2.5	*	1.052	1.046	1.056
Tetra	PCB-68	4.76e+04	0.73	y	33:57	1.35	23.3		*	2.5	*	1.059	1.054	1.064
Tetra	PCB-40	4.39e+05	0.78	y	34:08	0.70	412		*	2.5	*	1.064	1.061	1.071
Tetra	PCB-57	5.42e+04	1.11	n	34:29	0.98	27.8	R	*	2.5	*	0.970	0.965	0.975
Tetra	PCB-67	2.61e+05	0.74	y	34:47	1.11	118		*	2.5	*	0.978	0.974	0.984
Tetra	PCB-58	2.75e+04	1.19	n	34:55	0.93	14.9	R	*	2.5	*	0.982	0.977	0.987
Tetra	PCB-63	3.51e+05	0.87	y	35:03	0.95	185		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-74	5.69e+06	0.79	y	35:22	1.24	2300		*	2.5	*	0.995	0.990	1.000
Tetra	PCB-61/70	2.03e+07	0.78	y	35:33	0.95	10700		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-76/66	9.54e+06	0.78	y	35:45	1.04	4580		*	2.5	*	1.006	1.001	1.011
Tetra	PCB-80	*	*	n	NotF	1.19	*		3800	2.5	34.8	*	0.996	1.006
Tetra	PCB-55	4.87e+05	0.77	y	36:16	1.04	228		*	2.5	*	1.008	1.005	1.015
Tetra	PCB-56/60	6.33e+06	0.75	y	36:47	1.01	3050		*	2.5	*	1.023	1.019	1.029
Tetra	PCB-79	7.20e+05	0.81	y	37:52	1.08	325		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.27	*		3800	2.5	37.1	*	0.982	0.992
Tetra	PCB-81	2.32e+05	0.83	y	39:03	1.33	92.9		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-77	2.64e+06	0.81	y	39:39	1.10	1260		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.18	*		1800	2.5	56.8	*	0.996	1.006
Penta	PCB-96	1.20e+05	1.74	y	33:59	1.14	109		*	2.5	*	1.038	1.034	1.044
Penta	PCB-103	1.52e+05	1.52	y	34:30	0.96	163		*	2.5	*	1.053	1.050	1.060
Penta	PCB-100	6.93e+04	1.39	y	34:51	0.94	76.0		*	2.5	*	1.064	1.061	1.071
Penta	PCB-94	1.33e+05	1.70	y	35:19	1.06	178		*	2.5	*	0.986	0.980	0.990
Penta	PCB-95/98/102	3.20e+07	1.63	y	35:51	1.22	36900		*	2.5	*	1.000	0.995	1.005
Penta	PCB-93	*	*	n	NotF	0.84	*		1800	2.5	96.7	*	0.997	1.007
Penta	PCB-88/91	4.18e+06	1.75	y	36:15	1.12	5290		*	2.5	*	1.012	1.005	1.015
Penta	PCB-121	*	*	n	NotF	1.62	*		1800	2.5	50.4	*	1.009	1.019
Penta	PCB-84/92	1.54e+07	1.67	y	37:09	1.05	18400		*	2.5	*	0.990	0.985	0.995
Penta	PCB-89	3.27e+05	1.42	y	37:20	1.13	361		*	2.5	*	0.995	0.991	1.001

Analyst: DMS

Date: 3/31/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.957 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	4.08e+07	1.60	y 37:32	1.10	46200		*	2.5	*	1.000	0.995	1.005
Penta	PCB-113	*	*	n NotF¶	1.41	*		1800	2.5	51.0	*	1.002	1.012
Penta	PCB-99	1.37e+07	1.63	y 37:52	1.34	12800		*	2.5	*	1.009	1.004	1.014
Penta	PCB-119	6.47e+05	1.50	y 38:19	1.53	549		*	2.5	*	0.988	0.982	0.992
Penta	PCB-108/112	1.84e+06	1.40	y 38:29	1.28	1860		*	2.5	*	0.992	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.52	*		1800	2.5	54.1	*	0.990	1.000
Penta	PCB-97	1.10e+07	1.58	y 38:49	1.18	12100		*	2.5	*	1.000	0.995	1.005
Penta	PCB-86	7.76e+04	1.48	y 38:59	0.84	120		*	2.5	*	1.005	0.999	1.009
Penta	PCB-87/117/125	1.77e+07	1.63	y 39:07	1.55	14900		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	8.22e+05	1.54	y 39:16	1.63	655		*	2.5	*	1.012	1.006	1.016
Penta	PCB-85/116	5.87e+06	1.57	y 39:22	1.30	5860		*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	2.48e+05	1.37	y 39:34	1.68	192		*	2.5	*	1.020	1.016	1.026
Penta	PCB-110	6.10e+07	1.62	y 39:46	1.56	51000		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	3.78e+06	1.64	y 40:24	0.76	5180		*	2.5	*	0.977	0.971	0.981
Penta	PCB-124	2.47e+06	1.60	y 41:04	1.47	1750		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	3.10e+06	1.70	y 41:14	1.32	2440		*	2.5	*	0.997	0.991	1.001
Penta	PCB-123	7.14e+05	1.64	y 41:23	1.17	635		*	2.5	*	1.000	0.996	1.006
Penta	PCB-106/118	4.43e+07	1.63	y 41:34	1.17	36400		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	1.36e+06	1.48	y 42:13	1.30	743		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	8.19e+05	1.70	y 42:21	1.12	516		*	2.5	*	1.003	0.999	1.009
Penta	PCB-105	2.62e+07	1.62	y 43:05	1.30	13900		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.33	*		5040	2.5	85.2	*	0.996	1.006
Penta	PCB-126	7.71e+05	1.75	y 45:19	1.18	504		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	*	*	n NotF¶	1.11	*		1650	2.5	66.4	*	0.966	1.006
Hexa	PCB-150	5.16e+04	1.38	y 38:20	1.00	80.9		*	2.5	*	1.034	1.030	1.040
Hexa	PCB-152	5.35e+04	1.26	y 38:48	1.12	75.1		*	2.5	*	1.047	1.043	1.053
Hexa	PCB-145	*	*	n NotF¶	1.20	*		1650	2.5	61.5	*	1.055	1.065
Hexa	PCB-136	6.33e+06	1.30	y 39:34	1.18	8420		*	2.5	*	1.067	1.064	1.074
Hexa	PCB-148	*	*	n NotF¶	0.74	*		1650	2.5	99.3	*	1.066	1.076
Hexa	PCB-154	2.77e+05	1.24	y 40:10	0.86	506		*	2.5	*	1.084	1.080	1.090
Hexa	PCB-151	8.94e+06	1.31	y 40:49	0.75	18800		*	2.5	*	1.101	1.097	1.107
Hexa	PCB-135	4.63e+06	1.30	y 41:01	0.79	9150		*	2.5	*	1.107	1.103	1.113
Hexa	PCB-144	1.91e+06	1.26	y 41:08	0.76	3940		*	2.5	*	1.110	1.105	1.117
Hexa	PCB-147	6.22e+05	1.24	y 41:15	0.82	1190		*	2.5	*	1.113	1.109	1.121
Hexa	PCB-139/149	3.14e+07	1.29	y 41:31	0.76	64600		*	2.5	*	1.120	1.116	1.128
Hexa	PCB-140	1.71e+05	1.15	y 41:42	0.72	371		*	2.5	*	1.125	1.121	1.133
Hexa	PCB-134/143	3.98e+06	1.25	y 42:10	0.92	3890		*	2.5	*	0.976	0.970	0.980

Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.957 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hexa	PCB-133/142	1.97e+06	1.22	y 42:27	0.82	2160		*	2.5	*	0.982	0.977-0.987
Hexa	PCB-131	*	*	n NotF¶	0.91	*		3040	2.5	86.2	*	0.981-0.991
Hexa	PCB-146/165	1.14e+07	1.23	y 42:50	1.25	8180		*	2.5	*	0.991	0.986-0.996
Hexa	PCB-132/161	2.48e+07	1.28	y 43:06	1.10	20100		*	2.5	*	0.997	0.992-1.002
Hexa	PCB-153	7.96e+07	1.26	y 43:14	1.25	57200		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-168	1.38e+05	1.18	y 43:27	1.45	85.5		*	2.5	*	1.005	1.001-1.011
Hexa	PCB-141	1.61e+07	1.28	y 43:58	1.09	14700		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-137	3.34e+06	1.17	y 44:21	1.06	3130		*	2.5	*	1.009	1.004-1.014
Hexa	PCB-130	4.29e+06	1.22	y 44:27	0.96	4420		*	2.5	*	1.011	1.006-1.016
Hexa	PCB-138/163/164	8.95e+07	1.26	y 44:49	1.29	67700		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-158/160	1.13e+07	1.25	y 45:03	1.34	8220		*	2.5	*	1.006	1.001-1.011
Hexa	PCB-129	3.18e+06	1.23	y 45:19	0.85	3650		*	2.5	*	1.012	1.007-1.017
Hexa	PCB-166	3.25e+05	1.09	y 45:46	1.19	239		*	2.5	*	0.993	0.988-0.998
Hexa	PCB-159	*	*	n NotF¶	1.11	*		3040	2.5	71.9	*	0.996-1.006
Hexa	PCB-128/162	1.25e+07	1.28	y 46:22	1.05	10400		*	2.5	*	1.006	1.002-1.012
Hexa	PCB-167	4.01e+06	1.30	y 46:47	1.20	2670		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-156	9.27e+06	1.21	y 48:05	1.14	6750		*	2.5	*	1.001	0.996-1.006
Hexa	PCB-157	2.13e+06	1.28	y 48:21	1.16	1470		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-169	7.00e+04	1.33	y 50:29	1.12	55.4		*	2.5	*	1.000	0.995-1.005
Hepta	PCB-188	5.54e+04	1.11	y 42:52	1.58	43.7		*	2.5	*	1.000	0.996-1.006
Hepta	PCB-184	*	*	n NotF¶	1.63	*		1420	2.5	19.8	*	1.006-1.016
Hepta	PCB-179	1.01e+07	1.06	y 44:05	1.30	9640		*	2.5	*	1.029	1.024-1.034
Hepta	PCB-176	3.17e+06	1.07	y 44:33	1.48	2670		*	2.5	*	1.040	1.035-1.045
Hepta	PCB-186	*	*	n NotF¶	1.45	*		1420	2.5	22.2	*	1.050-1.060
Hepta	PCB-178	3.40e+06	1.06	y 45:39	1.03	4090		*	2.5	*	1.065	1.061-1.071
Hepta	PCB-175	7.14e+05	1.02	y 46:00	1.01	878		*	2.5	*	1.074	1.069-1.079
Hepta	PCB-182/187	2.24e+07	1.08	y 46:09	1.25	22300		*	2.5	*	1.077	1.073-1.083
Hepta	PCB-183	1.09e+07	1.08	y 46:30	1.21	11200		*	2.5	*	1.085	1.081-1.091
Hepta	PCB-185	2.18e+06	1.04	y 47:09	1.80	2300		*	2.5	*	0.955	0.951-0.961
Hepta	PCB-174	1.75e+07	1.08	y 47:31	1.38	24000		*	2.5	*	0.963	0.958-0.968
Hepta	PCB-181	5.57e+04	1.06	y 47:38	1.38	76.5		*	2.5	*	0.965	0.960-0.970
Hepta	PCB-177	9.25e+06	1.08	y 47:47	1.26	14000		*	2.5	*	0.968	0.963-0.973
Hepta	PCB-171	4.34e+06	1.06	y 48:05	1.58	5200		*	2.5	*	0.974	0.970-0.980
Hepta	PCB-173	3.49e+05	1.18	y 48:30	1.11	597		*	2.5	*	0.983	0.978-0.988
Hepta	PCB-172	2.75e+06	1.04	y 48:58	1.63	3190		*	2.5	*	0.992	0.987-0.997
Hepta	PCB-192	*	*	n NotF¶	1.74	*		1420	2.5	28.7	*	0.991-1.001
Hepta	PCB-180	3.96e+07	1.06	y 49:22	1.34	55900		*	2.5	*	1.000	0.995-1.005

Analyst: DMS

Date: 3/31/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.957 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	2.30e+06	1.09	y 49:34	1.72	2540		*	2.5	*	1.004	0.999	1.009
Hepta	PCB-191	8.10e+05	1.16	y 49:49	1.69	907		*	2.5	*	1.009	1.004	1.014
Hepta	PCB-170	1.41e+07	1.12	y 50:51	1.60	20600		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	3.77e+06	1.02	y 51:02	2.21	4000		*	2.5	*	1.004	0.998	1.008
Hepta	PCB-189	6.59e+05	1.17	y 52:21	1.55	783		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	1.62e+06	0.87	y 48:16	1.08	2360		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	1.14e+06	0.82	y 48:45	1.15	1550		*	2.5	*	1.010	1.005	1.015
Octa	PCB-204	*	*	n NotF┐	1.14	*		1290	2.5	44.7	*	1.008	1.018
Octa	PCB-197	3.10e+05	0.90	y 49:13	1.07	453		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	1.05e+06	0.92	y 50:06	1.06	1550		*	2.5	*	1.038	1.032	1.044
Octa	PCB-198	2.48e+05	0.96	y 51:27	0.76	517		*	2.5	*	1.066	1.059	1.069
Octa	PCB-199	5.79e+06	0.89	y 51:34	0.80	11400		*	2.5	*	1.068	1.061	1.071
Octa	PCB-196/203	6.81e+06	0.91	y 51:50	0.80	13400		*	2.5	*	1.074	1.066	1.076
Octa	PCB-195	3.70e+06	0.95	y 53:00	1.23	4160		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	1.04e+07	0.93	y 53:52	1.21	11800		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	6.24e+05	1.01	y 54:09	1.54	558		*	2.5	*	1.005	1.001	1.011
Nona	PCB-208	8.47e+05	1.24	y 53:08	0.93	941		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	5.51e+05	1.40	y 53:27	1.08	526		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	2.61e+06	1.30	y 55:30	1.02	4020		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	3.23e+05	1.27	y 56:50	1.17	461		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/27/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.9573 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.30e+06	2.91	y	16:11	1.27	425.533	
Total Di-PCB	9.70e+06	1.75	y	20:07	1.21	3623.33	
Total Tri-PCB	4.30e+06	1.13	y	25:55	1.10	2523.45	
Total Tri-PCB	1.65e+07	1.09	y	28:30	1.21	5925.84	Sum:8449.28
Total Tetra-PCB	1.07e+08	0.80	y	29:49	1.09	59208.2	
Total Penta-PCB	2.60e+08	1.74	y	33:59	1.18	253997	
Total Penta-PCB	2.91e+07	1.48	y	42:13	1.25	15700.0	Sum:269697
Total Hexa-PCB	5.44e+07	1.38	y	38:20	0.90	107036	
Total Hexa-PCB	2.78e+08	1.25	y	42:10	1.11	215048	Sum:322084
Total Hepta-PCB	1.48e+08	1.11	y	42:52	1.42	184971	
Total Octa-PCB	1.70e+07	0.87	y	48:16	0.96	31215.2	
Total Octa-PCB	1.47e+07	0.95	y	53:00	1.33	16568.5	Sum:47783.6
Total Nona-PCB	4.01e+06	1.24	y	53:08	1.01	5491.16	
Total Deca-PCB	3.23e+05	1.27	y	56:50	1.17	460.537	

Total PCB Conc:902621.860761
902000

Integrations
by
Analyst: DMS

Date: 3/31/15

Client ID: BD-MH-13.43-20141202-S Filename: 150319E1 S:3 Acq:19-MAR-15 14:56:27 ConCal: ST150319E1-1
Lab ID: 1400915-05RE1@5X GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.9573 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.49e+07	3.25 y	0.87	16:10	0.622	0.629	0.635	10500	103
13C-PCB-3	2.46e+07	3.35 y	0.91	18:46	0.722	0.725	0.733	9950	97.3
13C-PCB-4	1.45e+07	1.56 y	0.59	20:06	0.774	0.775	0.783	9140	89.5
13C-PCB-9	2.26e+07	1.61 y	0.90	21:53	0.842	0.842	0.850	9310	91.1
13C-PCB-11	2.44e+07	1.56 y	0.94	25:17	0.973	0.968	0.978	9580	93.8
13C-PCB-19	1.20e+07	1.11 y	0.53	24:15	0.933	0.930	0.940	8320	81.4
13C-PCB-28	2.17e+07	1.06 y	0.93	29:07	1.003	0.999	1.009	8340	81.6
13C-PCB-32	1.91e+07	1.02 y	0.80	27:10	1.046	1.040	1.050	8830	86.4
13C-PCB-37	2.20e+07	1.08 y	0.84	33:06	1.141	1.131	1.143	9360	91.6
13C-PCB-47	1.55e+07	0.80 y	0.81	32:04	0.872	0.866	0.874	8410	82.3
13C-PCB-52	1.48e+07	0.83 y	0.77	31:32	0.857	0.853	0.861	8450	82.7
13C-PCB-54	1.65e+07	0.82 y	0.97	27:59	0.761	0.758	0.766	7500	73.4
13C-PCB-70	2.04e+07	0.83 y	1.00	35:33	0.966	0.961	0.971	8970	87.8
13C-PCB-77	1.94e+07	0.81 y	0.94	39:39	1.078	1.073	1.083	9070	88.8
13C-PCB-80	2.10e+07	0.81 y	1.03	35:58	0.978	0.972	0.982	8950	87.6
13C-PCB-81	1.92e+07	0.78 y	0.92	39:03	1.062	1.057	1.067	9150	89.5
13C-PCB-95	7.23e+06	1.66 y	0.74	35:50	0.913	0.908	0.918	8510	83.3
13C-PCB-97	7.86e+06	1.78 y	0.70	38:48	0.989	0.984	0.994	9720	95.1
13C-PCB-101	8.19e+06	1.60 y	0.78	37:31	0.956	0.951	0.961	9110	89.2
13C-PCB-104	9.94e+06	1.50 y	1.00	32:45	0.835	0.828	0.836	8650	84.6
13C-PCB-105	1.48e+07	1.61 y	1.37	43:04	0.929	0.924	0.934	10300	100
13C-PCB-114	1.45e+07	1.52 y	1.36	42:13	0.911	0.905	0.915	10100	98.5
13C-PCB-118	1.06e+07	1.63 y	0.96	41:33	1.059	1.054	1.064	9640	94.3
13C-PCB-123	9.83e+06	1.58 y	0.89	41:22	1.054	1.050	1.060	9580	93.7
13C-PCB-126	1.32e+07	1.59 y	1.31	45:19	0.978	0.972	0.982	9600	94.0
13C-PCB-127	1.56e+07	1.63 y	1.47	43:25	0.937	0.931	0.941	10100	98.4
13C-PCB-138	1.05e+07	1.18 y	1.10	44:48	0.967	0.961	0.971	9020	88.3
13C-PCB-141	1.03e+07	1.30 y	1.07	43:58	0.949	0.943	0.953	9070	88.8
13C-PCB-153	1.14e+07	1.21 y	1.15	43:13	0.932	0.927	0.937	9420	92.2
13C-PCB-155	6.53e+06	1.34 y	0.84	37:04	0.945	0.939	0.949	6770	66.3
13C-PCB-156	1.24e+07	1.32 y	1.30	48:03	1.037	1.032	1.042	9050	88.5
13C-PCB-157	1.28e+07	1.37 y	1.36	48:20	1.043	1.038	1.048	8920	87.3
13C-PCB-159	1.17e+07	1.29 y	1.25	46:06	0.995	0.989	0.999	8920	87.3
13C-PCB-167	1.28e+07	1.29 y	1.35	46:47	1.009	1.004	1.014	8970	87.8
13C-PCB-169	1.15e+07	1.27 y	1.29	50:29	1.089	1.083	1.093	8520	83.4
13C-PCB-170	4.36e+06	0.47 y	0.54	50:51	1.097	1.089	1.101	7610	74.5
13C-PCB-180	5.39e+06	0.46 y	0.68	49:21	1.065	1.060	1.070	7470	73.1
13C-PCB-188	8.20e+06	0.46 y	0.92	42:51	0.924	0.919	0.929	8480	83.0
13C-PCB-189	5.55e+06	0.44 y	0.72	52:21	1.129	1.120	1.132	7350	71.9
13C-PCB-194	7.41e+06	0.92 y	0.80	53:52	0.995	0.990	1.000	8910	87.2
13C-PCB-202	6.50e+06	0.99 y	0.84	48:16	1.041	1.036	1.046	7360	72.0
13C-PCB-206	6.47e+06	0.79 y	0.65	55:29	1.025	1.021	1.031	9550	93.5
13C-PCB-208	9.88e+06	0.80 y	1.08	53:08	0.982	0.976	0.986	8780	85.9
13C-PCB-209	6.13e+06	1.15 y	0.61	56:49	1.050	1.045	1.055	9640	94.4

OK

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.13e+07	0.81 y	1.02	37:50	1.029	1.023	1.034	9230	90.4
13C-PCB-178	5.27e+06	0.49 y	0.61	45:39	0.985	0.979	0.990	8150	79.7

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	2.13e+07	0.81 y	1.10	37:50	0.969	0.964	0.974	10300	101
13C-PCB-178	5.27e+06	0.49 y	0.90	45:39	0.925	0.920	0.930	11100	109

RS

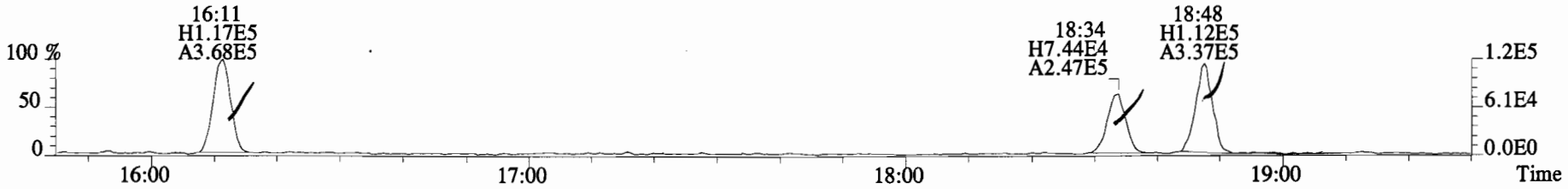
Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.77e+07	1.59	y	1.00	25:59	10200
13C-PCB-31	2.85e+07	1.04	y	1.00	29:01	10200
13C-PCB-60	2.32e+07	0.81	y	1.00	36:47	10200
13C-PCB-111	1.17e+07	1.66	y	1.00	39:14	10200
13C-PCB-128	1.08e+07	1.28	y	1.00	46:21	10200
13C-PCB-205	1.06e+07	0.92	y	1.00	54:08	10200

Analyst: DMS

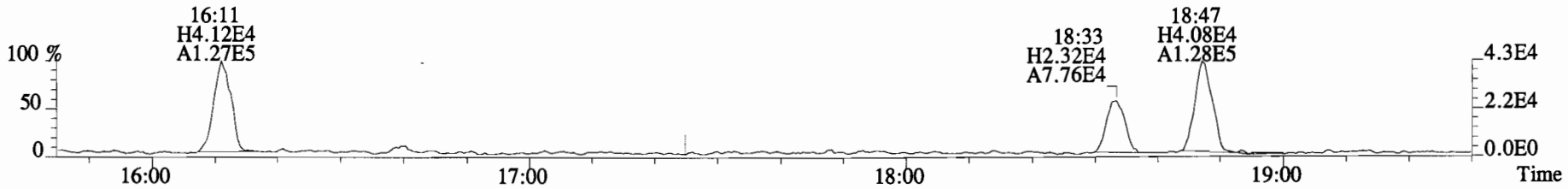
Date: 3/27/15

File:150319E1 #1-867 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1

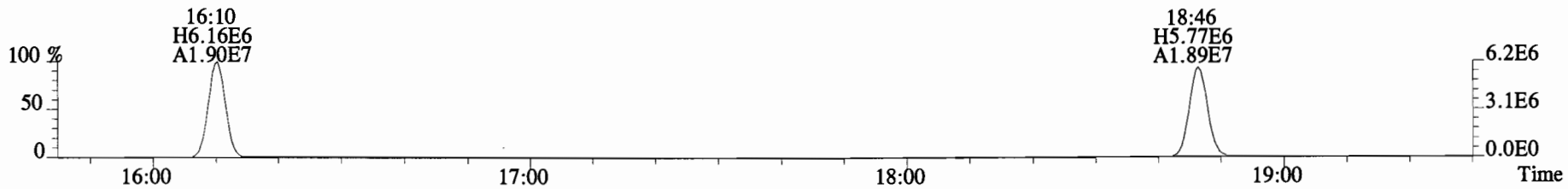
188.0393 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)



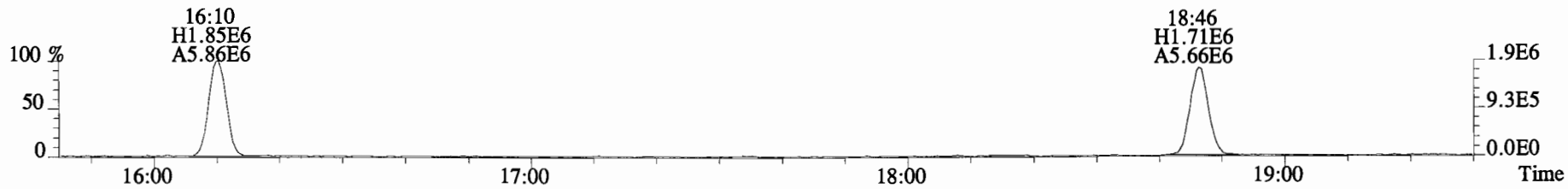
190.0363 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2628.0,0.00%,F,F)



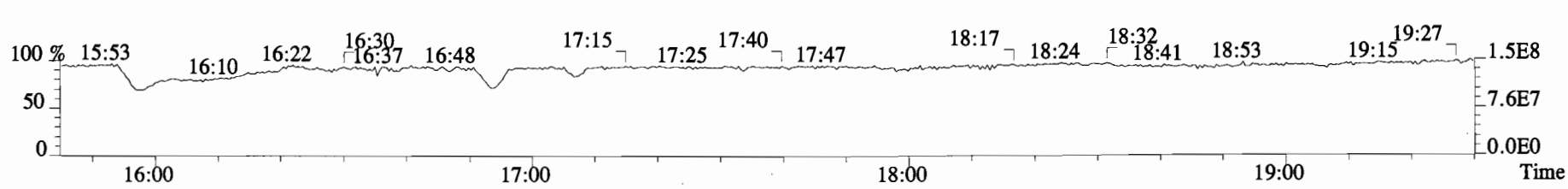
200.0795 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3952.0,0.00%,F,F)



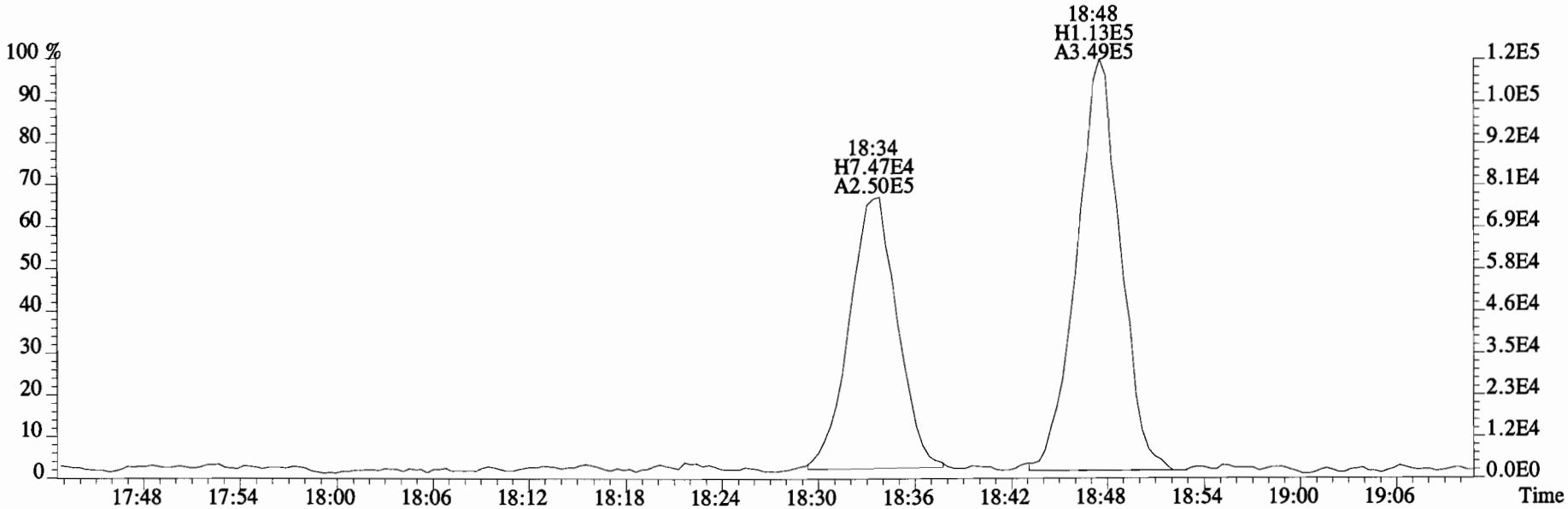
202.0766 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,20644.0,0.00%,F,F)



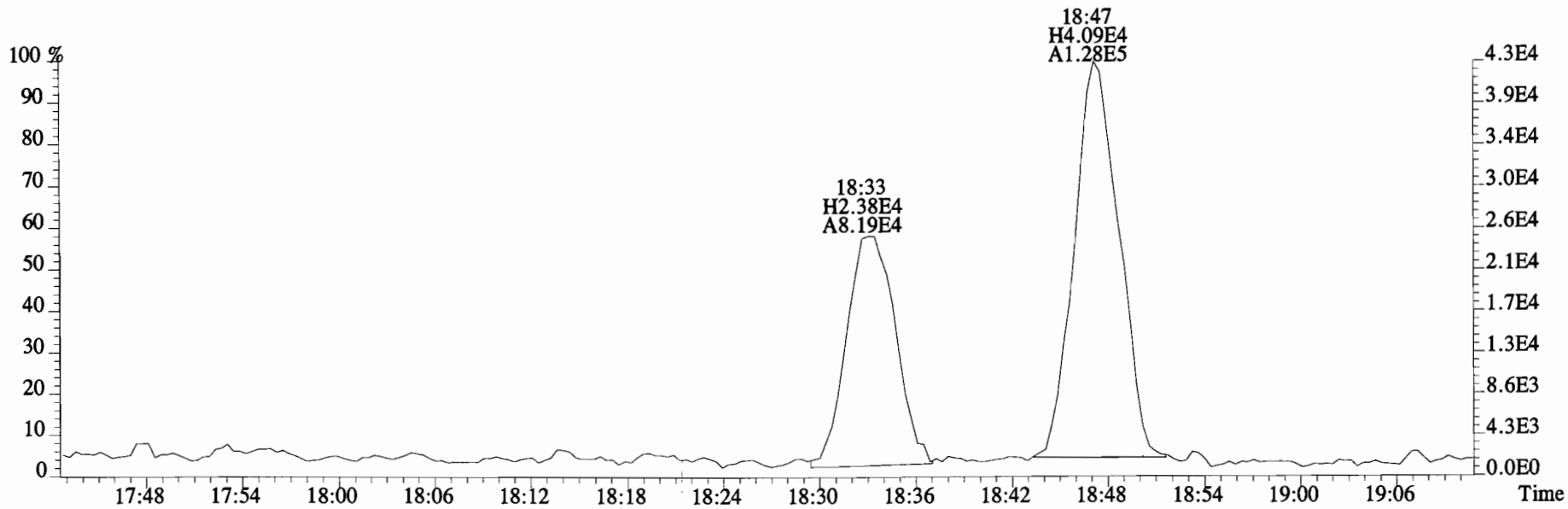
180.9880 S:3



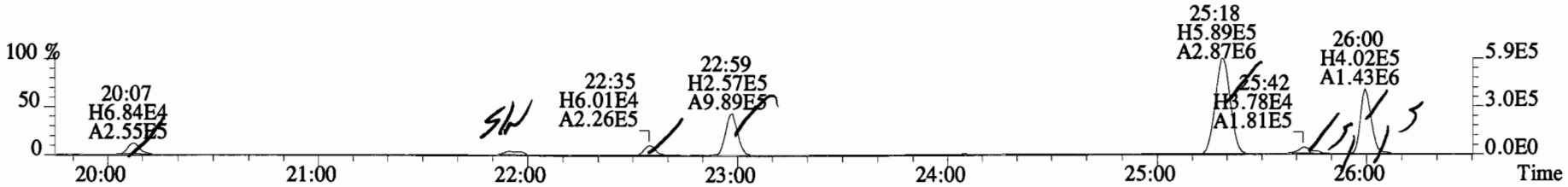
File:150319E1 #1-867 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
188.0393 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)



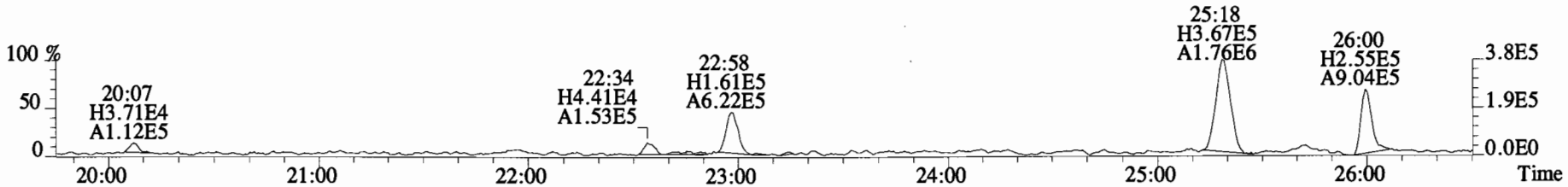
190.0363 S:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2628.0,0.00%,F,F)



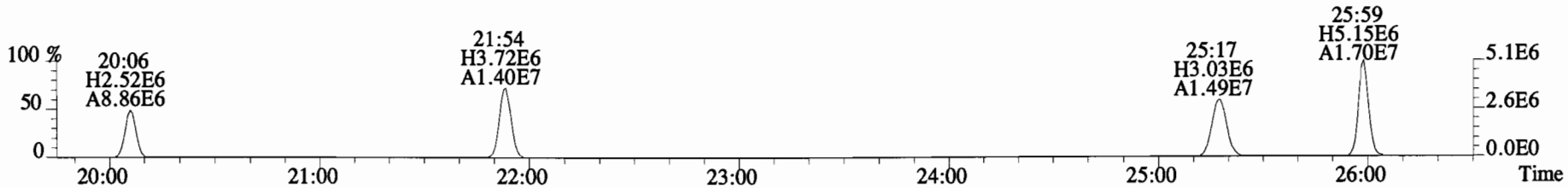
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4376.0,0.00%,F,F)



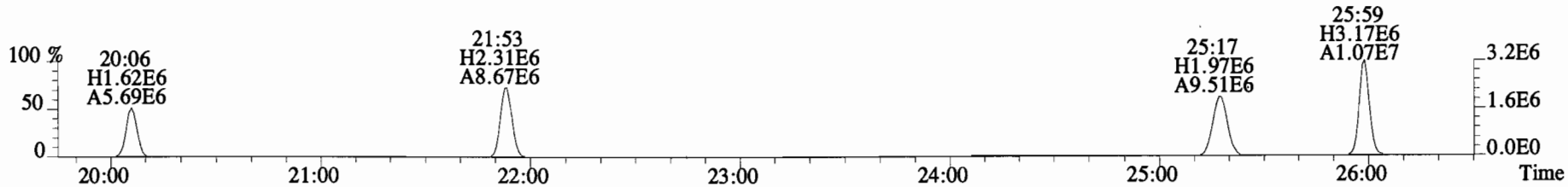
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18224.0,0.00%,F,F)



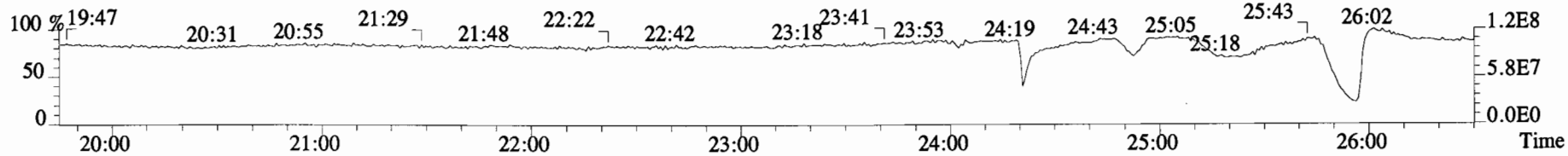
234.0406 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3336.0,0.00%,F,F)



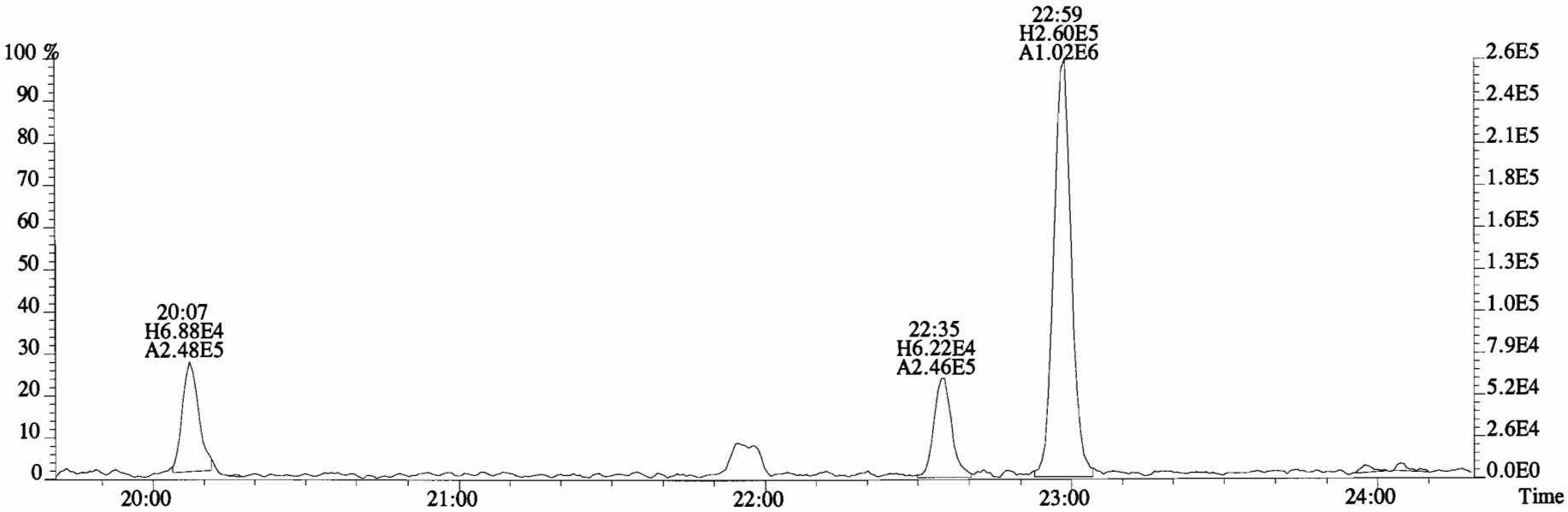
236.0376 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2500.0,0.00%,F,F)



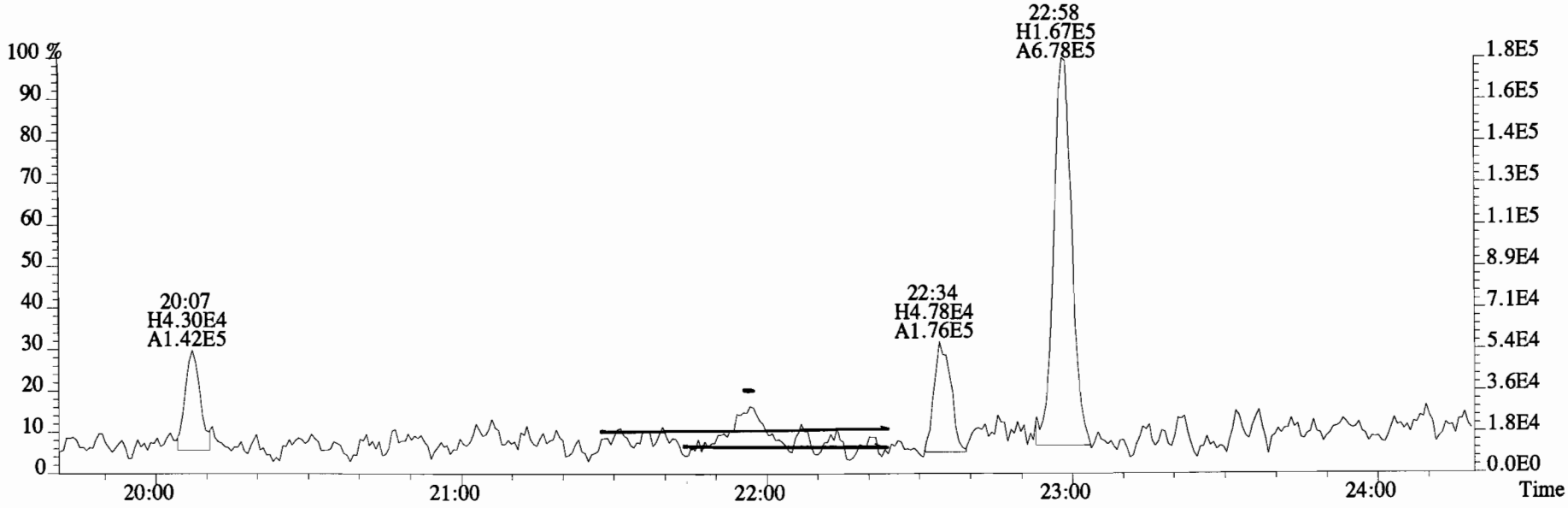
230.9856 S:3 F:2



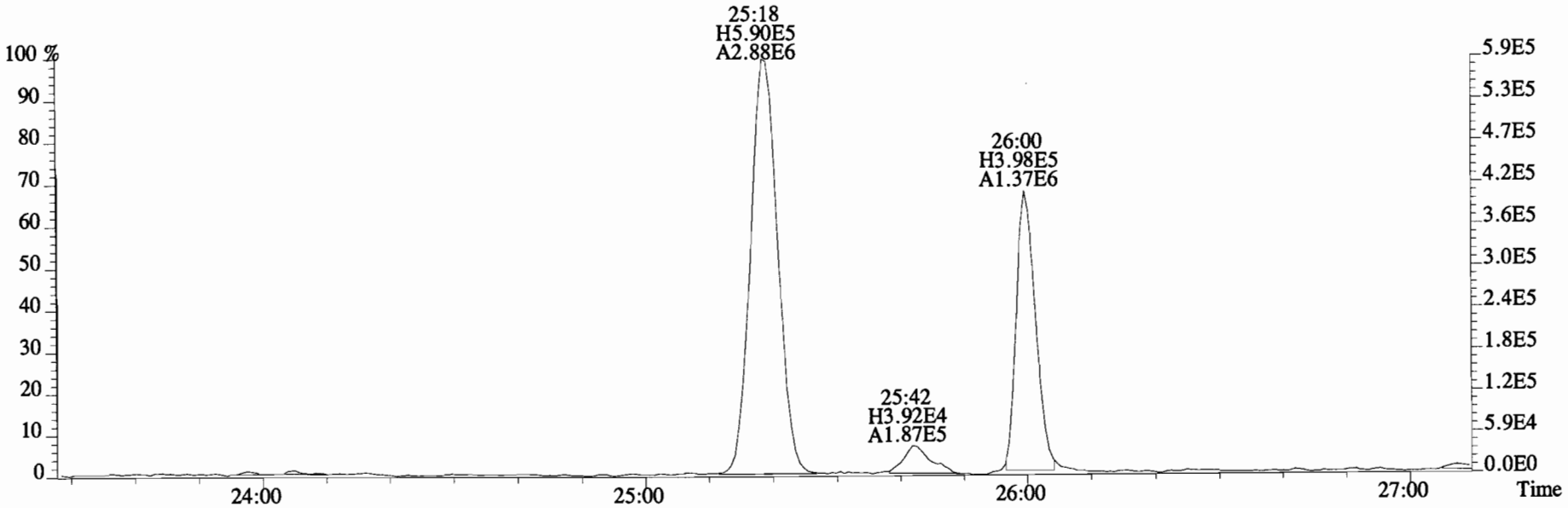
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4376.0,0.00%,F,F)



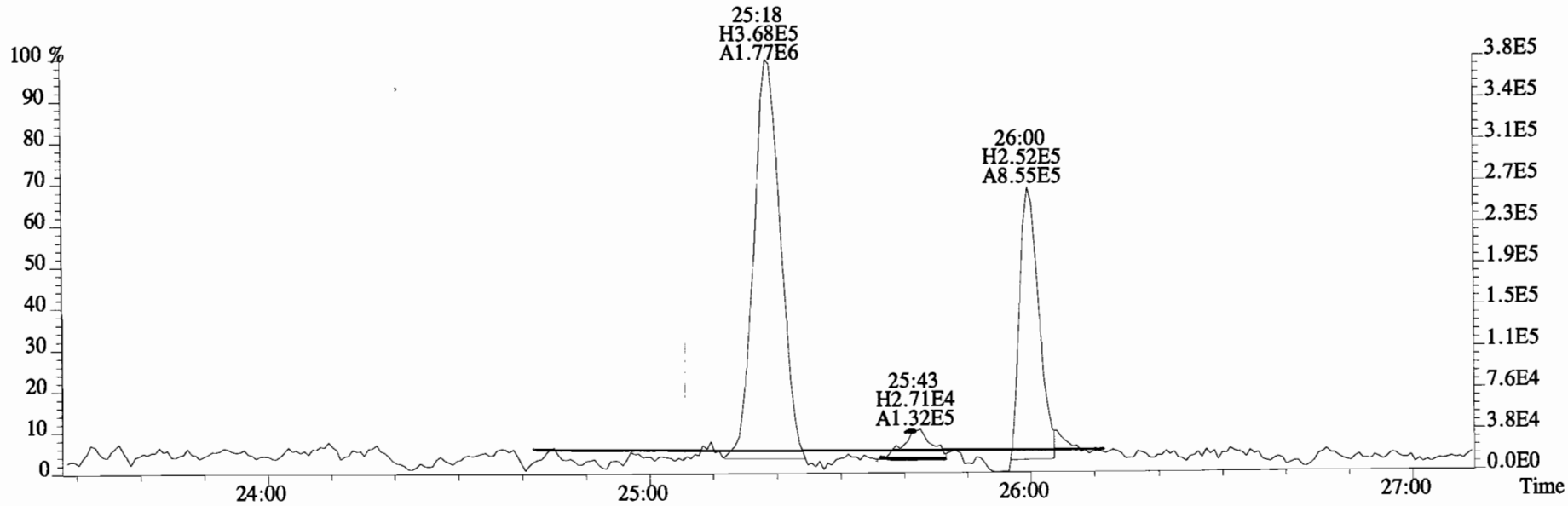
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18224.0,0.00%,F,F)



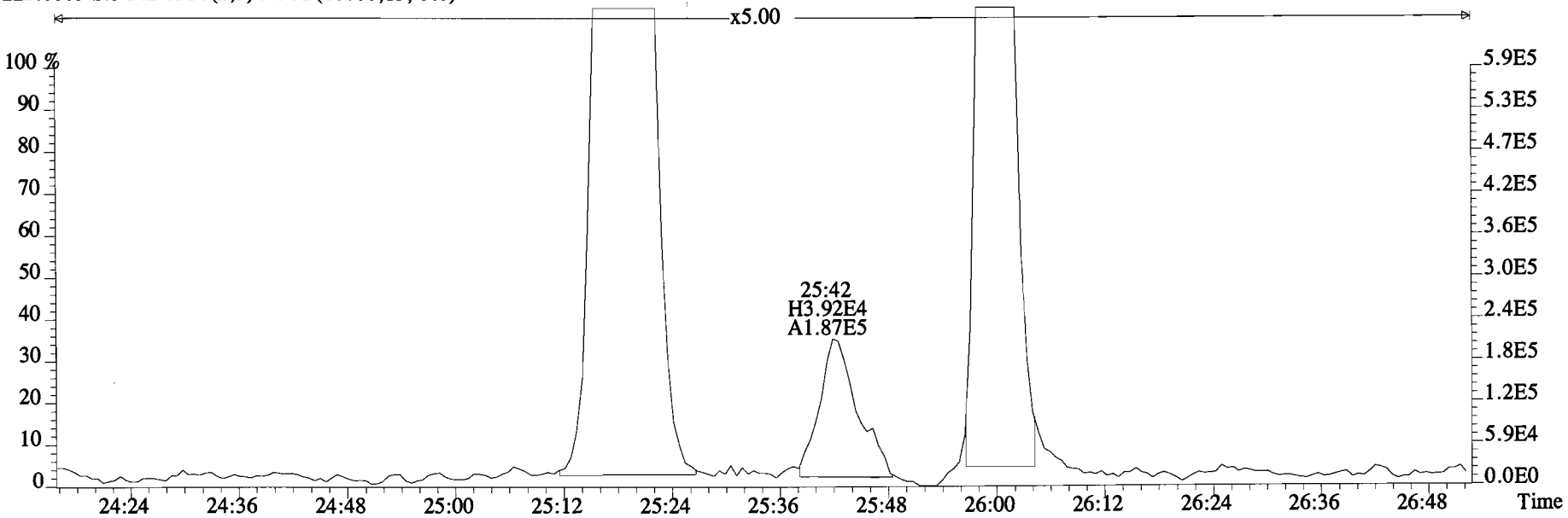
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4376.0,0.00%,F,F)



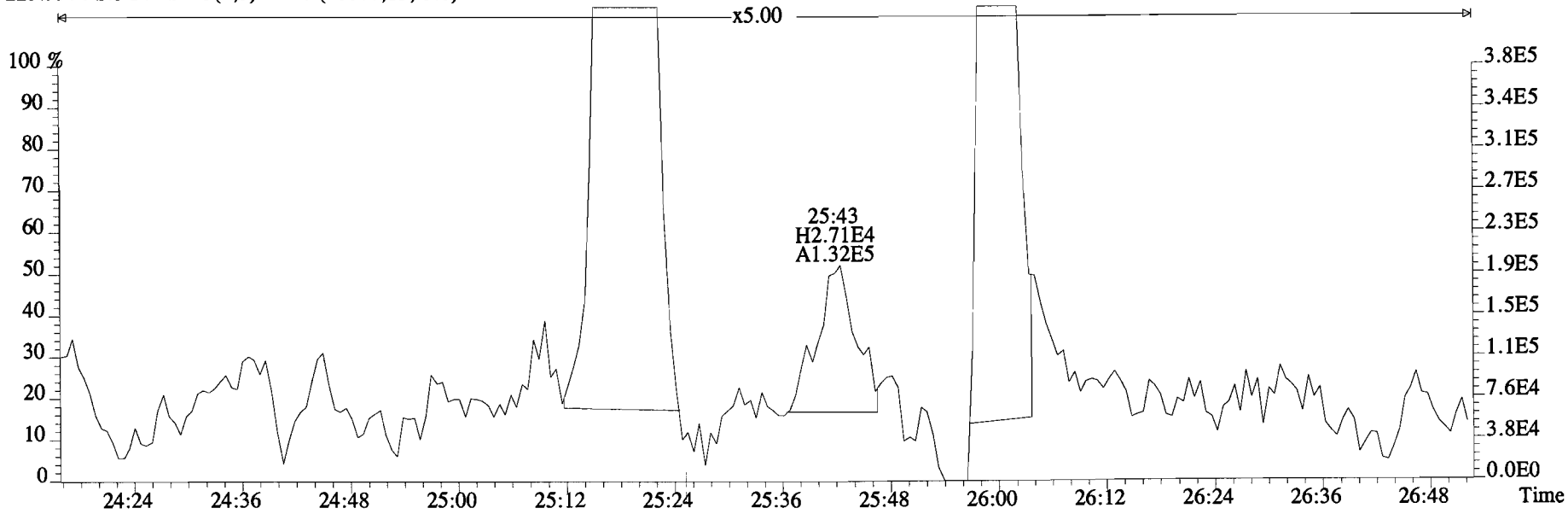
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,18224.0,0.00%,F,F)



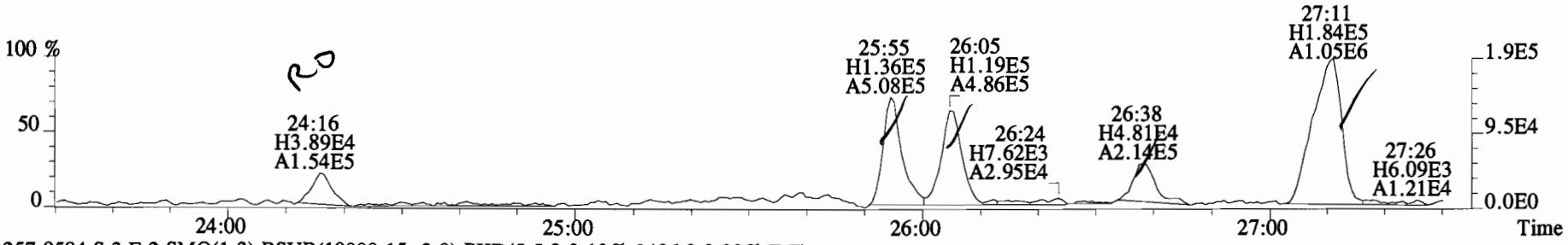
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
222.0003 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0)



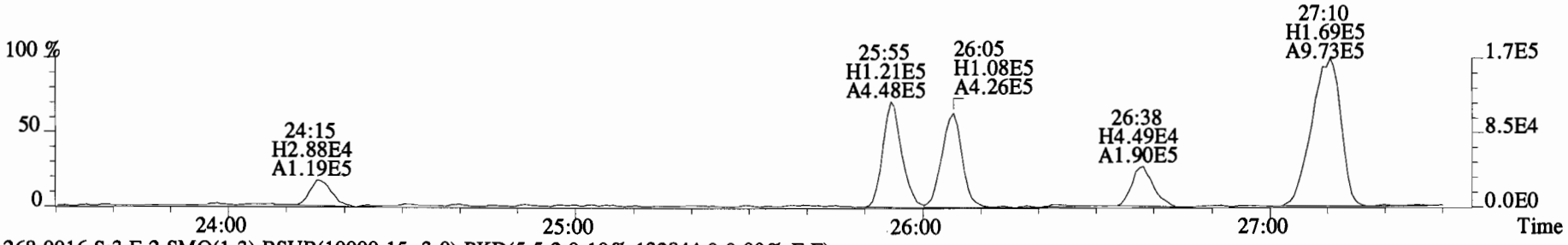
223.9974 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0)



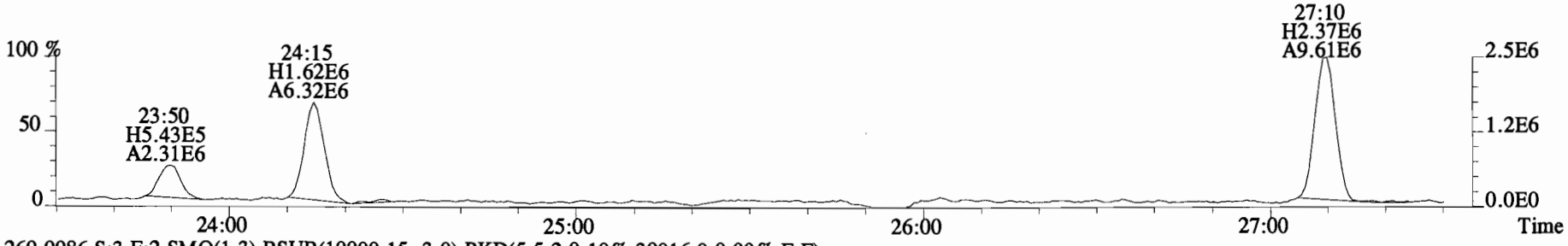
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
255.9613 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8892.0,0.00%,F,F)



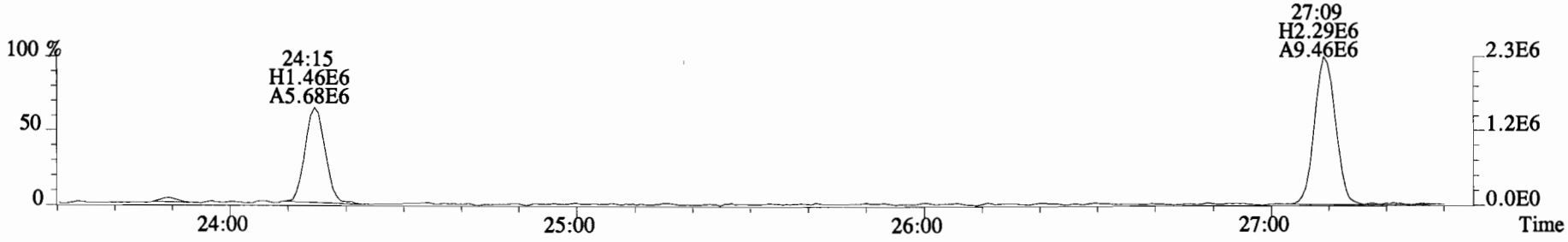
257.9584 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2496.0,0.00%,F,F)



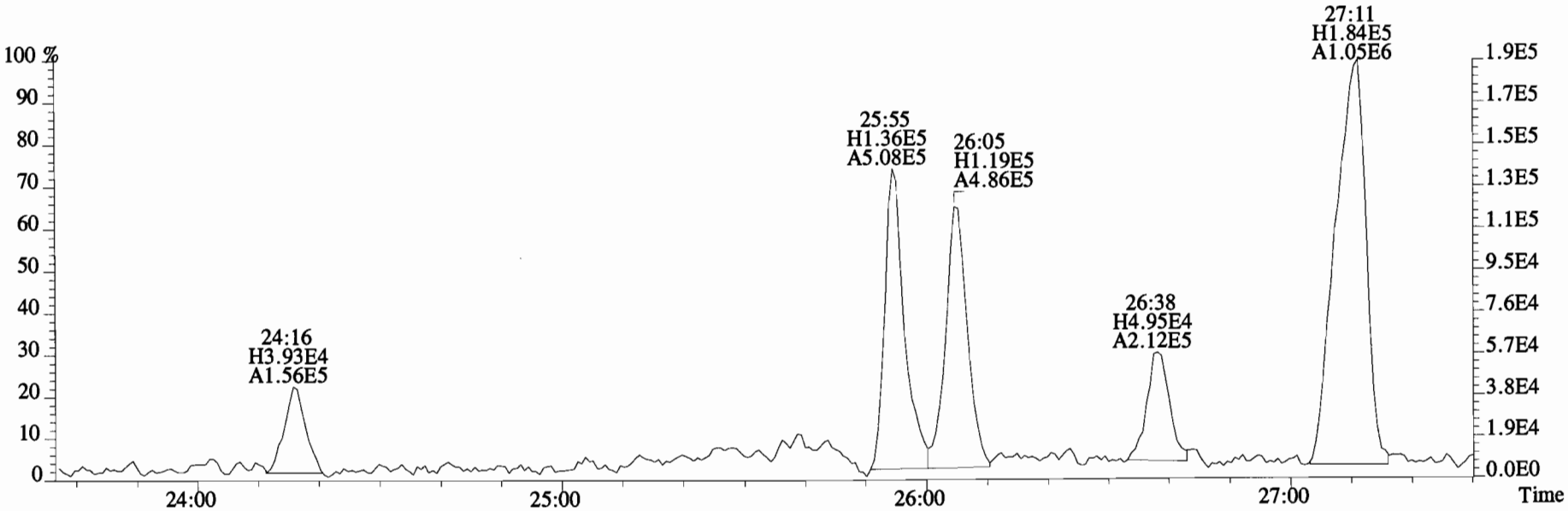
268.0016 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,132844.0,0.00%,F,F)



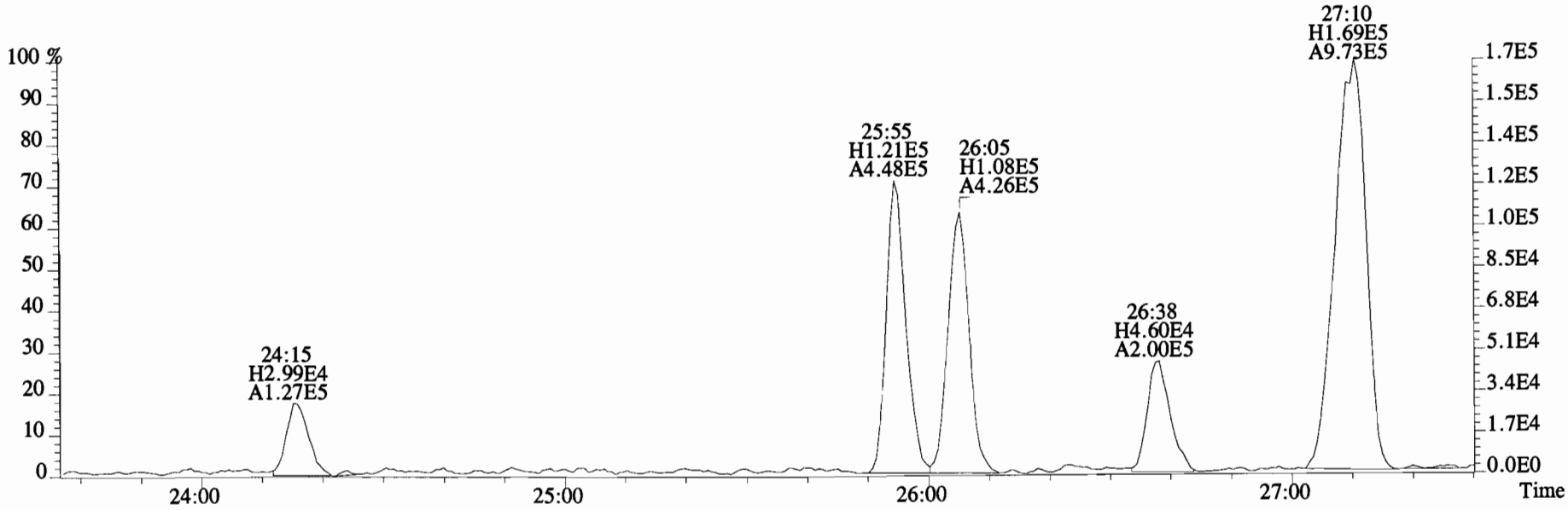
269.9986 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,39016.0,0.00%,F,F)



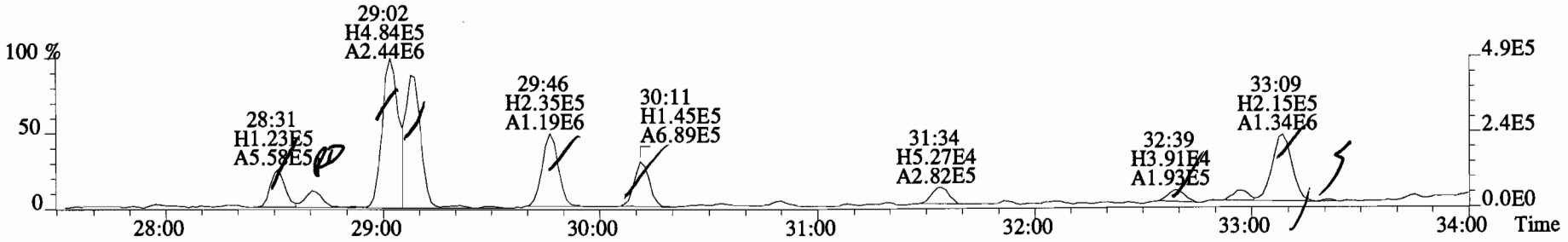
File:150319E1 #1-757 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
255.9613 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8892.0,0.00%,F,F)



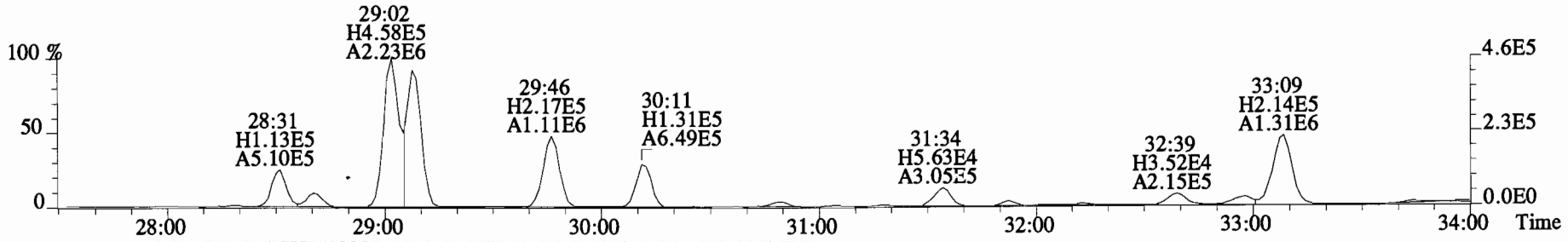
257.9584 S:3 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2496.0,0.00%,F,F)



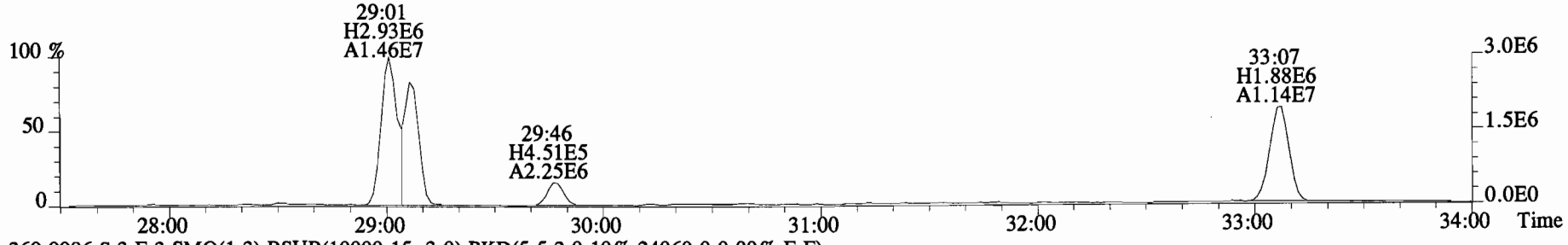
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
255.9613 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,17432.0,0.00%,F,F)



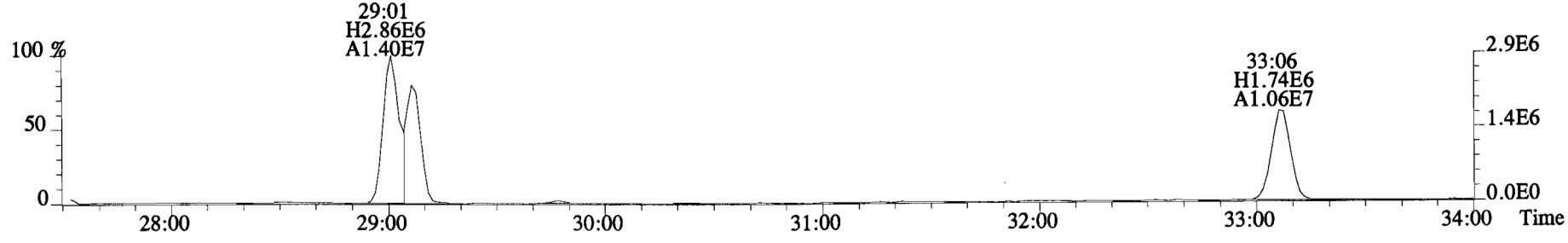
257.9584 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3656.0,0.00%,F,F)



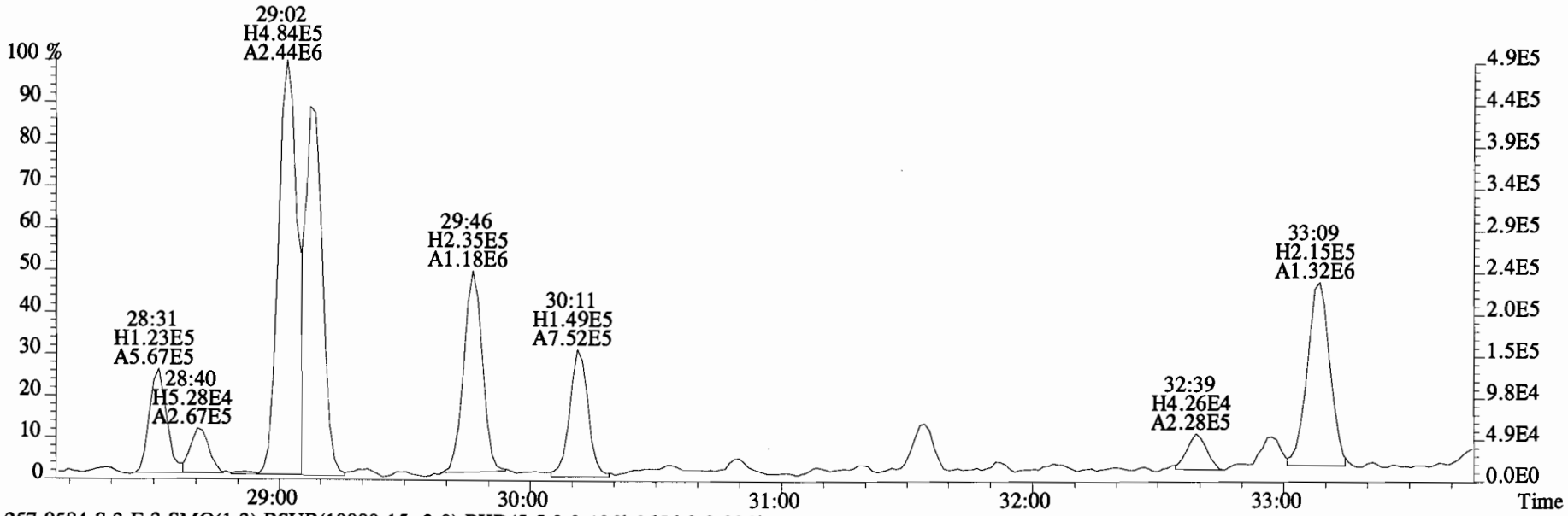
268.0016 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44352.0,0.00%,F,F)



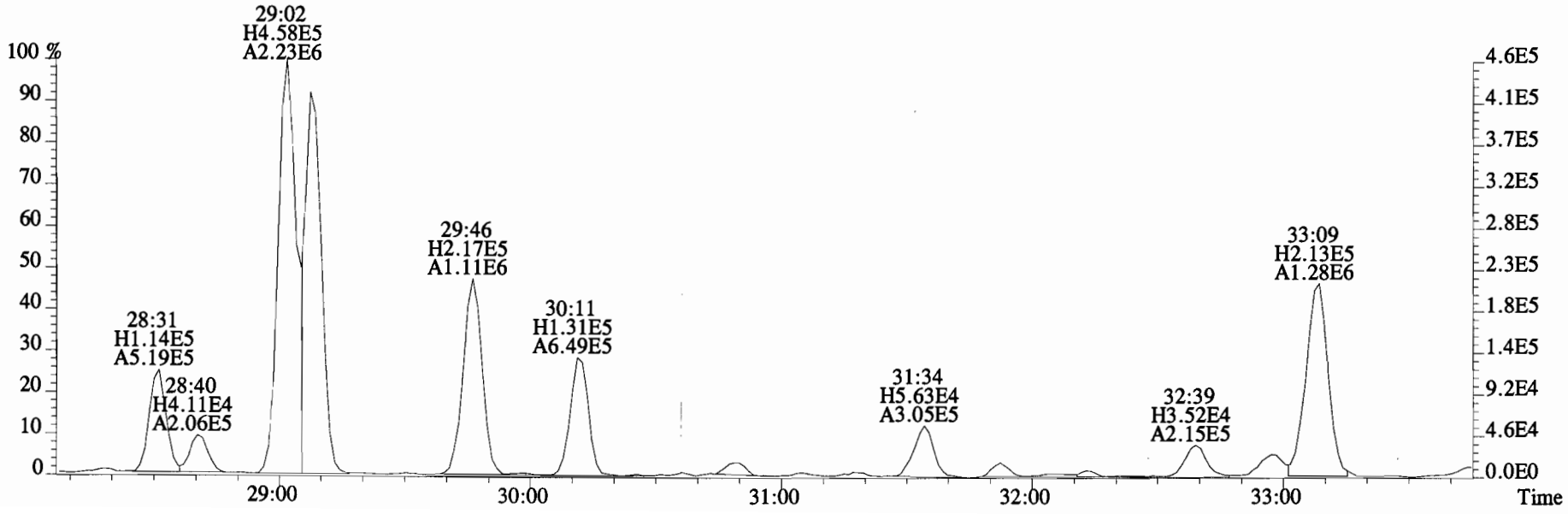
269.9986 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24060.0,0.00%,F,F)



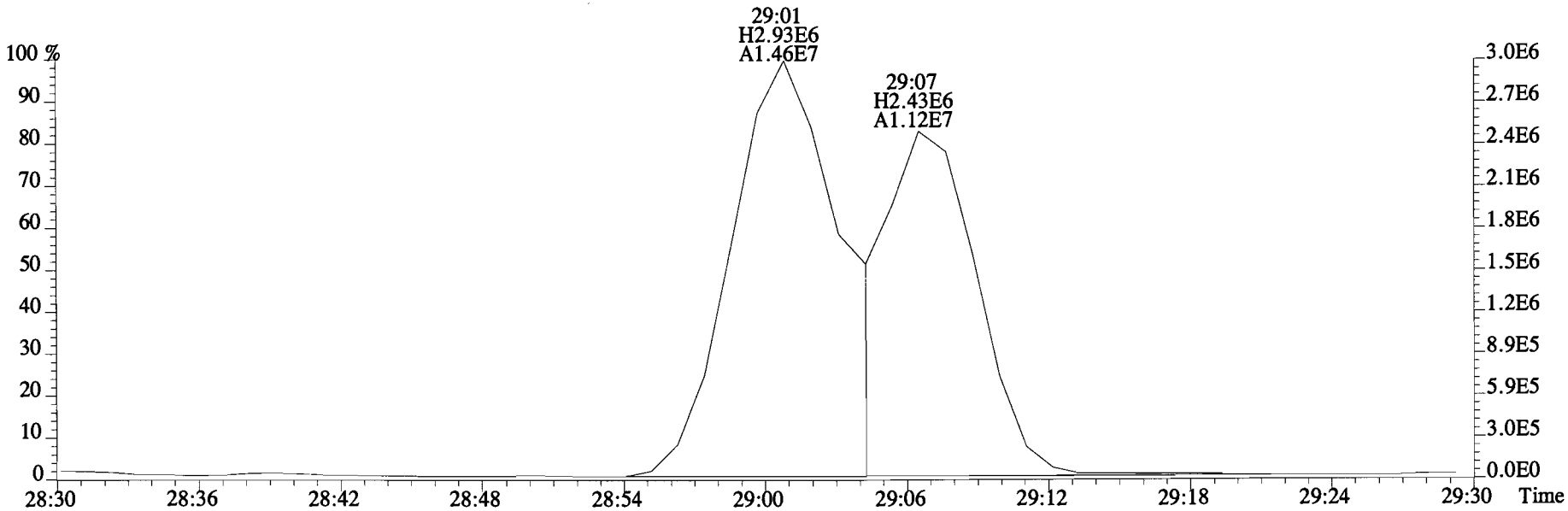
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
255.9613 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,17432.0,0.00%,F,F)



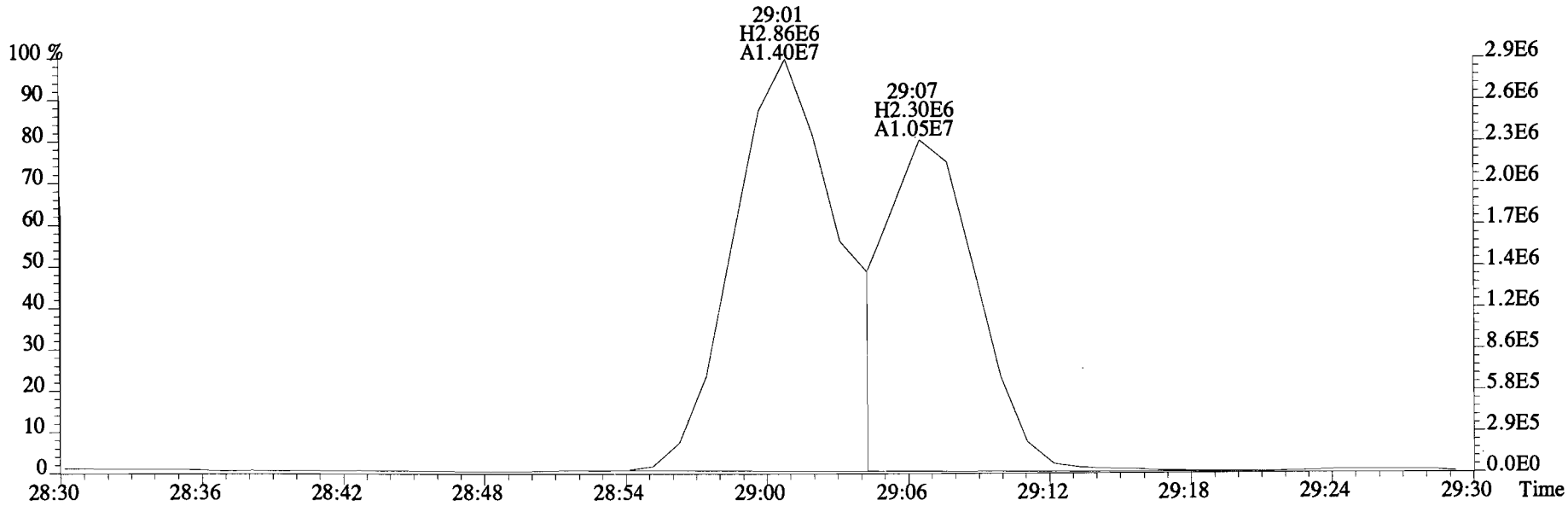
257.9584 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3656.0,0.00%,F,F)



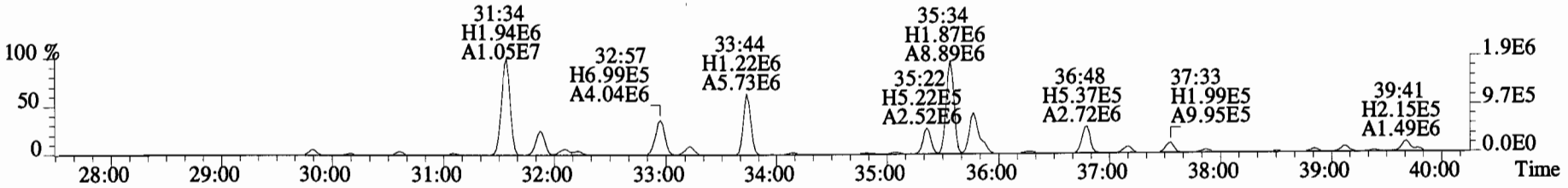
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
268.0016 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,44352.0,0.00%,F,F)



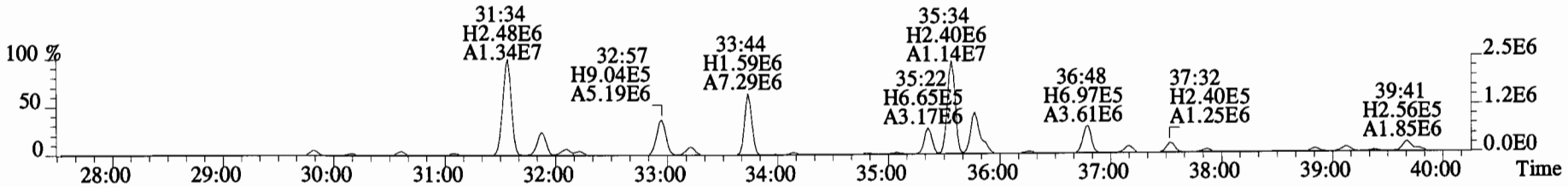
269.9986 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24060.0,0.00%,F,F)



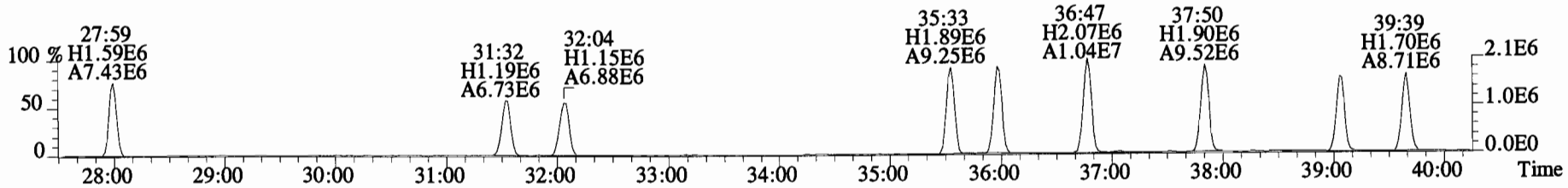
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



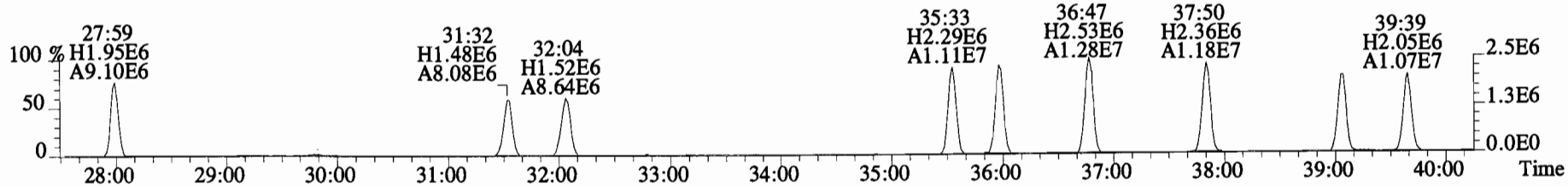
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



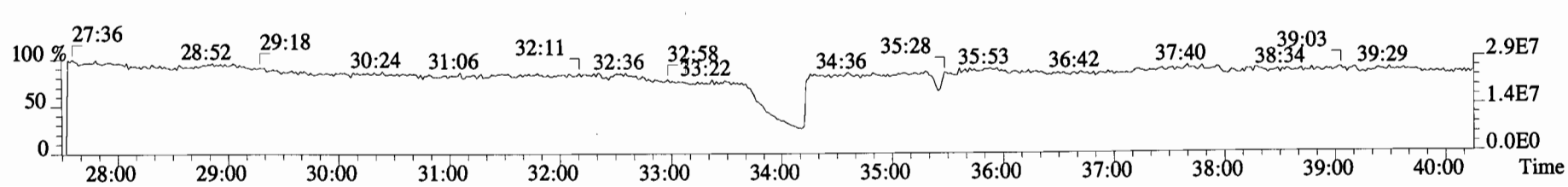
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22788.0,0.00%,F,F)



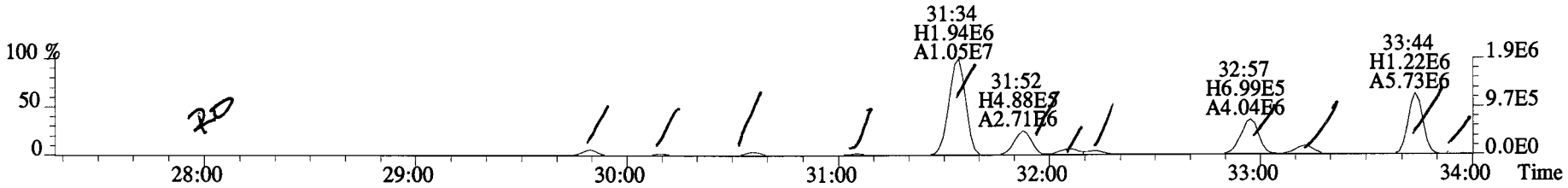
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12672.0,0.00%,F,F)



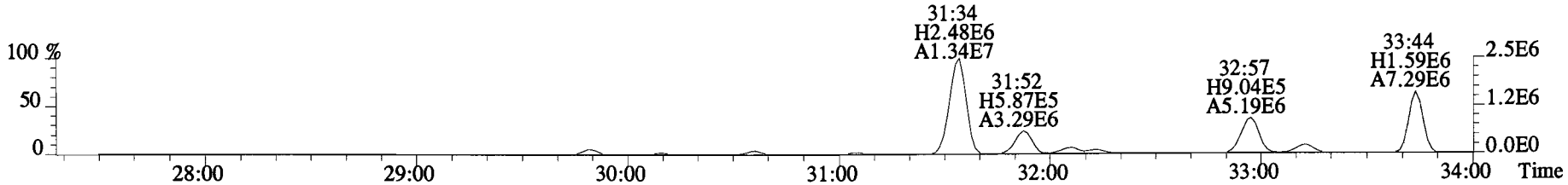
330.9792 S:3 F:3



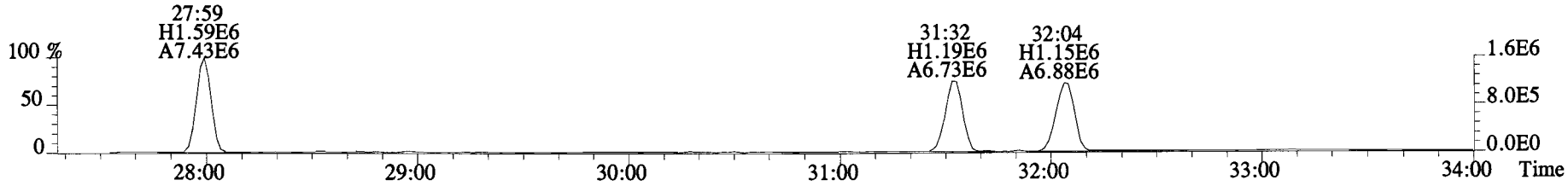
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



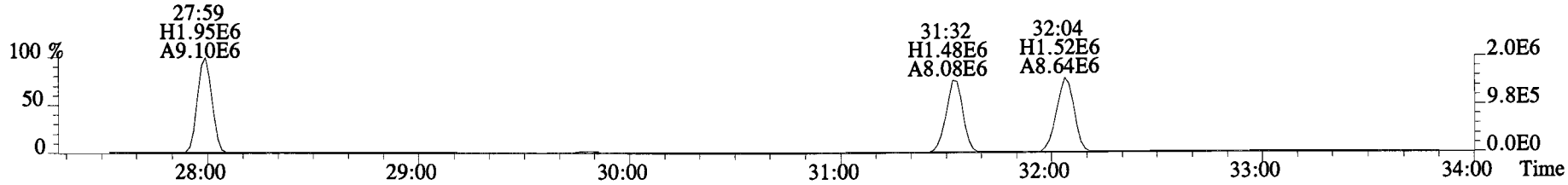
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



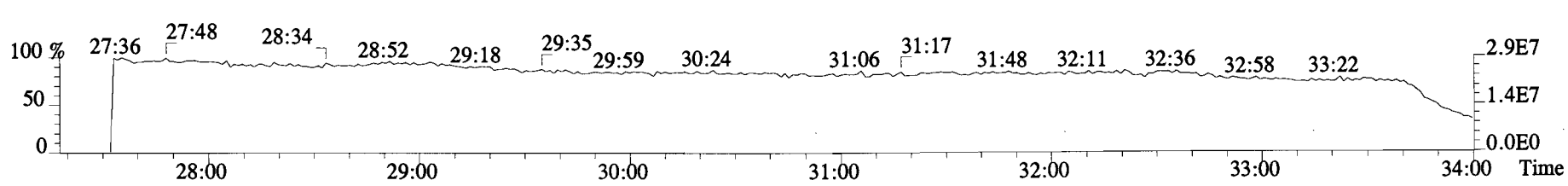
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22788.0,0.00%,F,F)



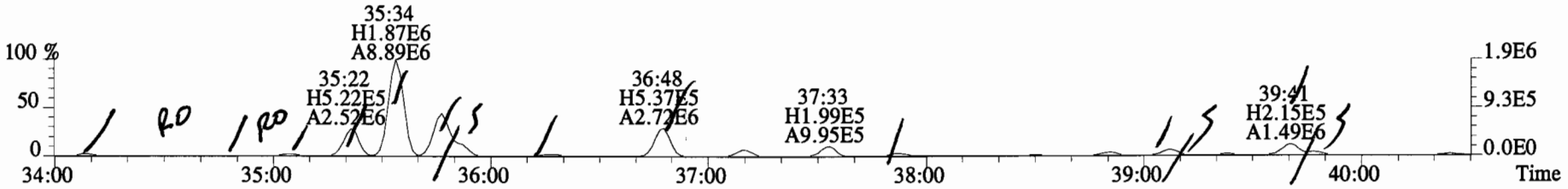
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12672.0,0.00%,F,F)



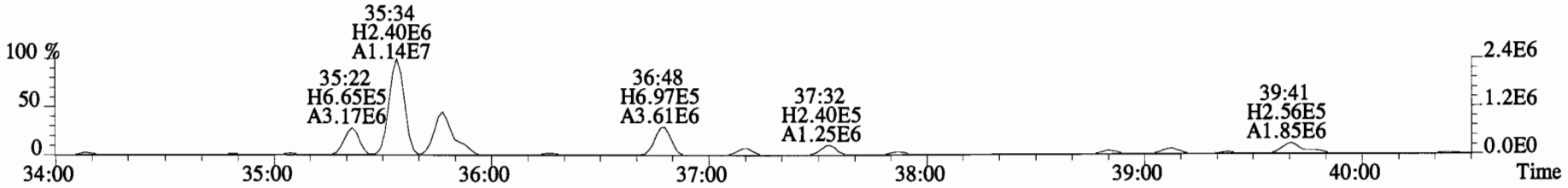
330.9792 S:3 F:3



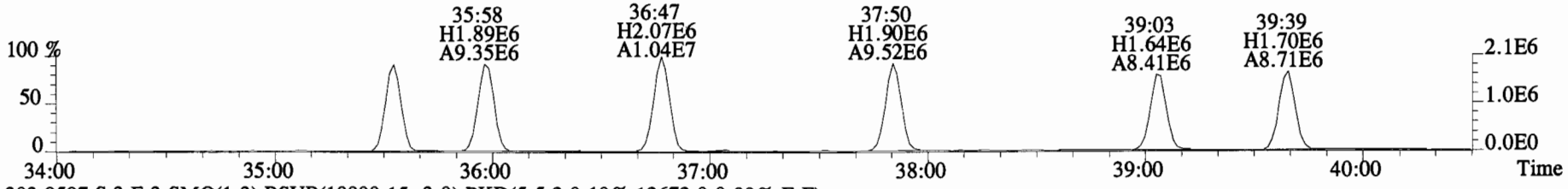
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



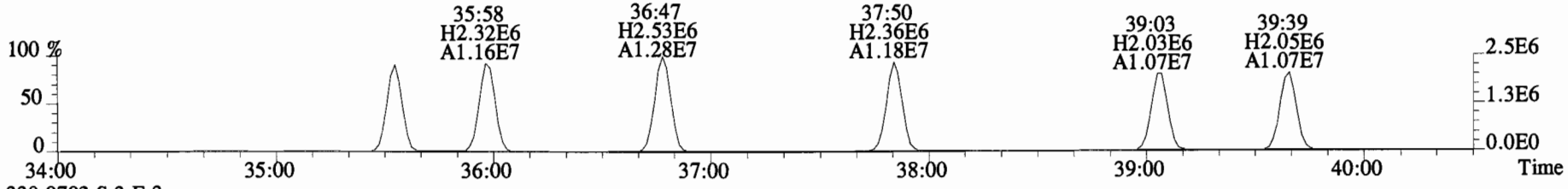
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



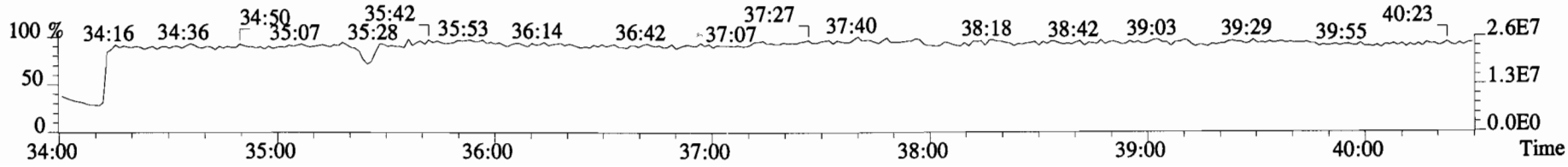
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22788.0,0.00%,F,F)



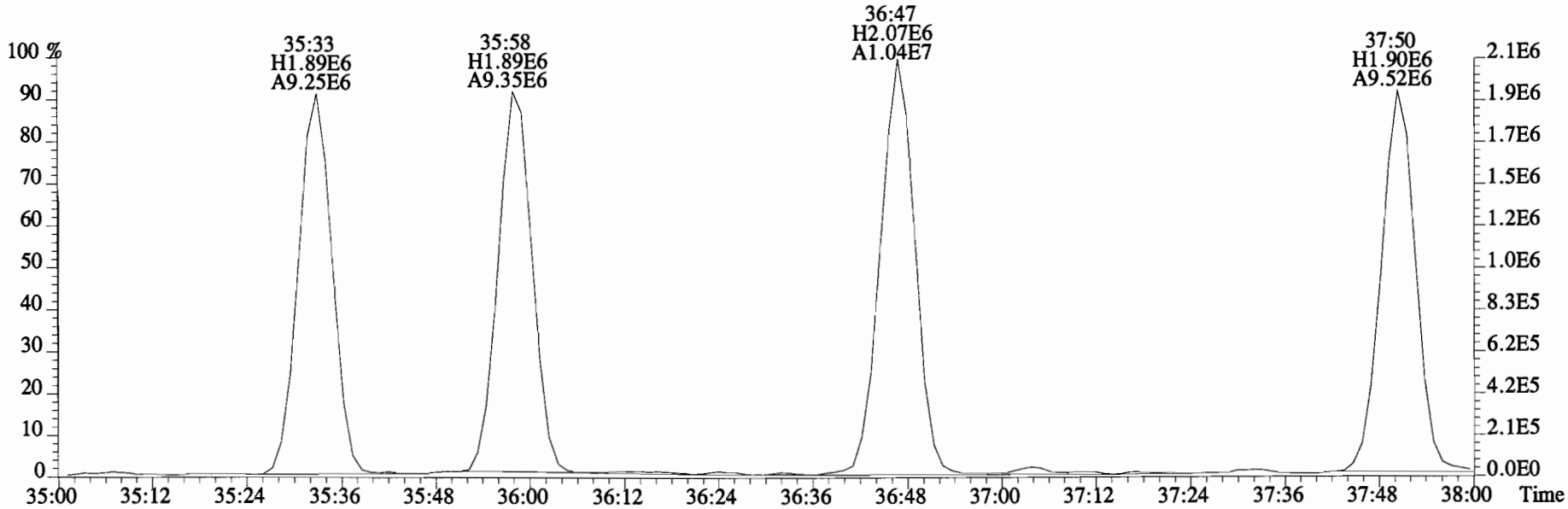
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12672.0,0.00%,F,F)



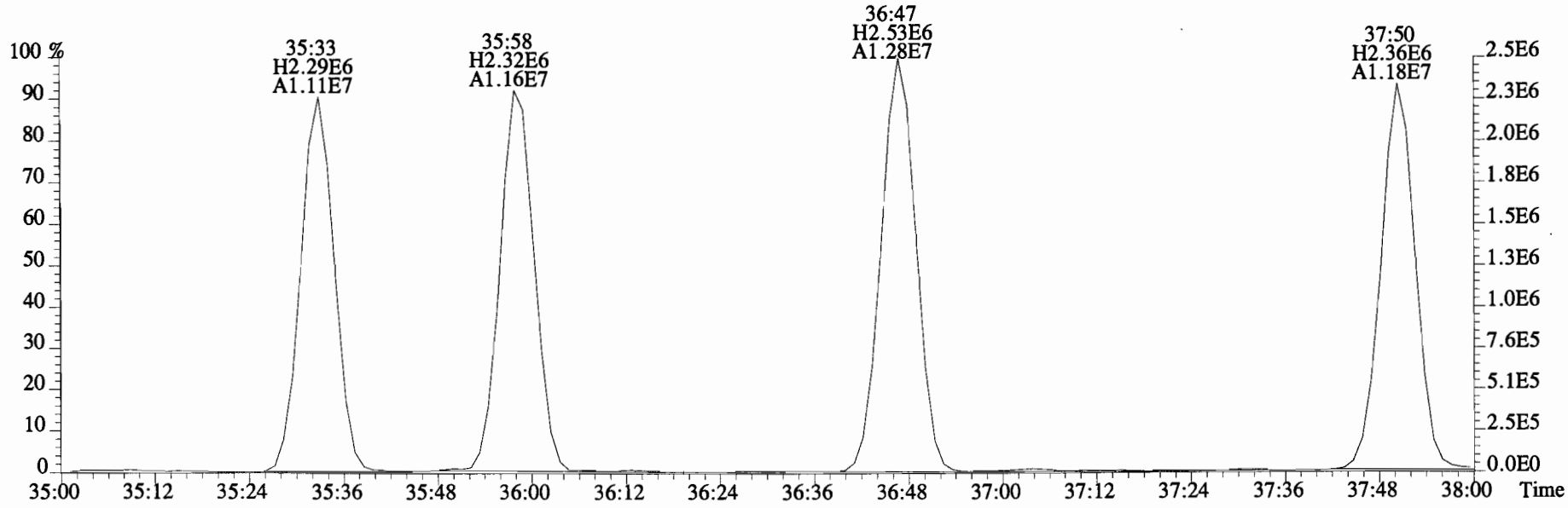
330.9792 S:3 F:3



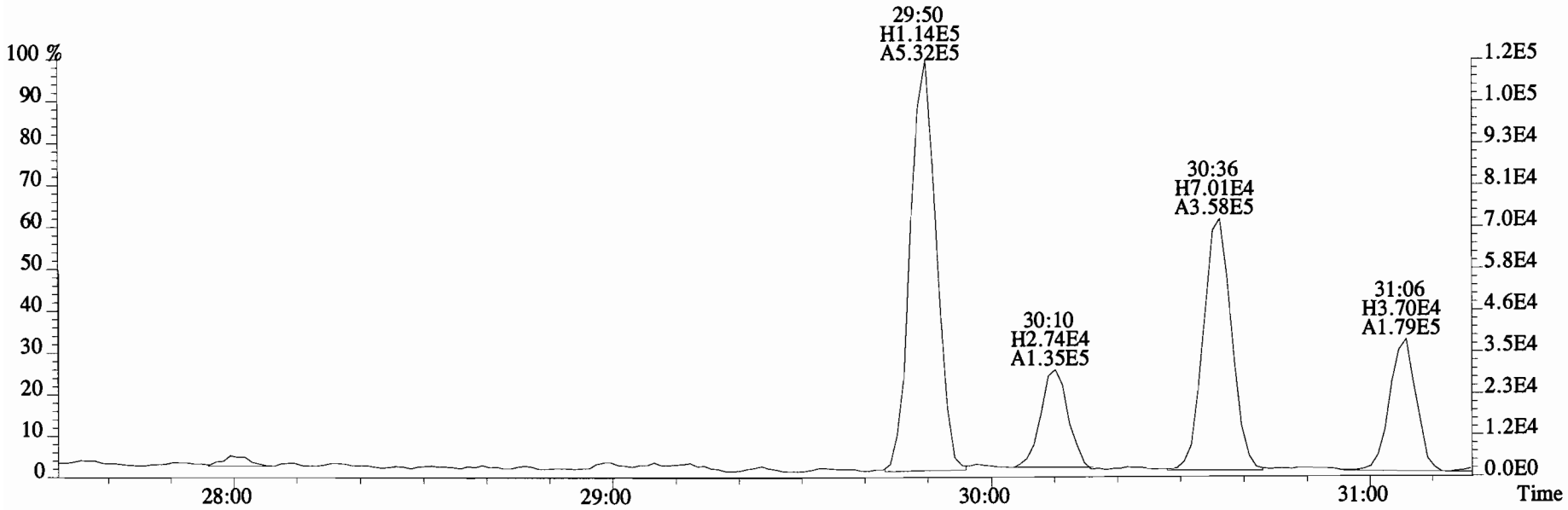
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
301.9626 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,22788.0,0.00%,F,F)



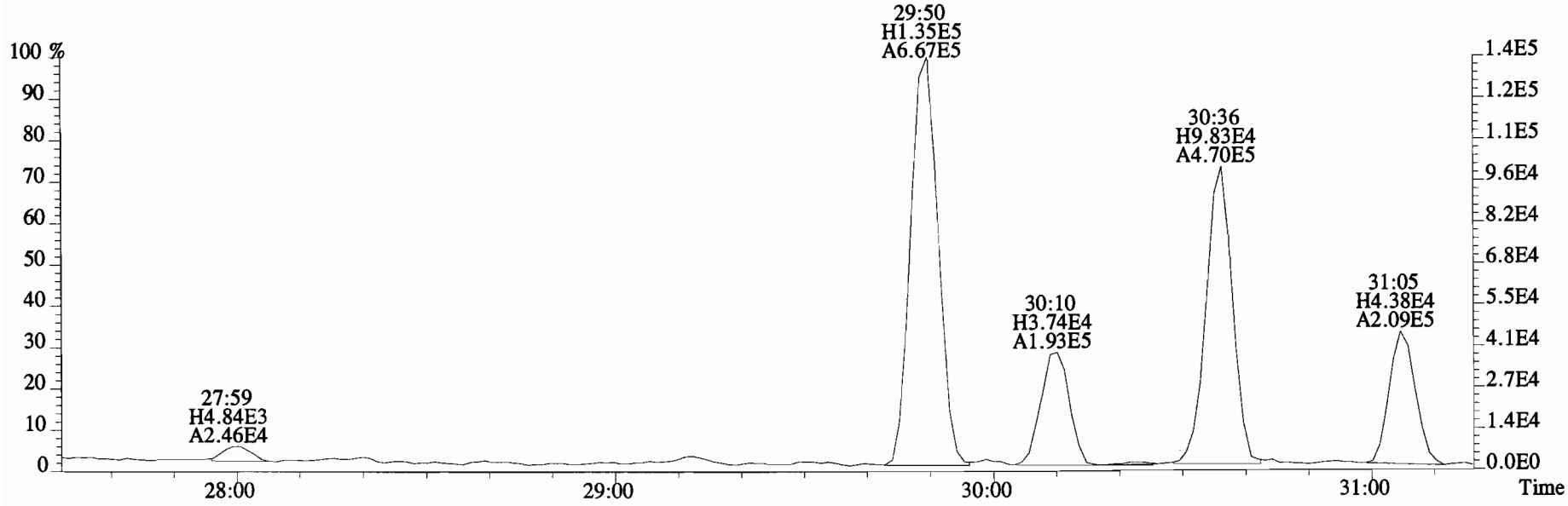
303.9597 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12672.0,0.00%,F,F)

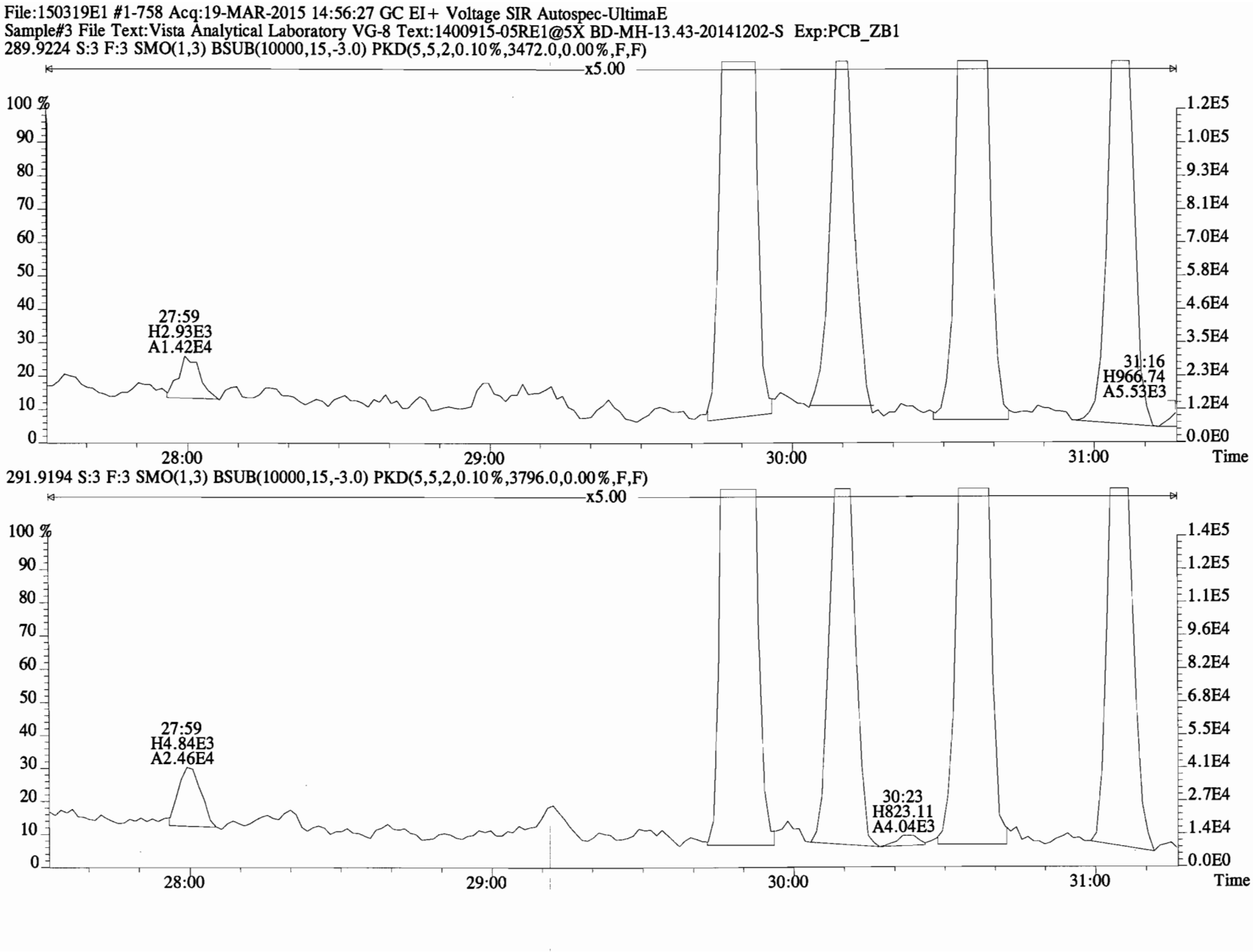


File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)

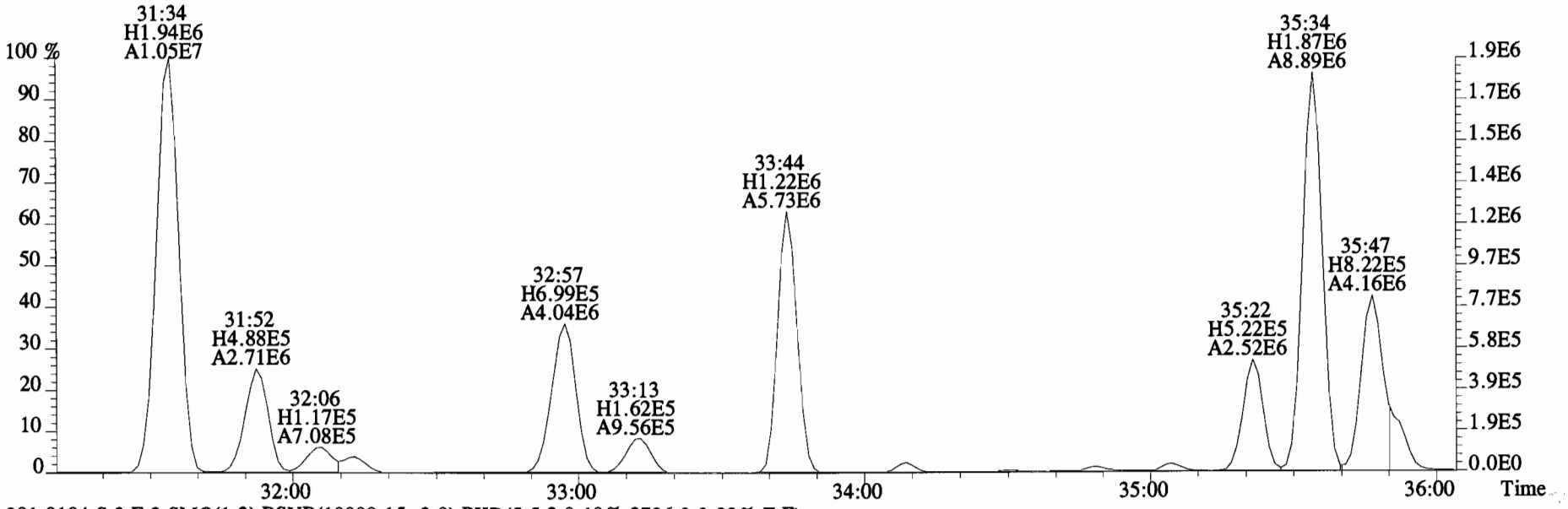


291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)

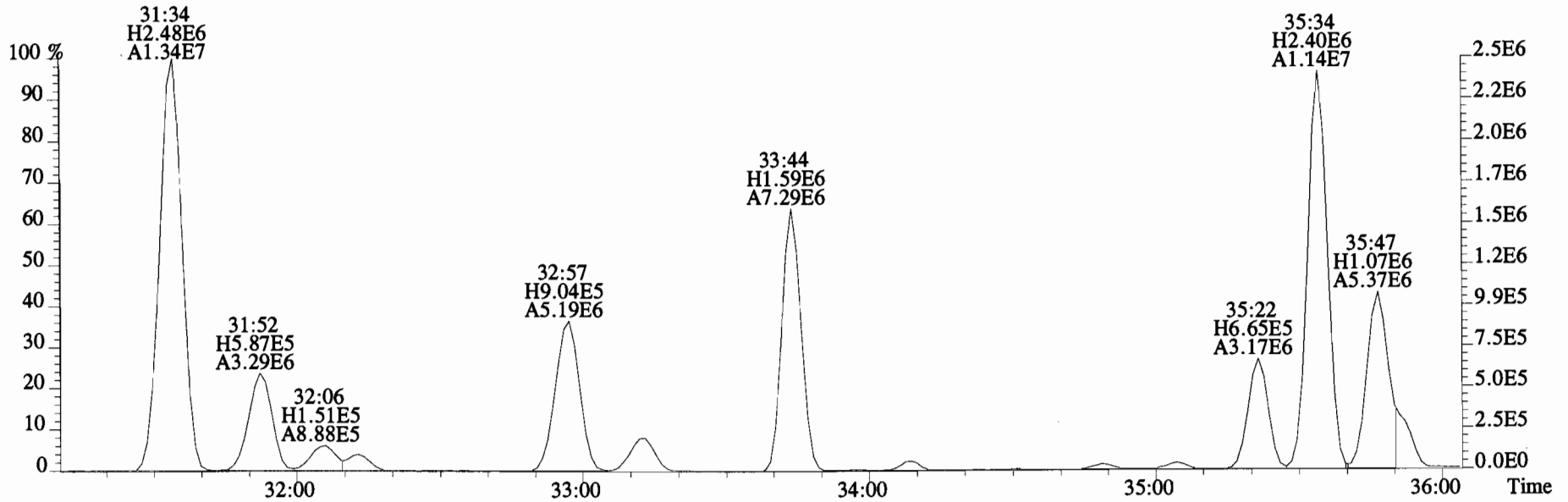



File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)
x5.00
27:59
H2.93E3
A1.42E4
31:16
H966.74
A5.53E3
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)
x5.00
27:59
H4.84E3
A2.46E4
30:23
H823.11
A4.04E3
Time

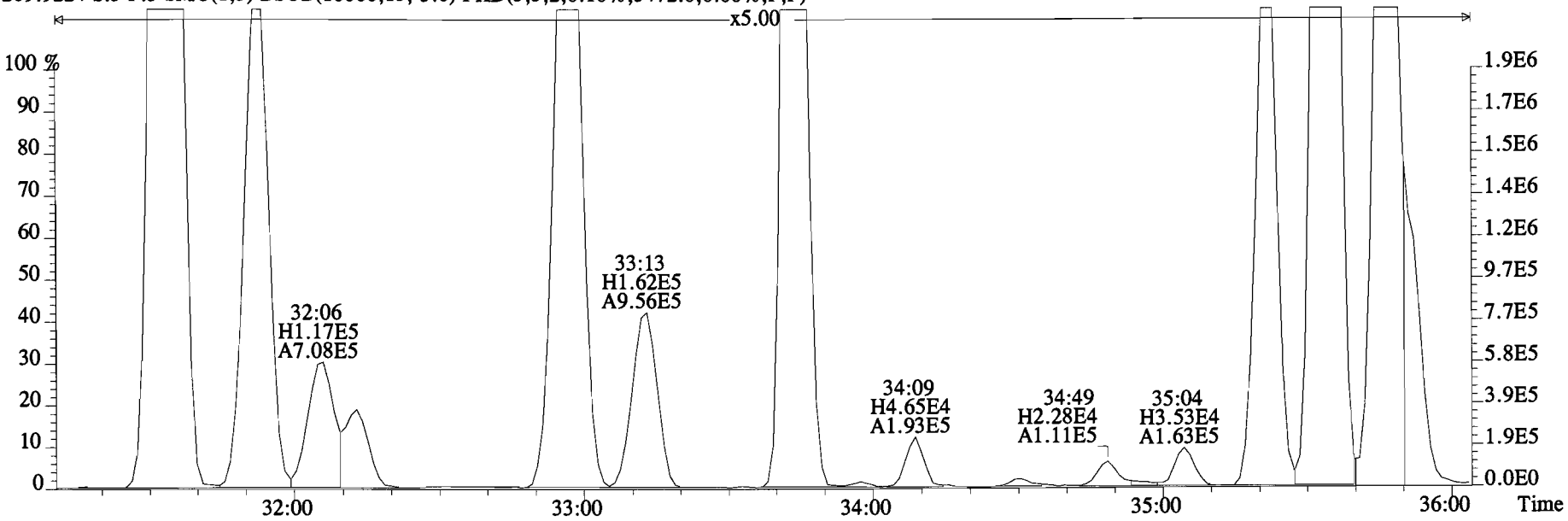
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



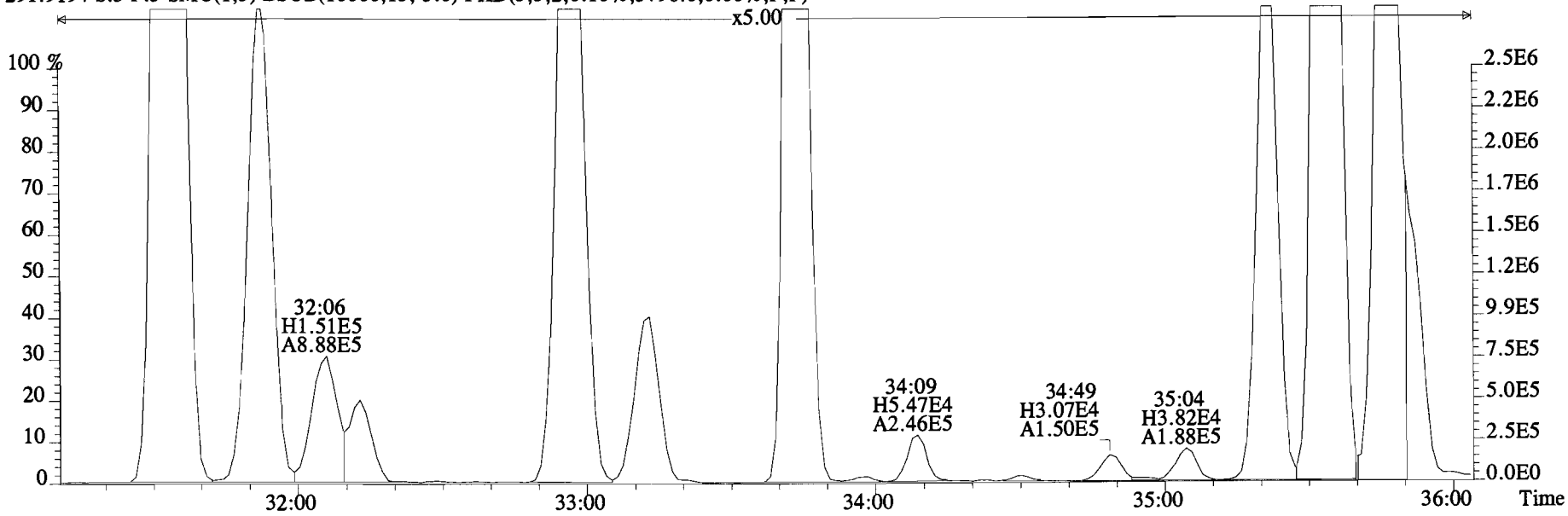
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



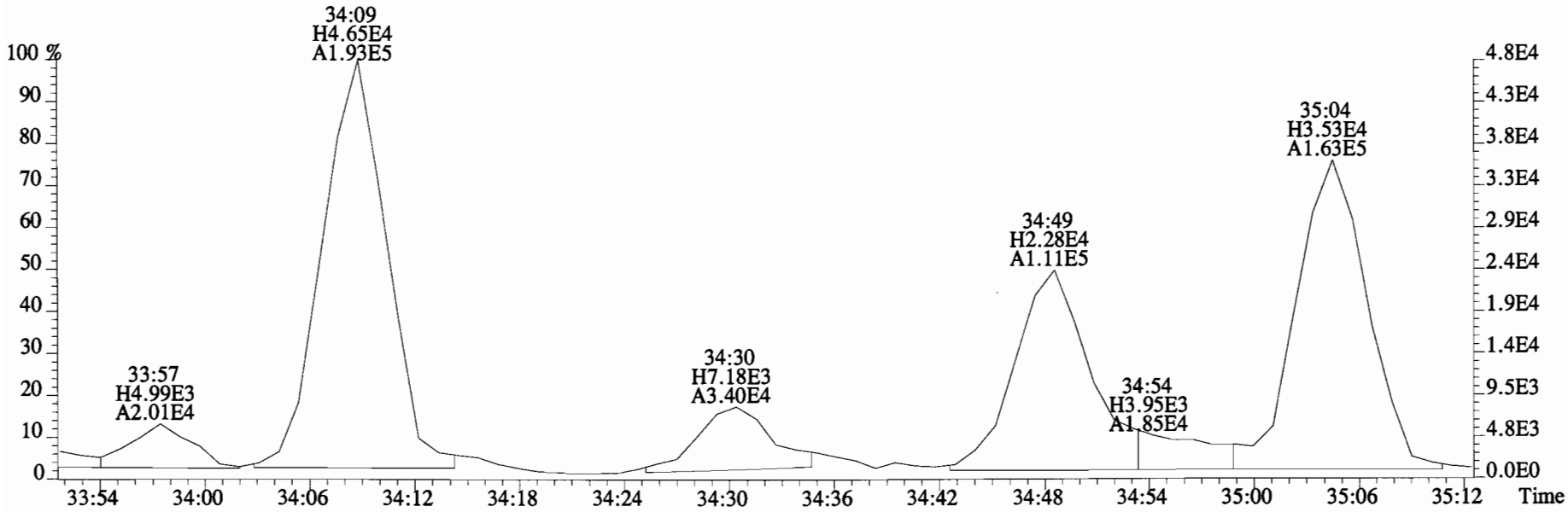
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



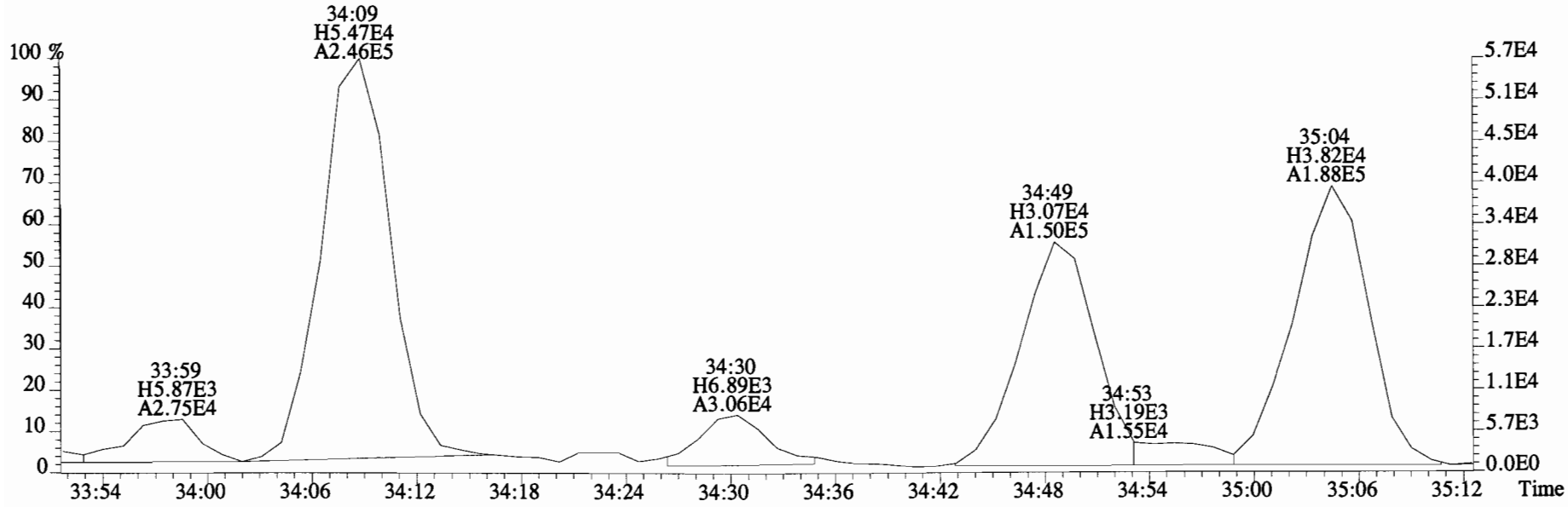
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



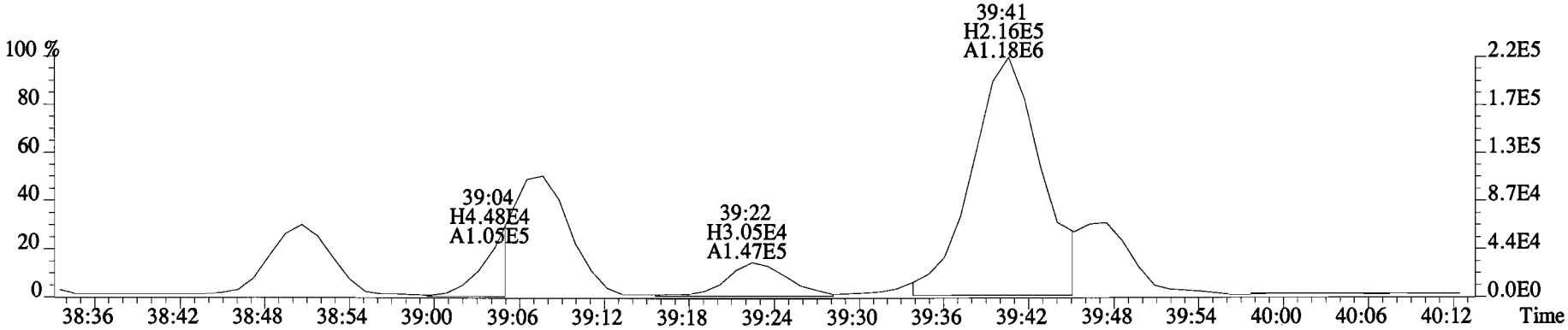
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



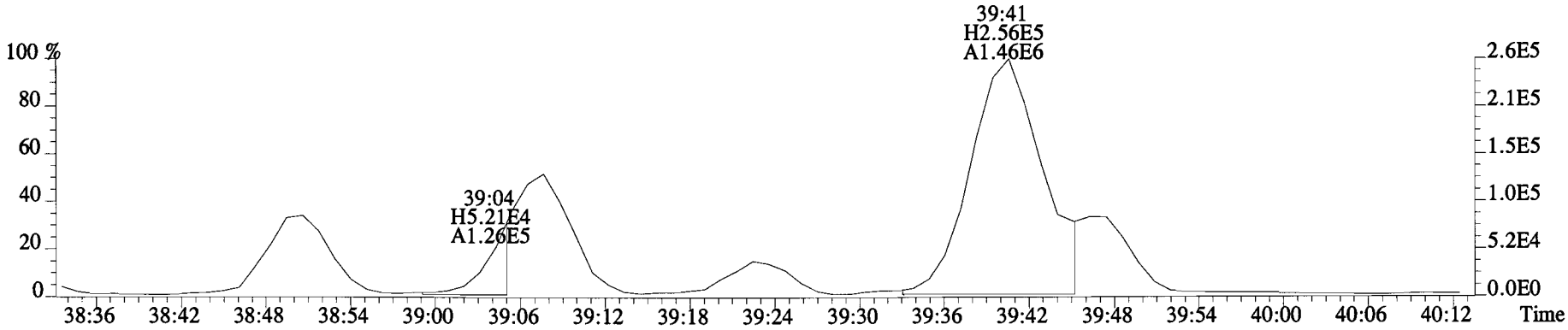
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



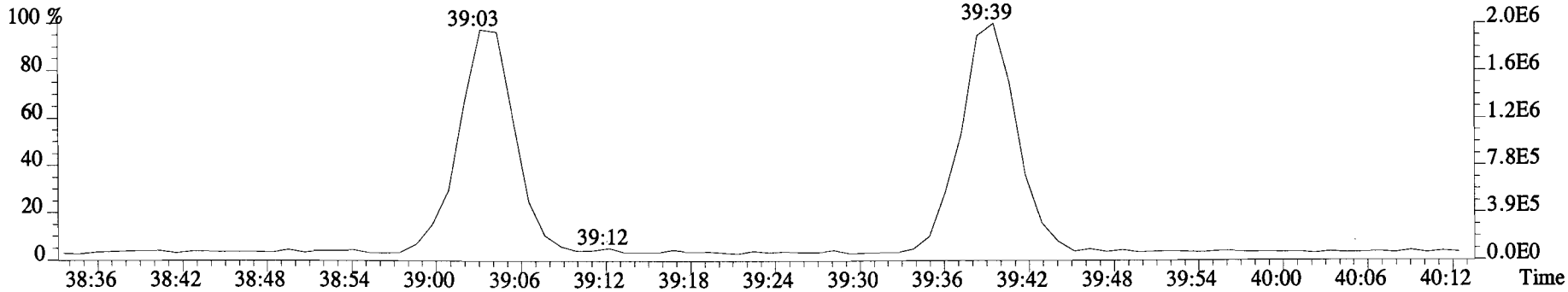
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
289.9224 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3472.0,0.00%,F,F)



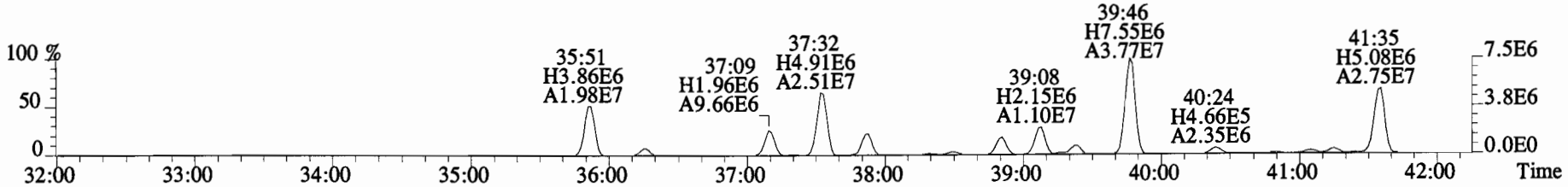
291.9194 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3796.0,0.00%,F,F)



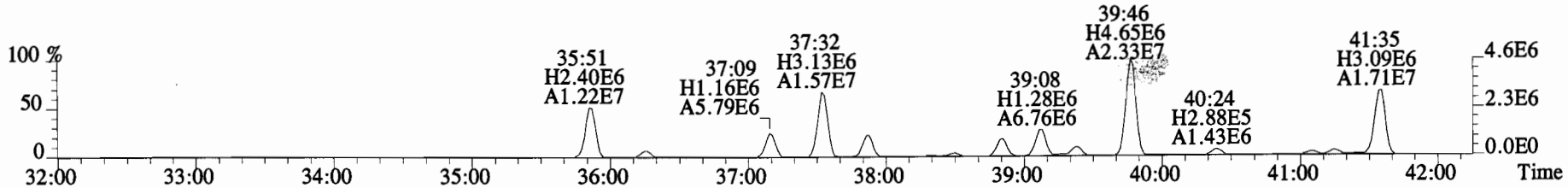
301.9626 S:3 F:3



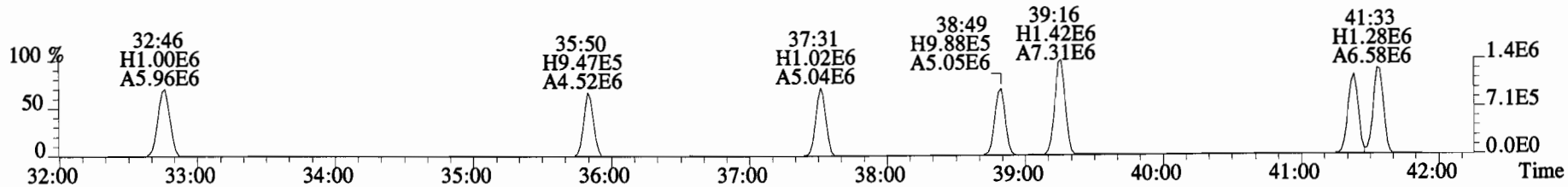
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1440.0,0.00%,F,F)



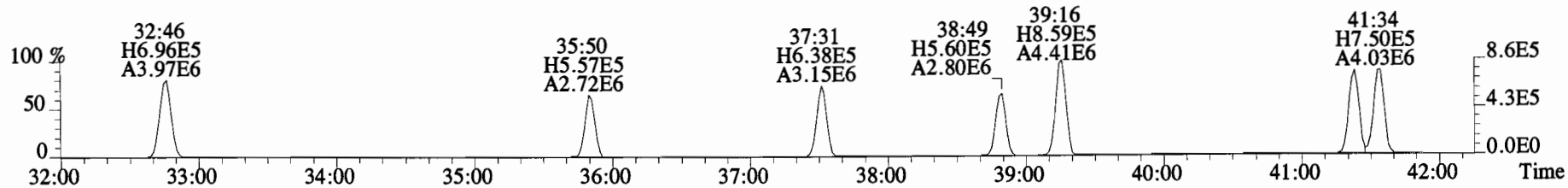
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1796.0,0.00%,F,F)



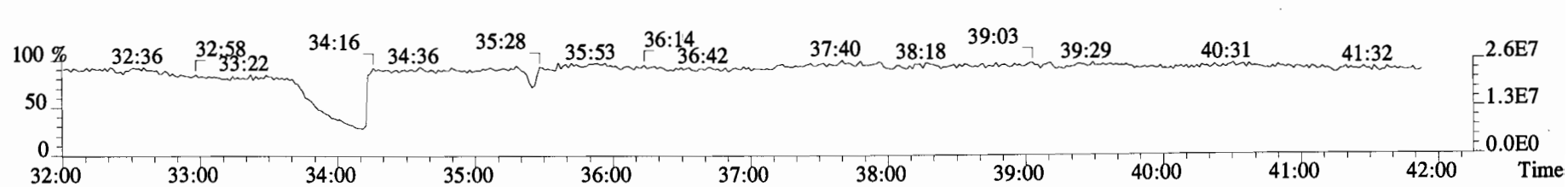
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2672.0,0.00%,F,F)



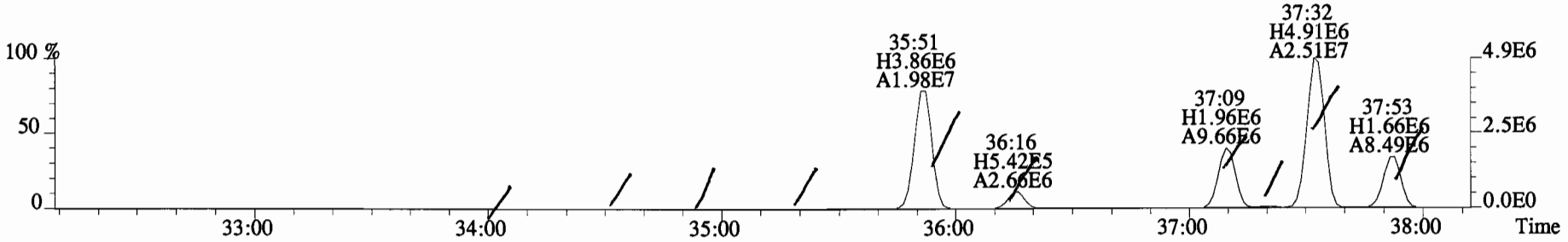
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2396.0,0.00%,F,F)



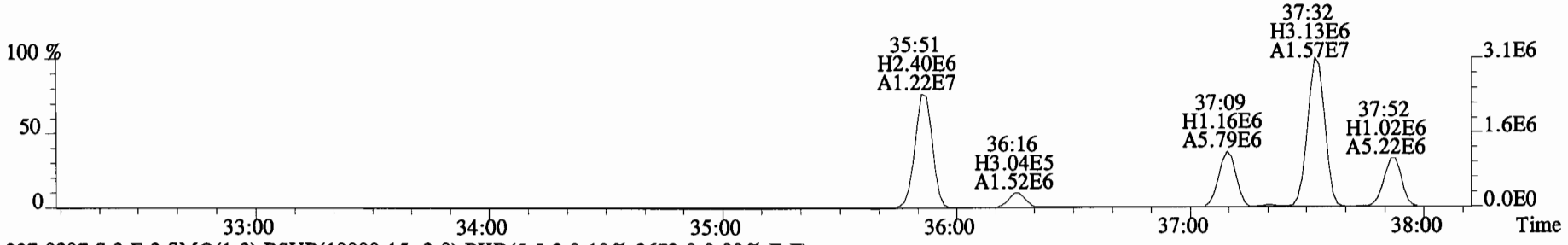
330.9792 S:3 F:3



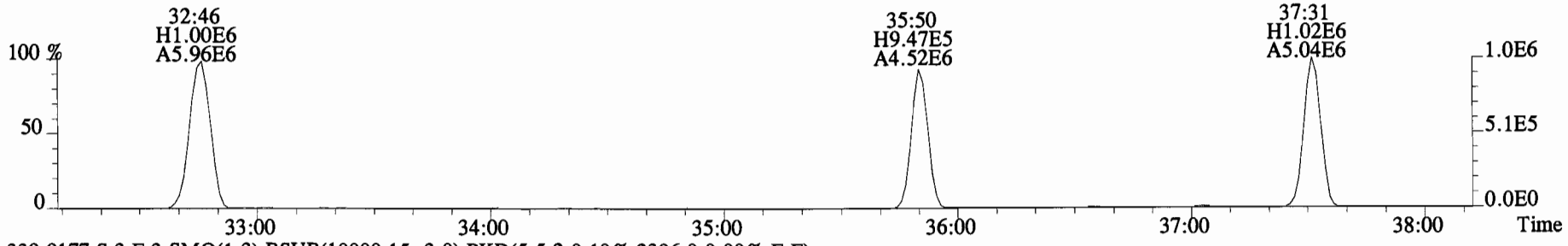
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1440.0,0.00%,F,F)



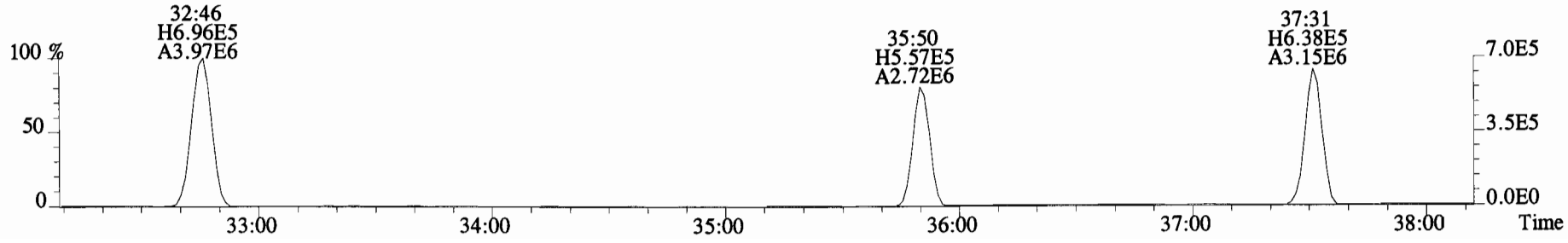
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1796.0,0.00%,F,F)



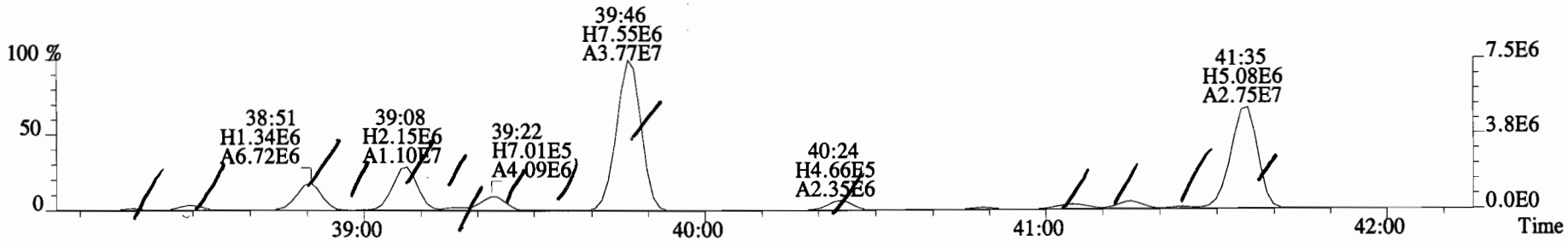
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2672.0,0.00%,F,F)



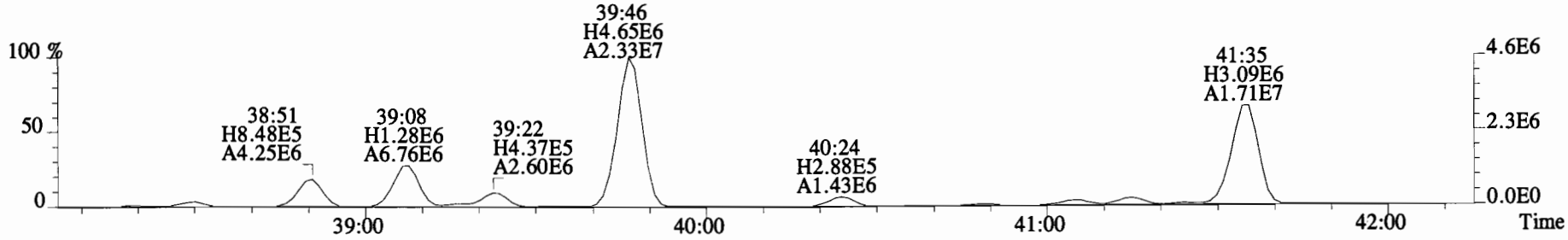
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2396.0,0.00%,F,F)



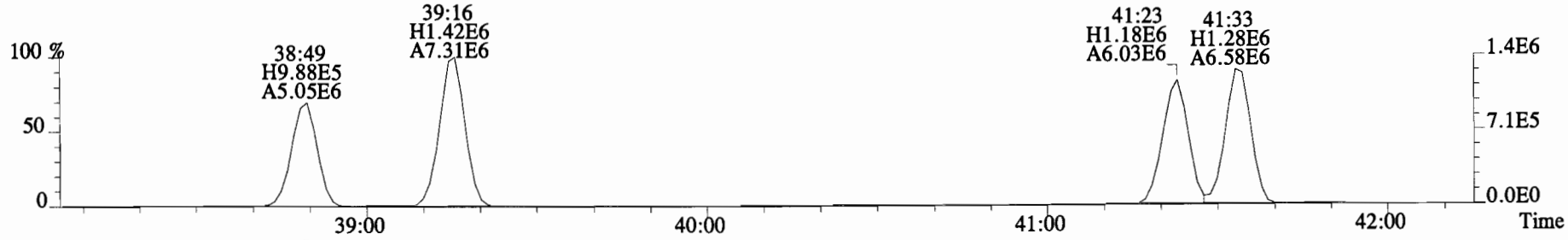
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1440.0,0.00%,F,F)



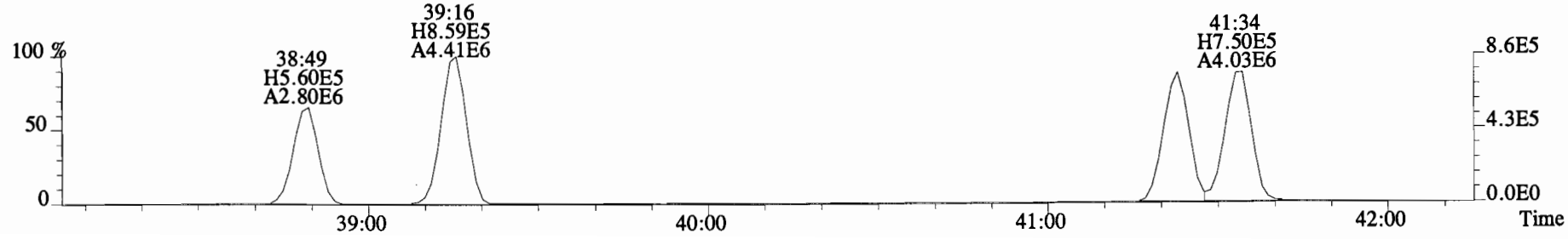
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1796.0,0.00%,F,F)



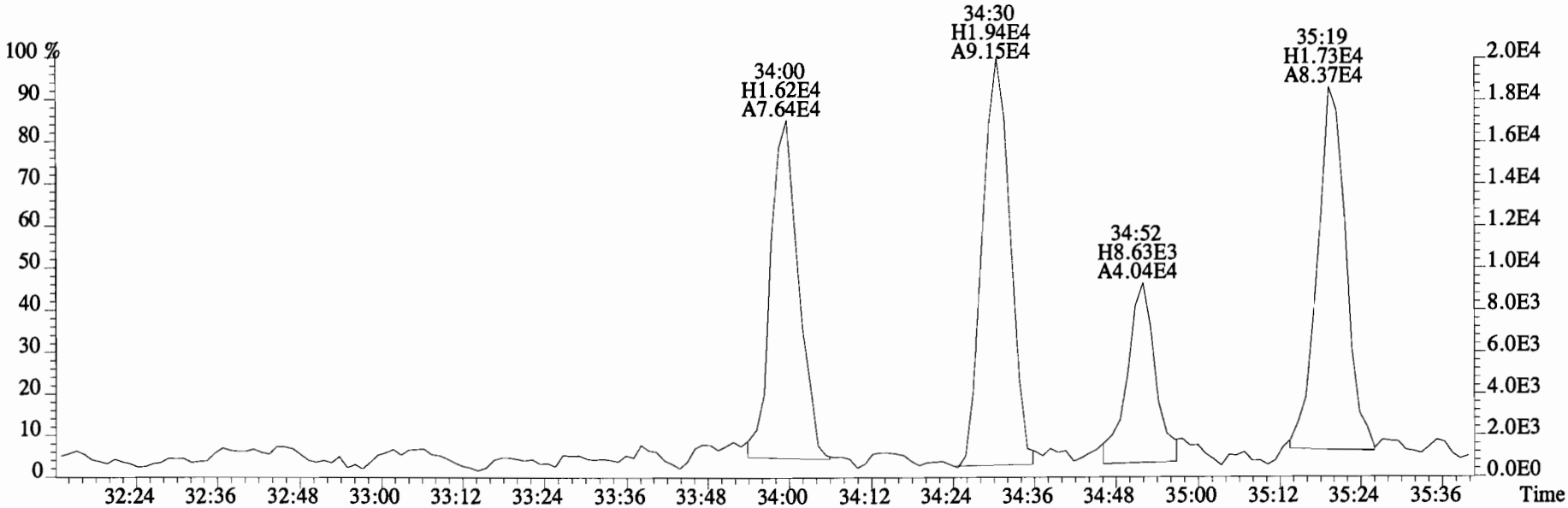
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2672.0,0.00%,F,F)



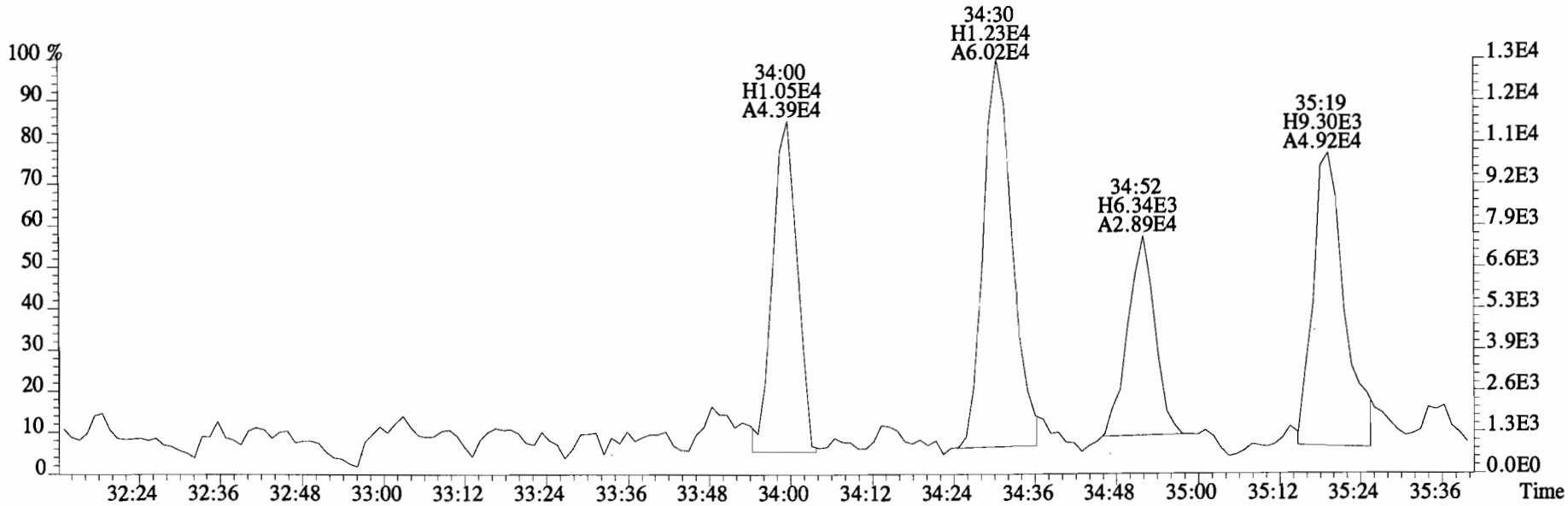
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2396.0,0.00%,F,F)



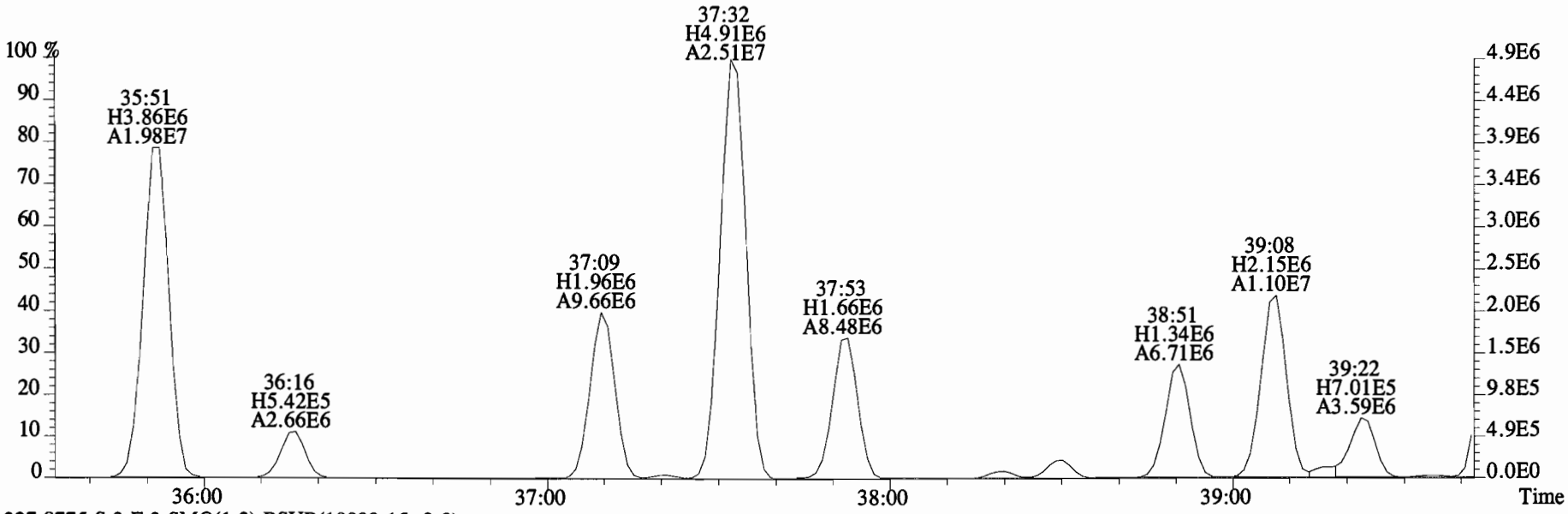
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



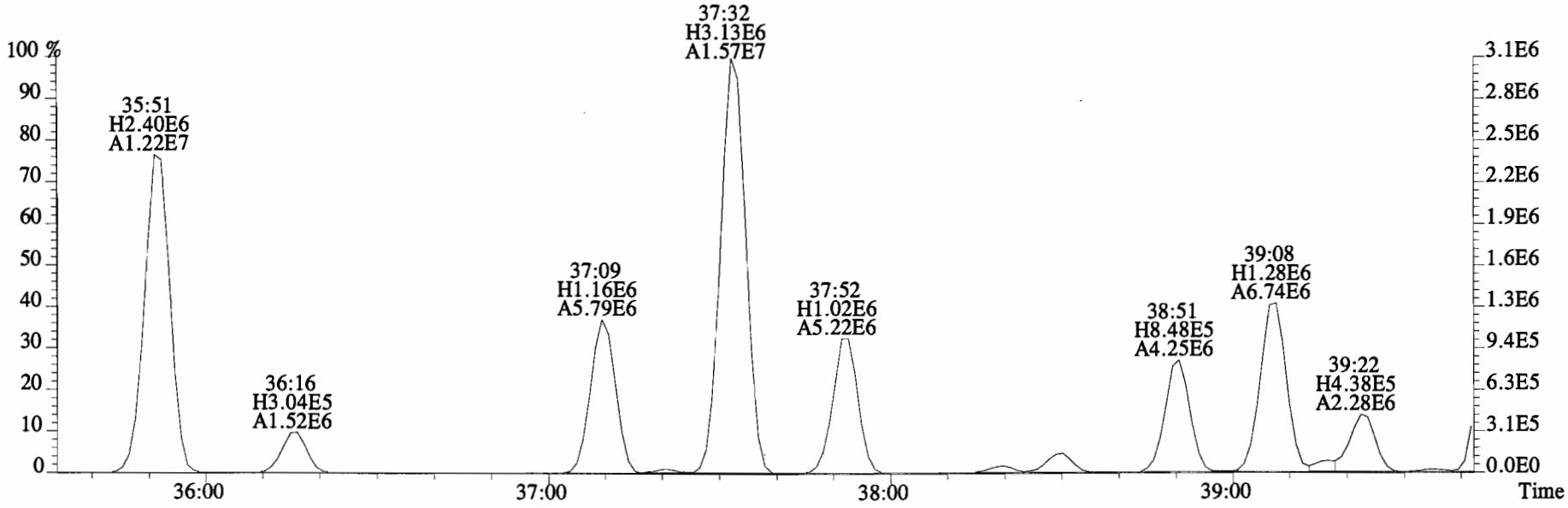
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



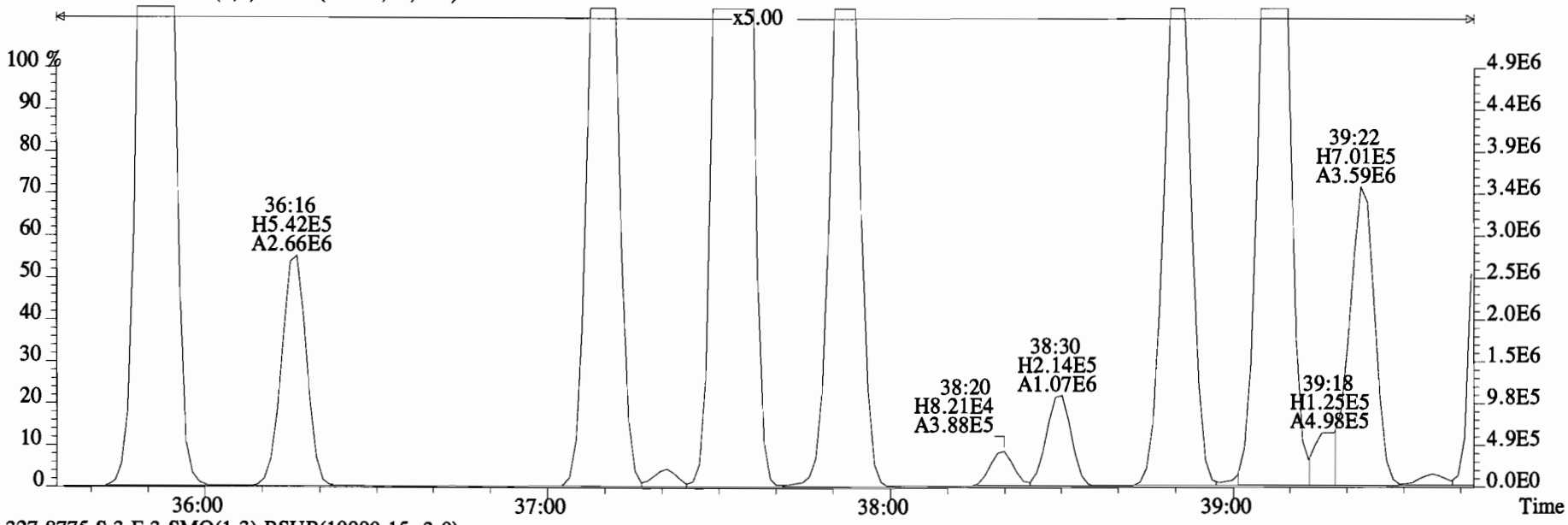
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



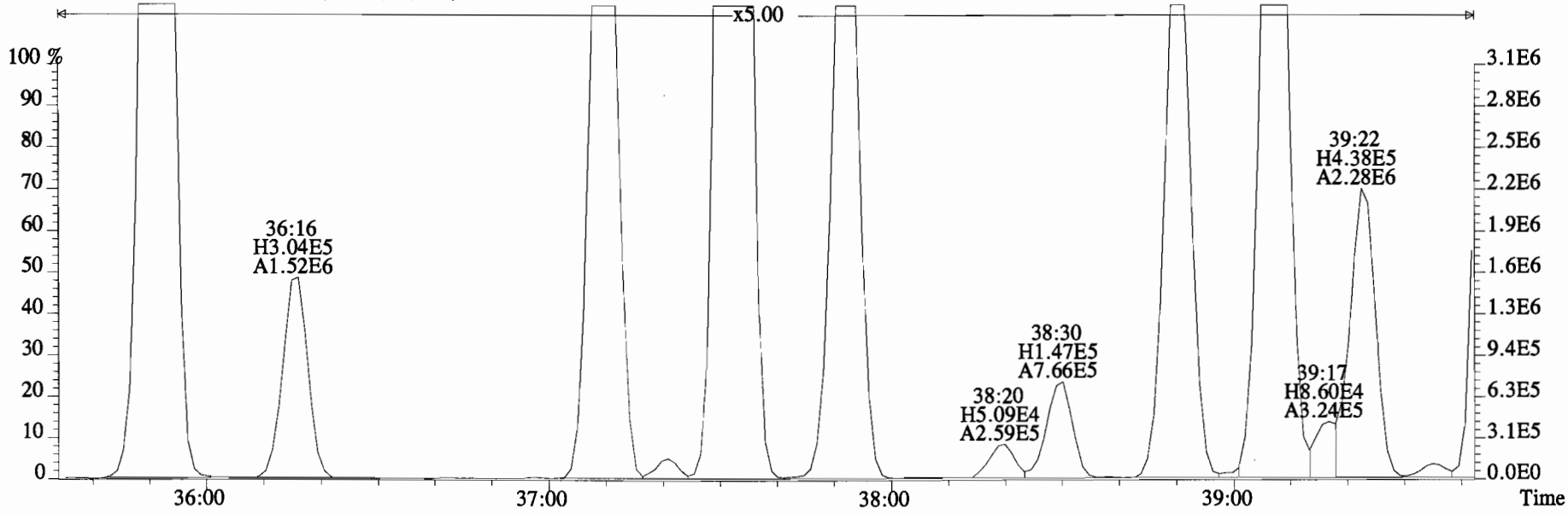
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



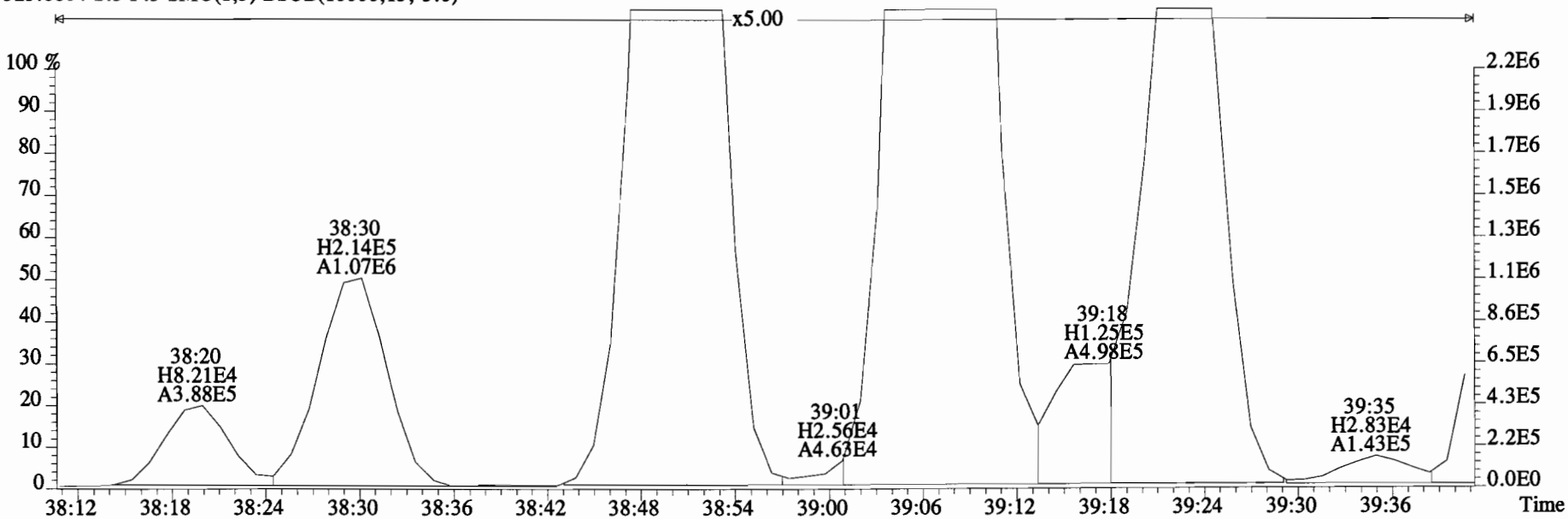
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



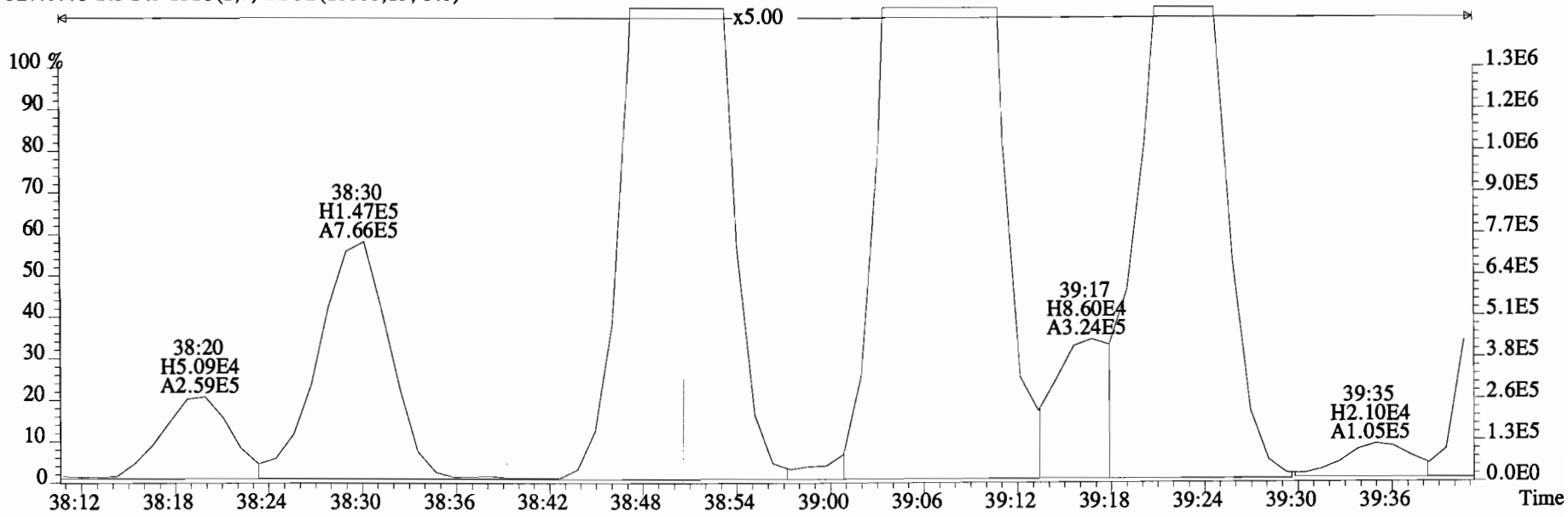
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



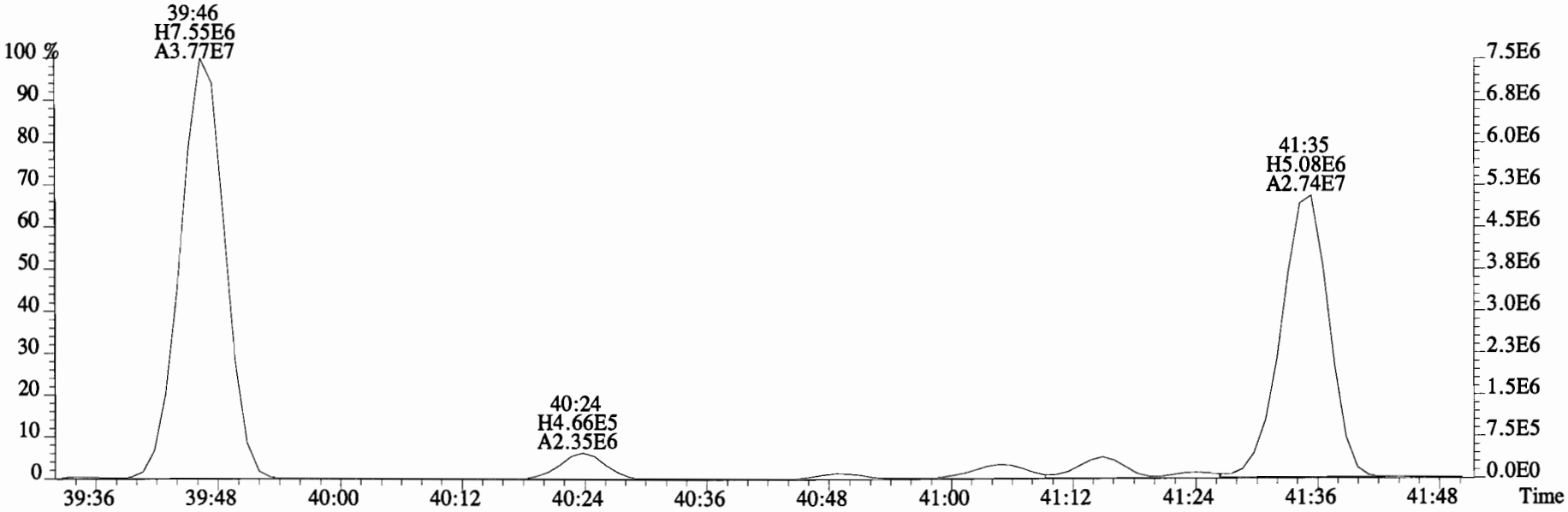
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)



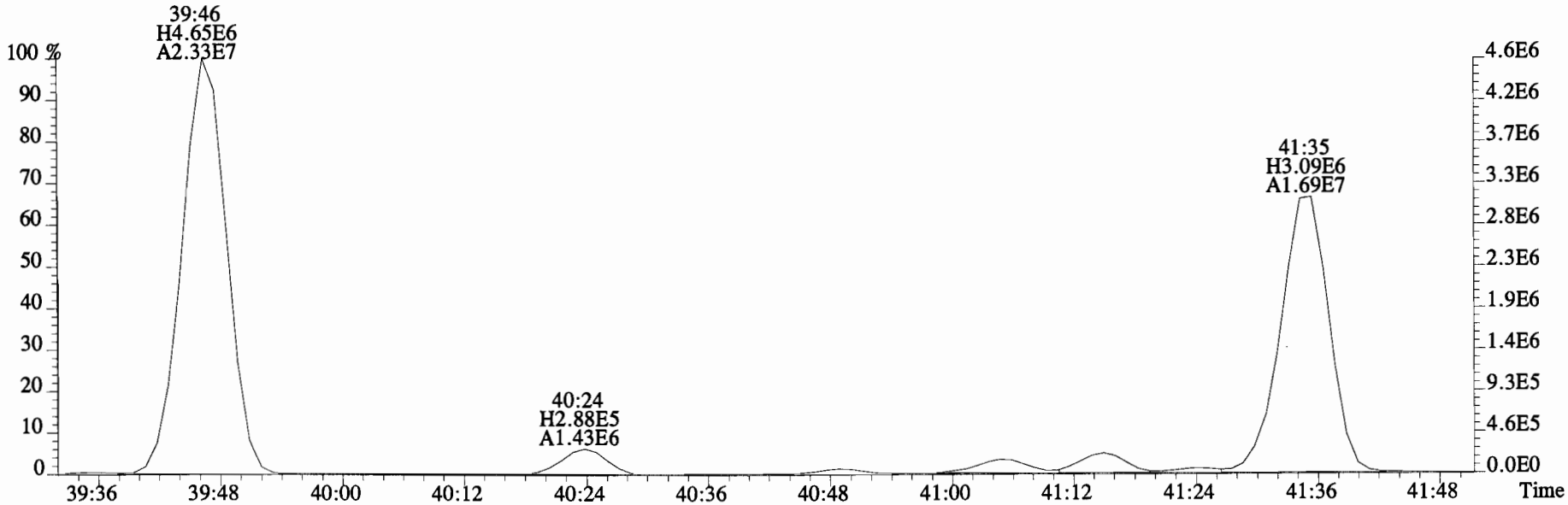
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)

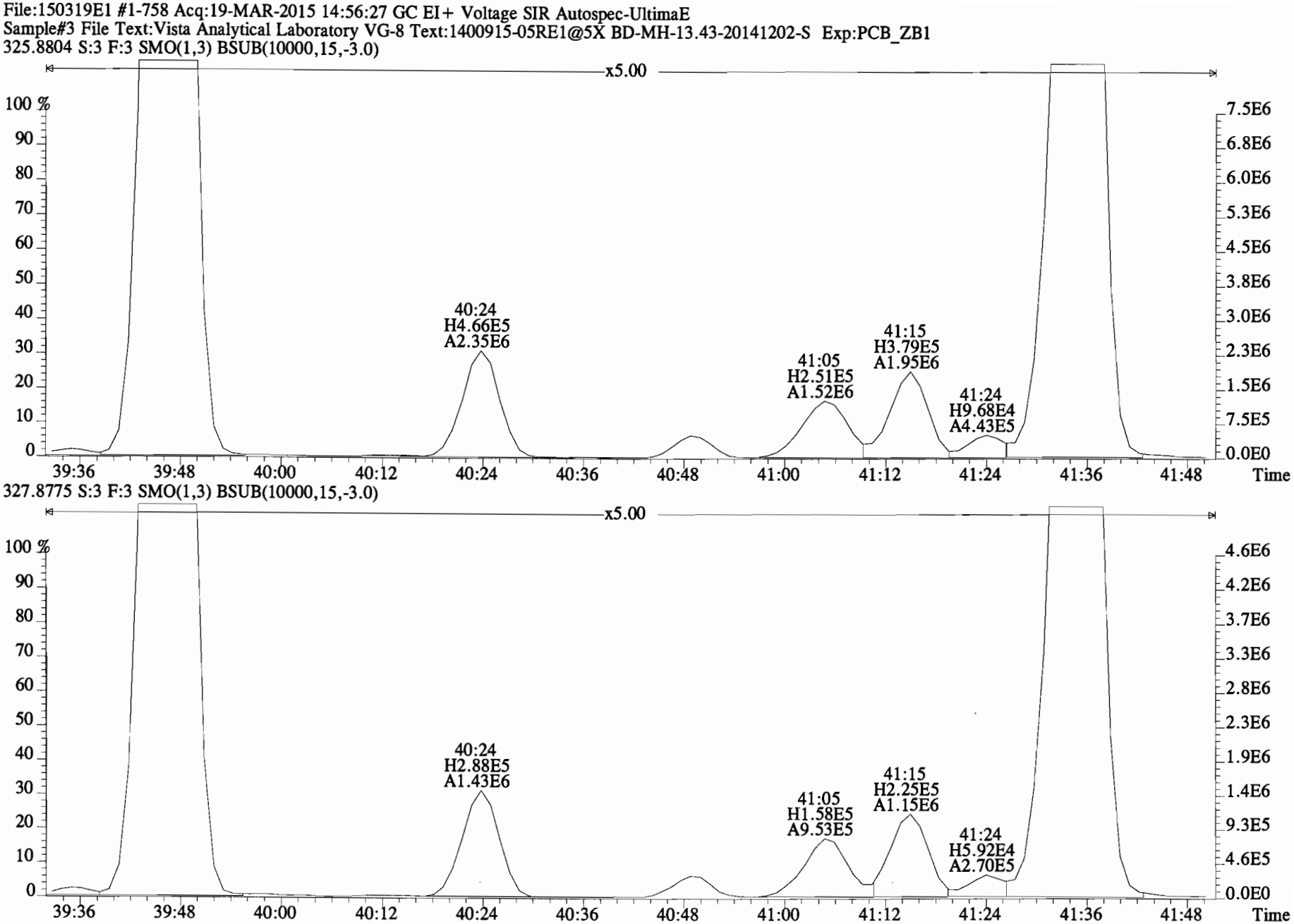


File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)

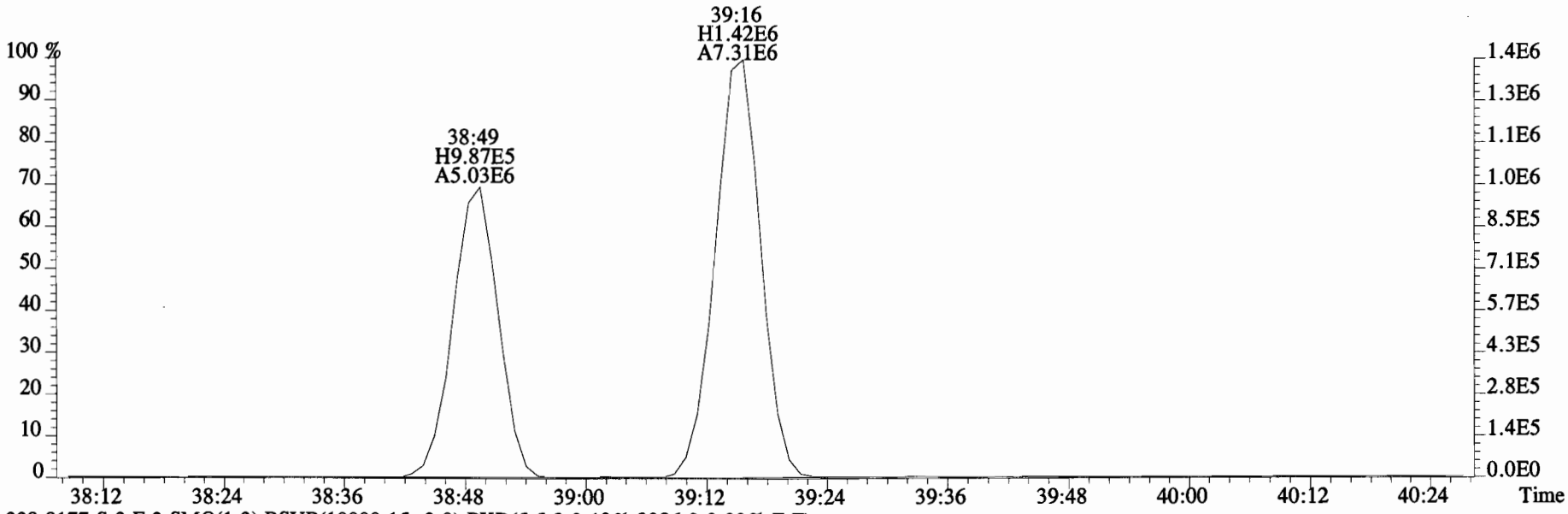


327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)

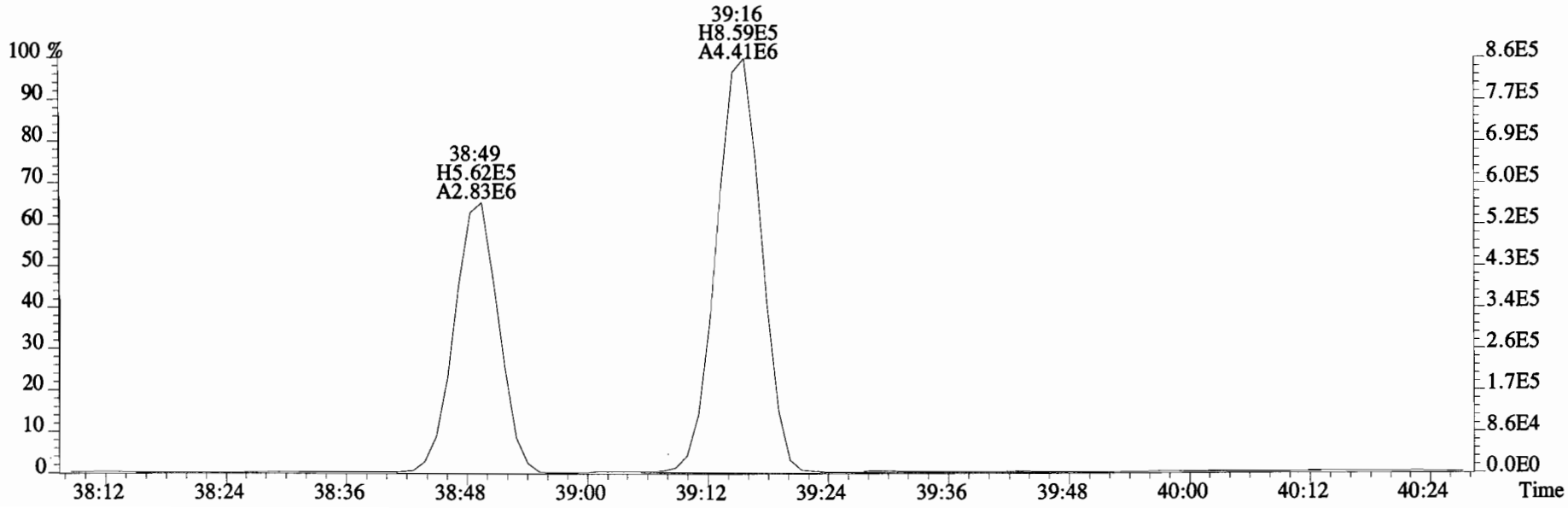



File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)
x5.00
40:24
H4.66E5
A2.35E6
41:05
H2.51E5
A1.52E6
41:15
H3.79E5
A1.95E6
41:24
H9.68E4
A4.43E5
Time
327.8775 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0)
x5.00
40:24
H2.88E5
A1.43E6
41:05
H1.58E5
A9.53E5
41:15
H2.25E5
A1.15E6
41:24
H5.92E4
A2.70E5
Time

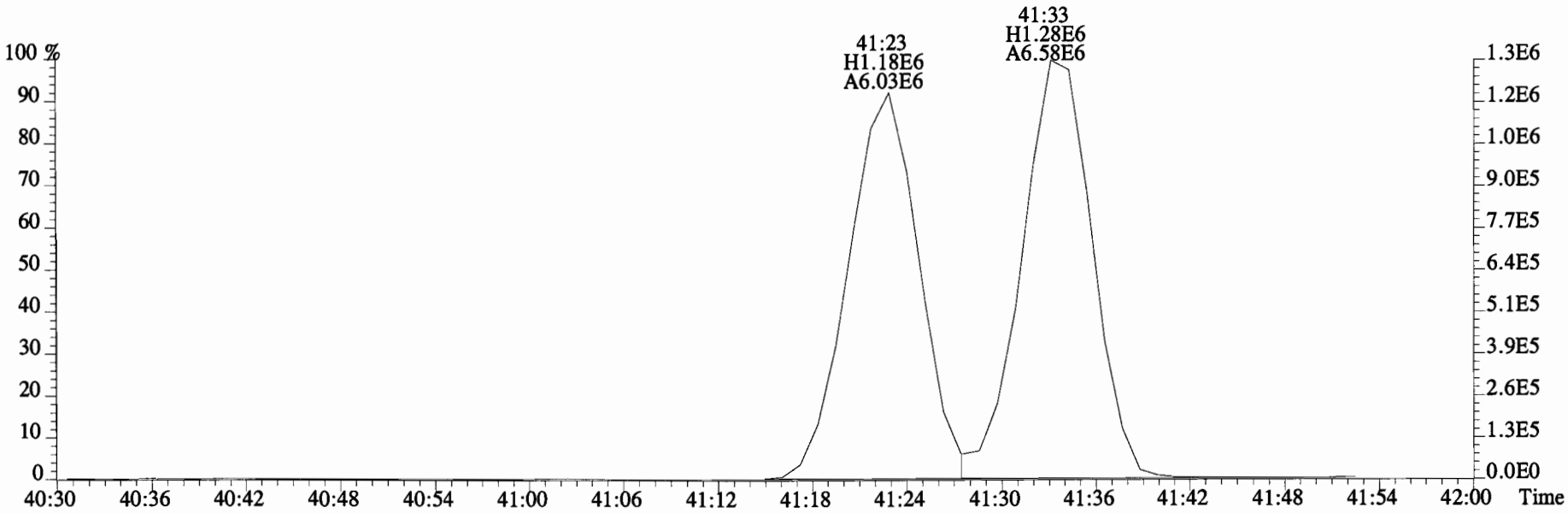
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2672.0,0.00%,F,F)



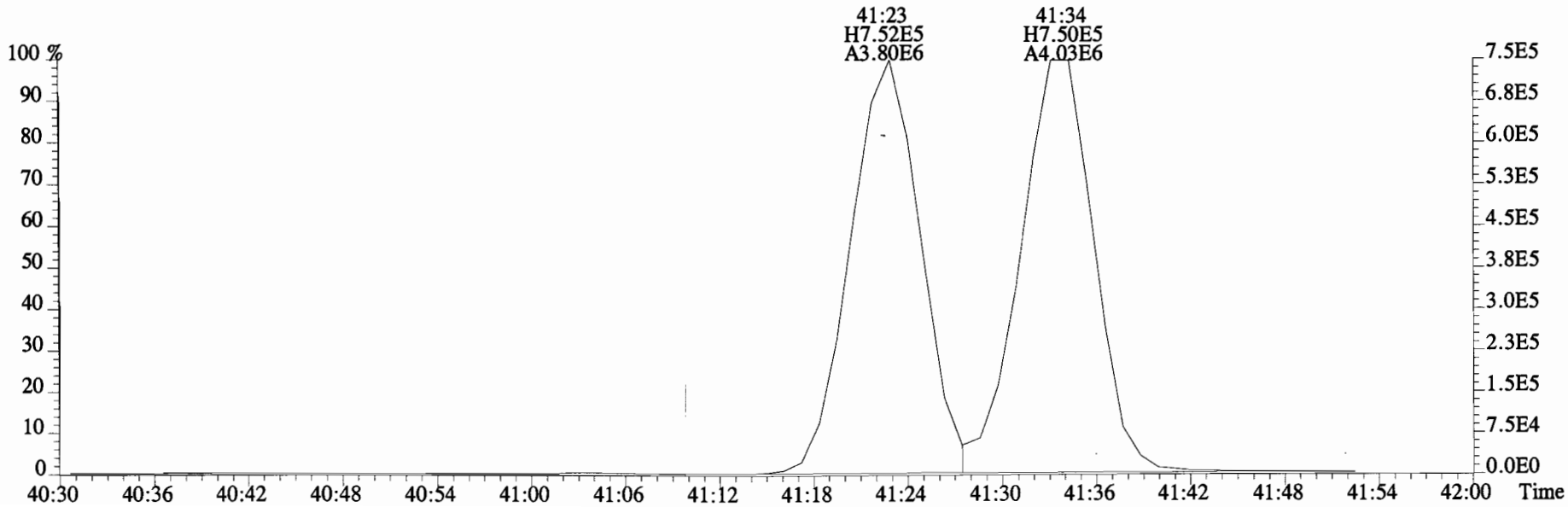
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2396.0,0.00%,F,F)



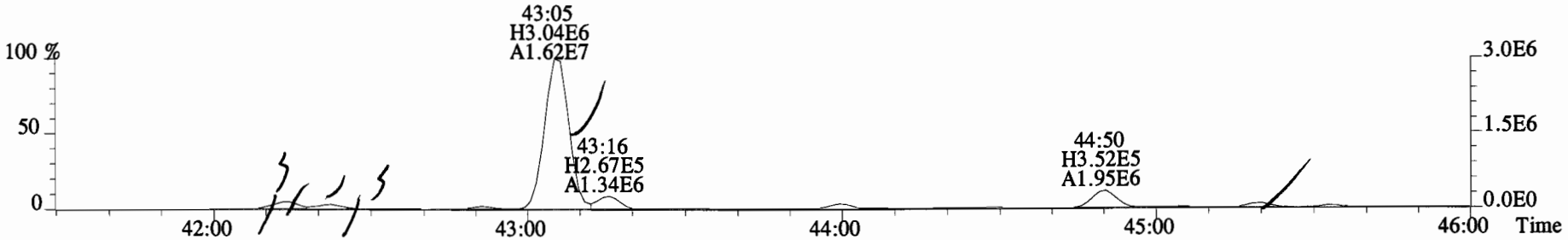
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
337.9207 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2672.0,0.00%,F,F)



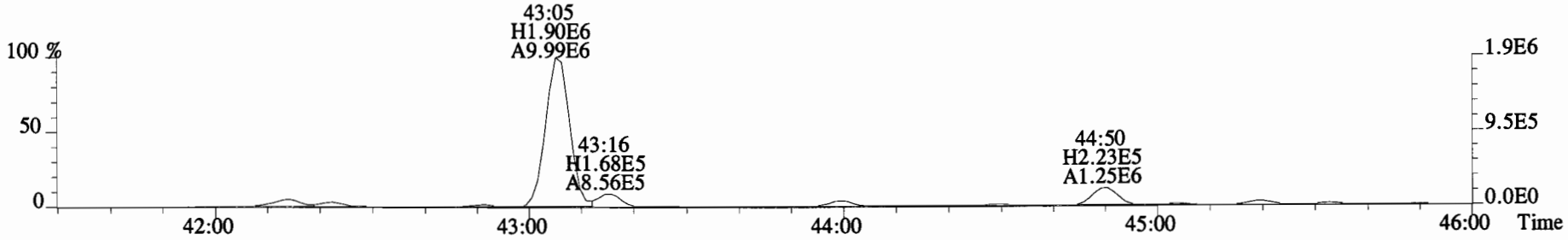
339.9177 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2396.0,0.00%,F,F)



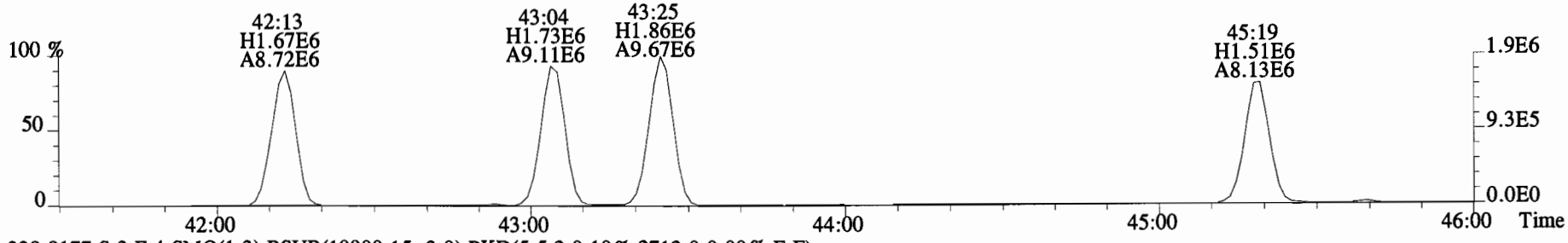
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8028.0,0.00%,F,F)



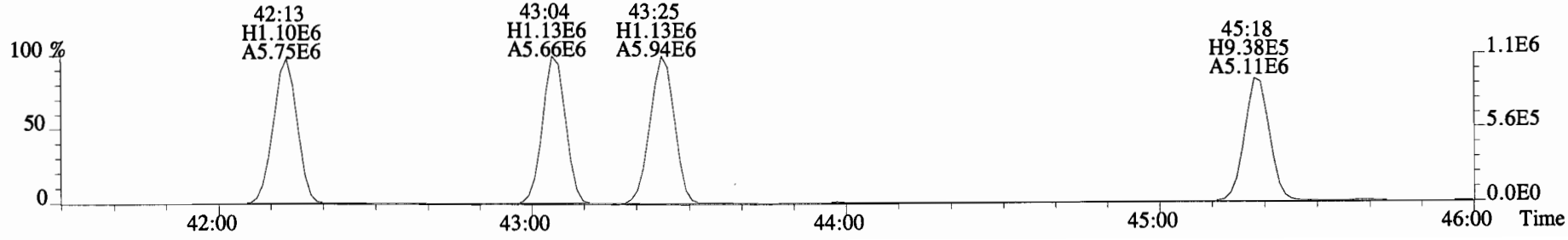
327.8775 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5040.0,0.00%,F,F)



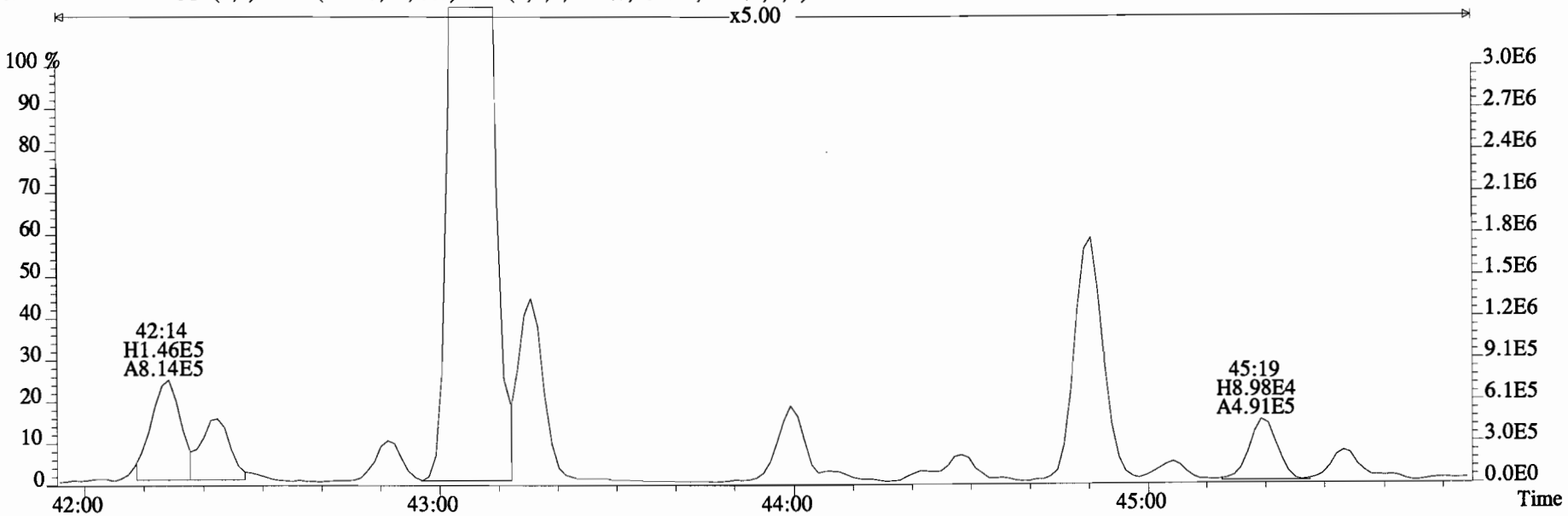
337.9207 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2612.0,0.00%,F,F)



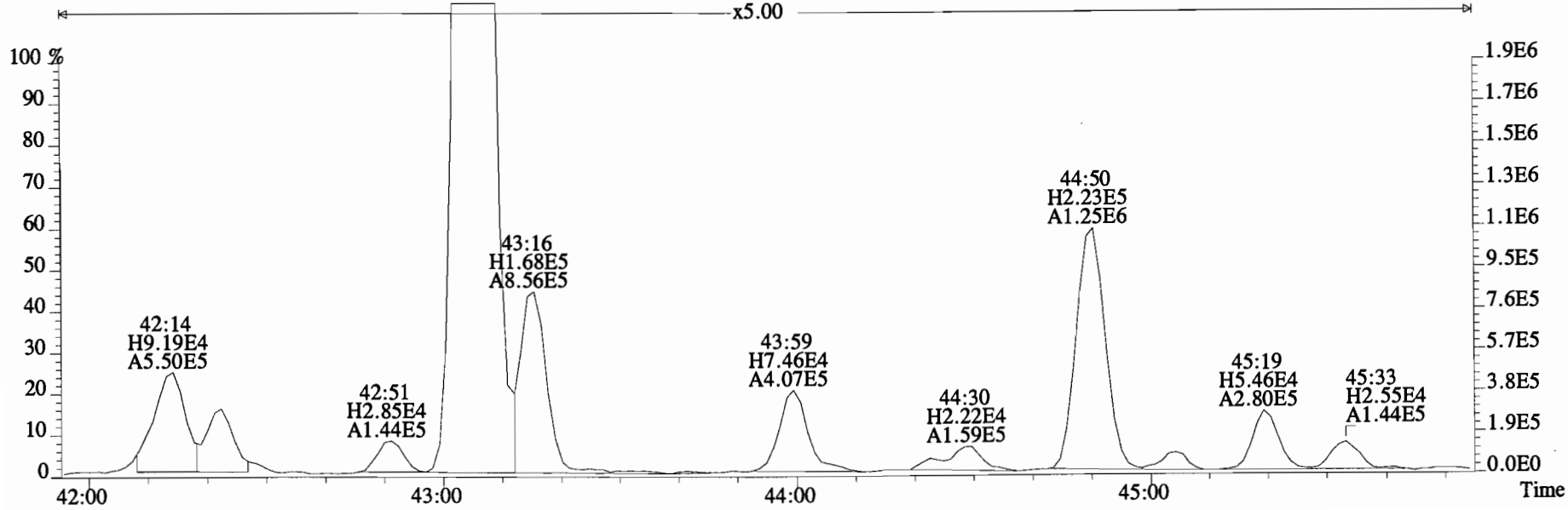
339.9177 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2712.0,0.00%,F,F)



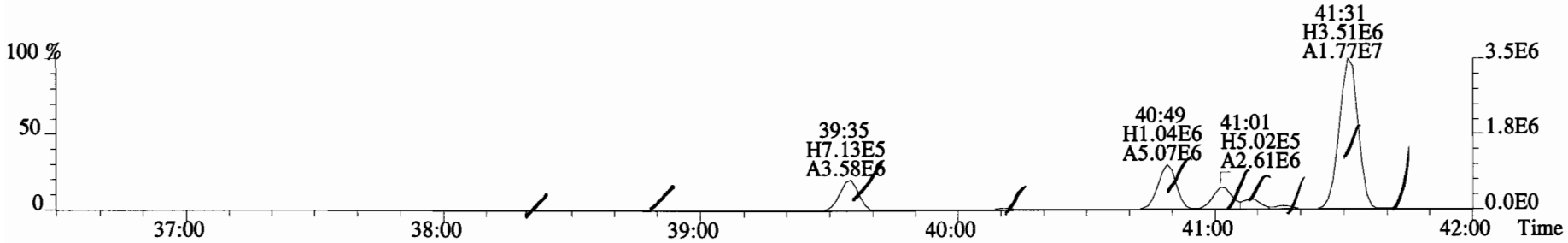
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
325.8804 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8028.0,0.00%,F,F)



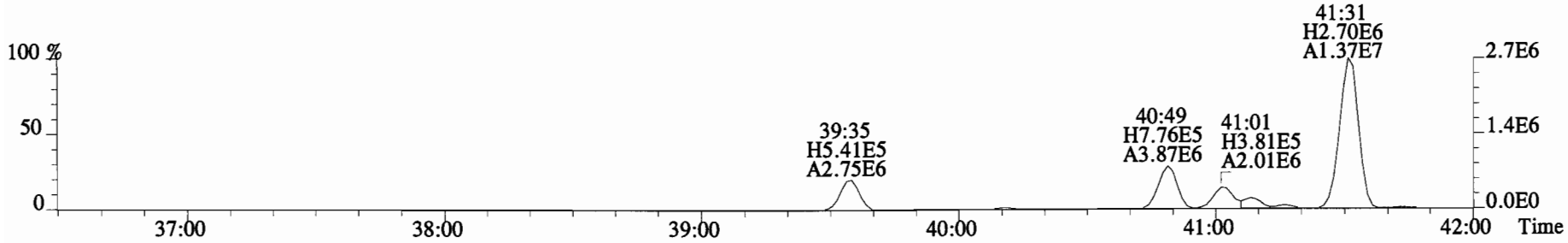
327.8775 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5040.0,0.00%,F,F)



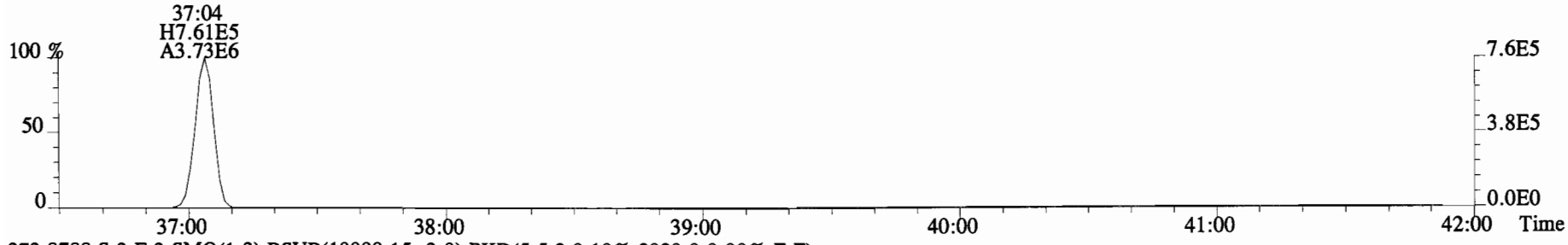
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)



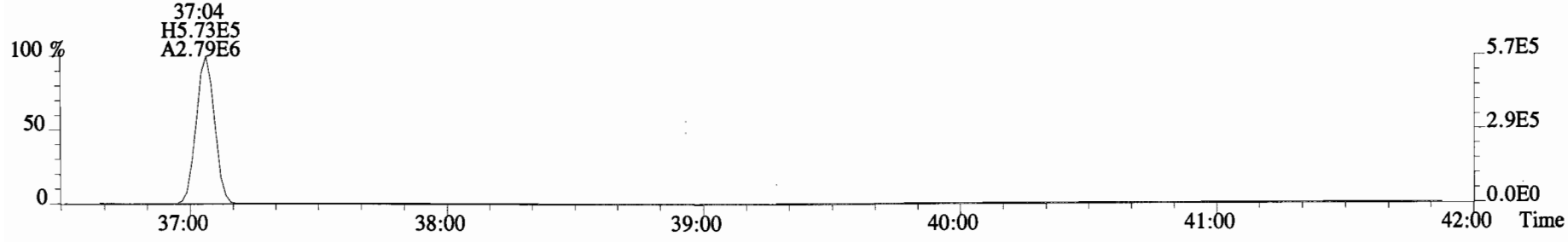
361.8385 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)



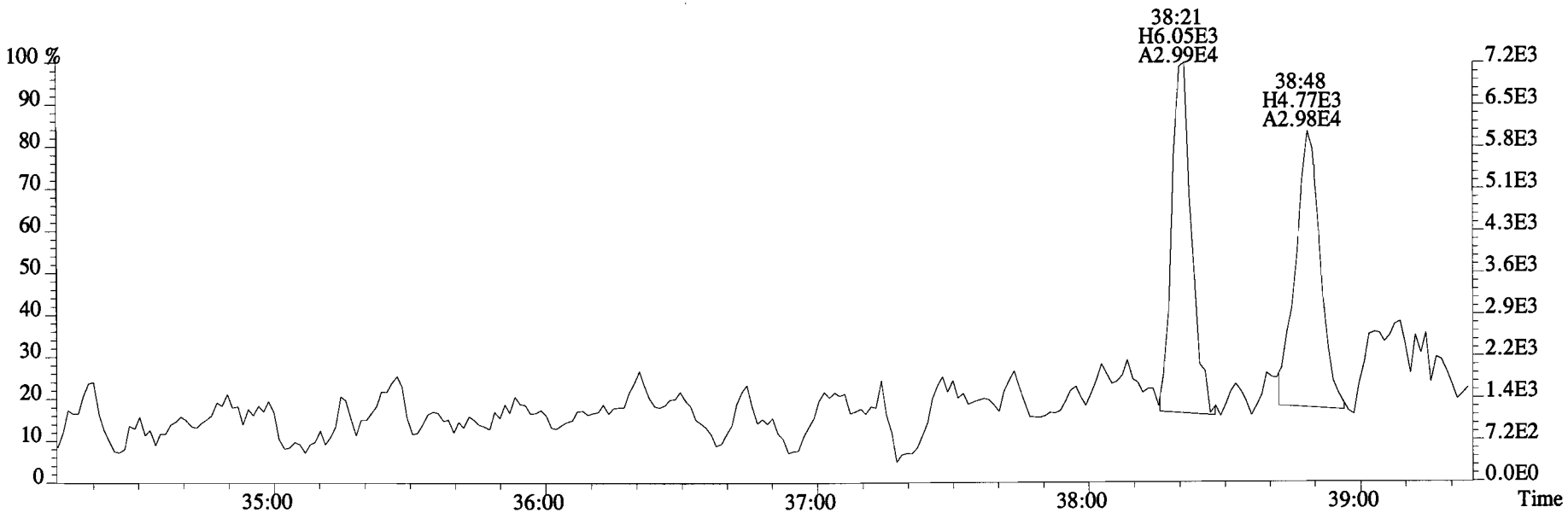
371.8817 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



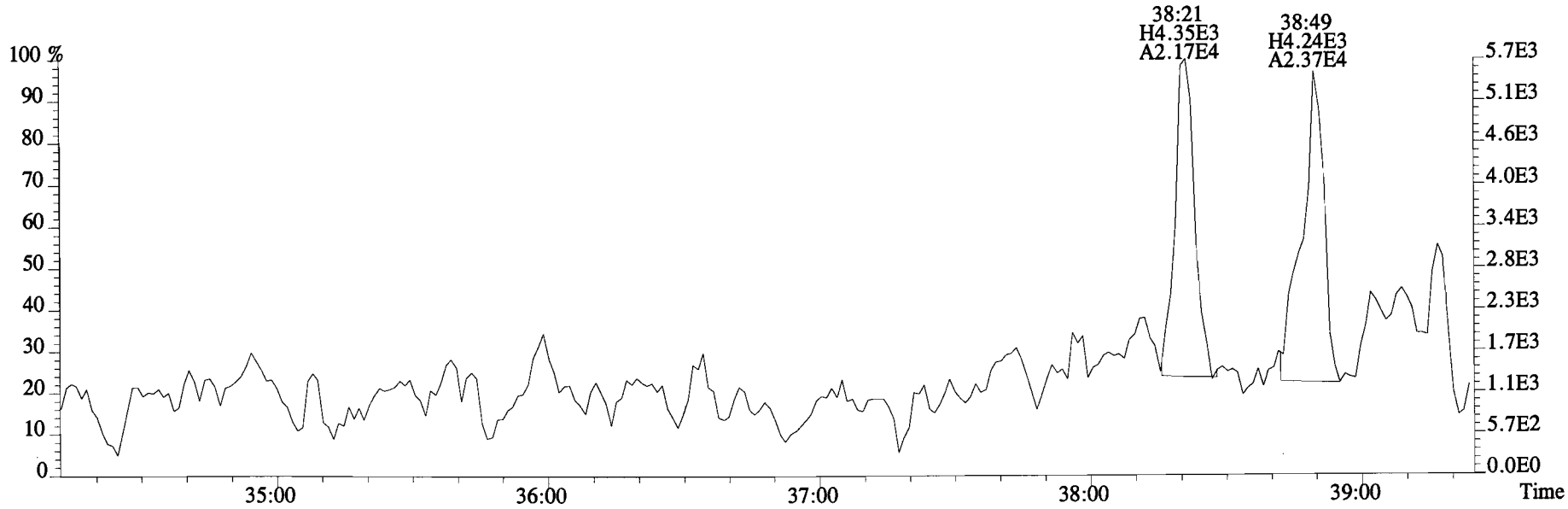
373.8788 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2020.0,0.00%,F,F)



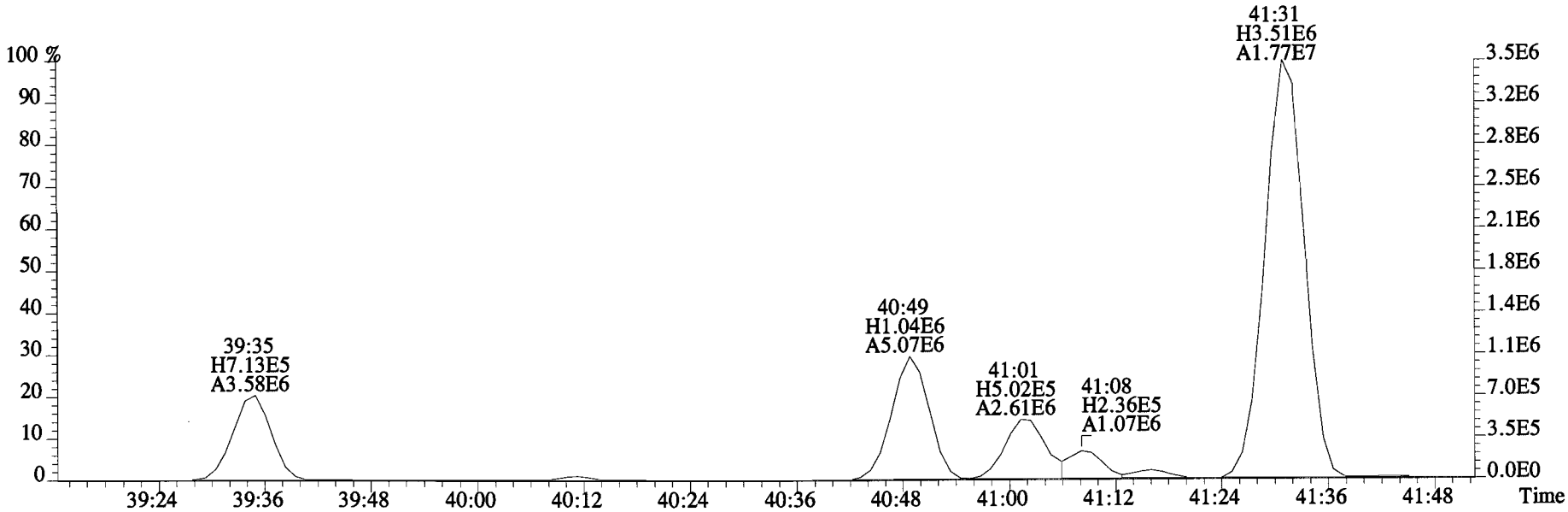
File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)



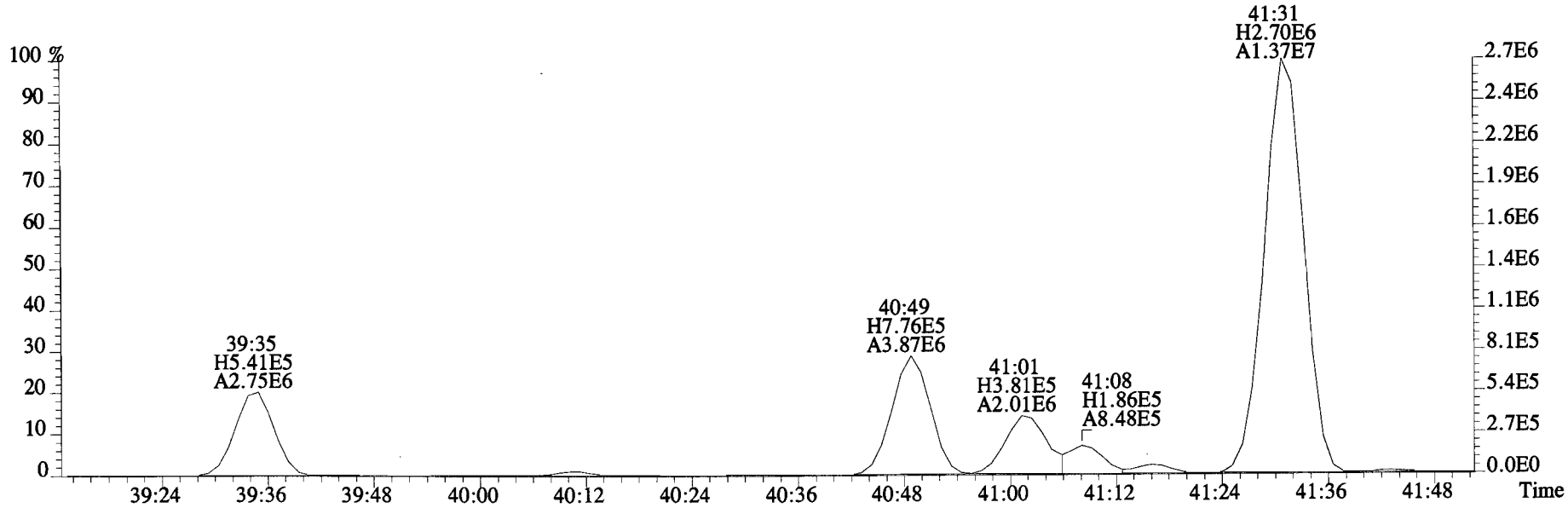
361.8385 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)

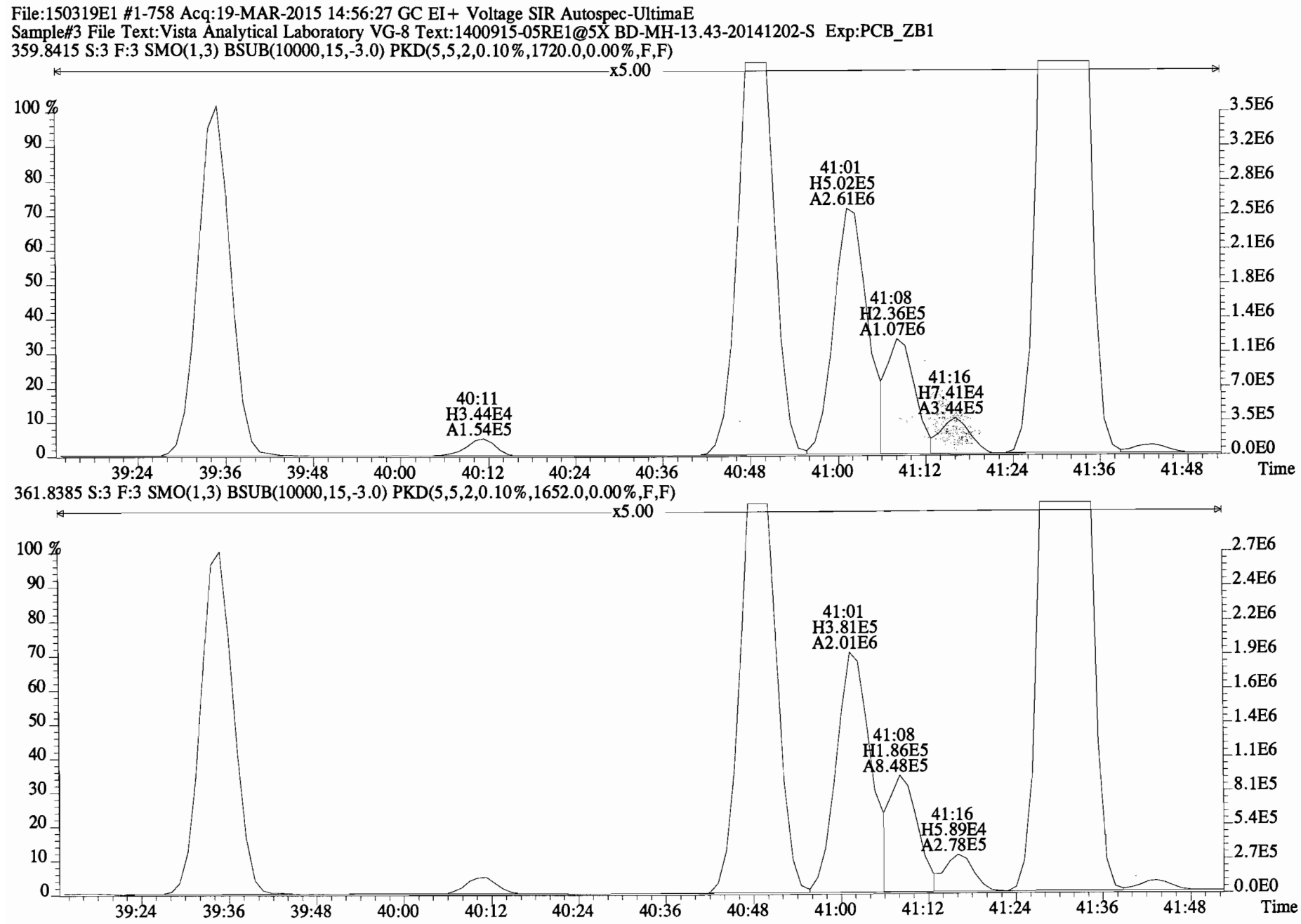


File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)

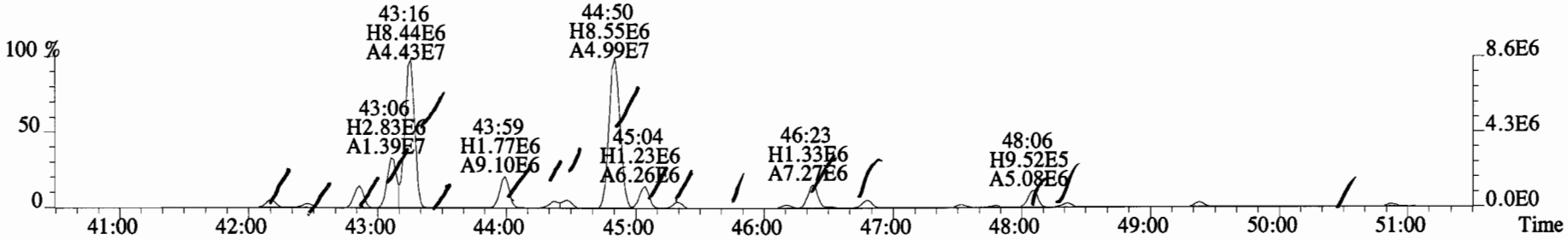


361.8385 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)

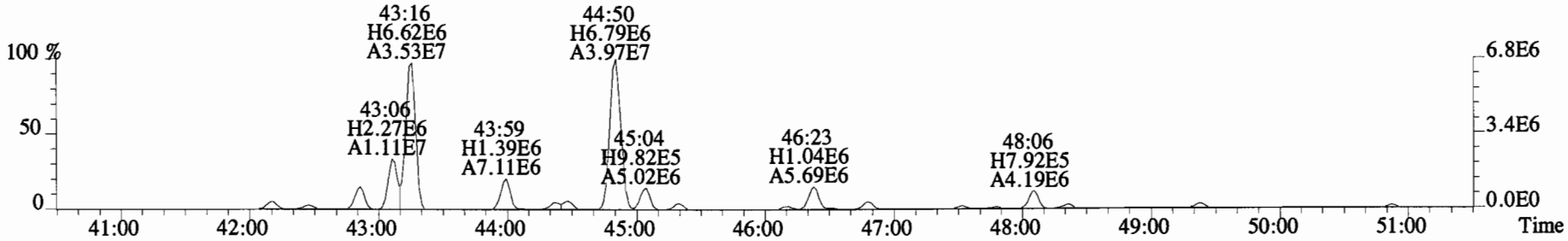



File:150319E1 #1-758 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)
x5.00
40:11
H3.44E4
A1.54E5
41:01
H5.02E5
A2.61E6
41:08
H2.36E5
A1.07E6
41:16
H7.41E4
A3.44E5
361.8385 S:3 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)
x5.00
41:01
H3.81E5
A2.01E6
41:08
H1.86E5
A8.48E5
41:16
H5.89E4
A2.78E5
Time

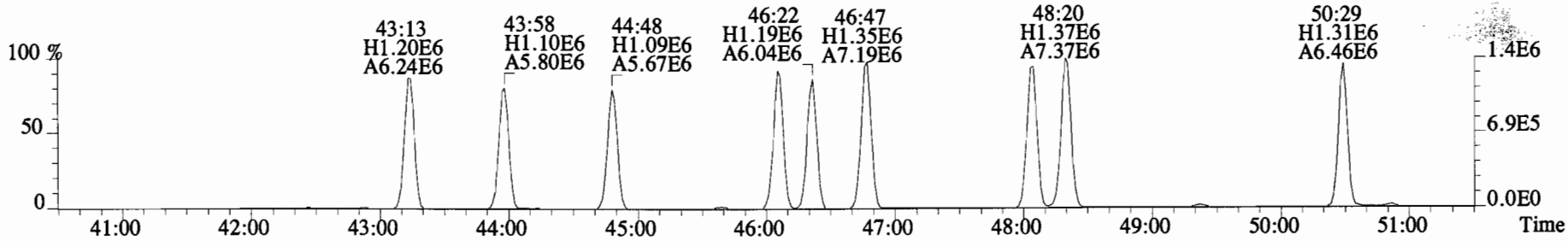
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



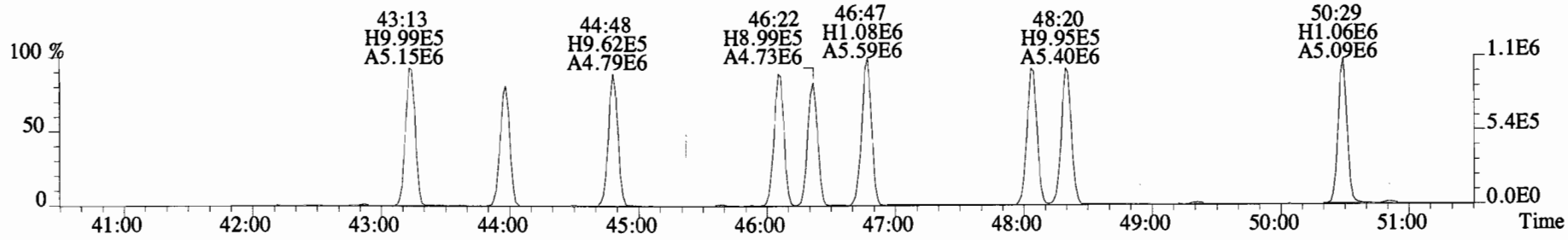
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



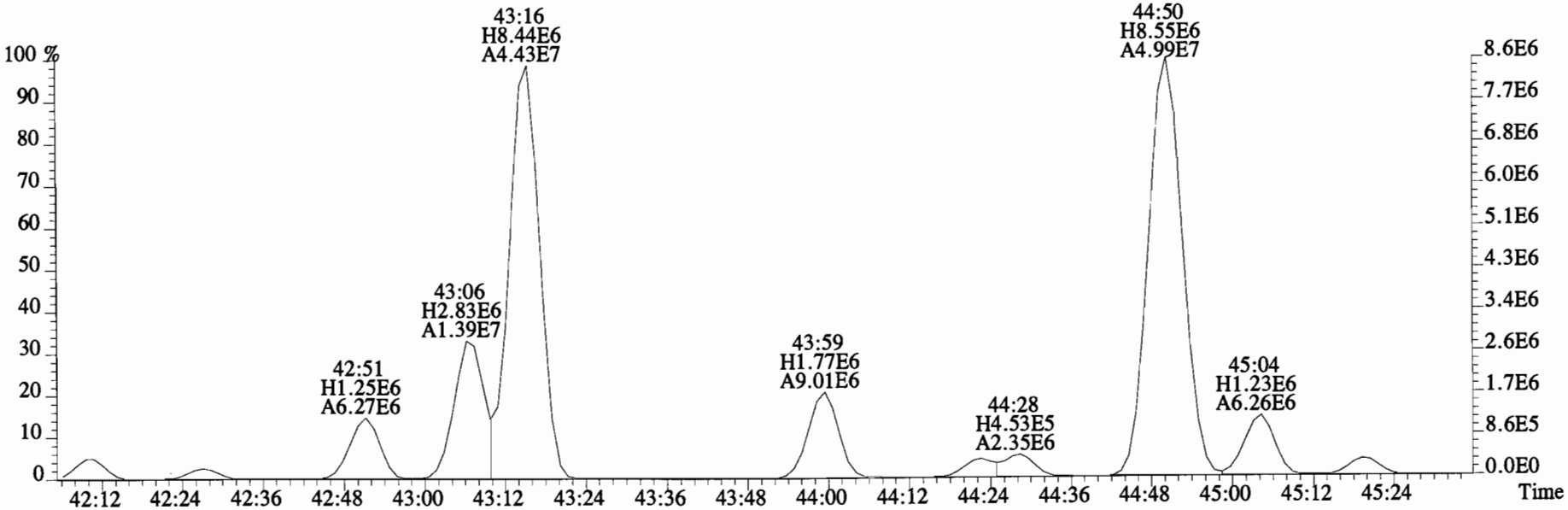
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2460.0,0.00%,F,F)



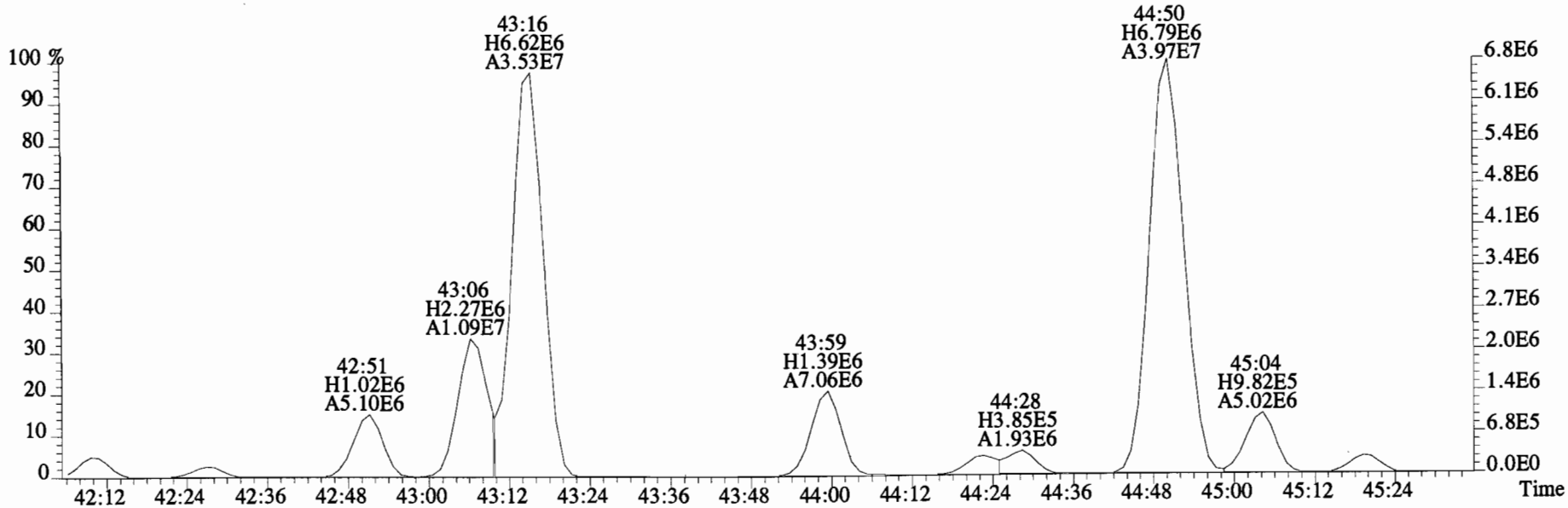
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2468.0,0.00%,F,F)



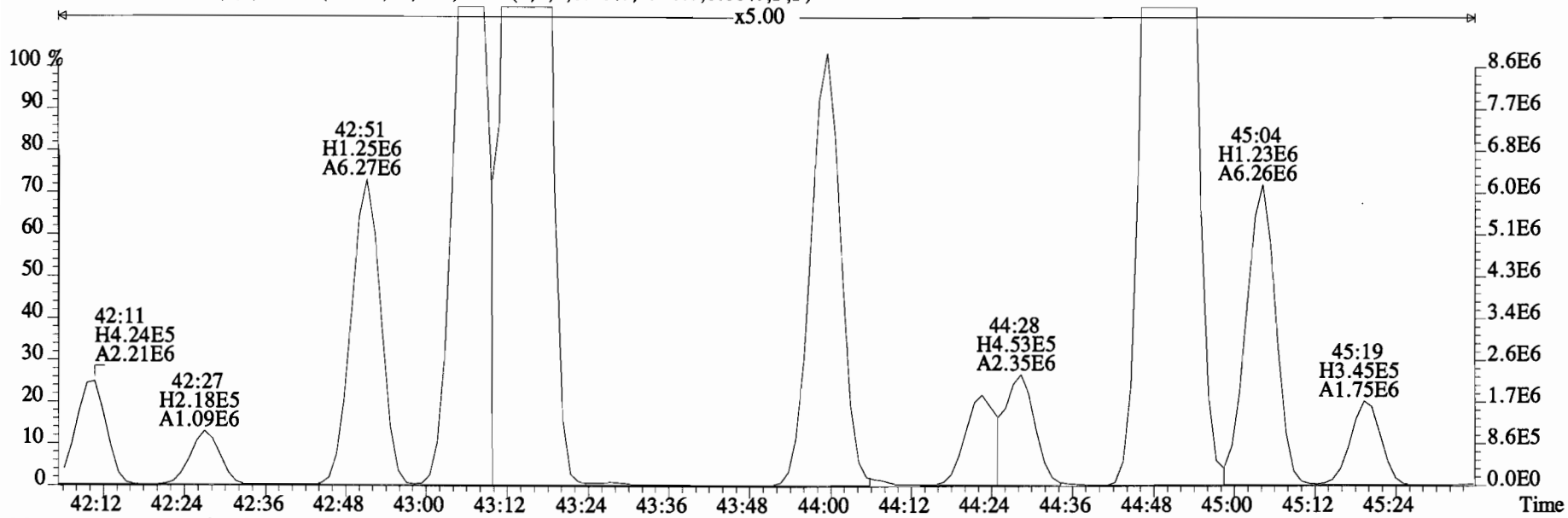
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



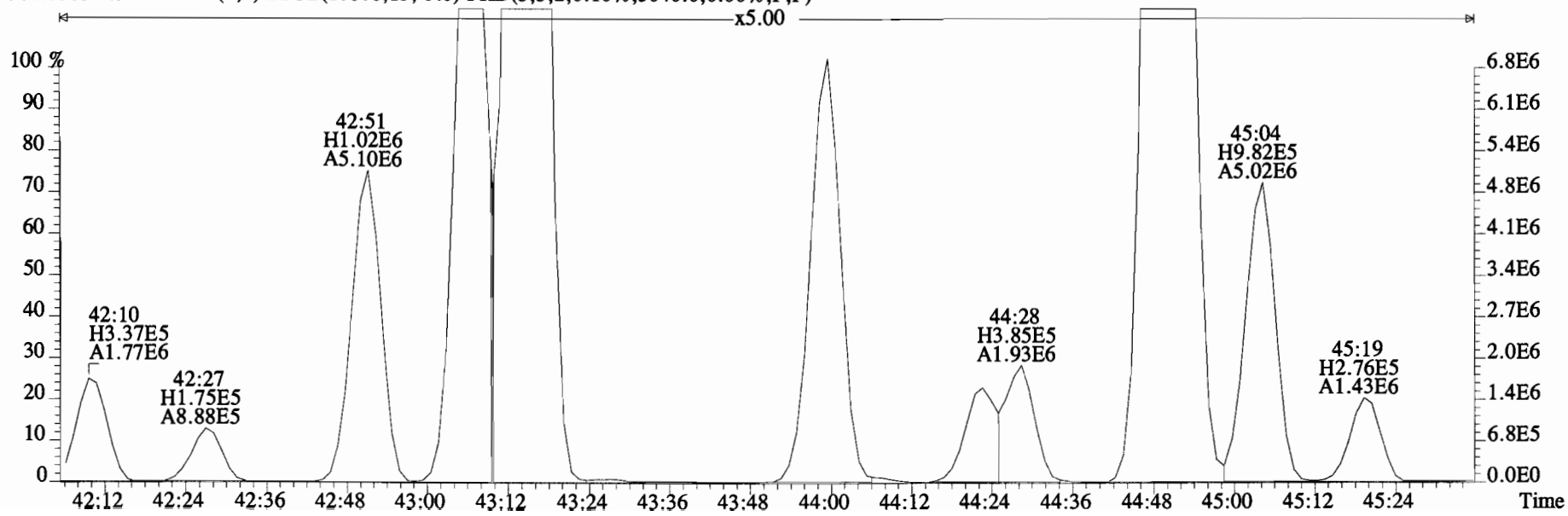
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



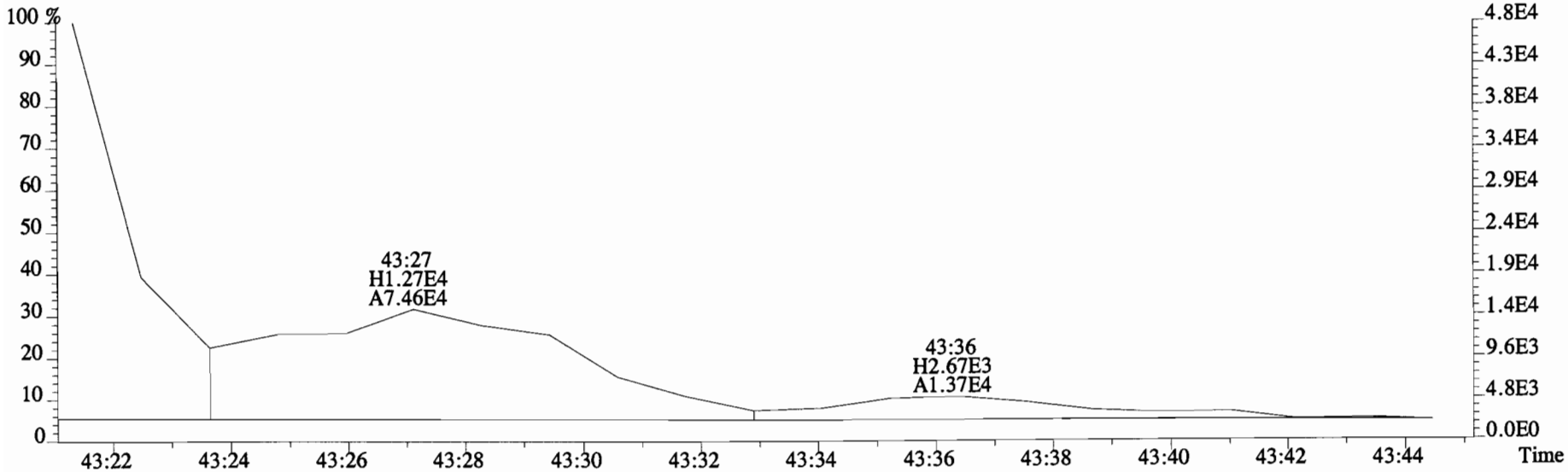
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



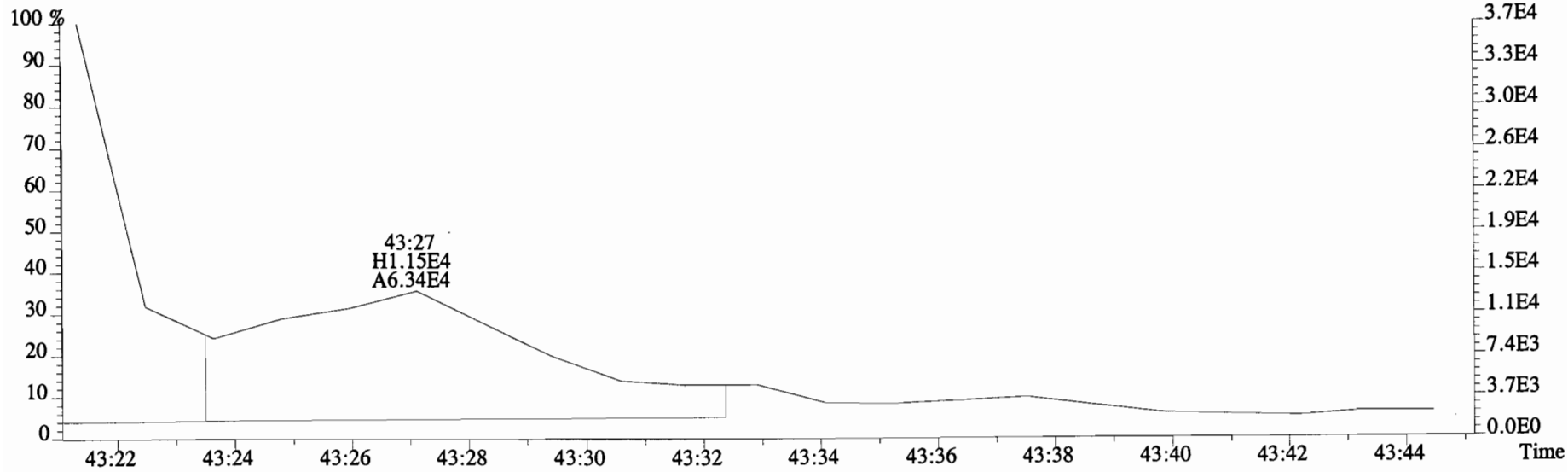
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



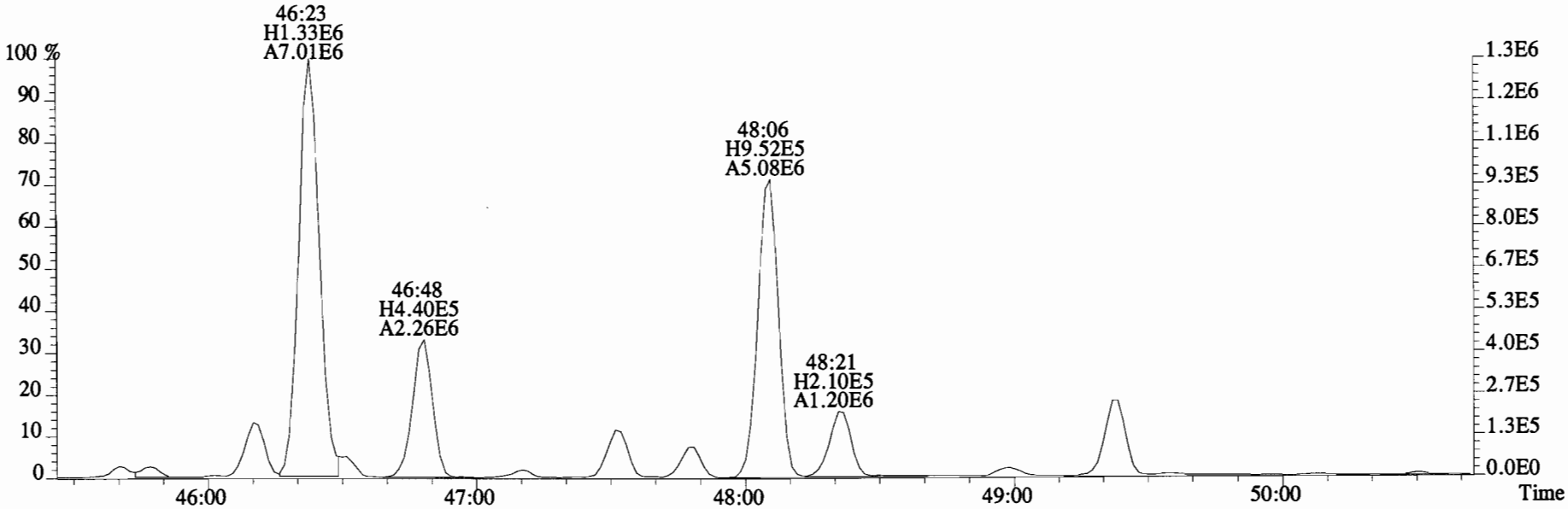
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



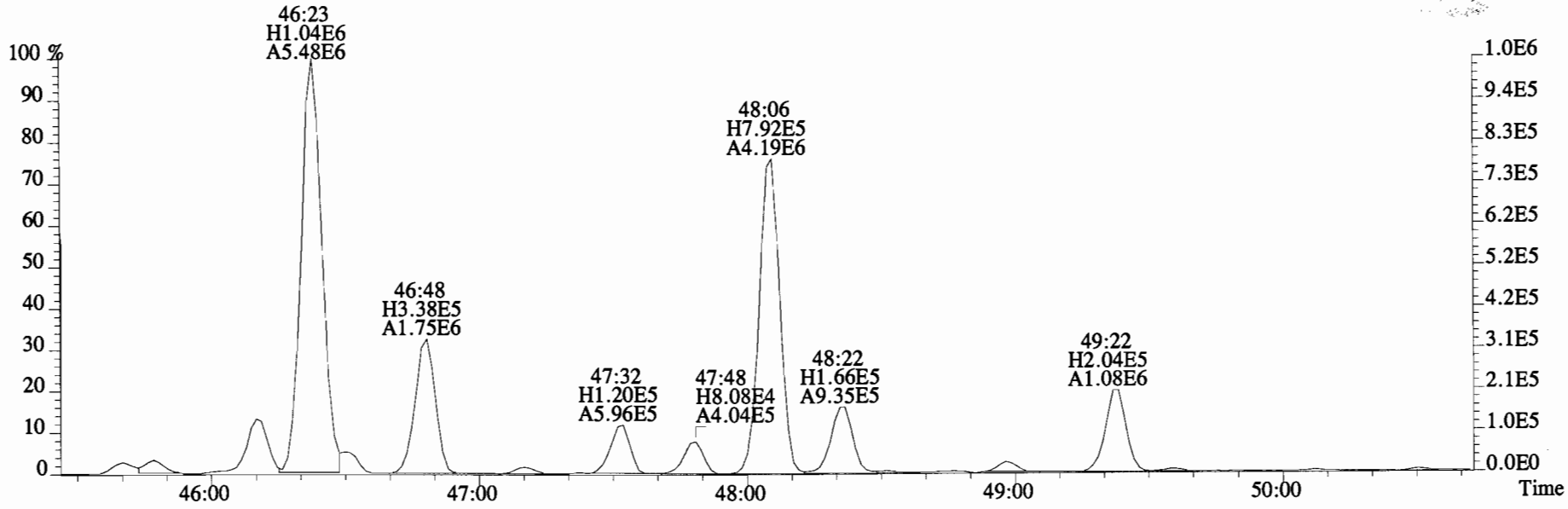
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



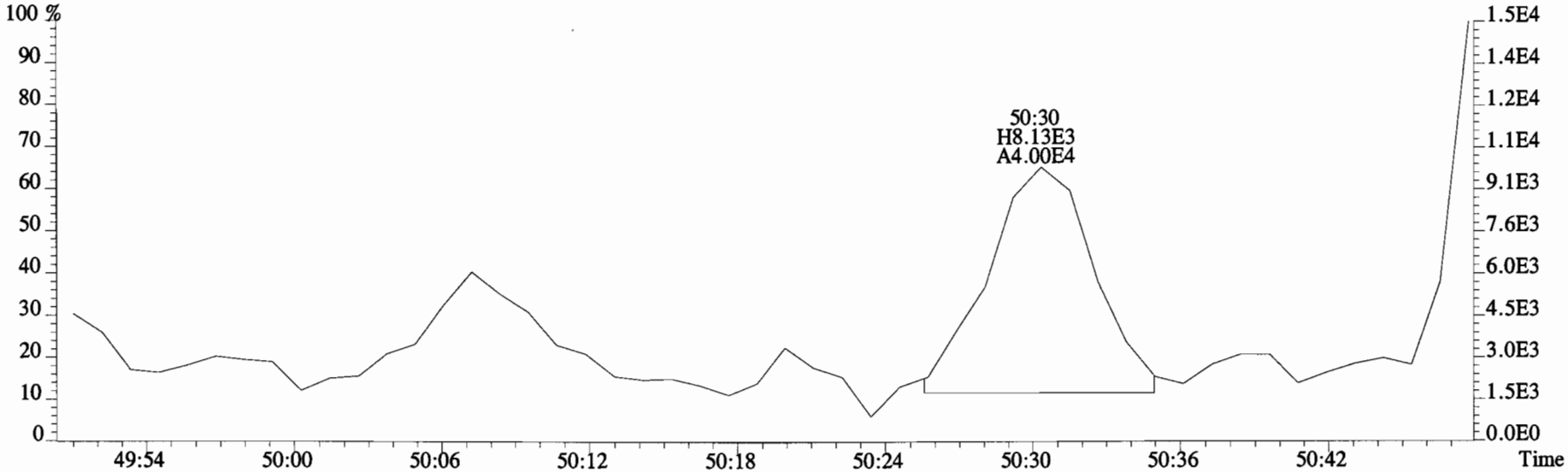
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



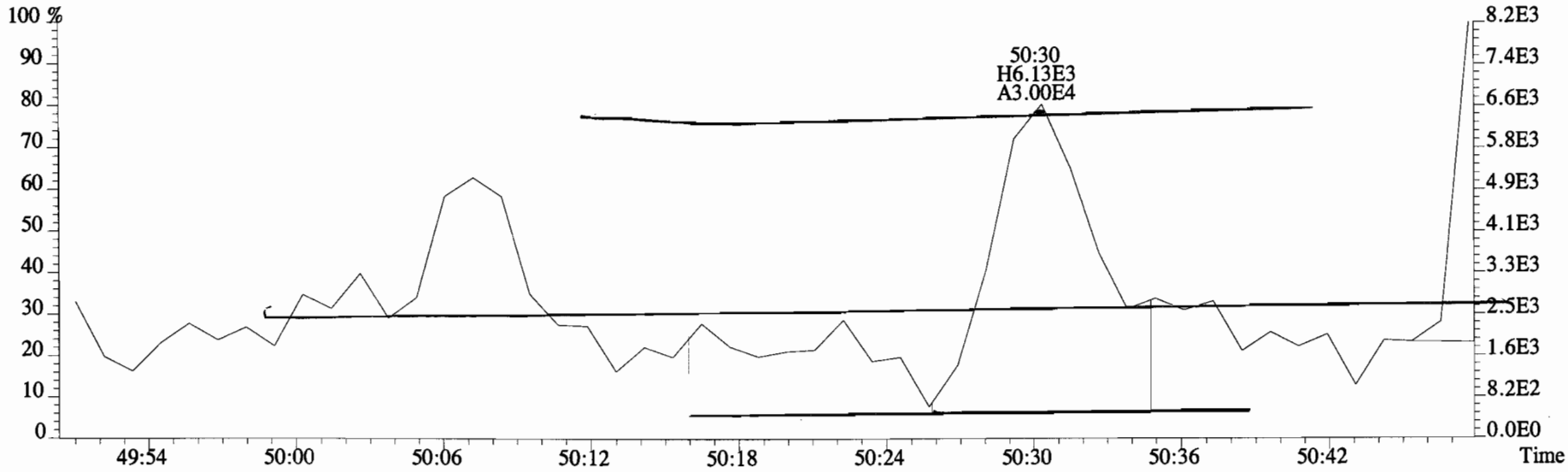
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



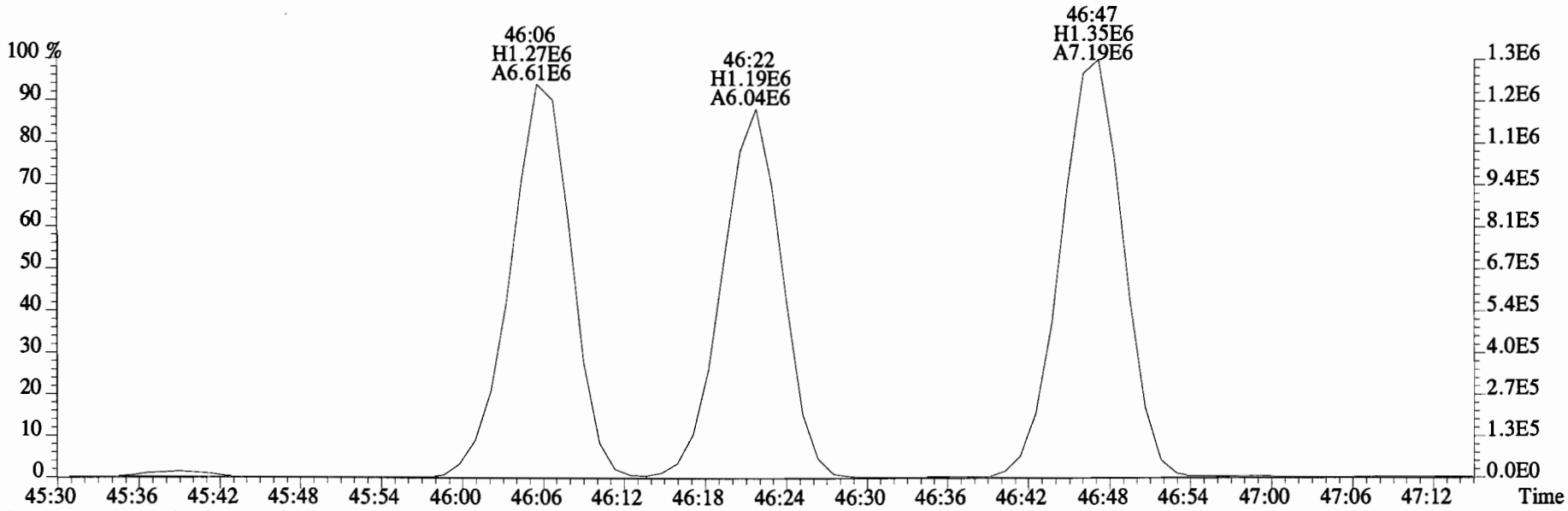
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
359.8415 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4356.0,0.00%,F,F)



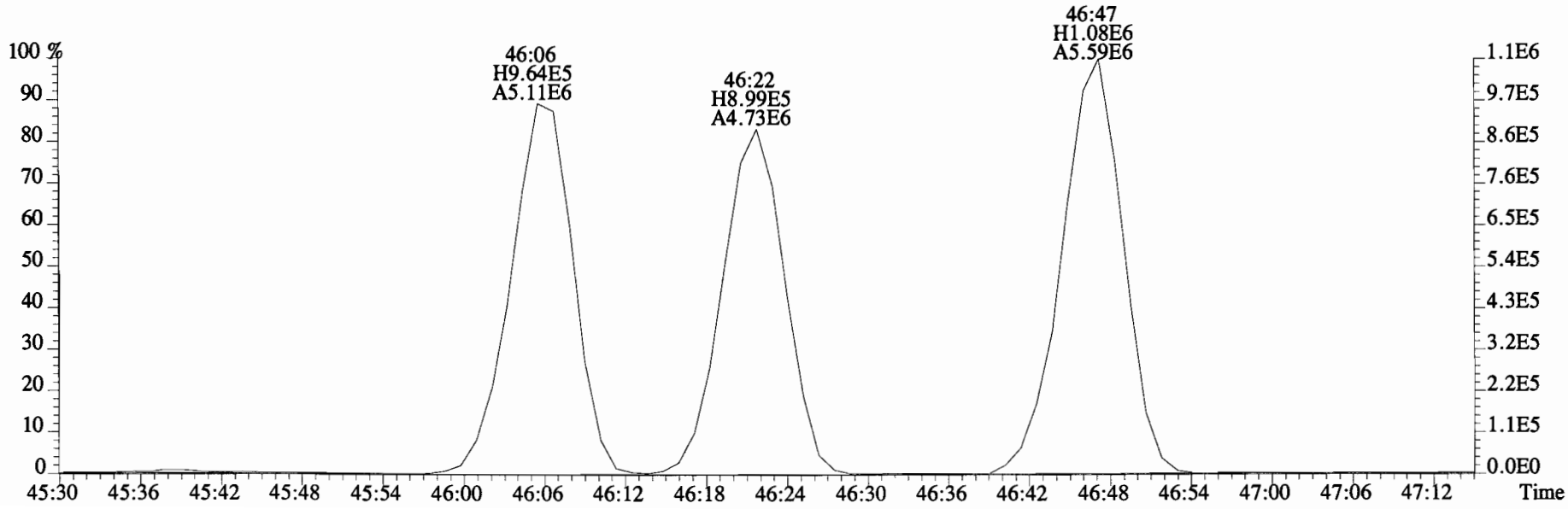
361.8385 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3040.0,0.00%,F,F)



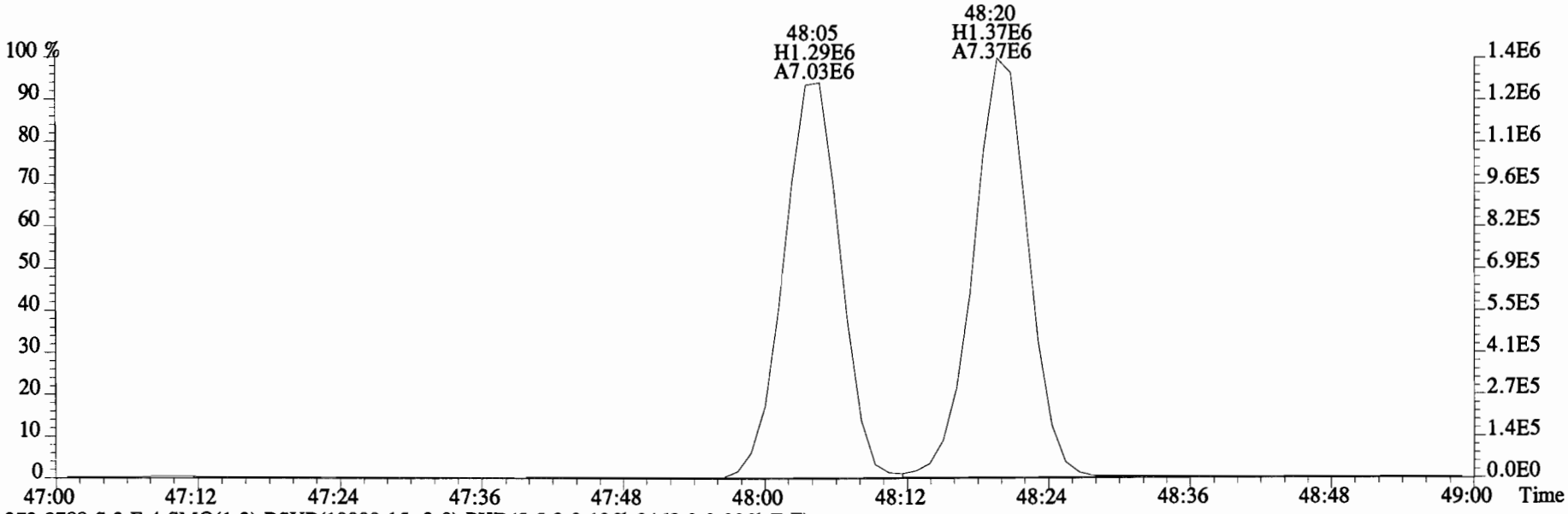
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2460.0,0.00%,F,F)



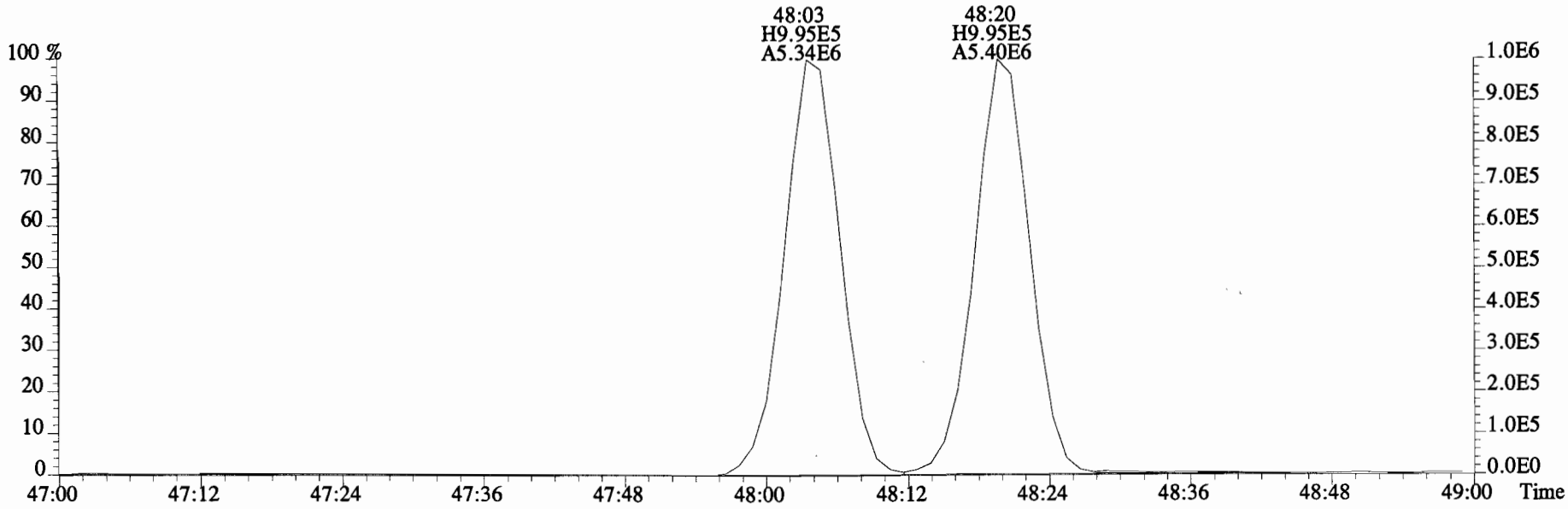
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2468.0,0.00%,F,F)



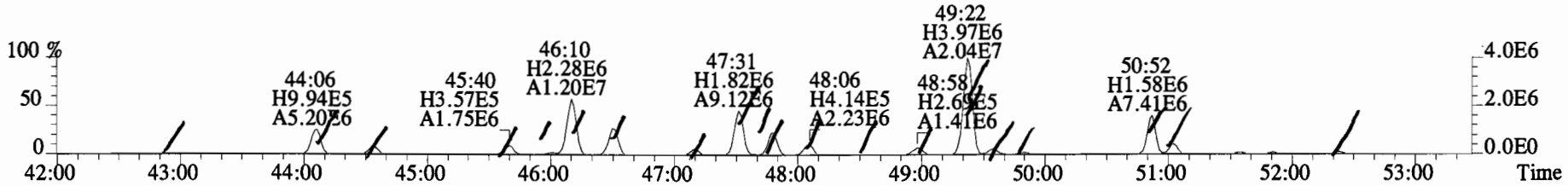
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
371.8817 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2460.0,0.00%,F,F)



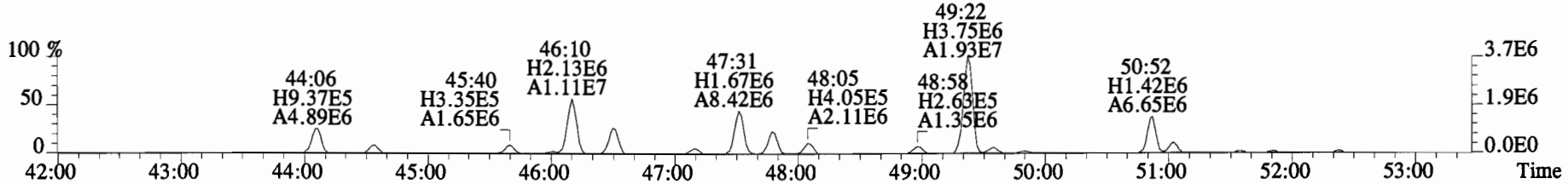
373.8788 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2468.0,0.00%,F,F)



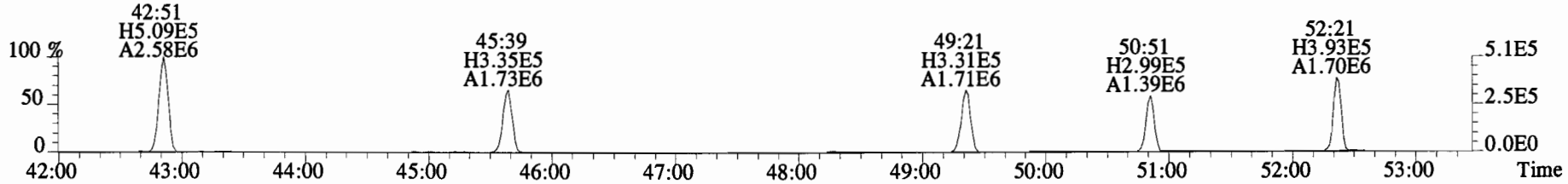
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)



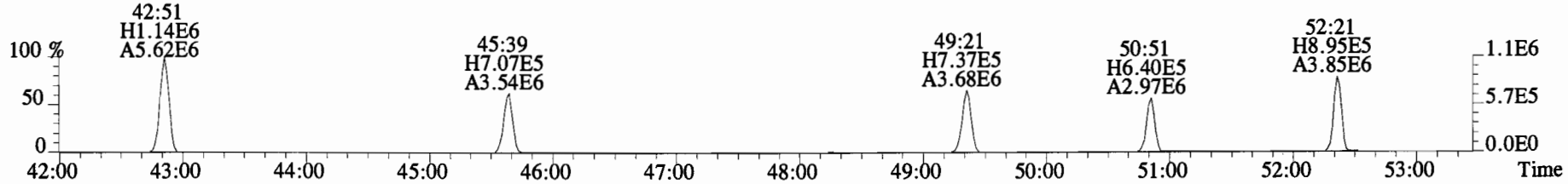
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)



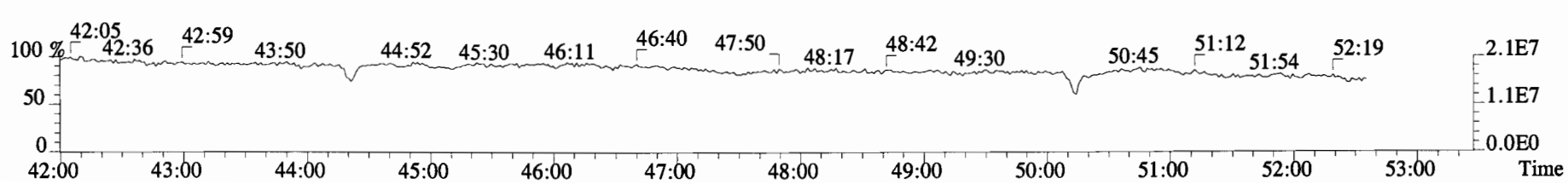
403.8457 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1616.0,0.00%,F,F)



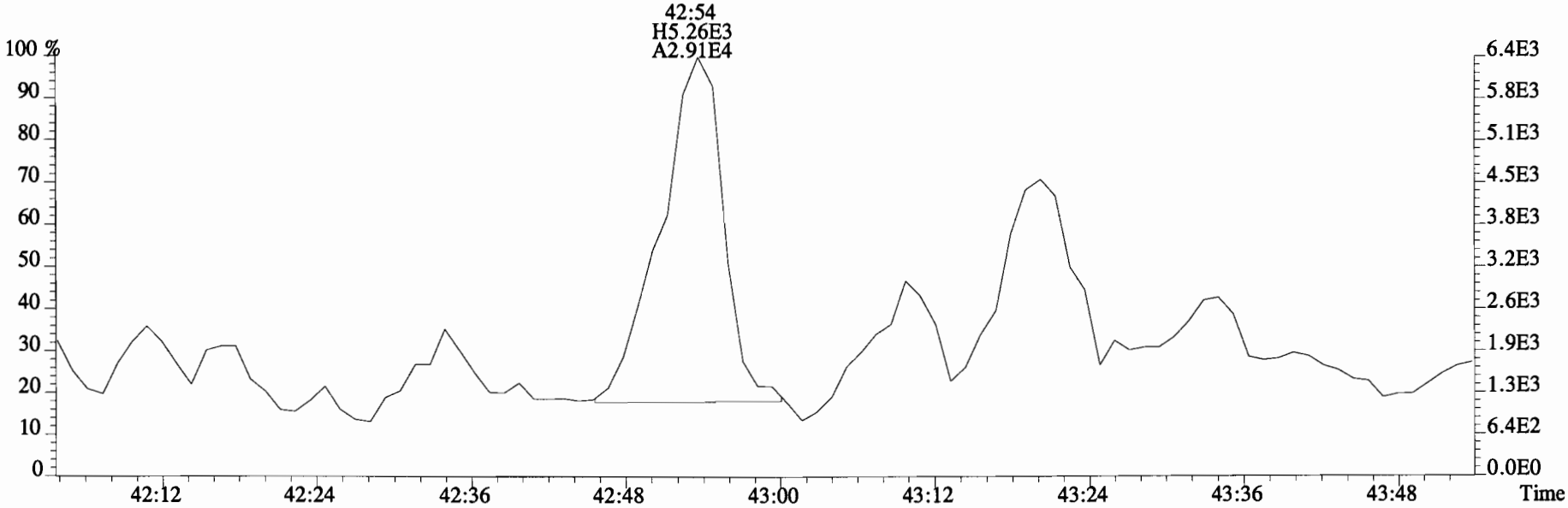
405.8428 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1400.0,0.00%,F,F)



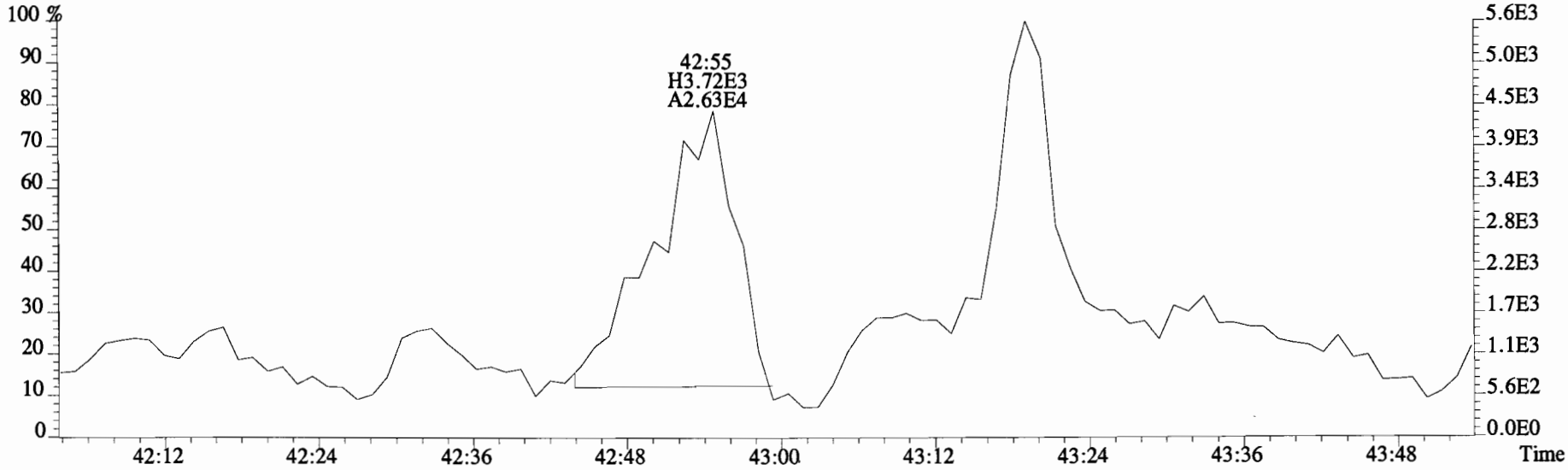
380.9760 S:3 F:4



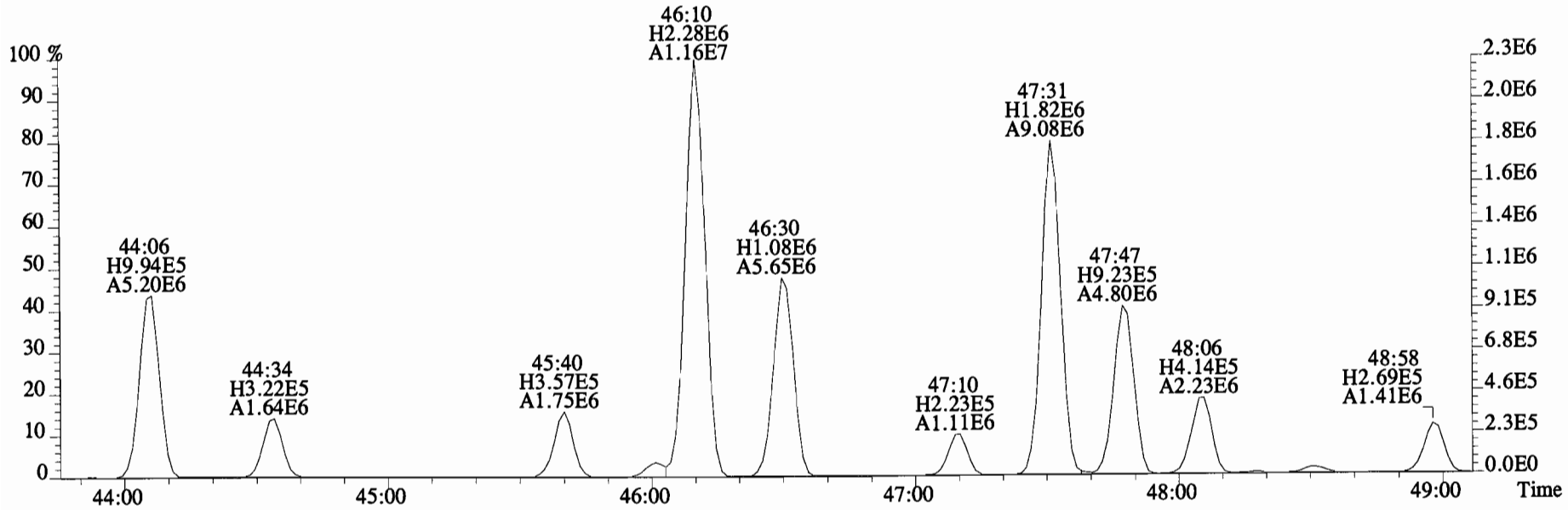
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)



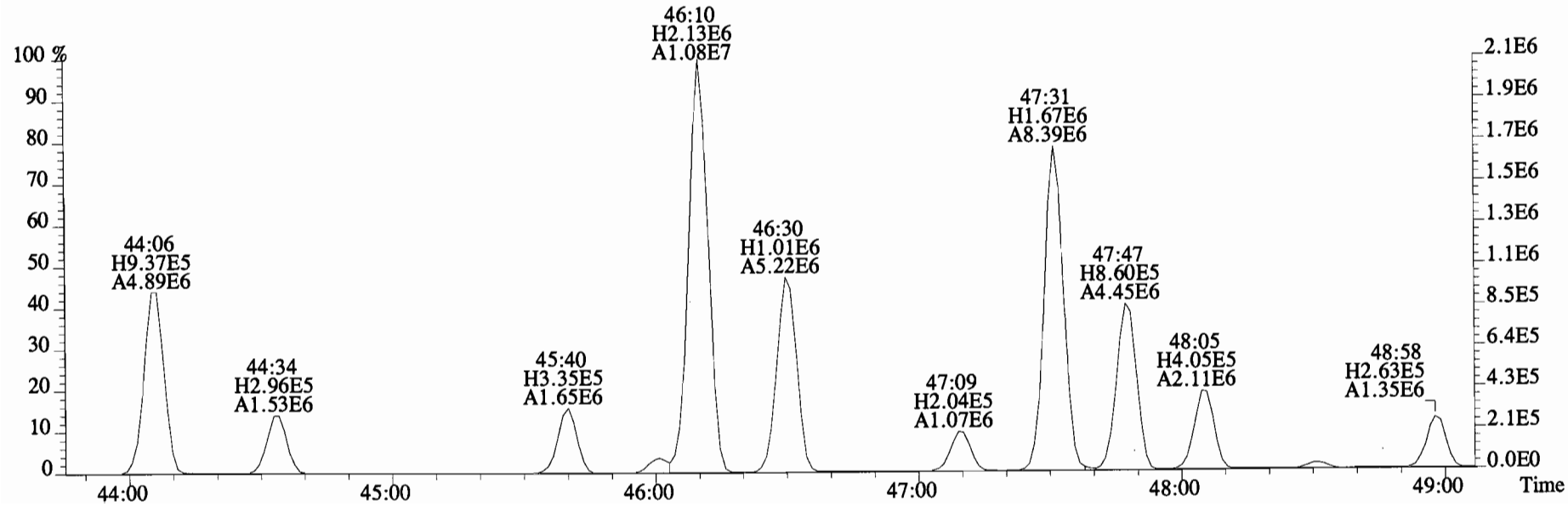
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)



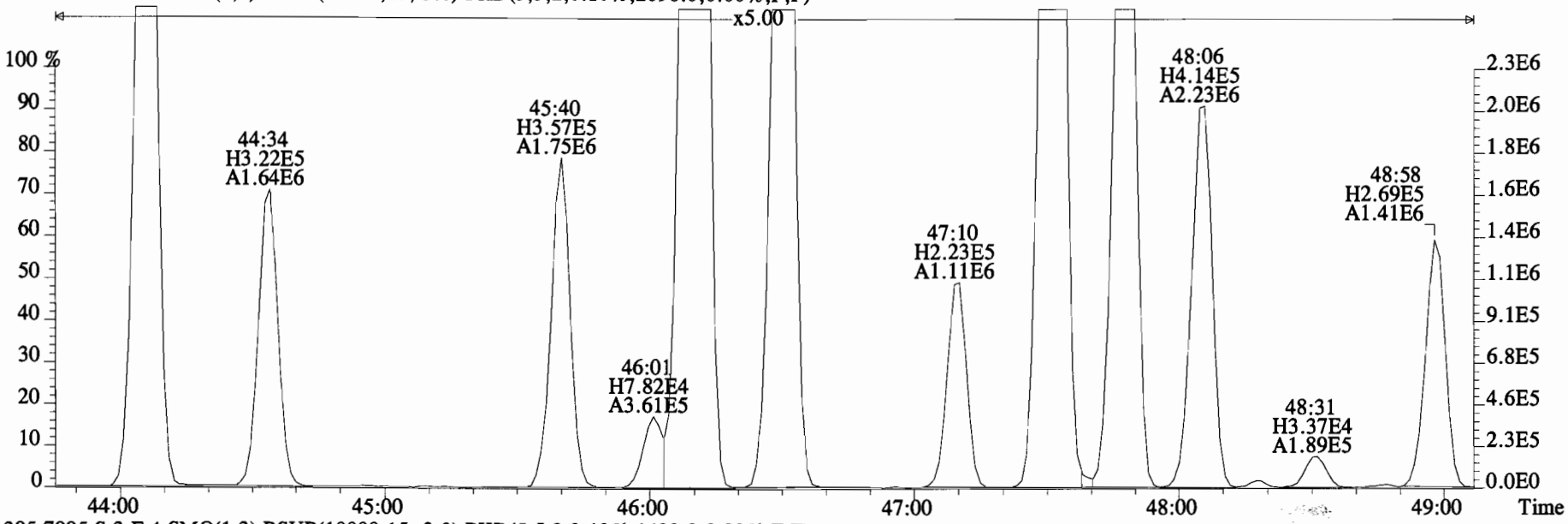
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)



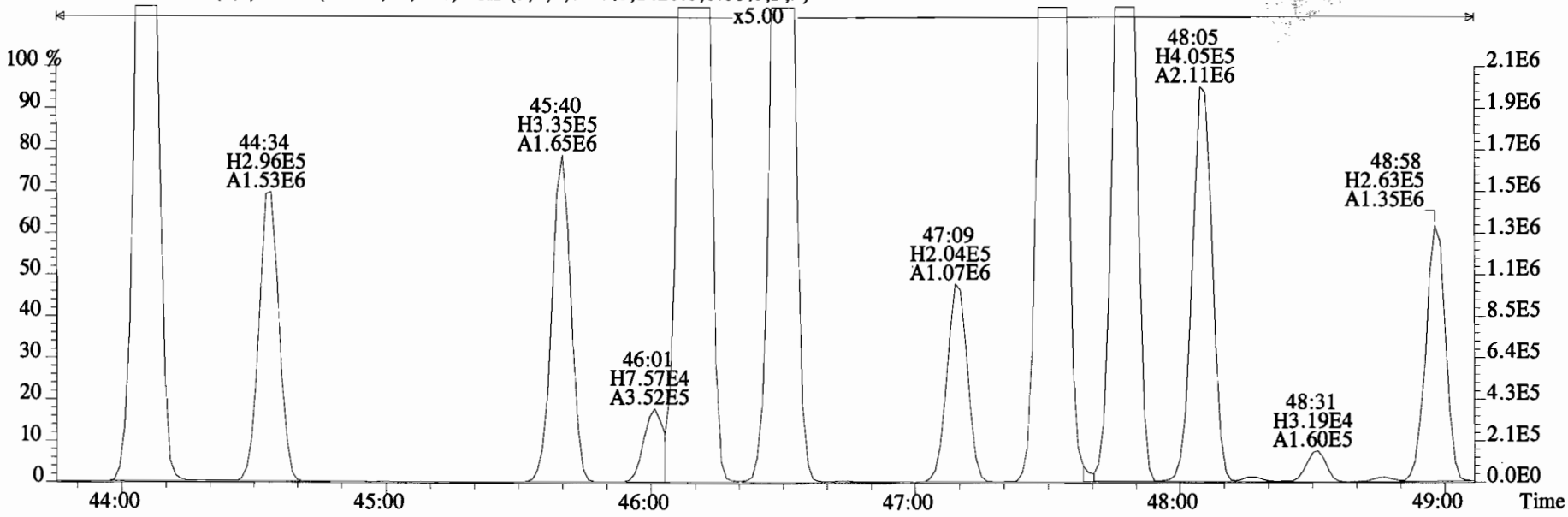
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)

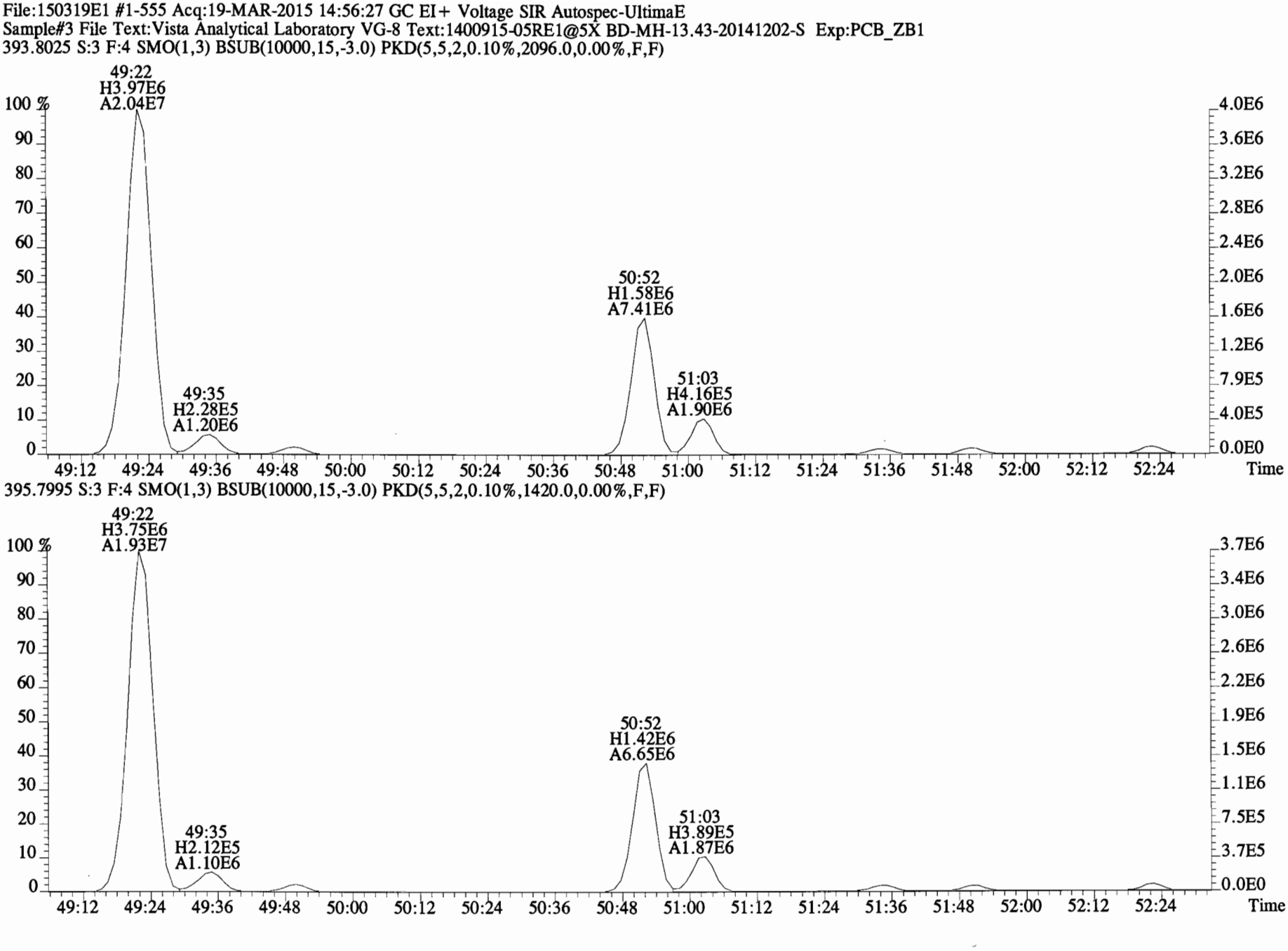


File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)

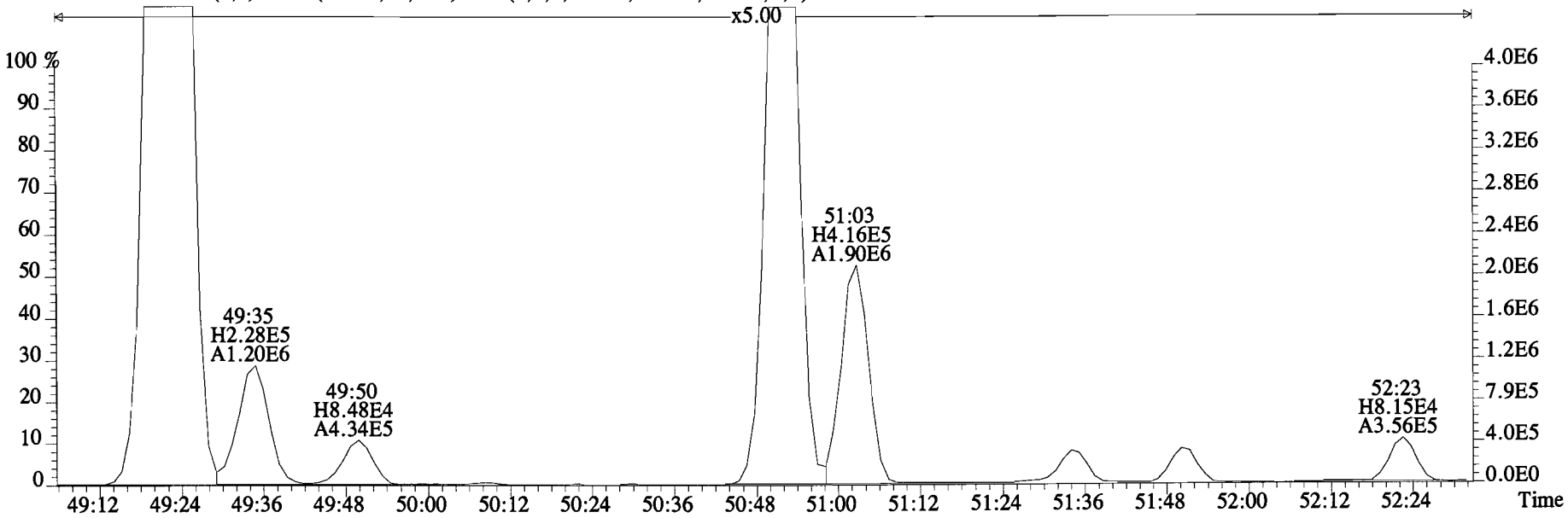


395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)

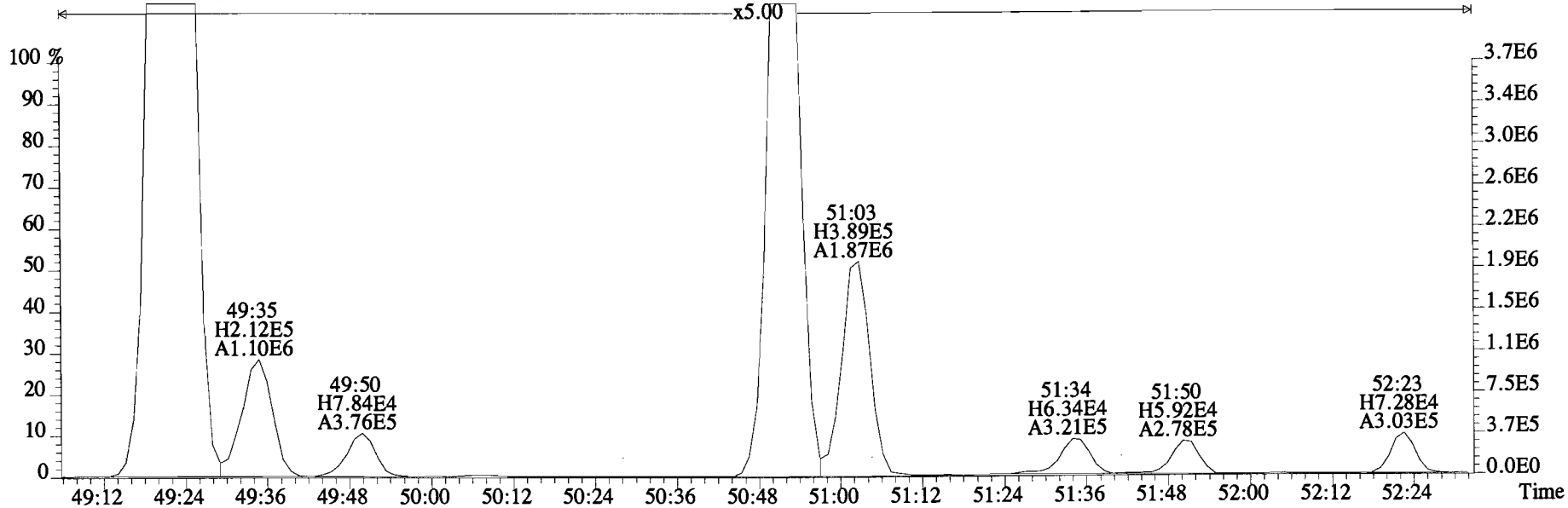



File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)
49:22
H3.97E6
A2.04E7
49:35
H2.28E5
A1.20E6
50:52
H1.58E6
A7.41E6
51:03
H4.16E5
A1.90E6
100 %
90
80
70
60
50
40
30
20
10
0
4.0E6
3.6E6
3.2E6
2.8E6
2.4E6
2.0E6
1.6E6
1.2E6
7.9E5
4.0E5
0.0E0
49:12
49:24
49:36
49:48
50:00
50:12
50:24
50:36
50:48
51:00
51:12
51:24
51:36
51:48
52:00
52:12
52:24
Time
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)
49:22
H3.75E6
A1.93E7
49:35
H2.12E5
A1.10E6
50:52
H1.42E6
A6.65E6
51:03
H3.89E5
A1.87E6
100 %
90
80
70
60
50
40
30
20
10
0
3.7E6
3.4E6
3.0E6
2.6E6
2.2E6
1.9E6
1.5E6
1.1E6
7.5E5
3.7E5
0.0E0
49:12
49:24
49:36
49:48
50:00
50:12
50:24
50:36
50:48
51:00
51:12
51:24
51:36
51:48
52:00
52:12
52:24
Time

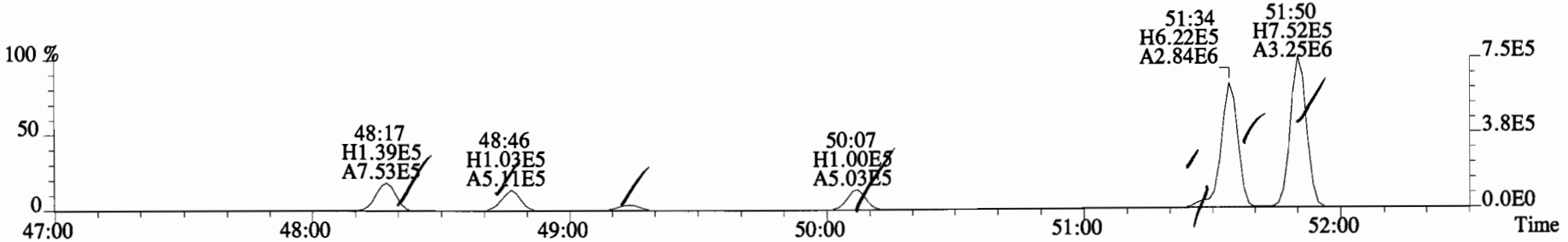
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
393.8025 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2096.0,0.00%,F,F)



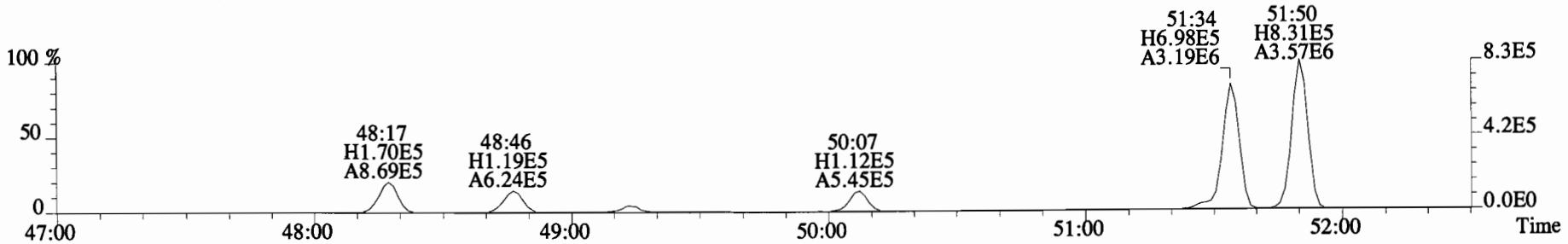
395.7995 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1420.0,0.00%,F,F)



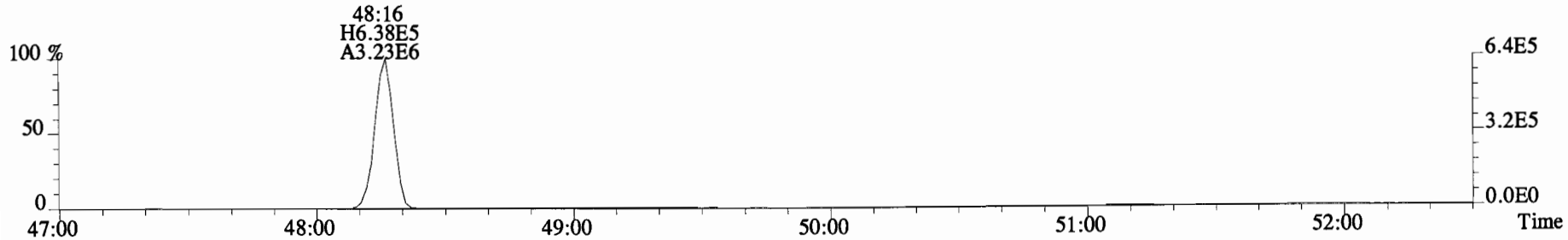
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
427.7635 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1372.0,0.00%,F,F)



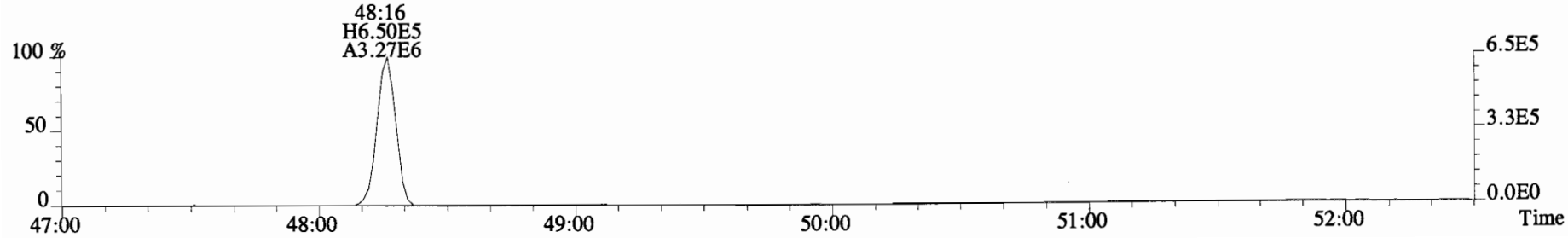
429.7606 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1292.0,0.00%,F,F)



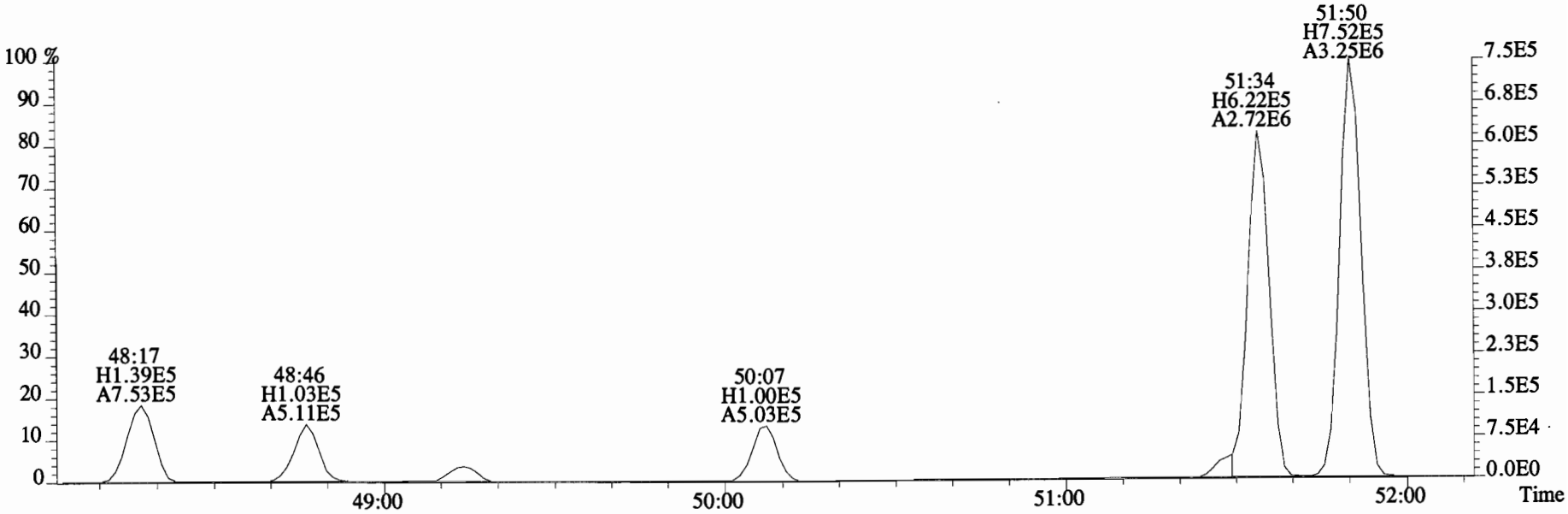
439.8038 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1524.0,0.00%,F,F)



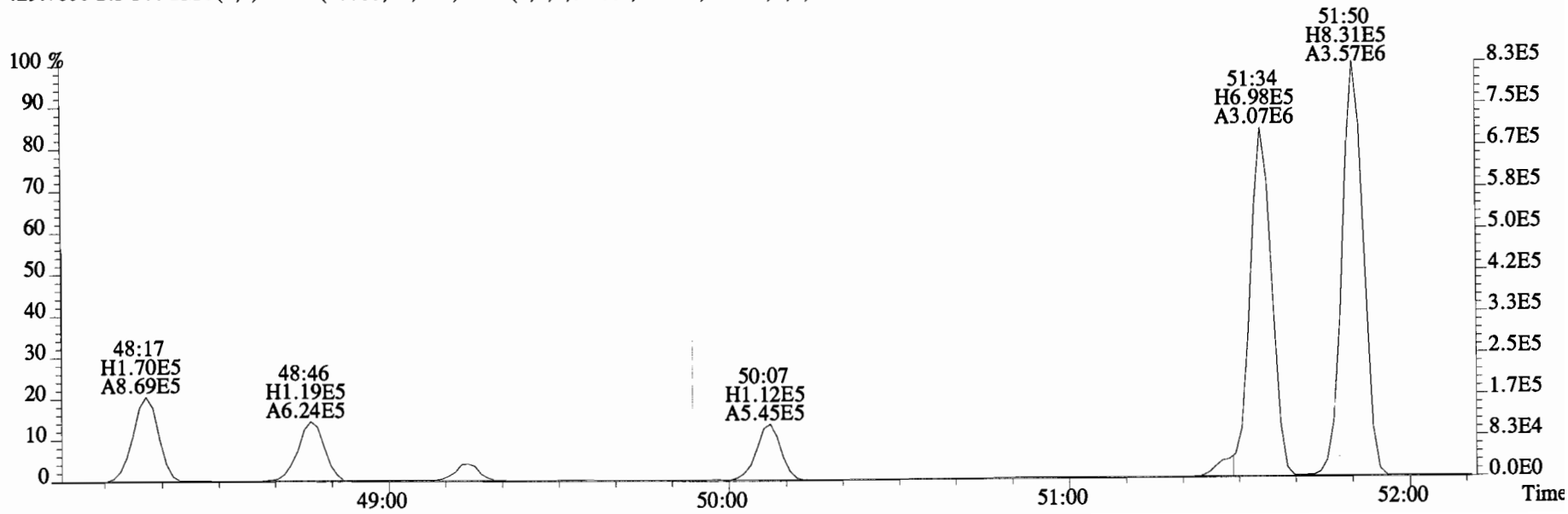
441.8008 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1404.0,0.00%,F,F)



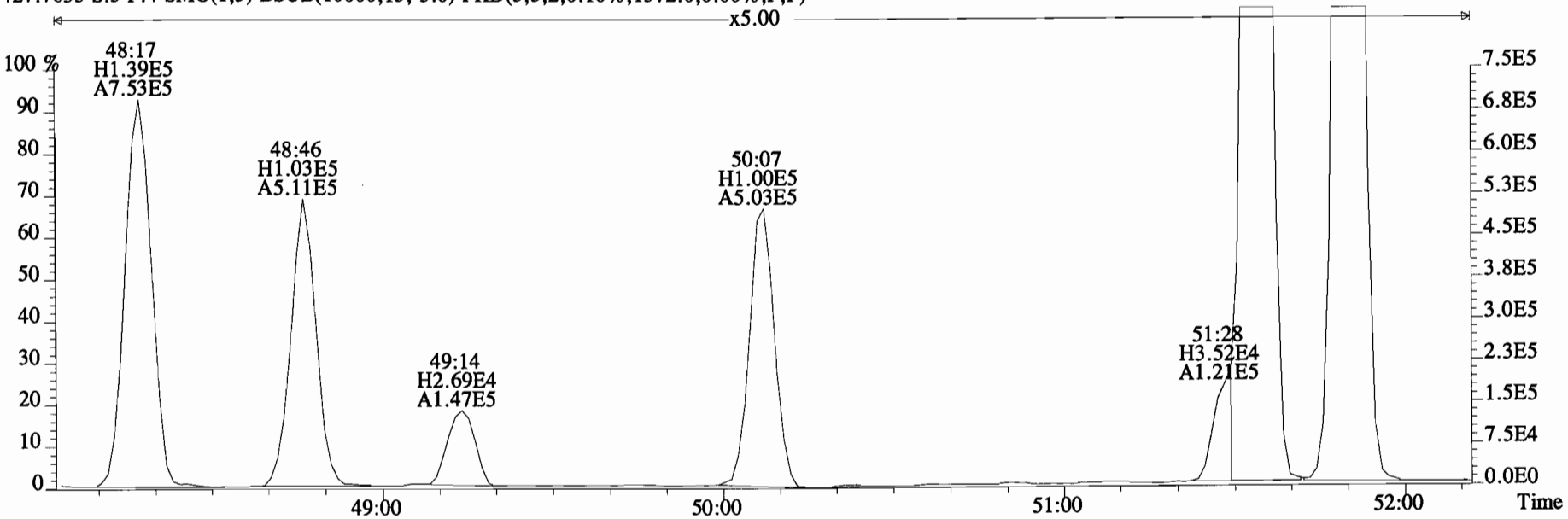
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
427.7635 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1372.0,0.00%,F,F)



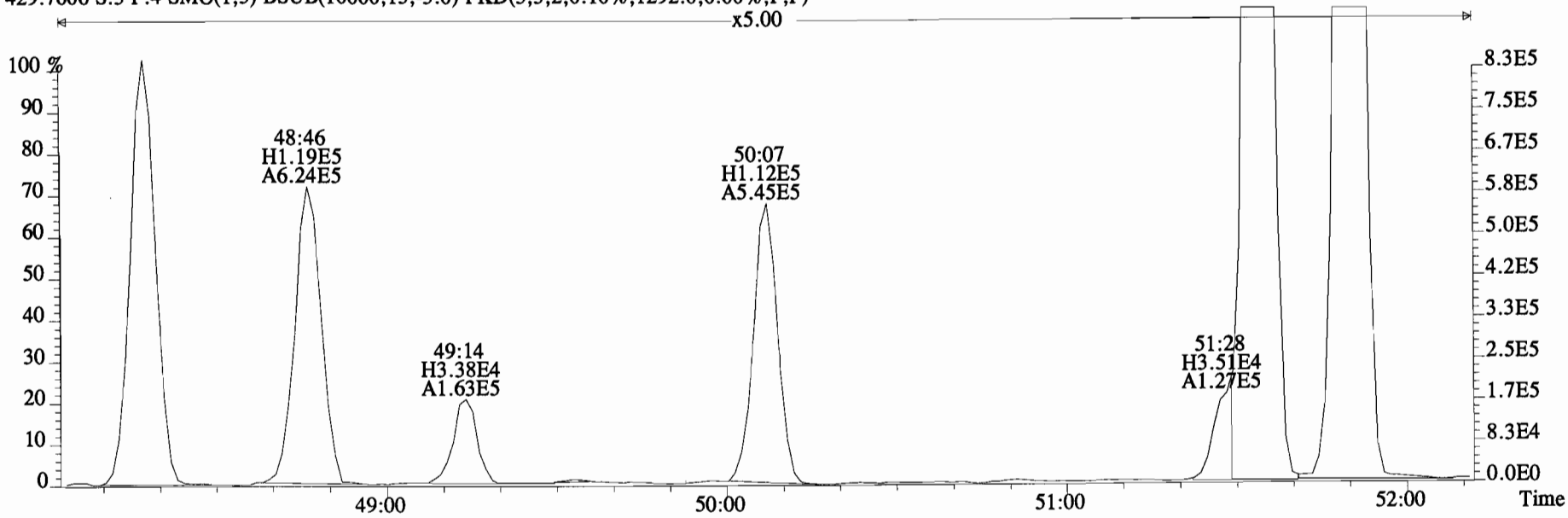
429.7606 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1292.0,0.00%,F,F)



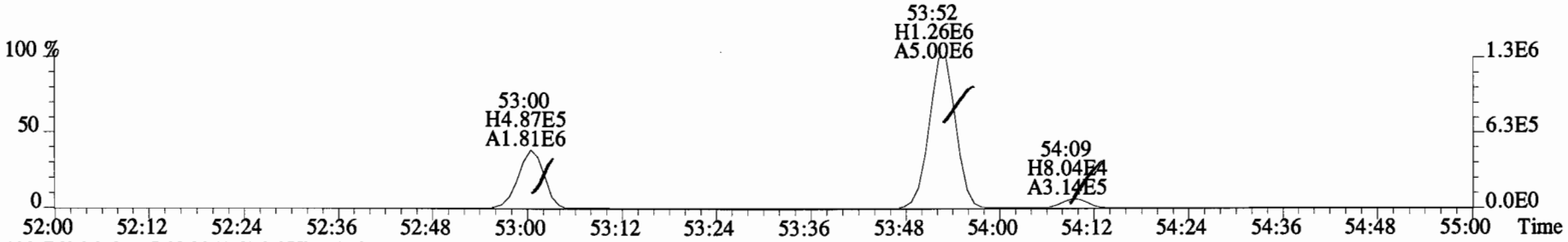
File:150319E1 #1-555 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
427.7635 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1372.0,0.00%,F,F)



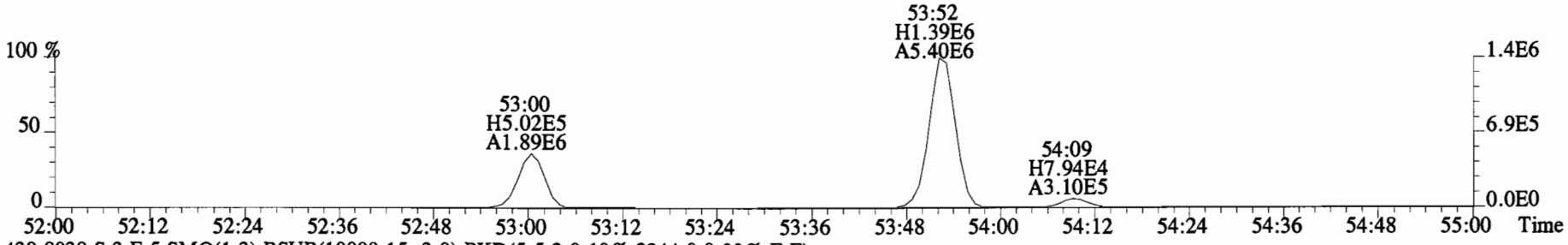
429.7606 S:3 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1292.0,0.00%,F,F)



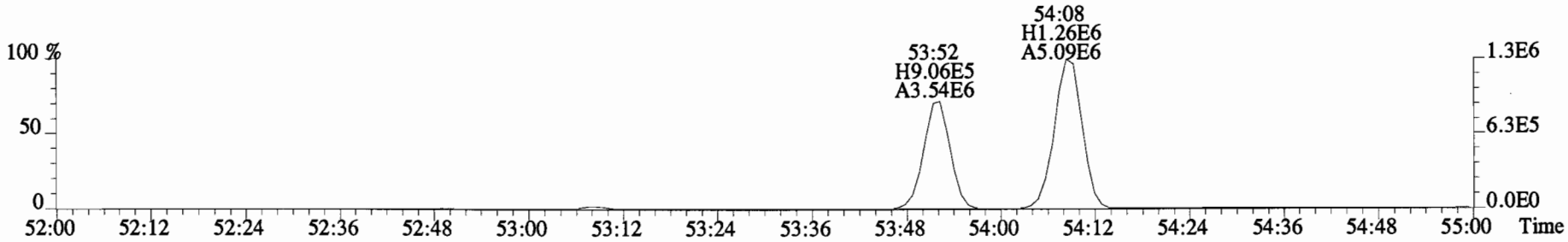
File:150319E1 #1-430 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
427.7635 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2280.0,0.00%,F,F)



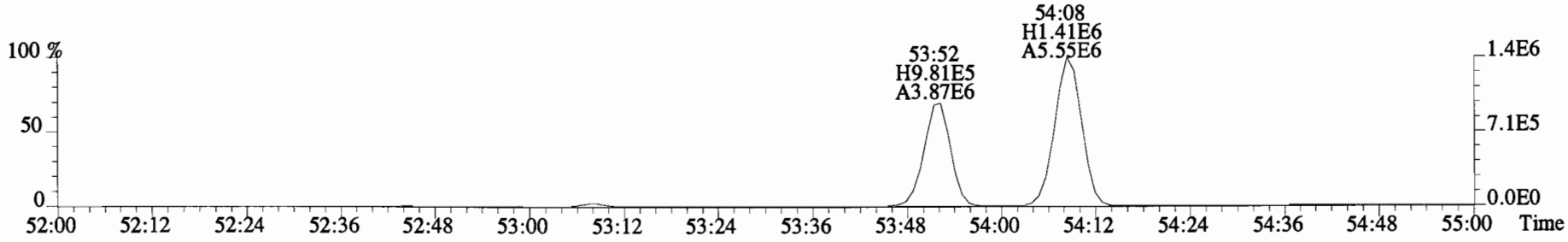
429.7606 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2148.0,0.00%,F,F)



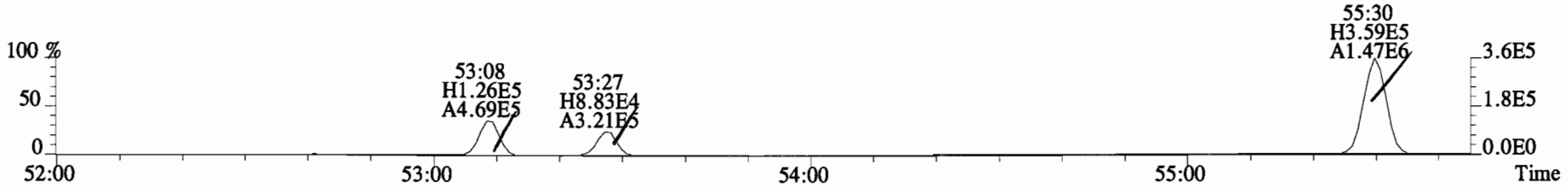
439.8038 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2244.0,0.00%,F,F)



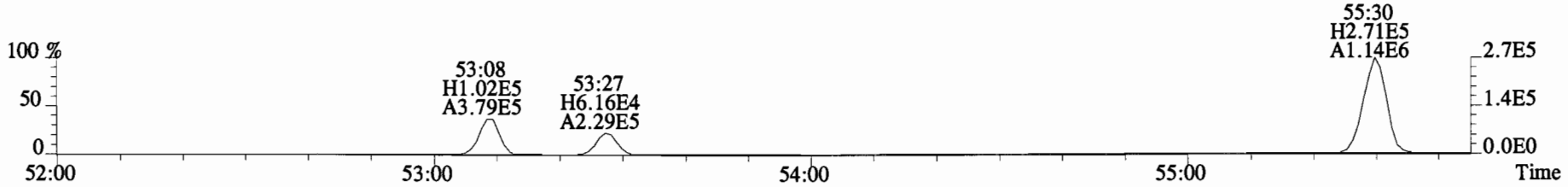
441.8008 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2600.0,0.00%,F,F)



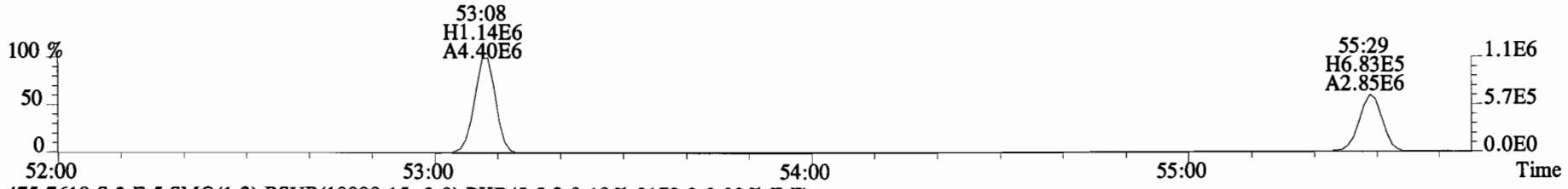
File:150319E1 #1-430 Acq:19-MAR-2015 14:56:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
463.7216 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1620.0,0.00%,F,F)



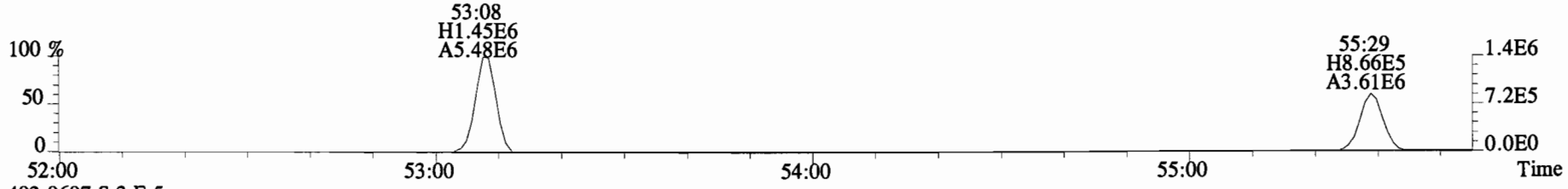
465.7186 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1476.0,0.00%,F,F)



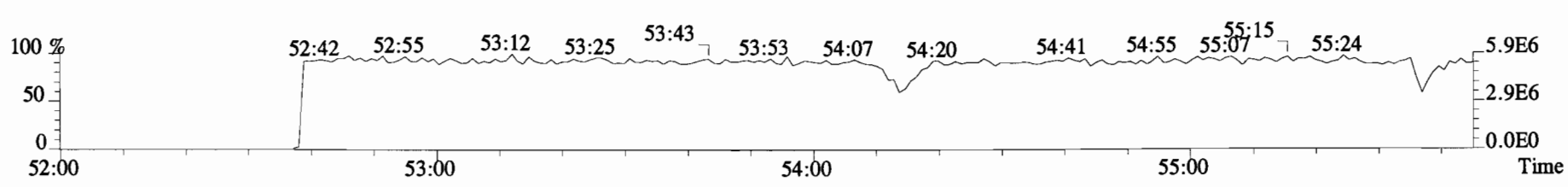
473.7648 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2088.0,0.00%,F,F)



475.7619 S:3 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2172.0,0.00%,F,F)



492.9697 S:3 F:5



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Sample#3 File Text:Vista Analytical Laboratory VG-8 Text:1400915-05RE1@5X BD-MH-13.43-20141202-S Exp:PCB_ZB1
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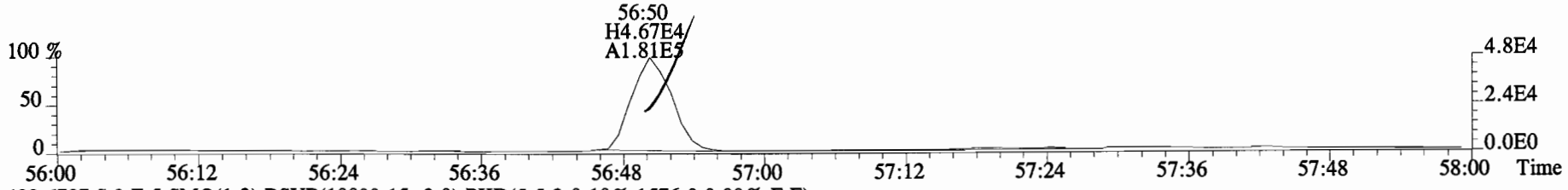

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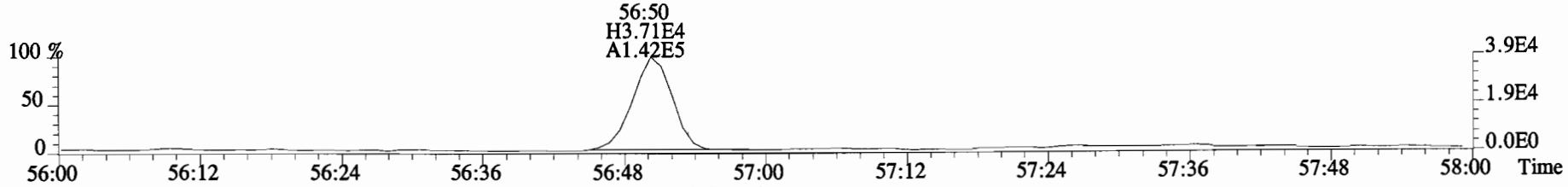

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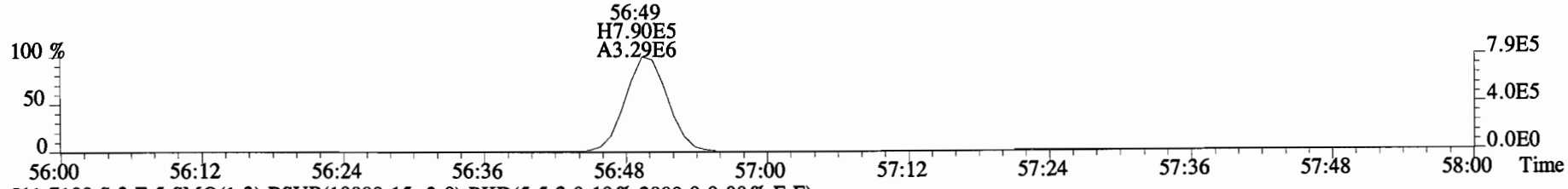

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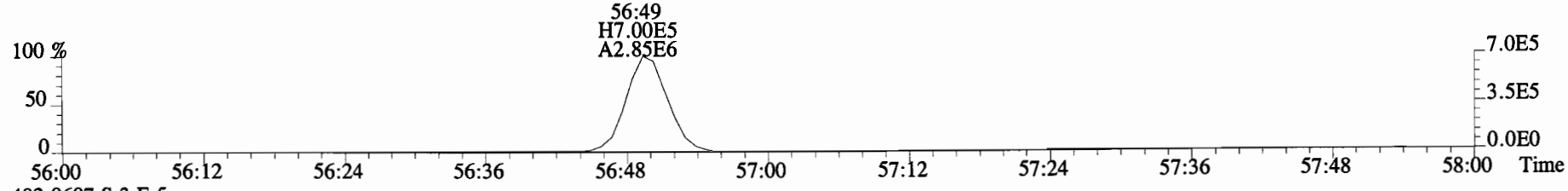
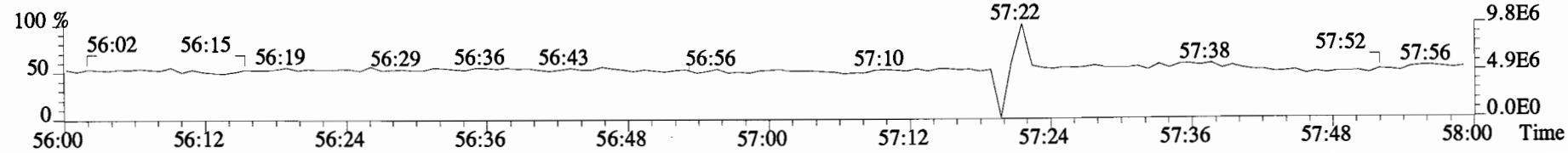


492.9697 S:3 F:5



CONTINUING CALIBRATION

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150318E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150318E1 S#1 Analysis Date: 18-MAR-15 Time: 09:59:47

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.98	2.66-3.60	y	44.7	37.5-62.5
PCB-2	3.01	2.66-3.60	y	42.3	37.5-62.5
PCB-3	2.96	2.66-3.60	y	43.9	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	203.3	150-250
PCB-7/9	1.66	1.33-1.79	y	208.6	150-250
PCB-6	1.64	1.33-1.79	y	102.0	75.0-125
PCB-5/8	1.66	1.33-1.79	y	211.1	150-250
PCB-14	1.66	1.33-1.79	y	104.8	75.0-125
PCB-11	1.66	1.33-1.79	y	105.0	75.0-125
PCB-12/13	1.64	1.33-1.79	y	207.9	150-250
PCB-15	1.63	1.33-1.79	y	104.4	75.0-125
PCB-19	1.09	0.88-1.20	y	53.0	37.5-62.5
PCB-30	1.07	0.88-1.20	y	50.9	37.5-62.5
PCB-18	1.07	0.88-1.20	y	52.9	37.5-62.5
PCB-17	1.07	0.88-1.20	y	51.8	37.5-62.5
PCB-24/27	1.07	0.88-1.20	y	105.1	75.0-125
PCB-16/32	1.07	0.88-1.20	y	105.5	75.0-125
PCB-34	1.10	0.88-1.20	y	54.7	37.5-62.5
PCB-23	1.12	0.88-1.20	y	49.9	37.5-62.5
PCB-29	1.09	0.88-1.20	y	53.7	37.5-62.5
PCB-26	1.08	0.88-1.20	y	54.6	37.5-62.5
PCB-25	1.10	0.88-1.20	y	56.9	37.5-62.5
PCB-31	1.12	0.88-1.20	y	53.3	37.5-62.5
PCB-28	1.12	0.88-1.20	y	55.9	37.5-62.5
PCB-20/21/33	1.10	0.88-1.20	y	178.4	112.5-225
PCB-22	1.11	0.88-1.20	y	57.1	37.5-62.5
PCB-36	1.11	0.88-1.20	y	53.9	37.5-62.5
PCB-39	1.12	0.88-1.20	y	54.3	37.5-62.5
PCB-38	1.10	0.88-1.20	y	51.3	37.5-62.5
PCB-35	1.11	0.88-1.20	y	58.7	37.5-62.5
PCB-37	1.12	0.88-1.20	y	56.8	37.5-62.5
PCB-54	0.79	0.65-0.89	y	52.6	37.5-62.5
PCB-50	0.80	0.65-0.89	y	53.1	37.5-62.5
PCB-53	0.79	0.65-0.89	y	54.9	37.5-62.5
PCB-51	0.80	0.65-0.89	y	53.2	37.5-62.5
PCB-45	0.80	0.65-0.89	y	54.5	37.5-62.5
PCB-46	0.79	0.65-0.89	y	54.3	37.5-62.5
PCB-52/69	0.78	0.65-0.89	y	114.8	75.0-125
PCB-73	0.79	0.65-0.89	y	52.0	37.5-62.5
PCB-43/49	0.79	0.65-0.89	y	108.5	75.0-125
PCB-47	0.78	0.65-0.89	y	51.0	37.5-62.5
PCB-48/75	0.79	0.65-0.89	y	116.2	75.0-125
PCB-65	0.78	0.65-0.89	y	58.0	37.5-62.5
PCB-62	0.80	0.65-0.89	y	54.6	37.5-62.5
PCB-44	0.79	0.65-0.89	y	56.7	37.5-62.5
PCB-42/59	0.80	0.65-0.89	y	114.9	75.0-125
PCB-41/64/71/72	0.80	0.65-0.89	y	227.4	150-250
PCB-68	0.80	0.65-0.89	y	58.5	37.5-62.5
PCB-40	0.78	0.65-0.89	y	59.3	37.5-62.5
PCB-57	0.79	0.65-0.89	y	56.3	37.5-62.5
PCB-67	0.78	0.65-0.89	y	54.7	37.5-62.5
PCB-58	0.79	0.65-0.89	y	55.2	37.5-62.5
PCB-63	0.78	0.65-0.89	y	54.6	37.5-62.5
PCB-74	0.80	0.65-0.89	y	54.3	37.5-62.5
PCB-61/70	0.79	0.65-0.89	y	112.7	75.0-125
PCB-76/66	0.80	0.65-0.89	y	108.8	75.0-125
PCB-80	0.79	0.65-0.89	y	55.0	37.5-62.5
PCB-55	0.78	0.65-0.89	y	54.8	37.5-62.5
PCB-56/60	0.80	0.65-0.89	y	111.0	75.0-125
PCB-79	0.80	0.65-0.89	y	55.3	37.5-62.5
PCB-78	0.79	0.65-0.89	y	51.0	37.5-62.5
PCB-81	0.79	0.65-0.89	y	50.7	37.5-62.5
PCB-77	0.81	0.65-0.89	y	51.5	37.5-62.5
PCB-104	1.60	1.32-1.78	y	56.4	37.5-62.5
PCB-96	1.62	1.32-1.78	y	54.6	37.5-62.5
PCB-103	1.61	1.32-1.78	y	54.8	37.5-62.5
PCB-100	1.58	1.32-1.78	y	55.6	37.5-62.5
PCB-94	1.60	1.32-1.78	y	52.0	37.5-62.5
PCB-95/98/102	1.62	1.32-1.78	y	163.3	112.5-225
PCB-93	1.65	1.32-1.78	y	50.9	37.5-62.5
PCB-88/91	1.61	1.32-1.78	y	111.2	75.0-125
PCB-121	1.62	1.32-1.78	y	53.8	37.5-62.5

Analyst: DMS

Date: 3/19/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150318E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150318E1 S#1 Analysis Date: 18-MAR-15 Time: 09:59:47

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.61	1.32-1.78	y	108.8	75.0-125	PCB-140	1.30	1.05-1.43	y	59.8	37.5-62.5
PCB-89	1.58	1.32-1.78	y	52.5	37.5-62.5	PCB-134/143	1.23	1.05-1.43	y	94.7	75.0-125
PCB-90/101	1.61	1.32-1.78	y	110.5	75.0-125	PCB-133/142	1.26	1.05-1.43	y	93.5	75.0-125
PCB-113	1.60	1.32-1.78	y	56.4	37.5-62.5	PCB-131	1.25	1.05-1.43	y	47.6	37.5-62.5
PCB-99	1.60	1.32-1.78	y	52.5	37.5-62.5	PCB-146/165	1.23	1.05-1.43	y	96.5	75.0-125
PCB-119	1.56	1.32-1.78	y	54.5	37.5-62.5	PCB-132/161	1.24	1.05-1.43	y	95.3	75.0-125
PCB-108/112	1.61	1.32-1.78	y	108.5	75.0-125	PCB-153	1.24	1.05-1.43	y	48.5	37.5-62.5
PCB-83	1.61	1.32-1.78	y	54.2	37.5-62.5	PCB-168	1.24	1.05-1.43	y	48.4	37.5-62.5
PCB-97	1.64	1.32-1.78	y	52.8	37.5-62.5	PCB-141	1.23	1.05-1.43	y	49.6	37.5-62.5
PCB-86	1.48	1.32-1.78	y	58.5	37.5-62.5	PCB-137	1.25	1.05-1.43	y	49.4	37.5-62.5
PCB-87/117/125	1.64	1.32-1.78	y	165.4	112.5-225	PCB-130	1.25	1.05-1.43	y	45.2	37.5-62.5
PCB-111/115	1.61	1.32-1.78	y	106.7	75.0-125	PCB-138/163/164	1.24	1.05-1.43	y	156.1	112.5-225
PCB-85/116	1.61	1.32-1.78	y	118.7	75.0-125	PCB-158/160	1.23	1.05-1.43	y	102.6	75.0-125
PCB-120	1.60	1.32-1.78	y	55.1	37.5-62.5	PCB-129	1.27	1.05-1.43	y	52.5	37.5-62.5
PCB-110	1.61	1.32-1.78	y	58.0	37.5-62.5	PCB-166	1.23	1.05-1.43	y	47.4	37.5-62.5
PCB-82	1.63	1.32-1.78	y	52.8	37.5-62.5	PCB-159	1.24	1.05-1.43	y	52.4	37.5-62.5
PCB-124	1.60	1.32-1.78	y	53.3	37.5-62.5	PCB-128/162	1.26	1.05-1.43	y	100.4	75.0-125
PCB-107/109	1.62	1.32-1.78	y	102.0	75.0-125	PCB-167	1.25	1.05-1.43	y	51.3	37.5-62.5
PCB-123	1.60	1.32-1.78	y	53.1	37.5-62.5	PCB-156	1.24	1.05-1.43	y	52.4	37.5-62.5
PCB-106/118	1.63	1.32-1.78	y	106.0	75.0-125	PCB-157	1.25	1.05-1.43	y	50.2	37.5-62.5
PCB-114	1.58	1.32-1.78	y	51.3	37.5-62.5	PCB-169	1.24	1.05-1.43	y	50.3	37.5-62.5
PCB-122	1.65	1.32-1.78	y	51.6	37.5-62.5	PCB-188	1.08	0.89-1.21	y	51.8	37.5-62.5
PCB-105	1.60	1.32-1.78	y	53.4	37.5-62.5	PCB-184	1.07	0.89-1.21	y	51.9	37.5-62.5
PCB-127	1.63	1.32-1.78	y	52.3	37.5-62.5	PCB-179	1.08	0.89-1.21	y	51.5	37.5-62.5
PCB-126	1.61	1.32-1.78	y	54.9	37.5-62.5	PCB-176	1.09	0.89-1.21	y	51.1	37.5-62.5
PCB-155	1.30	1.05-1.43	y	53.3	37.5-62.5	PCB-186	1.08	0.89-1.21	y	52.8	37.5-62.5
PCB-150	1.27	1.05-1.43	y	55.8	37.5-62.5	PCB-178	1.06	0.89-1.21	y	52.9	37.5-62.5
PCB-152	1.31	1.05-1.43	y	55.2	37.5-62.5	PCB-175	1.06	0.89-1.21	y	53.4	37.5-62.5
PCB-145	1.27	1.05-1.43	y	56.8	37.5-62.5	PCB-182/187	1.08	0.89-1.21	y	106.5	75.0-125
PCB-136	1.31	1.05-1.43	y	57.7	37.5-62.5	PCB-183	1.06	0.89-1.21	y	53.3	37.5-62.5
PCB-148	1.29	1.05-1.43	y	53.9	37.5-62.5	PCB-185	1.06	0.89-1.21	y	50.8	37.5-62.5
PCB-154	1.26	1.05-1.43	y	57.8	37.5-62.5	PCB-174	1.06	0.89-1.21	y	49.5	37.5-62.5
PCB-151	1.28	1.05-1.43	y	58.6	37.5-62.5	PCB-181	1.08	0.89-1.21	y	54.4	37.5-62.5
PCB-135	1.27	1.05-1.43	y	59.0	37.5-62.5	PCB-177	1.08	0.89-1.21	y	51.7	37.5-62.5
PCB-144	1.28	1.05-1.43	y	61.5	37.5-62.5	PCB-171	1.08	0.89-1.21	y	51.7	37.5-62.5
PCB-147	1.30	1.05-1.43	y	61.0	37.5-62.5	PCB-173	1.06	0.89-1.21	y	53.1	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	120.5	75.0-125	PCB-172	1.07	0.89-1.21	y	53.0	37.5-62.5

Analyst: DMS

Date: 3/19/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150318E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150318E1 S#1 Analysis Date: 18-MAR-15 Time: 09:59:47

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.07	0.89-1.21	y	54.7	37.5-62.5
PCB-180	1.07	0.89-1.21	y	52.5	37.5-62.5
PCB-193	1.07	0.89-1.21	y	53.2	37.5-62.5
PCB-191	1.07	0.89-1.21	y	52.9	37.5-62.5
PCB-170	1.08	0.89-1.21	y	52.5	37.5-62.5
PCB-190	1.06	0.89-1.21	y	53.0	37.5-62.5
PCB-189	1.07	0.89-1.21	y	51.4	37.5-62.5
PCB-202	0.92	0.76-1.02	y	51.0	37.5-62.5
PCB-201	0.93	0.76-1.02	y	52.8	37.5-62.5
PCB-204	0.92	0.76-1.02	y	50.7	37.5-62.5
PCB-197	0.92	0.76-1.02	y	51.4	37.5-62.5
PCB-200	0.92	0.76-1.02	y	52.5	37.5-62.5
PCB-198	0.90	0.76-1.02	y	57.2	37.5-62.5
PCB-199	0.91	0.76-1.02	y	55.8	37.5-62.5
PCB-196/203	0.92	0.76-1.02	y	116.7	75.0-125
PCB-195	0.93	0.76-1.02	y	43.2	37.5-62.5
PCB-194	0.92	0.76-1.02	y	47.7	37.5-62.5
PCB-205	0.92	0.76-1.02	y	51.2	37.5-62.5
PCB-208	1.33	1.14-1.54	y	51.6	37.5-62.5
PCB-207	1.34	1.14-1.54	y	53.2	37.5-62.5
PCB-206	1.35	1.14-1.54	y	50.5	37.5-62.5
PCB-209	1.18	0.99-1.33	y	52.4	37.5-62.5

Analyst: DMS

Date: 3/19/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150318E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150318E1 S#1 Analysis Date: 18-MAR-15 Time: 09:59:47

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.20	2.66-3.60	y	100.9	50.0-145
13C-PCB-3	3.22	2.66-3.60	y	104.8	50.0-145
13C-PCB-4	1.61	1.33-1.79	y	98.6	50.0-145
13C-PCB-9	1.60	1.33-1.79	y	95.2	50.0-145
13C-PCB-11	1.59	1.33-1.79	y	97.4	50.0-145
13C-PCB-19	1.09	0.88-1.20	y	86.8	50.0-145
13C-PCB-32	1.10	0.88-1.20	y	86.0	50.0-145
13C-PCB-28	1.09	0.88-1.20	y	105.6	50.0-145
13C-PCB-37	1.09	0.88-1.20	y	117.7	50.0-145
13C-PCB-54	0.82	0.65-0.89	y	87.6	50.0-145
13C-PCB-52	0.82	0.65-0.89	y	91.8	50.0-145
13C-PCB-47	0.80	0.65-0.89	y	91.5	50.0-145
13C-PCB-70	0.83	0.65-0.89	y	96.5	50.0-145
13C-PCB-80	0.81	0.65-0.89	y	98.8	50.0-145
13C-PCB-81	0.81	0.65-0.89	y	104.1	50.0-145
13C-PCB-77	0.81	0.65-0.89	y	105.5	50.0-145
13C-PCB-104	1.62	1.32-1.78	y	91.5	50.0-145
13C-PCB-95	1.62	1.32-1.78	y	96.4	50.0-145
13C-PCB-101	1.61	1.32-1.78	y	95.4	50.0-145
13C-PCB-97	1.67	1.32-1.78	y	97.8	50.0-145
13C-PCB-123	1.62	1.32-1.78	y	107.1	50.0-145
13C-PCB-118	1.63	1.32-1.78	y	104.6	50.0-145
13C-PCB-114	1.63	1.32-1.78	y	105.9	50.0-145
13C-PCB-105	1.64	1.32-1.78	y	104.8	50.0-145
13C-PCB-127	1.63	1.32-1.78	y	106.0	50.0-145
13C-PCB-126	1.64	1.32-1.78	y	110.8	50.0-145
13C-PCB-155	1.32	1.05-1.43	y	73.4	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	94.7	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	95.0	50.0-145
13C-PCB-138	1.31	1.05-1.43	y	94.4	50.0-145
13C-PCB-159	1.30	1.05-1.43	y	101.8	50.0-145
13C-PCB-167	1.30	1.05-1.43	y	103.3	50.0-145
13C-PCB-156	1.29	1.05-1.43	y	105.3	50.0-145
13C-PCB-157	1.29	1.05-1.43	y	104.3	50.0-145
13C-PCB-169	1.29	1.05-1.43	y	112.5	50 - 145
13C-PCB-188	0.47	0.38-0.52	y	81.4	50 - 145
13C-PCB-180	0.48	0.38-0.52	y	89.0	50 - 145
13C-PCB-170	0.47	0.38-0.52	y	94.5	50 - 145
13C-PCB-189	0.45	0.38-0.52	y	98.6	50 - 145
13C-PCB-202	0.93	0.76-1.02	y	76.2	50 - 145
13C-PCB-194	0.93	0.76-1.02	y	96.1	50 - 145
13C-PCB-208	0.78	0.65-0.89	y	78.9	50 - 145
13C-PCB-206	0.79	0.65-0.89	y	91.9	50 - 145
13C-PCB-209	1.20	0.99-1.33	y	99.7	50 - 145

CRS vs. RS

13C-PCB-79	0.82	0.65-0.89	y	98.4	75 - 125
13C-PCB-178	0.47	0.38-0.52	y	83.9	75 - 125

Analyst: DMS

Date: 3/19/15

Client ID: PCB CS3 14K1102 Filename: 150318E1 S:1 Acq:18-MAR-15 09:59:47 ConCal: ST150318E1-1

Lab ID: ST150318E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	1.21e+08	2.98	y	1.19	16:07	1.001	0.996	1.006	44.6964
	PCB-2	1.23e+08	3.01	y	1.18	18:30	0.988	0.984	0.994	42.2561
	PCB-3	1.54e+08	2.96	y	1.43	18:44	1.001	0.996	1.006	43.8704
	PCB-4/10	4.75e+08	1.64	y	1.57	20:05	1.002	0.997	1.007	203.261
	PCB-7/9	5.55e+08	1.66	y	1.21	21:52	0.868	0.866	0.874	208.570
	PCB-6	2.93e+08	1.64	y	1.30	22:31	0.893	0.890	0.899	101.975
	PCB-5/8	5.33e+08	1.66	y	1.15	22:56	0.910	0.907	0.917	211.116
	PCB-14	2.73e+08	1.66	y	1.11	24:01	0.953	0.949	0.959	104.825
	PCB-11	2.68e+08	1.66	y	1.09	25:13	1.001	0.995	1.005	104.998
	PCB-12/13	5.83e+08	1.64	y	1.19	25:37	1.016	1.011	1.021	207.948
	PCB-15	3.15e+08	1.63	y	1.28	25:55	1.028	1.023	1.033	104.436
	PCB-19	6.58e+07	1.09	y	1.04	24:12	1.001	0.996	1.006	53.0357
	PCB-30	1.03e+08	1.07	y	1.71	25:06	1.038	1.032	1.042	50.8591
	PCB-18	7.28e+07	1.07	y	0.78	25:51	0.954	0.949	0.959	52.8603
	PCB-17	8.43e+07	1.07	y	0.92	26:01	0.960	0.956	0.966	51.8482
	PCB-24/27	2.20e+08	1.07	y	1.19	26:36	0.981	0.977	0.987	105.096
-	PCB-16/32	1.75e+08	1.07	y	0.94	27:06	1.000	0.995	1.005	105.508
-	PCB-34	1.31e+08	1.10	y	1.14	27:54	0.960	0.955	0.965	54.7364
	PCB-23	1.35e+08	1.12	y	1.28	28:00	0.964	0.959	0.969	49.9337
	PCB-29	1.22e+08	1.09	y	1.08	28:14	0.972	0.967	0.977	53.7071
	PCB-26	1.39e+08	1.08	y	1.21	28:27	0.979	0.974	0.984	54.5863
	PCB-25	1.51e+08	1.10	y	1.26	28:37	0.985	0.979	0.989	56.9431
	PCB-31	1.44e+08	1.12	y	1.28	28:57	0.997	0.992	1.002	53.2659
	PCB-28	2.02e+08	1.12	y	1.71	29:04	1.001	0.995	1.005	55.8828
	PCB-20/21/33	4.07e+08	1.10	y	1.08	29:41	1.022	1.017	1.027	178.437
	PCB-22	1.45e+08	1.11	y	1.21	30:07	1.037	1.032	1.042	57.0758
	PCB-36	1.30e+08	1.11	y	1.14	30:44	0.934	0.928	0.938	53.9271
	PCB-39	1.28e+08	1.12	y	1.12	31:13	0.948	0.943	0.953	54.3169
	PCB-38	1.30e+08	1.10	y	1.20	31:58	0.971	0.966	0.976	51.2600
	PCB-35	1.53e+08	1.11	y	1.23	32:30	0.987	0.982	0.992	58.6611
	PCB-37	1.48e+08	1.12	y	1.23	32:56	1.001	0.995	1.005	56.7809
	PCB-54	8.75e+07	0.79	y	1.10	27:57	1.001	0.996	1.006	52.6081
	PCB-50	7.06e+07	0.80	y	0.88	29:07	1.042	1.037	1.047	53.1481
	PCB-53	7.34e+07	0.79	y	1.06	29:45	0.946	0.942	0.952	54.9121
	PCB-51	6.63e+07	0.80	y	0.99	30:06	0.957	0.952	0.962	53.2479
	PCB-45	5.92e+07	0.80	y	0.86	30:32	0.970	0.966	0.976	54.5327
	PCB-46	5.76e+07	0.79	y	0.85	31:01	0.986	0.981	0.991	54.2908

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.85e+08	0.78	y	1.28	31:30	1.001	0.996	1.006	114.800
PCB-73	8.83e+07	0.79	y	1.35	31:37	1.005	1.000	1.010	51.9749
PCB-43/49	1.36e+08	0.79	y	0.99	31:47	1.010	1.005	1.015	108.475
PCB-47	7.12e+07	0.78	y	1.06	31:59	1.000	0.996	1.006	51.0419
PCB-48/75	1.88e+08	0.79	y	1.23	32:06	1.004	0.999	1.009	116.178
PCB-65	9.35e+07	0.78	y	1.22	32:22	1.013	1.008	1.018	57.9719
PCB-62	8.79e+07	0.80	y	1.22	32:29	1.016	1.011	1.021	54.6217
PCB-44	6.42e+07	0.79	y	0.86	32:47	1.025	1.021	1.031	56.6678
PCB-42/59	1.72e+08	0.80	y	1.14	33:00	1.032	1.028	1.038	114.935
PCB-41/64/71/72	3.62e+08	0.80	y	1.21	33:35	1.051	1.046	1.056	227.374
PCB-68	1.04e+08	0.80	y	1.35	33:51	1.059	1.054	1.064	58.4761
PCB-40	5.48e+07	0.78	y	0.70	34:04	1.066	1.061	1.071	59.2951
PCB-57	9.42e+07	0.79	y	0.98	34:25	0.970	0.965	0.975	56.2961
PCB-67	1.04e+08	0.78	y	1.11	34:44	0.979	0.974	0.984	54.7482
PCB-58	8.74e+07	0.79	y	0.93	34:51	0.982	0.977	0.987	55.1846
PCB-63	8.88e+07	0.78	y	0.95	34:60	0.987	0.982	0.992	54.6057
PCB-74	1.15e+08	0.80	y	1.24	35:17	0.995	0.990	1.000	54.2857
PCB-61/70	1.84e+08	0.79	y	0.95	35:27	0.999	0.995	1.005	112.737
PCB-76/66	1.94e+08	0.80	y	1.04	35:41	1.006	1.001	1.011	108.829
PCB-80	1.19e+08	0.79	y	1.19	35:55	1.001	0.996	1.006	55.0299
PCB-55	1.03e+08	0.78	y	1.04	36:14	1.009	1.005	1.015	54.8373
PCB-56/60	2.03e+08	0.80	y	1.01	36:43	1.023	1.019	1.029	110.967
PCB-79	1.08e+08	0.80	y	1.08	37:47	1.053	1.048	1.058	55.2529
PCB-78	1.10e+08	0.79	y	1.27	38:29	0.987	0.982	0.992	50.9739
PCB-81	1.15e+08	0.79	y	1.33	39:01	1.000	0.995	1.005	50.7450
PCB-77	1.00e+08	0.81	y	1.10	39:36	1.000	0.995	1.005	51.5069
PCB-104	6.08e+07	1.60	y	1.18	32:38	1.001	0.996	1.006	56.3701
PCB-96	5.66e+07	1.62	y	1.14	33:53	1.039	1.034	1.044	54.5595
PCB-103	4.78e+07	1.61	y	0.96	34:26	1.056	1.050	1.060	54.7679
PCB-100	4.75e+07	1.58	y	0.94	34:46	1.066	1.061	1.071	55.5593
PCB-94	3.90e+07	1.60	y	1.06	35:15	0.985	0.980	0.990	52.0090
PCB-95/98/102	1.42e+08	1.62	y	1.22	35:44	0.999	0.995	1.005	163.280
PCB-93	3.05e+07	1.65	y	0.84	35:52	1.003	0.997	1.007	50.9496
PCB-88/91	8.81e+07	1.61	y	1.12	36:09	1.011	1.005	1.015	111.153
PCB-121	6.16e+07	1.62	y	1.62	36:16	1.014	1.009	1.019	53.7770
PCB-84/92	8.45e+07	1.61	y	1.05	37:05	0.990	0.985	0.995	108.819
PCB-89	4.41e+07	1.58	y	1.13	37:16	0.995	0.991	1.001	52.5087

Integrations by Analyst: DMS Date: 3/19/15

Reviewed by Analyst:_____ Date:_____

Client ID: PCB CS3 14K1102 Filename: 150318E1 S:1 Acq:18-MAR-15 09:59:47 ConCal: ST150318E1-1

Lab ID: ST150318E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	9.03e+07	1.61	y	1.10	37:28	1.000	0.995	1.005	110.461
	PCB-113	5.91e+07	1.60	y	1.41	37:42	1.007	1.002	1.012	56.4456
	PCB-99	5.21e+07	1.60	y	1.34	37:48	1.009	1.004	1.014	52.5033
	PCB-119	5.72e+07	1.56	y	1.53	38:15	0.987	0.982	0.992	54.5424
	PCB-108/112	9.51e+07	1.61	y	1.28	38:25	0.991	0.986	0.996	108.493
	PCB-83	5.63e+07	1.61	y	1.52	38:35	0.996	0.990	1.000	54.1735
	PCB-97	4.27e+07	1.64	y	1.18	38:46	1.000	0.995	1.005	52.7997
	PCB-86	3.37e+07	1.48	y	0.84	38:54	1.004	0.999	1.009	58.4511
	B-87/117/125	1.75e+08	1.64	y	1.55	39:02	1.007	1.002	1.012	165.378
	PCB-111/115	1.19e+08	1.61	y	1.63	39:11	1.011	1.006	1.016	106.673
	PCB-85/116	1.06e+08	1.61	y	1.30	39:19	1.015	1.010	1.020	118.735
	PCB-120	6.33e+07	1.60	y	1.68	39:34	1.021	1.016	1.026	55.1286
	PCB-110	6.18e+07	1.61	y	1.56	39:42	1.025	1.020	1.030	57.9803
	PCB-82	3.82e+07	1.63	y	0.76	40:19	0.976	0.971	0.981	52.8483
	PCB-124	7.46e+07	1.60	y	1.47	41:00	0.993	0.988	0.998	53.2750
	PCB-107/109	1.28e+08	1.62	y	1.32	41:09	0.996	0.991	1.001	101.957
	PCB-123	5.91e+07	1.60	y	1.17	41:20	1.001	0.996	1.006	53.1336
-	PCB-106/118	1.24e+08	1.63	y	1.17	41:32	1.001	0.996	1.006	105.997
-	PCB-114	1.06e+08	1.58	y	1.30	42:10	1.001	0.995	1.005	51.2802
	PCB-122	9.20e+07	1.65	y	1.12	42:18	1.004	0.999	1.009	51.5704
	PCB-105	1.09e+08	1.60	y	1.30	43:02	1.001	0.995	1.005	53.3975
	PCB-127	1.20e+08	1.63	y	1.33	43:21	1.000	0.996	1.006	52.2841
	PCB-126	1.04e+08	1.61	y	1.18	45:15	1.000	0.995	1.005	54.8932
	PCB-155	3.64e+07	1.30	y	1.11	37:00	1.000	0.966	1.006	53.3097
	PCB-150	3.41e+07	1.27	y	1.00	38:17	1.035	1.030	1.040	55.7683
	PCB-152	3.78e+07	1.31	y	1.12	38:45	1.048	1.043	1.053	55.2167
	PCB-145	4.18e+07	1.27	y	1.20	39:11	1.059	1.055	1.065	56.8049
	PCB-136	4.17e+07	1.31	y	1.18	39:30	1.068	1.064	1.074	57.7128
	PCB-148	2.46e+07	1.29	y	0.74	39:37	1.071	1.066	1.076	53.8529
	PCB-154	3.04e+07	1.26	y	0.86	40:07	1.085	1.080	1.090	57.8483
	PCB-151	2.68e+07	1.28	y	0.75	40:44	1.101	1.097	1.107	58.6369
	PCB-135	2.87e+07	1.27	y	0.79	40:58	1.108	1.103	1.113	59.0086
	PCB-144	2.87e+07	1.28	y	0.76	41:05	1.111	1.105	1.117	61.5348
	PCB-147	3.06e+07	1.30	y	0.82	41:12	1.114	1.109	1.121	60.9603
	PCB-139/149	5.63e+07	1.27	y	0.76	41:27	1.121	1.116	1.128	120.483
-	PCB-140	2.65e+07	1.30	y	0.72	41:39	1.126	1.121	1.133	59.8412
-	PCB-134/143	1.04e+08	1.23	y	0.92	42:05	0.975	0.970	0.980	94.7123

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	9.17e+07	1.26	y	0.82	42:22	0.982	0.977	0.987	93.5166
PCB-131	5.18e+07	1.25	y	0.91	42:33	0.986	0.981	0.991	47.6086
PCB-146/165	1.44e+08	1.23	y	1.25	42:46	0.991	0.986	0.996	96.5208
PCB-132/161	1.26e+08	1.24	y	1.10	43:01	0.997	0.992	1.002	95.3490
PCB-153	7.25e+07	1.24	y	1.25	43:11	1.000	0.995	1.005	48.5013
PCB-168	8.40e+07	1.24	y	1.45	43:24	1.006	1.001	1.011	48.3955
PCB-141	6.06e+07	1.23	y	1.09	43:55	1.000	0.995	1.005	49.5823
PCB-137	5.91e+07	1.25	y	1.06	44:18	1.009	1.004	1.014	49.3772
PCB-130	4.91e+07	1.25	y	0.96	44:24	1.011	1.006	1.016	45.1724
PCB-138/163/164	2.31e+08	1.24	y	1.29	44:46	1.001	0.996	1.006	156.125
PCB-158/160	1.58e+08	1.23	y	1.34	45:01	1.006	1.001	1.011	102.610
PCB-129	5.13e+07	1.27	y	0.85	45:15	1.011	1.007	1.017	52.4735
PCB-166	7.88e+07	1.23	y	1.19	45:42	0.993	0.988	0.998	47.4479
PCB-159	8.16e+07	1.24	y	1.11	46:02	1.000	0.996	1.006	52.3615
PCB-128/162	1.47e+08	1.26	y	1.05	46:19	1.007	1.002	1.012	100.427
PCB-167	9.48e+07	1.25	y	1.20	46:43	1.000	0.995	1.005	51.2751
PCB-156	8.97e+07	1.24	y	1.14	48:00	1.000	0.996	1.006	52.4309
PCB-157	9.12e+07	1.25	y	1.16	48:16	1.000	0.995	1.005	50.1619
PCB-169	8.98e+07	1.24	y	1.12	50:26	1.000	0.995	1.005	50.3260
PCB-188	6.74e+07	1.08	y	1.58	42:49	1.001	0.996	1.006	51.7581
PCB-184	6.98e+07	1.07	y	1.63	43:16	1.011	1.006	1.016	51.8768
PCB-179	5.54e+07	1.08	y	1.30	44:02	1.029	1.024	1.034	51.5052
PCB-176	6.22e+07	1.09	y	1.48	44:30	1.040	1.035	1.045	51.0944
PCB-186	6.33e+07	1.08	y	1.45	45:07	1.054	1.050	1.060	52.8146
PCB-178	4.51e+07	1.06	y	1.03	45:36	1.065	1.061	1.071	52.8629
PCB-175	4.46e+07	1.06	y	1.01	45:56	1.074	1.069	1.079	53.3735
PCB-182/187	1.10e+08	1.08	y	1.25	46:07	1.078	1.073	1.083	106.539
PCB-183	5.31e+07	1.06	y	1.21	46:26	1.085	1.081	1.091	53.2514
PCB-185	6.14e+07	1.06	y	1.80	47:06	0.956	0.951	0.961	50.7841
PCB-174	4.58e+07	1.06	y	1.38	47:27	0.963	0.958	0.968	49.4784
PCB-181	5.04e+07	1.08	y	1.38	47:33	0.965	0.960	0.970	54.3947
PCB-177	4.36e+07	1.08	y	1.26	47:44	0.969	0.963	0.973	51.7315
PCB-171	5.50e+07	1.08	y	1.58	48:01	0.975	0.970	0.980	51.7045
PCB-173	3.96e+07	1.06	y	1.11	48:27	0.983	0.978	0.988	53.1133
PCB-172	5.82e+07	1.07	y	1.63	48:53	0.992	0.987	0.997	53.0008
PCB-192	6.40e+07	1.07	y	1.74	49:05	0.996	0.991	1.001	54.7450
PCB-180	4.74e+07	1.07	y	1.34	49:18	1.000	0.995	1.005	52.5186

Integrations
by
Analyst: DMS

Date: 3/19/15

Client ID: PCB CS3 14K1102 Filename: 150318E1 S:1 Acq:18-MAR-15 09:59:47 ConCal: ST150318E1-1

Lab ID: ST150318E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	6.13e+07	1.07	y	1.72	49:30	1.005	0.999	1.009	53.2013
	PCB-191	6.02e+07	1.07	y	1.69	49:45	1.010	1.004	1.014	52.9142
	PCB-170	4.74e+07	1.08	y	1.60	50:48	1.000	0.995	1.005	52.4653
	PCB-190	6.62e+07	1.06	y	2.21	50:58	1.004	0.998	1.008	52.9871
	PCB-189	6.21e+07	1.07	y	1.55	52:19	1.000	0.995	1.005	51.3793
	PCB-202	3.89e+07	0.92	y	1.08	48:13	1.001	0.995	1.005	50.9695
	PCB-201	4.27e+07	0.93	y	1.15	48:42	1.011	1.005	1.015	52.7684
	PCB-204	4.06e+07	0.92	y	1.14	48:52	1.014	1.008	1.018	50.6622
	PCB-197	3.89e+07	0.92	y	1.07	49:09	1.020	1.015	1.025	51.3701
	PCB-200	3.93e+07	0.92	y	1.06	50:03	1.039	1.032	1.044	52.5204
	PCB-198	3.04e+07	0.90	y	0.76	51:24	1.066	1.059	1.069	57.1544
	PCB-199	3.13e+07	0.91	y	0.80	51:30	1.069	1.061	1.071	55.7696
-	PCB-196/203	6.59e+07	0.92	y	0.80	51:47	1.074	1.066	1.076	116.679
-	PCB-195	6.19e+07	0.93	y	1.23	52:57	0.984	0.979	0.989	43.1686
	PCB-194	6.76e+07	0.92	y	1.21	53:49	1.000	0.995	1.005	47.6950
	PCB-205	9.23e+07	0.92	y	1.54	54:06	1.006	1.001	1.011	51.2187
	PCB-208	6.24e+07	1.33	y	0.93	53:06	1.000	0.995	1.005	51.5636
	PCB-207	7.49e+07	1.34	y	1.08	53:24	1.006	1.001	1.011	53.1980
	PCB-206	4.71e+07	1.35	y	1.02	55:26	1.000	0.995	1.005	50.5127
	PCB-209	5.69e+07	1.18	y	1.17	56:48	1.000	0.995	1.005	52.4032

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	3.98e+08	2.98	y	16:07	1.27	130.823	
Total Di-PCB	3.30e+09	1.64	y	20:05	1.21	1250.38	
Total Tri-PCB	7.21e+08	1.09	y	24:12	1.10	419.207	
Total Tri-PCB	2.28e+09	1.10	y	27:54	1.21	894.818	Sum:1314.02
Total Tetra-PCB	3.76e+09	0.79	y	27:57	1.09	2331.76	
Total Penta-PCB	2.14e+09	1.60	y	32:38	1.18	2235.54	
Total Penta-PCB	5.57e+08	1.58	y	42:10	1.25	276.538	Sum:2512.07
Total Hexa-PCB	4.44e+08	1.30	y	37:00	0.90	810.979	
Total Hexa-PCB	1.99e+09	1.23	y	42:05	1.11	1407.04	Sum:2218.02
Total Hepta-PCB	1.35e+09	1.08	y	42:49	1.42	1272.47	
Total Octa-PCB	3.28e+08	0.92	y	48:13	0.96	487.893	
Total Octa-PCB	2.28e+08	0.93	y	52:57	1.33	145.845	Sum:633.739
Total Nona-PCB	1.85e+08	1.33	y	53:06	1.01	155.945	
Total Deca-PCB	5.69e+07	1.18	y	56:48	1.17	52.4032	

Total PCB Conc:11795.8760210

Integrations
by
Analyst: DMS

Date: 3/19/15

Client ID: PCB CS3 14K1102 Filename: 150318E1 S:1 Acq:18-MAR-15 09:59:47 ConCal: ST150318E1-1

Lab ID: ST150318E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.27e+08	3.20 y	0.87	16:06	0.622	0.629	0.635	101	101
13C-PCB-3	2.46e+08	3.22 y	0.91	18:43	0.722	0.725	0.733	105	105
13C-PCB-4	1.49e+08	1.61 y	0.59	20:03	0.774	0.775	0.783	98.6	98.6
13C-PCB-9	2.20e+08	1.60 y	0.90	21:50	0.843	0.842	0.850	95.2	95.2
13C-PCB-11	2.35e+08	1.59 y	0.94	25:12	0.973	0.968	0.978	97.4	97.4
13C-PCB-19	1.19e+08	1.09 y	0.53	24:11	0.933	0.930	0.940	86.8	86.8
13C-PCB-28	2.11e+08	1.09 y	0.93	29:03	1.004	0.999	1.009	106	106
13C-PCB-32	1.76e+08	1.10 y	0.80	27:06	1.046	1.040	1.050	86.0	86.0
13C-PCB-37	2.12e+08	1.09 y	0.84	32:55	1.137	1.131	1.143	118	118
13C-PCB-47	1.32e+08	0.80 y	0.81	31:58	0.871	0.866	0.874	91.5	91.5
13C-PCB-52	1.26e+08	0.82 y	0.77	31:27	0.857	0.853	0.861	91.8	91.8
13C-PCB-54	1.51e+08	0.82 y	0.97	27:56	0.761	0.758	0.766	87.6	87.6
13C-PCB-70	1.71e+08	0.83 y	1.00	35:28	0.966	0.961	0.971	96.5	96.5
13C-PCB-77	1.76e+08	0.81 y	0.94	39:35	1.078	1.073	1.083	106	106
13C-PCB-80	1.81e+08	0.81 y	1.03	35:53	0.978	0.972	0.982	98.8	98.8
13C-PCB-81	1.70e+08	0.81 y	0.92	38:60	1.062	1.057	1.067	104	104
13C-PCB-95	7.10e+07	1.62 y	0.74	35:46	0.913	0.908	0.918	96.4	96.4
13C-PCB-97	6.85e+07	1.67 y	0.70	38:45	0.989	0.984	0.994	97.8	97.8
13C-PCB-101	7.43e+07	1.61 y	0.78	37:27	0.956	0.951	0.961	95.4	95.4
13C-PCB-104	9.11e+07	1.62 y	1.00	32:37	0.832	0.828	0.836	91.5	91.5
13C-PCB-105	1.58e+08	1.64 y	1.37	43:00	0.929	0.924	0.934	105	105
13C-PCB-114	1.59e+08	1.63 y	1.36	42:09	0.910	0.905	0.915	106	106
13C-PCB-118	9.97e+07	1.63 y	0.96	41:30	1.059	1.054	1.064	105	105
13C-PCB-123	9.52e+07	1.62 y	0.89	41:18	1.054	1.050	1.060	107	107
13C-PCB-126	1.60e+08	1.64 y	1.31	45:14	0.977	0.972	0.982	111	111
13C-PCB-127	1.72e+08	1.63 y	1.47	43:20	0.936	0.931	0.941	106	106
13C-PCB-138	1.15e+08	1.31 y	1.10	44:44	0.967	0.961	0.971	94.4	94.4
13C-PCB-141	1.13e+08	1.29 y	1.07	43:54	0.948	0.943	0.953	95.0	95.0
13C-PCB-153	1.20e+08	1.29 y	1.15	43:10	0.933	0.927	0.937	94.7	94.7
13C-PCB-155	6.13e+07	1.32 y	0.84	36:59	0.944	0.939	0.949	73.4	73.4
13C-PCB-156	1.51e+08	1.29 y	1.30	47:60	1.037	1.032	1.042	105	105
13C-PCB-157	1.56e+08	1.29 y	1.36	48:16	1.043	1.038	1.048	104	104
13C-PCB-159	1.40e+08	1.30 y	1.25	46:01	0.994	0.989	0.999	102	102
13C-PCB-167	1.54e+08	1.30 y	1.35	46:42	1.009	1.004	1.014	103	103
13C-PCB-169	1.60e+08	1.29 y	1.29	50:25	1.089	1.083	1.093	113	113
13C-PCB-170	5.66e+07	0.47 y	0.54	50:47	1.097	1.089	1.101	94.5	94.5
13C-PCB-180	6.72e+07	0.48 y	0.68	49:16	1.065	1.060	1.070	89.0	89.0
13C-PCB-188	8.24e+07	0.47 y	0.92	42:48	0.925	0.919	0.929	81.4	81.4
13C-PCB-189	7.80e+07	0.45 y	0.72	52:18	1.130	1.120	1.132	98.6	98.6
13C-PCB-194	1.17e+08	0.93 y	0.80	53:48	0.995	0.990	1.000	96.1	96.1
13C-PCB-202	7.04e+07	0.93 y	0.84	48:12	1.041	1.036	1.046	76.2	76.2
13C-PCB-206	9.11e+07	0.79 y	0.65	55:25	1.025	1.021	1.031	91.9	91.9
13C-PCB-208	1.30e+08	0.78 y	1.08	53:05	0.982	0.976	0.986	78.9	78.9
13C-PCB-209	9.28e+07	1.20 y	0.61	56:47	1.050	1.045	1.055	99.7	99.7

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.77e+08	0.82 y	1.02	37:46	1.029	1.023	1.034	98.4	98.4
13C-PCB-178	5.68e+07	0.47 y	0.61	45:34	0.985	0.979	0.990	83.9	83.9

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.77e+08	0.82 y	1.10	37:46	0.968	0.964	0.974	94.5	94.5
13C-PCB-178	5.68e+07	0.47 y	0.90	45:34	0.925	0.920	0.930	94.2	94.2

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.57e+08	1.60	y	1.00	25:54	100
13C-PCB-31	2.14e+08	1.08	y	1.00	28:56	100
13C-PCB-60	1.77e+08	0.82	y	1.00	36:42	100
13C-PCB-111	9.94e+07	1.63	y	1.00	39:11	100
13C-PCB-128	1.10e+08	1.32	y	1.00	46:17	100
13C-PCB-205	1.53e+08	0.91	y	1.00	54:05	100

Analyst: DMS

Date: 3/19/15

Vista Analytical Laboratory - Injection Log Run file: 150318E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150318E1	1	ST150318E1-1	DMS	18-MAR-15	09:59:47	ST150318E1-1	NA
150318E1	2	B5C0059-BS1	DMS	18-MAR-15	11:04:10	ST150318E1-1	NA
150318E1	3	SOLVENT BLANK	DMS	18-MAR-15	12:08:39	ST150318E1-1	NA
150318E1	4	B5C0059-BLK1	DMS	18-MAR-15	13:13:08	ST150318E1-1	NA
150318E1	5	1400915-02RE1	DMS	18-MAR-15	14:17:36	ST150318E1-1	NA
150318E1	6	1400915-03RE1	DMS	18-MAR-15	15:22:05	ST150318E1-1	NA
150318E1	7	1400915-04RE1	DMS	18-MAR-15	16:26:29	ST150318E1-1	NA
150318E1	8	1400915-05RE1	DMS	18-MAR-15	17:30:54	ST150318E1-1	NA
150318E1	9	1400948-01RE1	DMS	18-MAR-15	18:35:16	ST150318E1-1	NA
150318E1	10	1400948-02RE1	DMS	18-MAR-15	19:39:45	ST150318E1-1	NA
150318E1	11	1400948-03RE1	DMS	18-MAR-15	20:44:12	ST150318E1-1	NA
150318E1	12	SOLVENT BLANK	DMS	18-MAR-15	21:48:42	ST150318E1-1	NA
150318E1	13	QC150318E1-1	DMS	18-MAR-15	22:53:09	ST150318E1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150318E1-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	PM 3/19 ✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	—	—
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MN 3/19/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150319E1 S#1 Analysis Date: 19-MAR-15 Time: 12:47:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.98	2.66-3.60	y	43.4	37.5-62.5
PCB-2	3.01	2.66-3.60	y	40.0	37.5-62.5
PCB-3	3.00	2.66-3.60	y	40.4	37.5-62.5
PCB-4/10	1.61	1.33-1.79	y	185.1	150-250
PCB-7/9	1.62	1.33-1.79	y	187.3	150-250
PCB-6	1.61	1.33-1.79	y	90.3	75.0-125
PCB-5/8	1.61	1.33-1.79	y	185.8	150-250
PCB-14	1.61	1.33-1.79	y	94.9	75.0-125
PCB-11	1.63	1.33-1.79	y	95.3	75.0-125
PCB-12/13	1.62	1.33-1.79	y	189.1	150-250
PCB-15	1.61	1.33-1.79	y	95.4	75.0-125
PCB-19	1.07	0.88-1.20	y	51.4	37.5-62.5
PCB-30	1.06	0.88-1.20	y	50.1	37.5-62.5
PCB-18	1.07	0.88-1.20	y	51.3	37.5-62.5
PCB-17	1.07	0.88-1.20	y	50.7	37.5-62.5
PCB-24/27	1.07	0.88-1.20	y	100.9	75.0-125
PCB-16/32	1.07	0.88-1.20	y	101.9	75.0-125
PCB-34	1.08	0.88-1.20	y	51.0	37.5-62.5
PCB-23	1.12	0.88-1.20	y	48.7	37.5-62.5
PCB-29	1.09	0.88-1.20	y	50.9	37.5-62.5
PCB-26	1.10	0.88-1.20	y	51.4	37.5-62.5
PCB-25	1.09	0.88-1.20	y	54.0	37.5-62.5
PCB-31	1.09	0.88-1.20	y	51.5	37.5-62.5
PCB-28	1.11	0.88-1.20	y	50.2	37.5-62.5
PCB-20/21/33	1.07	0.88-1.20	y	172.8	112.5-225
PCB-22	1.09	0.88-1.20	y	54.6	37.5-62.5
PCB-36	1.10	0.88-1.20	y	54.5	37.5-62.5
PCB-39	1.09	0.88-1.20	y	52.5	37.5-62.5
PCB-38	1.09	0.88-1.20	y	49.5	37.5-62.5
PCB-35	1.10	0.88-1.20	y	57.4	37.5-62.5
PCB-37	1.11	0.88-1.20	y	52.3	37.5-62.5
PCB-54	0.79	0.65-0.89	y	52.7	37.5-62.5
PCB-50	0.79	0.65-0.89	y	54.3	37.5-62.5
PCB-53	0.78	0.65-0.89	y	55.2	37.5-62.5
PCB-51	0.79	0.65-0.89	y	52.9	37.5-62.5
PCB-45	0.78	0.65-0.89	y	53.5	37.5-62.5
PCB-46	0.79	0.65-0.89	y	53.6	37.5-62.5

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.78	0.65-0.89	y	104.9	75.0-125
PCB-73	0.81	0.65-0.89	y	56.7	37.5-62.5
PCB-43/49	0.79	0.65-0.89	y	106.0	75.0-125
PCB-47	0.78	0.65-0.89	y	51.9	37.5-62.5
PCB-48/75	0.78	0.65-0.89	y	108.4	75.0-125
PCB-65	0.88	0.65-0.89	y	55.9	37.5-62.5
PCB-62	0.69	0.65-0.89	y	55.7	37.5-62.5
PCB-44	0.79	0.65-0.89	y	55.2	37.5-62.5
PCB-42/59	0.80	0.65-0.89	y	106.9	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	216.0	150-250
PCB-68	0.78	0.65-0.89	y	55.0	37.5-62.5
PCB-40	0.79	0.65-0.89	y	56.5	37.5-62.5
PCB-57	0.79	0.65-0.89	y	54.7	37.5-62.5
PCB-67	0.86	0.65-0.89	y	51.6	37.5-62.5
PCB-58	0.73	0.65-0.89	y	54.0	37.5-62.5
PCB-63	0.77	0.65-0.89	y	52.6	37.5-62.5
PCB-74	0.78	0.65-0.89	y	51.7	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	110.8	75.0-125
PCB-76/66	0.78	0.65-0.89	y	104.4	75.0-125
PCB-80	0.79	0.65-0.89	y	53.5	37.5-62.5
PCB-55	0.78	0.65-0.89	y	53.7	37.5-62.5
PCB-56/60	0.78	0.65-0.89	y	109.1	75.0-125
PCB-79	0.79	0.65-0.89	y	53.8	37.5-62.5
PCB-78	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-81	0.79	0.65-0.89	y	51.7	37.5-62.5
PCB-77	0.80	0.65-0.89	y	52.0	37.5-62.5
PCB-104	1.61	1.32-1.78	y	53.1	37.5-62.5
PCB-96	1.64	1.32-1.78	y	52.7	37.5-62.5
PCB-103	1.62	1.32-1.78	y	51.4	37.5-62.5
PCB-100	1.60	1.32-1.78	y	51.5	37.5-62.5
PCB-94	1.60	1.32-1.78	y	49.4	37.5-62.5
PCB-95/98/102	1.59	1.32-1.78	y	148.3	112.5-225
PCB-93	1.62	1.32-1.78	y	52.1	37.5-62.5
PCB-88/91	1.61	1.32-1.78	y	108.4	75.0-125
PCB-121	1.62	1.32-1.78	y	45.6	37.5-62.5

Analyst: DMS

Date: 3/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150319E1 S#1 Analysis Date: 19-MAR-15 Time: 12:47:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.60	1.32-1.78	y	102.5	75.0-125	PCB-140	1.32	1.05-1.43	y	58.3	37.5-62.5
PCB-89	1.61	1.32-1.78	y	50.2	37.5-62.5	PCB-134/143	1.25	1.05-1.43	y	105.7	75.0-125
PCB-90/101	1.61	1.32-1.78	y	105.3	75.0-125	PCB-133/142	1.25	1.05-1.43	y	106.4	75.0-125
PCB-113	1.61	1.32-1.78	y	49.6	37.5-62.5	PCB-131	1.26	1.05-1.43	y	50.9	37.5-62.5
PCB-99	1.64	1.32-1.78	y	53.3	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	102.8	75.0-125
PCB-119	1.60	1.32-1.78	y	51.2	37.5-62.5	PCB-132/161	1.24	1.05-1.43	y	103.2	75.0-125
PCB-108/112	1.61	1.32-1.78	y	99.9	75.0-125	PCB-153	1.23	1.05-1.43	y	48.8	37.5-62.5
PCB-83	1.62	1.32-1.78	y	47.9	37.5-62.5	PCB-168	1.25	1.05-1.43	y	48.8	37.5-62.5
PCB-97	1.56	1.32-1.78	y	50.6	37.5-62.5	PCB-141	1.25	1.05-1.43	y	48.2	37.5-62.5
PCB-86	1.57	1.32-1.78	y	47.9	37.5-62.5	PCB-137	1.23	1.05-1.43	y	51.6	37.5-62.5
PCB-87/117/125	1.61	1.32-1.78	y	155.1	112.5-225	PCB-130	1.28	1.05-1.43	y	44.9	37.5-62.5
PCB-111/115	1.59	1.32-1.78	y	99.5	75.0-125	PCB-138/163/164	1.23	1.05-1.43	y	144.5	112.5-225
PCB-85/116	1.64	1.32-1.78	y	102.1	75.0-125	PCB-158/160	1.25	1.05-1.43	y	102.0	75.0-125
PCB-120	1.59	1.32-1.78	y	52.3	37.5-62.5	PCB-129	1.22	1.05-1.43	y	51.1	37.5-62.5
PCB-110	1.62	1.32-1.78	y	50.1	37.5-62.5	PCB-166	1.23	1.05-1.43	y	52.4	37.5-62.5
PCB-82	1.59	1.32-1.78	y	50.6	37.5-62.5	PCB-159	1.27	1.05-1.43	y	51.6	37.5-62.5
PCB-124	1.78	1.32-1.78	y	50.8	37.5-62.5	PCB-128/162	1.24	1.05-1.43	y	97.9	75.0-125
PCB-107/109	1.51	1.32-1.78	y	102.6	75.0-125	PCB-167	1.24	1.05-1.43	y	50.5	37.5-62.5
PCB-123	1.64	1.32-1.78	y	50.3	37.5-62.5	PCB-156	1.22	1.05-1.43	y	50.4	37.5-62.5
PCB-106/118	1.60	1.32-1.78	y	99.5	75.0-125	PCB-157	1.24	1.05-1.43	y	49.1	37.5-62.5
PCB-114	1.64	1.32-1.78	y	51.5	37.5-62.5	PCB-169	1.24	1.05-1.43	y	48.4	37.5-62.5
PCB-122	1.61	1.32-1.78	y	56.4	37.5-62.5	PCB-188	1.07	0.89-1.21	y	51.1	37.5-62.5
PCB-105	1.57	1.32-1.78	y	52.1	37.5-62.5	PCB-184	1.08	0.89-1.21	y	51.7	37.5-62.5
PCB-127	1.68	1.32-1.78	y	54.4	37.5-62.5	PCB-179	1.08	0.89-1.21	y	49.6	37.5-62.5
PCB-126	1.64	1.32-1.78	y	55.5	37.5-62.5	PCB-176	1.08	0.89-1.21	y	49.6	37.5-62.5
PCB-155	1.31	1.05-1.43	y	54.4	37.5-62.5	PCB-186	1.08	0.89-1.21	y	50.6	37.5-62.5
PCB-150	1.29	1.05-1.43	y	54.8	37.5-62.5	PCB-178	1.06	0.89-1.21	y	51.2	37.5-62.5
PCB-152	1.30	1.05-1.43	y	53.4	37.5-62.5	PCB-175	1.07	0.89-1.21	y	50.5	37.5-62.5
PCB-145	1.30	1.05-1.43	y	53.5	37.5-62.5	PCB-182/187	1.07	0.89-1.21	y	99.8	75.0-125
PCB-136	1.31	1.05-1.43	y	55.8	37.5-62.5	PCB-183	1.07	0.89-1.21	y	51.1	37.5-62.5
PCB-148	1.27	1.05-1.43	y	57.2	37.5-62.5	PCB-185	1.05	0.89-1.21	y	52.9	37.5-62.5
PCB-154	1.32	1.05-1.43	y	57.3	37.5-62.5	PCB-174	1.07	0.89-1.21	y	53.2	37.5-62.5
PCB-151	1.28	1.05-1.43	y	56.7	37.5-62.5	PCB-181	1.08	0.89-1.21	y	52.5	37.5-62.5
PCB-135	1.29	1.05-1.43	y	53.8	37.5-62.5	PCB-177	1.08	0.89-1.21	y	49.6	37.5-62.5
PCB-144	1.27	1.05-1.43	y	62.1	37.5-62.5	PCB-171	1.08	0.89-1.21	y	50.5	37.5-62.5
PCB-147	1.28	1.05-1.43	y	58.0	37.5-62.5	PCB-173	1.07	0.89-1.21	y	51.4	37.5-62.5
PCB-139/149	1.30	1.05-1.43	y	114.9	75.0-125	PCB-172	1.08	0.89-1.21	y	50.0	37.5-62.5

Analyst: DMS

Date: 3/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150319E1 S#1 Analysis Date: 19-MAR-15 Time: 12:47:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.07	0.89-1.21	y	52.4	37.5-62.5
PCB-180	1.05	0.89-1.21	y	50.5	37.5-62.5
PCB-193	1.08	0.89-1.21	y	54.9	37.5-62.5
PCB-191	1.07	0.89-1.21	y	51.3	37.5-62.5
PCB-170	1.07	0.89-1.21	y	50.1	37.5-62.5
PCB-190	1.08	0.89-1.21	y	51.9	37.5-62.5
PCB-189	1.06	0.89-1.21	y	52.0	37.5-62.5
PCB-202	0.91	0.76-1.02	y	51.6	37.5-62.5
PCB-201	0.92	0.76-1.02	y	50.6	37.5-62.5
PCB-204	0.92	0.76-1.02	y	51.7	37.5-62.5
PCB-197	0.91	0.76-1.02	y	52.5	37.5-62.5
PCB-200	0.92	0.76-1.02	y	53.0	37.5-62.5
PCB-198	0.90	0.76-1.02	y	57.7	37.5-62.5
PCB-199	0.93	0.76-1.02	y	52.1	37.5-62.5
PCB-196/203	0.92	0.76-1.02	y	106.1	75.0-125
PCB-195	0.91	0.76-1.02	y	43.9	37.5-62.5
PCB-194	0.92	0.76-1.02	y	47.6	37.5-62.5
PCB-205	0.93	0.76-1.02	y	51.7	37.5-62.5
PCB-208	1.35	1.14-1.54	y	51.9	37.5-62.5
PCB-207	1.35	1.14-1.54	y	52.8	37.5-62.5
PCB-206	1.30	1.14-1.54	y	50.3	37.5-62.5
PCB-209	1.19	0.99-1.33	y	51.3	37.5-62.5

Analyst: DMS

Date: 3/20/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150319E1 S#1 Analysis Date: 19-MAR-15 Time: 12:47:35

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.21	2.66-3.60	y	107.4	50.0-145
13C-PCB-3	3.24	2.66-3.60	y	115.5	50.0-145
13C-PCB-4	1.59	1.33-1.79	y	99.6	50.0-145
13C-PCB-9	1.58	1.33-1.79	y	97.1	50.0-145
13C-PCB-11	1.56	1.33-1.79	y	97.4	50.0-145
13C-PCB-19	1.07	0.88-1.20	y	93.6	50.0-145
13C-PCB-32	1.09	0.88-1.20	y	93.7	50.0-145
13C-PCB-28	1.07	0.88-1.20	y	98.3	50.0-145
13C-PCB-37	1.09	0.88-1.20	y	105.4	50.0-145
13C-PCB-54	0.81	0.65-0.89	y	89.5	50.0-145
13C-PCB-52	0.80	0.65-0.89	y	95.0	50.0-145
13C-PCB-47	0.81	0.65-0.89	y	94.1	50.0-145
13C-PCB-70	0.82	0.65-0.89	y	96.6	50.0-145
13C-PCB-80	0.82	0.65-0.89	y	97.2	50.0-145
13C-PCB-81	0.82	0.65-0.89	y	97.4	50.0-145
13C-PCB-77	0.81	0.65-0.89	y	99.4	50.0-145
13C-PCB-104	1.58	1.32-1.78	y	95.2	50.0-145
13C-PCB-95	1.60	1.32-1.78	y	100.8	50.0-145
13C-PCB-101	1.66	1.32-1.78	y	100.6	50.0-145
13C-PCB-97	1.63	1.32-1.78	y	100.4	50.0-145
13C-PCB-123	1.61	1.32-1.78	y	104.1	50.0-145
13C-PCB-118	1.60	1.32-1.78	y	101.8	50.0-145
13C-PCB-114	1.61	1.32-1.78	y	104.8	50.0-145
13C-PCB-105	1.60	1.32-1.78	y	107.9	50.0-145
13C-PCB-127	1.59	1.32-1.78	y	99.1	50.0-145
13C-PCB-126	1.59	1.32-1.78	y	105.1	50.0-145
13C-PCB-155	1.28	1.05-1.43	y	74.5	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	98.6	50.0-145
13C-PCB-141	1.28	1.05-1.43	y	98.5	50.0-145
13C-PCB-138	1.27	1.05-1.43	y	97.0	50.0-145
13C-PCB-159	1.29	1.05-1.43	y	97.5	50.0-145
13C-PCB-167	1.27	1.05-1.43	y	99.1	50.0-145
13C-PCB-156	1.29	1.05-1.43	y	103.0	50.0-145
13C-PCB-157	1.27	1.05-1.43	y	100.5	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.29	1.05-1.43	y	107.5	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	87.4	50 - 145
13C-PCB-180	0.47	0.38-0.52	y	89.6	50 - 145
13C-PCB-170	0.47	0.38-0.52	y	87.9	50 - 145
13C-PCB-189	0.47	0.38-0.52	y	92.1	50 - 145
13C-PCB-202	0.96	0.76-1.02	y	79.5	50 - 145
13C-PCB-194	0.92	0.76-1.02	y	92.7	50 - 145
13C-PCB-208	0.80	0.65-0.89	y	83.5	50 - 145
13C-PCB-206	0.80	0.65-0.89	y	100.0	50 - 145
13C-PCB-209	1.20	0.99-1.33	y	104.4	50 - 145

CRS vs. RS

13C-PCB-79	0.81	0.65-0.89	y	99.2	75 - 125
13C-PCB-178	0.47	0.38-0.52	y	85.3	75 - 125

Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14K1102 Filename: 150319E1 S:1 Acq:19-MAR-15 12:47:35 ConCal: ST150319E1-1

Lab ID: ST150319E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	1.01e+08	2.98	y	1.19	16:09	1.001	0.996	1.006	43.3920
	PCB-2	1.04e+08	3.01	y	1.18	18:32	0.988	0.984	0.994	39.9761
	PCB-3	1.26e+08	3.00	y	1.43	18:46	1.001	0.996	1.006	40.3912
	PCB-4/10	3.52e+08	1.61	y	1.57	20:07	1.002	0.997	1.007	185.096
	PCB-7/9	4.10e+08	1.62	y	1.21	21:54	0.868	0.866	0.874	187.316
	PCB-6	2.13e+08	1.61	y	1.30	22:33	0.894	0.890	0.899	90.2932
	PCB-5/8	3.86e+08	1.61	y	1.15	22:58	0.910	0.907	0.917	185.770
	PCB-14	2.00e+08	1.61	y	1.11	24:04	0.954	0.949	0.959	94.9032
	PCB-11	1.96e+08	1.63	y	1.09	25:15	1.001	0.995	1.005	95.3146
	PCB-12/13	4.28e+08	1.62	y	1.19	25:39	1.016	1.011	1.021	189.104
	PCB-15	2.32e+08	1.61	y	1.28	25:57	1.028	1.023	1.033	95.3854
	PCB-19	5.54e+07	1.07	y	1.04	24:14	1.001	0.996	1.006	51.4241
	PCB-30	8.86e+07	1.06	y	1.71	25:08	1.038	1.032	1.042	50.1128
	PCB-18	6.21e+07	1.07	y	0.78	25:53	0.954	0.949	0.959	51.3359
	PCB-17	7.24e+07	1.07	y	0.92	26:03	0.960	0.956	0.966	50.6904
	PCB-24/27	1.86e+08	1.07	y	1.19	26:38	0.981	0.977	0.987	100.921
-	PCB-16/32	1.48e+08	1.07	y	0.94	27:08	1.000	0.995	1.005	101.870
-	PCB-34	9.86e+07	1.08	y	1.14	27:56	0.960	0.955	0.965	51.0079
	PCB-23	1.06e+08	1.12	y	1.28	28:02	0.964	0.959	0.969	48.6560
	PCB-29	9.35e+07	1.09	y	1.08	28:17	0.972	0.967	0.977	50.9165
	PCB-26	1.06e+08	1.10	y	1.21	28:29	0.979	0.974	0.984	51.4193
	PCB-25	1.16e+08	1.09	y	1.26	28:38	0.984	0.979	0.989	53.9740
	PCB-31	1.13e+08	1.09	y	1.28	29:00	0.997	0.992	1.002	51.5059
	PCB-28	1.46e+08	1.11	y	1.71	29:05	1.000	0.995	1.005	50.2122
	PCB-20/21/33	3.18e+08	1.07	y	1.08	29:43	1.022	1.017	1.027	172.818
	PCB-22	1.12e+08	1.09	y	1.21	30:09	1.037	1.032	1.042	54.6025
	PCB-36	1.02e+08	1.10	y	1.14	30:47	0.934	0.928	0.938	54.4555
	PCB-39	9.62e+07	1.09	y	1.12	31:14	0.948	0.943	0.953	52.4989
	PCB-38	9.75e+07	1.09	y	1.20	32:00	0.971	0.966	0.976	49.4745
	PCB-35	1.16e+08	1.10	y	1.23	32:32	0.987	0.982	0.992	57.4476
	PCB-37	1.06e+08	1.11	y	1.23	32:58	1.000	0.995	1.005	52.2617
	PCB-54	7.56e+07	0.79	y	1.10	27:59	1.001	0.996	1.006	52.7290
	PCB-50	6.23e+07	0.79	y	0.88	29:09	1.043	1.037	1.047	54.3478
	PCB-53	6.44e+07	0.78	y	1.06	29:47	0.946	0.942	0.952	55.1602
	PCB-51	5.75e+07	0.79	y	0.99	30:08	0.957	0.952	0.962	52.8833
	PCB-45	5.07e+07	0.78	y	0.86	30:34	0.971	0.966	0.976	53.5266
	PCB-46	4.97e+07	0.79	y	0.85	31:03	0.986	0.981	0.991	53.6143

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.48e+08	0.78	y	1.28	31:32	1.001	0.996	1.006	104.930
PCB-73	8.42e+07	0.81	y	1.35	31:39	1.005	1.000	1.010	56.7008
PCB-43/49	1.16e+08	0.79	y	0.99	31:49	1.010	1.005	1.015	106.019
PCB-47	6.29e+07	0.78	y	1.06	32:00	1.000	0.996	1.006	51.8615
PCB-48/75	1.52e+08	0.78	y	1.23	32:08	1.004	0.999	1.009	108.423
PCB-65	7.84e+07	0.88	y	1.22	32:24	1.013	1.008	1.018	55.9368
PCB-62	7.78e+07	0.69	y	1.22	32:31	1.016	1.011	1.021	55.6795
PCB-44	5.43e+07	0.79	y	0.86	32:48	1.025	1.021	1.031	55.1720
PCB-42/59	1.39e+08	0.80	y	1.14	33:02	1.032	1.028	1.038	106.867
PCB-41/64/71/72	2.99e+08	0.78	y	1.21	33:37	1.051	1.046	1.056	215.999
PCB-68	8.48e+07	0.78	y	1.35	33:53	1.059	1.054	1.064	54.9810
PCB-40	4.53e+07	0.79	y	0.70	34:05	1.065	1.061	1.071	56.4794
PCB-57	7.73e+07	0.79	y	0.98	34:27	0.970	0.965	0.975	54.6910
PCB-67	8.24e+07	0.86	y	1.11	34:45	0.979	0.974	0.984	51.5735
PCB-58	7.23e+07	0.73	y	0.93	34:53	0.982	0.977	0.987	53.9906
PCB-63	7.23e+07	0.77	y	0.95	35:02	0.987	0.982	0.992	52.5623
PCB-74	9.29e+07	0.78	y	1.24	35:19	0.995	0.990	1.000	51.7420
PCB-61/70	1.53e+08	0.78	y	0.95	35:29	1.000	0.995	1.005	110.835
PCB-76/66	1.57e+08	0.78	y	1.04	35:43	1.006	1.001	1.011	104.388
PCB-80	9.58e+07	0.79	y	1.19	35:57	1.001	0.996	1.006	53.4631
PCB-55	8.41e+07	0.78	y	1.04	36:16	1.009	1.005	1.015	53.7396
PCB-56/60	1.66e+08	0.78	y	1.01	36:45	1.023	1.019	1.029	109.109
PCB-79	8.73e+07	0.79	y	1.08	37:49	1.053	1.048	1.058	53.8202
PCB-78	8.81e+07	0.77	y	1.27	38:31	0.987	0.982	0.992	51.5380
PCB-81	9.26e+07	0.79	y	1.33	39:02	1.000	0.995	1.005	51.7350
PCB-77	8.03e+07	0.80	y	1.10	39:38	1.000	0.995	1.005	51.9938
PCB-104	4.80e+07	1.61	y	1.18	32:40	1.001	0.996	1.006	53.0956
PCB-96	4.57e+07	1.64	y	1.14	33:55	1.039	1.034	1.044	52.6666
PCB-103	3.76e+07	1.62	y	0.96	34:27	1.055	1.050	1.060	51.4305
PCB-100	3.68e+07	1.60	y	0.94	34:49	1.066	1.061	1.071	51.5146
PCB-94	3.12e+07	1.60	y	1.06	35:17	0.986	0.980	0.990	49.4337
PCB-95/98/102	1.08e+08	1.59	y	1.22	35:47	1.000	0.995	1.005	148.250
PCB-93	2.62e+07	1.62	y	0.84	35:55	1.003	0.997	1.007	52.0802
PCB-88/91	7.23e+07	1.61	y	1.12	36:12	1.011	1.005	1.015	108.446
PCB-121	4.40e+07	1.62	y	1.62	36:18	1.014	1.009	1.019	45.5781
PCB-84/92	6.76e+07	1.60	y	1.05	37:07	0.990	0.985	0.995	102.454
PCB-89	3.57e+07	1.61	y	1.13	37:17	0.995	0.991	1.001	50.1810

Integrations by Analyst: DMS Date: 3/20/15

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14K1102 Filename: 150319E1 S:1 Acq:19-MAR-15 12:47:35 ConCal: ST150319E1-1

Lab ID: ST150319E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	7.31e+07	1.61	y	1.10	37:29	1.000	0.995	1.005	105.262
	PCB-113	4.41e+07	1.61	y	1.41	37:44	1.007	1.002	1.012	49.6044
	PCB-99	4.49e+07	1.64	y	1.34	37:49	1.009	1.004	1.014	53.2895
	PCB-119	4.44e+07	1.60	y	1.53	38:17	0.987	0.982	0.992	51.2365
	PCB-108/112	7.24e+07	1.61	y	1.28	38:27	0.991	0.986	0.996	99.9031
	PCB-83	4.12e+07	1.62	y	1.52	38:36	0.995	0.990	1.000	47.9338
	PCB-97	3.39e+07	1.56	y	1.18	38:47	1.000	0.995	1.005	50.6037
	PCB-86	2.29e+07	1.57	y	0.84	38:56	1.004	0.999	1.009	47.9347
	B-87/117/125	1.36e+08	1.61	y	1.55	39:04	1.007	1.002	1.012	155.100
	PCB-111/115	9.20e+07	1.59	y	1.63	39:13	1.011	1.006	1.016	99.5078
	PCB-85/116	7.53e+07	1.64	y	1.30	39:21	1.015	1.010	1.020	102.103
	PCB-120	4.97e+07	1.59	y	1.68	39:36	1.021	1.016	1.026	52.3469
	PCB-110	4.41e+07	1.62	y	1.56	39:44	1.025	1.020	1.030	50.0899
	PCB-82	2.86e+07	1.59	y	0.76	40:22	0.976	0.971	0.981	50.6080
	PCB-124	5.56e+07	1.78	y	1.47	41:03	0.993	0.988	0.998	50.7834
	PCB-107/109	1.01e+08	1.51	y	1.32	41:10	0.996	0.991	1.001	102.565
	PCB-123	4.37e+07	1.64	y	1.17	41:21	1.000	0.996	1.006	50.2746
-	PCB-106/118	9.12e+07	1.60	y	1.17	41:33	1.001	0.996	1.006	99.5185
-	PCB-114	6.93e+07	1.64	y	1.30	42:11	1.000	0.995	1.005	51.5419
	PCB-122	6.55e+07	1.61	y	1.12	42:19	1.003	0.999	1.009	56.3544
	PCB-105	7.24e+07	1.57	y	1.30	43:03	1.000	0.995	1.005	52.0688
	PCB-127	7.69e+07	1.68	y	1.33	43:23	1.000	0.996	1.006	54.4276
	PCB-126	6.55e+07	1.64	y	1.18	45:17	1.000	0.995	1.005	55.5098
	PCB-155	3.03e+07	1.31	y	1.11	37:03	1.001	0.966	1.006	54.4355
	PCB-150	2.74e+07	1.29	y	1.00	38:18	1.035	1.030	1.040	54.8059
	PCB-152	2.98e+07	1.30	y	1.12	38:47	1.047	1.043	1.053	53.3997
	PCB-145	3.22e+07	1.30	y	1.20	39:13	1.059	1.055	1.065	53.5444
	PCB-136	3.29e+07	1.31	y	1.18	39:33	1.068	1.064	1.074	55.7567
	PCB-148	2.13e+07	1.27	y	0.74	39:39	1.071	1.066	1.076	57.2457
	PCB-154	2.46e+07	1.32	y	0.86	40:09	1.084	1.080	1.090	57.2789
	PCB-151	2.12e+07	1.28	y	0.75	40:47	1.101	1.097	1.107	56.7430
	PCB-135	2.13e+07	1.29	y	0.79	40:59	1.107	1.103	1.113	53.8195
	PCB-144	2.37e+07	1.27	y	0.76	41:06	1.110	1.105	1.117	62.1146
	PCB-147	2.38e+07	1.28	y	0.82	41:14	1.114	1.109	1.121	57.9784
	PCB-139/149	4.38e+07	1.30	y	0.76	41:30	1.121	1.116	1.128	114.911
-	PCB-140	2.11e+07	1.32	y	0.72	41:41	1.126	1.121	1.133	58.3439
-	PCB-134/143	7.95e+07	1.25	y	0.92	42:06	0.975	0.970	0.980	105.690

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	7.15e+07	1.25	y	0.82	42:25	0.982	0.977	0.987	106.409
PCB-131	3.79e+07	1.26	y	0.91	42:34	0.985	0.981	0.991	50.9396
PCB-146/165	1.05e+08	1.25	y	1.25	42:48	0.991	0.986	0.996	102.771
PCB-132/161	9.36e+07	1.24	y	1.10	43:02	0.996	0.992	1.002	103.202
PCB-153	5.00e+07	1.23	y	1.25	43:12	1.000	0.995	1.005	48.7911
PCB-168	5.80e+07	1.25	y	1.45	43:25	1.005	1.001	1.011	48.7827
PCB-141	4.02e+07	1.25	y	1.09	43:56	1.000	0.995	1.005	48.1666
PCB-137	4.21e+07	1.23	y	1.06	44:19	1.009	1.004	1.014	51.5529
PCB-130	3.33e+07	1.28	y	0.96	44:26	1.011	1.006	1.016	44.9484
PCB-138/163/164	1.45e+08	1.23	y	1.29	44:48	1.001	0.996	1.006	144.512
PCB-158/160	1.06e+08	1.25	y	1.34	45:03	1.006	1.001	1.011	102.007
PCB-129	3.38e+07	1.22	y	0.85	45:17	1.012	1.007	1.017	51.0837
PCB-166	5.48e+07	1.23	y	1.19	45:45	0.993	0.988	0.998	52.3541
PCB-159	5.07e+07	1.27	y	1.11	46:04	1.000	0.996	1.006	51.6136
PCB-128/162	9.05e+07	1.24	y	1.05	46:21	1.006	1.002	1.012	97.9105
PCB-167	5.89e+07	1.24	y	1.20	46:45	1.000	0.995	1.005	50.4839
PCB-156	5.56e+07	1.22	y	1.14	48:02	1.000	0.996	1.006	50.4430
PCB-157	5.66e+07	1.24	y	1.16	48:19	1.001	0.995	1.005	49.0684
PCB-169	5.43e+07	1.24	y	1.12	50:27	1.000	0.995	1.005	48.3503
PCB-188	4.70e+07	1.07	y	1.58	42:50	1.000	0.996	1.006	51.0689
PCB-184	4.92e+07	1.08	y	1.63	43:17	1.011	1.006	1.016	51.7290
PCB-179	3.77e+07	1.08	y	1.30	44:04	1.029	1.024	1.034	49.6012
PCB-176	4.27e+07	1.08	y	1.48	44:32	1.040	1.035	1.045	49.6386
PCB-186	4.28e+07	1.08	y	1.45	45:08	1.054	1.050	1.060	50.5790
PCB-178	3.08e+07	1.06	y	1.03	45:38	1.066	1.061	1.071	51.1683
PCB-175	2.98e+07	1.07	y	1.01	45:59	1.074	1.069	1.079	50.4714
PCB-182/187	7.27e+07	1.07	y	1.25	46:09	1.078	1.073	1.083	99.8125
PCB-183	3.60e+07	1.07	y	1.21	46:28	1.085	1.081	1.091	51.1315
PCB-185	4.24e+07	1.05	y	1.80	47:08	0.956	0.951	0.961	52.9339
PCB-174	3.26e+07	1.07	y	1.38	47:29	0.963	0.958	0.968	53.2241
PCB-181	3.22e+07	1.08	y	1.38	47:36	0.965	0.960	0.970	52.4688
PCB-177	2.77e+07	1.08	y	1.26	47:45	0.968	0.963	0.973	49.6221
PCB-171	3.56e+07	1.08	y	1.58	48:03	0.974	0.970	0.980	50.5052
PCB-173	2.54e+07	1.07	y	1.11	48:29	0.983	0.978	0.988	51.4223
PCB-172	3.63e+07	1.08	y	1.63	48:56	0.992	0.987	0.997	49.9671
PCB-192	4.06e+07	1.07	y	1.74	49:07	0.996	0.991	1.001	52.4359
PCB-180	3.02e+07	1.05	y	1.34	49:20	1.000	0.995	1.005	50.5287

Integrations by Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14K1102 Filename: 150319E1 S:1 Acq:19-MAR-15 12:47:35 ConCal: ST150319E1-1
Lab ID: ST150319E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	4.19e+07	1.08	y	1.72	49:32	1.005	0.999	1.009	54.9486
	PCB-191	3.87e+07	1.07	y	1.69	49:47	1.010	1.004	1.014	51.3340
	PCB-170	2.77e+07	1.07	y	1.60	50:50	1.000	0.995	1.005	50.0974
	PCB-190	3.97e+07	1.08	y	2.21	51:00	1.004	0.998	1.008	51.9351
	PCB-189	3.86e+07	1.06	y	1.55	52:20	1.000	0.995	1.005	52.0292
	PCB-202	2.70e+07	0.91	y	1.08	48:15	1.000	0.995	1.005	51.6207
	PCB-201	2.81e+07	0.92	y	1.15	48:44	1.010	1.005	1.015	50.6057
	PCB-204	2.85e+07	0.92	y	1.14	48:53	1.014	1.008	1.018	51.7211
	PCB-197	2.73e+07	0.91	y	1.07	49:12	1.020	1.015	1.025	52.4953
	PCB-200	2.72e+07	0.92	y	1.06	50:05	1.038	1.032	1.044	52.9706
	PCB-198	2.11e+07	0.90	y	0.76	51:26	1.066	1.059	1.069	57.7480
	PCB-199	2.01e+07	0.93	y	0.80	51:32	1.069	1.061	1.071	52.0847
-	PCB-196/203	4.11e+07	0.92	y	0.80	51:48	1.074	1.066	1.076	106.090
-	PCB-195	3.57e+07	0.91	y	1.23	52:59	0.984	0.979	0.989	43.8846
	PCB-194	3.83e+07	0.92	y	1.21	53:51	1.000	0.995	1.005	47.6409
	PCB-205	5.29e+07	0.93	y	1.54	54:07	1.005	1.001	1.011	51.7120
	PCB-208	3.92e+07	1.35	y	0.93	53:07	1.000	0.995	1.005	51.9422
	PCB-207	4.63e+07	1.35	y	1.08	53:26	1.006	1.001	1.011	52.8099
	PCB-206	3.00e+07	1.30	y	1.02	55:28	1.000	0.995	1.005	50.3270
	PCB-209	3.43e+07	1.19	y	1.17	56:49	1.000	0.995	1.005	51.2505

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	3.30e+08	2.98	y	16:09	1.27	123.759	
Total Di-PCB	2.42e+09	1.61	y	20:07	1.21	1125.73	
Total Tri-PCB	6.13e+08	1.07	y	24:14	1.10	406.355	
Total Tri-PCB	1.74e+09	1.08	y	27:56	1.21	859.180	Sum:1265.53
Total Tetra-PCB	3.12e+09	0.79	y	27:59	1.09	2271.28	
Total Penta-PCB	1.65e+09	1.61	y	32:40	1.18	2088.02	
Total Penta-PCB	3.70e+08	1.64	y	42:11	1.25	285.945	Sum:2373.96
Total Hexa-PCB	3.53e+08	1.31	y	37:03	0.90	790.377	
Total Hexa-PCB	1.34e+09	1.25	y	42:06	1.11	1436.00	Sum:2226.38
Total Hepta-PCB	8.88e+08	1.07	y	42:50	1.42	1242.17	
Total Octa-PCB	2.21e+08	0.91	y	48:15	0.96	475.396	
Total Octa-PCB	1.30e+08	0.91	y	52:59	1.33	146.896	Sum:622.292
Total Nona-PCB	1.16e+08	1.35	y	53:07	1.01	155.946	
Total Deca-PCB	3.43e+07	1.19	y	56:49	1.17	51.2505	

Total PCB Conc:11367.7510010

Integrations
by
Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14K1102 Filename: 150319E1 S:1 Acq:19-MAR-15 12:47:35 ConCal: ST150319E1-1
Lab ID: ST150319E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.95e+08	3.21 y	0.87	16:08	0.622	0.629	0.635	107	107
13C-PCB-3	2.19e+08	3.24 y	0.91	18:45	0.723	0.725	0.733	115	115
13C-PCB-4	1.21e+08	1.59 y	0.59	20:05	0.774	0.775	0.783	99.6	99.6
13C-PCB-9	1.81e+08	1.58 y	0.90	21:52	0.843	0.842	0.850	97.1	97.1
13C-PCB-11	1.90e+08	1.56 y	0.94	25:14	0.973	0.968	0.978	97.4	97.4
13C-PCB-19	1.03e+08	1.07 y	0.53	24:13	0.933	0.930	0.940	93.6	93.6
13C-PCB-28	1.70e+08	1.07 y	0.93	29:05	1.004	0.999	1.009	98.3	98.3
13C-PCB-32	1.55e+08	1.09 y	0.80	27:08	1.046	1.040	1.050	93.7	93.7
13C-PCB-37	1.64e+08	1.09 y	0.84	32:57	1.137	1.131	1.143	105	105
13C-PCB-47	1.14e+08	0.81 y	0.81	31:60	0.871	0.866	0.874	94.1	94.1
13C-PCB-52	1.10e+08	0.80 y	0.77	31:30	0.857	0.853	0.861	95.0	95.0
13C-PCB-54	1.30e+08	0.81 y	0.97	27:57	0.761	0.758	0.766	89.5	89.5
13C-PCB-70	1.44e+08	0.82 y	1.00	35:30	0.966	0.961	0.971	96.6	96.6
13C-PCB-77	1.40e+08	0.81 y	0.94	39:37	1.078	1.073	1.083	99.4	99.4
13C-PCB-80	1.50e+08	0.82 y	1.03	35:56	0.978	0.972	0.982	97.2	97.2
13C-PCB-81	1.35e+08	0.82 y	0.92	39:01	1.062	1.057	1.067	97.4	97.4
13C-PCB-95	5.97e+07	1.60 y	0.74	35:48	0.913	0.908	0.918	101	101
13C-PCB-97	5.66e+07	1.63 y	0.70	38:47	0.989	0.984	0.994	100	100
13C-PCB-101	6.31e+07	1.66 y	0.78	37:29	0.956	0.951	0.961	101	101
13C-PCB-104	7.63e+07	1.58 y	1.00	32:39	0.832	0.828	0.836	95.2	95.2
13C-PCB-105	1.07e+08	1.60 y	1.37	43:02	0.929	0.924	0.934	108	108
13C-PCB-114	1.04e+08	1.61 y	1.36	42:11	0.911	0.905	0.915	105	105
13C-PCB-118	7.81e+07	1.60 y	0.96	41:31	1.059	1.054	1.064	102	102
13C-PCB-123	7.44e+07	1.61 y	0.89	41:20	1.054	1.050	1.060	104	104
13C-PCB-126	9.98e+07	1.59 y	1.31	45:16	0.977	0.972	0.982	105	105
13C-PCB-127	1.06e+08	1.59 y	1.47	43:23	0.936	0.931	0.941	99.1	99.1
13C-PCB-138	7.75e+07	1.27 y	1.10	44:46	0.966	0.961	0.971	97.0	97.0
13C-PCB-141	7.69e+07	1.28 y	1.07	43:56	0.948	0.943	0.953	98.5	98.5
13C-PCB-153	8.21e+07	1.29 y	1.15	43:12	0.932	0.927	0.937	98.6	98.6
13C-PCB-155	5.01e+07	1.28 y	0.84	37:02	0.944	0.939	0.949	74.5	74.5
13C-PCB-156	9.71e+07	1.29 y	1.30	48:01	1.037	1.032	1.042	103	103
13C-PCB-157	9.91e+07	1.27 y	1.36	48:17	1.042	1.038	1.048	101	101
13C-PCB-159	8.83e+07	1.29 y	1.25	46:03	0.994	0.989	0.999	97.5	97.5
13C-PCB-167	9.73e+07	1.27 y	1.35	46:44	1.009	1.004	1.014	99.1	99.1
13C-PCB-169	1.00e+08	1.29 y	1.29	50:27	1.089	1.083	1.093	107	107
13C-PCB-170	3.46e+07	0.47 y	0.54	50:49	1.097	1.089	1.101	87.9	87.9
13C-PCB-180	4.45e+07	0.47 y	0.68	49:19	1.065	1.060	1.070	89.6	89.6
13C-PCB-188	5.82e+07	0.46 y	0.92	42:49	0.924	0.919	0.929	87.4	87.4
13C-PCB-189	4.79e+07	0.47 y	0.72	52:19	1.129	1.120	1.132	92.1	92.1
13C-PCB-194	6.64e+07	0.92 y	0.80	53:50	0.995	0.990	1.000	92.7	92.7
13C-PCB-202	4.84e+07	0.96 y	0.84	48:14	1.041	1.036	1.046	79.5	79.5
13C-PCB-206	5.83e+07	0.80 y	0.65	55:27	1.025	1.021	1.031	100.0	100.0
13C-PCB-208	8.10e+07	0.80 y	1.08	53:06	0.981	0.976	0.986	83.5	83.5
13C-PCB-209	5.72e+07	1.20 y	0.61	56:48	1.050	1.045	1.055	104	104

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.51e+08	0.81 y	1.02	37:48	1.029	1.023	1.034	99.2	99.2
13C-PCB-178	3.80e+07	0.47 y	0.61	45:36	0.985	0.979	0.990	85.3	85.3

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.51e+08	0.81 y	1.10	37:48	0.969	0.964	0.974	102	102
13C-PCB-178	3.80e+07	0.47 y	0.90	45:36	0.925	0.920	0.930	95.1	95.1

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.08e+08	1.57	y	1.00	25:56	100
13C-PCB-31	1.85e+08	1.06	y	1.00	28:59	100
13C-PCB-60	1.50e+08	0.81	y	1.00	36:45	100
13C-PCB-111	8.00e+07	1.63	y	1.00	39:13	100
13C-PCB-128	7.26e+07	1.30	y	1.00	46:19	100
13C-PCB-205	8.97e+07	0.92	y	1.00	54:07	100

Analyst: DMS

Date: 3/20/15

Vista Analytical Laboratory - Injection Log Run file: 150319E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150319E1	1	ST150319E1-1	DMS	19-MAR-15	12:47:35	ST150319E1-1	NA
150319E1	2	SOLVENT BLANK	DMS	19-MAR-15	13:51:58	ST150319E1-1	NA
150319E1	3	1400915-05RE1@5X	DMS	19-MAR-15	14:56:27	ST150319E1-1	NA
150319E1	4	1400948-01RE1@20X	DMS	19-MAR-15	16:00:57	ST150319E1-1	NA
150319E1	5	1400948-02RE1@20X	DMS	19-MAR-15	17:05:20	ST150319E1-1	NA
150319E1	6	1400948-03RE1@20X	DMS	19-MAR-15	18:09:45	ST150319E1-1	NA
150319E1	7	1500211-01RE1@20X	DMS	19-MAR-15	19:14:08	ST150319E1-1	NA
150319E1	8	SOLVENT BLANK	DMS	19-MAR-15	20:18:33	ST150319E1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST1S0319E1-1

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	✓
First and last eluters present?	✓	
Retention Times within criteria?	DMS 3Feb15	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: MJ 3/20/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150328E2-2 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150328E2 S#2 Analysis Date: 28-MAR-15 Time: 21:52:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.97	2.66-3.60	y	41.0	37.5-62.5
PCB-2	2.98	2.66-3.60	y	39.4	37.5-62.5
PCB-3	2.97	2.66-3.60	y	40.5	37.5-62.5
PCB-4/10	1.61	1.33-1.79	y	185.8	150-250
PCB-7/9	1.62	1.33-1.79	y	188.7	150-250
PCB-6	1.61	1.33-1.79	y	93.0	75.0-125
PCB-5/8	1.62	1.33-1.79	y	188.8	150-250
PCB-14	1.63	1.33-1.79	y	94.9	75.0-125
PCB-11	1.62	1.33-1.79	y	95.9	75.0-125
PCB-12/13	1.61	1.33-1.79	y	187.2	150-250
PCB-15	1.61	1.33-1.79	y	95.1	75.0-125
PCB-19	1.06	0.88-1.20	y	49.8	37.5-62.5
PCB-30	1.05	0.88-1.20	y	47.4	37.5-62.5
PCB-18	1.06	0.88-1.20	y	50.3	37.5-62.5
PCB-17	1.06	0.88-1.20	y	49.7	37.5-62.5
PCB-24/27	1.05	0.88-1.20	y	99.5	75.0-125
PCB-16/32	1.05	0.88-1.20	y	99.4	75.0-125
PCB-34	1.05	0.88-1.20	y	52.2	37.5-62.5
PCB-23	1.08	0.88-1.20	y	49.3	37.5-62.5
PCB-29	1.06	0.88-1.20	y	50.3	37.5-62.5
PCB-26	1.07	0.88-1.20	y	50.7	37.5-62.5
PCB-25	1.07	0.88-1.20	y	53.2	37.5-62.5
PCB-31	1.05	0.88-1.20	y	54.3	37.5-62.5
PCB-28	1.07	0.88-1.20	y	51.7	37.5-62.5
PCB-20/21/33	1.05	0.88-1.20	y	157.0	112.5-225
PCB-22	1.06	0.88-1.20	y	52.1	37.5-62.5
PCB-36	1.06	0.88-1.20	y	48.3	37.5-62.5
PCB-39	1.07	0.88-1.20	y	49.8	37.5-62.5
PCB-38	1.07	0.88-1.20	y	47.2	37.5-62.5
PCB-35	1.06	0.88-1.20	y	53.2	37.5-62.5
PCB-37	1.05	0.88-1.20	y	51.7	37.5-62.5
PCB-54	0.78	0.65-0.89	y	50.8	37.5-62.5
PCB-50	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-53	0.76	0.65-0.89	y	51.6	37.5-62.5
PCB-51	0.78	0.65-0.89	y	50.4	37.5-62.5
PCB-45	0.78	0.65-0.89	y	51.3	37.5-62.5
PCB-46	0.77	0.65-0.89	y	50.5	37.5-62.5

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.77	0.65-0.89	y	104.6	75.0-125
PCB-73	0.77	0.65-0.89	y	52.8	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	101.6	75.0-125
PCB-47	0.76	0.65-0.89	y	54.6	37.5-62.5
PCB-48/75	0.78	0.65-0.89	y	103.8	75.0-125
PCB-65	0.77	0.65-0.89	y	51.3	37.5-62.5
PCB-62	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-44	0.76	0.65-0.89	y	54.2	37.5-62.5
PCB-42/59	0.76	0.65-0.89	y	107.9	75.0-125
PCB-41/64/71/72	0.77	0.65-0.89	y	217.5	150-250
PCB-68	0.77	0.65-0.89	y	55.0	37.5-62.5
PCB-40	0.78	0.65-0.89	y	56.3	37.5-62.5
PCB-57	0.78	0.65-0.89	y	52.8	37.5-62.5
PCB-67	0.76	0.65-0.89	y	50.1	37.5-62.5
PCB-58	0.78	0.65-0.89	y	53.5	37.5-62.5
PCB-63	0.76	0.65-0.89	y	51.1	37.5-62.5
PCB-74	0.76	0.65-0.89	y	51.4	37.5-62.5
PCB-61/70	0.77	0.65-0.89	y	104.4	75.0-125
PCB-76/66	0.78	0.65-0.89	y	104.0	75.0-125
PCB-80	0.77	0.65-0.89	y	53.2	37.5-62.5
PCB-55	0.78	0.65-0.89	y	52.3	37.5-62.5
PCB-56/60	0.77	0.65-0.89	y	105.2	75.0-125
PCB-79	0.78	0.65-0.89	y	51.4	37.5-62.5
PCB-78	0.77	0.65-0.89	y	49.3	37.5-62.5
PCB-81	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-77	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-104	1.59	1.32-1.78	y	53.1	37.5-62.5
PCB-96	1.57	1.32-1.78	y	54.3	37.5-62.5
PCB-103	1.57	1.32-1.78	y	51.3	37.5-62.5
PCB-100	1.62	1.32-1.78	y	52.5	37.5-62.5
PCB-94	1.59	1.32-1.78	y	49.5	37.5-62.5
PCB-95/98/102	1.59	1.32-1.78	y	157.0	112.5-225
PCB-93	1.58	1.32-1.78	y	50.5	37.5-62.5
PCB-88/91	1.58	1.32-1.78	y	102.7	75.0-125
PCB-121	1.62	1.32-1.78	y	52.6	37.5-62.5

Analyst: DMS

Date: 3/30/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150328E2-2 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150328E2 S#2 Analysis Date: 28-MAR-15 Time: 21:52:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.61	1.32-1.78	y	105.0	75.0-125	PCB-140	1.28	1.05-1.43	y	55.2	37.5-62.5
PCB-89	1.59	1.32-1.78	y	51.7	37.5-62.5	PCB-134/143	1.22	1.05-1.43	y	97.9	75.0-125
PCB-90/101	1.62	1.32-1.78	y	105.9	75.0-125	PCB-133/142	1.25	1.05-1.43	y	97.1	75.0-125
PCB-113	1.60	1.32-1.78	y	50.0	37.5-62.5	PCB-131	1.24	1.05-1.43	y	48.0	37.5-62.5
PCB-99	1.62	1.32-1.78	y	53.7	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	95.7	75.0-125
PCB-119	1.60	1.32-1.78	y	52.1	37.5-62.5	PCB-132/161	1.25	1.05-1.43	y	96.2	75.0-125
PCB-108/112	1.61	1.32-1.78	y	103.7	75.0-125	PCB-153	1.25	1.05-1.43	y	49.3	37.5-62.5
PCB-83	1.61	1.32-1.78	y	50.8	37.5-62.5	PCB-168	1.24	1.05-1.43	y	49.5	37.5-62.5
PCB-97	1.60	1.32-1.78	y	52.0	37.5-62.5	PCB-141	1.23	1.05-1.43	y	49.0	37.5-62.5
PCB-86	1.52	1.32-1.78	y	56.6	37.5-62.5	PCB-137	1.24	1.05-1.43	y	51.2	37.5-62.5
PCB-87/117/125	1.60	1.32-1.78	y	158.2	112.5-225	PCB-130	1.22	1.05-1.43	y	46.9	37.5-62.5
PCB-111/115	1.60	1.32-1.78	y	102.0	75.0-125	PCB-138/163/164	1.24	1.05-1.43	y	148.2	112.5-225
PCB-85/116	1.60	1.32-1.78	y	111.5	75.0-125	PCB-158/160	1.23	1.05-1.43	y	99.7	75.0-125
PCB-120	1.61	1.32-1.78	y	52.5	37.5-62.5	PCB-129	1.24	1.05-1.43	y	50.2	37.5-62.5
PCB-110	1.62	1.32-1.78	y	53.8	37.5-62.5	PCB-166	1.25	1.05-1.43	y	50.0	37.5-62.5
PCB-82	1.59	1.32-1.78	y	51.9	37.5-62.5	PCB-159	1.25	1.05-1.43	y	50.7	37.5-62.5
PCB-124	1.59	1.32-1.78	y	52.5	37.5-62.5	PCB-128/162	1.24	1.05-1.43	y	99.1	75.0-125
PCB-107/109	1.64	1.32-1.78	y	102.9	75.0-125	PCB-167	1.23	1.05-1.43	y	50.3	37.5-62.5
PCB-123	1.53	1.32-1.78	y	51.9	37.5-62.5	PCB-156	1.23	1.05-1.43	y	50.5	37.5-62.5
PCB-106/118	1.61	1.32-1.78	y	103.3	75.0-125	PCB-157	1.24	1.05-1.43	y	48.1	37.5-62.5
PCB-114	1.58	1.32-1.78	y	49.8	37.5-62.5	PCB-169	1.24	1.05-1.43	y	48.5	37.5-62.5
PCB-122	1.64	1.32-1.78	y	50.8	37.5-62.5	PCB-188	1.06	0.89-1.21	y	50.9	37.5-62.5
PCB-105	1.61	1.32-1.78	y	49.7	37.5-62.5	PCB-184	1.07	0.89-1.21	y	49.8	37.5-62.5
PCB-127	1.59	1.32-1.78	y	49.4	37.5-62.5	PCB-179	1.07	0.89-1.21	y	48.9	37.5-62.5
PCB-126	1.61	1.32-1.78	y	51.1	37.5-62.5	PCB-176	1.06	0.89-1.21	y	48.8	37.5-62.5
PCB-155	1.27	1.05-1.43	y	53.1	37.5-62.5	PCB-186	1.06	0.89-1.21	y	51.0	37.5-62.5
PCB-150	1.28	1.05-1.43	y	53.2	37.5-62.5	PCB-178	1.05	0.89-1.21	y	49.5	37.5-62.5
PCB-152	1.28	1.05-1.43	y	53.1	37.5-62.5	PCB-175	1.06	0.89-1.21	y	47.8	37.5-62.5
PCB-145	1.27	1.05-1.43	y	54.3	37.5-62.5	PCB-182/187	1.07	0.89-1.21	y	98.5	75.0-125
PCB-136	1.27	1.05-1.43	y	55.9	37.5-62.5	PCB-183	1.05	0.89-1.21	y	51.3	37.5-62.5
PCB-148	1.27	1.05-1.43	y	50.3	37.5-62.5	PCB-185	1.08	0.89-1.21	y	50.6	37.5-62.5
PCB-154	1.26	1.05-1.43	y	54.1	37.5-62.5	PCB-174	1.05	0.89-1.21	y	48.4	37.5-62.5
PCB-151	1.27	1.05-1.43	y	53.7	37.5-62.5	PCB-181	1.08	0.89-1.21	y	55.4	37.5-62.5
PCB-135	1.27	1.05-1.43	y	53.9	37.5-62.5	PCB-177	1.08	0.89-1.21	y	50.2	37.5-62.5
PCB-144	1.28	1.05-1.43	y	54.9	37.5-62.5	PCB-171	1.06	0.89-1.21	y	52.6	37.5-62.5
PCB-147	1.29	1.05-1.43	y	57.1	37.5-62.5	PCB-173	1.07	0.89-1.21	y	51.7	37.5-62.5
PCB-139/149	1.26	1.05-1.43	y	110.9	75.0-125	PCB-172	1.07	0.89-1.21	y	51.3	37.5-62.5

Analyst: DMS

Date: 3/30/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150328E2-2 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150328E2 S#2 Analysis Date: 28-MAR-15 Time: 21:52:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.06	0.89-1.21	y	51.9	37.5-62.5
PCB-180	1.05	0.89-1.21	y	52.1	37.5-62.5
PCB-193	1.07	0.89-1.21	y	51.2	37.5-62.5
PCB-191	1.08	0.89-1.21	y	50.4	37.5-62.5
PCB-170	1.06	0.89-1.21	y	51.7	37.5-62.5
PCB-190	1.06	0.89-1.21	y	52.4	37.5-62.5
PCB-189	1.06	0.89-1.21	y	51.3	37.5-62.5
PCB-202	0.90	0.76-1.02	y	50.0	37.5-62.5
PCB-201	0.91	0.76-1.02	y	49.4	37.5-62.5
PCB-204	0.92	0.76-1.02	y	49.1	37.5-62.5
PCB-197	0.91	0.76-1.02	y	49.7	37.5-62.5
PCB-200	0.91	0.76-1.02	y	48.9	37.5-62.5
PCB-198	0.89	0.76-1.02	y	47.7	37.5-62.5
PCB-199	0.92	0.76-1.02	y	51.0	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	103.0	75.0-125
PCB-195	0.91	0.76-1.02	y	45.8	37.5-62.5
PCB-194	0.91	0.76-1.02	y	47.0	37.5-62.5
PCB-205	0.91	0.76-1.02	y	50.4	37.5-62.5
PCB-208	1.33	1.14-1.54	y	49.7	37.5-62.5
PCB-207	1.34	1.14-1.54	y	50.7	37.5-62.5
PCB-206	1.34	1.14-1.54	y	49.5	37.5-62.5
PCB-209	1.18	0.99-1.33	y	51.3	37.5-62.5

Analyst: DMS

Date: 3/30/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150328E2-2 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150328E2 S#2 Analysis Date: 28-MAR-15 Time: 21:52:49

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.18	2.66-3.60	y	126.4	50.0-145
13C-PCB-3	3.22	2.66-3.60	y	128.6	50.0-145
13C-PCB-4	1.58	1.33-1.79	y	102.3	50.0-145
13C-PCB-9	1.57	1.33-1.79	y	98.0	50.0-145
13C-PCB-11	1.56	1.33-1.79	y	97.9	50.0-145
13C-PCB-19	1.06	0.88-1.20	y	108.9	50.0-145
13C-PCB-32	1.07	0.88-1.20	y	106.2	50.0-145
13C-PCB-28	1.04	0.88-1.20	y	94.9	50.0-145
13C-PCB-37	1.05	0.88-1.20	y	102.1	50.0-145
13C-PCB-54	0.80	0.65-0.89	y	92.5	50.0-145
13C-PCB-52	0.80	0.65-0.89	y	94.3	50.0-145
13C-PCB-47	0.78	0.65-0.89	y	93.5	50.0-145
13C-PCB-70	0.80	0.65-0.89	y	98.6	50.0-145
13C-PCB-80	0.80	0.65-0.89	y	98.9	50.0-145
13C-PCB-81	0.80	0.65-0.89	y	97.2	50.0-145
13C-PCB-77	0.79	0.65-0.89	y	96.6	50.0-145
13C-PCB-104	1.63	1.32-1.78	y	96.0	50.0-145
13C-PCB-95	1.64	1.32-1.78	y	100.8	50.0-145
13C-PCB-101	1.63	1.32-1.78	y	99.2	50.0-145
13C-PCB-97	1.66	1.32-1.78	y	97.7	50.0-145
13C-PCB-123	1.63	1.32-1.78	y	100.9	50.0-145
13C-PCB-118	1.66	1.32-1.78	y	100.7	50.0-145
13C-PCB-114	1.60	1.32-1.78	y	95.2	50.0-145
13C-PCB-105	1.62	1.32-1.78	y	95.1	50.0-145
13C-PCB-127	1.59	1.32-1.78	y	94.0	50.0-145
13C-PCB-126	1.57	1.32-1.78	y	95.7	50.0-145
13C-PCB-155	1.33	1.05-1.43	y	81.3	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	100.7	50.0-145
13C-PCB-141	1.28	1.05-1.43	y	97.1	50.0-145
13C-PCB-138	1.28	1.05-1.43	y	98.9	50.0-145
13C-PCB-159	1.28	1.05-1.43	y	98.4	50.0-145
13C-PCB-167	1.26	1.05-1.43	y	100.7	50.0-145
13C-PCB-156	1.28	1.05-1.43	y	99.8	50.0-145
13C-PCB-157	1.29	1.05-1.43	y	100.7	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.26	1.05-1.43	y	99.5	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	96.7	50 - 145
13C-PCB-180	0.46	0.38-0.52	y	94.7	50 - 145
13C-PCB-170	0.47	0.38-0.52	y	93.9	50 - 145
13C-PCB-189	0.46	0.38-0.52	y	95.9	50 - 145
13C-PCB-202	0.92	0.76-1.02	y	90.5	50 - 145
13C-PCB-194	0.92	0.76-1.02	y	92.7	50 - 145
13C-PCB-208	0.77	0.65-0.89	y	93.7	50 - 145
13C-PCB-206	0.80	0.65-0.89	y	107.6	50 - 145
13C-PCB-209	1.21	0.99-1.33	y	123.3	50 - 145

CRS vs. RS

13C-PCB-79	0.80	0.65-0.89	y	97.5	75 - 125
13C-PCB-178	0.46	0.38-0.52	y	92.5	75 - 125

Analyst: DMS

Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150328E2 S:2 Acq:28-MAR-15 21:52:49 ConCal: ST150328E2-2

Lab ID: ST150328E2-2 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	1.36e+08	2.97	y	1.19	16:10	1.001	0.996	1.006	40.9939
	PCB-2	1.38e+08	2.98	y	1.18	18:32	0.988	0.984	0.994	39.4183
	PCB-3	1.71e+08	2.97	y	1.43	18:46	1.001	0.996	1.006	40.5200
	PCB-4/10	4.40e+08	1.61	y	1.57	20:08	1.003	0.997	1.007	185.764
	PCB-7/9	5.06e+08	1.62	y	1.21	21:54	0.868	0.866	0.874	188.680
	PCB-6	2.69e+08	1.61	y	1.30	22:34	0.894	0.890	0.899	92.9502
	PCB-5/8	4.81e+08	1.62	y	1.15	22:58	0.910	0.907	0.917	188.836
	PCB-14	2.44e+08	1.63	y	1.11	24:04	0.954	0.949	0.959	94.8824
	PCB-11	2.41e+08	1.62	y	1.09	25:15	1.001	0.995	1.005	95.8980
	PCB-12/13	5.17e+08	1.61	y	1.19	25:39	1.016	1.011	1.021	187.176
	PCB-15	2.82e+08	1.61	y	1.28	25:57	1.028	1.023	1.033	95.1049
	PCB-19	7.58e+07	1.06	y	1.04	24:15	1.001	0.996	1.006	49.7899
	PCB-30	1.18e+08	1.05	y	1.71	25:08	1.038	1.032	1.042	47.4048
	PCB-18	8.38e+07	1.06	y	0.78	25:53	0.954	0.949	0.959	50.3127
	PCB-17	9.76e+07	1.06	y	0.92	26:03	0.960	0.956	0.966	49.6762
	PCB-24/27	2.52e+08	1.05	y	1.19	26:38	0.981	0.977	0.987	99.5122
-	PCB-16/32	1.99e+08	1.05	y	0.94	27:08	1.000	0.995	1.005	99.4187
-	PCB-34	1.21e+08	1.05	y	1.14	27:55	0.960	0.955	0.965	52.1578
	PCB-23	1.29e+08	1.08	y	1.28	28:02	0.964	0.959	0.969	49.3319
	PCB-29	1.11e+08	1.06	y	1.08	28:16	0.972	0.967	0.977	50.2702
	PCB-26	1.25e+08	1.07	y	1.21	28:28	0.979	0.974	0.984	50.7307
	PCB-25	1.37e+08	1.07	y	1.26	28:38	0.984	0.979	0.989	53.1771
	PCB-31	1.43e+08	1.05	y	1.28	29:00	0.997	0.992	1.002	54.2724
	PCB-28	1.81e+08	1.07	y	1.71	29:06	1.000	0.995	1.005	51.6847
	PCB-20/21/33	3.48e+08	1.05	y	1.08	29:43	1.022	1.017	1.027	157.042
	PCB-22	1.29e+08	1.06	y	1.21	30:09	1.037	1.032	1.042	52.1269
	PCB-36	1.09e+08	1.06	y	1.14	30:46	0.934	0.928	0.938	48.2699
	PCB-39	1.10e+08	1.07	y	1.12	31:14	0.948	0.943	0.953	49.7711
	PCB-38	1.12e+08	1.07	y	1.20	32:01	0.972	0.966	0.976	47.1808
	PCB-35	1.30e+08	1.06	y	1.23	32:31	0.987	0.982	0.992	53.2427
	PCB-37	1.26e+08	1.05	y	1.23	32:57	1.000	0.995	1.005	51.7415
	PCB-54	1.01e+08	0.78	y	1.10	27:59	1.001	0.996	1.006	50.7659
	PCB-50	8.17e+07	0.77	y	0.88	29:09	1.043	1.037	1.047	51.4719
	PCB-53	8.02e+07	0.76	y	1.06	29:48	0.946	0.942	0.952	51.6141
	PCB-51	7.30e+07	0.78	y	0.99	30:08	0.957	0.952	0.962	50.4270
	PCB-45	6.48e+07	0.78	y	0.86	30:34	0.971	0.966	0.976	51.3226
	PCB-46	6.24e+07	0.77	y	0.85	31:03	0.986	0.981	0.991	50.5282

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.96e+08	0.77	y	1.28	31:32	1.002	0.996	1.006	104.615
PCB-73	1.04e+08	0.77	y	1.35	31:39	1.005	1.000	1.010	52.7817
PCB-43/49	1.48e+08	0.77	y	0.99	31:48	1.010	1.005	1.015	101.600
PCB-47	8.81e+07	0.76	y	1.06	32:01	1.001	0.996	1.006	54.5798
PCB-48/75	1.94e+08	0.78	y	1.23	32:07	1.004	0.999	1.009	103.822
PCB-65	9.58e+07	0.77	y	1.22	32:23	1.012	1.008	1.018	51.3105
PCB-62	9.92e+07	0.77	y	1.22	32:30	1.016	1.011	1.021	53.2626
PCB-44	7.11e+07	0.76	y	0.86	32:48	1.025	1.021	1.031	54.1879
PCB-42/59	1.87e+08	0.76	y	1.14	33:02	1.033	1.028	1.038	107.930
PCB-41/64/71/72	4.01e+08	0.77	y	1.21	33:37	1.051	1.046	1.056	217.535
PCB-68	1.13e+08	0.77	y	1.35	33:52	1.059	1.054	1.064	54.9616
PCB-40	6.02e+07	0.78	y	0.70	34:05	1.066	1.061	1.071	56.3020
PCB-57	1.02e+08	0.78	y	0.98	34:27	0.971	0.965	0.975	52.7850
PCB-67	1.09e+08	0.76	y	1.11	34:45	0.979	0.974	0.984	50.0649
PCB-58	9.80e+07	0.78	y	0.93	34:52	0.982	0.977	0.987	53.4648
PCB-63	9.62e+07	0.76	y	0.95	35:01	0.987	0.982	0.992	51.0999
PCB-74	1.26e+08	0.76	y	1.24	35:18	0.995	0.990	1.000	51.3990
PCB-61/70	1.97e+08	0.77	y	0.95	35:29	1.000	0.995	1.005	104.388
PCB-76/66	2.15e+08	0.78	y	1.04	35:42	1.006	1.001	1.011	103.986
PCB-80	1.30e+08	0.77	y	1.19	35:56	1.001	0.996	1.006	53.1958
PCB-55	1.12e+08	0.78	y	1.04	36:15	1.009	1.005	1.015	52.2698
PCB-56/60	2.18e+08	0.77	y	1.01	36:45	1.023	1.019	1.029	105.185
PCB-79	1.14e+08	0.78	y	1.08	37:49	1.053	1.048	1.058	• 51.3789
PCB-78	1.13e+08	0.77	y	1.27	38:30	0.987	0.982	0.992	49.2902
PCB-81	1.20e+08	0.78	y	1.33	39:02	1.000	0.995	1.005	50.1914
PCB-77	1.02e+08	0.78	y	1.10	39:37	1.000	0.995	1.005	50.9199
PCB-104	7.11e+07	1.59	y	1.18	32:39	1.000	0.996	1.006	53.1263
PCB-96	6.98e+07	1.57	y	1.14	33:54	1.039	1.034	1.044	54.2862
PCB-103	5.54e+07	1.57	y	0.96	34:27	1.056	1.050	1.060	51.2751
PCB-100	5.56e+07	1.62	y	0.94	34:49	1.067	1.061	1.071	52.4756
PCB-94	4.59e+07	1.59	y	1.06	35:16	0.985	0.980	0.990	49.5052
PCB-95/98/102	1.69e+08	1.59	y	1.22	35:46	0.999	0.995	1.005	156.971
PCB-93	3.73e+07	1.58	y	0.84	35:54	1.003	0.997	1.007	50.4858
PCB-88/91	1.01e+08	1.58	y	1.12	36:11	1.011	1.005	1.015	102.669
PCB-121	7.46e+07	1.62	y	1.62	36:17	1.014	1.009	1.019	52.6152
PCB-84/92	1.00e+08	1.61	y	1.05	37:06	0.990	0.985	0.995	105.037
PCB-89	5.33e+07	1.59	y	1.13	37:18	0.995	0.991	1.001	51.7453

Integrations by Analyst: DMS Date: 3/30/15

Reviewed by Analyst:_____ Date:_____

Client ID: PCB CS3 14K1102 Filename: 150328E2 S:2 Acq:28-MAR-15 21:52:49 ConCal: ST150328E2-2

Lab ID: ST150328E2-2 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	1.06e+08	1.62	y	1.10	37:29	1.000	0.995	1.005	105.928
	PCB-113	6.43e+07	1.60	y	1.41	37:43	1.006	1.002	1.012	49.9525
	PCB-99	6.55e+07	1.62	y	1.34	37:49	1.009	1.004	1.014	53.7397
	PCB-119	6.45e+07	1.60	y	1.53	38:17	0.987	0.982	0.992	52.0691
	PCB-108/112	1.07e+08	1.61	y	1.28	38:26	0.991	0.986	0.996	103.715
	PCB-83	6.24e+07	1.61	y	1.52	38:36	0.996	0.990	1.000	50.7973
	PCB-97	4.97e+07	1.60	y	1.18	38:47	1.000	0.995	1.005	52.0268
	PCB-86	3.86e+07	1.52	y	0.84	38:55	1.004	0.999	1.009	56.6373
	B-87/117/125	1.98e+08	1.60	y	1.55	39:03	1.007	1.002	1.012	158.180
	PCB-111/115	1.35e+08	1.60	y	1.63	39:12	1.011	1.006	1.016	102.035
	PCB-85/116	1.17e+08	1.60	y	1.30	39:20	1.014	1.010	1.020	111.450
	PCB-120	7.11e+07	1.61	y	1.68	39:35	1.021	1.016	1.026	52.4710
	PCB-110	6.76e+07	1.62	y	1.56	39:43	1.024	1.020	1.030	53.7687
	PCB-82	4.17e+07	1.59	y	0.76	40:21	0.976	0.971	0.981	51.9097
	PCB-124	8.18e+07	1.59	y	1.47	41:02	0.993	0.988	0.998	52.5201
	PCB-107/109	1.44e+08	1.64	y	1.32	41:11	0.996	0.991	1.001	102.949
	PCB-123	6.42e+07	1.53	y	1.17	41:21	1.001	0.996	1.006	51.8656
-	PCB-106/118	1.37e+08	1.61	y	1.17	41:33	1.001	0.996	1.006	103.311
-	PCB-114	9.24e+07	1.58	y	1.30	42:11	1.000	0.995	1.005	49.8283
	PCB-122	8.14e+07	1.64	y	1.12	42:19	1.004	0.999	1.009	50.7964
	PCB-105	9.24e+07	1.61	y	1.30	43:02	1.000	0.995	1.005	49.7166
	PCB-127	1.01e+08	1.59	y	1.33	43:23	1.000	0.996	1.006	49.4250
	PCB-126	8.33e+07	1.61	y	1.18	45:16	1.000	0.995	1.005	51.1436
	PCB-155	4.74e+07	1.27	y	1.11	37:03	1.001	0.966	1.006	53.1266
	PCB-150	4.26e+07	1.28	y	1.00	38:18	1.035	1.030	1.040	53.1664
	PCB-152	4.75e+07	1.28	y	1.12	38:46	1.047	1.043	1.053	53.1398
	PCB-145	5.23e+07	1.27	y	1.20	39:13	1.059	1.055	1.065	54.3037
	PCB-136	5.28e+07	1.27	y	1.18	39:32	1.068	1.064	1.074	55.9324
	PCB-148	3.00e+07	1.27	y	0.74	39:39	1.071	1.066	1.076	50.3081
	PCB-154	3.72e+07	1.26	y	0.86	40:08	1.084	1.080	1.090	54.0781
	PCB-151	3.21e+07	1.27	y	0.75	40:46	1.101	1.097	1.107	53.6521
	PCB-135	3.42e+07	1.27	y	0.79	40:59	1.107	1.103	1.113	53.9041
	PCB-144	3.35e+07	1.28	y	0.76	41:06	1.110	1.105	1.117	54.8622
	PCB-147	3.75e+07	1.29	y	0.82	41:14	1.114	1.109	1.121	57.1401
	PCB-139/149	6.78e+07	1.26	y	0.76	41:30	1.121	1.116	1.128	110.941
-	PCB-140	3.20e+07	1.28	y	0.72	41:40	1.126	1.121	1.133	55.2408
-	PCB-134/143	1.14e+08	1.22	y	0.92	42:06	0.975	0.970	0.980	97.9263

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	1.01e+08	1.25	y	0.82	42:24	0.982	0.977	0.987	97.1356
PCB-131	5.55e+07	1.24	y	0.91	42:34	0.986	0.981	0.991	48.0122
PCB-146/165	1.52e+08	1.24	y	1.25	42:47	0.991	0.986	0.996	95.7356
PCB-132/161	1.35e+08	1.25	y	1.10	43:02	0.997	0.992	1.002	96.1763
PCB-153	7.84e+07	1.25	y	1.25	43:12	1.000	0.995	1.005	49.3182
PCB-168	9.13e+07	1.24	y	1.45	43:25	1.005	1.001	1.011	49.5182
PCB-141	6.12e+07	1.23	y	1.09	43:56	1.000	0.995	1.005	48.9830
PCB-137	6.25e+07	1.24	y	1.06	44:19	1.009	1.004	1.014	51.1837
PCB-130	5.20e+07	1.22	y	0.96	44:25	1.011	1.006	1.016	46.8910
PCB-138/163/164	2.30e+08	1.24	y	1.29	44:47	1.001	0.996	1.006	148.169
PCB-158/160	1.60e+08	1.23	y	1.34	45:02	1.006	1.001	1.011	99.6516
PCB-129	5.14e+07	1.24	y	0.85	45:16	1.011	1.007	1.017	50.2492
PCB-166	8.03e+07	1.25	y	1.19	45:44	0.993	0.988	0.998	50.0411
PCB-159	7.63e+07	1.25	y	1.11	46:03	1.000	0.996	1.006	50.6913
PCB-128/162	1.40e+08	1.24	y	1.05	46:21	1.007	1.002	1.012	99.0926
PCB-167	9.06e+07	1.23	y	1.20	46:44	1.000	0.995	1.005	50.3075
PCB-156	8.19e+07	1.23	y	1.14	48:01	1.000	0.996	1.006	50.5454
PCB-157	8.43e+07	1.24	y	1.16	48:18	1.000	0.995	1.005	48.0876
PCB-169	7.65e+07	1.24	y	1.12	50:27	1.000	0.995	1.005	48.4868
PCB-188	7.86e+07	1.06	y	1.58	42:50	1.001	0.996	1.006	50.8580
PCB-184	7.95e+07	1.07	y	1.63	43:17	1.011	1.006	1.016	49.8425
PCB-179	6.23e+07	1.07	y	1.30	44:03	1.029	1.024	1.034	48.8586
PCB-176	7.05e+07	1.06	y	1.48	44:31	1.040	1.035	1.045	48.8359
PCB-186	7.25e+07	1.06	y	1.45	45:08	1.054	1.050	1.060	50.9740
PCB-178	5.01e+07	1.05	y	1.03	45:37	1.065	1.061	1.071	49.4873
PCB-175	4.73e+07	1.06	y	1.01	45:58	1.074	1.069	1.079	47.7876
PCB-182/187	1.21e+08	1.07	y	1.25	46:08	1.078	1.073	1.083	98.5280
PCB-183	6.07e+07	1.05	y	1.21	46:27	1.085	1.081	1.091	51.3266
PCB-185	6.51e+07	1.08	y	1.80	47:07	0.956	0.951	0.961	50.5713
PCB-174	4.77e+07	1.05	y	1.38	47:28	0.963	0.958	0.968	48.4490
PCB-181	5.46e+07	1.08	y	1.38	47:35	0.965	0.960	0.970	55.4199
PCB-177	4.51e+07	1.08	y	1.26	47:45	0.969	0.963	0.973	50.2497
PCB-171	5.94e+07	1.06	y	1.58	48:03	0.974	0.970	0.980	52.5520
PCB-173	4.09e+07	1.07	y	1.11	48:28	0.983	0.978	0.988	51.6544
PCB-172	5.99e+07	1.07	y	1.63	48:55	0.992	0.987	0.997	51.3056
PCB-192	6.45e+07	1.06	y	1.74	49:07	0.996	0.991	1.001	51.8950
PCB-180	5.00e+07	1.05	y	1.34	49:20	1.000	0.995	1.005	52.0530

Integrations by Analyst: DMS

Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150328E2 S:2 Acq:28-MAR-15 21:52:49 ConCal: ST150328E2-2

Lab ID: ST150328E2-2 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	6.27e+07	1.07	y	1.72	49:32	1.004	0.999	1.009	51.1716
	PCB-191	6.10e+07	1.08	y	1.69	49:47	1.010	1.004	1.014	50.4247
	PCB-170	4.64e+07	1.06	y	1.60	50:50	1.000	0.995	1.005	51.6813
	PCB-190	6.50e+07	1.06	y	2.21	51:00	1.004	0.998	1.008	52.4414
	PCB-189	6.02e+07	1.06	y	1.55	52:20	1.000	0.995	1.005	51.3073
	PCB-202	4.53e+07	0.90	y	1.08	48:15	1.001	0.995	1.005	50.0088
	PCB-201	4.75e+07	0.91	y	1.15	48:44	1.011	1.005	1.015	49.4481
	PCB-204	4.67e+07	0.92	y	1.14	48:53	1.014	1.008	1.018	49.0901
	PCB-197	4.46e+07	0.91	y	1.07	49:11	1.020	1.015	1.025	49.6960
	PCB-200	4.35e+07	0.91	y	1.06	50:05	1.039	1.032	1.044	48.9280
	PCB-198	3.01e+07	0.89	y	0.76	51:25	1.066	1.059	1.069	47.7031
	PCB-199	3.40e+07	0.92	y	0.80	51:32	1.069	1.061	1.071	50.9950
-	PCB-196/203	6.90e+07	0.90	y	0.80	51:48	1.074	1.066	1.076	103.047
-	PCB-195	5.18e+07	0.91	y	1.23	52:59	0.984	0.979	0.989	45.8400
	PCB-194	5.25e+07	0.91	y	1.21	53:51	1.000	0.995	1.005	46.9798
	PCB-205	7.16e+07	0.91	y	1.54	54:07	1.005	1.001	1.011	50.4113
	PCB-208	5.83e+07	1.33	y	0.93	53:07	1.000	0.995	1.005	49.6674
	PCB-207	6.94e+07	1.34	y	1.08	53:25	1.006	1.001	1.011	50.7339
	PCB-206	4.42e+07	1.34	y	1.02	55:29	1.000	0.995	1.005	49.5111
	PCB-209	5.63e+07	1.18	y	1.17	56:51	1.000	0.995	1.005	51.3060

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	4.45e+08	2.97	y	16:10	1.27	120.932	
Total Di-PCB	2.99e+09	1.61	y	20:08	1.21	1133.08	
Total Tri-PCB	8.26e+08	1.06	y	24:15	1.10	396.114	
Total Tri-PCB	2.04e+09	1.05	y	27:55	1.21	831.322	Sum:1227.44
Total Tetra-PCB	4.10e+09	0.78	y	27:59	1.09	2216.12	
Total Penta-PCB	2.45e+09	1.59	y	32:39	1.18	2150.15	
Total Penta-PCB	4.71e+08	1.58	y	42:11	1.25	262.387	Sum:2412.53
Total Hexa-PCB	5.47e+08	1.27	y	37:03	0.90	759.795	
Total Hexa-PCB	2.01e+09	1.22	y	42:06	1.11	1398.59	Sum:2158.39
Total Hepta-PCB	1.44e+09	1.06	y	42:50	1.42	1229.50	
Total Octa-PCB	3.61e+08	0.90	y	48:15	0.96	448.916	
Total Octa-PCB	1.79e+08	0.91	y	52:59	1.33	145.478	Sum:594.394
Total Nona-PCB	1.72e+08	1.33	y	53:07	1.01	150.442	
Total Deca-PCB	5.63e+07	1.18	y	56:51	1.17	51.3060	

Total PCB Conc:11209.4404800

Integrations by Analyst: DMS

Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150328E2 S:2 Acq:28-MAR-15 21:52:49 ConCal: ST150328E2-2
Lab ID: ST150328E2-2 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.78e+08	3.18	y	0.87	16:09	0.622	0.629	0.635	126	126
13C-PCB-3	2.95e+08	3.22	y	0.91	18:45	0.723	0.725	0.733	129	129
13C-PCB-4	1.51e+08	1.58	y	0.59	20:05	0.774	0.775	0.783	102	102
13C-PCB-9	2.22e+08	1.57	y	0.90	21:52	0.843	0.842	0.850	98.0	98.0
13C-PCB-11	2.31e+08	1.56	y	0.94	25:14	0.973	0.968	0.978	97.9	97.9
13C-PCB-19	1.46e+08	1.06	y	0.53	24:13	0.934	0.930	0.940	109	109
13C-PCB-28	2.05e+08	1.04	y	0.93	29:05	1.004	0.999	1.009	94.9	94.9
13C-PCB-32	2.13e+08	1.07	y	0.80	27:08	1.046	1.040	1.050	106	106
13C-PCB-37	1.99e+08	1.05	y	0.84	32:57	1.137	1.131	1.143	102	102
13C-PCB-47	1.52e+08	0.78	y	0.81	31:59	0.871	0.866	0.874	93.5	93.5
13C-PCB-52	1.46e+08	0.80	y	0.77	31:29	0.857	0.853	0.861	94.3	94.3
13C-PCB-54	1.80e+08	0.80	y	0.97	27:57	0.761	0.758	0.766	92.5	92.5
13C-PCB-70	1.98e+08	0.80	y	1.00	35:30	0.966	0.961	0.971	98.6	98.6
13C-PCB-77	1.83e+08	0.79	y	0.94	39:36	1.078	1.073	1.083	96.6	96.6
13C-PCB-80	2.05e+08	0.80	y	1.03	35:55	0.977	0.972	0.982	98.9	98.9
13C-PCB-81	1.80e+08	0.80	y	0.92	39:01	1.062	1.057	1.067	97.2	97.2
13C-PCB-95	8.77e+07	1.64	y	0.74	35:48	0.913	0.908	0.918	101	101
13C-PCB-97	8.09e+07	1.66	y	0.70	38:46	0.989	0.984	0.994	97.7	97.7
13C-PCB-101	9.13e+07	1.63	y	0.78	37:29	0.956	0.951	0.961	99.2	99.2
13C-PCB-104	1.13e+08	1.63	y	1.00	32:38	0.832	0.828	0.836	96.0	96.0
13C-PCB-105	1.43e+08	1.62	y	1.37	43:02	0.929	0.924	0.934	95.1	95.1
13C-PCB-114	1.43e+08	1.60	y	1.36	42:10	0.911	0.905	0.915	95.2	95.2
13C-PCB-118	1.13e+08	1.66	y	0.96	41:31	1.059	1.054	1.064	101	101
13C-PCB-123	1.06e+08	1.63	y	0.89	41:20	1.054	1.050	1.060	101	101
13C-PCB-126	1.38e+08	1.57	y	1.31	45:16	0.978	0.972	0.982	95.7	95.7
13C-PCB-127	1.53e+08	1.59	y	1.47	43:22	0.937	0.931	0.941	94.0	94.0
13C-PCB-138	1.20e+08	1.28	y	1.10	44:46	0.967	0.961	0.971	98.9	98.9
13C-PCB-141	1.15e+08	1.28	y	1.07	43:55	0.948	0.943	0.953	97.1	97.1
13C-PCB-153	1.27e+08	1.29	y	1.15	43:11	0.933	0.927	0.937	101	101
13C-PCB-155	8.02e+07	1.33	y	0.84	37:01	0.944	0.939	0.949	81.3	81.3
13C-PCB-156	1.43e+08	1.28	y	1.30	48:01	1.037	1.032	1.042	99.8	99.8
13C-PCB-157	1.51e+08	1.29	y	1.36	48:17	1.043	1.038	1.048	101	101
13C-PCB-159	1.35e+08	1.28	y	1.25	46:03	0.994	0.989	0.999	98.4	98.4
13C-PCB-167	1.50e+08	1.26	y	1.35	46:44	1.009	1.004	1.014	101	101
13C-PCB-169	1.41e+08	1.26	y	1.29	50:27	1.089	1.083	1.093	99.5	99.5
13C-PCB-170	5.61e+07	0.47	y	0.54	50:49	1.097	1.089	1.101	93.9	93.9
13C-PCB-180	7.14e+07	0.46	y	0.68	49:18	1.065	1.060	1.070	94.7	94.7
13C-PCB-188	9.78e+07	0.46	y	0.92	42:49	0.925	0.919	0.929	96.7	96.7
13C-PCB-189	7.58e+07	0.46	y	0.72	52:19	1.130	1.120	1.132	95.9	95.9
13C-PCB-194	9.22e+07	0.92	y	0.80	53:50	0.995	0.990	1.000	92.7	92.7
13C-PCB-202	8.36e+07	0.92	y	0.84	48:13	1.041	1.036	1.046	90.5	90.5
13C-PCB-206	8.71e+07	0.80	y	0.65	55:28	1.025	1.021	1.031	108	108
13C-PCB-208	1.26e+08	0.77	y	1.08	53:06	0.981	0.976	0.986	93.7	93.7
13C-PCB-209	9.38e+07	1.21	y	0.61	56:50	1.050	1.045	1.055	123	123

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.99e+08	0.80	y	1.02	37:48	1.029	1.023	1.034	97.5	97.5
13C-PCB-178	6.26e+07	0.46	y	0.61	45:36	0.985	0.979	0.990	92.5	92.5

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.99e+08	0.80	y	1.10	37:48	0.969	0.964	0.974	100	100
13C-PCB-178	6.26e+07	0.46	y	0.90	45:36	0.925	0.920	0.930	97.6	97.6

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.52e+08	1.56	y	1.00	25:57	100
13C-PCB-31	2.32e+08	1.05	y	1.00	28:59	100
13C-PCB-60	2.01e+08	0.79	y	1.00	36:44	100
13C-PCB-111	1.17e+08	1.66	y	1.00	39:12	100
13C-PCB-128	1.10e+08	1.27	y	1.00	46:18	100
13C-PCB-205	1.25e+08	0.90	y	1.00	54:07	100

Analyst: DMS

Date: 3/30/15

Vista Analytical Laboratory - Injection Log Run file: 150328e2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150328E2	1	ST150328E2-1	dms	28-MAR-15	20:48:20	ST150328E2-1	NA
150328E2	2	ST150328E2-2	dms	28-MAR-15	21:52:49	ST150328E2-2	NA
150328E2	3	B5C0104-BS1	dms	28-MAR-15	22:57:11	ST150328E2-1	NA
150328E2	4	SOLVENT BLANK	dms	29-MAR-15	00:01:41	NA	NA
150328E2	5	B5C0104-BLK1	dms	29-MAR-15	01:06:03	ST150328E2-1	NA
150328E2	6	1500252-01	dms	29-MAR-15	02:10:25	ST150328E2-1	NA
150328E2	7	1500252-02	dms	29-MAR-15	03:14:49	ST150328E2-1	NA
150328E2	8	1400915-03RE1@5X	dms	29-MAR-15	04:19:13	ST150328E2-2	NA
150328E2	9	1400915-04RE1@5X	dms	29-MAR-15	05:23:38	ST150328E2-2	NA
150328E2	10	SOLVENT BLANK	dms	29-MAR-15	06:28:02	NA	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: 5T150328EZ-Z End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	DM 3/30/15 ✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > (10,000)? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MJ 3/30/15
Initials & Date

** Ending standard criteria applicable to 8290 only.*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150330E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150330E1 S#1 Analysis Date: 30-MAR-15 Time: 08:14:16

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	3.08	2.66-3.60	y	46.2	37.5-62.5
PCB-2	3.08	2.66-3.60	y	43.3	37.5-62.5
PCB-3	3.05	2.66-3.60	y	45.0	37.5-62.5
PCB-4/10	1.63	1.33-1.79	y	192.7	150-250
PCB-7/9	1.63	1.33-1.79	y	198.7	150-250
PCB-6	1.63	1.33-1.79	y	99.2	75.0-125
PCB-5/8	1.63	1.33-1.79	y	196.7	150-250
PCB-14	1.64	1.33-1.79	y	99.7	75.0-125
PCB-11	1.64	1.33-1.79	y	99.9	75.0-125
PCB-12/13	1.63	1.33-1.79	y	196.2	150-250
PCB-15	1.63	1.33-1.79	y	99.6	75.0-125
PCB-19	1.08	0.88-1.20	y	52.6	37.5-62.5
PCB-30	1.08	0.88-1.20	y	48.9	37.5-62.5
PCB-18	1.07	0.88-1.20	y	51.3	37.5-62.5
PCB-17	1.07	0.88-1.20	y	50.4	37.5-62.5
PCB-24/27	1.08	0.88-1.20	y	101.8	75.0-125
PCB-16/32	1.07	0.88-1.20	y	102.7	75.0-125
PCB-34	1.10	0.88-1.20	y	50.5	37.5-62.5
PCB-23	1.06	0.88-1.20	y	51.2	37.5-62.5
PCB-29	1.07	0.88-1.20	y	50.4	37.5-62.5
PCB-26	1.07	0.88-1.20	y	51.2	37.5-62.5
PCB-25	1.08	0.88-1.20	y	53.9	37.5-62.5
PCB-31	1.07	0.88-1.20	y	53.9	37.5-62.5
PCB-28	1.09	0.88-1.20	y	54.6	37.5-62.5
PCB-20/21/33	1.08	0.88-1.20	y	164.9	112.5-225
PCB-22	1.08	0.88-1.20	y	52.8	37.5-62.5
PCB-36	1.08	0.88-1.20	y	53.4	37.5-62.5
PCB-39	1.09	0.88-1.20	y	54.5	37.5-62.5
PCB-38	1.10	0.88-1.20	y	51.3	37.5-62.5
PCB-35	1.09	0.88-1.20	y	57.1	37.5-62.5
PCB-37	1.08	0.88-1.20	y	55.2	37.5-62.5
PCB-54	0.79	0.65-0.89	y	55.1	37.5-62.5
PCB-50	0.77	0.65-0.89	y	55.0	37.5-62.5
PCB-53	0.79	0.65-0.89	y	56.6	37.5-62.5
PCB-51	0.78	0.65-0.89	y	53.6	37.5-62.5
PCB-45	0.79	0.65-0.89	y	55.8	37.5-62.5
PCB-46	0.78	0.65-0.89	y	52.9	37.5-62.5

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.78	0.65-0.89	y	108.7	75.0-125
PCB-73	0.80	0.65-0.89	y	58.1	37.5-62.5
PCB-43/49	0.79	0.65-0.89	y	107.9	75.0-125
PCB-47	0.78	0.65-0.89	y	54.6	37.5-62.5
PCB-48/75	0.79	0.65-0.89	y	112.5	75.0-125
PCB-65	0.78	0.65-0.89	y	58.5	37.5-62.5
PCB-62	0.78	0.65-0.89	y	51.9	37.5-62.5
PCB-44	0.80	0.65-0.89	y	55.6	37.5-62.5
PCB-42/59	0.77	0.65-0.89	y	110.0	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	222.8	150-250
PCB-68	0.79	0.65-0.89	y	54.1	37.5-62.5
PCB-40	0.78	0.65-0.89	y	54.9	37.5-62.5
PCB-57	0.78	0.65-0.89	y	54.5	37.5-62.5
PCB-67	0.77	0.65-0.89	y	54.7	37.5-62.5
PCB-58	0.78	0.65-0.89	y	53.6	37.5-62.5
PCB-63	0.79	0.65-0.89	y	53.2	37.5-62.5
PCB-74	0.78	0.65-0.89	y	55.4	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	110.4	75.0-125
PCB-76/66	0.78	0.65-0.89	y	107.4	75.0-125
PCB-80	0.77	0.65-0.89	y	56.6	37.5-62.5
PCB-55	0.78	0.65-0.89	y	56.3	37.5-62.5
PCB-56/60	0.78	0.65-0.89	y	114.0	75.0-125
PCB-79	0.80	0.65-0.89	y	57.6	37.5-62.5
PCB-78	0.79	0.65-0.89	y	53.8	37.5-62.5
PCB-81	0.79	0.65-0.89	y	53.1	37.5-62.5
PCB-77	0.82	0.65-0.89	y	54.4	37.5-62.5
PCB-104	1.59	1.32-1.78	y	55.0	37.5-62.5
PCB-96	1.59	1.32-1.78	y	50.9	37.5-62.5
PCB-103	1.59	1.32-1.78	y	51.0	37.5-62.5
PCB-100	1.59	1.32-1.78	y	51.8	37.5-62.5
PCB-94	1.60	1.32-1.78	y	50.7	37.5-62.5
PCB-95/98/102	1.57	1.32-1.78	y	156.0	112.5-225
PCB-93	1.67	1.32-1.78	y	51.8	37.5-62.5
PCB-88/91	1.59	1.32-1.78	y	109.4	75.0-125
PCB-121	1.61	1.32-1.78	y	48.8	37.5-62.5

Analyst: DMS

Date: 3/30/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150330E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150330E1 S#1 Analysis Date: 30-MAR-15 Time: 08:14:16

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.57	1.32-1.78	y	103.7	75.0-125	PCB-140	1.28	1.05-1.43	y	58.6	37.5-62.5
PCB-89	1.60	1.32-1.78	y	51.2	37.5-62.5	PCB-134/143	1.27	1.05-1.43	y	102.5	75.0-125
PCB-90/101	1.58	1.32-1.78	y	104.7	75.0-125	PCB-133/142	1.24	1.05-1.43	y	100.6	75.0-125
PCB-113	1.59	1.32-1.78	y	49.6	37.5-62.5	PCB-131	1.23	1.05-1.43	y	48.8	37.5-62.5
PCB-99	1.61	1.32-1.78	y	57.1	37.5-62.5	PCB-146/165	1.26	1.05-1.43	y	98.1	75.0-125
PCB-119	1.59	1.32-1.78	y	52.5	37.5-62.5	PCB-132/161	1.25	1.05-1.43	y	98.2	75.0-125
PCB-108/112	1.60	1.32-1.78	y	103.7	75.0-125	PCB-153	1.24	1.05-1.43	y	49.3	37.5-62.5
PCB-83	1.63	1.32-1.78	y	51.9	37.5-62.5	PCB-168	1.25	1.05-1.43	y	49.2	37.5-62.5
PCB-97	1.60	1.32-1.78	y	52.3	37.5-62.5	PCB-141	1.23	1.05-1.43	y	50.3	37.5-62.5
PCB-86	1.67	1.32-1.78	y	59.7	37.5-62.5	PCB-137	1.22	1.05-1.43	y	51.6	37.5-62.5
PCB-87/117/125	1.55	1.32-1.78	y	153.4	112.5-225	PCB-130	1.27	1.05-1.43	y	47.8	37.5-62.5
PCB-111/115	1.62	1.32-1.78	y	102.4	75.0-125	PCB-138/163/164	1.26	1.05-1.43	y	148.4	112.5-225
PCB-85/116	1.54	1.32-1.78	y	107.4	75.0-125	PCB-158/160	1.23	1.05-1.43	y	103.1	75.0-125
PCB-120	1.60	1.32-1.78	y	52.9	37.5-62.5	PCB-129	1.24	1.05-1.43	y	48.9	37.5-62.5
PCB-110	1.59	1.32-1.78	y	53.1	37.5-62.5	PCB-166	1.24	1.05-1.43	y	49.4	37.5-62.5
PCB-82	1.60	1.32-1.78	y	50.7	37.5-62.5	PCB-159	1.23	1.05-1.43	y	51.2	37.5-62.5
PCB-124	1.58	1.32-1.78	y	52.9	37.5-62.5	PCB-128/162	1.25	1.05-1.43	y	95.6	75.0-125
PCB-107/109	1.59	1.32-1.78	y	101.2	75.0-125	PCB-167	1.25	1.05-1.43	y	50.5	37.5-62.5
PCB-123	1.61	1.32-1.78	y	53.4	37.5-62.5	PCB-156	1.24	1.05-1.43	y	51.1	37.5-62.5
PCB-106/118	1.59	1.32-1.78	y	105.3	75.0-125	PCB-157	1.26	1.05-1.43	y	47.1	37.5-62.5
PCB-114	1.60	1.32-1.78	y	53.2	37.5-62.5	PCB-169	1.27	1.05-1.43	y	48.0	37.5-62.5
PCB-122	1.66	1.32-1.78	y	52.9	37.5-62.5	PCB-188	1.07	0.89-1.21	y	53.5	37.5-62.5
PCB-105	1.64	1.32-1.78	y	53.5	37.5-62.5	PCB-184	1.07	0.89-1.21	y	51.7	37.5-62.5
PCB-127	1.63	1.32-1.78	y	53.0	37.5-62.5	PCB-179	1.06	0.89-1.21	y	51.7	37.5-62.5
PCB-126	1.62	1.32-1.78	y	55.5	37.5-62.5	PCB-176	1.09	0.89-1.21	y	51.3	37.5-62.5
PCB-155	1.27	1.05-1.43	y	51.8	37.5-62.5	PCB-186	1.07	0.89-1.21	y	52.4	37.5-62.5
PCB-150	1.26	1.05-1.43	y	54.3	37.5-62.5	PCB-178	1.06	0.89-1.21	y	53.2	37.5-62.5
PCB-152	1.28	1.05-1.43	y	55.5	37.5-62.5	PCB-175	1.06	0.89-1.21	y	54.0	37.5-62.5
PCB-145	1.27	1.05-1.43	y	54.8	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	107.9	75.0-125
PCB-136	1.27	1.05-1.43	y	53.1	37.5-62.5	PCB-183	1.07	0.89-1.21	y	53.6	37.5-62.5
PCB-148	1.28	1.05-1.43	y	57.5	37.5-62.5	PCB-185	1.08	0.89-1.21	y	52.0	37.5-62.5
PCB-154	1.27	1.05-1.43	y	57.7	37.5-62.5	PCB-174	1.05	0.89-1.21	y	51.4	37.5-62.5
PCB-151	1.26	1.05-1.43	y	56.4	37.5-62.5	PCB-181	1.08	0.89-1.21	y	55.0	37.5-62.5
PCB-135	1.23	1.05-1.43	y	58.8	37.5-62.5	PCB-177	1.08	0.89-1.21	y	52.1	37.5-62.5
PCB-144	1.27	1.05-1.43	y	57.1	37.5-62.5	PCB-171	1.06	0.89-1.21	y	51.8	37.5-62.5
PCB-147	1.26	1.05-1.43	y	59.4	37.5-62.5	PCB-173	1.06	0.89-1.21	y	52.6	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	118.8	75.0-125	PCB-172	1.06	0.89-1.21	y	53.0	37.5-62.5

Analyst: DMS

Date: 3/30/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150330E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150330E1 S#1 Analysis Date: 30-MAR-15 Time: 08:14:16

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.06	0.89-1.21	y	55.0	37.5-62.5
PCB-180	1.07	0.89-1.21	y	52.9	37.5-62.5
PCB-193	1.06	0.89-1.21	y	52.7	37.5-62.5
PCB-191	1.09	0.89-1.21	y	53.2	37.5-62.5
PCB-170	1.07	0.89-1.21	y	52.8	37.5-62.5
PCB-190	1.06	0.89-1.21	y	53.6	37.5-62.5
PCB-189	1.08	0.89-1.21	y	51.9	37.5-62.5
PCB-202	0.89	0.76-1.02	y	50.9	37.5-62.5
PCB-201	0.91	0.76-1.02	y	51.4	37.5-62.5
PCB-204	0.90	0.76-1.02	y	52.8	37.5-62.5
PCB-197	0.91	0.76-1.02	y	51.8	37.5-62.5
PCB-200	0.90	0.76-1.02	y	53.7	37.5-62.5
PCB-198	0.89	0.76-1.02	y	56.3	37.5-62.5
PCB-199	0.91	0.76-1.02	y	55.9	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	117.4	75.0-125
PCB-195	0.91	0.76-1.02	y	47.0	37.5-62.5
PCB-194	0.92	0.76-1.02	y	47.4	37.5-62.5
PCB-205	0.93	0.76-1.02	y	50.3	37.5-62.5
PCB-208	1.34	1.14-1.54	y	50.6	37.5-62.5
PCB-207	1.36	1.14-1.54	y	51.6	37.5-62.5
PCB-206	1.32	1.14-1.54	y	49.3	37.5-62.5
PCB-209	1.18	0.99-1.33	y	49.8	37.5-62.5

Analyst: DMS

Date: 3/30/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150330E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 150330E1 S#1 Analysis Date: 30-MAR-15 Time: 08:14:16

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.18	2.66-3.60	y	112.1	50.0-145
13C-PCB-3	3.27	2.66-3.60	y	113.2	50.0-145
13C-PCB-4	1.58	1.33-1.79	y	107.0	50.0-145
13C-PCB-9	1.58	1.33-1.79	y	98.7	50.0-145
13C-PCB-11	1.57	1.33-1.79	y	96.9	50.0-145
13C-PCB-19	1.08	0.88-1.20	y	91.5	50.0-145
13C-PCB-32	1.08	0.88-1.20	y	90.2	50.0-145
13C-PCB-28	1.07	0.88-1.20	y	101.7	50.0-145
13C-PCB-37	1.07	0.88-1.20	y	100.7	50.0-145
13C-PCB-54	0.81	0.65-0.89	y	95.4	50.0-145
13C-PCB-52	0.81	0.65-0.89	y	96.2	50.0-145
13C-PCB-47	0.79	0.65-0.89	y	96.4	50.0-145
13C-PCB-70	0.81	0.65-0.89	y	98.8	50.0-145
13C-PCB-80	0.80	0.65-0.89	y	97.4	50.0-145
13C-PCB-81	0.81	0.65-0.89	y	101.9	50.0-145
13C-PCB-77	0.81	0.65-0.89	y	102.1	50.0-145
13C-PCB-104	1.68	1.32-1.78	y	92.7	50.0-145
13C-PCB-95	1.62	1.32-1.78	y	94.5	50.0-145
13C-PCB-101	1.66	1.32-1.78	y	96.5	50.0-145
13C-PCB-97	1.63	1.32-1.78	y	100.3	50.0-145
13C-PCB-123	1.67	1.32-1.78	y	107.0	50.0-145
13C-PCB-118	1.66	1.32-1.78	y	104.5	50.0-145
13C-PCB-114	1.60	1.32-1.78	y	99.0	50.0-145
13C-PCB-105	1.62	1.32-1.78	y	96.3	50.0-145
13C-PCB-127	1.57	1.32-1.78	y	94.6	50.0-145
13C-PCB-126	1.59	1.32-1.78	y	94.4	50.0-145
13C-PCB-155	1.26	1.05-1.43	y	79.7	50.0-145
13C-PCB-153	1.28	1.05-1.43	y	95.4	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	93.2	50.0-145
13C-PCB-138	1.28	1.05-1.43	y	96.3	50.0-145
13C-PCB-159	1.27	1.05-1.43	y	100.0	50.0-145
13C-PCB-167	1.28	1.05-1.43	y	101.1	50.0-145
13C-PCB-156	1.26	1.05-1.43	y	99.5	50.0-145
13C-PCB-157	1.29	1.05-1.43	y	104.0	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.25	1.05-1.43	y	106.7	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	88.2	50 - 145
13C-PCB-180	0.48	0.38-0.52	y	95.6	50 - 145
13C-PCB-170	0.48	0.38-0.52	y	100.2	50 - 145
13C-PCB-189	0.45	0.38-0.52	y	105.8	50 - 145
13C-PCB-202	0.93	0.76-1.02	y	87.2	50 - 145
13C-PCB-194	0.91	0.76-1.02	y	95.8	50 - 145
13C-PCB-208	0.79	0.65-0.89	y	92.1	50 - 145
13C-PCB-206	0.80	0.65-0.89	y	106.3	50 - 145
13C-PCB-209	1.20	0.99-1.33	y	116.1	50 - 145

CRS vs. RS

13C-PCB-79	0.81	0.65-0.89	y	102.3	75 - 125
13C-PCB-178	0.47	0.38-0.52	y	88.0	75 - 125

Analyst: DMS

Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150330E1 S:1 Acq:30-MAR-15 08:14:16 ConCal: ST150330E1-1

Lab ID: ST150330E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	1.11e+08	3.08	y	1.19	16:08	1.001	0.996	1.006	46.2210
	PCB-2	1.09e+08	3.08	y	1.18	18:30	0.988	0.984	0.994	43.2530
	PCB-3	1.36e+08	3.05	y	1.43	18:44	1.001	0.996	1.006	45.0375
	PCB-4/10	3.90e+08	1.63	y	1.57	20:06	1.002	0.997	1.007	192.719
	PCB-7/9	4.37e+08	1.63	y	1.21	21:53	0.868	0.866	0.874	198.672
	PCB-6	2.35e+08	1.63	y	1.30	22:31	0.893	0.890	0.899	99.2199
	PCB-5/8	4.10e+08	1.63	y	1.15	22:57	0.910	0.907	0.917	196.653
	PCB-14	2.06e+08	1.64	y	1.11	24:03	0.954	0.949	0.959	99.6716
	PCB-11	2.02e+08	1.64	y	1.09	25:14	1.001	0.995	1.005	99.8591
	PCB-12/13	4.37e+08	1.63	y	1.19	25:37	1.016	1.011	1.021	196.204
	PCB-15	2.38e+08	1.63	y	1.28	25:56	1.029	1.023	1.033	99.5679
	PCB-19	5.47e+07	1.08	y	1.04	24:13	1.001	0.996	1.006	52.5798
	PCB-30	8.36e+07	1.08	y	1.71	25:06	1.038	1.032	1.042	48.9206
	PCB-18	5.91e+07	1.07	y	0.78	25:51	0.954	0.949	0.959	51.3122
	PCB-17	6.85e+07	1.07	y	0.92	26:01	0.960	0.956	0.966	50.4402
	PCB-24/27	1.78e+08	1.08	y	1.19	26:36	0.981	0.977	0.987	101.824
-	PCB-16/32	1.42e+08	1.07	y	0.94	27:07	1.000	0.995	1.005	102.722
-	PCB-34	9.98e+07	1.10	y	1.14	27:54	0.960	0.955	0.965	50.4617
	PCB-23	1.14e+08	1.06	y	1.28	28:01	0.964	0.959	0.969	51.2492
	PCB-29	9.47e+07	1.07	y	1.08	28:15	0.972	0.967	0.977	50.3789
	PCB-26	1.07e+08	1.07	y	1.21	28:28	0.979	0.974	0.984	51.1603
	PCB-25	1.18e+08	1.08	y	1.26	28:37	0.985	0.979	0.989	53.8631
	PCB-31	1.20e+08	1.07	y	1.28	28:59	0.997	0.992	1.002	53.8714
	PCB-28	1.63e+08	1.09	y	1.71	29:04	1.000	0.995	1.005	54.6130
	PCB-20/21/33	3.10e+08	1.08	y	1.08	29:42	1.022	1.017	1.027	164.888
	PCB-22	1.11e+08	1.08	y	1.21	30:08	1.037	1.032	1.042	52.8423
	PCB-36	9.48e+07	1.08	y	1.14	30:45	0.934	0.928	0.938	53.4369
	PCB-39	9.44e+07	1.09	y	1.12	31:14	0.948	0.943	0.953	54.4660
	PCB-38	9.56e+07	1.10	y	1.20	31:59	0.971	0.966	0.976	51.2801
	PCB-35	1.09e+08	1.09	y	1.23	32:31	0.987	0.982	0.992	57.1152
	PCB-37	1.05e+08	1.08	y	1.23	32:57	1.000	0.995	1.005	55.2155
	PCB-54	7.68e+07	0.79	y	1.10	27:57	1.001	0.996	1.006	55.0928
	PCB-50	6.13e+07	0.77	y	0.88	29:08	1.043	1.037	1.047	55.0434
	PCB-53	6.09e+07	0.79	y	1.06	29:46	0.946	0.942	0.952	56.6088
	PCB-51	5.37e+07	0.78	y	0.99	30:07	0.957	0.952	0.962	53.5992
	PCB-45	4.88e+07	0.79	y	0.86	30:33	0.970	0.966	0.976	55.8288
	PCB-46	4.53e+07	0.78	y	0.85	31:02	0.986	0.981	0.991	52.9057

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.41e+08	0.78	y	1.28	31:31	1.001	0.996	1.006	108.693
PCB-73	7.96e+07	0.80	y	1.35	31:37	1.005	1.000	1.010	58.1232
PCB-43/49	1.09e+08	0.79	y	0.99	31:47	1.010	1.005	1.015	107.854
PCB-47	6.17e+07	0.78	y	1.06	31:59	1.000	0.996	1.006	54.6077
PCB-48/75	1.48e+08	0.79	y	1.23	32:06	1.004	0.999	1.009	112.518
PCB-65	7.65e+07	0.78	y	1.22	32:23	1.013	1.008	1.018	58.4588
PCB-62	6.77e+07	0.78	y	1.22	32:29	1.016	1.011	1.021	51.9344
PCB-44	5.10e+07	0.80	y	0.86	32:47	1.025	1.021	1.031	55.5567
PCB-42/59	1.34e+08	0.77	y	1.14	33:01	1.032	1.028	1.038	110.023
PCB-41/64/71/72	2.87e+08	0.78	y	1.21	33:36	1.051	1.046	1.056	222.836
PCB-68	7.78e+07	0.79	y	1.35	33:52	1.059	1.054	1.064	54.0557
PCB-40	4.11e+07	0.78	y	0.70	34:04	1.065	1.061	1.071	54.9134
PCB-57	7.18e+07	0.78	y	0.98	34:26	0.970	0.965	0.975	54.4673
PCB-67	8.15e+07	0.77	y	1.11	34:45	0.979	0.974	0.984	54.7100
PCB-58	6.68e+07	0.78	y	0.93	34:52	0.982	0.977	0.987	53.5761
PCB-63	6.82e+07	0.79	y	0.95	35:01	0.987	0.982	0.992	53.2376
PCB-74	9.28e+07	0.78	y	1.24	35:18	0.995	0.990	1.000	55.4309
PCB-61/70	1.42e+08	0.78	y	0.95	35:28	0.999	0.995	1.005	110.442
PCB-76/66	1.51e+08	0.78	y	1.04	35:42	1.006	1.001	1.011	107.359
PCB-80	9.25e+07	0.77	y	1.19	35:56	1.001	0.996	1.006	56.5835
PCB-55	8.04e+07	0.78	y	1.04	36:15	1.009	1.005	1.015	56.2568
PCB-56/60	1.58e+08	0.78	y	1.01	36:44	1.023	1.019	1.029	113.988
PCB-79	8.53e+07	0.80	y	1.08	37:49	1.053	1.048	1.058	57.6323
PCB-78	8.76e+07	0.79	y	1.27	38:30	0.987	0.982	0.992	53.8360
PCB-81	9.05e+07	0.79	y	1.33	39:02	1.000	0.995	1.005	53.0794
PCB-77	7.85e+07	0.82	y	1.10	39:38	1.000	0.995	1.005	54.3654
PCB-104	4.95e+07	1.59	y	1.18	32:39	1.001	0.996	1.006	55.0206
PCB-96	4.41e+07	1.59	y	1.14	33:54	1.039	1.034	1.044	50.9281
PCB-103	3.71e+07	1.59	y	0.96	34:26	1.055	1.050	1.060	51.0433
PCB-100	3.69e+07	1.59	y	0.94	34:47	1.066	1.061	1.071	51.7727
PCB-94	3.07e+07	1.60	y	1.06	35:16	0.986	0.980	0.990	50.6617
PCB-95/98/102	1.09e+08	1.57	y	1.22	35:45	0.999	0.995	1.005	156.024
PCB-93	2.50e+07	1.67	y	0.84	35:53	1.003	0.997	1.007	51.7896
PCB-88/91	7.00e+07	1.59	y	1.12	36:10	1.011	1.005	1.015	109.388
PCB-121	4.51e+07	1.61	y	1.62	36:17	1.014	1.009	1.019	48.7802
PCB-84/92	6.71e+07	1.57	y	1.05	37:06	0.990	0.985	0.995	103.703
PCB-89	3.58e+07	1.60	y	1.13	37:17	0.995	0.991	1.001	51.1844

Integrations by Analyst: DMS Date: 3/30/15

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14K1102 Filename: 150330E1 S:1 Acq:30-MAR-15 08:14:16 ConCal: ST150330E1-1

Lab ID: ST150330E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	7.13e+07	1.58 y	1.10	37:28	1.000	0.995	1.005	104.747
	PCB-113	4.32e+07	1.59 y	1.41	37:42	1.006	1.002	1.012	49.5626
	PCB-99	4.71e+07	1.61 y	1.34	37:48	1.009	1.004	1.014	57.0669
	PCB-119	4.66e+07	1.59 y	1.53	38:17	0.988	0.982	0.992	52.5422
	PCB-108/112	7.68e+07	1.60 y	1.28	38:26	0.991	0.986	0.996	103.707
	PCB-83	4.55e+07	1.63 y	1.52	38:35	0.995	0.990	1.000	51.8658
	PCB-97	3.58e+07	1.60 y	1.18	38:47	1.000	0.995	1.005	52.3325
	PCB-86	2.91e+07	1.67 y	0.84	38:55	1.004	0.999	1.009	59.6556
	B-87/117/125	1.37e+08	1.55 y	1.55	39:03	1.007	1.002	1.012	153.380
	PCB-111/115	9.67e+07	1.62 y	1.63	39:12	1.011	1.006	1.016	102.430
	PCB-85/116	8.09e+07	1.54 y	1.30	39:20	1.015	1.010	1.020	107.422
	PCB-120	5.12e+07	1.60 y	1.68	39:35	1.021	1.016	1.026	52.8533
	PCB-110	4.78e+07	1.59 y	1.56	39:43	1.025	1.020	1.030	53.1426
	PCB-82	3.01e+07	1.60 y	0.76	40:20	0.976	0.971	0.981	50.7351
	PCB-124	6.09e+07	1.58 y	1.47	41:01	0.993	0.988	0.998	52.9455
	PCB-107/109	1.05e+08	1.59 y	1.32	41:10	0.996	0.991	1.001	101.157
	PCB-123	4.88e+07	1.61 y	1.17	41:21	1.001	0.996	1.006	53.4050
-	PCB-106/118	1.01e+08	1.59 y	1.17	41:33	1.001	0.996	1.006	105.317
-	PCB-114	7.74e+07	1.60 y	1.30	42:11	1.001	0.995	1.005	53.2303
	PCB-122	6.65e+07	1.66 y	1.12	42:19	1.004	0.999	1.009	52.8954
	PCB-105	7.60e+07	1.64 y	1.30	43:02	1.000	0.995	1.005	53.5163
	PCB-127	8.19e+07	1.63 y	1.33	43:22	1.000	0.996	1.006	53.0377
	PCB-126	6.73e+07	1.62 y	1.18	45:17	1.000	0.995	1.005	55.4735
	PCB-155	3.16e+07	1.27 y	1.11	37:02	1.001	0.966	1.006	51.7780
	PCB-150	2.97e+07	1.26 y	1.00	38:17	1.035	1.030	1.040	54.3167
	PCB-152	3.39e+07	1.28 y	1.12	38:46	1.047	1.043	1.053	55.4705
	PCB-145	3.60e+07	1.27 y	1.20	39:12	1.059	1.055	1.065	54.7617
	PCB-136	3.42e+07	1.27 y	1.18	39:32	1.068	1.064	1.074	53.0884
	PCB-148	2.34e+07	1.28 y	0.74	39:38	1.071	1.066	1.076	57.4680
	PCB-154	2.71e+07	1.27 y	0.86	40:08	1.084	1.080	1.090	57.6832
	PCB-151	2.30e+07	1.26 y	0.75	40:46	1.102	1.097	1.107	56.3713
	PCB-135	2.55e+07	1.23 y	0.79	40:59	1.107	1.103	1.113	58.8253
	PCB-144	2.38e+07	1.27 y	0.76	41:06	1.110	1.105	1.117	57.1056
	PCB-147	2.67e+07	1.26 y	0.82	41:13	1.114	1.109	1.121	59.4462
	PCB-139/149	4.96e+07	1.27 y	0.76	41:29	1.121	1.116	1.128	118.841
-	PCB-140	2.32e+07	1.28 y	0.72	41:40	1.126	1.121	1.133	58.6412
-	PCB-134/143	8.54e+07	1.27 y	0.92	42:06	0.975	0.970	0.980	102.489

	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
	PCB-133/142	7.49e+07	1.24 y	0.82	42:23	0.982	0.977	0.987	100.576
	PCB-131	4.03e+07	1.23 y	0.91	42:33	0.985	0.981	0.991	48.7762
	PCB-146/165	1.11e+08	1.26 y	1.25	42:47	0.991	0.986	0.996	98.1246
	PCB-132/161	9.87e+07	1.25 y	1.10	43:02	0.997	0.992	1.002	98.2187
	PCB-153	5.60e+07	1.24 y	1.25	43:12	1.000	0.995	1.005	49.2702
	PCB-168	6.48e+07	1.25 y	1.45	43:25	1.006	1.001	1.011	49.1818
	PCB-141	4.54e+07	1.23 y	1.09	43:56	1.000	0.995	1.005	50.2627
	PCB-137	4.57e+07	1.22 y	1.06	44:18	1.009	1.004	1.014	51.6286
	PCB-130	3.84e+07	1.27 y	0.96	44:25	1.011	1.006	1.016	47.7843
	PCB-138/163/164	1.69e+08	1.26 y	1.29	44:47	1.001	0.996	1.006	148.436
	PCB-158/160	1.22e+08	1.23 y	1.34	45:02	1.006	1.001	1.011	103.072
	PCB-129	3.67e+07	1.24 y	0.85	45:16	1.011	1.007	1.017	48.9096
	PCB-166	6.07e+07	1.24 y	1.19	45:44	0.993	0.988	0.998	49.3654
	PCB-159	5.90e+07	1.23 y	1.11	46:03	1.000	0.996	1.006	51.1606
	PCB-128/162	1.04e+08	1.25 y	1.05	46:21	1.007	1.002	1.012	95.5846
	PCB-167	6.88e+07	1.25 y	1.20	46:44	1.000	0.995	1.005	50.4840
	PCB-156	6.22e+07	1.24 y	1.14	48:01	1.000	0.996	1.006	51.0911
	PCB-157	6.43e+07	1.26 y	1.16	48:17	1.000	0.995	1.005	47.1199
	PCB-169	6.12e+07	1.27 y	1.12	50:27	1.000	0.995	1.005	48.0103
	PCB-188	5.69e+07	1.07 y	1.58	42:50	1.001	0.996	1.006	53.5079
	PCB-184	5.67e+07	1.07 y	1.63	43:17	1.011	1.006	1.016	51.6821
	PCB-179	4.53e+07	1.06 y	1.30	44:03	1.029	1.024	1.034	51.6726
	PCB-176	5.10e+07	1.09 y	1.48	44:31	1.040	1.035	1.045	51.3049
	PCB-186	5.13e+07	1.07 y	1.45	45:07	1.054	1.050	1.060	52.4327
	PCB-178	3.70e+07	1.06 y	1.03	45:37	1.066	1.061	1.071	53.1601
	PCB-175	3.68e+07	1.06 y	1.01	45:57	1.074	1.069	1.079	53.9708
	PCB-182/187	9.08e+07	1.05 y	1.25	46:08	1.078	1.073	1.083	107.895
	PCB-183	4.36e+07	1.07 y	1.21	46:27	1.085	1.081	1.091	53.5591
	PCB-185	5.09e+07	1.08 y	1.80	47:07	0.956	0.951	0.961	52.0013
	PCB-174	3.85e+07	1.05 y	1.38	47:28	0.963	0.958	0.968	51.4357
	PCB-181	4.13e+07	1.08 y	1.38	47:34	0.965	0.960	0.970	55.0298
	PCB-177	3.56e+07	1.08 y	1.26	47:45	0.969	0.963	0.973	52.1470
	PCB-171	4.46e+07	1.06 y	1.58	48:02	0.975	0.970	0.980	51.7879
	PCB-173	3.17e+07	1.06 y	1.11	48:28	0.983	0.978	0.988	52.6238
	PCB-172	4.71e+07	1.06 y	1.63	48:54	0.992	0.987	0.997	52.9586
	PCB-192	5.20e+07	1.06 y	1.74	49:06	0.996	0.991	1.001	54.9931
	PCB-180	3.87e+07	1.07 y	1.34	49:19	1.000	0.995	1.005	52.8784

Integrations by Analyst: DMS

Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150330E1 S:1 Acq:30-MAR-15 08:14:16 ConCal: ST150330E1-1
Lab ID: ST150330E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	4.91e+07	1.06	y	1.72	49:31	1.005	0.999	1.009	52.6882
	PCB-191	4.90e+07	1.09	y	1.69	49:46	1.010	1.004	1.014	53.1820
	PCB-170	3.81e+07	1.07	y	1.60	50:49	1.000	0.995	1.005	52.8020
	PCB-190	5.35e+07	1.06	y	2.21	50:59	1.004	0.998	1.008	53.5786
	PCB-189	5.07e+07	1.08	y	1.55	52:20	1.000	0.995	1.005	51.8787
	PCB-202	3.35e+07	0.89	y	1.08	48:14	1.000	0.995	1.005	50.9202
	PCB-201	3.59e+07	0.91	y	1.15	48:43	1.010	1.005	1.015	51.4048
	PCB-204	3.65e+07	0.90	y	1.14	48:52	1.014	1.008	1.018	52.8075
	PCB-197	3.38e+07	0.91	y	1.07	49:11	1.020	1.015	1.025	51.7828
	PCB-200	3.47e+07	0.90	y	1.06	50:04	1.038	1.032	1.044	53.7385
	PCB-198	2.58e+07	0.89	y	0.76	51:25	1.066	1.059	1.069	56.3106
	PCB-199	2.71e+07	0.91	y	0.80	51:31	1.069	1.061	1.071	55.9065
-	PCB-196/203	5.72e+07	0.90	y	0.80	51:48	1.074	1.066	1.076	117.420
-	PCB-195	4.78e+07	0.91	y	1.23	52:58	0.984	0.979	0.989	46.9892
	PCB-194	4.76e+07	0.92	y	1.21	53:50	1.000	0.995	1.005	47.3871
	PCB-205	6.43e+07	0.93	y	1.54	54:07	1.005	1.001	1.011	50.3200
	PCB-208	5.08e+07	1.34	y	0.93	53:07	1.000	0.995	1.005	50.5786
	PCB-207	6.03e+07	1.36	y	1.08	53:25	1.006	1.001	1.011	51.6035
	PCB-206	3.78e+07	1.32	y	1.02	55:27	1.000	0.995	1.005	49.3285
	PCB-209	4.48e+07	1.18	y	1.17	56:50	1.000	0.995	1.005	49.8287

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	3.55e+08	3.08	y	16:08	1.27	134.512	
Total Di-PCB	2.56e+09	1.63	y	20:06	1.21	1186.52	
Total Tri-PCB	5.86e+08	1.08	y	24:13	1.10	407.798	
Total Tri-PCB	1.76e+09	1.10	y	27:54	1.21	866.178	Sum:1273.98
Total Tetra-PCB	2.99e+09	0.79	y	27:57	1.09	2335.99	
Total Penta-PCB	1.71e+09	1.59	y	32:39	1.18	2149.61	
Total Penta-PCB	3.84e+08	1.60	y	42:11	1.25	279.277	Sum:2428.89
Total Hexa-PCB	3.88e+08	1.27	y	37:02	0.90	793.845	
Total Hexa-PCB	1.49e+09	1.27	y	42:06	1.11	1413.61	Sum:2207.45
Total Hepta-PCB	1.10e+09	1.07	y	42:50	1.42	1281.59	
Total Octa-PCB	2.85e+08	0.89	y	48:14	0.96	490.291	
Total Octa-PCB	1.63e+08	0.91	y	52:58	1.33	148.137	Sum:638.428
Total Nona-PCB	1.49e+08	1.34	y	53:07	1.01	152.014	
Total Deca-PCB	4.48e+07	1.18	y	56:50	1.17	49.8287	

Total PCB Conc:11594.8916550

Integrations
by
Analyst: DMS
Date: 3/30/15

Client ID: PCB CS3 14K1102 Filename: 150330E1 S:1 Acq:30-MAR-15 08:14:16 ConCal: ST150330E1-1
Lab ID: ST150330E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	2.01e+08	3.18 y	0.87	16:07	0.622	0.629	0.635	112	112
13C-PCB-3	2.12e+08	3.27 y	0.91	18:44	0.723	0.725	0.733	113	113
13C-PCB-4	1.29e+08	1.58 y	0.59	20:03	0.774	0.775	0.783	107	107
13C-PCB-9	1.82e+08	1.58 y	0.90	21:50	0.843	0.842	0.850	98.7	98.7
13C-PCB-11	1.87e+08	1.57 y	0.94	25:13	0.973	0.968	0.978	96.9	96.9
13C-PCB-19	9.98e+07	1.08 y	0.53	24:11	0.933	0.930	0.940	91.5	91.5
13C-PCB-28	1.74e+08	1.07 y	0.93	29:04	1.004	0.999	1.009	102	102
13C-PCB-32	1.47e+08	1.08 y	0.80	27:06	1.046	1.040	1.050	90.2	90.2
13C-PCB-37	1.55e+08	1.07 y	0.84	32:56	1.137	1.131	1.143	101	101
13C-PCB-47	1.07e+08	0.79 y	0.81	31:59	0.871	0.866	0.874	96.4	96.4
13C-PCB-52	1.01e+08	0.81 y	0.77	31:28	0.857	0.853	0.861	96.2	96.2
13C-PCB-54	1.26e+08	0.81 y	0.97	27:56	0.761	0.758	0.766	95.4	95.4
13C-PCB-70	1.35e+08	0.81 y	1.00	35:29	0.966	0.961	0.971	98.8	98.8
13C-PCB-77	1.31e+08	0.81 y	0.94	39:37	1.079	1.073	1.083	102	102
13C-PCB-80	1.37e+08	0.80 y	1.03	35:54	0.978	0.972	0.982	97.4	97.4
13C-PCB-81	1.28e+08	0.81 y	0.92	39:01	1.062	1.057	1.067	102	102
13C-PCB-95	5.73e+07	1.62 y	0.74	35:47	0.913	0.908	0.918	94.5	94.5
13C-PCB-97	5.78e+07	1.63 y	0.70	38:46	0.989	0.984	0.994	100	100
13C-PCB-101	6.19e+07	1.66 y	0.78	37:28	0.956	0.951	0.961	96.5	96.5
13C-PCB-104	7.60e+07	1.68 y	1.00	32:38	0.832	0.828	0.836	92.7	92.7
13C-PCB-105	1.09e+08	1.62 y	1.37	43:02	0.929	0.924	0.934	96.3	96.3
13C-PCB-114	1.12e+08	1.60 y	1.36	42:10	0.911	0.905	0.915	99.0	99.0
13C-PCB-118	8.20e+07	1.66 y	0.96	41:31	1.059	1.054	1.064	105	105
13C-PCB-123	7.83e+07	1.67 y	0.89	41:19	1.054	1.050	1.060	107	107
13C-PCB-126	1.03e+08	1.59 y	1.31	45:16	0.978	0.972	0.982	94.4	94.4
13C-PCB-127	1.16e+08	1.57 y	1.47	43:22	0.937	0.931	0.941	94.6	94.6
13C-PCB-138	8.81e+07	1.28 y	1.10	44:45	0.967	0.961	0.971	96.3	96.3
13C-PCB-141	8.33e+07	1.29 y	1.07	43:55	0.948	0.943	0.953	93.2	93.2
13C-PCB-153	9.10e+07	1.28 y	1.15	43:11	0.933	0.927	0.937	95.4	95.4
13C-PCB-155	5.48e+07	1.26 y	0.84	37:00	0.944	0.939	0.949	79.7	79.7
13C-PCB-156	1.07e+08	1.26 y	1.30	48:01	1.037	1.032	1.042	99.5	99.5
13C-PCB-157	1.17e+08	1.29 y	1.36	48:17	1.043	1.038	1.048	104	104
13C-PCB-159	1.04e+08	1.27 y	1.25	46:03	0.994	0.989	0.999	100.0	100.0
13C-PCB-167	1.14e+08	1.28 y	1.35	46:44	1.009	1.004	1.014	101	101
13C-PCB-169	1.14e+08	1.25 y	1.29	50:27	1.089	1.083	1.093	107	107
13C-PCB-170	4.52e+07	0.48 y	0.54	50:48	1.097	1.089	1.101	100	100
13C-PCB-180	5.44e+07	0.48 y	0.68	49:17	1.065	1.060	1.070	95.6	95.6
13C-PCB-188	6.72e+07	0.46 y	0.92	42:48	0.924	0.919	0.929	88.2	88.2
13C-PCB-189	6.30e+07	0.45 y	0.72	52:19	1.130	1.120	1.132	106	106
13C-PCB-194	8.29e+07	0.91 y	0.80	53:50	0.995	0.990	1.000	95.8	95.8
13C-PCB-202	6.08e+07	0.93 y	0.84	48:13	1.041	1.036	1.046	87.2	87.2
13C-PCB-206	7.49e+07	0.80 y	0.65	55:26	1.025	1.021	1.031	106	106
13C-PCB-208	1.08e+08	0.79 y	1.08	53:06	0.982	0.976	0.986	92.1	92.1
13C-PCB-209	7.69e+07	1.20 y	0.61	56:49	1.050	1.045	1.055	116	116

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.42e+08	0.81 y	1.02	37:48	1.029	1.023	1.034	102	102
13C-PCB-178	4.49e+07	0.47 y	0.61	45:35	0.985	0.979	0.990	88.0	88.0

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.42e+08	0.81 y	1.10	37:48	0.969	0.964	0.974	100	100
13C-PCB-178	4.49e+07	0.47 y	0.90	45:35	0.925	0.920	0.930	92.0	92.0

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	2.05e+08	1.57	y	1.00	25:55	100
13C-PCB-31	1.84e+08	1.04	y	1.00	28:57	100
13C-PCB-60	1.36e+08	0.81	y	1.00	36:43	100
13C-PCB-111	8.18e+07	1.66	y	1.00	39:12	100
13C-PCB-128	8.32e+07	1.28	y	1.00	46:18	100
13C-PCB-205	1.08e+08	0.91	y	1.00	54:06	100

Analyst: DMS

Date: 3/30/15

Vista Analytical Laboratory - Injection Log Run file: 150330E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150330E1	1	ST150330E1-1	DMS	30-MAR-15	08:14:16	ST150330E1-1	NA
150330E1	2	SOLVENT BLANK	DMS	30-MAR-15	09:18:39	ST150330E1-1	NA
150330E1	3	1400915-03RE1@20X	DMS	30-MAR-15	10:23:04	ST150330E1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150330E1-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓ DM 3/30/15	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(Y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MN 3/30/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
Run: 140623E2 Analyte: PCBNEW Cal: PCBVG8-6-23-14 Inst. ID: VG 8

Data filename: 140623E2

Name	Mean RRF	%RSD	Samp# 1 0.25 RRF#1	Samp# 2 1.0 RRF#2	Samp# 3 2.5 RRF#3	Samp# 4 50 RRF#4	Samp# 5 400 RRF#5	Samp# 6 750 RRF#6
PCB-1	1.19	8.06 %	1.04	1.13	1.18	1.23	1.29	1.29
PCB-2	1.18	7.35 %	1.05	1.12	1.16	1.23	1.28	1.26
PCB-3	1.43	5.11 %	1.34	1.37	1.37	1.46	1.49	1.51
PCB-4/10	1.57	2.14 %	1.53	1.54	1.55	1.57	1.60	1.62
PCB-7/9	1.21	2.44 %	1.22	1.17	1.19	1.21	1.22	1.26
PCB-6	1.30	2.87 %	1.25	1.28	1.31	1.31	1.34	1.35
PCB-5/8	1.15	2.31 %	1.13	1.12	1.15	1.15	1.16	1.19
PCB-14	1.11	3.28 %	1.05	1.09	1.11	1.14	1.12	1.15
PCB-11	1.09	2.23 %	1.05	1.09	1.07	1.10	1.09	1.12
PCB-12/13	1.19	2.18 %	1.17	1.17	1.18	1.20	1.20	1.24
PCB-15	1.28	3.09 %	1.29	1.22	1.26	1.28	1.30	1.34
PCB-19	1.04	3.02 %	1.04	1.01	1.01	1.04	1.07	1.09
PCB-30	1.71	4.54 %	1.67	1.64	1.66	1.69	1.79	1.83
PCB-18	0.78	5.11 %	0.71	0.79	0.79	0.80	0.78	0.82
PCB-17	0.92	2.36 %	0.90	0.90	0.94	0.93	0.91	0.95
PCB-24/27	1.19	3.36 %	1.13	1.17	1.19	1.20	1.18	1.25
PCB-16/32	0.94	1.56 %	0.92	0.93	0.94	0.94	0.94	0.96
PCB-34	1.14	3.58 %	1.15	1.19	1.13	1.09	1.16	1.09
PCB-23	1.28	4.96 %	1.38	1.28	1.22	1.23	1.24	1.33
PCB-29	1.08	3.94 %	1.11	1.13	1.09	1.06	1.01	1.06
PCB-26	1.21	4.37 %	1.25	1.23	1.27	1.18	1.12	1.19
PCB-25	1.26	7.07 %	1.39	1.25	1.30	1.27	1.25	1.11
PCB-31	1.28	11.62 %	1.50	1.29	1.36	1.24	1.27	1.05
PCB-28	1.71	5.40 %	1.81	1.76	1.78	1.70	1.63	1.57
PCB-20/21/33	1.08	5.41 %	1.15	1.07	1.11	1.08	1.11	0.98
PCB-22	1.21	8.00 %	1.36	1.24	1.17	1.23	1.06	1.18
PCB-36	1.14	11.01 %	1.36	1.16	1.11	1.18	1.05	0.99
PCB-39	1.12	11.88 %	1.31	1.12	1.09	1.20	0.92	1.05
PCB-38	1.20	13.44 %	1.44	1.25	1.24	1.23	1.03	1.00
PCB-35	1.23	8.27 %	1.40	1.18	1.31	1.18	1.15	1.17
PCB-37	1.23	8.23 %	1.38	1.30	1.25	1.19	1.12	1.13
PCB-54	1.10	3.74 %	1.18	1.06	1.10	1.10	1.09	1.09
PCB-50	0.88	6.30 %	0.97	0.83	0.92	0.88	0.86	0.83
PCB-53	1.06	1.53 %	1.06	1.05	1.06	1.08	1.09	1.05
PCB-51	0.99	4.28 %	0.95	1.06	0.97	0.98	0.96	1.02
PCB-45	0.86	5.46 %	0.95	0.85	0.83	0.89	0.84	0.82
PCB-46	0.85	4.52 %	0.90	0.89	0.82	0.83	0.83	0.81
PCB-52/69	1.28	3.90 %	1.23	1.29	1.27	1.28	1.25	1.37
PCB-73	1.35	5.47 %	1.44	1.30	1.43	1.38	1.30	1.27
PCB-43/49	0.99	4.35 %	1.07	1.01	0.96	0.97	0.95	1.02
PCB-47	1.06	4.72 %	1.12	1.10	1.07	1.04	1.04	0.98

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PCB-48/75	1.23	5.03 %	1.34	1.24	1.21	1.17	1.17	1.24
PCB-65	1.22	5.52 %	1.22	1.30	1.29	1.23	1.12	1.19
PCB-62	1.22	11.22 %	1.47	1.10	1.25	1.09	1.22	1.19
PCB-44	0.86	9.00 %	1.00	0.90	0.84	0.80	0.79	0.83
PCB-42/59	1.14	4.85 %	1.20	1.19	1.08	1.08	1.11	1.17
PCB-41/64/71/72	1.21	4.49 %	1.24	1.25	1.16	1.13	1.19	1.26
PCB-68	1.35	3.60 %	1.42	1.35	1.32	1.29	1.31	1.38
PCB-40	0.70	2.83 %	0.69	0.73	0.70	0.68	0.69	0.71
PCB-57	0.98	1.87 %	0.97	0.96	1.00	0.99	0.96	0.99
PCB-67	1.11	4.07 %	1.19	1.11	1.11	1.09	1.09	1.05
PCB-58	0.93	3.04 %	0.90	0.95	0.94	0.93	0.88	0.96

PCB-63	0.95	8.80 %	1.12	0.95	0.91	0.93	0.88	0.92
PCB-74	1.24	4.15 %	1.34	1.21	1.25	1.20	1.23	1.23
PCB-61/70	0.95	2.14 %	0.96	0.96	0.98	0.95	0.92	0.94
PCB-76/66	1.04	3.20 %	1.11	1.04	1.04	1.03	1.03	1.02
PCB-80	1.19	2.93 %	1.13	1.22	1.22	1.22	1.18	1.18
PCB-55	1.04	3.47 %	1.00	0.99	1.07	1.08	1.05	1.06
PCB-56/60	1.01	3.48 %	1.01	1.06	1.05	1.00	0.97	0.98
PCB-79	1.08	3.24 %	1.12	1.07	1.13	1.07	1.04	1.06
PCB-78	1.27	5.24 %	1.40	1.26	1.27	1.25	1.20	1.24
PCB-81	1.33	5.94 %	1.49	1.32	1.29	1.29	1.27	1.33
PCB-77	1.10	4.03 %	1.19	1.07	1.11	1.08	1.07	1.09
PCB-104	1.18	2.54 %	1.13	1.18	1.20	1.20	1.19	1.21
PCB-96	1.14	2.81 %	1.10	1.15	1.11	1.13	1.16	1.19
PCB-103	0.96	4.05 %	0.99	0.93	0.92	0.93	0.95	1.02
PCB-100	0.94	4.52 %	0.97	0.90	0.89	0.92	0.95	1.00
PCB-94	1.06	5.71 %	1.17	1.08	1.03	1.02	1.00	1.05
PCB-95/98/102	1.22	0.35 %	1.23	1.23	1.22	1.22	1.23	1.23
PCB-93	0.84	6.35 %	0.80	0.85	0.86	0.85	0.77	0.93
PCB-88/91	1.12	3.65 %	1.05	1.11	1.15	1.12	1.16	1.10
PCB-121	1.62	5.39 %	1.66	1.53	1.61	1.62	1.52	1.75
PCB-84/92	1.05	3.37 %	1.10	1.00	1.04	1.04	1.04	1.06
PCB-89	1.13	4.67 %	1.23	1.07	1.13	1.14	1.11	1.10
PCB-90/101	1.10	1.29 %	1.11	1.08	1.12	1.10	1.08	1.11
PCB-113	1.41	6.93 %	1.52	1.30	1.46	1.49	1.29	1.41
PCB-99	1.34	8.14 %	1.19	1.49	1.27	1.27	1.42	1.36
PCB-119	1.53	3.61 %	1.51	1.46	1.54	1.52	1.53	1.63
PCB-108/112	1.28	3.29 %	1.26	1.25	1.25	1.28	1.29	1.36
PCB-83	1.52	3.93 %	1.64	1.49	1.52	1.49	1.48	1.49
PCB-97	1.18	4.68 %	1.29	1.13	1.14	1.17	1.17	1.19
PCB-86	0.84	7.14 %	0.84	0.82	0.81	0.80	0.83	0.96
PCB-87/117/125	1.55	5.06 %	1.46	1.50	1.49	1.59	1.59	1.66
PCB-111/115	1.63	1.45 %	1.61	1.64	1.61	1.61	1.65	1.67
PCB-85/116	1.30	4.51 %	1.35	1.21	1.27	1.31	1.31	1.37
PCB-120	1.68	3.52 %	1.67	1.69	1.60	1.63	1.70	1.77
PCB-110	1.56	2.67 %	1.63	1.50	1.56	1.56	1.54	1.55
PCB-82	0.76	2.07 %	0.78	0.75	0.74	0.76	0.76	0.76
PCB-124	1.47	4.97 %	1.43	1.40	1.45	1.43	1.51	1.60
PCB-107/109	1.32	3.64 %	1.31	1.24	1.29	1.35	1.37	1.36
PCB-123	1.17	1.49 %	1.14	1.16	1.18	1.18	1.16	1.19
PCB-106/118	1.17	2.46 %	1.20	1.13	1.19	1.17	1.15	1.20
PCB-114	1.30	1.22 %	1.29	1.31	1.31	1.31	1.28	1.28
PCB-122	1.12	0.66 %	1.13	1.12	1.12	1.11	1.11	1.12
PCB-105	1.30	1.61 %	1.32	1.28	1.31	1.28	1.28	1.33
PCB-127	1.33	5.30 %	1.46	1.31	1.37	1.27	1.28	1.32
PCB-126	1.18	1.24 %	1.18	1.16	1.19	1.17	1.18	1.21
PCB-155	1.11	2.06 %	1.10	1.11	1.10	1.11	1.11	1.16
PCB-150	1.00	4.51 %	0.93	0.99	0.98	1.00	1.03	1.06
PCB-152	1.12	4.70 %	1.15	1.02	1.12	1.10	1.12	1.18
PCB-145	1.20	4.85 %	1.17	1.13	1.18	1.19	1.23	1.30
PCB-136	1.18	1.51 %	1.17	1.17	1.17	1.15	1.21	1.19

PCB-148	0.74	7.90 %	0.70	0.72	0.74	0.74	0.72	0.86
PCB-154	0.86	3.14 %	0.85	0.86	0.88	0.83	0.83	0.90
PCB-151	0.75	8.09 %	0.86	0.69	0.73	0.71	0.71	0.77
PCB-135	0.79	9.11 %	0.89	0.82	0.70	0.77	0.73	0.84
PCB-144	0.76	6.76 %	0.70	0.75	0.76	0.71	0.82	0.82
PCB-147	0.82	6.64 %	0.80	0.80	0.78	0.79	0.83	0.93
PCB-139/149	0.76	6.06 %	0.79	0.71	0.73	0.74	0.77	0.84
PCB-140	0.72	3.18 %	0.70	0.73	0.73	0.70	0.71	0.76
PCB-134/143	0.92	3.43 %	0.95	0.89	0.89	0.89	0.94	0.95
PCB-133/142	0.82	3.97 %	0.86	0.78	0.79	0.80	0.83	0.85
PCB-131	0.91	1.88 %	0.92	0.93	0.90	0.89	0.90	0.90

PCB-146/165	1.25	4.47 %	1.32	1.16	1.22	1.23	1.26	1.29
PCB-132/161	1.10	4.39 %	1.19	1.06	1.07	1.08	1.09	1.14
PCB-153	1.25	3.90 %	1.19	1.33	1.24	1.23	1.27	1.24
PCB-168	1.45	3.18 %	1.40	1.41	1.43	1.45	1.48	1.52
PCB-141	1.09	4.31 %	1.16	1.12	1.04	1.06	1.05	1.09
PCB-137	1.06	4.15 %	1.07	1.02	1.03	1.05	1.06	1.14
PCB-130	0.96	5.65 %	1.06	0.91	0.99	0.97	0.96	0.90
PCB-138/163/164	1.29	4.03 %	1.26	1.23	1.30	1.27	1.31	1.38
PCB-158/160	1.34	4.62 %	1.24	1.30	1.39	1.34	1.37	1.41
PCB-129	0.85	2.93 %	0.85	0.82	0.87	0.84	0.86	0.89
PCB-166	1.19	1.02 %	1.19	1.18	1.18	1.17	1.18	1.21
PCB-159	1.11	2.18 %	1.10	1.09	1.11	1.11	1.10	1.16
PCB-128/162	1.05	3.89 %	1.12	1.04	1.00	1.02	1.03	1.07
PCB-167	1.20	2.55 %	1.15	1.21	1.21	1.20	1.19	1.24
PCB-156	1.14	4.58 %	1.06	1.09	1.18	1.14	1.16	1.19
PCB-157	1.16	5.07 %	1.28	1.16	1.14	1.13	1.12	1.15
PCB-169	1.12	7.20 %	1.28	1.07	1.09	1.08	1.07	1.12
PCB-188	1.58	3.04 %	1.58	1.66	1.55	1.56	1.52	1.61
PCB-184	1.63	2.34 %	1.61	1.66	1.69	1.60	1.60	1.64
PCB-179	1.30	4.28 %	1.27	1.41	1.29	1.30	1.26	1.29
PCB-176	1.48	4.46 %	1.61	1.46	1.45	1.46	1.45	1.44
PCB-186	1.45	8.39 %	1.69	1.34	1.36	1.45	1.46	1.43
PCB-178	1.03	3.35 %	1.03	1.05	1.10	1.02	1.00	1.00
PCB-175	1.01	1.89 %	1.05	1.02	1.00	1.01	0.99	1.01
PCB-182/187	1.25	2.08 %	1.28	1.25	1.24	1.21	1.26	1.28
PCB-183	1.21	5.09 %	1.33	1.19	1.21	1.15	1.18	1.19
PCB-185	1.80	4.35 %	1.77	1.68	1.87	1.78	1.82	1.89
PCB-174	1.38	4.65 %	1.34	1.30	1.33	1.42	1.47	1.40
PCB-181	1.38	7.65 %	1.25	1.33	1.44	1.36	1.35	1.56
PCB-177	1.26	3.80 %	1.18	1.23	1.28	1.26	1.28	1.32
PCB-171	1.58	6.45 %	1.43	1.54	1.57	1.59	1.61	1.74
PCB-173	1.11	6.27 %	0.97	1.11	1.14	1.13	1.13	1.17
PCB-172	1.63	10.65 %	1.31	1.67	1.66	1.64	1.70	1.83
PCB-192	1.74	6.94 %	1.52	1.71	1.77	1.78	1.79	1.87
PCB-180	1.34	3.01 %	1.35	1.27	1.37	1.35	1.34	1.39
PCB-193	1.72	3.48 %	1.81	1.65	1.67	1.72	1.69	1.76
PCB-191	1.69	2.79 %	1.73	1.62	1.71	1.68	1.67	1.75
PCB-170	1.60	3.31 %	1.54	1.53	1.63	1.62	1.61	1.66
PCB-190	2.21	4.63 %	2.14	2.04	2.28	2.23	2.23	2.33
PCB-189	1.55	1.89 %	1.58	1.50	1.54	1.55	1.55	1.58
PCB-202	1.08	3.14 %	1.09	1.05	1.05	1.06	1.10	1.14
PCB-201	1.15	2.55 %	1.11	1.14	1.16	1.13	1.16	1.20
PCB-204	1.14	6.76 %	1.02	1.10	1.14	1.14	1.18	1.25
PCB-197	1.07	2.46 %	1.09	1.04	1.05	1.07	1.09	1.11
PCB-200	1.06	2.80 %	1.08	1.01	1.05	1.06	1.09	1.09
PCB-198	0.76	5.28 %	0.74	0.69	0.76	0.77	0.76	0.81
PCB-199	0.80	5.91 %	0.76	0.86	0.75	0.76	0.82	0.83
PCB-196/203	0.80	9.29 %	0.71	0.75	0.77	0.80	0.86	0.91
PCB-195	1.23	4.42 %	1.15	1.18	1.24	1.24	1.25	1.30
PCB-194	1.21	4.43 %	1.32	1.19	1.18	1.19	1.18	1.20

PCB-205	1.54	2.37 %	1.51	1.58	1.53	1.52	1.51	1.60
PCB-208	0.93	1.86 %	0.95	0.92	0.91	0.92	0.94	0.94
PCB-207	1.08	2.65 %	1.07	1.07	1.05	1.08	1.12	1.12
PCB-206	1.02	4.52 %	1.11	1.03	0.99	1.01	0.97	1.03
PCB-209	1.17	3.05 %	1.15	1.12	1.17	1.20	1.17	1.22
Total Mono-PCB	1.27	6.66 %	1.15	1.21	1.24	1.31	1.35	1.36
Total Di-PCB	1.21	2.10 %	1.19	1.18	1.20	1.21	1.22	1.25
Total Tri-PCB	1.10	2.76 %	1.06	1.08	1.09	1.10	1.10	1.15

Total Tri-PCB	1.21	6.05 %	1.33	1.23	1.24	1.21	1.15	1.12
Total Tetra-PCB	1.09	2.96 %	1.14	1.10	1.08	1.06	1.06	1.09
Total Penta-PCB	1.18	1.93 %	1.18	1.16	1.17	1.18	1.18	1.23
Total Penta-PCB	1.25	1.50 %	1.28	1.24	1.26	1.23	1.23	1.25
Total Hexa-PCB	0.90	3.60 %	0.90	0.87	0.88	0.88	0.90	0.96
Total Hexa-PCB	1.11	2.03 %	1.13	1.08	1.10	1.09	1.11	1.14
Total Hepta-PCB	1.42	1.47 %	1.41	1.40	1.42	1.41	1.41	1.46
Total Octa-PCB	0.96	4.13 %	0.92	0.93	0.95	0.96	0.99	1.03
Total Octa-PCB	1.33	1.46 %	1.33	1.31	1.32	1.32	1.32	1.36
Total Nona-PCB	1.01	1.96 %	1.03	1.00	0.98	1.00	1.02	1.03
Total Deca-PCB	1.17	3.05 %	1.15	1.12	1.17	1.20	1.17	1.22
13C-PCB-1	0.87	10.59 %	1.00	0.92	0.91	0.86	0.77	0.77
13C-PCB-3	0.91	9.90 %	1.04	0.97	0.96	0.86	0.81	0.83
13C-PCB-4	0.59	1.89 %	0.60	0.60	0.60	0.59	0.57	0.57
13C-PCB-9	0.90	1.45 %	0.90	0.91	0.91	0.89	0.88	0.88
13C-PCB-11	0.94	1.14 %	0.95	0.94	0.95	0.92	0.93	0.94
13C-PCB-19	0.53	8.18 %	0.58	0.56	0.56	0.53	0.48	0.48
13C-PCB-32	0.80	5.62 %	0.87	0.82	0.80	0.78	0.77	0.74
13C-PCB-28	0.93	4.96 %	0.92	0.91	0.93	0.92	0.89	1.02
13C-PCB-37	0.84	6.29 %	0.87	0.84	0.79	0.79	0.82	0.93
13C-PCB-54	0.97	0.69 %	0.96	0.96	0.97	0.98	0.97	0.98
13C-PCB-52	0.77	2.27 %	0.80	0.77	0.77	0.78	0.76	0.75
13C-PCB-47	0.81	2.56 %	0.85	0.80	0.81	0.82	0.81	0.78
13C-PCB-70	1.00	1.92 %	1.03	0.99	0.99	0.98	1.00	1.02
13C-PCB-80	1.03	1.60 %	1.05	1.02	1.02	1.01	1.04	1.05
13C-PCB-81	0.92	3.24 %	0.91	0.91	0.92	0.89	0.93	0.98
13C-PCB-77	0.94	2.93 %	0.95	0.93	0.92	0.91	0.98	0.97
13C-PCB-104	1.00	2.32 %	1.02	1.02	1.01	1.00	1.00	0.96
13C-PCB-95	0.74	1.65 %	0.74	0.73	0.73	0.74	0.77	0.74
13C-PCB-101	0.78	1.28 %	0.79	0.79	0.77	0.77	0.80	0.79
13C-PCB-97	0.70	1.19 %	0.72	0.71	0.71	0.69	0.71	0.70
13C-PCB-123	0.89	2.20 %	0.92	0.90	0.90	0.87	0.88	0.89
13C-PCB-118	0.96	2.66 %	0.96	0.97	0.95	0.92	0.98	0.99
13C-PCB-114	1.36	3.25 %	1.33	1.33	1.35	1.35	1.37	1.45
13C-PCB-105	1.37	3.32 %	1.34	1.34	1.36	1.32	1.38	1.45
13C-PCB-127	1.47	2.80 %	1.42	1.48	1.48	1.45	1.48	1.54
13C-PCB-126	1.31	1.41 %	1.29	1.30	1.31	1.31	1.30	1.34
13C-PCB-155	0.84	3.94 %	0.89	0.85	0.84	0.83	0.83	0.79
13C-PCB-153	1.15	1.31 %	1.15	1.16	1.15	1.14	1.12	1.15
13C-PCB-141	1.07	1.13 %	1.07	1.09	1.09	1.07	1.06	1.07
13C-PCB-138	1.10	0.94 %	1.10	1.11	1.09	1.11	1.09	1.09
13C-PCB-159	1.25	1.27 %	1.26	1.27	1.25	1.22	1.24	1.25
13C-PCB-167	1.35	1.38 %	1.36	1.37	1.35	1.33	1.37	1.33
13C-PCB-156	1.30	1.09 %	1.30	1.30	1.29	1.28	1.30	1.32
13C-PCB-157	1.36	1.30 %	1.37	1.36	1.35	1.33	1.36	1.38
13C-PCB-169	1.29	2.02 %	1.32	1.28	1.29	1.24	1.28	1.29
13C-PCB-188	0.92	2.20 %	0.95	0.90	0.91	0.92	0.91	0.91
13C-PCB-180	0.68	5.20 %	0.75	0.70	0.67	0.67	0.67	0.65
13C-PCB-170	0.54	5.16 %	0.59	0.56	0.53	0.53	0.53	0.52
13C-PCB-189	0.72	4.14 %	0.77	0.74	0.71	0.69	0.69	0.70
13C-PCB-202	0.84	6.77 %	0.94	0.87	0.83	0.81	0.80	0.78

13C-PCB-194	0.80	1.04 %	0.79	0.81	0.80	0.79	0.80	0.79
13C-PCB-208	1.08	1.09 %	1.09	1.09	1.09	1.08	1.07	1.07
13C-PCB-206	0.65	2.52 %	0.65	0.66	0.65	0.65	0.67	0.62
13C-PCB-209	0.61	3.41 %	0.62	0.62	0.63	0.59	0.63	0.58
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.02	1.30 %	1.02	1.02	1.02	1.00	1.01	1.04
13C-PCB-178	0.61	3.59 %	0.64	0.63	0.61	0.62	0.60	0.58
13C-PCB-79	1.10	2.04 %	1.11	1.12	1.11	1.12	1.09	1.06
13C-PCB-178	0.90	2.70 %	0.86	0.90	0.92	0.93	0.89	0.90

Filename: 140623E2 S: 1 Acquired: 23-JUN-14 11:41:57
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-1 PCB CS0 14F1602

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Mono	PCB-1	0.25	4.81e+05	2.67	y	16:24	-	1.04
2	Mono	PCB-2	0.25	5.03e+05	3.50	y	18:40	-	1.05
3	Mono	PCB-3	0.25	6.38e+05	2.83	y	18:54	-	1.34
4	Di	PCB-4/10	1.00	1.68e+06	1.64	y	20:13	-	1.53
5	Di	PCB-7/9	1.00	2.03e+06	1.59	y	21:57	-	1.22
6	Di	PCB-6	0.50	1.04e+06	1.77	y	22:34	-	1.25
7	Di	PCB-5/8	1.00	1.87e+06	1.60	y	22:59	-	1.13
8	Di	PCB-14	0.50	9.15e+05	1.73	y	24:03	-	1.05
9	Di	PCB-11	0.50	9.14e+05	1.60	y	25:13	-	1.05
10	Di	PCB-12/13	1.00	2.03e+06	1.71	y	25:37	-	1.17
11	Di	PCB-15	0.50	1.13e+06	1.70	y	25:55	-	1.29
12	Tri	PCB-19	0.25	2.77e+05	1.03	y	24:14	-	1.04
13	Tri	PCB-30	0.25	4.46e+05	1.08	y	25:06	-	1.67
14	Tri	PCB-18	0.25	2.82e+05	1.17	y	25:50	-	0.71
15	Tri	PCB-17	0.25	3.59e+05	0.95	y	26:01	-	0.90
16	Tri	PCB-24/27	0.50	9.03e+05	1.12	y	26:35	-	1.13
17	Tri	PCB-16/32	0.50	7.35e+05	1.02	y	27:05	-	0.92
18	Tri	PCB-34	0.25	4.46e+05	1.14	y	27:51	-	1.15
19	Tri	PCB-23	0.25	5.33e+05	1.13	y	27:57	-	1.38
20	Tri	PCB-29	0.25	4.32e+05	1.02	y	28:12	-	1.11
21	Tri	PCB-26	0.25	4.83e+05	0.94	y	28:24	-	1.25
22	Tri	PCB-25	0.25	5.38e+05	0.92	y	28:33	-	1.39
23	Tri	PCB-31	0.25	5.81e+05	0.96	y	28:55	-	1.50
24	Tri	PCB-28	0.25	7.03e+05	1.16	y	29:01	-	1.81
25	Tri	PCB-20/21/33	0.75	1.33e+06	1.03	y	29:38	-	1.15
26	Tri	PCB-22	0.25	5.26e+05	1.01	y	30:04	-	1.36
27	Tri	PCB-36	0.25	4.96e+05	1.00	y	30:41	-	1.36
28	Tri	PCB-39	0.25	4.79e+05	1.13	y	31:08	-	1.31
29	Tri	PCB-38	0.25	5.28e+05	1.17	y	31:55	-	1.44
30	Tri	PCB-35	0.25	5.13e+05	0.95	y	32:25	-	1.40
31	Tri	PCB-37	0.25	5.06e+05	1.03	y	32:51	-	1.38
32	Tetra	PCB-54	0.25	3.83e+05	0.67	y	27:55	-	1.18
33	Tetra	PCB-50	0.25	3.14e+05	0.72	y	29:04	-	0.97
34	Tetra	PCB-53	0.25	2.86e+05	0.85	y	29:42	-	1.06
35	Tetra	PCB-51	0.25	2.57e+05	0.85	y	30:03	-	0.95
36	Tetra	PCB-45	0.25	2.55e+05	0.84	y	30:28	-	0.95
37	Tetra	PCB-46	0.25	2.42e+05	0.82	y	30:58	-	0.90
38	Tetra	PCB-52/69	0.50	6.62e+05	0.73	y	31:25	-	1.23
39	Tetra	PCB-73	0.25	3.88e+05	0.72	y	31:32	-	1.44
40	Tetra	PCB-43/49	0.50	5.73e+05	0.83	y	31:42	-	1.07

41	Tetra	PCB-47	0.25	3.18e+05	0.79 y	31:55	-	1.12
42	Tetra	PCB-48/75	0.50	7.61e+05	0.81 y	32:01	-	1.34
43	Tetra	PCB-65	0.25	3.48e+05	0.88 y	32:17	-	1.22
44	Tetra	PCB-62	0.25	4.17e+05	0.79 y	32:24	-	1.47
45	Tetra	PCB-44	0.25	2.83e+05	0.73 y	32:42	-	1.00
46	Tetra	PCB-42/59	0.50	6.84e+05	0.76 y	32:55	-	1.20
47	Tetra	PCB-41/64/71/72	1.00	1.41e+06	0.76 y	33:30	-	1.24
48	Tetra	PCB-68	0.25	4.05e+05	0.81 y	33:46	-	1.42
49	Tetra	PCB-40	0.25	1.96e+05	0.70 y	34:00	-	0.69
50	Tetra	PCB-57	0.25	3.33e+05	0.87 y	34:20	-	0.97
51	Tetra	PCB-67	0.25	4.09e+05	0.84 y	34:38	-	1.19

52	Tetra	PCB-58	0.25	3.10e+05	0.67 y	34:45	-	0.90
53	Tetra	PCB-63	0.25	3.84e+05	0.79 y	34:55	-	1.12
54	Tetra	PCB-74	0.25	4.62e+05	0.82 y	35:12	-	1.34
55	Tetra	PCB-61/70	0.50	6.62e+05	0.77 y	35:23	-	0.96
56	Tetra	PCB-76/66	0.50	7.64e+05	0.73 y	35:35	-	1.11
57	Tetra	PCB-80	0.25	4.01e+05	0.75 y	35:49	-	1.13
58	Tetra	PCB-55	0.25	3.54e+05	0.77 y	36:09	-	1.00
59	Tetra	PCB-56/60	0.50	7.14e+05	0.78 y	36:39	-	1.01
60	Tetra	PCB-79	0.25	3.94e+05	0.76 y	37:42	-	1.12
61	Tetra	PCB-78	0.25	4.28e+05	0.69 y	38:24	-	1.40
62	Tetra	PCB-81	0.25	4.55e+05	0.75 y	38:56	-	1.49
63	Tetra	PCB-77	0.25	3.79e+05	0.71 y	39:31	-	1.19
64	Penta	PCB-104	0.25	2.69e+05	1.51 y	32:34	-	1.13
65	Penta	PCB-96	0.25	2.62e+05	1.46 y	33:49	-	1.10
66	Penta	PCB-103	0.25	2.37e+05	1.63 y	34:21	-	0.99
67	Penta	PCB-100	0.25	2.32e+05	1.75 y	34:43	-	0.97
68	Penta	PCB-94	0.25	2.02e+05	1.62 y	35:10	-	1.17
69	Penta	PCB-95/98/102	0.75	6.38e+05	1.53 y	35:40	-	1.23
70	Penta	PCB-93	0.25	1.38e+05	1.68 y	35:48	-	0.80
71	Penta	PCB-88/91	0.50	3.63e+05	1.40 y	36:05	-	1.05
72	Penta	PCB-121	0.25	2.89e+05	1.74 y	36:10	-	1.66
73	Penta	PCB-84/92	0.50	4.09e+05	1.74 y	37:00	-	1.10
74	Penta	PCB-89	0.25	2.28e+05	1.35 y	37:12	-	1.23
75	Penta	PCB-90/101	0.50	4.11e+05	1.60 y	37:22	-	1.11
76	Penta	PCB-113	0.25	2.82e+05	1.48 y	37:38	-	1.52
77	Penta	PCB-99	0.25	2.22e+05	1.49 y	37:43	-	1.19
78	Penta	PCB-119	0.25	2.54e+05	1.74 y	38:11	-	1.51
79	Penta	PCB-108/112	0.50	4.22e+05	1.43 y	38:20	-	1.26
80	Penta	PCB-83	0.25	2.75e+05	1.61 y	38:30	-	1.64
81	Penta	PCB-97	0.25	2.16e+05	1.33 y	38:41	-	1.29
82	Penta	PCB-86	0.25	1.41e+05	1.33 y	38:50	-	0.84
83	Penta	PCB-87/117/125	0.75	7.34e+05	1.43 y	38:57	-	1.46
84	Penta	PCB-111/115	0.50	5.41e+05	1.52 y	39:08	-	1.61
85	Penta	PCB-85/116	0.50	4.52e+05	1.76 y	39:15	-	1.35
86	Penta	PCB-120	0.25	2.81e+05	1.77 y	39:29	-	1.67
87	Penta	PCB-110	0.25	2.74e+05	1.56 y	39:38	-	1.63
88	Penta	PCB-82	0.25	1.70e+05	1.65 y	40:16	-	0.78
89	Penta	PCB-124	0.25	3.10e+05	1.57 y	40:57	-	1.43
90	Penta	PCB-107/109	0.50	5.68e+05	1.59 y	41:05	-	1.31
91	Penta	PCB-123	0.25	2.47e+05	1.58 y	41:16	-	1.14
92	Penta	PCB-106/118	0.50	5.38e+05	1.47 y	41:27	-	1.20
93	Penta	PCB-114	0.25	3.15e+05	1.48 y	42:06	-	1.29
94	Penta	PCB-122	0.25	2.77e+05	1.67 y	42:14	-	1.13
95	Penta	PCB-105	0.25	3.23e+05	1.61 y	42:58	-	1.32
96	Penta	PCB-127	0.25	3.79e+05	1.59 y	43:18	-	1.46
97	Penta	PCB-126	0.25	2.78e+05	1.58 y	45:12	-	1.18
98	Hexa	PCB-155	0.25	2.29e+05	1.14 y	36:56	-	1.10
99	Hexa	PCB-150	0.25	1.94e+05	1.23 y	38:12	-	0.93
100	Hexa	PCB-152	0.25	2.40e+05	1.08 y	38:40	-	1.15
101	Hexa	PCB-145	0.25	2.45e+05	1.20 y	39:08	-	1.17

102	Hexa	PCB-136	0.25	2.45e+05	1.20 y	39:27	-	1.17
103	Hexa	PCB-148	0.25	1.45e+05	1.15 y	39:33	-	0.70
104	Hexa	PCB-154	0.25	1.77e+05	1.37 y	40:02	-	0.85
105	Hexa	PCB-151	0.25	1.79e+05	1.18 y	40:41	-	0.86
106	Hexa	PCB-135	0.25	1.86e+05	1.13 y	40:54	-	0.89
107	Hexa	PCB-144	0.25	1.47e+05	1.40 y	41:00	-	0.70
108	Hexa	PCB-147	0.25	1.67e+05	1.07 y	41:08	-	0.80
109	Hexa	PCB-139/149	0.50	3.29e+05	1.16 y	41:24	-	0.79
110	Hexa	PCB-140	0.25	1.47e+05	1.10 y	41:35	-	0.70
111	Hexa	PCB-134/143	0.50	4.01e+05	1.40 y	42:01	-	0.95
112	Hexa	PCB-133/142	0.50	3.65e+05	1.40 y	42:19	-	0.86

113	Hexa	PCB-131	0.25	1.96e+05	1.21 y	42:29	-	0.92
114	Hexa	PCB-146/165	0.50	5.59e+05	1.30 y	42:42	-	1.32
115	Hexa	PCB-132/161	0.50	5.02e+05	1.30 y	42:57	-	1.19
116	Hexa	PCB-153	0.25	2.51e+05	1.25 y	43:06	-	1.19
117	Hexa	PCB-168	0.25	2.97e+05	1.27 y	43:20	-	1.40
118	Hexa	PCB-141	0.25	2.26e+05	1.36 y	43:51	-	1.16
119	Hexa	PCB-137	0.25	2.10e+05	1.21 y	44:14	-	1.07
120	Hexa	PCB-130	0.25	2.06e+05	1.15 y	44:20	-	1.06
121	Hexa	PCB-138/163/164	0.75	7.59e+05	1.25 y	44:43	-	1.26
122	Hexa	PCB-158/160	0.50	5.00e+05	1.32 y	44:58	-	1.24
123	Hexa	PCB-129	0.25	1.71e+05	1.19 y	45:12	-	0.85
124	Hexa	PCB-166	0.25	2.74e+05	1.28 y	45:40	-	1.19
125	Hexa	PCB-159	0.25	2.53e+05	1.29 y	46:00	-	1.10
126	Hexa	PCB-128/162	0.50	5.15e+05	1.18 y	46:17	-	1.12
127	Hexa	PCB-167	0.25	2.86e+05	1.19 y	46:40	-	1.15
128	Hexa	PCB-156	0.25	2.51e+05	1.34 y	47:59	-	1.06
129	Hexa	PCB-157	0.25	3.21e+05	1.29 y	48:15	-	1.28
130	Hexa	PCB-169	0.25	3.10e+05	1.35 y	50:19	-	1.28
131	Hepta	PCB-188	0.25	2.77e+05	1.01 y	42:45	-	1.58
132	Hepta	PCB-184	0.25	2.81e+05	1.07 y	43:12	-	1.61
133	Hepta	PCB-179	0.25	2.22e+05	0.95 y	43:58	-	1.27
134	Hepta	PCB-176	0.25	2.82e+05	1.14 y	44:27	-	1.61
135	Hepta	PCB-186	0.25	2.95e+05	1.09 y	45:04	-	1.69
136	Hepta	PCB-178	0.25	1.81e+05	0.95 y	45:33	-	1.03
137	Hepta	PCB-175	0.25	1.83e+05	1.03 y	45:54	-	1.05
138	Hepta	PCB-182/187	0.50	4.48e+05	0.94 y	46:04	-	1.28
139	Hepta	PCB-183	0.25	2.33e+05	1.14 y	46:23	-	1.33
140	Hepta	PCB-185	0.25	2.42e+05	0.91 y	47:03	-	1.77
141	Hepta	PCB-174	0.25	1.84e+05	0.97 y	47:25	-	1.34
142	Hepta	PCB-181	0.25	1.71e+05	0.89 y	47:31	-	1.25
143	Hepta	PCB-177	0.25	1.62e+05	1.15 y	47:41	-	1.18
144	Hepta	PCB-171	0.25	1.96e+05	0.95 y	48:00	-	1.43
145	Hepta	PCB-173	0.25	1.34e+05	1.04 y	48:25	-	0.97
146	Hepta	PCB-172	0.25	1.79e+05	1.06 y	48:52	-	1.31
147	Hepta	PCB-192	0.25	2.08e+05	1.05 y	49:03	-	1.52
148	Hepta	PCB-180	0.25	1.86e+05	1.04 y	49:15	-	1.35
149	Hepta	PCB-193	0.25	2.48e+05	1.20 y	49:27	-	1.81
150	Hepta	PCB-191	0.25	2.37e+05	0.93 y	49:42	-	1.73
151	Hepta	PCB-170	0.25	1.67e+05	1.00 y	50:41	-	1.54
152	Hepta	PCB-190	0.25	2.32e+05	1.20 y	50:51	-	2.14
153	Hepta	PCB-189	0.25	2.21e+05	0.99 y	52:07	-	1.58
154	Octa	PCB-202	0.25	1.87e+05	0.90 y	48:11	-	1.09
155	Octa	PCB-201	0.25	1.91e+05	0.96 y	48:40	-	1.11
156	Octa	PCB-204	0.25	1.75e+05	0.89 y	48:50	-	1.02
157	Octa	PCB-197	0.25	1.86e+05	1.01 y	49:08	-	1.09
158	Octa	PCB-200	0.25	1.85e+05	1.02 y	49:59	-	1.08
159	Octa	PCB-198	0.25	1.27e+05	0.92 y	51:14	-	0.74
160	Octa	PCB-199	0.25	1.30e+05	0.87 y	51:21	-	0.76
161	Octa	PCB-196/203	0.50	2.45e+05	0.96 y	51:36	-	0.71
162	Octa	PCB-195	0.25	1.54e+05	0.94 y	52:45	-	1.15

163	Octa	PCB-194	0.25	1.77e+05	0.95	y	53:38	-	1.32
164	Octa	PCB-205	0.25	2.02e+05	0.89	y	53:56	-	1.51
165	Nona	PCB-208	0.25	1.76e+05	1.45	y	52:54	-	0.95
166	Nona	PCB-207	0.25	1.98e+05	1.16	y	53:13	-	1.07
167	Nona	PCB-206	0.25	1.21e+05	1.45	y	55:20	-	1.11
168	Deca	PCB-209	0.25	1.20e+05	1.18	y	56:37	-	1.15
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.15
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.19

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.06
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.33
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.14
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.18
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.28
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.13
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.41
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.92
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.33
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.03
182	Tot ╗	Total Deca-PCB	0.25	1.20e+05	1.18	y	56:37	-	1.15
183	Mono╗	13C-PCB-1	100.00	1.84e+08	3.30	y	16:23	-	1.00
184	Mono╗	13C-PCB-3	100.00	1.91e+08	3.30	y	18:53	-	1.04
185	Di-IS	13C-PCB-4	100.00	1.10e+08	1.58	y	20:10	-	0.60
186	Di-IS	13C-PCB-9	100.00	1.66e+08	1.58	y	21:54	-	0.90
187	Di-IS	13C-PCB-11	100.00	1.74e+08	1.56	y	25:12	-	0.95
188	Tri-╗	13C-PCB-19	100.00	1.07e+08	1.08	y	24:13	-	0.58
189	Tri-╗	13C-PCB-32	100.00	1.60e+08	1.07	y	27:05	-	0.87
190	Tri-╗	13C-PCB-28	100.00	1.55e+08	1.06	y	29:00	-	0.92
191	Tri-╗	13C-PCB-37	100.00	1.46e+08	1.07	y	32:51	-	0.87
192	Tetr╗	13C-PCB-54	100.00	1.29e+08	0.80	y	27:54	-	0.96
193	Tetr╗	13C-PCB-52	100.00	1.08e+08	0.80	y	31:23	-	0.80
194	Tetr╗	13C-PCB-47	100.00	1.14e+08	0.80	y	31:53	-	0.85
195	Tetr╗	13C-PCB-70	100.00	1.38e+08	0.80	y	35:24	-	1.03
196	Tetr╗	13C-PCB-80	100.00	1.41e+08	0.80	y	35:48	-	1.05
197	Tetr╗	13C-PCB-81	100.00	1.22e+08	0.80	y	38:55	-	0.91
198	Tetr╗	13C-PCB-77	100.00	1.28e+08	0.80	y	39:31	-	0.95
199	Pent╗	13C-PCB-104	100.00	9.53e+07	1.55	y	32:33	-	1.02
200	Pent╗	13C-PCB-95	100.00	6.94e+07	1.58	y	35:42	-	0.74
201	Pent╗	13C-PCB-101	100.00	7.42e+07	1.61	y	37:22	-	0.79
202	Pent╗	13C-PCB-97	100.00	6.72e+07	1.62	y	38:40	-	0.72
203	Pent╗	13C-PCB-123	100.00	8.66e+07	1.59	y	41:15	-	0.92
204	Pent╗	13C-PCB-118	100.00	9.00e+07	1.59	y	41:25	-	0.96
205	Pent╗	13C-PCB-114	100.00	9.79e+07	1.62	y	42:05	-	1.33
206	Pent╗	13C-PCB-105	100.00	9.84e+07	1.62	y	42:57	-	1.34
207	Pent╗	13C-PCB-127	100.00	1.04e+08	1.60	y	43:17	-	1.42
208	Pent╗	13C-PCB-126	100.00	9.44e+07	1.59	y	45:11	-	1.29
209	Hexa╗	13C-PCB-155	100.00	8.36e+07	1.29	y	36:55	-	0.89
210	Hexa╗	13C-PCB-153	100.00	8.47e+07	1.26	y	43:06	-	1.15
211	Hexa╗	13C-PCB-141	100.00	7.81e+07	1.26	y	43:50	-	1.07
212	Hexa	13C-PCB-138	100.00	8.05e+07	1.27	y	44:41	-	1.10
213	Hexa╗	13C-PCB-159	100.00	9.21e+07	1.27	y	45:58	-	1.26
214	Hexa╗	13C-PCB-167	100.00	9.97e+07	1.26	y	46:40	-	1.36
215	Hexa╗	13C-PCB-156	100.00	9.50e+07	1.29	y	47:58	-	1.30
216	Hexa╗	13C-PCB-157	100.00	1.00e+08	1.32	y	48:14	-	1.37
217	Hexa╗	13C-PCB-169	100.00	9.71e+07	1.27	y	50:19	-	1.32
218	Hept╗	13C-PCB-188	100.00	7.00e+07	0.47	y	42:44	-	0.95
219	Hept╗	13C-PCB-180	100.00	5.49e+07	0.46	y	49:15	-	0.75
220	Hept╗	13C-PCB-170	100.00	4.33e+07	0.46	y	50:40	-	0.59
221	Hept╗	13C-PCB-189	100.00	5.61e+07	0.46	y	52:07	-	0.77

222	Octa¬	13C-PCB-202	100.00	6.86e+07	0.93	y	48:10	-	0.94
223	Octa¬	13C-PCB-194	100.00	5.37e+07	0.93	y	53:37	-	0.79
224	Nona¬	13C-PCB-208	100.00	7.40e+07	0.78	y	52:53	-	1.09
225	Nona¬	13C-PCB-206	100.00	4.38e+07	0.78	y	55:20	-	0.65
226	Deca¬	13C-PCB-209	100.00	4.18e+07	1.19	y	56:37	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.84e+08	1.59	y	25:54	-	1.00
228	Tri-¬	13C-PCB-31	100.00	1.69e+08	1.07	y	28:54	-	1.00
229	Tetr¬	13C-PCB-60	100.00	1.34e+08	0.80	y	36:38	-	1.00
230	Penta	13C-PCB-111	100.00	9.38e+07	1.57	y	39:06	-	1.00
231	Hexa¬	13C-PCB-128	100.00	7.33e+07	1.25	y	46:16	-	1.00

232	Octa¶	13C-PCB-205	100.00	6.77e+07	0.90	y	53:55	-	1.00
233	CRS	13C-PCB-79	100.00	1.36e+08	0.80	y	37:41	-	1.02
234	CRS	13C-PCB-178	100.00	4.71e+07	0.46	y	45:32	-	0.64
235	PS	13C-PCB-79	100.00	1.36e+08	0.80	y	37:41	-	1.11
236	PS	13C-PCB-178	100.00	4.71e+07	0.46	y	45:32	-	0.86

Filename: 140623E2 S: 2 Acquired: 23-JUN-14 12:45:53
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-2 PCB CS1 14F1603

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	1.92e+06	3.07 y	16:24	-	1.13
2	Mono	PCB-2	1.00	2.00e+06	3.10 y	18:41	-	1.12
3	Mono	PCB-3	1.00	2.45e+06	2.99 y	18:54	-	1.37
4	Di	PCB-4/10	4.00	6.76e+06	1.61 y	20:14	-	1.54
5	Di	PCB-7/9	4.00	7.85e+06	1.66 y	21:57	-	1.17
6	Di	PCB-6	2.00	4.27e+06	1.72 y	22:35	-	1.28
7	Di	PCB-5/8	4.00	7.47e+06	1.65 y	22:59	-	1.12
8	Di	PCB-14	2.00	3.76e+06	1.62 y	24:03	-	1.09
9	Di	PCB-11	2.00	3.76e+06	1.61 y	25:13	-	1.09
10	Di	PCB-12/13	4.00	8.12e+06	1.62 y	25:37	-	1.17
11	Di	PCB-15	2.00	4.22e+06	1.64 y	25:55	-	1.22
12	Tri	PCB-19	1.00	1.05e+06	1.10 y	24:15	-	1.01
13	Tri	PCB-30	1.00	1.69e+06	1.10 y	25:06	-	1.64
14	Tri	PCB-18	1.00	1.19e+06	1.03 y	25:51	-	0.79
15	Tri	PCB-17	1.00	1.36e+06	1.06 y	26:01	-	0.90
16	Tri	PCB-24/27	2.00	3.54e+06	1.03 y	26:35	-	1.17
17	Tri	PCB-16/32	2.00	2.81e+06	1.04 y	27:05	-	0.93
18	Tri	PCB-34	1.00	1.77e+06	1.02 y	27:52	-	1.19
19	Tri	PCB-23	1.00	1.91e+06	1.05 y	27:58	-	1.28
20	Tri	PCB-29	1.00	1.69e+06	1.03 y	28:13	-	1.13
21	Tri	PCB-26	1.00	1.83e+06	1.06 y	28:25	-	1.23
22	Tri	PCB-25	1.00	1.86e+06	1.03 y	28:35	-	1.25
23	Tri	PCB-31	1.00	1.92e+06	1.03 y	28:55	-	1.29
24	Tri	PCB-28	1.00	2.63e+06	1.05 y	29:02	-	1.76
25	Tri	PCB-20/21/33	3.00	4.78e+06	1.06 y	29:38	-	1.07
26	Tri	PCB-22	1.00	1.85e+06	1.03 y	30:05	-	1.24
27	Tri	PCB-36	1.00	1.58e+06	0.96 y	30:41	-	1.16
28	Tri	PCB-39	1.00	1.53e+06	1.03 y	31:09	-	1.12
29	Tri	PCB-38	1.00	1.71e+06	0.96 y	31:56	-	1.25
30	Tri	PCB-35	1.00	1.61e+06	1.02 y	32:27	-	1.18
31	Tri	PCB-37	1.00	1.78e+06	0.99 y	32:53	-	1.30
32	Tetra	PCB-54	1.00	1.33e+06	0.85 y	27:56	-	1.06
33	Tetra	PCB-50	1.00	1.04e+06	0.83 y	29:04	-	0.83
34	Tetra	PCB-53	1.00	1.06e+06	0.75 y	29:43	-	1.05
35	Tetra	PCB-51	1.00	1.07e+06	0.77 y	30:03	-	1.06
36	Tetra	PCB-45	1.00	8.56e+05	0.81 y	30:29	-	0.85
37	Tetra	PCB-46	1.00	8.89e+05	0.82 y	30:58	-	0.89
38	Tetra	PCB-52/69	2.00	2.58e+06	0.75 y	31:26	-	1.29
39	Tetra	PCB-73	1.00	1.30e+06	0.82 y	31:33	-	1.30
40	Tetra	PCB-43/49	2.00	2.01e+06	0.79 y	31:43	-	1.01
41	Tetra	PCB-47	1.00	1.15e+06	0.76 y	31:55	-	1.10

42	Tetra	PCB-48/75	2.00	2.58e+06	0.79 y	32:02	-	1.24
43	Tetra	PCB-65	1.00	1.36e+06	0.70 y	32:18	-	1.30
44	Tetra	PCB-62	1.00	1.15e+06	0.75 y	32:25	-	1.10
45	Tetra	PCB-44	1.00	9.43e+05	0.71 y	32:42	-	0.90
46	Tetra	PCB-42/59	2.00	2.48e+06	0.73 y	32:56	-	1.19
47	Tetra	PCB-41/64/71/72	4.00	5.23e+06	0.81 y	33:31	-	1.25
48	Tetra	PCB-68	1.00	1.41e+06	0.83 y	33:46	-	1.35
49	Tetra	PCB-40	1.00	7.66e+05	0.68 y	34:00	-	0.73
50	Tetra	PCB-57	1.00	1.23e+06	0.73 y	34:21	-	0.96
51	Tetra	PCB-67	1.00	1.43e+06	0.70 y	34:39	-	1.11
52	Tetra	PCB-58	1.00	1.22e+06	0.81 y	34:46	-	0.95

53	Tetra	PCB-63	1.00	1.23e+06	0.72 y	34:55	-	0.95
54	Tetra	PCB-74	1.00	1.56e+06	0.79 y	35:12	-	1.21
55	Tetra	PCB-61/70	2.00	2.47e+06	0.75 y	35:23	-	0.96
56	Tetra	PCB-76/66	2.00	2.68e+06	0.76 y	35:36	-	1.04
57	Tetra	PCB-80	1.00	1.62e+06	0.71 y	35:50	-	1.22
58	Tetra	PCB-55	1.00	1.32e+06	0.77 y	36:09	-	0.99
59	Tetra	PCB-56/60	2.00	2.80e+06	0.73 y	36:39	-	1.06
60	Tetra	PCB-79	1.00	1.42e+06	0.79 y	37:42	-	1.07
61	Tetra	PCB-78	1.00	1.49e+06	0.78 y	38:25	-	1.26
62	Tetra	PCB-81	1.00	1.56e+06	0.81 y	38:56	-	1.32
63	Tetra	PCB-77	1.00	1.28e+06	0.77 y	39:32	-	1.07
64	Penta	PCB-104	1.00	1.07e+06	1.55 y	32:35	-	1.18
65	Penta	PCB-96	1.00	1.05e+06	1.49 y	33:50	-	1.15
66	Penta	PCB-103	1.00	8.47e+05	1.59 y	34:21	-	0.93
67	Penta	PCB-100	1.00	8.14e+05	1.70 y	34:42	-	0.90
68	Penta	PCB-94	1.00	7.01e+05	1.52 y	35:10	-	1.08
69	Penta	PCB-95/98/102	3.00	2.40e+06	1.45 y	35:40	-	1.23
70	Penta	PCB-93	1.00	5.56e+05	1.74 y	35:48	-	0.85
71	Penta	PCB-88/91	2.00	1.45e+06	1.50 y	36:05	-	1.11
72	Penta	PCB-121	1.00	9.97e+05	1.56 y	36:12	-	1.53
73	Penta	PCB-84/92	2.00	1.39e+06	1.53 y	37:00	-	1.00
74	Penta	PCB-89	1.00	7.51e+05	1.52 y	37:13	-	1.07
75	Penta	PCB-90/101	2.00	1.52e+06	1.60 y	37:23	-	1.08
76	Penta	PCB-113	1.00	9.10e+05	1.52 y	37:37	-	1.30
77	Penta	PCB-99	1.00	1.04e+06	1.45 y	37:42	-	1.49
78	Penta	PCB-119	1.00	9.16e+05	1.51 y	38:11	-	1.46
79	Penta	PCB-108/112	2.00	1.56e+06	1.62 y	38:20	-	1.25
80	Penta	PCB-83	1.00	9.33e+05	1.71 y	38:30	-	1.49
81	Penta	PCB-97	1.00	7.11e+05	1.49 y	38:42	-	1.13
82	Penta	PCB-86	1.00	5.14e+05	1.35 y	38:51	-	0.82
83	Penta	PCB-87/117/125	3.00	2.83e+06	1.57 y	38:57	-	1.50
84	Penta	PCB-111/115	2.00	2.06e+06	1.59 y	39:08	-	1.64
85	Penta	PCB-85/116	2.00	1.52e+06	1.65 y	39:16	-	1.21
86	Penta	PCB-120	1.00	1.06e+06	1.54 y	39:29	-	1.69
87	Penta	PCB-110	1.00	9.43e+05	1.47 y	39:38	-	1.50
88	Penta	PCB-82	1.00	6.04e+05	1.60 y	40:16	-	0.75
89	Penta	PCB-124	1.00	1.13e+06	1.50 y	40:56	-	1.40
90	Penta	PCB-107/109	2.00	2.00e+06	1.63 y	41:05	-	1.24
91	Penta	PCB-123	1.00	9.34e+05	1.64 y	41:15	-	1.16
92	Penta	PCB-106/118	2.00	1.94e+06	1.53 y	41:27	-	1.13
93	Penta	PCB-114	1.00	1.25e+06	1.49 y	42:06	-	1.31
94	Penta	PCB-122	1.00	1.07e+06	1.65 y	42:14	-	1.12
95	Penta	PCB-105	1.00	1.23e+06	1.59 y	42:58	-	1.28
96	Penta	PCB-127	1.00	1.38e+06	1.64 y	43:18	-	1.31
97	Penta	PCB-126	1.00	1.08e+06	1.55 y	45:12	-	1.16
98	Hexa	PCB-155	1.00	8.37e+05	1.10 y	36:56	-	1.11
99	Hexa	PCB-150	1.00	7.52e+05	1.14 y	38:12	-	0.99
100	Hexa	PCB-152	1.00	7.75e+05	1.29 y	38:40	-	1.02
101	Hexa	PCB-145	1.00	8.56e+05	1.22 y	39:08	-	1.13
102	Hexa	PCB-136	1.00	8.87e+05	1.27 y	39:27	-	1.17

103	Hexa	PCB-148	1.00	5.42e+05	1.31 y	39:33	-	0.72
104	Hexa	PCB-154	1.00	6.51e+05	1.13 y	40:02	-	0.86
105	Hexa	PCB-151	1.00	5.25e+05	1.34 y	40:41	-	0.69
106	Hexa	PCB-135	1.00	6.20e+05	1.16 y	40:53	-	0.82
107	Hexa	PCB-144	1.00	5.68e+05	1.14 y	41:00	-	0.75
108	Hexa	PCB-147	1.00	6.03e+05	1.39 y	41:08	-	0.80
109	Hexa	PCB-139/149	2.00	1.07e+06	1.35 y	41:24	-	0.71
110	Hexa	PCB-140	1.00	5.54e+05	1.12 y	41:35	-	0.73
111	Hexa	PCB-134/143	2.00	1.48e+06	1.32 y	42:02	-	0.89
112	Hexa	PCB-133/142	2.00	1.31e+06	1.23 y	42:19	-	0.78
113	Hexa	PCB-131	1.00	7.77e+05	1.25 y	42:29	-	0.93

114	Hexa	PCB-146/165	2.00	1.94e+06	1.26	y	42:42	- 1.16
115	Hexa	PCB-132/161	2.00	1.76e+06	1.27	y	42:57	- 1.06
116	Hexa	PCB-153	1.00	1.11e+06	1.29	y	43:06	- 1.33
117	Hexa	PCB-168	1.00	1.18e+06	1.25	y	43:19	- 1.41
118	Hexa	PCB-141	1.00	8.76e+05	1.23	y	43:51	- 1.12
119	Hexa	PCB-137	1.00	7.99e+05	1.23	y	44:15	- 1.02
120	Hexa	PCB-130	1.00	7.15e+05	1.22	y	44:20	- 0.91
121	Hexa	PCB-138/163/164	3.00	2.94e+06	1.28	y	44:43	- 1.23
122	Hexa	PCB-158/160	2.00	2.07e+06	1.39	y	44:58	- 1.30
123	Hexa	PCB-129	1.00	6.52e+05	1.17	y	45:12	- 0.82
124	Hexa	PCB-166	1.00	1.08e+06	1.25	y	45:40	- 1.18
125	Hexa	PCB-159	1.00	9.95e+05	1.26	y	46:00	- 1.09
126	Hexa	PCB-128/162	2.00	1.90e+06	1.35	y	46:17	- 1.04
127	Hexa	PCB-167	1.00	1.19e+06	1.26	y	46:40	- 1.21
128	Hexa	PCB-156	1.00	1.01e+06	1.15	y	47:59	- 1.09
129	Hexa	PCB-157	1.00	1.13e+06	1.24	y	48:15	- 1.16
130	Hexa	PCB-169	1.00	9.84e+05	1.29	y	50:19	- 1.07
131	Hepta	PCB-188	1.00	1.07e+06	1.08	y	42:44	- 1.66
132	Hepta	PCB-184	1.00	1.07e+06	1.01	y	43:12	- 1.66
133	Hepta	PCB-179	1.00	9.11e+05	1.11	y	43:58	- 1.41
134	Hepta	PCB-176	1.00	9.38e+05	1.19	y	44:27	- 1.46
135	Hepta	PCB-186	1.00	8.65e+05	1.07	y	45:04	- 1.34
136	Hepta	PCB-178	1.00	6.76e+05	1.13	y	45:32	- 1.05
137	Hepta	PCB-175	1.00	6.57e+05	1.07	y	45:54	- 1.02
138	Hepta	PCB-182/187	2.00	1.61e+06	1.10	y	46:04	- 1.25
139	Hepta	PCB-183	1.00	7.65e+05	1.02	y	46:23	- 1.19
140	Hepta	PCB-185	1.00	8.43e+05	0.96	y	47:03	- 1.68
141	Hepta	PCB-174	1.00	6.52e+05	1.02	y	47:25	- 1.30
142	Hepta	PCB-181	1.00	6.66e+05	1.08	y	47:31	- 1.33
143	Hepta	PCB-177	1.00	6.16e+05	1.08	y	47:42	- 1.23
144	Hepta	PCB-171	1.00	7.73e+05	0.96	y	47:59	- 1.54
145	Hepta	PCB-173	1.00	5.56e+05	0.90	y	48:25	- 1.11
146	Hepta	PCB-172	1.00	8.39e+05	1.07	y	48:52	- 1.67
147	Hepta	PCB-192	1.00	8.60e+05	1.06	y	49:04	- 1.71
148	Hepta	PCB-180	1.00	6.37e+05	0.90	y	49:15	- 1.27
149	Hepta	PCB-193	1.00	8.28e+05	1.14	y	49:27	- 1.65
150	Hepta	PCB-191	1.00	8.11e+05	1.07	y	49:42	- 1.62
151	Hepta	PCB-170	1.00	6.14e+05	0.96	y	50:41	- 1.53
152	Hepta	PCB-190	1.00	8.22e+05	1.03	y	50:50	- 2.04
153	Hepta	PCB-189	1.00	7.94e+05	1.03	y	52:07	- 1.50
154	Octa	PCB-202	1.00	6.55e+05	1.00	y	48:12	- 1.05
155	Octa	PCB-201	1.00	7.12e+05	0.86	y	48:42	- 1.14
156	Octa	PCB-204	1.00	6.82e+05	0.95	y	48:50	- 1.10
157	Octa	PCB-197	1.00	6.44e+05	0.88	y	49:08	- 1.04
158	Octa	PCB-200	1.00	6.28e+05	0.92	y	49:59	- 1.01
159	Octa	PCB-198	1.00	4.28e+05	0.78	y	51:15	- 0.69
160	Octa	PCB-199	1.00	5.35e+05	0.89	y	51:21	- 0.86
161	Octa	PCB-196/203	2.00	9.29e+05	0.93	y	51:37	- 0.75
162	Octa	PCB-195	1.00	6.48e+05	0.85	y	52:45	- 1.18
163	Octa	PCB-194	1.00	6.56e+05	0.96	y	53:38	- 1.19

164	Octa	PCB-205	1.00	8.69e+05	0.98	y	53:56	-	1.58
165	Nona	PCB-208	1.00	6.83e+05	1.14	y	52:54	-	0.92
166	Nona	PCB-207	1.00	7.94e+05	1.46	y	53:12	-	1.07
167	Nona	PCB-206	1.00	4.60e+05	1.50	y	55:20	-	1.03
168	Deca	PCB-209	1.00	4.74e+05	1.30	y	56:37	-	1.12
169	Tot ₫	Total Mono-PCB	0.00	-	-	n	-	-	1.21
170	Tot ₫	Total Di-PCB	0.00	-	-	n	-	-	1.18
171	Tot ₫	Total Tri-PCB	0.00	-	-	n	-	-	1.08

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.23
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.10
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.16
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.87
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.08
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.40
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.93
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.31
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.00
182	Tot ╗	Total Deca-PCB	1.00	4.74e+05	1.30	y	56:37	-	1.12
183	Mono╗	13C-PCB-1	100.00	1.69e+08	3.26	y	16:23	-	0.92
184	Mono╗	13C-PCB-3	100.00	1.78e+08	3.34	y	18:53	-	0.97
185	Di-IS	13C-PCB-4	100.00	1.10e+08	1.59	y	20:11	-	0.60
186	Di-IS	13C-PCB-9	100.00	1.67e+08	1.58	y	21:54	-	0.91
187	Di-IS	13C-PCB-11	100.00	1.73e+08	1.56	y	25:13	-	0.94
188	Tri-╗	13C-PCB-19	100.00	1.03e+08	1.08	y	24:13	-	0.56
189	Tri-╗	13C-PCB-32	100.00	1.51e+08	1.08	y	27:05	-	0.82
190	Tri-╗	13C-PCB-28	100.00	1.49e+08	1.05	y	29:01	-	0.91
191	Tri-╗	13C-PCB-37	100.00	1.36e+08	1.07	y	32:51	-	0.84
192	Tetr╗	13C-PCB-54	100.00	1.25e+08	0.80	y	27:55	-	0.96
193	Tetr╗	13C-PCB-52	100.00	1.00e+08	0.79	y	31:24	-	0.77
194	Tetr╗	13C-PCB-47	100.00	1.04e+08	0.79	y	31:54	-	0.80
195	Tetr╗	13C-PCB-70	100.00	1.29e+08	0.80	y	35:24	-	0.99
196	Tetr╗	13C-PCB-80	100.00	1.33e+08	0.79	y	35:49	-	1.02
197	Tetr╗	13C-PCB-81	100.00	1.18e+08	0.79	y	38:55	-	0.91
198	Tetr╗	13C-PCB-77	100.00	1.20e+08	0.79	y	39:30	-	0.93
199	Pent╗	13C-PCB-104	100.00	9.09e+07	1.57	y	32:33	-	1.02
200	Pent╗	13C-PCB-95	100.00	6.52e+07	1.56	y	35:42	-	0.73
201	Pent╗	13C-PCB-101	100.00	7.00e+07	1.57	y	37:22	-	0.79
202	Pent╗	13C-PCB-97	100.00	6.28e+07	1.60	y	38:40	-	0.71
203	Pent╗	13C-PCB-123	100.00	8.04e+07	1.57	y	41:15	-	0.90
204	Pent╗	13C-PCB-118	100.00	8.60e+07	1.62	y	41:25	-	0.97
205	Pent╗	13C-PCB-114	100.00	9.51e+07	1.64	y	42:05	-	1.33
206	Pent╗	13C-PCB-105	100.00	9.62e+07	1.60	y	42:57	-	1.34
207	Pent╗	13C-PCB-127	100.00	1.06e+08	1.61	y	43:17	-	1.48
208	Pent╗	13C-PCB-126	100.00	9.30e+07	1.60	y	45:11	-	1.30
209	Hexa╗	13C-PCB-155	100.00	7.57e+07	1.27	y	36:55	-	0.85
210	Hexa╗	13C-PCB-153	100.00	8.33e+07	1.30	y	43:06	-	1.16
211	Hexa╗	13C-PCB-141	100.00	7.82e+07	1.28	y	43:50	-	1.09
212	Hexa	13C-PCB-138	100.00	7.98e+07	1.28	y	44:41	-	1.11
213	Hexa╗	13C-PCB-159	100.00	9.11e+07	1.28	y	45:59	-	1.27
214	Hexa╗	13C-PCB-167	100.00	9.84e+07	1.27	y	46:40	-	1.37
215	Hexa╗	13C-PCB-156	100.00	9.34e+07	1.28	y	47:58	-	1.30
216	Hexa╗	13C-PCB-157	100.00	9.73e+07	1.29	y	48:14	-	1.36
217	Hexa╗	13C-PCB-169	100.00	9.18e+07	1.27	y	50:19	-	1.28
218	Hept╗	13C-PCB-188	100.00	6.44e+07	0.46	y	42:44	-	0.90
219	Hept╗	13C-PCB-180	100.00	5.02e+07	0.46	y	49:15	-	0.70
220	Hept╗	13C-PCB-170	100.00	4.02e+07	0.48	y	50:40	-	0.56
221	Hept╗	13C-PCB-189	100.00	5.29e+07	0.47	y	52:06	-	0.74
222	Octa╗	13C-PCB-202	100.00	6.22e+07	0.90	y	48:10	-	0.87

223	Octa╗	13C-PCB-194	100.00	5.51e+07	0.92 y	53:37	-	0.81
224	Nona╗	13C-PCB-208	100.00	7.43e+07	0.77 y	52:53	-	1.09
225	Nona╗	13C-PCB-206	100.00	4.47e+07	0.79 y	55:19	-	0.66
226	Deca╗	13C-PCB-209	100.00	4.24e+07	1.24 y	56:36	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.84e+08	1.57 y	25:54	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.63e+08	1.05 y	28:54	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.30e+08	0.80 y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	8.89e+07	1.60 y	39:06	-	1.00
231	Hexa╗	13C-PCB-128	100.00	7.17e+07	1.30 y	46:16	-	1.00
232	Octa╗	13C-PCB-205	100.00	6.82e+07	0.91 y	53:55	-	1.00

233	CRS		13C-PCB-79	100.00	1.32e+08	0.79 y	37:41	-	1.02
234	CRS		13C-PCB-178	100.00	4.49e+07	0.45 y	45:32	-	0.63
235	PS		13C-PCB-79	100.00	1.32e+08	0.79 y	37:41	-	1.12
236	PS		13C-PCB-178	100.00	4.49e+07	0.45 y	45:32	-	0.90

Filename: 140623E2 S: 3 Acquired: 23-JUN-14 13:49:52
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-3 PCB CS2 14F1604

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Mono	PCB-1	2.50	4.75e+06	3.02	y	16:24	-	1.18
2	Mono	PCB-2	2.50	4.92e+06	2.98	y	18:41	-	1.16
3	Mono	PCB-3	2.50	5.82e+06	3.06	y	18:54	-	1.37
4	Di	PCB-4/10	10.00	1.63e+07	1.69	y	20:13	-	1.55
5	Di	PCB-7/9	10.00	1.91e+07	1.66	y	21:57	-	1.19
6	Di	PCB-6	5.00	1.05e+07	1.63	y	22:35	-	1.31
7	Di	PCB-5/8	10.00	1.85e+07	1.65	y	22:59	-	1.15
8	Di	PCB-14	5.00	9.28e+06	1.67	y	24:03	-	1.11
9	Di	PCB-11	5.00	8.97e+06	1.69	y	25:13	-	1.07
10	Di	PCB-12/13	10.00	1.98e+07	1.68	y	25:37	-	1.18
11	Di	PCB-15	5.00	1.05e+07	1.70	y	25:55	-	1.26
12	Tri	PCB-19	2.50	2.48e+06	1.07	y	24:14	-	1.01
13	Tri	PCB-30	2.50	4.07e+06	1.08	y	25:06	-	1.66
14	Tri	PCB-18	2.50	2.77e+06	1.08	y	25:50	-	0.79
15	Tri	PCB-17	2.50	3.32e+06	1.02	y	26:01	-	0.94
16	Tri	PCB-24/27	5.00	8.36e+06	1.04	y	26:35	-	1.19
17	Tri	PCB-16/32	5.00	6.64e+06	1.06	y	27:05	-	0.94
18	Tri	PCB-34	2.50	4.10e+06	1.00	y	27:52	-	1.13
19	Tri	PCB-23	2.50	4.41e+06	1.05	y	27:58	-	1.22
20	Tri	PCB-29	2.50	3.95e+06	1.06	y	28:13	-	1.09
21	Tri	PCB-26	2.50	4.58e+06	1.04	y	28:24	-	1.27
22	Tri	PCB-25	2.50	4.69e+06	1.09	y	28:35	-	1.30
23	Tri	PCB-31	2.50	4.94e+06	1.06	y	28:55	-	1.36
24	Tri	PCB-28	2.50	6.44e+06	1.05	y	29:02	-	1.78
25	Tri	PCB-20/21/33	7.50	1.21e+07	1.07	y	29:38	-	1.11
26	Tri	PCB-22	2.50	4.25e+06	1.06	y	30:04	-	1.17
27	Tri	PCB-36	2.50	3.41e+06	1.03	y	30:41	-	1.11
28	Tri	PCB-39	2.50	3.35e+06	1.04	y	31:09	-	1.09
29	Tri	PCB-38	2.50	3.81e+06	1.11	y	31:56	-	1.24
30	Tri	PCB-35	2.50	4.04e+06	1.02	y	32:26	-	1.31
31	Tri	PCB-37	2.50	3.84e+06	0.98	y	32:53	-	1.25
32	Tetra	PCB-54	2.50	3.28e+06	0.79	y	27:56	-	1.10
33	Tetra	PCB-50	2.50	2.75e+06	0.77	y	29:04	-	0.92
34	Tetra	PCB-53	2.50	2.52e+06	0.76	y	29:43	-	1.06
35	Tetra	PCB-51	2.50	2.31e+06	0.79	y	30:03	-	0.97
36	Tetra	PCB-45	2.50	1.97e+06	0.72	y	30:29	-	0.83
37	Tetra	PCB-46	2.50	1.95e+06	0.75	y	30:58	-	0.82
38	Tetra	PCB-52/69	5.00	6.07e+06	0.78	y	31:26	-	1.27
39	Tetra	PCB-73	2.50	3.40e+06	0.77	y	31:33	-	1.43
40	Tetra	PCB-43/49	5.00	4.57e+06	0.77	y	31:43	-	0.96
41	Tetra	PCB-47	2.50	2.67e+06	0.72	y	31:55	-	1.07

42	Tetra	PCB-48/75	5.00	6.04e+06	0.80 y	32:01	-	1.21
43	Tetra	PCB-65	2.50	3.21e+06	0.86 y	32:18	-	1.29
44	Tetra	PCB-62	2.50	3.13e+06	0.70 y	32:25	-	1.25
45	Tetra	PCB-44	2.50	2.09e+06	0.75 y	32:42	-	0.84
46	Tetra	PCB-42/59	5.00	5.38e+06	0.76 y	32:56	-	1.08
47	Tetra	PCB-41/64/71/72	10.00	1.16e+07	0.76 y	33:31	-	1.16
48	Tetra	PCB-68	2.50	3.30e+06	0.76 y	33:46	-	1.32
49	Tetra	PCB-40	2.50	1.74e+06	0.77 y	34:00	-	0.70
50	Tetra	PCB-57	2.50	3.04e+06	0.75 y	34:21	-	1.00
51	Tetra	PCB-67	2.50	3.37e+06	0.81 y	34:39	-	1.11
52	Tetra	PCB-58	2.50	2.87e+06	0.75 y	34:46	-	0.94

53	Tetra	PCB-63	2.50	2.77e+06	0.73	y	34:55	- 0.91
54	Tetra	PCB-74	2.50	3.80e+06	0.75	y	35:12	- 1.25
55	Tetra	PCB-61/70	5.00	5.98e+06	0.74	y	35:23	- 0.98
56	Tetra	PCB-76/66	5.00	6.31e+06	0.76	y	35:36	- 1.04
57	Tetra	PCB-80	2.50	3.85e+06	0.79	y	35:50	- 1.22
58	Tetra	PCB-55	2.50	3.37e+06	0.77	y	36:09	- 1.07
59	Tetra	PCB-56/60	5.00	6.58e+06	0.79	y	36:39	- 1.05
60	Tetra	PCB-79	2.50	3.55e+06	0.78	y	37:42	- 1.13
61	Tetra	PCB-78	2.50	3.58e+06	0.75	y	38:24	- 1.27
62	Tetra	PCB-81	2.50	3.64e+06	0.71	y	38:56	- 1.29
63	Tetra	PCB-77	2.50	3.13e+06	0.84	y	39:32	- 1.11
64	Penta	PCB-104	2.50	2.54e+06	1.55	y	32:34	- 1.20
65	Penta	PCB-96	2.50	2.37e+06	1.57	y	33:49	- 1.11
66	Penta	PCB-103	2.50	1.95e+06	1.62	y	34:21	- 0.92
67	Penta	PCB-100	2.50	1.89e+06	1.58	y	34:42	- 0.89
68	Penta	PCB-94	2.50	1.59e+06	1.56	y	35:10	- 1.03
69	Penta	PCB-95/98/102	7.50	5.65e+06	1.58	y	35:40	- 1.22
70	Penta	PCB-93	2.50	1.33e+06	1.59	y	35:48	- 0.86
71	Penta	PCB-88/91	5.00	3.54e+06	1.56	y	36:05	- 1.15
72	Penta	PCB-121	2.50	2.47e+06	1.61	y	36:11	- 1.61
73	Penta	PCB-84/92	5.00	3.35e+06	1.58	y	37:00	- 1.04
74	Penta	PCB-89	2.50	1.82e+06	1.44	y	37:13	- 1.13
75	Penta	PCB-90/101	5.00	3.61e+06	1.57	y	37:23	- 1.12
76	Penta	PCB-113	2.50	2.36e+06	1.55	y	37:38	- 1.46
77	Penta	PCB-99	2.50	2.05e+06	1.54	y	37:43	- 1.27
78	Penta	PCB-119	2.50	2.29e+06	1.50	y	38:11	- 1.54
79	Penta	PCB-108/112	5.00	3.72e+06	1.60	y	38:20	- 1.25
80	Penta	PCB-83	2.50	2.26e+06	1.63	y	38:30	- 1.52
81	Penta	PCB-97	2.50	1.70e+06	1.65	y	38:41	- 1.14
82	Penta	PCB-86	2.50	1.20e+06	1.61	y	38:50	- 0.81
83	Penta	PCB-87/117/125	7.50	6.65e+06	1.64	y	38:57	- 1.49
84	Penta	PCB-111/115	5.00	4.80e+06	1.62	y	39:08	- 1.61
85	Penta	PCB-85/116	5.00	3.77e+06	1.61	y	39:15	- 1.27
86	Penta	PCB-120	2.50	2.37e+06	1.56	y	39:29	- 1.60
87	Penta	PCB-110	2.50	2.32e+06	1.42	y	39:38	- 1.56
88	Penta	PCB-82	2.50	1.39e+06	1.53	y	40:16	- 0.74
89	Penta	PCB-124	2.50	2.74e+06	1.58	y	40:57	- 1.45
90	Penta	PCB-107/109	5.00	4.89e+06	1.55	y	41:05	- 1.29
91	Penta	PCB-123	2.50	2.23e+06	1.54	y	41:15	- 1.18
92	Penta	PCB-106/118	5.00	4.74e+06	1.58	y	41:27	- 1.19
93	Penta	PCB-114	2.50	3.01e+06	1.74	y	42:06	- 1.31
94	Penta	PCB-122	2.50	2.58e+06	1.66	y	42:14	- 1.12
95	Penta	PCB-105	2.50	3.03e+06	1.56	y	42:58	- 1.31
96	Penta	PCB-127	2.50	3.44e+06	1.56	y	43:18	- 1.37
97	Penta	PCB-126	2.50	2.65e+06	1.69	y	45:12	- 1.19
98	Hexa	PCB-155	2.50	1.95e+06	1.25	y	36:56	- 1.10
99	Hexa	PCB-150	2.50	1.74e+06	1.30	y	38:12	- 0.98
100	Hexa	PCB-152	2.50	1.99e+06	1.35	y	38:40	- 1.12
101	Hexa	PCB-145	2.50	2.09e+06	1.25	y	39:08	- 1.18
102	Hexa	PCB-136	2.50	2.08e+06	1.27	y	39:27	- 1.17

103	Hexa	PCB-148	2.50	1.31e+06	1.34 y	39:33	-	0.74
104	Hexa	PCB-154	2.50	1.55e+06	1.20 y	40:02	-	0.88
105	Hexa	PCB-151	2.50	1.29e+06	1.35 y	40:41	-	0.73
106	Hexa	PCB-135	2.50	1.24e+06	1.27 y	40:53	-	0.70
107	Hexa	PCB-144	2.50	1.35e+06	1.29 y	41:00	-	0.76
108	Hexa	PCB-147	2.50	1.38e+06	1.27 y	41:08	-	0.78
109	Hexa	PCB-139/149	5.00	2.58e+06	1.32 y	41:24	-	0.73
110	Hexa	PCB-140	2.50	1.29e+06	1.21 y	41:35	-	0.73
111	Hexa	PCB-134/143	5.00	3.48e+06	1.21 y	42:01	-	0.89
112	Hexa	PCB-133/142	5.00	3.10e+06	1.24 y	42:19	-	0.79
113	Hexa	PCB-131	2.50	1.76e+06	1.30 y	42:29	-	0.90

114	Hexa	PCB-146/165	5.00	4.77e+06	1.25	y	42:42	- 1.22
115	Hexa	PCB-132/161	5.00	4.19e+06	1.28	y	42:57	- 1.07
116	Hexa	PCB-153	2.50	2.42e+06	1.18	y	43:07	- 1.24
117	Hexa	PCB-168	2.50	2.79e+06	1.31	y	43:20	- 1.43
118	Hexa	PCB-141	2.50	1.92e+06	1.24	y	43:51	- 1.04
119	Hexa	PCB-137	2.50	1.90e+06	1.26	y	44:14	- 1.03
120	Hexa	PCB-130	2.50	1.82e+06	1.20	y	44:20	- 0.99
121	Hexa	PCB-138/163/164	7.50	7.26e+06	1.17	y	44:43	- 1.30
122	Hexa	PCB-158/160	5.00	5.17e+06	1.21	y	44:58	- 1.39
123	Hexa	PCB-129	2.50	1.61e+06	1.27	y	45:12	- 0.87
124	Hexa	PCB-166	2.50	2.51e+06	1.17	y	45:40	- 1.18
125	Hexa	PCB-159	2.50	2.37e+06	1.27	y	46:00	- 1.11
126	Hexa	PCB-128/162	5.00	4.28e+06	1.21	y	46:17	- 1.00
127	Hexa	PCB-167	2.50	2.79e+06	1.21	y	46:40	- 1.21
128	Hexa	PCB-156	2.50	2.59e+06	1.29	y	47:59	- 1.18
129	Hexa	PCB-157	2.50	2.63e+06	1.28	y	48:15	- 1.14
130	Hexa	PCB-169	2.50	2.41e+06	1.20	y	50:20	- 1.09
131	Hepta	PCB-188	2.50	2.41e+06	0.99	y	42:44	- 1.55
132	Hepta	PCB-184	2.50	2.63e+06	1.06	y	43:12	- 1.69
133	Hepta	PCB-179	2.50	2.01e+06	1.01	y	43:59	- 1.29
134	Hepta	PCB-176	2.50	2.25e+06	1.03	y	44:27	- 1.45
135	Hepta	PCB-186	2.50	2.12e+06	0.99	y	45:04	- 1.36
136	Hepta	PCB-178	2.50	1.70e+06	1.03	y	45:33	- 1.10
137	Hepta	PCB-175	2.50	1.56e+06	1.13	y	45:54	- 1.00
138	Hepta	PCB-182/187	5.00	3.83e+06	1.06	y	46:04	- 1.24
139	Hepta	PCB-183	2.50	1.88e+06	0.99	y	46:23	- 1.21
140	Hepta	PCB-185	2.50	2.14e+06	1.08	y	47:03	- 1.87
141	Hepta	PCB-174	2.50	1.52e+06	1.09	y	47:25	- 1.33
142	Hepta	PCB-181	2.50	1.64e+06	1.06	y	47:31	- 1.44
143	Hepta	PCB-177	2.50	1.46e+06	1.12	y	47:41	- 1.28
144	Hepta	PCB-171	2.50	1.80e+06	1.10	y	47:59	- 1.57
145	Hepta	PCB-173	2.50	1.30e+06	1.02	y	48:25	- 1.14
146	Hepta	PCB-172	2.50	1.89e+06	1.10	y	48:52	- 1.66
147	Hepta	PCB-192	2.50	2.02e+06	1.05	y	49:03	- 1.77
148	Hepta	PCB-180	2.50	1.56e+06	1.03	y	49:15	- 1.37
149	Hepta	PCB-193	2.50	1.90e+06	1.14	y	49:27	- 1.67
150	Hepta	PCB-191	2.50	1.95e+06	1.08	y	49:42	- 1.71
151	Hepta	PCB-170	2.50	1.48e+06	1.03	y	50:41	- 1.63
152	Hepta	PCB-190	2.50	2.08e+06	1.01	y	50:51	- 2.28
153	Hepta	PCB-189	2.50	1.87e+06	1.06	y	52:07	- 1.54
154	Octa	PCB-202	2.50	1.49e+06	0.93	y	48:11	- 1.05
155	Octa	PCB-201	2.50	1.64e+06	0.88	y	48:41	- 1.16
156	Octa	PCB-204	2.50	1.62e+06	0.92	y	48:51	- 1.14
157	Octa	PCB-197	2.50	1.49e+06	0.97	y	49:09	- 1.05
158	Octa	PCB-200	2.50	1.49e+06	0.95	y	49:59	- 1.05
159	Octa	PCB-198	2.50	1.08e+06	0.86	y	51:15	- 0.76
160	Octa	PCB-199	2.50	1.06e+06	0.98	y	51:22	- 0.75
161	Octa	PCB-196/203	5.00	2.18e+06	0.94	y	51:37	- 0.77
162	Octa	PCB-195	2.50	1.58e+06	0.94	y	52:46	- 1.24
163	Octa	PCB-194	2.50	1.51e+06	0.87	y	53:39	- 1.18

164	Octa	PCB-205	2.50	1.95e+06	0.91	y	53:56	-	1.53
165	Nona	PCB-208	2.50	1.57e+06	1.28	y	52:54	-	0.91
166	Nona	PCB-207	2.50	1.82e+06	1.42	y	53:13	-	1.05
167	Nona	PCB-206	2.50	1.03e+06	1.32	y	55:21	-	0.99
168	Deca	PCB-209	2.50	1.17e+06	1.22	y	56:39	-	1.17
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.24
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.20
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.09

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.24
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.08
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.17
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.26
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.88
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.10
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.42
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.95
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.32
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.98
182	Tot ╗	Total Deca-PCB	2.50	1.17e+06	1.22	y	56:39	-	1.17
183	Mono╗	13C-PCB-1	100.00	1.61e+08	3.34	y	16:23	-	0.91
184	Mono╗	13C-PCB-3	100.00	1.70e+08	3.41	y	18:53	-	0.96
185	Di-IS	13C-PCB-4	100.00	1.05e+08	1.60	y	20:11	-	0.60
186	Di-IS	13C-PCB-9	100.00	1.61e+08	1.58	y	21:54	-	0.91
187	Di-IS	13C-PCB-11	100.00	1.68e+08	1.55	y	25:12	-	0.95
188	Tri-╗	13C-PCB-19	100.00	9.81e+07	1.09	y	24:13	-	0.56
189	Tri-╗	13C-PCB-32	100.00	1.41e+08	1.10	y	27:05	-	0.80
190	Tri-╗	13C-PCB-28	100.00	1.45e+08	1.05	y	29:00	-	0.93
191	Tri-╗	13C-PCB-37	100.00	1.23e+08	1.05	y	32:51	-	0.79
192	Tetr╗	13C-PCB-54	100.00	1.19e+08	0.80	y	27:55	-	0.97
193	Tetr╗	13C-PCB-52	100.00	9.54e+07	0.79	y	31:24	-	0.77
194	Tetr╗	13C-PCB-47	100.00	9.99e+07	0.78	y	31:53	-	0.81
195	Tetr╗	13C-PCB-70	100.00	1.22e+08	0.79	y	35:24	-	0.99
196	Tetr╗	13C-PCB-80	100.00	1.26e+08	0.79	y	35:48	-	1.02
197	Tetr╗	13C-PCB-81	100.00	1.13e+08	0.80	y	38:55	-	0.92
198	Tetr╗	13C-PCB-77	100.00	1.13e+08	0.81	y	39:31	-	0.92
199	Pent╗	13C-PCB-104	100.00	8.51e+07	1.58	y	32:33	-	1.01
200	Pent╗	13C-PCB-95	100.00	6.16e+07	1.60	y	35:42	-	0.73
201	Pent╗	13C-PCB-101	100.00	6.46e+07	1.61	y	37:22	-	0.77
202	Pent╗	13C-PCB-97	100.00	5.95e+07	1.56	y	38:40	-	0.71
203	Pent╗	13C-PCB-123	100.00	7.57e+07	1.60	y	41:14	-	0.90
204	Pent╗	13C-PCB-118	100.00	7.96e+07	1.58	y	41:25	-	0.95
205	Pent╗	13C-PCB-114	100.00	9.23e+07	1.63	y	42:05	-	1.35
206	Pent╗	13C-PCB-105	100.00	9.25e+07	1.61	y	42:57	-	1.36
207	Pent╗	13C-PCB-127	100.00	1.01e+08	1.61	y	43:17	-	1.48
208	Pent╗	13C-PCB-126	100.00	8.91e+07	1.60	y	45:11	-	1.31
209	Hexa╗	13C-PCB-155	100.00	7.08e+07	1.28	y	36:55	-	0.84
210	Hexa╗	13C-PCB-153	100.00	7.84e+07	1.29	y	43:06	-	1.15
211	Hexa╗	13C-PCB-141	100.00	7.40e+07	1.27	y	43:50	-	1.09
212	Hexa	13C-PCB-138	100.00	7.43e+07	1.26	y	44:41	-	1.09
213	Hexa╗	13C-PCB-159	100.00	8.52e+07	1.28	y	45:58	-	1.25
214	Hexa╗	13C-PCB-167	100.00	9.23e+07	1.29	y	46:40	-	1.35
215	Hexa╗	13C-PCB-156	100.00	8.80e+07	1.30	y	47:58	-	1.29
216	Hexa╗	13C-PCB-157	100.00	9.23e+07	1.29	y	48:14	-	1.35
217	Hexa╗	13C-PCB-169	100.00	8.83e+07	1.28	y	50:19	-	1.29
218	Hept╗	13C-PCB-188	100.00	6.20e+07	0.47	y	42:44	-	0.91
219	Hept╗	13C-PCB-180	100.00	4.56e+07	0.47	y	49:15	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.64e+07	0.46	y	50:40	-	0.53
221	Hept╗	13C-PCB-189	100.00	4.86e+07	0.48	y	52:07	-	0.71
222	Octa╗	13C-PCB-202	100.00	5.66e+07	0.90	y	48:10	-	0.83

223	Octa¶	13C-PCB-194	100.00	5.12e+07	0.92	y	53:38	-	0.80
224	Nona¶	13C-PCB-208	100.00	6.94e+07	0.78	y	52:53	-	1.09
225	Nona¶	13C-PCB-206	100.00	4.16e+07	0.79	y	55:20	-	0.65
226	Deca¶	13C-PCB-209	100.00	3.99e+07	1.19	y	56:38	-	0.63
227	DI-RS	13C-PCB-15	100.00	1.76e+08	1.60	y	25:54	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.55e+08	1.05	y	28:54	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.23e+08	0.79	y	36:38	-	1.00
230	Penta	13C-PCB-111	100.00	8.39e+07	1.60	y	39:06	-	1.00
231	Hexa¶	13C-PCB-128	100.00	6.82e+07	1.27	y	46:16	-	1.00
232	Octa¶	13C-PCB-205	100.00	6.36e+07	0.91	y	53:55	-	1.00

233	CRS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:41	-	1.02
234	CRS	13C-PCB-178	100.00	4.19e+07	0.47 y	45:32	-	0.61
235	PS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:41	-	1.11
236	PS	13C-PCB-178	100.00	4.19e+07	0.47 y	45:32	-	0.92

Filename: 140623E2 S: 4 Acquired: 23-JUN-14 14:53:49
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-4 PCB CS3 14F1302

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	9.40e+07	3.00 y	16:25	-	1.23
2	Mono	PCB-2	50.00	9.45e+07	3.01 y	18:41	-	1.23
3	Mono	PCB-3	50.00	1.13e+08	3.01 y	18:55	-	1.46
4	Di	PCB-4/10	200.00	3.27e+08	1.65 y	20:14	-	1.57
5	Di	PCB-7/9	200.00	3.82e+08	1.65 y	21:57	-	1.21
6	Di	PCB-6	100.00	2.07e+08	1.66 y	22:35	-	1.31
7	Di	PCB-5/8	200.00	3.65e+08	1.64 y	23:00	-	1.15
8	Di	PCB-14	100.00	1.87e+08	1.66 y	24:04	-	1.14
9	Di	PCB-11	100.00	1.81e+08	1.65 y	25:14	-	1.10
10	Di	PCB-12/13	200.00	3.92e+08	1.65 y	25:38	-	1.20
11	Di	PCB-15	100.00	2.11e+08	1.66 y	25:56	-	1.28
12	Tri	PCB-19	50.00	4.92e+07	1.05 y	24:15	-	1.04
13	Tri	PCB-30	50.00	7.99e+07	1.06 y	25:07	-	1.69
14	Tri	PCB-18	50.00	5.58e+07	1.05 y	25:51	-	0.80
15	Tri	PCB-17	50.00	6.48e+07	1.05 y	26:02	-	0.93
16	Tri	PCB-24/27	100.00	1.68e+08	1.05 y	26:36	-	1.20
17	Tri	PCB-16/32	100.00	1.31e+08	1.06 y	27:06	-	0.94
18	Tri	PCB-34	50.00	7.59e+07	1.03 y	27:52	-	1.09
19	Tri	PCB-23	50.00	8.55e+07	1.06 y	27:58	-	1.23
20	Tri	PCB-29	50.00	7.42e+07	1.04 y	28:13	-	1.06
21	Tri	PCB-26	50.00	8.24e+07	1.04 y	28:25	-	1.18
22	Tri	PCB-25	50.00	8.85e+07	1.06 y	28:34	-	1.27
23	Tri	PCB-31	50.00	8.65e+07	1.02 y	28:56	-	1.24
24	Tri	PCB-28	50.00	1.19e+08	1.04 y	29:02	-	1.70
25	Tri	PCB-20/21/33	150.00	2.26e+08	1.03 y	29:39	-	1.08
26	Tri	PCB-22	50.00	8.60e+07	1.04 y	30:05	-	1.23
27	Tri	PCB-36	50.00	7.12e+07	1.03 y	30:40	-	1.18
28	Tri	PCB-39	50.00	7.20e+07	1.02 y	31:09	-	1.20
29	Tri	PCB-38	50.00	7.37e+07	1.03 y	31:55	-	1.23
30	Tri	PCB-35	50.00	7.10e+07	1.03 y	32:26	-	1.18
31	Tri	PCB-37	50.00	7.16e+07	1.02 y	32:53	-	1.19
32	Tetra	PCB-54	50.00	6.73e+07	0.78 y	27:57	-	1.10
33	Tetra	PCB-50	50.00	5.38e+07	0.77 y	29:05	-	0.88
34	Tetra	PCB-53	50.00	5.23e+07	0.75 y	29:44	-	1.08
35	Tetra	PCB-51	50.00	4.77e+07	0.77 y	30:04	-	0.98
36	Tetra	PCB-45	50.00	4.32e+07	0.77 y	30:30	-	0.89
37	Tetra	PCB-46	50.00	4.05e+07	0.76 y	30:59	-	0.83
38	Tetra	PCB-52/69	100.00	1.24e+08	0.76 y	31:27	-	1.28
39	Tetra	PCB-73	50.00	6.71e+07	0.78 y	31:34	-	1.38
40	Tetra	PCB-43/49	100.00	9.43e+07	0.76 y	31:44	-	0.97
41	Tetra	PCB-47	50.00	5.35e+07	0.76 y	31:55	-	1.04

42	Tetra	PCB-48/75	100.00	1.20e+08	0.77 y	32:02	-	1.17
43	Tetra	PCB-65	50.00	6.30e+07	0.76 y	32:19	-	1.23
44	Tetra	PCB-62	50.00	5.58e+07	0.76 y	32:26	-	1.09
45	Tetra	PCB-44	50.00	4.12e+07	0.77 y	32:43	-	0.80
46	Tetra	PCB-42/59	100.00	1.11e+08	0.76 y	32:57	-	1.08
47	Tetra	PCB-41/64/71/72	200.00	2.33e+08	0.77 y	33:32	-	1.13
48	Tetra	PCB-68	50.00	6.63e+07	0.76 y	33:47	-	1.29
49	Tetra	PCB-40	50.00	3.48e+07	0.77 y	34:00	-	0.68
50	Tetra	PCB-57	50.00	6.06e+07	0.76 y	34:22	-	0.99
51	Tetra	PCB-67	50.00	6.65e+07	0.76 y	34:40	-	1.09
52	Tetra	PCB-58	50.00	5.67e+07	0.79 y	34:47	-	0.93

53	Tetra	PCB-63	50.00	5.70e+07	0.76 y	34:56	-	0.93
54	Tetra	PCB-74	50.00	7.34e+07	0.77 y	35:13	-	1.20
55	Tetra	PCB-61/70	100.00	1.16e+08	0.77 y	35:24	-	0.95
56	Tetra	PCB-76/66	100.00	1.26e+08	0.77 y	35:37	-	1.03
57	Tetra	PCB-80	50.00	7.72e+07	0.77 y	35:50	-	1.22
58	Tetra	PCB-55	50.00	6.84e+07	0.77 y	36:10	-	1.08
59	Tetra	PCB-56/60	100.00	1.27e+08	0.77 y	36:40	-	1.00
60	Tetra	PCB-79	50.00	6.79e+07	0.78 y	37:43	-	1.07
61	Tetra	PCB-78	50.00	6.97e+07	0.77 y	38:25	-	1.25
62	Tetra	PCB-81	50.00	7.20e+07	0.78 y	38:57	-	1.29
63	Tetra	PCB-77	50.00	6.19e+07	0.79 y	39:33	-	1.08
64	Penta	PCB-104	50.00	5.11e+07	1.57 y	32:35	-	1.20
65	Penta	PCB-96	50.00	4.80e+07	1.56 y	33:50	-	1.13
66	Penta	PCB-103	50.00	3.98e+07	1.56 y	34:22	-	0.93
67	Penta	PCB-100	50.00	3.93e+07	1.58 y	34:42	-	0.92
68	Penta	PCB-94	50.00	3.18e+07	1.55 y	35:11	-	1.02
69	Penta	PCB-95/98/102	150.00	1.14e+08	1.55 y	35:42	-	1.22
70	Penta	PCB-93	50.00	2.65e+07	1.58 y	35:48	-	0.85
71	Penta	PCB-88/91	100.00	7.03e+07	1.58 y	36:05	-	1.12
72	Penta	PCB-121	50.00	5.08e+07	1.60 y	36:12	-	1.62
73	Penta	PCB-84/92	100.00	6.82e+07	1.56 y	37:01	-	1.04
74	Penta	PCB-89	50.00	3.73e+07	1.58 y	37:14	-	1.14
75	Penta	PCB-90/101	100.00	7.26e+07	1.56 y	37:24	-	1.10
76	Penta	PCB-113	50.00	4.88e+07	1.57 y	37:39	-	1.49
77	Penta	PCB-99	50.00	4.19e+07	1.60 y	37:44	-	1.27
78	Penta	PCB-119	50.00	4.49e+07	1.56 y	38:12	-	1.52
79	Penta	PCB-108/112	100.00	7.56e+07	1.58 y	38:21	-	1.28
80	Penta	PCB-83	50.00	4.40e+07	1.57 y	38:31	-	1.49
81	Penta	PCB-97	50.00	3.44e+07	1.55 y	38:42	-	1.17
82	Penta	PCB-86	50.00	2.35e+07	1.55 y	38:51	-	0.80
83	Penta	PCB-87/117/125	150.00	1.40e+08	1.62 y	38:58	-	1.59
84	Penta	PCB-111/115	100.00	9.49e+07	1.51 y	39:08	-	1.61
85	Penta	PCB-85/116	100.00	7.71e+07	1.58 y	39:16	-	1.31
86	Penta	PCB-120	50.00	4.81e+07	1.59 y	39:30	-	1.63
87	Penta	PCB-110	50.00	4.58e+07	1.57 y	39:39	-	1.56
88	Penta	PCB-82	50.00	2.78e+07	1.55 y	40:17	-	0.76
89	Penta	PCB-124	50.00	5.28e+07	1.58 y	40:57	-	1.43
90	Penta	PCB-107/109	100.00	9.93e+07	1.59 y	41:05	-	1.35
91	Penta	PCB-123	50.00	4.35e+07	1.59 y	41:17	-	1.18
92	Penta	PCB-106/118	100.00	9.15e+07	1.59 y	41:28	-	1.17
93	Penta	PCB-114	50.00	6.12e+07	1.65 y	42:07	-	1.31
94	Penta	PCB-122	50.00	5.19e+07	1.66 y	42:15	-	1.11
95	Penta	PCB-105	50.00	5.88e+07	1.64 y	42:59	-	1.28
96	Penta	PCB-127	50.00	6.36e+07	1.67 y	43:19	-	1.27
97	Penta	PCB-126	50.00	5.32e+07	1.63 y	45:13	-	1.17
98	Hexa	PCB-155	50.00	3.92e+07	1.27 y	36:57	-	1.11
99	Hexa	PCB-150	50.00	3.54e+07	1.29 y	38:13	-	1.00
100	Hexa	PCB-152	50.00	3.90e+07	1.30 y	38:42	-	1.10
101	Hexa	PCB-145	50.00	4.21e+07	1.28 y	39:08	-	1.19
102	Hexa	PCB-136	50.00	4.09e+07	1.29 y	39:28	-	1.15

103	Hexa	PCB-148	50.00	2.62e+07	1.30	y	39:33	-	0.74
104	Hexa	PCB-154	50.00	2.94e+07	1.28	y	40:03	-	0.83
105	Hexa	PCB-151	50.00	2.53e+07	1.29	y	40:42	-	0.71
106	Hexa	PCB-135	50.00	2.73e+07	1.26	y	40:55	-	0.77
107	Hexa	PCB-144	50.00	2.52e+07	1.30	y	41:02	-	0.71
108	Hexa	PCB-147	50.00	2.80e+07	1.30	y	41:09	-	0.79
109	Hexa	PCB-139/149	100.00	5.22e+07	1.28	y	41:25	-	0.74
110	Hexa	PCB-140	50.00	2.47e+07	1.27	y	41:36	-	0.70
111	Hexa	PCB-134/143	100.00	7.05e+07	1.25	y	42:02	-	0.89
112	Hexa	PCB-133/142	100.00	6.32e+07	1.24	y	42:20	-	0.80
113	Hexa	PCB-131	50.00	3.53e+07	1.23	y	42:30	-	0.89

114	Hexa	PCB-146/165	100.00	9.72e+07	1.25 y	42:43	-	1.23
115	Hexa	PCB-132/161	100.00	8.58e+07	1.31 y	42:58	-	1.08
116	Hexa	PCB-153	50.00	4.86e+07	1.16 y	43:08	-	1.23
117	Hexa	PCB-168	50.00	5.75e+07	1.25 y	43:21	-	1.45
118	Hexa	PCB-141	50.00	3.94e+07	1.24 y	43:52	-	1.06
119	Hexa	PCB-137	50.00	3.90e+07	1.23 y	44:15	-	1.05
120	Hexa	PCB-130	50.00	3.61e+07	1.23 y	44:21	-	0.97
121	Hexa	PCB-138/163/164	150.00	1.47e+08	1.24 y	44:44	-	1.27
122	Hexa	PCB-158/160	100.00	1.03e+08	1.23 y	44:59	-	1.34
123	Hexa	PCB-129	50.00	3.23e+07	1.24 y	45:13	-	0.84
124	Hexa	PCB-166	50.00	4.98e+07	1.24 y	45:41	-	1.17
125	Hexa	PCB-159	50.00	4.70e+07	1.23 y	46:01	-	1.11
126	Hexa	PCB-128/162	100.00	8.65e+07	1.23 y	46:18	-	1.02
127	Hexa	PCB-167	50.00	5.55e+07	1.22 y	46:41	-	1.20
128	Hexa	PCB-156	50.00	5.05e+07	1.25 y	48:00	-	1.14
129	Hexa	PCB-157	50.00	5.18e+07	1.24 y	48:16	-	1.13
130	Hexa	PCB-169	50.00	4.66e+07	1.27 y	50:20	-	1.08
131	Hepta	PCB-188	50.00	4.99e+07	1.05 y	42:46	-	1.56
132	Hepta	PCB-184	50.00	5.13e+07	1.06 y	43:13	-	1.60
133	Hepta	PCB-179	50.00	4.15e+07	1.06 y	44:00	-	1.30
134	Hepta	PCB-176	50.00	4.68e+07	1.04 y	44:28	-	1.46
135	Hepta	PCB-186	50.00	4.64e+07	1.05 y	45:05	-	1.45
136	Hepta	PCB-178	50.00	3.27e+07	1.05 y	45:34	-	1.02
137	Hepta	PCB-175	50.00	3.22e+07	1.05 y	45:55	-	1.01
138	Hepta	PCB-182/187	100.00	7.77e+07	1.05 y	46:05	-	1.21
139	Hepta	PCB-183	50.00	3.68e+07	1.05 y	46:24	-	1.15
140	Hepta	PCB-185	50.00	4.12e+07	1.07 y	47:04	-	1.78
141	Hepta	PCB-174	50.00	3.30e+07	1.02 y	47:26	-	1.42
142	Hepta	PCB-181	50.00	3.14e+07	1.06 y	47:33	-	1.36
143	Hepta	PCB-177	50.00	2.91e+07	1.05 y	47:42	-	1.26
144	Hepta	PCB-171	50.00	3.69e+07	1.07 y	48:00	-	1.59
145	Hepta	PCB-173	50.00	2.61e+07	1.04 y	48:26	-	1.13
146	Hepta	PCB-172	50.00	3.80e+07	1.07 y	48:53	-	1.64
147	Hepta	PCB-192	50.00	4.11e+07	1.06 y	49:04	-	1.78
148	Hepta	PCB-180	50.00	3.12e+07	1.05 y	49:17	-	1.35
149	Hepta	PCB-193	50.00	3.98e+07	1.07 y	49:27	-	1.72
150	Hepta	PCB-191	50.00	3.90e+07	1.07 y	49:42	-	1.68
151	Hepta	PCB-170	50.00	2.97e+07	1.05 y	50:41	-	1.62
152	Hepta	PCB-190	50.00	4.08e+07	1.06 y	50:51	-	2.23
153	Hepta	PCB-189	50.00	3.71e+07	1.05 y	52:08	-	1.55
154	Octa	PCB-202	50.00	3.01e+07	0.94 y	48:12	-	1.06
155	Octa	PCB-201	50.00	3.19e+07	0.91 y	48:41	-	1.13
156	Octa	PCB-204	50.00	3.22e+07	0.91 y	48:50	-	1.14
157	Octa	PCB-197	50.00	3.03e+07	0.91 y	49:09	-	1.07
158	Octa	PCB-200	50.00	3.01e+07	0.90 y	49:59	-	1.06
159	Octa	PCB-198	50.00	2.18e+07	0.92 y	51:15	-	0.77
160	Octa	PCB-199	50.00	2.16e+07	0.91 y	51:21	-	0.76
161	Octa	PCB-196/203	100.00	4.53e+07	0.92 y	51:36	-	0.80
162	Octa	PCB-195	50.00	3.20e+07	0.89 y	52:45	-	1.24
163	Octa	PCB-194	50.00	3.08e+07	0.92 y	53:37	-	1.19

164	Octa	PCB-205	50.00	3.93e+07	0.92	y	53:55	-	1.52
165	Nona	PCB-208	50.00	3.24e+07	1.34	y	52:53	-	0.92
166	Nona	PCB-207	50.00	3.78e+07	1.32	y	53:12	-	1.08
167	Nona	PCB-206	50.00	2.13e+07	1.36	y	55:20	-	1.01
168	Deca	PCB-209	50.00	2.30e+07	1.21	y	56:38	-	1.20
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.31
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.21
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.10

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.21
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.06
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.18
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.23
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.88
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.09
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.41
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.96
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.32
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.00
182	Tot ╗	Total Deca-PCB	50.00	2.30e+07	1.21	y	56:38	-	1.20
183	Mono╗	13C-PCB-1	100.00	1.53e+08	3.37	y	16:24	-	0.86
184	Mono╗	13C-PCB-3	100.00	1.54e+08	3.41	y	18:54	-	0.86
185	Di-IS	13C-PCB-4	100.00	1.04e+08	1.58	y	20:11	-	0.59
186	Di-IS	13C-PCB-9	100.00	1.59e+08	1.59	y	21:55	-	0.89
187	Di-IS	13C-PCB-11	100.00	1.64e+08	1.57	y	25:13	-	0.92
188	Tri-╗	13C-PCB-19	100.00	9.46e+07	1.07	y	24:14	-	0.53
189	Tri-╗	13C-PCB-32	100.00	1.39e+08	1.09	y	27:06	-	0.78
190	Tri-╗	13C-PCB-28	100.00	1.40e+08	1.06	y	29:01	-	0.92
191	Tri-╗	13C-PCB-37	100.00	1.20e+08	1.07	y	32:52	-	0.79
192	Tetr╗	13C-PCB-54	100.00	1.23e+08	0.81	y	27:55	-	0.98
193	Tetr╗	13C-PCB-52	100.00	9.72e+07	0.80	y	31:24	-	0.78
194	Tetr╗	13C-PCB-47	100.00	1.02e+08	0.79	y	31:54	-	0.82
195	Tetr╗	13C-PCB-70	100.00	1.22e+08	0.78	y	35:25	-	0.98
196	Tetr╗	13C-PCB-80	100.00	1.27e+08	0.80	y	35:49	-	1.01
197	Tetr╗	13C-PCB-81	100.00	1.12e+08	0.79	y	38:56	-	0.89
198	Tetr╗	13C-PCB-77	100.00	1.14e+08	0.78	y	39:32	-	0.91
199	Pent╗	13C-PCB-104	100.00	8.52e+07	1.57	y	32:34	-	1.00
200	Pent╗	13C-PCB-95	100.00	6.27e+07	1.59	y	35:43	-	0.74
201	Pent╗	13C-PCB-101	100.00	6.57e+07	1.54	y	37:23	-	0.77
202	Pent╗	13C-PCB-97	100.00	5.89e+07	1.59	y	38:42	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.37e+07	1.61	y	41:15	-	0.87
204	Pent╗	13C-PCB-118	100.00	7.79e+07	1.58	y	41:26	-	0.92
205	Pent╗	13C-PCB-114	100.00	9.33e+07	1.60	y	42:06	-	1.35
206	Pent╗	13C-PCB-105	100.00	9.17e+07	1.60	y	42:58	-	1.32
207	Pent╗	13C-PCB-127	100.00	1.00e+08	1.57	y	43:17	-	1.45
208	Pent╗	13C-PCB-126	100.00	9.05e+07	1.58	y	45:12	-	1.31
209	Hexa╗	13C-PCB-155	100.00	7.08e+07	1.29	y	36:55	-	0.83
210	Hexa╗	13C-PCB-153	100.00	7.92e+07	1.29	y	43:07	-	1.14
211	Hexa╗	13C-PCB-141	100.00	7.45e+07	1.28	y	43:51	-	1.07
212	Hexa	13C-PCB-138	100.00	7.71e+07	1.29	y	44:42	-	1.11
213	Hexa╗	13C-PCB-159	100.00	8.48e+07	1.27	y	45:59	-	1.22
214	Hexa╗	13C-PCB-167	100.00	9.22e+07	1.30	y	46:40	-	1.33
215	Hexa╗	13C-PCB-156	100.00	8.85e+07	1.29	y	47:58	-	1.28
216	Hexa╗	13C-PCB-157	100.00	9.20e+07	1.29	y	48:15	-	1.33
217	Hexa╗	13C-PCB-169	100.00	8.62e+07	1.27	y	50:19	-	1.24
218	Hept╗	13C-PCB-188	100.00	6.40e+07	0.46	y	42:45	-	0.92
219	Hept╗	13C-PCB-180	100.00	4.63e+07	0.47	y	49:15	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.66e+07	0.47	y	50:40	-	0.53
221	Hept╗	13C-PCB-189	100.00	4.78e+07	0.47	y	52:07	-	0.69
222	Octa╗	13C-PCB-202	100.00	5.65e+07	0.94	y	48:11	-	0.81

223	Octa¬	13C-PCB-194	100.00	5.16e+07	0.92 y	53:36	-	0.79
224	Nona¬	13C-PCB-208	100.00	7.00e+07	0.78 y	52:53	-	1.08
225	Nona¬	13C-PCB-206	100.00	4.23e+07	0.78 y	55:19	-	0.65
226	Deca¬	13C-PCB-209	100.00	3.85e+07	1.23 y	56:37	-	0.59
227	DI-RS	13C-PCB-15	100.00	1.78e+08	1.59 y	25:55	-	1.00
228	Tri-¬	13C-PCB-31	100.00	1.52e+08	1.05 y	28:55	-	1.00
229	Tetr¬	13C-PCB-60	100.00	1.25e+08	0.79 y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	8.51e+07	1.57 y	39:07	-	1.00
231	Hexa¬	13C-PCB-128	100.00	6.93e+07	1.27 y	46:16	-	1.00
232	Octa¬	13C-PCB-205	100.00	6.51e+07	0.91 y	53:54	-	1.00

233	CRS		13C-PCB-79	100.00	1.25e+08	0.79	y	37:42	- 1.00
234	CRS		13C-PCB-178	100.00	4.30e+07	0.46	y	45:33	- 0.62
235	PS		13C-PCB-79	100.00	1.25e+08	0.79	y	37:42	- 1.12
236	PS		13C-PCB-178	100.00	4.30e+07	0.46	y	45:33	- 0.93

Filename: 140623E2 S: 5 Acquired: 23-JUN-14 15:57:45
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-5 PCB CS4 14F1605

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	7.39e+08	3.02 y	16:25	-	1.29
2	Mono	PCB-2	400.00	7.73e+08	3.00 y	18:41	-	1.28
3	Mono	PCB-3	400.00	9.04e+08	3.01 y	18:55	-	1.49
4	Di	PCB-4/10	1600.00	2.74e+09	1.64 y	20:14	-	1.60
5	Di	PCB-7/9	1600.00	3.22e+09	1.65 y	21:58	-	1.22
6	Di	PCB-6	800.00	1.77e+09	1.65 y	22:36	-	1.34
7	Di	PCB-5/8	1600.00	3.07e+09	1.65 y	23:01	-	1.16
8	Di	PCB-14	800.00	1.56e+09	1.66 y	24:04	-	1.12
9	Di	PCB-11	800.00	1.52e+09	1.66 y	25:15	-	1.09
10	Di	PCB-12/13	1600.00	3.35e+09	1.64 y	25:37	-	1.20
11	Di	PCB-15	800.00	1.81e+09	1.65 y	25:56	-	1.30
12	Tri	PCB-19	400.00	3.88e+08	1.06 y	24:15	-	1.07
13	Tri	PCB-30	400.00	6.46e+08	1.07 y	25:08	-	1.79
14	Tri	PCB-18	400.00	4.49e+08	1.07 y	25:51	-	0.78
15	Tri	PCB-17	400.00	5.20e+08	1.07 y	26:02	-	0.91
16	Tri	PCB-24/27	800.00	1.36e+09	1.07 y	26:36	-	1.18
17	Tri	PCB-16/32	800.00	1.07e+09	1.06 y	27:06	-	0.94
18	Tri	PCB-34	400.00	6.31e+08	1.04 y	27:53	-	1.16
19	Tri	PCB-23	400.00	6.73e+08	1.03 y	27:58	-	1.24
20	Tri	PCB-29	400.00	5.51e+08	1.00 y	28:13	-	1.01
21	Tri	PCB-26	400.00	6.09e+08	1.01 y	28:26	-	1.12
22	Tri	PCB-25	400.00	6.81e+08	1.01 y	28:35	-	1.25
23	Tri	PCB-31	400.00	6.90e+08	1.00 y	28:56	-	1.27
24	Tri	PCB-28	400.00	8.88e+08	1.03 y	29:02	-	1.63
25	Tri	PCB-20/21/33	1200.00	1.80e+09	1.00 y	29:38	-	1.11
26	Tri	PCB-22	400.00	5.78e+08	1.01 y	30:06	-	1.06
27	Tri	PCB-36	400.00	5.30e+08	1.01 y	30:41	-	1.05
28	Tri	PCB-39	400.00	4.63e+08	0.99 y	31:09	-	0.92
29	Tri	PCB-38	400.00	5.20e+08	1.00 y	31:56	-	1.03
30	Tri	PCB-35	400.00	5.75e+08	0.99 y	32:27	-	1.15
31	Tri	PCB-37	400.00	5.64e+08	1.01 y	32:53	-	1.12
32	Tetra	PCB-54	400.00	5.49e+08	0.77 y	27:57	-	1.09
33	Tetra	PCB-50	400.00	4.32e+08	0.76 y	29:05	-	0.86
34	Tetra	PCB-53	400.00	4.28e+08	0.76 y	29:44	-	1.09
35	Tetra	PCB-51	400.00	3.77e+08	0.76 y	30:04	-	0.96
36	Tetra	PCB-45	400.00	3.32e+08	0.76 y	30:30	-	0.84
37	Tetra	PCB-46	400.00	3.25e+08	0.77 y	30:59	-	0.83
38	Tetra	PCB-52/69	800.00	9.79e+08	0.75 y	31:27	-	1.25
39	Tetra	PCB-73	400.00	5.09e+08	0.76 y	31:34	-	1.30
40	Tetra	PCB-43/49	800.00	7.49e+08	0.75 y	31:43	-	0.95
41	Tetra	PCB-47	400.00	4.38e+08	0.76 y	31:56	-	1.04

42	Tetra	PCB-48/75	800.00	9.87e+08	0.76	y	32:03	- 1.17
43	Tetra	PCB-65	400.00	4.70e+08	0.75	y	32:19	- 1.12
44	Tetra	PCB-62	400.00	5.15e+08	0.76	y	32:25	- 1.22
45	Tetra	PCB-44	400.00	3.32e+08	0.76	y	32:44	- 0.79
46	Tetra	PCB-42/59	800.00	9.34e+08	0.76	y	32:57	- 1.11
47	Tetra	PCB-41/64/71/72	1600.00	2.01e+09	0.77	y	33:32	- 1.19
48	Tetra	PCB-68	400.00	5.53e+08	0.76	y	33:47	- 1.31
49	Tetra	PCB-40	400.00	2.93e+08	0.77	y	34:01	- 0.69
50	Tetra	PCB-57	400.00	4.98e+08	0.76	y	34:21	- 0.96
51	Tetra	PCB-67	400.00	5.63e+08	0.76	y	34:40	- 1.09
52	Tetra	PCB-58	400.00	4.58e+08	0.78	y	34:47	- 0.88

53	Tetra	PCB-63	400.00	4.57e+08	0.76	y	34:56	- 0.88
54	Tetra	PCB-74	400.00	6.33e+08	0.76	y	35:14	- 1.23
55	Tetra	PCB-61/70	800.00	9.54e+08	0.76	y	35:24	- 0.92
56	Tetra	PCB-76/66	800.00	1.06e+09	0.77	y	35:37	- 1.03
57	Tetra	PCB-80	400.00	6.36e+08	0.77	y	35:51	- 1.18
58	Tetra	PCB-55	400.00	5.68e+08	0.76	y	36:10	- 1.05
59	Tetra	PCB-56/60	800.00	1.04e+09	0.76	y	36:40	- 0.97
60	Tetra	PCB-79	400.00	5.59e+08	0.77	y	37:44	- 1.04
61	Tetra	PCB-78	400.00	5.77e+08	0.76	y	38:26	- 1.20
62	Tetra	PCB-81	400.00	6.11e+08	0.76	y	38:58	- 1.27
63	Tetra	PCB-77	400.00	5.41e+08	0.79	y	39:33	- 1.07
64	Penta	PCB-104	400.00	4.22e+08	1.58	y	32:35	- 1.19
65	Penta	PCB-96	400.00	4.08e+08	1.59	y	33:51	- 1.16
66	Penta	PCB-103	400.00	3.36e+08	1.56	y	34:23	- 0.95
67	Penta	PCB-100	400.00	3.34e+08	1.58	y	34:43	- 0.95
68	Penta	PCB-94	400.00	2.70e+08	1.58	y	35:11	- 1.00
69	Penta	PCB-95/98/102	1200.00	9.97e+08	1.58	y	35:41	- 1.23
70	Penta	PCB-93	400.00	2.10e+08	1.55	y	35:49	- 0.77
71	Penta	PCB-88/91	800.00	6.29e+08	1.54	y	36:06	- 1.16
72	Penta	PCB-121	400.00	4.11e+08	1.62	y	36:13	- 1.52
73	Penta	PCB-84/92	800.00	5.85e+08	1.57	y	37:02	- 1.04
74	Penta	PCB-89	400.00	3.12e+08	1.58	y	37:13	- 1.11
75	Penta	PCB-90/101	800.00	6.09e+08	1.57	y	37:23	- 1.08
76	Penta	PCB-113	400.00	3.62e+08	1.56	y	37:38	- 1.29
77	Penta	PCB-99	400.00	4.00e+08	1.57	y	37:44	- 1.42
78	Penta	PCB-119	400.00	3.82e+08	1.57	y	38:12	- 1.53
79	Penta	PCB-108/112	800.00	6.45e+08	1.57	y	38:21	- 1.29
80	Penta	PCB-83	400.00	3.69e+08	1.56	y	38:31	- 1.48
81	Penta	PCB-97	400.00	2.93e+08	1.58	y	38:43	- 1.17
82	Penta	PCB-86	400.00	2.07e+08	1.53	y	38:52	- 0.83
83	Penta	PCB-87/117/125	1200.00	1.19e+09	1.57	y	38:59	- 1.59
84	Penta	PCB-111/115	800.00	8.24e+08	1.65	y	39:09	- 1.65
85	Penta	PCB-85/116	800.00	6.56e+08	1.48	y	39:17	- 1.31
86	Penta	PCB-120	400.00	4.25e+08	1.57	y	39:30	- 1.70
87	Penta	PCB-110	400.00	3.85e+08	1.58	y	39:40	- 1.54
88	Penta	PCB-82	400.00	2.39e+08	1.57	y	40:17	- 0.76
89	Penta	PCB-124	400.00	4.72e+08	1.57	y	40:57	- 1.51
90	Penta	PCB-107/109	800.00	8.57e+08	1.57	y	41:06	- 1.37
91	Penta	PCB-123	400.00	3.63e+08	1.58	y	41:16	- 1.16
92	Penta	PCB-106/118	800.00	7.95e+08	1.58	y	41:29	- 1.15
93	Penta	PCB-114	400.00	5.21e+08	1.63	y	42:07	- 1.28
94	Penta	PCB-122	400.00	4.51e+08	1.65	y	42:16	- 1.11
95	Penta	PCB-105	400.00	5.21e+08	1.62	y	42:59	- 1.28
96	Penta	PCB-127	400.00	5.57e+08	1.64	y	43:19	- 1.28
97	Penta	PCB-126	400.00	4.53e+08	1.65	y	45:14	- 1.18
98	Hexa	PCB-155	400.00	3.27e+08	1.28	y	36:57	- 1.11
99	Hexa	PCB-150	400.00	3.03e+08	1.28	y	38:13	- 1.03
100	Hexa	PCB-152	400.00	3.29e+08	1.27	y	38:42	- 1.12
101	Hexa	PCB-145	400.00	3.63e+08	1.28	y	39:09	- 1.23
102	Hexa	PCB-136	400.00	3.55e+08	1.28	y	39:28	- 1.21

103	Hexa	PCB-148	400.00	2.11e+08	1.30 y	39:34	-	0.72
104	Hexa	PCB-154	400.00	2.46e+08	1.28 y	40:03	-	0.83
105	Hexa	PCB-151	400.00	2.09e+08	1.29 y	40:42	-	0.71
106	Hexa	PCB-135	400.00	2.14e+08	1.26 y	40:55	-	0.73
107	Hexa	PCB-144	400.00	2.42e+08	1.27 y	41:01	-	0.82
108	Hexa	PCB-147	400.00	2.44e+08	1.29 y	41:09	-	0.83
109	Hexa	PCB-139/149	800.00	4.56e+08	1.27 y	41:25	-	0.77
110	Hexa	PCB-140	400.00	2.10e+08	1.30 y	41:37	-	0.71
111	Hexa	PCB-134/143	800.00	6.18e+08	1.24 y	42:03	-	0.94
112	Hexa	PCB-133/142	800.00	5.46e+08	1.24 y	42:20	-	0.83
113	Hexa	PCB-131	400.00	2.97e+08	1.24 y	42:31	-	0.90

114	Hexa	PCB-146/165	800.00	8.31e+08	1.24	y	42:43	- 1.26
115	Hexa	PCB-132/161	800.00	7.22e+08	1.24	y	42:58	- 1.09
116	Hexa	PCB-153	400.00	4.21e+08	1.25	y	43:08	- 1.27
117	Hexa	PCB-168	400.00	4.88e+08	1.24	y	43:20	- 1.48
118	Hexa	PCB-141	400.00	3.29e+08	1.24	y	43:53	- 1.05
119	Hexa	PCB-137	400.00	3.31e+08	1.24	y	44:16	- 1.06
120	Hexa	PCB-130	400.00	3.00e+08	1.24	y	44:22	- 0.96
121	Hexa	PCB-138/163/164	1200.00	1.27e+09	1.25	y	44:45	- 1.31
122	Hexa	PCB-158/160	800.00	8.83e+08	1.24	y	45:00	- 1.37
123	Hexa	PCB-129	400.00	2.76e+08	1.24	y	45:14	- 0.86
124	Hexa	PCB-166	400.00	4.30e+08	1.24	y	45:41	- 1.18
125	Hexa	PCB-159	400.00	4.02e+08	1.27	y	46:00	- 1.10
126	Hexa	PCB-128/162	800.00	7.56e+08	1.24	y	46:18	- 1.03
127	Hexa	PCB-167	400.00	4.81e+08	1.24	y	46:41	- 1.19
128	Hexa	PCB-156	400.00	4.44e+08	1.24	y	47:59	- 1.16
129	Hexa	PCB-157	400.00	4.52e+08	1.25	y	48:16	- 1.12
130	Hexa	PCB-169	400.00	4.05e+08	1.24	y	50:20	- 1.07
131	Hepta	PCB-188	400.00	4.10e+08	1.06	y	42:46	- 1.52
132	Hepta	PCB-184	400.00	4.29e+08	1.05	y	43:13	- 1.60
133	Hepta	PCB-179	400.00	3.39e+08	1.06	y	44:01	- 1.26
134	Hepta	PCB-176	400.00	3.89e+08	1.05	y	44:28	- 1.45
135	Hepta	PCB-186	400.00	3.92e+08	1.05	y	45:05	- 1.46
136	Hepta	PCB-178	400.00	2.70e+08	1.06	y	45:34	- 1.00
137	Hepta	PCB-175	400.00	2.66e+08	1.05	y	45:55	- 0.99
138	Hepta	PCB-182/187	800.00	6.75e+08	1.05	y	46:06	- 1.26
139	Hepta	PCB-183	400.00	3.18e+08	1.06	y	46:24	- 1.18
140	Hepta	PCB-185	400.00	3.60e+08	1.05	y	47:05	- 1.82
141	Hepta	PCB-174	400.00	2.91e+08	1.05	y	47:26	- 1.47
142	Hepta	PCB-181	400.00	2.68e+08	1.07	y	47:33	- 1.35
143	Hepta	PCB-177	400.00	2.53e+08	1.05	y	47:43	- 1.28
144	Hepta	PCB-171	400.00	3.19e+08	1.05	y	48:00	- 1.61
145	Hepta	PCB-173	400.00	2.24e+08	1.05	y	48:27	- 1.13
146	Hepta	PCB-172	400.00	3.36e+08	1.06	y	48:53	- 1.70
147	Hepta	PCB-192	400.00	3.55e+08	1.05	y	49:05	- 1.79
148	Hepta	PCB-180	400.00	2.65e+08	1.05	y	49:16	- 1.34
149	Hepta	PCB-193	400.00	3.34e+08	1.06	y	49:28	- 1.69
150	Hepta	PCB-191	400.00	3.32e+08	1.06	y	49:42	- 1.67
151	Hepta	PCB-170	400.00	2.49e+08	1.04	y	50:42	- 1.61
152	Hepta	PCB-190	400.00	3.45e+08	1.05	y	50:51	- 2.23
153	Hepta	PCB-189	400.00	3.17e+08	1.06	y	52:08	- 1.55
154	Octa	PCB-202	400.00	2.60e+08	0.91	y	48:13	- 1.10
155	Octa	PCB-201	400.00	2.75e+08	0.90	y	48:42	- 1.16
156	Octa	PCB-204	400.00	2.80e+08	0.91	y	48:51	- 1.18
157	Octa	PCB-197	400.00	2.59e+08	0.92	y	49:09	- 1.09
158	Octa	PCB-200	400.00	2.59e+08	0.91	y	49:59	- 1.09
159	Octa	PCB-198	400.00	1.81e+08	1.01	y	51:16	- 0.76
160	Octa	PCB-199	400.00	1.96e+08	0.84	y	51:21	- 0.82
161	Octa	PCB-196/203	800.00	4.10e+08	0.91	y	51:37	- 0.86
162	Octa	PCB-195	400.00	2.74e+08	0.91	y	52:46	- 1.25
163	Octa	PCB-194	400.00	2.60e+08	0.92	y	53:38	- 1.18

164	Octa	PCB-205	400.00	3.32e+08	0.92	y	53:55	-	1.51
165	Nona	PCB-208	400.00	2.75e+08	1.33	y	52:54	-	0.94
166	Nona	PCB-207	400.00	3.26e+08	1.32	y	53:12	-	1.12
167	Nona	PCB-206	400.00	1.78e+08	1.32	y	55:19	-	0.97
168	Deca	PCB-209	400.00	2.00e+08	1.19	y	56:35	-	1.17
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.35
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.22
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.10

172	Tot ¬	Total Tri-PCB	0.00	-	-	n	-	-	1.15
173	Tot ¬	Total Tetra-PCB	0.00	-	-	n	-	-	1.06
174	Tot ¬	Total Penta-PCB	0.00	-	-	n	-	-	1.18
175	Tot ¬	Total Penta-PCB	0.00	-	-	n	-	-	1.23
176	Tot ¬	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot ¬	Total Hexa-PCB	0.00	-	-	n	-	-	1.11
178	Tot ¬	Total Hepta-PCB	0.00	-	-	n	-	-	1.41
179	Tot ¬	Total Octa-PCB	0.00	-	-	n	-	-	0.99
180	Tot ¬	Total Octa-PCB	0.00	-	-	n	-	-	1.32
181	Tot ¬	Total Nona-PCB	0.00	-	-	n	-	-	1.02
182	Tot ¬	Total Deca-PCB	400.00	2.00e+08	1.19	y	56:35	-	1.17
183	Mono¬	13C-PCB-1	100.00	1.43e+08	3.35	y	16:24	-	0.77
184	Mono¬	13C-PCB-3	100.00	1.51e+08	3.41	y	18:54	-	0.81
185	Di-IS	13C-PCB-4	100.00	1.07e+08	1.60	y	20:12	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.65e+08	1.57	y	21:55	-	0.88
187	Di-IS	13C-PCB-11	100.00	1.74e+08	1.58	y	25:13	-	0.93
188	Tri-¬	13C-PCB-19	100.00	9.04e+07	1.10	y	24:14	-	0.48
189	Tri-¬	13C-PCB-32	100.00	1.43e+08	1.10	y	27:06	-	0.77
190	Tri-¬	13C-PCB-28	100.00	1.36e+08	1.05	y	29:02	-	0.89
191	Tri-¬	13C-PCB-37	100.00	1.26e+08	1.06	y	32:52	-	0.82
192	Tetr¬	13C-PCB-54	100.00	1.26e+08	0.81	y	27:55	-	0.97
193	Tetr¬	13C-PCB-52	100.00	9.82e+07	0.78	y	31:24	-	0.76
194	Tetr¬	13C-PCB-47	100.00	1.05e+08	0.77	y	31:55	-	0.81
195	Tetr¬	13C-PCB-70	100.00	1.29e+08	0.79	y	35:25	-	1.00
196	Tetr¬	13C-PCB-80	100.00	1.35e+08	0.80	y	35:50	-	1.04
197	Tetr¬	13C-PCB-81	100.00	1.20e+08	0.78	y	38:56	-	0.93
198	Tetr¬	13C-PCB-77	100.00	1.27e+08	0.80	y	39:32	-	0.98
199	Pent¬	13C-PCB-104	100.00	8.83e+07	1.55	y	32:34	-	1.00
200	Pent¬	13C-PCB-95	100.00	6.77e+07	1.62	y	35:43	-	0.77
201	Pent¬	13C-PCB-101	100.00	7.03e+07	1.56	y	37:23	-	0.80
202	Pent¬	13C-PCB-97	100.00	6.24e+07	1.61	y	38:42	-	0.71
203	Pent¬	13C-PCB-123	100.00	7.82e+07	1.58	y	41:16	-	0.88
204	Pent¬	13C-PCB-118	100.00	8.64e+07	1.60	y	41:26	-	0.98
205	Pent¬	13C-PCB-114	100.00	1.01e+08	1.61	y	42:06	-	1.37
206	Pent¬	13C-PCB-105	100.00	1.02e+08	1.58	y	42:58	-	1.38
207	Pent¬	13C-PCB-127	100.00	1.09e+08	1.60	y	43:18	-	1.48
208	Pent¬	13C-PCB-126	100.00	9.62e+07	1.57	y	45:12	-	1.30
209	Hexa¬	13C-PCB-155	100.00	7.37e+07	1.30	y	36:56	-	0.83
210	Hexa¬	13C-PCB-153	100.00	8.26e+07	1.29	y	43:07	-	1.12
211	Hexa¬	13C-PCB-141	100.00	7.81e+07	1.29	y	43:51	-	1.06
212	Hexa	13C-PCB-138	100.00	8.07e+07	1.29	y	44:42	-	1.09
213	Hexa¬	13C-PCB-159	100.00	9.15e+07	1.26	y	46:00	-	1.24
214	Hexa¬	13C-PCB-167	100.00	1.01e+08	1.25	y	46:40	-	1.37
215	Hexa¬	13C-PCB-156	100.00	9.58e+07	1.27	y	47:59	-	1.30
216	Hexa¬	13C-PCB-157	100.00	1.01e+08	1.31	y	48:15	-	1.36
217	Hexa¬	13C-PCB-169	100.00	9.47e+07	1.29	y	50:19	-	1.28
218	Hept¬	13C-PCB-188	100.00	6.72e+07	0.46	y	42:45	-	0.91
219	Hept¬	13C-PCB-180	100.00	4.95e+07	0.46	y	49:15	-	0.67
220	Hept¬	13C-PCB-170	100.00	3.88e+07	0.47	y	50:41	-	0.53
221	Hept¬	13C-PCB-189	100.00	5.10e+07	0.48	y	52:07	-	0.69
222	Octa¬	13C-PCB-202	100.00	5.93e+07	0.90	y	48:11	-	0.80

223	Octa¶	13C-PCB-194	100.00	5.48e+07	0.91 y	53:37	-	0.80
224	Nona¶	13C-PCB-208	100.00	7.31e+07	0.78 y	52:53	-	1.07
225	Nona¶	13C-PCB-206	100.00	4.59e+07	0.80 y	55:18	-	0.67
226	Deca¶	13C-PCB-209	100.00	4.28e+07	1.18 y	56:34	-	0.63
227	DI-RS	13C-PCB-15	100.00	1.87e+08	1.59 y	25:55	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.53e+08	1.05 y	28:55	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.30e+08	0.78 y	36:40	-	1.00
230	Penta	13C-PCB-111	100.00	8.84e+07	1.58 y	39:07	-	1.00
231	Hexa¶	13C-PCB-128	100.00	7.38e+07	1.22 y	46:17	-	1.00
232	Octa¶	13C-PCB-205	100.00	6.83e+07	0.90 y	53:54	-	1.00

233	CRS		13C-PCB-79	100.00	1.31e+08	0.78	y	37:43	- 1.01
234	CRS		13C-PCB-178	100.00	4.40e+07	0.47	y	45:33	- 0.60
235	PS		13C-PCB-79	100.00	1.31e+08	0.78	y	37:43	- 1.09
236	PS		13C-PCB-178	100.00	4.40e+07	0.47	y	45:33	- 0.89

Filename: 140623E2 S: 6 Acquired: 23-JUN-14 17:01:39
Run: 140623E2 Analyte: ICal: PCBVG8-6-23-14 Results: 140623E2
Sample text: ST140623E2-6 PCB CS5 14F1606

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	750.00	1.47e+09	3.03 y	16:25	-	1.29
2	Mono	PCB-2	750.00	1.54e+09	3.03 y	18:42	-	1.26
3	Mono	PCB-3	750.00	1.85e+09	3.03 y	18:55	-	1.51
4	Di	PCB-4/10	3000.00	5.45e+09	1.65 y	20:15	-	1.62
5	Di	PCB-7/9	3000.00	6.53e+09	1.65 y	21:58	-	1.26
6	Di	PCB-6	1500.00	3.51e+09	1.66 y	22:36	-	1.35
7	Di	PCB-5/8	3000.00	6.19e+09	1.65 y	23:01	-	1.19
8	Di	PCB-14	1500.00	3.16e+09	1.66 y	24:04	-	1.15
9	Di	PCB-11	1500.00	3.07e+09	1.65 y	25:14	-	1.12
10	Di	PCB-12/13	3000.00	6.82e+09	1.65 y	25:38	-	1.24
11	Di	PCB-15	1500.00	3.68e+09	1.66 y	25:56	-	1.34
12	Tri	PCB-19	750.00	7.61e+08	1.06 y	24:15	-	1.09
13	Tri	PCB-30	750.00	1.28e+09	1.06 y	25:08	-	1.83
14	Tri	PCB-18	750.00	8.96e+08	1.06 y	25:51	-	0.82
15	Tri	PCB-17	750.00	1.03e+09	1.07 y	26:02	-	0.95
16	Tri	PCB-24/27	1500.00	2.73e+09	1.07 y	26:36	-	1.25
17	Tri	PCB-16/32	1500.00	2.10e+09	1.07 y	27:06	-	0.96
18	Tri	PCB-34	750.00	1.12e+09	1.02 y	27:52	-	1.09
19	Tri	PCB-23	750.00	1.37e+09	1.02 y	27:58	-	1.33
20	Tri	PCB-29	750.00	1.10e+09	1.00 y	28:13	-	1.06
21	Tri	PCB-26	750.00	1.23e+09	1.02 y	28:25	-	1.19
22	Tri	PCB-25	750.00	1.15e+09	0.98 y	28:35	-	1.11
23	Tri	PCB-31	750.00	1.08e+09	0.96 y	28:56	-	1.05
24	Tri	PCB-28	750.00	1.62e+09	1.02 y	29:03	-	1.57
25	Tri	PCB-20/21/33	2250.00	3.02e+09	0.99 y	29:39	-	0.98
26	Tri	PCB-22	750.00	1.22e+09	1.01 y	30:05	-	1.18
27	Tri	PCB-36	750.00	9.30e+08	0.97 y	30:41	-	0.99
28	Tri	PCB-39	750.00	9.84e+08	1.03 y	31:10	-	1.05
29	Tri	PCB-38	750.00	9.41e+08	0.97 y	31:56	-	1.00
30	Tri	PCB-35	750.00	1.09e+09	0.98 y	32:27	-	1.17
31	Tri	PCB-37	750.00	1.06e+09	0.97 y	32:53	-	1.13
32	Tetra	PCB-54	750.00	1.06e+09	0.76 y	27:57	-	1.09
33	Tetra	PCB-50	750.00	8.12e+08	0.76 y	29:06	-	0.83
34	Tetra	PCB-53	750.00	7.83e+08	0.75 y	29:44	-	1.05
35	Tetra	PCB-51	750.00	7.61e+08	0.75 y	30:04	-	1.02
36	Tetra	PCB-45	750.00	6.16e+08	0.75 y	30:30	-	0.82
37	Tetra	PCB-46	750.00	6.05e+08	0.76 y	30:59	-	0.81
38	Tetra	PCB-52/69	1500.00	2.06e+09	0.76 y	31:27	-	1.37
39	Tetra	PCB-73	750.00	9.51e+08	0.78 y	31:34	-	1.27
40	Tetra	PCB-43/49	1500.00	1.52e+09	0.76 y	31:44	-	1.02
41	Tetra	PCB-47	750.00	7.65e+08	0.74 y	31:56	-	0.98

42	Tetra	PCB-48/75	1500.00	1.93e+09	0.76 y	32:03	-	1.24
43	Tetra	PCB-65	750.00	9.32e+08	0.75 y	32:19	-	1.19
44	Tetra	PCB-62	750.00	9.33e+08	0.76 y	32:26	-	1.19
45	Tetra	PCB-44	750.00	6.53e+08	0.76 y	32:44	-	0.83
46	Tetra	PCB-42/59	1500.00	1.82e+09	0.76 y	32:57	-	1.17
47	Tetra	PCB-41/64/71/72	3000.00	3.95e+09	0.77 y	33:32	-	1.26
48	Tetra	PCB-68	750.00	1.08e+09	0.76 y	33:47	-	1.38
49	Tetra	PCB-40	750.00	5.59e+08	0.77 y	34:00	-	0.71
50	Tetra	PCB-57	750.00	1.01e+09	0.77 y	34:22	-	0.99
51	Tetra	PCB-67	750.00	1.07e+09	0.76 y	34:40	-	1.05
52	Tetra	PCB-58	750.00	9.72e+08	0.77 y	34:47	-	0.96

53	Tetra	PCB-63	750.00	9.30e+08	0.77 y	34:56	-	0.92
54	Tetra	PCB-74	750.00	1.25e+09	0.76 y	35:13	-	1.23
55	Tetra	PCB-61/70	1500.00	1.91e+09	0.76 y	35:24	-	0.94
56	Tetra	PCB-76/66	1500.00	2.06e+09	0.76 y	35:37	-	1.02
57	Tetra	PCB-80	750.00	1.23e+09	0.76 y	35:51	-	1.18
58	Tetra	PCB-55	750.00	1.10e+09	0.75 y	36:10	-	1.06
59	Tetra	PCB-56/60	1500.00	2.06e+09	0.76 y	36:40	-	0.98
60	Tetra	PCB-79	750.00	1.10e+09	0.77 y	37:44	-	1.06
61	Tetra	PCB-78	750.00	1.22e+09	0.77 y	38:26	-	1.24
62	Tetra	PCB-81	750.00	1.30e+09	0.78 y	38:58	-	1.33
63	Tetra	PCB-77	750.00	1.06e+09	0.79 y	39:33	-	1.09
64	Penta	PCB-104	750.00	8.02e+08	1.57 y	32:35	-	1.21
65	Penta	PCB-96	750.00	7.85e+08	1.58 y	33:50	-	1.19
66	Penta	PCB-103	750.00	6.73e+08	1.58 y	34:22	-	1.02
67	Penta	PCB-100	750.00	6.59e+08	1.58 y	34:44	-	1.00
68	Penta	PCB-94	750.00	5.35e+08	1.58 y	35:12	-	1.05
69	Penta	PCB-95/98/102	2250.00	1.88e+09	1.56 y	35:41	-	1.23
70	Penta	PCB-93	750.00	4.72e+08	1.58 y	35:49	-	0.93
71	Penta	PCB-88/91	1500.00	1.12e+09	1.56 y	36:05	-	1.10
72	Penta	PCB-121	750.00	8.92e+08	1.59 y	36:12	-	1.75
73	Penta	PCB-84/92	1500.00	1.15e+09	1.58 y	37:02	-	1.06
74	Penta	PCB-89	750.00	5.99e+08	1.56 y	37:14	-	1.10
75	Penta	PCB-90/101	1500.00	1.20e+09	1.56 y	37:24	-	1.11
76	Penta	PCB-113	750.00	7.64e+08	1.55 y	37:39	-	1.41
77	Penta	PCB-99	750.00	7.39e+08	1.58 y	37:44	-	1.36
78	Penta	PCB-119	750.00	7.86e+08	1.58 y	38:11	-	1.63
79	Penta	PCB-108/112	1500.00	1.31e+09	1.58 y	38:22	-	1.36
80	Penta	PCB-83	750.00	7.22e+08	1.58 y	38:31	-	1.49
81	Penta	PCB-97	750.00	5.75e+08	1.58 y	38:43	-	1.19
82	Penta	PCB-86	750.00	4.64e+08	1.55 y	38:51	-	0.96
83	Penta	PCB-87/117/125	2250.00	2.41e+09	1.59 y	38:59	-	1.66
84	Penta	PCB-111/115	1500.00	1.61e+09	1.57 y	39:08	-	1.67
85	Penta	PCB-85/116	1500.00	1.32e+09	1.57 y	39:16	-	1.37
86	Penta	PCB-120	750.00	8.54e+08	1.57 y	39:30	-	1.77
87	Penta	PCB-110	750.00	7.47e+08	1.59 y	39:39	-	1.55
88	Penta	PCB-82	750.00	4.68e+08	1.56 y	40:16	-	0.76
89	Penta	PCB-124	750.00	9.82e+08	1.56 y	40:57	-	1.60
90	Penta	PCB-107/109	1500.00	1.67e+09	1.57 y	41:06	-	1.36
91	Penta	PCB-123	750.00	7.28e+08	1.57 y	41:17	-	1.19
92	Penta	PCB-106/118	1500.00	1.64e+09	1.59 y	41:29	-	1.20
93	Penta	PCB-114	750.00	1.06e+09	1.62 y	42:07	-	1.28
94	Penta	PCB-122	750.00	9.29e+08	1.66 y	42:15	-	1.12
95	Penta	PCB-105	750.00	1.10e+09	1.63 y	42:59	-	1.33
96	Penta	PCB-127	750.00	1.16e+09	1.65 y	43:18	-	1.32
97	Penta	PCB-126	750.00	9.26e+08	1.64 y	45:13	-	1.21
98	Hexa	PCB-155	750.00	6.31e+08	1.29 y	36:58	-	1.16
99	Hexa	PCB-150	750.00	5.78e+08	1.28 y	38:13	-	1.06
100	Hexa	PCB-152	750.00	6.42e+08	1.29 y	38:42	-	1.18
101	Hexa	PCB-145	750.00	7.08e+08	1.29 y	39:09	-	1.30
102	Hexa	PCB-136	750.00	6.49e+08	1.27 y	39:28	-	1.19

103	Hexa	PCB-148	750.00	4.68e+08	1.28 y	39:34	-	0.86
104	Hexa	PCB-154	750.00	4.91e+08	1.28 y	40:03	-	0.90
105	Hexa	PCB-151	750.00	4.20e+08	1.28 y	40:42	-	0.77
106	Hexa	PCB-135	750.00	4.60e+08	1.27 y	40:55	-	0.84
107	Hexa	PCB-144	750.00	4.48e+08	1.29 y	41:02	-	0.82
108	Hexa	PCB-147	750.00	5.04e+08	1.28 y	41:10	-	0.93
109	Hexa	PCB-139/149	1500.00	9.10e+08	1.28 y	41:26	-	0.84
110	Hexa	PCB-140	750.00	4.13e+08	1.28 y	41:37	-	0.76
111	Hexa	PCB-134/143	1500.00	1.26e+09	1.24 y	42:02	-	0.95
112	Hexa	PCB-133/142	1500.00	1.12e+09	1.25 y	42:21	-	0.85
113	Hexa	PCB-131	750.00	5.92e+08	1.24 y	42:30	-	0.90

114	Hexa	PCB-146/165	1500.00	1.70e+09	1.24 y	42:43	-	1.29
115	Hexa	PCB-132/161	1500.00	1.50e+09	1.24 y	42:58	-	1.14
116	Hexa	PCB-153	750.00	8.18e+08	1.25 y	43:08	-	1.24
117	Hexa	PCB-168	750.00	1.00e+09	1.24 y	43:21	-	1.52
118	Hexa	PCB-141	750.00	6.67e+08	1.24 y	43:52	-	1.09
119	Hexa	PCB-137	750.00	7.01e+08	1.23 y	44:15	-	1.14
120	Hexa	PCB-130	750.00	5.55e+08	1.25 y	44:22	-	0.90
121	Hexa	PCB-138/163/164	2250.00	2.58e+09	1.24 y	44:44	-	1.38
122	Hexa	PCB-158/160	1500.00	1.76e+09	1.24 y	44:59	-	1.41
123	Hexa	PCB-129	750.00	5.55e+08	1.24 y	45:14	-	0.89
124	Hexa	PCB-166	750.00	8.60e+08	1.24 y	45:41	-	1.21
125	Hexa	PCB-159	750.00	8.27e+08	1.24 y	46:00	-	1.16
126	Hexa	PCB-128/162	1500.00	1.52e+09	1.24 y	46:18	-	1.07
127	Hexa	PCB-167	750.00	9.41e+08	1.24 y	46:42	-	1.24
128	Hexa	PCB-156	750.00	8.95e+08	1.24 y	47:59	-	1.19
129	Hexa	PCB-157	750.00	9.06e+08	1.25 y	48:16	-	1.15
130	Hexa	PCB-169	750.00	8.21e+08	1.25 y	50:21	-	1.12
131	Hepta	PCB-188	750.00	8.34e+08	1.05 y	42:46	-	1.61
132	Hepta	PCB-184	750.00	8.48e+08	1.06 y	43:13	-	1.64
133	Hepta	PCB-179	750.00	6.69e+08	1.06 y	44:00	-	1.29
134	Hepta	PCB-176	750.00	7.45e+08	1.06 y	44:28	-	1.44
135	Hepta	PCB-186	750.00	7.39e+08	1.05 y	45:05	-	1.43
136	Hepta	PCB-178	750.00	5.20e+08	1.06 y	45:34	-	1.00
137	Hepta	PCB-175	750.00	5.24e+08	1.06 y	45:55	-	1.01
138	Hepta	PCB-182/187	1500.00	1.33e+09	1.05 y	46:05	-	1.28
139	Hepta	PCB-183	750.00	6.17e+08	1.06 y	46:25	-	1.19
140	Hepta	PCB-185	750.00	7.01e+08	1.06 y	47:04	-	1.89
141	Hepta	PCB-174	750.00	5.17e+08	1.05 y	47:26	-	1.40
142	Hepta	PCB-181	750.00	5.76e+08	1.06 y	47:33	-	1.56
143	Hepta	PCB-177	750.00	4.88e+08	1.06 y	47:42	-	1.32
144	Hepta	PCB-171	750.00	6.45e+08	1.06 y	48:01	-	1.74
145	Hepta	PCB-173	750.00	4.34e+08	1.05 y	48:26	-	1.17
146	Hepta	PCB-172	750.00	6.78e+08	1.06 y	48:53	-	1.83
147	Hepta	PCB-192	750.00	6.93e+08	1.05 y	49:04	-	1.87
148	Hepta	PCB-180	750.00	5.13e+08	1.05 y	49:17	-	1.39
149	Hepta	PCB-193	750.00	6.52e+08	1.06 y	49:29	-	1.76
150	Hepta	PCB-191	750.00	6.47e+08	1.05 y	49:42	-	1.75
151	Hepta	PCB-170	750.00	4.90e+08	1.06 y	50:41	-	1.66
152	Hepta	PCB-190	750.00	6.88e+08	1.05 y	50:52	-	2.33
153	Hepta	PCB-189	750.00	6.33e+08	1.05 y	52:08	-	1.58
154	Octa	PCB-202	750.00	5.06e+08	0.91 y	48:13	-	1.14
155	Octa	PCB-201	750.00	5.32e+08	0.91 y	48:42	-	1.20
156	Octa	PCB-204	750.00	5.54e+08	0.92 y	48:52	-	1.25
157	Octa	PCB-197	750.00	4.91e+08	0.92 y	49:10	-	1.11
158	Octa	PCB-200	750.00	4.81e+08	0.92 y	50:00	-	1.09
159	Octa	PCB-198	750.00	3.58e+08	0.91 y	51:16	-	0.81
160	Octa	PCB-199	750.00	3.69e+08	0.92 y	51:23	-	0.83
161	Octa	PCB-196/203	1500.00	8.08e+08	0.92 y	51:38	-	0.91
162	Octa	PCB-195	750.00	5.64e+08	0.92 y	52:47	-	1.30
163	Octa	PCB-194	750.00	5.18e+08	0.92 y	53:40	-	1.20

164	Octa	PCB-205	750.00	6.92e+08	0.92	y	53:57	-	1.60
165	Nona	PCB-208	750.00	5.53e+08	1.33	y	52:55	-	0.94
166	Nona	PCB-207	750.00	6.58e+08	1.33	y	53:14	-	1.12
167	Nona	PCB-206	750.00	3.54e+08	1.32	y	55:22	-	1.03
168	Deca	PCB-209	750.00	3.89e+08	1.19	y	56:40	-	1.22
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.36
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.25
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.15

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.12
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.09
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.23
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.25
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.14
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.46
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.03
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.36
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.03
182	Tot ╗	Total Deca-PCB	750.00	3.89e+08	1.19	y	56:40	-	1.22
183	Mono╗	13C-PCB-1	100.00	1.51e+08	3.37	y	16:24	-	0.77
184	Mono╗	13C-PCB-3	100.00	1.63e+08	3.42	y	18:54	-	0.83
185	Di-IS	13C-PCB-4	100.00	1.12e+08	1.60	y	20:12	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.73e+08	1.58	y	21:55	-	0.88
187	Di-IS	13C-PCB-11	100.00	1.84e+08	1.56	y	25:13	-	0.94
188	Tri-╗	13C-PCB-19	100.00	9.33e+07	1.09	y	24:14	-	0.48
189	Tri-╗	13C-PCB-32	100.00	1.45e+08	1.09	y	27:05	-	0.74
190	Tri-╗	13C-PCB-28	100.00	1.37e+08	1.03	y	29:01	-	1.02
191	Tri-╗	13C-PCB-37	100.00	1.25e+08	1.07	y	32:52	-	0.93
192	Tetr╗	13C-PCB-54	100.00	1.30e+08	0.80	y	27:56	-	0.98
193	Tetr╗	13C-PCB-52	100.00	9.99e+07	0.80	y	31:25	-	0.75
194	Tetr╗	13C-PCB-47	100.00	1.04e+08	0.77	y	31:55	-	0.78
195	Tetr╗	13C-PCB-70	100.00	1.35e+08	0.78	y	35:24	-	1.02
196	Tetr╗	13C-PCB-80	100.00	1.39e+08	0.80	y	35:49	-	1.05
197	Tetr╗	13C-PCB-81	100.00	1.30e+08	0.79	y	38:56	-	0.98
198	Tetr╗	13C-PCB-77	100.00	1.29e+08	0.80	y	39:32	-	0.97
199	Pent╗	13C-PCB-104	100.00	8.83e+07	1.59	y	32:34	-	0.96
200	Pent╗	13C-PCB-95	100.00	6.79e+07	1.55	y	35:43	-	0.74
201	Pent╗	13C-PCB-101	100.00	7.25e+07	1.55	y	37:23	-	0.79
202	Pent╗	13C-PCB-97	100.00	6.44e+07	1.57	y	38:42	-	0.70
203	Pent╗	13C-PCB-123	100.00	8.18e+07	1.58	y	41:16	-	0.89
204	Pent╗	13C-PCB-118	100.00	9.11e+07	1.59	y	41:27	-	0.99
205	Pent╗	13C-PCB-114	100.00	1.10e+08	1.61	y	42:06	-	1.45
206	Pent╗	13C-PCB-105	100.00	1.10e+08	1.59	y	42:58	-	1.45
207	Pent╗	13C-PCB-127	100.00	1.18e+08	1.61	y	43:18	-	1.54
208	Pent╗	13C-PCB-126	100.00	1.02e+08	1.57	y	45:13	-	1.34
209	Hexa╗	13C-PCB-155	100.00	7.27e+07	1.27	y	36:56	-	0.79
210	Hexa╗	13C-PCB-153	100.00	8.79e+07	1.29	y	43:07	-	1.15
211	Hexa╗	13C-PCB-141	100.00	8.18e+07	1.28	y	43:52	-	1.07
212	Hexa	13C-PCB-138	100.00	8.32e+07	1.27	y	44:43	-	1.09
213	Hexa╗	13C-PCB-159	100.00	9.51e+07	1.28	y	45:59	-	1.25
214	Hexa╗	13C-PCB-167	100.00	1.01e+08	1.26	y	46:41	-	1.33
215	Hexa╗	13C-PCB-156	100.00	1.01e+08	1.27	y	47:59	-	1.32
216	Hexa╗	13C-PCB-157	100.00	1.05e+08	1.31	y	48:15	-	1.38
217	Hexa╗	13C-PCB-169	100.00	9.82e+07	1.28	y	50:20	-	1.29
218	Hept╗	13C-PCB-188	100.00	6.91e+07	0.47	y	42:45	-	0.91
219	Hept╗	13C-PCB-180	100.00	4.94e+07	0.48	y	49:16	-	0.65
220	Hept╗	13C-PCB-170	100.00	3.94e+07	0.46	y	50:41	-	0.52
221	Hept╗	13C-PCB-189	100.00	5.34e+07	0.46	y	52:08	-	0.70
222	Octa╗	13C-PCB-202	100.00	5.91e+07	0.90	y	48:12	-	0.78

223	Octa╗	13C-PCB-194	100.00	5.78e+07	0.93	y	53:39	-	0.79
224	Nona╗	13C-PCB-208	100.00	7.83e+07	0.77	y	52:54	-	1.07
225	Nona╗	13C-PCB-206	100.00	4.57e+07	0.77	y	55:21	-	0.62
226	Deca╗	13C-PCB-209	100.00	4.25e+07	1.20	y	56:39	-	0.58
227	DI-RS	13C-PCB-15	100.00	1.96e+08	1.59	y	25:55	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.34e+08	1.04	y	28:55	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.33e+08	0.78	y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	9.21e+07	1.57	y	39:07	-	1.00
231	Hexa╗	13C-PCB-128	100.00	7.63e+07	1.27	y	46:17	-	1.00
232	Octa╗	13C-PCB-205	100.00	7.35e+07	0.92	y	53:56	-	1.00

233	CRS	13C-PCB-79	100.00	1.38e+08	0.77 y	37:43	-	1.04
234	CRS	13C-PCB-178	100.00	4.43e+07	0.45 y	45:33	-	0.58
235	PS	13C-PCB-79	100.00	1.38e+08	0.77 y	37:43	-	1.06
236	PS	13C-PCB-178	100.00	4.43e+07	0.45 y	45:33	-	0.90

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140623E2-4 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 140623E2 S#4 Analysis Date: 23-JUN-14 Time: 14:53:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	3.00	2.66-3.60	y	51.3	37.5-62.5	PCB-52/69	0.76	0.65-0.89	y	99.8	75.0-125
PCB-2	3.01	2.66-3.60	y	51.8	37.5-62.5	PCB-73	0.78	0.65-0.89	y	51.0	37.5-62.5
PCB-3	3.01	2.66-3.60	y	51.3	37.5-62.5	PCB-43/49	0.76	0.65-0.89	y	97.5	75.0-125
PCB-4/10	1.65	1.33-1.79	y	200.1	150-250	PCB-47	0.76	0.65-0.89	y	49.3	37.5-62.5
PCB-7/9	1.65	1.33-1.79	y	199.3	150-250	PCB-48/75	0.77	0.65-0.89	y	95.6	75.0-125
PCB-6	1.66	1.33-1.79	y	100.0	75.0-125	PCB-65	0.76	0.65-0.89	y	50.2	37.5-62.5
PCB-5/8	1.64	1.33-1.79	y	200.2	150-250	PCB-62	0.76	0.65-0.89	y	44.6	37.5-62.5
PCB-14	1.66	1.33-1.79	y	102.7	75.0-125	PCB-44	0.77	0.65-0.89	y	46.7	37.5-62.5
PCB-11	1.65	1.33-1.79	y	101.7	75.0-125	PCB-42/59	0.76	0.65-0.89	y	95.3	75.0-125
PCB-12/13	1.65	1.33-1.79	y	200.4	150-250	PCB-41/64/71/72	0.77	0.65-0.89	y	187.9	150-250
PCB-15	1.66	1.33-1.79	y	100.2	75.0-125	PCB-68	0.76	0.65-0.89	y	48.0	37.5-62.5
PCB-19	1.05	0.88-1.20	y	49.8	37.5-62.5	PCB-40	0.77	0.65-0.89	y	48.5	37.5-62.5
PCB-30	1.06	0.88-1.20	y	49.4	37.5-62.5	PCB-57	0.76	0.65-0.89	y	50.7	37.5-62.5
PCB-18	1.05	0.88-1.20	y	51.3	37.5-62.5	PCB-67	0.76	0.65-0.89	y	49.2	37.5-62.5
PCB-17	1.05	0.88-1.20	y	50.5	37.5-62.5	PCB-58	0.79	0.65-0.89	y	50.1	37.5-62.5
PCB-24/27	1.05	0.88-1.20	y	101.3	75.0-125	PCB-63	0.76	0.65-0.89	y	49.0	37.5-62.5
PCB-16/32	1.06	0.88-1.20	y	100.2	75.0-125	PCB-74	0.77	0.65-0.89	y	48.3	37.5-62.5
PCB-34	1.03	0.88-1.20	y	47.9	37.5-62.5	PCB-61/70	0.77	0.65-0.89	y	99.9	75.0-125
PCB-23	1.06	0.88-1.20	y	47.9	37.5-62.5	PCB-76/66	0.77	0.65-0.89	y	99.0	75.0-125
PCB-29	1.04	0.88-1.20	y	49.2	37.5-62.5	PCB-80	0.77	0.65-0.89	y	51.1	37.5-62.5
PCB-26	1.04	0.88-1.20	y	48.9	37.5-62.5	PCB-55	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-25	1.06	0.88-1.20	y	50.3	37.5-62.5	PCB-56/60	0.77	0.65-0.89	y	98.9	75.0-125
PCB-31	1.02	0.88-1.20	y	48.2	37.5-62.5	PCB-79	0.78	0.65-0.89	y	49.6	37.5-62.5
PCB-28	1.04	0.88-1.20	y	49.8	37.5-62.5	PCB-78	0.77	0.65-0.89	y	49.1	37.5-62.5
PCB-20/21/33	1.03	0.88-1.20	y	149.6	112.5-225	PCB-81	0.78	0.65-0.89	y	48.4	37.5-62.5
PCB-22	1.04	0.88-1.20	y	50.9	37.5-62.5	PCB-77	0.79	0.65-0.89	y	49.2	37.5-62.5
PCB-36	1.03	0.88-1.20	y	51.8	37.5-62.5	PCB-104	1.57	1.32-1.78	y	50.6	37.5-62.5
PCB-39	1.02	0.88-1.20	y	53.7	37.5-62.5	PCB-96	1.56	1.32-1.78	y	49.5	37.5-62.5
PCB-38	1.03	0.88-1.20	y	51.1	37.5-62.5	PCB-103	1.56	1.32-1.78	y	48.8	37.5-62.5
PCB-35	1.03	0.88-1.20	y	47.9	37.5-62.5	PCB-100	1.58	1.32-1.78	y	49.2	37.5-62.5
PCB-37	1.02	0.88-1.20	y	48.4	37.5-62.5	PCB-94	1.55	1.32-1.78	y	48.1	37.5-62.5
PCB-54	0.78	0.65-0.89	y	49.7	37.5-62.5	PCB-95/98/102	1.55	1.32-1.78	y	149.1	112.5-225
PCB-50	0.77	0.65-0.89	y	49.7	37.5-62.5	PCB-93	1.58	1.32-1.78	y	50.1	37.5-62.5
PCB-53	0.75	0.65-0.89	y	50.5	37.5-62.5	PCB-88/91	1.58	1.32-1.78	y	100.5	75.0-125
PCB-51	0.77	0.65-0.89	y	49.6	37.5-62.5	PCB-121	1.60	1.32-1.78	y	50.2	37.5-62.5
PCB-45	0.77	0.65-0.89	y	51.4	37.5-62.5						
PCB-46	0.76	0.65-0.89	y	49.3	37.5-62.5						

Analyst: DMS

Date: 6/24/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140623E2-4 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 140623E2 S#4 Analysis Date: 23-JUN-14 Time: 14:53:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.56	1.32-1.78	y	99.2	75.0-125	PCB-140	1.27	1.05-1.43	y	48.3	37.5-62.5
PCB-89	1.58	1.32-1.78	y	50.3	37.5-62.5	PCB-134/143	1.25	1.05-1.43	y	97.1	75.0-125
PCB-90/101	1.56	1.32-1.78	y	100.3	75.0-125	PCB-133/142	1.24	1.05-1.43	y	97.4	75.0-125
PCB-113	1.57	1.32-1.78	y	52.7	37.5-62.5	PCB-131	1.23	1.05-1.43	y	49.1	37.5-62.5
PCB-99	1.60	1.32-1.78	y	47.7	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	98.5	75.0-125
PCB-119	1.56	1.32-1.78	y	49.8	37.5-62.5	PCB-132/161	1.31	1.05-1.43	y	98.0	75.0-125
PCB-108/112	1.58	1.32-1.78	y	100.2	75.0-125	PCB-153	1.16	1.05-1.43	y	49.2	37.5-62.5
PCB-83	1.57	1.32-1.78	y	49.2	37.5-62.5	PCB-168	1.25	1.05-1.43	y	50.1	37.5-62.5
PCB-97	1.55	1.32-1.78	y	49.4	37.5-62.5	PCB-141	1.24	1.05-1.43	y	48.7	37.5-62.5
PCB-86	1.55	1.32-1.78	y	47.3	37.5-62.5	PCB-137	1.23	1.05-1.43	y	49.3	37.5-62.5
PCB-87/117/125	1.62	1.32-1.78	y	153.7	112.5-225	PCB-130	1.23	1.05-1.43	y	50.2	37.5-62.5
PCB-111/115	1.51	1.32-1.78	y	98.7	75.0-125	PCB-138/163/164	1.24	1.05-1.43	y	147.8	112.5-225
PCB-85/116	1.58	1.32-1.78	y	100.6	75.0-125	PCB-158/160	1.23	1.05-1.43	y	99.9	75.0-125
PCB-120	1.59	1.32-1.78	y	48.7	37.5-62.5	PCB-129	1.24	1.05-1.43	y	49.1	37.5-62.5
PCB-110	1.57	1.32-1.78	y	50.0	37.5-62.5	PCB-166	1.24	1.05-1.43	y	49.5	37.5-62.5
PCB-82	1.55	1.32-1.78	y	49.8	37.5-62.5	PCB-159	1.23	1.05-1.43	y	49.9	37.5-62.5
PCB-124	1.58	1.32-1.78	y	48.7	37.5-62.5	PCB-128/162	1.23	1.05-1.43	y	97.4	75.0-125
PCB-107/109	1.59	1.32-1.78	y	102.0	75.0-125	PCB-167	1.22	1.05-1.43	y	50.2	37.5-62.5
PCB-123	1.59	1.32-1.78	y	50.6	37.5-62.5	PCB-156	1.25	1.05-1.43	y	50.3	37.5-62.5
PCB-106/118	1.59	1.32-1.78	y	100.2	75.0-125	PCB-157	1.24	1.05-1.43	y	48.4	37.5-62.5
PCB-114	1.65	1.32-1.78	y	50.6	37.5-62.5	PCB-169	1.27	1.05-1.43	y	48.4	37.5-62.5
PCB-122	1.66	1.32-1.78	y	49.6	37.5-62.5	PCB-188	1.05	0.89-1.21	y	49.3	37.5-62.5
PCB-105	1.64	1.32-1.78	y	49.4	37.5-62.5	PCB-184	1.06	0.89-1.21	y	49.1	37.5-62.5
PCB-127	1.67	1.32-1.78	y	47.6	37.5-62.5	PCB-179	1.06	0.89-1.21	y	49.7	37.5-62.5
PCB-126	1.63	1.32-1.78	y	49.7	37.5-62.5	PCB-176	1.04	0.89-1.21	y	49.5	37.5-62.5
PCB-155	1.27	1.05-1.43	y	49.7	37.5-62.5	PCB-186	1.05	0.89-1.21	y	49.8	37.5-62.5
PCB-150	1.29	1.05-1.43	y	50.1	37.5-62.5	PCB-178	1.05	0.89-1.21	y	49.4	37.5-62.5
PCB-152	1.30	1.05-1.43	y	49.4	37.5-62.5	PCB-175	1.05	0.89-1.21	y	49.6	37.5-62.5
PCB-145	1.28	1.05-1.43	y	49.5	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	96.9	75.0-125
PCB-136	1.29	1.05-1.43	y	49.0	37.5-62.5	PCB-183	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-148	1.30	1.05-1.43	y	49.6	37.5-62.5	PCB-185	1.07	0.89-1.21	y	49.3	37.5-62.5
PCB-154	1.28	1.05-1.43	y	48.4	37.5-62.5	PCB-174	1.02	0.89-1.21	y	51.7	37.5-62.5
PCB-151	1.29	1.05-1.43	y	47.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	49.2	37.5-62.5
PCB-135	1.26	1.05-1.43	y	48.7	37.5-62.5	PCB-177	1.05	0.89-1.21	y	50.0	37.5-62.5
PCB-144	1.30	1.05-1.43	y	46.6	37.5-62.5	PCB-171	1.07	0.89-1.21	y	50.3	37.5-62.5
PCB-147	1.30	1.05-1.43	y	48.2	37.5-62.5	PCB-173	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-139/149	1.28	1.05-1.43	y	96.8	75.0-125	PCB-172	1.07	0.89-1.21	y	50.2	37.5-62.5

Analyst: DMS

Date: 6/24/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140623E2-4 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 140623E2 S#4 Analysis Date: 23-JUN-14 Time: 14:53:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.06	0.89-1.21	y	51.0	37.5-62.5
PCB-180	1.05	0.89-1.21	y	50.1	37.5-62.5
PCB-193	1.07	0.89-1.21	y	50.1	37.5-62.5
PCB-191	1.07	0.89-1.21	y	49.6	37.5-62.5
PCB-170	1.05	0.89-1.21	y	50.8	37.5-62.5
PCB-190	1.06	0.89-1.21	y	50.5	37.5-62.5
PCB-189	1.05	0.89-1.21	y	50.0	37.5-62.5
PCB-202	0.94	0.76-1.02	y	49.2	37.5-62.5
PCB-201	0.91	0.76-1.02	y	49.1	37.5-62.5
PCB-204	0.91	0.76-1.02	y	50.1	37.5-62.5
PCB-197	0.91	0.76-1.02	y	49.9	37.5-62.5
PCB-200	0.90	0.76-1.02	y	50.1	37.5-62.5
PCB-198	0.92	0.76-1.02	y	51.1	37.5-62.5
PCB-199	0.91	0.76-1.02	y	47.9	37.5-62.5
PCB-196/203	0.92	0.76-1.02	y	100.1	75.0-125
PCB-195	0.89	0.76-1.02	y	50.7	37.5-62.5
PCB-194	0.92	0.76-1.02	y	49.2	37.5-62.5
PCB-205	0.92	0.76-1.02	y	49.4	37.5-62.5
PCB-208	1.34	1.14-1.54	y	49.7	37.5-62.5
PCB-207	1.32	1.14-1.54	y	49.8	37.5-62.5
PCB-206	1.36	1.14-1.54	y	49.3	37.5-62.5
PCB-209	1.21	0.99-1.33	y	51.1	37.5-62.5

Analyst: DMS

Date: 6/24/14

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140623E2-4 Instrument ID: VG-8

Initial Calibration Date: 6-23-14 ICal ID: PCBVG8-6-23-14 GC Column ID: ZB-1

VER Data Filename: 140623E2 S#4 Analysis Date: 23-JUN-14 Time: 14:53:49

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.37	2.66-3.60	y	98.7	50.0-145
13C-PCB-3	3.41	2.66-3.60	y	94.8	50.0-145
13C-PCB-4	1.58	1.33-1.79	y	99.7	50.0-145
13C-PCB-9	1.59	1.33-1.79	y	99.2	50.0-145
13C-PCB-11	1.57	1.33-1.79	y	98.2	50.0-145
13C-PCB-19	1.07	0.88-1.20	y	99.8	50.0-145
13C-PCB-32	1.09	0.88-1.20	y	98.2	50.0-145
13C-PCB-28	1.06	0.88-1.20	y	98.7	50.0-145
13C-PCB-37	1.07	0.88-1.20	y	94.4	50.0-145
13C-PCB-54	0.81	0.65-0.89	y	100.9	50.0-145
13C-PCB-52	0.80	0.65-0.89	y	100.5	50.0-145
13C-PCB-47	0.79	0.65-0.89	y	100.7	50.0-145
13C-PCB-70	0.78	0.65-0.89	y	97.6	50.0-145
13C-PCB-80	0.80	0.65-0.89	y	98.0	50.0-145
13C-PCB-81	0.79	0.65-0.89	y	96.6	50.0-145
13C-PCB-77	0.78	0.65-0.89	y	96.6	50.0-145
13C-PCB-104	1.57	1.32-1.78	y	100.0	50.0-145
13C-PCB-95	1.59	1.32-1.78	y	99.4	50.0-145
13C-PCB-101	1.54	1.32-1.78	y	98.6	50.0-145
13C-PCB-97	1.59	1.32-1.78	y	98.2	50.0-145
13C-PCB-123	1.61	1.32-1.78	y	96.8	50.0-145
13C-PCB-118	1.58	1.32-1.78	y	95.4	50.0-145
13C-PCB-114	1.60	1.32-1.78	y	98.7	50.0-145
13C-PCB-105	1.60	1.32-1.78	y	96.9	50.0-145
13C-PCB-127	1.57	1.32-1.78	y	98.2	50.0-145
13C-PCB-126	1.58	1.32-1.78	y	99.9	50.0-145
13C-PCB-155	1.29	1.05-1.43	y	99.1	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	99.7	50.0-145
13C-PCB-141	1.28	1.05-1.43	y	100.0	50.0-145
13C-PCB-138	1.29	1.05-1.43	y	101.1	50.0-145
13C-PCB-159	1.27	1.05-1.43	y	98.0	50.0-145
13C-PCB-167	1.30	1.05-1.43	y	98.4	50.0-145
13C-PCB-156	1.29	1.05-1.43	y	98.4	50.0-145
13C-PCB-157	1.29	1.05-1.43	y	97.7	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.27	1.05-1.43	y	96.7	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	100.6	50 - 145
13C-PCB-180	0.47	0.38-0.52	y	97.7	50 - 145
13C-PCB-170	0.47	0.38-0.52	y	97.2	50 - 145
13C-PCB-189	0.47	0.38-0.52	y	96.3	50 - 145
13C-PCB-202	0.94	0.76-1.02	y	97.2	50 - 145
13C-PCB-194	0.92	0.76-1.02	y	99.4	50 - 145
13C-PCB-208	0.78	0.65-0.89	y	99.5	50 - 145
13C-PCB-206	0.78	0.65-0.89	y	100.0	50 - 145
13C-PCB-209	1.23	0.99-1.33	y	96.9	50 - 145

CRS vs. RS

13C-PCB-79	0.79	0.65-0.89	y	98.3	75 - 125
13C-PCB-178	0.46	0.38-0.52	y	101.1	75 - 125

Analyst: DMS

Date: 6/24/14

Client ID: PCB CS3 14F1302 Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA

Lab ID: ST140623E2-4 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	9.40e+07	3.00	y	1.19	16:25	1.001	0.996	1.006	51.3300
	PCB-2	9.45e+07	3.01	y	1.18	18:41	0.989	0.984	0.994	51.8481
	PCB-3	1.13e+08	3.01	y	1.43	18:55	1.001	0.996	1.006	51.3028
	PCB-4/10	3.27e+08	1.65	y	1.57	20:14	1.002	0.997	1.007	200.078
	PCB-7/9	3.82e+08	1.65	y	1.21	21:57	0.870	0.866	0.874	199.310
	PCB-6	2.07e+08	1.66	y	1.30	22:35	0.895	0.890	0.899	100.033
	PCB-5/8	3.65e+08	1.64	y	1.15	23:00	0.912	0.907	0.917	200.175
	PCB-14	1.87e+08	1.66	y	1.11	24:04	0.954	0.949	0.959	102.750
	PCB-11	1.81e+08	1.65	y	1.09	25:14	1.000	0.995	1.005	101.723
	PCB-12/13	3.92e+08	1.65	y	1.19	25:38	1.016	1.011	1.021	200.431
	PCB-15	2.11e+08	1.66	y	1.28	25:56	1.028	1.023	1.033	100.196
	PCB-19	4.92e+07	1.05	y	1.04	24:15	1.001	0.996	1.006	49.8495
	PCB-30	7.99e+07	1.06	y	1.71	25:07	1.037	1.032	1.042	49.3635
	PCB-18	5.58e+07	1.05	y	0.78	25:51	0.954	0.949	0.959	51.2756
	PCB-17	6.48e+07	1.05	y	0.92	26:02	0.961	0.956	0.966	50.4844
	PCB-24/27	1.68e+08	1.05	y	1.19	26:36	0.982	0.977	0.987	101.312
-	PCB-16/32	1.31e+08	1.06	y	0.94	27:06	1.000	0.995	1.005	100.158
-	PCB-34	7.59e+07	1.03	y	1.14	27:52	0.960	0.955	0.965	47.8540
	PCB-23	8.55e+07	1.06	y	1.28	27:58	0.964	0.959	0.969	47.9079
	PCB-29	7.42e+07	1.04	y	1.08	28:13	0.972	0.967	0.977	49.2142
	PCB-26	8.24e+07	1.04	y	1.21	28:25	0.979	0.974	0.984	48.9217
	PCB-25	8.85e+07	1.06	y	1.26	28:34	0.984	0.979	0.989	50.2567
	PCB-31	8.64e+07	1.02	y	1.28	28:56	0.997	0.992	1.002	48.1924
	PCB-28	1.19e+08	1.04	y	1.71	29:02	1.000	0.995	1.005	49.7990
	PCB-20/21/33	2.26e+08	1.03	y	1.08	29:39	1.022	1.017	1.027	149.601
	PCB-22	8.60e+07	1.04	y	1.21	30:05	1.037	1.032	1.042	50.9455
	PCB-36	7.12e+07	1.03	y	1.14	30:40	0.933	0.928	0.938	51.8469
	PCB-39	7.20e+07	1.02	y	1.12	31:09	0.948	0.943	0.953	53.6838
	PCB-38	7.37e+07	1.03	y	1.20	31:55	0.971	0.966	0.976	51.1156
	PCB-35	7.10e+07	1.03	y	1.23	32:26	0.987	0.982	0.992	47.9376
	PCB-37	7.16e+07	1.02	y	1.23	32:53	1.000	0.995	1.005	48.3854
	PCB-54	6.73e+07	0.78	y	1.10	27:57	1.001	0.996	1.006	49.6981
	PCB-50	5.38e+07	0.77	y	0.88	29:05	1.042	1.037	1.047	49.7280
	PCB-53	5.23e+07	0.75	y	1.06	29:44	0.947	0.942	0.952	50.5493
	PCB-51	4.77e+07	0.77	y	0.99	30:04	0.957	0.952	0.962	49.5846
	PCB-45	4.32e+07	0.77	y	0.86	30:30	0.971	0.966	0.976	51.4204
	PCB-46	4.05e+07	0.76	y	0.85	30:59	0.986	0.981	0.991	49.2764

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	1.24e+08	0.76	y	1.28	31:27	1.001	0.996	1.006	99.8332
	PCB-73	6.71e+07	0.78	y	1.35	31:34	1.005	1.000	1.010	51.0170
	PCB-43/49	9.43e+07	0.76	y	0.99	31:44	1.010	1.005	1.015	97.5221
	PCB-47	5.35e+07	0.76	y	1.06	31:55	1.001	0.996	1.006	49.2976
	PCB-48/75	1.20e+08	0.77	y	1.23	32:02	1.004	0.999	1.009	95.5705
	PCB-65	6.30e+07	0.76	y	1.22	32:19	1.013	1.008	1.018	50.1860
	PCB-62	5.58e+07	0.76	y	1.22	32:26	1.016	1.011	1.021	44.5973
	PCB-44	4.12e+07	0.77	y	0.86	32:43	1.026	1.021	1.031	46.6811
	PCB-42/59	1.11e+08	0.76	y	1.14	32:57	1.033	1.028	1.038	95.2591
	PCB-41/64/71/72	2.33e+08	0.77	y	1.21	33:32	1.051	1.046	1.056	187.913
	PCB-68	6.63e+07	0.76	y	1.35	33:47	1.059	1.054	1.064	47.9757
	PCB-40	3.48e+07	0.77	y	0.70	34:00	1.066	1.061	1.071	48.4517
	PCB-57	6.06e+07	0.76	y	0.98	34:22	0.970	0.965	0.975	50.6920
	PCB-67	6.65e+07	0.76	y	1.11	34:40	0.979	0.974	0.984	49.1755
	PCB-58	5.67e+07	0.79	y	0.93	34:47	0.982	0.977	0.987	50.1141
	PCB-63	5.70e+07	0.76	y	0.95	34:56	0.987	0.982	0.992	48.9977
	PCB-74	7.34e+07	0.77	y	1.24	35:13	0.995	0.990	1.000	48.3011
	PCB-61/70	1.16e+08	0.77	y	0.95	35:24	1.000	0.995	1.005	99.8888
	PCB-76/66	1.26e+08	0.77	y	1.04	35:37	1.006	1.001	1.011	99.0361
	PCB-80	7.72e+07	0.77	y	1.19	35:50	1.001	0.996	1.006	51.1089
	PCB-55	6.84e+07	0.77	y	1.04	36:10	1.010	1.005	1.015	51.7926
	PCB-56/60	1.27e+08	0.77	y	1.01	36:40	1.024	1.019	1.029	98.8614
	PCB-79	6.79e+07	0.78	y	1.08	37:43	1.053	1.048	1.058	49.6313
	PCB-78	6.97e+07	0.77	y	1.27	38:25	0.987	0.982	0.992	49.0861
	PCB-81	7.20e+07	0.78	y	1.33	38:57	1.000	0.995	1.005	48.4278
	PCB-77	6.19e+07	0.79	y	1.10	39:33	1.000	0.995	1.005	49.2464
	PCB-104	5.11e+07	1.57	y	1.18	32:35	1.001	0.996	1.006	50.6145
	PCB-96	4.80e+07	1.56	y	1.14	33:50	1.039	1.034	1.044	49.4868
	PCB-103	3.98e+07	1.56	y	0.96	34:22	1.055	1.050	1.060	48.8016
	PCB-100	3.93e+07	1.58	y	0.94	34:42	1.066	1.061	1.071	49.1824
	PCB-94	3.18e+07	1.55	y	1.06	35:11	0.985	0.980	0.990	48.0705
	PCB-95/98/102	1.14e+08	1.55	y	1.22	35:42	1.000	0.995	1.005	149.073
	PCB-93	2.65e+07	1.58	y	0.84	35:48	1.002	0.997	1.007	50.1439
	PCB-88/91	7.03e+07	1.58	y	1.12	36:05	1.010	1.005	1.015	100.529
	PCB-121	5.08e+07	1.60	y	1.62	36:12	1.014	1.009	1.019	50.2163
	PCB-84/92	6.82e+07	1.56	y	1.05	37:01	0.990	0.985	0.995	99.2072
	PCB-89	3.73e+07	1.58	y	1.13	37:14	0.996	0.991	1.001	50.2710

RL: MONO, TRI - DECA: _____

RL: DI : _____

Integrations by Analyst: DMS Date: 6/24/14

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14F1302 Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA

Lab ID: ST140623E2-4 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	7.26e+07	1.56	y	1.10	37:24	1.000	0.995	1.005	100.338
	PCB-113	4.88e+07	1.57	y	1.41	37:39	1.007	1.002	1.012	52.6770
	PCB-99	4.19e+07	1.60	y	1.34	37:44	1.009	1.004	1.014	47.7406
	PCB-119	4.49e+07	1.56	y	1.53	38:12	0.987	0.982	0.992	49.7646
	PCB-108/112	7.56e+07	1.58	y	1.28	38:21	0.991	0.986	0.996	100.241
	PCB-83	4.40e+07	1.57	y	1.52	38:31	0.995	0.990	1.000	49.2175
	PCB-97	3.44e+07	1.55	y	1.18	38:42	1.000	0.995	1.005	49.3584
	PCB-86	2.35e+07	1.55	y	0.84	38:51	1.004	0.999	1.009	47.2868
	B-87/117/125	1.40e+08	1.62	y	1.55	38:58	1.007	1.002	1.012	153.661
	PCB-111/115	9.49e+07	1.51	y	1.63	39:08	1.011	1.006	1.016	98.7316
	PCB-85/116	7.71e+07	1.58	y	1.30	39:16	1.015	1.010	1.020	100.601
	PCB-120	4.81e+07	1.59	y	1.68	39:30	1.021	1.016	1.026	48.6800
	PCB-110	4.58e+07	1.57	y	1.56	39:39	1.025	1.020	1.030	50.0059
	PCB-82	2.78e+07	1.55	y	0.76	40:17	0.976	0.971	0.981	49.7616
	PCB-124	5.28e+07	1.58	y	1.47	40:57	0.993	0.988	0.998	48.7175
	PCB-107/109	9.93e+07	1.59	y	1.32	41:05	0.996	0.991	1.001	102.042
	PCB-123	4.35e+07	1.59	y	1.17	41:17	1.001	0.996	1.006	50.5524
-	PCB-106/118	9.15e+07	1.59	y	1.17	41:28	1.001	0.996	1.006	100.161
-	PCB-114	6.12e+07	1.65	y	1.30	42:07	1.000	0.995	1.005	50.6258
	PCB-122	5.19e+07	1.66	y	1.12	42:15	1.004	0.999	1.009	49.6469
	PCB-105	5.88e+07	1.64	y	1.30	42:59	1.000	0.995	1.005	49.4039
	PCB-127	6.36e+07	1.67	y	1.33	43:19	1.001	0.996	1.006	47.5787
	PCB-126	5.32e+07	1.63	y	1.18	45:13	1.000	0.995	1.005	49.7195
	PCB-155	3.92e+07	1.27	y	1.11	36:57	1.001	0.966	1.006	49.6608
	PCB-150	3.54e+07	1.29	y	1.00	38:13	1.035	1.030	1.040	50.0537
	PCB-152	3.90e+07	1.30	y	1.12	38:42	1.048	1.043	1.053	49.3510
	PCB-145	4.21e+07	1.28	y	1.20	39:08	1.060	1.055	1.065	49.5203
	PCB-136	4.09e+07	1.29	y	1.18	39:28	1.069	1.064	1.074	48.9891
	PCB-148	2.62e+07	1.30	y	0.74	39:33	1.071	1.066	1.076	49.6483
	PCB-154	2.94e+07	1.28	y	0.86	40:03	1.085	1.080	1.090	48.3589
	PCB-151	2.53e+07	1.29	y	0.75	40:42	1.102	1.097	1.107	47.8747
	PCB-135	2.73e+07	1.26	y	0.79	40:55	1.108	1.103	1.113	48.6888
	PCB-144	2.52e+07	1.30	y	0.76	41:02	1.111	1.105	1.117	46.6300
	PCB-147	2.80e+07	1.30	y	0.82	41:09	1.115	1.109	1.121	48.1949
	PCB-139/149	5.22e+07	1.28	y	0.76	41:25	1.122	1.116	1.128	96.7904
-	PCB-140	2.47e+07	1.27	y	0.72	41:36	1.127	1.121	1.133	48.2707
-	PCB-134/143	7.05e+07	1.25	y	0.92	42:02	0.975	0.970	0.980	97.1084

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	6.32e+07	1.24	y	0.82	42:20	0.982	0.977	0.987	97.4225
PCB-131	3.53e+07	1.23	y	0.91	42:30	0.986	0.981	0.991	49.1208
PCB-146/165	9.72e+07	1.25	y	1.25	42:43	0.991	0.986	0.996	98.5088
PCB-132/161	8.58e+07	1.31	y	1.10	42:58	0.997	0.992	1.002	98.0024
PCB-153	4.86e+07	1.16	y	1.25	43:08	1.000	0.995	1.005	49.1545
PCB-168	5.75e+07	1.25	y	1.45	43:21	1.006	1.001	1.011	50.0689
PCB-141	3.94e+07	1.24	y	1.09	43:52	1.000	0.995	1.005	48.7397
PCB-137	3.90e+07	1.23	y	1.06	44:15	1.009	1.004	1.014	49.2894
PCB-130	3.61e+07	1.23	y	0.96	44:21	1.011	1.006	1.016	50.1859
PCB-138/163/164	1.47e+08	1.24	y	1.29	44:44	1.001	0.996	1.006	147.764
PCB-158/160	1.03e+08	1.23	y	1.34	44:59	1.006	1.001	1.011	99.9483
PCB-129	3.23e+07	1.24	y	0.85	45:13	1.012	1.007	1.017	49.1140
PCB-166	4.98e+07	1.24	y	1.19	45:41	0.993	0.988	0.998	49.5492
PCB-159	4.70e+07	1.23	y	1.11	46:01	1.001	0.996	1.006	49.8539
PCB-128/162	8.65e+07	1.23	y	1.05	46:18	1.007	1.002	1.012	97.4214
PCB-167	5.55e+07	1.22	y	1.20	46:41	1.000	0.995	1.005	50.1954
PCB-156	5.05e+07	1.25	y	1.14	48:00	1.001	0.996	1.006	50.3349
PCB-157	5.18e+07	1.24	y	1.16	48:16	1.000	0.995	1.005	48.3867
PCB-169	4.66e+07	1.27	y	1.12	50:20	1.000	0.995	1.005	48.3941
PCB-188	4.99e+07	1.05	y	1.58	42:46	1.001	0.996	1.006	49.3061
PCB-184	5.13e+07	1.06	y	1.63	43:13	1.011	1.006	1.016	49.1029
PCB-179	4.15e+07	1.06	y	1.30	44:00	1.029	1.024	1.034	49.7059
PCB-176	4.68e+07	1.04	y	1.48	44:28	1.040	1.035	1.045	49.4886
PCB-186	4.64e+07	1.05	y	1.45	45:05	1.055	1.050	1.060	49.8177
PCB-178	3.27e+07	1.05	y	1.03	45:34	1.066	1.061	1.071	49.3595
PCB-175	3.22e+07	1.05	y	1.01	45:55	1.074	1.069	1.079	49.6213
PCB-182/187	7.77e+07	1.05	y	1.25	46:05	1.078	1.073	1.083	96.9439
PCB-183	3.68e+07	1.05	y	1.21	46:24	1.086	1.081	1.091	47.6012
PCB-185	4.12e+07	1.07	y	1.80	47:04	0.956	0.951	0.961	49.3457
PCB-174	3.30e+07	1.02	y	1.38	47:26	0.963	0.958	0.968	51.6599
PCB-181	3.14e+07	1.06	y	1.38	47:33	0.965	0.960	0.970	49.1713
PCB-177	2.91e+07	1.05	y	1.26	47:42	0.968	0.963	0.973	50.0451
PCB-171	3.69e+07	1.07	y	1.58	48:00	0.975	0.970	0.980	50.3499
PCB-173	2.61e+07	1.04	y	1.11	48:26	0.983	0.978	0.988	50.8218
PCB-172	3.80e+07	1.07	y	1.63	48:53	0.992	0.987	0.997	50.2115
PCB-192	4.11e+07	1.06	y	1.74	49:04	0.996	0.991	1.001	51.0155
PCB-180	3.12e+07	1.05	y	1.34	49:17	1.000	0.995	1.005	50.1142

RL: MONO, TRI - DECA: _____

Integrations by Analyst: DMS

Date: 6/24/14

Client ID: PCB CS3 14F1302 Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA
Lab ID: ST140623E2-4 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.98e+07	1.07	y	1.72	49:27	1.004	0.999	1.009	50.0826
	PCB-191	3.90e+07	1.07	y	1.69	49:42	1.009	1.004	1.014	49.6416
	PCB-170	2.97e+07	1.05	y	1.60	50:41	1.000	0.995	1.005	50.7863
	PCB-190	4.08e+07	1.06	y	2.21	50:51	1.003	0.998	1.008	50.4671
	PCB-189	3.71e+07	1.05	y	1.55	52:08	1.000	0.995	1.005	50.0142
	PCB-202	3.01e+07	0.94	y	1.08	48:12	1.000	0.995	1.005	49.1569
	PCB-201	3.19e+07	0.91	y	1.15	48:41	1.010	1.005	1.015	49.1361
	PCB-204	3.22e+07	0.91	y	1.14	48:50	1.014	1.008	1.018	50.0554
	PCB-197	3.03e+07	0.91	y	1.07	49:09	1.020	1.015	1.025	49.8625
	PCB-200	3.01e+07	0.90	y	1.06	49:59	1.037	1.032	1.044	50.0631
	PCB-198	2.18e+07	0.92	y	0.76	51:15	1.064	1.059	1.069	51.1487
	PCB-199	2.16e+07	0.91	y	0.80	51:21	1.066	1.061	1.071	47.8578
-	PCB-196/203	4.53e+07	0.92	y	0.80	51:37	1.071	1.066	1.076	100.108
-	PCB-195	3.20e+07	0.89	y	1.23	52:45	0.984	0.979	0.989	50.6536
	PCB-194	3.08e+07	0.92	y	1.21	53:37	1.000	0.995	1.005	49.2456
	PCB-205	3.93e+07	0.92	y	1.54	53:55	1.006	1.001	1.011	49.3837
	PCB-208	3.24e+07	1.34	y	0.93	52:53	1.000	0.995	1.005	49.6730
	PCB-207	3.78e+07	1.32	y	1.08	53:12	1.006	1.001	1.011	49.8284
	PCB-206	2.13e+07	1.36	y	1.02	55:20	1.000	0.995	1.005	49.3149
	PCB-209	2.30e+07	1.21	y	1.17	56:38	1.000	0.995	1.005	51.1001

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	3.01e+08	3.00	y	16:25	1.27	154.481	
Total Di-PCB	2.26e+09	1.65	y	20:14	1.21	1208.89	
Total Tri-PCB	5.48e+08	1.05	y	24:15	1.10	402.442	
Total Tri-PCB	1.30e+09	1.03	y	27:52	1.21	807.063	Sum:1209.50
Total Tetra-PCB	2.49e+09	0.78	y	27:57	1.09	2080.43	
Total Penta-PCB	1.69e+09	1.57	y	32:35	1.18	2047.61	
Total Penta-PCB	3.13e+08	1.65	y	42:07	1.25	268.155	Sum:2315.77
Total Hexa-PCB	4.35e+08	1.27	y	36:57	0.90	682.032	
Total Hexa-PCB	1.26e+09	1.25	y	42:02	1.11	1398.33	Sum:2080.36
Total Hepta-PCB	9.18e+08	1.05	y	42:46	1.42	1205.33	
Total Octa-PCB	2.43e+08	0.94	y	48:12	0.96	447.388	
Total Octa-PCB	1.04e+08	0.89	y	52:45	1.33	151.653	Sum:599.041
Total Nona-PCB	9.23e+07	1.34	y	52:53	1.01	150.101	
Total Deca-PCB	2.30e+07	1.21	y	56:38	1.17	51.1001	

Total PCB Conc:10960.1670500

RL: MONO, TRI - DECA: _____

Integrations by Analyst: DMS

Date: 6/24/14

Client ID: PCB CS3 14F1302 Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA
Lab ID: ST140623E2-4 GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.53e+08	3.37 y	0.87	16:24	0.632	0.629	0.635	98.7	98.7
13C-PCB-3	1.54e+08	3.41 y	0.91	18:54	0.729	0.725	0.733	94.8	94.8
13C-PCB-4	1.04e+08	1.58 y	0.59	20:11	0.779	0.775	0.783	99.7	99.7
13C-PCB-9	1.59e+08	1.59 y	0.90	21:55	0.846	0.842	0.850	99.2	99.2
13C-PCB-11	1.64e+08	1.57 y	0.94	25:13	0.973	0.968	0.978	98.2	98.2
13C-PCB-19	9.46e+07	1.07 y	0.53	24:14	0.935	0.930	0.940	99.8	99.8
13C-PCB-28	1.40e+08	1.06 y	0.93	29:01	1.004	0.999	1.009	98.7	98.7
13C-PCB-32	1.39e+08	1.09 y	0.80	27:06	1.045	1.040	1.050	98.2	98.2
13C-PCB-37	1.20e+08	1.07 y	0.84	32:52	1.137	1.131	1.143	94.4	94.4
13C-PCB-47	1.02e+08	0.79 y	0.81	31:54	0.870	0.866	0.874	101	101
13C-PCB-52	9.72e+07	0.80 y	0.77	31:24	0.857	0.853	0.861	101	101
13C-PCB-54	1.23e+08	0.81 y	0.97	27:55	0.762	0.758	0.766	101	101
13C-PCB-70	1.22e+08	0.78 y	1.00	35:25	0.966	0.961	0.971	97.6	97.6
13C-PCB-77	1.14e+08	0.78 y	0.94	39:32	1.078	1.073	1.083	96.6	96.6
13C-PCB-80	1.27e+08	0.80 y	1.03	35:49	0.977	0.972	0.982	98.0	98.0
13C-PCB-81	1.12e+08	0.79 y	0.92	38:56	1.062	1.057	1.067	96.6	96.6
13C-PCB-95	6.27e+07	1.59 y	0.74	35:43	0.913	0.908	0.918	99.4	99.4
13C-PCB-97	5.89e+07	1.59 y	0.70	38:42	0.989	0.984	0.994	98.2	98.2
13C-PCB-101	6.57e+07	1.54 y	0.78	37:23	0.956	0.951	0.961	98.6	98.6
13C-PCB-104	8.52e+07	1.57 y	1.00	32:34	0.832	0.828	0.836	100.0	100.0
13C-PCB-105	9.17e+07	1.60 y	1.37	42:58	0.929	0.924	0.934	96.9	96.9
13C-PCB-114	9.33e+07	1.60 y	1.36	42:06	0.910	0.905	0.915	98.7	98.7
13C-PCB-118	7.79e+07	1.58 y	0.96	41:26	1.059	1.054	1.064	95.4	95.4
13C-PCB-123	7.37e+07	1.61 y	0.89	41:15	1.055	1.050	1.060	96.8	96.8
13C-PCB-126	9.05e+07	1.58 y	1.31	45:12	0.977	0.972	0.982	99.9	99.9
13C-PCB-127	1.00e+08	1.57 y	1.47	43:17	0.936	0.931	0.941	98.2	98.2
13C-PCB-138	7.71e+07	1.29 y	1.10	44:42	0.966	0.961	0.971	101	101
13C-PCB-141	7.45e+07	1.28 y	1.07	43:51	0.948	0.943	0.953	100.0	100.0
13C-PCB-153	7.92e+07	1.29 y	1.15	43:07	0.932	0.927	0.937	99.7	99.7
13C-PCB-155	7.08e+07	1.29 y	0.84	36:55	0.944	0.939	0.949	99.1	99.1
13C-PCB-156	8.85e+07	1.29 y	1.30	47:58	1.037	1.032	1.042	98.4	98.4
13C-PCB-157	9.20e+07	1.29 y	1.36	48:15	1.043	1.038	1.048	97.7	97.7
13C-PCB-159	8.48e+07	1.27 y	1.25	45:59	0.994	0.989	0.999	98.0	98.0
13C-PCB-167	9.22e+07	1.30 y	1.35	46:40	1.009	1.004	1.014	98.4	98.4
13C-PCB-169	8.62e+07	1.27 y	1.29	50:19	1.088	1.083	1.093	96.7	96.7
13C-PCB-170	3.66e+07	0.47 y	0.54	50:40	1.095	1.089	1.101	97.2	97.2
13C-PCB-180	4.63e+07	0.47 y	0.68	49:15	1.065	1.060	1.070	97.7	97.7
13C-PCB-188	6.40e+07	0.46 y	0.92	42:45	0.924	0.919	0.929	101	101
13C-PCB-189	4.78e+07	0.47 y	0.72	52:07	1.126	1.120	1.132	96.3	96.3
13C-PCB-194	5.16e+07	0.92 y	0.80	53:36	0.995	0.990	1.000	99.4	99.4
13C-PCB-202	5.65e+07	0.94 y	0.84	48:11	1.041	1.036	1.046	97.2	97.2
13C-PCB-206	4.23e+07	0.78 y	0.65	55:19	1.026	1.021	1.031	100.0	100.0
13C-PCB-208	7.00e+07	0.78 y	1.08	52:53	0.981	0.976	0.986	99.5	99.5
13C-PCB-209	3.85e+07	1.23 y	0.61	56:37	1.050	1.045	1.055	96.9	96.9

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.25e+08	0.79 y	1.02	37:42	1.028	1.023	1.034	98.3	98.3
13C-PCB-178	4.30e+07	0.46 y	0.61	45:33	0.984	0.979	0.990	101	101

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.25e+08	0.79 y	1.10	37:42	0.968	0.963	0.973	102	102
13C-PCB-178	4.30e+07	0.46 y	0.90	45:33	0.925	0.920	0.930	103	103

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.78e+08	1.59	y	1.00	25:55	100
13C-PCB-31	1.52e+08	1.05	y	1.00	28:55	100
13C-PCB-60	1.25e+08	0.79	y	1.00	36:39	100
13C-PCB-111	8.51e+07	1.57	y	1.00	39:07	100
13C-PCB-128	6.93e+07	1.27	y	1.00	46:16	100
13C-PCB-205	6.51e+07	0.91	y	1.00	53:54	100

Analyst: DMS

Date: 6/24/14

Vista Analytical Laboratory - Injection Log Run file: 140623E2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
140623E2	1	ST140623E2-1	DMS	23-JUN-14	11:41:57	NA	NA
140623E2	2	ST140623E2-2	DMS	23-JUN-14	12:45:53	NA	NA
140623E2	3	ST140623E2-3	DMS	23-JUN-14	13:49:52	NA	NA
140623E2	4	ST140623E2-4	DMS	23-JUN-14	14:53:49	NA	NA
140623E2	5	ST140623E2-5	DMS	23-JUN-14	15:57:45	NA	NA
140623E2	6	ST140623E2-6	DMS	23-JUN-14	17:01:39	NA	NA
140623E2	7	SOLVENT BLANK	DMS	23-JUN-14	18:05:37	NA	NA
140623E2	8	ST140623E2-7	DMS	23-JUN-14	19:09:28	NA	NA
140623E2	9	B4F0051-BS1	DMS	23-JUN-14	20:13:23	ST140623E2-4	NA
140623E2	10	SOLVENT BLANK	DMS	23-JUN-14	21:17:15	NA	NA
140623E2	11	B4F0051-BLK1	DMS	23-JUN-14	22:21:11	ST140623E2-4	NA
140623E2	12	1400418-01 1:10	DMS	23-JUN-14	23:25:05	ST140623E2-4	NA
140623E2	13	1400418-02 1:10	DMS	24-JUN-14	00:29:00	ST140623E2-4	NA
140623E2	14	1400418-03 1:10	DMS	24-JUN-14	01:32:54	ST140623E2-4	NA
140623E2	15	SOLVENT BLANK	DMS	24-JUN-14	02:36:47	NA	NA

December 31, 2014

Vista Project I.D.: 1400958

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 16, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1400958
Case Narrative

Sample Condition on Receipt:

Two effluent samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested, the Method 1613 analyses were placed on hold.

Analytical Notes:

PA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400958-01	BD-MH-11.31-20141215-W	15-Dec-14 09:10	16-Dec-14 08:44	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400958-02	BD-MH-5.16-20141215-W	15-Dec-14 10:30	16-Dec-14 08:44	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L

Vista Project: 1400958

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B4L0127
Date Extracted: 23-Dec-2014 8:05
Lab Sample: B4L0127-BLK1
Date Analyzed: 26-Dec-14 14:35 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	5.00	1.12		1.21	
PCB-2	ND	5.00	1.29		1.75	
PCB-3	ND	5.00	1.25		1.49	
PCB-4/10	ND	20.0	0.849		5.64	
PCB-5/8	ND	20.0	0.707		3.59	
PCB-6	ND	10.0	0.692		3.10	
PCB-7/9	ND	20.0	0.687		6.22	
PCB-11	ND	10.0		14.2	3.86	
PCB-12/13	ND	20.0	0.702		5.01	
PCB-14	ND	10.0	0.626		3.98	
PCB-15	ND	10.0	0.638		2.53	
PCB-16/32	ND	10.0	0.848		2.87	
PCB-17	ND	5.00	0.970		1.37	
PCB-18	ND	5.00	1.02		2.57	
PCB-19	ND	5.00	1.02		2.38	
PCB-20/21/33	ND	15.0	0.634		10.3	
PCB-22	ND	5.00	0.629		3.17	
PCB-23	ND	5.00	0.634		1.35	
PCB-24/27	ND	10.0	0.742		3.16	
PCB-25	ND	5.00	0.619		3.34	
PCB-26	ND	5.00	0.643		2.19	
PCB-28	3.18	5.00			2.90	J
PCB-29	ND	5.00	0.625		1.60	
PCB-30	ND	5.00	0.725		2.09	
PCB-31	ND	5.00	0.585		4.29	
PCB-34	ND	5.00	0.659		2.34	
PCB-35	ND	5.00	0.652		1.65	
PCB-36	ND	5.00	0.652		2.69	
PCB-37	ND	5.00	0.645		1.92	
PCB-38	ND	5.00	0.663		1.56	
PCB-39	ND	5.00	0.632		2.60	
PCB-40	ND	5.00	1.69		3.08	
PCB-41/64/71/72	ND	20.0	1.05		5.57	
PCB-42/59	ND	10.0	1.14		2.84	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-43/49	ND	10.0	1.26		3.38	
PCB-44	ND	5.00	1.47		2.48	
PCB-45	ND	5.00	1.45		1.96	
PCB-46	ND	5.00	1.48		2.49	
PCB-47	ND	5.00	1.22		4.42	
PCB-48/75	ND	10.0	1.06		2.09	
PCB-50	ND	5.00	1.21		1.40	
PCB-51	ND	5.00	1.22		1.42	
PCB-52/69	ND	10.0	1.10		3.64	
PCB-53	ND	5.00	1.18		1.12	
PCB-54	ND	5.00	0.975		1.51	
PCB-55	ND	5.00	0.891		1.19	
PCB-56/60	ND	10.0	0.910		2.19	
PCB-57	ND	5.00	0.920		0.857	
PCB-58	ND	5.00	0.930		1.81	
PCB-61/70	ND	10.0	0.949		2.40	
PCB-62	ND	5.00	1.07		1.46	
PCB-63	ND	5.00	0.917		0.696	
PCB-65	ND	5.00	1.04		0.953	
PCB-66/76	ND	10.0	0.902		2.82	
PCB-67	ND	5.00	0.954		1.22	
PCB-68	ND	5.00	0.930		1.24	
PCB-73	ND	5.00	1.02		1.56	
PCB-74	ND	5.00	0.851		1.53	
PCB-77	ND	5.00	0.813		1.34	
PCB-78	ND	5.00	0.903		0.990	
PCB-79	ND	5.00	0.880		1.60	
PCB-80	ND	5.00	0.774		1.98	
PCB-81	ND	5.00	0.809		2.34	
PCB-82	ND	5.00	2.65		1.69	
PCB-83	ND	5.00	1.70		1.32	
PCB-84/92	ND	10.0	2.36		3.38	
PCB-85/116	ND	10.0	1.98		2.83	
PCB-86	ND	5.00	2.53		2.34	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B4L0127
Date Extracted: 23-Dec-2014 8:05
Lab Sample: B4L0127-BLK1
Date Analyzed: 26-Dec-14 14:35 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	15.0	1.66		3.79	
PCB-88/91	ND	5.00	2.59		3.25	
PCB-89	ND	5.00	2.44		1.84	
PCB-90/101	ND	10.0		5.45	1.92	
PCB-93	ND	5.00	2.33		1.47	
PCB-94	ND	5.00	2.38		1.91	
PCB-95/98/102	ND	15.0	2.17		6.58	
PCB-96	ND	5.00	1.85		2.16	
PCB-97	ND	5.00	2.07		1.24	
PCB-99	ND	5.00	1.93		1.94	
PCB-100	ND	5.00	2.01		2.03	
PCB-103	ND	5.00	2.16		2.28	
PCB-104	ND	5.00	1.60		0.931	
PCB-105	ND	5.00	0.826		2.21	
PCB-106/118	ND	10.0		3.97	2.44	
PCB-107/109	ND	10.0	1.60		1.98	
PCB-108/112	ND	10.0	2.01		1.86	
PCB-110	ND	5.00	1.54		1.94	
PCB-111/115	ND	10.0	1.47		0.768	
PCB-113	ND	5.00	1.84		1.31	
PCB-114	ND	5.00	0.835		1.81	
PCB-119	ND	5.00	1.50		0.949	
PCB-120	ND	5.00	1.45		1.01	
PCB-121	ND	5.00	1.38		1.94	
PCB-122	ND	5.00	0.915		1.84	
PCB-123	ND	5.00	1.61		1.35	
PCB-124	ND	5.00	1.48		1.79	
PCB-126	ND	5.00	0.844		2.05	
PCB-127	ND	5.00	0.848		0.808	
PCB-128/162	ND	10.0	1.81		1.68	
PCB-129	ND	5.00	2.19		1.11	
PCB-130	ND	5.00	2.35		2.21	
PCB-131	ND	5.00	2.19		1.46	
PCB-132/161	ND	10.0	1.80		2.34	
PCB-133/142	ND	10.0	2.12		2.19	
PCB-134/143	ND	10.0	2.16		2.40	
PCB-135	ND	5.00	2.27		2.90	
PCB-136	ND	5.00	1.63		2.89	
PCB-137	ND	5.00	1.86		2.08	
PCB-138/163/164	ND	15.0		6.99	2.68	
PCB-139/149	ND	10.0		4.33	7.87	
PCB-140	ND	5.00	2.25		3.52	
PCB-141	ND	5.00	2.04		1.15	
PCB-144	ND	5.00	2.16		3.22	
PCB-145	ND	5.00	1.62		1.73	
PCB-146/165	ND	10.0	1.73		1.91	
PCB-147	ND	5.00	2.13		3.62	
PCB-148	ND	5.00	2.39		1.68	
PCB-150	ND	5.00	1.66		1.14	
PCB-151	ND	5.00	2.18		3.59	
PCB-152	ND	5.00	1.61		1.82	
PCB-153	ND	5.00		9.67	1.83	
PCB-154	ND	5.00	2.00		2.78	
PCB-155	ND	5.00	1.56		1.45	
PCB-156	ND	5.00	1.42		1.74	
PCB-157	ND	5.00	1.54		1.17	
PCB-158/160	ND	10.0	1.57		1.99	
PCB-159	ND	5.00	1.58		1.20	
PCB-166	ND	5.00	1.65		0.920	
PCB-167	ND	5.00	1.46		1.65	
PCB-168	ND	5.00	1.46		0.933	
PCB-169	ND	5.00	1.49		1.12	
PCB-170	ND	5.00	1.54		1.38	
PCB-171	ND	5.00	1.51		1.61	
PCB-172	ND	5.00	1.62		1.46	
PCB-173	ND	5.00	1.71		1.49	
PCB-174	ND	5.00	1.48		1.42	
PCB-175	ND	5.00	1.66		3.15	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B4L0127
Date Extracted: 23-Dec-2014 8:05
Lab Sample: B4L0127-BLK1
Date Analyzed: 26-Dec-14 14:35 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	5.00	1.18		2.17	
PCB-177	ND	5.00	1.59		1.34	
PCB-178	ND	5.00	1.72		2.25	
PCB-179	ND	5.00	1.23		1.57	
PCB-180	ND	5.00		5.50	0.610	
PCB-181	ND	5.00	1.45		1.01	
PCB-182/187	ND	10.0		4.45	6.20	
PCB-183	ND	5.00	1.49		3.29	
PCB-184	ND	5.00	1.30		1.25	
PCB-185	ND	5.00	1.47		1.47	
PCB-186	ND	5.00	1.26		2.43	
PCB-188	ND	5.00	1.15		1.08	
PCB-189	ND	5.00	1.04		1.49	
PCB-190	ND	5.00	1.15		1.70	
PCB-191	ND	5.00	1.18		1.96	
PCB-192	ND	5.00	1.30		1.69	
PCB-193	ND	5.00	1.20		1.46	
PCB-194	ND	5.00	0.637		1.71	
PCB-195	ND	5.00	0.662		1.47	
PCB-196/203	ND	10.0	2.09		6.35	
PCB-197	ND	5.00	1.50		1.80	
PCB-198	ND	5.00	2.17		3.78	
PCB-199	ND	5.00	2.21		4.05	
PCB-200	ND	5.00	1.58		1.75	
PCB-201	ND	5.00	1.46		1.02	
PCB-202	ND	5.00	1.55		1.55	
PCB-204	ND	5.00	1.62		1.48	
PCB-205	ND	5.00	0.562		1.53	
PCB-206	ND	5.00	0.806		1.32	
PCB-207	ND	5.00	0.477		1.51	
PCB-208	ND	5.00	0.454		1.34	
PCB-209	ND	5.00	1.80		1.86	
Total monoCB	ND	5.00	1.29			
Total diCB	ND	10.0		14.2		
Total triCB	3.18	5.00				J
Total tetraCB	ND	5.00	1.69			
Total pentaCB	ND	5.00		9.42		
Total hexaCB	ND	5.00		21.0		
Total heptaCB	ND	5.00		9.95		
Total octaCB	ND	5.00	2.21			
Total nonaCB	ND	5.00	0.806			
DecaCB	ND	5.00	1.80			
Total PCB	3.18	10.0				J

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: Method Blank — EPA Method 1668C

Matrix:	Aqueous	QC Batch:	B4L0127	Lab Sample:	B4L0127-BLK1
Sample Size:	1.00 L	Date Extracted:	23-Dec-2014 8:05	Date Analyzed:	26-Dec-14 14:35 Column: ZB-1 Analyst: ANP

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	87.9	5 - 145	
	13C-PCB-3	84.9	5 - 145	
	13C-PCB-4	79.6	5 - 145	
	13C-PCB-11	83.6	5 - 145	
	13C-PCB-9	80.5	5 - 145	
	13C-PCB-19	75.6	5 - 145	
	13C-PCB-28	93.8	5 - 145	
	13C-PCB-32	76.1	5 - 145	
	13C-PCB-37	94.3	5 - 145	
	13C-PCB-47	81.2	5 - 145	
	13C-PCB-52	82.9	5 - 145	
	13C-PCB-54	81.8	5 - 145	
	13C-PCB-70	87.4	5 - 145	
	13C-PCB-77	102	10 - 145	
	13C-PCB-80	89.9	10 - 145	
	13C-PCB-81	97.6	10 - 145	
	13C-PCB-95	84.9	10 - 145	
	13C-PCB-97	94.1	10 - 145	
	13C-PCB-101	89.8	10 - 145	
	13C-PCB-104	80.9	10 - 145	
	13C-PCB-105	109	10 - 145	
	13C-PCB-114	103	10 - 145	
	13C-PCB-118	95.1	10 - 145	
	13C-PCB-123	95.3	10 - 145	
	13C-PCB-126	117	10 - 145	
	13C-PCB-127	110	10 - 145	
	13C-PCB-138	95.9	10 - 145	
	13C-PCB-141	96.4	10 - 145	
	13C-PCB-153	90.2	10 - 145	
	13C-PCB-155	74.4	10 - 145	
	13C-PCB-156	101	10 - 145	
	13C-PCB-157	99.9	10 - 145	
	13C-PCB-159	96.8	10 - 145	
	13C-PCB-167	101	10 - 145	
	13C-PCB-169	109	10 - 145	
	13C-PCB-170	89.1	10 - 145	
	13C-PCB-180	86.7	10 - 145	
	13C-PCB-188	75.9	10 - 145	
	13C-PCB-189	92.4	10 - 145	
	13C-PCB-194	97.4	10 - 145	
	13C-PCB-202	73.1	10 - 145	
	13C-PCB-206	88.7	10 - 145	
	13C-PCB-208	78.8	10 - 145	
	13C-PCB-209	91.7	10 - 145	
CRS	13C-PCB-79	102	10 - 145	
	13C-PCB-178	91.2	10 - 145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0127
Date Extracted: 23-Dec-2014 8:05

Lab Sample: B4L0127-BS1
Date Analyzed: 26-Dec-14 12:27 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
PCB-1	1010	1000	101	60 - 135
PCB-3	1010	1000	101	60 - 135
PCB-4/10	4960	4000	124	60 - 135
PCB-15	2410	2000	120	60 - 135
PCB-19	1070	1000	107	60 - 135
PCB-37	1080	1000	108	60 - 135
PCB-54	1090	1000	109	60 - 135
PCB-77	1080	1000	108	60 - 135
PCB-81	1070	1000	107	60 - 135
PCB-104	1120	1000	112	60 - 135
PCB-105	1220	1000	122	60 - 135
PCB-106/118	2260	2000	113	60 - 135
PCB-114	1200	1000	120	60 - 135
PCB-123	1190	1000	119	60 - 135
PCB-126	1180	1000	118	60 - 135
PCB-155	1110	1000	111	60 - 135
PCB-156	1150	1000	115	60 - 135
PCB-157	1160	1000	116	60 - 135
PCB-167	1150	1000	115	60 - 135
PCB-169	1210	1000	121	60 - 135
PCB-188	1090	1000	109	60 - 135
PCB-189	1190	1000	119	60 - 135
PCB-202	1090	1000	109	60 - 135
PCB-205	1180	1000	118	60 - 135
PCB-206	1200	1000	120	60 - 135
PCB-208	1190	1000	119	60 - 135
PCB-209	1170	1000	117	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	74.0	15 - 145
IS	13C-PCB-3	71.7	15 - 145
IS	13C-PCB-4	69.1	15 - 145
IS	13C-PCB-11	76.0	15 - 145
IS	13C-PCB-9	71.3	15 - 145
IS	13C-PCB-19	65.3	15 - 145
IS	13C-PCB-28	82.7	15 - 145
IS	13C-PCB-32	67.1	15 - 145
IS	13C-PCB-37	87.8	15 - 145
IS	13C-PCB-47	77.0	15 - 145
IS	13C-PCB-52	76.1	15 - 145
IS	13C-PCB-54	74.9	15 - 145
IS	13C-PCB-70	87.4	15 - 145
IS	13C-PCB-77	94.5	40 - 145
IS	13C-PCB-80	87.5	40 - 145
IS	13C-PCB-81	93.2	40 - 145
IS	13C-PCB-95	81.7	40 - 145
IS	13C-PCB-97	91.9	40 - 145
IS	13C-PCB-101	86.8	40 - 145
IS	13C-PCB-104	74.5	40 - 145
IS	13C-PCB-105	106	40 - 145
IS	13C-PCB-114	101	40 - 145
IS	13C-PCB-118	93.2	40 - 145
IS	13C-PCB-123	90.5	40 - 145
IS	13C-PCB-126	111	40 - 145
IS	13C-PCB-127	106	40 - 145
IS	13C-PCB-138	94.1	40 - 145
IS	13C-PCB-141	91.8	40 - 145
IS	13C-PCB-153	90.3	40 - 145
IS	13C-PCB-155	71.3	40 - 145
IS	13C-PCB-156	96.4	40 - 145
IS	13C-PCB-157	95.5	40 - 145
IS	13C-PCB-159	96.5	40 - 145
IS	13C-PCB-167	95.1	40 - 145
IS	13C-PCB-169	92.5	40 - 145
IS	13C-PCB-170	86.9	40 - 145
IS	13C-PCB-180	85.8	40 - 145
IS	13C-PCB-188	74.6	40 - 145
IS	13C-PCB-189	86.2	40 - 145
IS	13C-PCB-194	92.1	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0127
Date Extracted: 23-Dec-2014 8:05

Lab Sample: B4L0127-BS1
Date Analyzed: 26-Dec-14 12:27 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	71.5	40 - 145
IS	13C-PCB-206	82.2	40 - 145
IS	13C-PCB-208	70.1	40 - 145
IS	13C-PCB-209	86.9	40 - 145
CRS	13C-PCB-79	99.8	40 - 145
CRS	13C-PCB-178	88.8	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-MH-11.31-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 9:10

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-01 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 18:57 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	4.91	2.55		1.21	
PCB-2	ND	4.91	2.36		1.75	
PCB-3	ND	4.91	2.29		1.49	
PCB-4/10	10.2	19.6			5.64	J
PCB-5/8	13.1	19.6			3.59	J
PCB-6	7.33	9.82			3.10	J
PCB-7/9	ND	19.6	6.91		6.22	
PCB-11	12.5	9.82			3.86	
PCB-12/13	ND	19.6	6.60		5.01	
PCB-14	ND	9.82	5.89		3.98	
PCB-15	8.94	9.82			2.53	J
PCB-16/32	24.2	9.82			2.87	
PCB-17	14.8	4.91			1.37	
PCB-18	35.5	4.91			2.57	
PCB-19	7.15	4.91			2.38	
PCB-20/21/33	13.0	14.7			10.3	J
PCB-22	12.1	4.91			3.17	
PCB-23	ND	4.91	1.23		1.35	
PCB-24/27	7.57	9.82			3.16	J
PCB-25	5.84	4.91			3.34	
PCB-26	16.3	4.91			2.19	
PCB-28	36.9	4.91			2.90	B
PCB-29	ND	4.91	1.21		1.60	
PCB-30	ND	4.91	0.889		2.09	
PCB-31	23.9	4.91			4.29	
PCB-34	ND	4.91	1.28		2.34	
PCB-35	ND	4.91	1.17		1.65	
PCB-36	ND	4.91	1.17		2.69	
PCB-37	12.3	4.91			1.92	
PCB-38	ND	4.91	1.19		1.56	
PCB-39	ND	4.91	1.13		2.60	
PCB-40	7.68	4.91			3.08	
PCB-41/64/71/72	32.8	19.6			5.57	
PCB-42/59	12.6	9.82			2.84	
PCB-43/49	43.2	9.82			3.38	
PCB-44	36.0	4.91			2.48	
PCB-45	4.87	4.91			1.96	J
PCB-46	1.83	4.91			2.49	J
PCB-47	18.0	4.91			4.42	
PCB-48/75	4.08	9.82			2.09	J
PCB-50	ND	4.91	3.44		1.40	
PCB-51	7.50	4.91			1.42	
PCB-52/69	56.9	9.82			3.64	
PCB-53	12.3	4.91			1.12	
PCB-54	ND	4.91	2.77		1.51	
PCB-55	ND	4.91	2.21		1.19	
PCB-56/60	19.8	9.82			2.19	
PCB-57	ND	4.91	2.25		0.857	
PCB-58	ND	4.91	2.27		1.81	
PCB-61/70	34.8	9.82			2.40	
PCB-62	ND	4.91	2.76		1.46	
PCB-63	ND	4.91	2.24		0.696	
PCB-65	ND	4.91	2.68		0.953	
PCB-66/76	29.8	9.82			2.82	
PCB-67	ND	4.91	2.33		1.22	
PCB-68	2.56	4.91			1.24	J
PCB-73	ND	4.91	2.76		1.56	
PCB-74	13.4	4.91			1.53	
PCB-77	4.80	4.91			1.34	J
PCB-78	ND	4.91	2.04		0.990	
PCB-79	2.20	4.91			1.60	J
PCB-80	ND	4.91	1.92		1.98	
PCB-81	ND	4.91	1.83		2.34	
PCB-82	8.22	4.91			1.69	
PCB-83	ND	4.91	3.24		1.32	
PCB-84/92	33.1	9.82			3.38	
PCB-85/116	ND	9.82		10.1	2.83	
PCB-86	ND	4.91	4.82		2.34	
PCB-87/117/125	23.8	14.7			3.79	
PCB-88/91	15.4	4.91			3.25	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-11.31-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 9:10

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-01 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 18:57 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	4.91	3.41		1.84	
PCB-90/101	71.5	9.82			1.92	
PCB-93	ND	4.91	3.39		1.47	
PCB-94	ND	4.91	3.46		1.91	
PCB-95/98/102	65.2	14.7			6.58	
PCB-96	2.02	4.91			2.16	J
PCB-97	22.1	4.91			1.24	
PCB-99	30.7	4.91			1.94	
PCB-100	ND	4.91	3.07		2.03	
PCB-103	2.16	4.91			2.28	J
PCB-104	ND	4.91	2.45		0.931	
PCB-105	27.4	4.91			2.21	
PCB-106/118	63.8	9.82			2.44	
PCB-107/109	6.50	9.82			1.98	J
PCB-108/112	3.62	9.82			1.86	J
PCB-110	91.8	4.91			1.94	
PCB-111/115	1.74	9.82			0.768	J
PCB-113	ND	4.91	3.27		1.31	
PCB-114	ND	4.91	2.12		1.81	
PCB-119	2.90	4.91			0.949	J
PCB-120	ND	4.91	2.76		1.01	
PCB-121	ND	4.91	2.01		1.94	
PCB-122	ND	4.91	2.33		1.84	
PCB-123	ND	4.91	2.79		1.35	
PCB-124	4.07	4.91			1.79	J
PCB-126	ND	4.91	2.24		2.05	
PCB-127	ND	4.91	2.16		0.808	
PCB-128/162	18.9	9.82			1.68	
PCB-129	5.05	4.91			1.11	
PCB-130	7.87	4.91			2.21	
PCB-131	ND	4.91	2.82		1.46	
PCB-132/161	35.5	9.82			2.34	
PCB-133/142	3.28	9.82			2.19	J
PCB-134/143	4.92	9.82			2.40	J
PCB-135	ND	4.91		13.2	2.90	
PCB-136	13.8	4.91			2.89	
PCB-137	4.61	4.91			2.08	J
PCB-138/163/164	121	14.7			2.68	
PCB-139/149	92.7	9.82			7.87	
PCB-140	ND	4.91	3.56		3.52	
PCB-141	22.6	4.91			1.15	
PCB-144	5.84	4.91			3.22	
PCB-145	ND	4.91	3.84		1.73	
PCB-146/165	16.1	9.82			1.91	
PCB-147	ND	4.91		2.88	3.62	
PCB-148	ND	4.91	3.78		1.68	
PCB-150	ND	4.91	3.94		1.14	
PCB-151	23.6	4.91			3.59	
PCB-152	ND	4.91	3.82		1.82	
PCB-153	97.6	4.91			1.83	
PCB-154	ND	4.91	3.17		2.78	
PCB-155	ND	4.91	3.70		1.45	
PCB-156	9.45	4.91			1.74	
PCB-157	3.36	4.91			1.17	J
PCB-158/160	12.8	9.82			1.99	
PCB-159	ND	4.91	1.86		1.20	
PCB-166	ND	4.91	1.94		0.920	
PCB-167	5.68	4.91			1.65	
PCB-168	ND	4.91	1.88		0.933	
PCB-169	ND	4.91	1.93		1.12	
PCB-170	33.6	4.91			1.38	
PCB-171	9.04	4.91			1.61	
PCB-172	7.14	4.91			1.46	
PCB-173	ND	4.91	3.16		1.49	
PCB-174	28.5	4.91			1.42	
PCB-175	ND	4.91	3.08		3.15	
PCB-176	3.76	4.91			2.17	J
PCB-177	19.1	4.91			1.34	
PCB-178	6.76	4.91			2.25	
PCB-179	12.6	4.91			1.57	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: BD-MH-11.31-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 9:10

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-01 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 18:57 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	66.4	4.91			0.610	
PCB-181	ND	4.91	2.69		1.01	
PCB-182/187	43.0	9.82			6.20	
PCB-183	18.6	4.91			3.29	
PCB-184	ND	4.91	2.41		1.25	
PCB-185	3.60	4.91			1.47	J
PCB-186	ND	4.91	2.34		2.43	
PCB-188	ND	4.91	2.12		1.08	
PCB-189	1.36	4.91			1.49	J
PCB-190	6.25	4.91			1.70	
PCB-191	1.41	4.91			1.96	J
PCB-192	ND	4.91	2.40		1.69	
PCB-193	3.46	4.91			1.46	J
PCB-194	14.6	4.91			1.71	
PCB-195	5.51	4.91			1.47	
PCB-196/203	19.8	9.82			6.35	
PCB-197	ND	4.91	2.33		1.80	
PCB-198	ND	4.91	3.37		3.78	
PCB-199	ND	4.91		15.3	4.05	
PCB-200	ND	4.91	2.92		1.75	
PCB-201	2.82	4.91			1.02	J
PCB-202	3.59	4.91			1.55	J
PCB-204	ND	4.91	2.52		1.48	
PCB-205	ND	4.91	0.861		1.53	
PCB-206	6.14	4.91			1.32	
PCB-207	ND	4.91	0.944		1.51	
PCB-208	ND	4.91		1.99	1.34	
PCB-209	2.41	4.91			1.86	J
Total monoCB	ND	4.91	2.55			
Total diCB	52.0	9.82				
Total triCB	210	4.91				B
Total tetraCB	345	4.91				
Total pentaCB	476	4.91		486		
Total hexaCB	505	4.91		521		
Total heptaCB	264	4.91				

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
Total octaCB	46.3	4.91		61.6		
Total nonaCB	6.14	4.91		8.13		
DecaCB	2.41	4.91				J
Total PCB	1910	9.82				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-11.31-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 9:10

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-01 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 18:57 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	67.8	5 -145	
	13C-PCB-3	73.3	5 -145	
	13C-PCB-4	71.7	5 -145	
	13C-PCB-11	80.4	5 -145	
	13C-PCB-9	73.1	5 -145	
	13C-PCB-19	64.5	5 -145	
	13C-PCB-28	99.5	5 -145	
	13C-PCB-32	68.5	5 -145	
	13C-PCB-37	104	5 -145	
	13C-PCB-47	76.5	5 -145	
	13C-PCB-52	76.1	5 -145	
	13C-PCB-54	71.2	5 -145	
	13C-PCB-70	90.5	5 -145	
	13C-PCB-77	102	10 -145	
	13C-PCB-80	93.5	10 -145	
	13C-PCB-81	103	10 -145	
	13C-PCB-95	81.1	10 -145	
	13C-PCB-97	91.3	10 -145	
	13C-PCB-101	87.5	10 -145	
	13C-PCB-104	75.3	10 -145	
	13C-PCB-105	97.7	10 -145	
	13C-PCB-114	98.2	10 -145	
	13C-PCB-118	98.3	10 -145	
	13C-PCB-123	95.8	10 -145	
	13C-PCB-126	104	10 -145	
	13C-PCB-127	104	10 -145	
	13C-PCB-138	93.0	10 -145	
	13C-PCB-141	89.6	10 -145	
	13C-PCB-153	87.1	10 -145	
	13C-PCB-155	81.7	10 -145	
	13C-PCB-156	96.2	10 -145	
	13C-PCB-157	95.1	10 -145	
	13C-PCB-159	96.1	10 -145	
	13C-PCB-167	95.5	10 -145	
	13C-PCB-169	98.4	10 -145	
	13C-PCB-170	89.7	10 -145	
	13C-PCB-180	84.0	10 -145	
	13C-PCB-188	73.9	10 -145	
	13C-PCB-189	91.0	10 -145	
	13C-PCB-194	99.2	10 -145	
	13C-PCB-202	77.4	10 -145	
	13C-PCB-206	92.2	10 -145	
	13C-PCB-208	92.1	10 -145	
	13C-PCB-209	100	10 -145	
CRS	13C-PCB-79	105	10 -145	
	13C-PCB-178	88.0	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-5.16-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 10:30

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-02 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 20:02 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	1.70	4.88			1.21	J
PCB-2	ND	4.88	1.34		1.75	
PCB-3	ND	4.88	1.30		1.49	
PCB-4/10	7.53	19.5			5.64	J
PCB-5/8	9.46	19.5			3.59	J
PCB-6	5.74	9.77			3.10	J
PCB-7/9	ND	19.5	4.98		6.22	
PCB-11	31.2	9.77			3.86	
PCB-12/13	ND	19.5	4.64		5.01	
PCB-14	ND	9.77	4.14		3.98	
PCB-15	13.3	9.77			2.53	
PCB-16/32	31.9	9.77			2.87	
PCB-17	15.0	4.88			1.37	
PCB-18	35.9	4.88			2.57	
PCB-19	6.22	4.88			2.38	
PCB-20/21/33	19.2	14.6			10.3	
PCB-22	17.8	4.88			3.17	
PCB-23	ND	4.88	1.93		1.35	
PCB-24/27	5.97	9.77			3.16	J
PCB-25	5.62	4.88			3.34	
PCB-26	12.9	4.88			2.19	
PCB-28	53.4	4.88			2.90	B
PCB-29	ND	4.88	1.91		1.60	
PCB-30	ND	4.88	1.59		2.09	
PCB-31	36.9	4.88			4.29	
PCB-34	ND	4.88	2.01		2.34	
PCB-35	2.08	4.88			1.65	J
PCB-36	ND	4.88	1.69		2.69	
PCB-37	23.5	4.88			1.92	
PCB-38	1.77	4.88			1.56	J
PCB-39	ND	4.88	1.64		2.60	
PCB-40	17.4	4.88			3.08	
PCB-41/64/71/72	87.3	19.5			5.57	
PCB-42/59	32.6	9.77			2.84	
PCB-43/49	92.6	9.77			3.38	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-44	120	4.88			2.48	
PCB-45	13.5	4.88			1.96	
PCB-46	6.11	4.88			2.49	
PCB-47	36.0	4.88			4.42	
PCB-48/75	11.9	9.77			2.09	
PCB-50	ND	4.88	2.29		1.40	
PCB-51	12.7	4.88			1.42	
PCB-52/69	183	9.77			3.64	
PCB-53	22.7	4.88			1.12	
PCB-54	ND	4.88		1.67	1.51	
PCB-55	4.28	4.88			1.19	J
PCB-56/60	62.3	9.77			2.19	
PCB-57	ND	4.88	1.46		0.857	
PCB-58	ND	4.88	1.47		1.81	
PCB-61/70	141	9.77			2.40	
PCB-62	ND	4.88	1.78		1.46	
PCB-63	3.96	4.88			0.696	J
PCB-65	ND	4.88	1.73		0.953	
PCB-66/76	91.4	9.77			2.82	
PCB-67	2.79	4.88			1.22	J
PCB-68	1.88	4.88			1.24	J
PCB-73	ND	4.88	1.68		1.56	
PCB-74	45.1	4.88			1.53	
PCB-77	16.8	4.88			1.34	
PCB-78	ND	4.88	1.42		0.990	
PCB-79	7.28	4.88			1.60	
PCB-80	ND	4.88	1.24		1.98	
PCB-81	4.36	4.88			2.34	J
PCB-82	70.7	4.88			1.69	
PCB-83	ND	4.88	2.52		1.32	
PCB-84/92	211	9.77			3.38	
PCB-85/116	89.0	9.77			2.83	
PCB-86	ND	4.88	3.75		2.34	
PCB-87/117/125	199	14.6			3.79	
PCB-88/91	83.6	4.88			3.25	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: BD-MH-5.16-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 10:30

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-02 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 20:02 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	4.10	4.88			1.84	J
PCB-90/101	524	9.77			1.92	
PCB-93	ND	4.88	3.48		1.47	
PCB-94	2.45	4.88			1.91	J
PCB-95/98/102	381	14.6			6.58	
PCB-96	3.28	4.88			2.16	J
PCB-97	157	4.88			1.24	
PCB-99	201	4.88			1.94	
PCB-100	ND	4.88		1.42	2.03	
PCB-103	2.05	4.88			2.28	J
PCB-104	ND	4.88	2.42		0.931	
PCB-105	170	4.88			2.21	
PCB-106/118	451	9.77			2.44	
PCB-107/109	34.5	9.77			1.98	
PCB-108/112	23.1	9.77			1.86	
PCB-110	676	4.88			1.94	
PCB-111/115	7.28	9.77			0.768	J
PCB-113	ND	4.88	2.56		1.31	
PCB-114	9.07	4.88			1.81	
PCB-119	10.3	4.88			0.949	
PCB-120	ND	4.88	2.15		1.01	
PCB-121	ND	4.88	2.07		1.94	
PCB-122	4.47	4.88			1.84	J
PCB-123	7.32	4.88			1.35	
PCB-124	21.1	4.88			1.79	
PCB-126	5.78	4.88			2.05	
PCB-127	ND	4.88	2.10		0.808	
PCB-128/162	138	9.77			1.68	
PCB-129	41.7	4.88			1.11	
PCB-130	58.5	4.88			2.21	
PCB-131	ND	4.88	3.37		1.46	
PCB-132/161	216	9.77			2.34	
PCB-133/142	18.5	9.77			2.19	
PCB-134/143	40.3	9.77			2.40	
PCB-135	84.7	4.88			2.90	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	77.0	4.88			2.89	
PCB-137	45.5	4.88			2.08	
PCB-138/163/164	882	14.6			2.68	
PCB-139/149	578	9.77			7.87	
PCB-140	4.18	4.88			3.52	J
PCB-141	177	4.88			1.15	
PCB-144	28.8	4.88			3.22	
PCB-145	ND	4.88	2.93		1.73	
PCB-146/165	99.6	9.77			1.91	
PCB-147	15.2	4.88			3.62	
PCB-148	ND	4.88	4.33		1.68	
PCB-150	ND	4.88	3.01		1.14	
PCB-151	141	4.88			3.59	
PCB-152	ND	4.88	2.92		1.82	
PCB-153	662	4.88			1.83	
PCB-154	7.99	4.88			2.78	
PCB-155	ND	4.88	2.82		1.45	
PCB-156	71.6	4.88			1.74	
PCB-157	19.4	4.88			1.17	
PCB-158/160	97.2	9.77			1.99	
PCB-159	ND	4.88	2.49		1.20	
PCB-166	ND	4.88	3.09		0.920	
PCB-167	37.1	4.88			1.65	
PCB-168	ND	4.88	2.25		0.933	
PCB-169	ND	4.88	2.26		1.12	
PCB-170	244	4.88			1.38	
PCB-171	63.2	4.88			1.61	
PCB-172	47.9	4.88			1.46	
PCB-173	5.99	4.88			1.49	
PCB-174	224	4.88			1.42	
PCB-175	9.63	4.88			3.15	
PCB-176	24.0	4.88			2.17	
PCB-177	132	4.88			1.34	
PCB-178	43.3	4.88			2.25	
PCB-179	76.5	4.88			1.57	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: BD-MH-5.16-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 10:30

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-02 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 20:02 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	533	4.88			0.610	
PCB-181	ND	4.88	2.18		1.01	
PCB-182/187	278	9.77			6.20	
PCB-183	125	4.88			3.29	
PCB-184	ND	4.88	1.89		1.25	
PCB-185	23.3	4.88			1.47	
PCB-186	ND	4.88	1.83		2.43	
PCB-188	ND	4.88	1.67		1.08	
PCB-189	10.2	4.88			1.49	
PCB-190	52.5	4.88			1.70	
PCB-191	12.1	4.88			1.96	
PCB-192	ND	4.88	1.94		1.69	
PCB-193	27.5	4.88			1.46	
PCB-194	99.9	4.88			1.71	
PCB-195	37.0	4.88			1.47	
PCB-196/203	130	9.77			6.35	
PCB-197	4.29	4.88			1.80	J
PCB-198	7.16	4.88			3.78	
PCB-199	114	4.88			4.05	
PCB-200	12.1	4.88			1.75	
PCB-201	10.1	4.88			1.02	
PCB-202	15.6	4.88			1.55	
PCB-204	ND	4.88	1.45		1.48	
PCB-205	5.33	4.88			1.53	
PCB-206	25.2	4.88			1.32	
PCB-207	3.11	4.88			1.51	J
PCB-208	5.98	4.88			1.34	
PCB-209	6.24	4.88			1.86	
Total monoCB	1.70	4.88				J
Total diCB	67.2	9.77				
Total triCB	268	4.88				B
Total tetraCB	1020	4.88				
Total pentaCB	3350	4.88				
Total hexaCB	3540	4.88				
Total heptaCB	1930	4.88				
Total octaCB	435	4.88				
Total nonaCB	34.3	4.88				
DecaCB	6.24	4.88				
Total PCB	10600	9.77				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-5.16-20141215-W

EPA Method 1668C

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 10:30

Sample Data
Matrix: Effluent
Sample Size: 1.02 L

Laboratory Data
Lab Sample: 1400958-02 Date Received: 16-Dec-2014 8:44
QC Batch: B4L0127 Date Extracted: 23-Dec-2014 8:05
Date Analyzed : 27-Dec-14 20:02 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	62.5	5 -145	
	13C-PCB-3	64.9	5 -145	
	13C-PCB-4	66.6	5 -145	
	13C-PCB-11	82.2	5 -145	
	13C-PCB-9	71.2	5 -145	
	13C-PCB-19	63.7	5 -145	
	13C-PCB-28	84.9	5 -145	
	13C-PCB-32	71.4	5 -145	
	13C-PCB-37	102	5 -145	
	13C-PCB-47	76.1	5 -145	
	13C-PCB-52	76.1	5 -145	
	13C-PCB-54	68.5	5 -145	
	13C-PCB-70	88.5	5 -145	
	13C-PCB-77	98.3	10 -145	
	13C-PCB-80	91.7	10 -145	
	13C-PCB-81	96.2	10 -145	
	13C-PCB-95	80.3	10 -145	
	13C-PCB-97	89.4	10 -145	
	13C-PCB-101	89.3	10 -145	
	13C-PCB-104	75.7	10 -145	
	13C-PCB-105	107	10 -145	
	13C-PCB-114	103	10 -145	
	13C-PCB-118	92.3	10 -145	
	13C-PCB-123	95.8	10 -145	
	13C-PCB-126	109	10 -145	
	13C-PCB-127	107	10 -145	
	13C-PCB-138	94.4	10 -145	
	13C-PCB-141	93.8	10 -145	
	13C-PCB-153	93.2	10 -145	
	13C-PCB-155	78.7	10 -145	
	13C-PCB-156	97.6	10 -145	
	13C-PCB-157	97.1	10 -145	
	13C-PCB-159	95.8	10 -145	
	13C-PCB-167	96.4	10 -145	
	13C-PCB-169	104	10 -145	
	13C-PCB-170	92.5	10 -145	
	13C-PCB-180	89.6	10 -145	
	13C-PCB-188	79.5	10 -145	
	13C-PCB-189	95.2	10 -145	
	13C-PCB-194	92.4	10 -145	
	13C-PCB-202	76.6	10 -145	
	13C-PCB-206	91.2	10 -145	
	13C-PCB-208	86.6	10 -145	
	13C-PCB-209	98.2	10 -145	
CRS	13C-PCB-79	109	10 -145	
	13C-PCB-178	92.1	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Vista CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Laboratory Project ID: 1400958 Storage Secured: Yes ☑ No ☐

Storage ID: WR-8 Temp: 0.4 °C

TAT: (Check One):
Standard: ● 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.:_____ P.O.#_____ Sampler: M. Ivancevich, C. Wilson (Name)

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N. Creek Pkwy, Ste 101 City: Bothell, WA State: Zip: 98011 Ph#: (206) 300-2144 Fax#:

Relinquished by: (Signature and Printed Name) Melissa Ivancevich Date: 12/15/14 Time: 1455 Received by: (Signature and Printed Name) Barbara Benedict B. Benedict Date: 12/16/14 Time: 0855

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: Sample Control

Method of Shipment: FedEx

Tracking No.: 806459792404

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	EPA1614 PAH	CARB429 WHO-29
BD-MH-11.31-20141215-W	12/15/14	0910	BDC	4	A	~~EF~~	H									√2		√2			
BD-MH-5.16-20141215-W	12/15/14	1030	BDC	4	A	~~EF~~	H									√2		√2			

Special Instructions/Comments: Hold samples for Dioxins/Furans.

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company:
Address:
City: State: Zip:
Phone: Fax:
Email: nancarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400958 **TAT** Std

Samples Arrival:	**Date/Time** 12/16/14 0844		**Initials:** JBAB		**Location:** WR-2 **Shelf/Rack:** NA		
Logged In:	**Date/Time** 12/16/14 1512		**Initials:** JBAB		**Location:** WR-2 **Shelf/Rack:** C4		
Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other	
Preservation:	(Ice)	Blue Ice	Dry Ice	None			
Temp °C: 0.4 (uncorrected)		**Time:** 0855		**Thermometer ID:** IR-1			
Temp °C: 0.4 (corrected)							

	YES	NO	NA
Adequate Sample Volume Received? A,B,C,D Containers	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill / Trk # 8064 5979 2404	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA	COC	Sample Container	None		
Shipping Container	(Vista)	Client	(Retain)	Return	Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400958

Prep Expiration: 12/15/2015
Client: Leidos

Workorder Due: 06-Jan-15 00:00

TAT: 21

Method: **1668C Full List**
Matrix: **Aqueous**
Client Matrix: Effluent
Also run: **Percent Solids**

Prep Batch: BHL0127

Prep Data Entered: M.T 12/24/14
Date and Initials

Initial Sequence: S4LD040

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400958-01 "B"	☑	BD-MH-11.31-20141215-W	16-Dec-14 08:44	WR-2 C-4	
1400958-02 "B"	☑	BD-MH-5.16-20141215-W	16-Dec-14 08:44	WR-2 C-4	

Vista PM:Martha Maier

Vial Box ID: Grace

Sample Reconciled By: M.T 12/23/14

Page 1 of 1

D2216-90 BATCH ID B4L0126

Analyst: MJT **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

INST HRMS-4

Date/Time IN: 12/23/14 ~~9:00~~ 9:45 Date/Time OUT 12/24/14 9:00

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	MJT 12/23/14				MJT 12/23/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added (A)	Cl-
	1400934-01RE1		Sample	1.31	8.02	1.31			6	3	10	0
	1400934-02RE1		Sample	1.31	12.41	1.32			7	3	10	0
	1400948-04RE1		Sample	1.30	9.69	1.30			5	3	10	0
	1400949-01		Sample	1.30	11.49	1.31			7	3	10	0
	1400949-02		Sample	1.32	7.34	1.32			7	3	10	0
	1400949-03		Sample	1.30	6.41	1.31			7	3	20	0
	1400949-04		Sample	1.31	10.00	1.32			7	3	10	0
	1400949-05		Sample	1.31	12.75	1.31			6	3	10	0
	1400958-01		Sample	1.31 ~~1.32~~ MJT 12/23/14	10.35	1.33			6	3	10	0
	1400958-02		Sample	1.31	9.27	1.31			6	3	10	0
	B4L0127-MB		QC						5	3	10	0
	B4L0127-OPR		QC						5	3	10	0

(A) Acid was added in drops. MJT 12/23/14

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0126

Analyst: MJT **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

INST HRMS-4

Date/Time IN:	Date/Time OUT
12/23/14 9:45	12/24/14 9:00

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	MJT 12/23/14	MJT 12/24/14			MJT 12/23/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400934-01RE1		Sample	1.3100	8.0200	1.3100	0.0000	0.00	6	3	10	0
	1400934-02RE1		Sample	1.3100	12.4100	1.3200	0.0100	0.09	7	3	10	0
	1400948-04RE1		Sample	1.3000	9.6900	1.3000	0.0000	0.00	5	3	10	0
	1400949-01		Sample	1.3000	11.4900	1.3100	0.0100	0.10	7	3	10	0
	1400949-02		Sample	1.3200	7.3400	1.3200	0.0000	0.00	7	3	10	0
	1400949-03		Sample	1.3000	6.4100	1.3100	0.0100	0.20	7	3	20	0
	1400949-04		Sample	1.3100	10.0000	1.3200	0.0100	0.12	7	3	10	0
	1400949-05		Sample	1.3100	12.7500	1.3100	0.0000	0.00	6	3	10	0
	1400958-01		Sample	1.3100	10.3500	1.3300	0.0200	0.22	6	3	10	0
	1400958-02		Sample	1.3100	9.2700	1.3100	0.0000	0.00	6	3	10	0
	B4L0127-MB		QC						5	3	10	0
	B4L0127-OPR		QC						5	3	10	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668A Full List
Method: 1668C Full List

B4L0127

Chemist: M.T

Prep Date/Time: 23-Dec-14 08:05

Prepared using: HRMS - Separatory Funnel

							NA	C4L0098	NA	NA	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B4L0127-BLK1 (A)	NA 1	NA	(1.000)	M.T DR 12/23/14	M.T 12/23/14	NA	M.T 12/23/14	NA	NA	M.T CJ 12/24/14
☐	B4L0127-BS1 (A)	↓	↓	↓							
☐	1400934-01	781.61	282.80	0.49881							
☐	1400934-02	776.18	284.17	0.49201							
☐	1400948-04	1492.20	499.16	0.99304							
☐	1400949-01	1508.94	497.90	1.01104							
☐	1400949-02 (B)	1514.44	498.08	1.01636							
☐	1400949-03	1503.38	498.28	1.00510							
☐	1400949-04	1513.53	498.14	1.01539							
☐	1400949-05	1511.64	498.75	1.01289							
☐	1400958-01	1520.48	501.89	1.01859							
☐	1400958-02 (A)	1526.00	502.00	1.02400	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: (SEFUN) SOX SDS	Check Out:
PCDD/F 1 (V1)	PCDD/F (V1)	PCDD/F (V2)	PCDD/F (V2)	Start Date/Time 12/23/14 M.T 12/23/14 NA	SOLV: DCM	Chemist/Date: M.T 12/23/14
PCB 14A3001, 10uL	PCB 13I2503, 10uL	PCB 14A3002, 10uL	PCB 14A3003, 10uL		Other NA	Check In: Empty
PAH	PAH	PAH	PAH	Stop Date/Time 12/12 M.T 12/23/14 NA	Final Volume(s) 20uL C9	Chemist/Date: M.T 12/23/14
						Balance ID: HRMS-4

Comments: (A) Sample Ran through Sodium Sulfate Twice due to presence of water M.T 12/23/14
(B) Sample approached dryness @ while Rotovaping @ F.V. M.T 12/24/14

SAMPLE DATA

EPA Method 1668C

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1

Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF¶	1.25	*		993	2.5	1.12	*	0.996	1.006
Mono	PCB-2	*	*	n	NotF¶	1.18	*		993	2.5	1.29	*	0.983	0.993
Mono	PCB-3	*	*	n	NotF¶	1.22	*		993	2.5	1.25	*	0.996	1.006
Di	PCB-4/10	*	*	n	NotF¶	1.55	*		721	2.5	0.849	*	0.998	1.008
Di	PCB-7/9	*	*	n	NotF¶	1.27	*		721	2.5	0.687	*	0.865	0.873
Di	PCB-6	*	*	n	NotF¶	1.26	*		721	2.5	0.692	*	0.890	0.899
Di	PCB-5/8	*	*	n	NotF¶	1.23	*		721	2.5	0.707	*	0.906	0.916
Di	PCB-14	*	*	n	NotF¶	1.23	*		721	2.5	0.626	*	0.949	0.959
Di	PCB-11	3.81e+05	1.10	n	25:13	1.16	14.2		*	2.5	*	1.000	0.996	1.006
Di	PCB-12/13	*	*	n	NotF¶	1.10	*		721	2.5	0.702	*	1.010	1.020
Di	PCB-15	*	*	n	NotF¶	1.21	*		721	2.5	0.638	*	1.024	1.034
Tri	PCB-19	*	*	n	NotF¶	1.30	*		797	2.5	1.02	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF¶	1.83	*		797	2.5	0.725	*	1.032	1.042
Tri	PCB-18	*	*	n	NotF¶	0.86	*		797	2.5	1.02	*	0.949	0.959
Tri	PCB-17	*	*	n	NotF¶	0.90	*		797	2.5	0.970	*	0.955	0.965
Tri	PCB-24/27	*	*	n	NotF¶	1.18	*		797	2.5	0.742	*	0.976	0.986
Tri	PCB-16/32	*	*	n	NotF¶	1.03	*		797	2.5	0.848	*	0.995	1.005
Tri	PCB-34	*	*	n	NotF¶	1.26	*		720	2.5	0.659	*	0.956	0.966
Tri	PCB-23	*	*	n	NotF¶	1.31	*		720	2.5	0.634	*	0.959	0.969
Tri	PCB-29	*	*	n	NotF¶	1.33	*		720	2.5	0.625	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF¶	1.29	*		720	2.5	0.643	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF¶	1.34	*		720	2.5	0.619	*	0.980	0.990
Tri	PCB-31	*	*	n	NotF¶	1.42	*		720	2.5	0.585	*	0.992	1.002
Tri	PCB-28	9.37e+04	1.09	y	29:03	1.38	3.18		*	2.5	*	0.999	0.996	1.006
Tri	PCB-20/21/33	*	*	n	NotF¶	1.31	*		720	2.5	0.634	*	1.017	1.027
Tri	PCB-22	*	*	n	NotF¶	1.32	*		720	2.5	0.629	*	1.032	1.042
Tri	PCB-36	*	*	n	NotF¶	1.38	*		720	2.5	0.652	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF¶	1.42	*		720	2.5	0.632	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF¶	1.35	*		720	2.5	0.663	*	0.967	0.976
Tri	PCB-35	*	*	n	NotF¶	1.38	*		720	2.5	0.652	*	0.982	0.992
Tri	PCB-37	*	*	n	NotF¶	1.39	*		720	2.5	0.645	*	0.996	1.006
Tetra	PCB-54	*	*	n	NotF¶	1.20	*		855	2.5	0.975	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF¶	0.97	*		855	2.5	1.21	*	1.037	1.047
Tetra	PCB-53	*	*	n	NotF¶	1.19	*		855	2.5	1.18	*	0.941	0.951
Tetra	PCB-51	*	*	n	NotF¶	1.15	*		855	2.5	1.22	*	0.952	0.962
Tetra	PCB-45	*	*	n	NotF¶	0.97	*		855	2.5	1.45	*	0.966	0.976
Tetra	PCB-46	*	*	n	NotF¶	0.95	*		855	2.5	1.48	*	0.982	0.992

Integrations By:

Analyst: [signature]

Date: 12/30/14

Reviewed by: [signature]

Date: 12/31/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1

Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	*	n NotF¶	1.28	*		855	2.5	1.10	*	0.996	1.006
Tetra	PCB-73	*	*	n NotF¶	1.37	*		855	2.5	1.02	*	1.000	1.010
Tetra	PCB-43/49	*	*	n NotF¶	1.11	*		855	2.5	1.26	*	1.005	1.015
Tetra	PCB-47	*	*	n NotF¶	1.13	*		855	2.5	1.22	*	0.996	1.006
Tetra	PCB-48/75	*	*	n NotF¶	1.30	*		855	2.5	1.06	*	0.999	1.009
Tetra	PCB-65	*	*	n NotF¶	1.33	*		855	2.5	1.04	*	1.007	1.017
Tetra	PCB-62	*	*	n NotF¶	1.29	*		855	2.5	1.07	*	1.011	1.021
Tetra	PCB-44	*	*	n NotF¶	0.94	*		855	2.5	1.47	*	1.020	1.030
Tetra	PCB-42/59	*	*	n NotF¶	1.22	*		855	2.5	1.14	*	1.028	1.038
Tetra	PCB-41/64/71/72	*	*	n NotF¶	1.31	*		855	2.5	1.05	*	1.046	1.056
Tetra	PCB-68	*	*	n NotF¶	1.49	*		855	2.5	0.930	*	1.054	1.064
Tetra	PCB-40	*	*	n NotF¶	0.82	*		855	2.5	1.69	*	1.061	1.071
Tetra	PCB-57	*	*	n NotF¶	1.11	*		855	2.5	0.920	*	0.965	0.975
Tetra	PCB-67	*	*	n NotF¶	1.07	*		855	2.5	0.954	*	0.974	0.984
Tetra	PCB-58	*	*	n NotF¶	1.10	*		855	2.5	0.930	*	0.977	0.987
Tetra	PCB-63	*	*	n NotF¶	1.12	*		855	2.5	0.917	*	0.982	0.992
Tetra	PCB-74	*	*	n NotF¶	1.20	*		855	2.5	0.851	*	0.990	1.000
Tetra	PCB-61/70	*	*	n NotF¶	1.08	*		855	2.5	0.949	*	0.994	1.004
Tetra	PCB-76/66	*	*	n NotF¶	1.14	*		855	2.5	0.902	*	1.001	1.011
Tetra	PCB-80	*	*	n NotF¶	1.28	*		855	2.5	0.774	*	0.996	1.006
Tetra	PCB-55	*	*	n NotF¶	1.11	*		855	2.5	0.891	*	1.005	1.015
Tetra	PCB-56/60	*	*	n NotF¶	1.09	*		855	2.5	0.910	*	1.018	1.028
Tetra	PCB-79	*	*	n NotF¶	1.12	*		855	2.5	0.880	*	1.048	1.058
Tetra	PCB-78	*	*	n NotF¶	1.24	*		855	2.5	0.903	*	0.982	0.992
Tetra	PCB-81	*	*	n NotF¶	1.38	*		855	2.5	0.809	*	0.995	1.005
Tetra	PCB-77	*	*	n NotF¶	1.21	*		855	2.5	0.813	*	0.995	1.005
Penta	PCB-104	*	*	n NotF¶	1.26	*		657	2.5	1.60	*	0.996	1.006
Penta	PCB-96	*	*	n NotF¶	1.09	*		657	2.5	1.85	*	1.034	1.044
Penta	PCB-103	*	*	n NotF¶	0.93	*		657	2.5	2.16	*	1.050	1.060
Penta	PCB-100	*	*	n NotF¶	1.00	*		657	2.5	2.01	*	1.061	1.071
Penta	PCB-94	*	*	n NotF¶	1.11	*		657	2.5	2.38	*	0.981	0.991
Penta	PCB-95/98/102	*	*	n NotF¶	1.21	*		657	2.5	2.17	*	0.994	1.004
Penta	PCB-93	*	*	n NotF¶	1.13	*		657	2.5	2.33	*	0.998	1.008
Penta	PCB-88/91	*	*	n NotF¶	1.02	*		657	2.5	2.59	*	1.006	1.016
Penta	PCB-121	*	*	n NotF¶	1.90	*		657	2.5	1.38	*	1.009	1.019
Penta	PCB-84/92	*	*	n NotF¶	1.05	*		657	2.5	2.36	*	0.986	0.996
Penta	PCB-89	*	*	n NotF¶	1.02	*		657	2.5	2.44	*	0.991	1.001

Analyst: CC

Date: 12/30/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1

Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

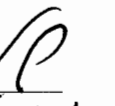
Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	5.59e+04	1.10	n 37:29	1.19	5.45		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	*	*	n NotF¶	1.35	*		657	2.5	1.84	*	1.002	1.012
Penta	PCB-99	*	*	n NotF¶	1.29	*		657	2.5	1.93	*	1.005	1.015
Penta	PCB-119	*	*	n NotF¶	1.72	*		657	2.5	1.50	*	0.982	0.992
Penta	PCB-108/112	*	*	n NotF¶	1.29	*		657	2.5	2.01	*	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.52	*		657	2.5	1.70	*	0.991	1.001
Penta	PCB-97	*	*	n NotF¶	1.25	*		657	2.5	2.07	*	0.996	1.006
Penta	PCB-86	*	*	n NotF¶	1.02	*		657	2.5	2.53	*	1.000	1.010
Penta	PCB-87/117/125	*	*	n NotF¶	1.56	*		657	2.5	1.66	*	1.002	1.012
Penta	PCB-111/115	*	*	n NotF¶	1.75	*		657	2.5	1.47	*	1.007	1.017
Penta	PCB-85/116	*	*	n NotF¶	1.30	*		657	2.5	1.98	*	1.010	1.020
Penta	PCB-120	*	*	n NotF¶	1.78	*		657	2.5	1.45	*	1.016	1.026
Penta	PCB-110	*	*	n NotF¶	1.68	*		657	2.5	1.54	*	1.020	1.030
Penta	PCB-82	*	*	n NotF¶	0.74	*		657	2.5	2.65	*	0.972	0.982
Penta	PCB-124	*	*	n NotF¶	1.32	*		657	2.5	1.48	*	0.988	0.998
Penta	PCB-107/109	*	*	n NotF¶	1.22	*		657	2.5	1.60	*	0.991	1.001
Penta	PCB-123	*	*	n NotF¶	1.22	*		657	2.5	1.61	*	0.995	1.005
Penta	PCB-106/118	5.56e+04	1.31	n 41:31	1.22	3.97		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	*	*	n NotF¶	1.36	*		555	2.5	0.835	*	0.995	1.005
Penta	PCB-122	*	*	n NotF¶	1.24	*		555	2.5	0.915	*	0.999	1.009
Penta	PCB-105	*	*	n NotF¶	1.28	*		555	2.5	0.826	*	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.14	*		555	2.5	0.848	*	0.995	1.005
Penta	PCB-126	*	*	n NotF¶	1.28	*		555	2.5	0.844	*	0.995	1.005
Hexa	PCB-155	*	*	n NotF¶	1.14	*		480	2.5	1.56	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF¶	1.06	*		480	2.5	1.66	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF¶	1.10	*		480	2.5	1.61	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF¶	1.09	*		480	2.5	1.62	*	1.055	1.065
Hexa	PCB-136	*	*	n NotF¶	1.08	*		480	2.5	1.63	*	1.064	1.074
Hexa	PCB-148	*	*	n NotF¶	0.74	*		480	2.5	2.39	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF¶	0.88	*		480	2.5	2.00	*	1.079	1.089
Hexa	PCB-151	*	*	n NotF¶	0.81	*		480	2.5	2.18	*	1.097	1.107
Hexa	PCB-135	*	*	n NotF¶	0.78	*		480	2.5	2.27	*	1.101	1.113
Hexa	PCB-144	*	*	n NotF¶	0.82	*		480	2.5	2.16	*	1.105	1.116
Hexa	PCB-147	*	*	n NotF¶	0.83	*		480	2.5	2.13	*	1.011	1.120
Hexa	PCB-139/149	2.76e+04	1.49	n 41:28	0.84	4.33		*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	*	*	n NotF¶	0.79	*		480	2.5	2.25	*	1.120	1.132
Hexa	PCB-134/143	*	*	n NotF¶	0.93	*		947	2.5	2.16	*	0.970	0.980

Analyst: _____

Date: 12/30/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1
Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n	NotF	0.95	*		947	2.5	2.12	*	0.977	0.987
Hexa	PCB-131	*	*	n	NotF	0.91	*		947	2.5	2.19	*	0.981	0.991
Hexa	PCB-146/165	*	*	n	NotF	1.16	*		947	2.5	1.73	*	0.986	0.996
Hexa	PCB-132/161	*	*	n	NotF	1.11	*		947	2.5	1.80	*	0.992	1.002
Hexa	PCB-153	1.48e+05	1.04	n	43:11	1.18	9.67		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n	NotF	1.37	*		947	2.5	1.46	*	1.000	1.010
Hexa	PCB-141	*	*	n	NotF	0.97	*		947	2.5	2.04	*	0.996	1.005
Hexa	PCB-137	*	*	n	NotF	1.07	*		947	2.5	1.86	*	1.004	1.014
Hexa	PCB-130	*	*	n	NotF	0.85	*		947	2.5	2.35	*	1.007	1.017
Hexa	PCB-138/163/164	1.10e+05	0.80	n	44:47	1.23	6.99		*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	*	*	n	NotF	1.29	*		947	2.5	1.57	*	1.001	1.011
Hexa	PCB-129	*	*	n	NotF	0.92	*		947	2.5	2.19	*	1.007	1.017
Hexa	PCB-166	*	*	n	NotF	1.12	*		947	2.5	1.65	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF	1.16	*		947	2.5	1.58	*	0.995	1.005
Hexa	PCB-128/162	*	*	n	NotF	1.02	*		947	2.5	1.81	*	1.002	1.012
Hexa	PCB-167	*	*	n	NotF	1.06	*		947	2.5	1.46	*	0.995	1.005
Hexa	PCB-156	*	*	n	NotF	1.18	*		947	2.5	1.42	*	0.995	1.005
Hexa	PCB-157	*	*	n	NotF	1.08	*		947	2.5	1.54	*	0.995	1.005
Hexa	PCB-169	*	*	n	NotF	1.11	*		947	2.5	1.49	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotF	1.40	*		822	2.5	1.15	*	0.995	1.005
Hepta	PCB-184	*	*	n	NotF	1.24	*		822	2.5	1.30	*	1.006	1.016
Hepta	PCB-179	*	*	n	NotF	1.30	*		822	2.5	1.23	*	1.024	1.034
Hepta	PCB-176	*	*	n	NotF	1.36	*		822	2.5	1.18	*	1.035	1.045
Hepta	PCB-186	*	*	n	NotF	1.28	*		822	2.5	1.26	*	1.049	1.059
Hepta	PCB-178	*	*	n	NotF	0.94	*		822	2.5	1.72	*	1.061	1.071
Hepta	PCB-175	*	*	n	NotF	0.97	*		822	2.5	1.66	*	1.069	1.079
Hepta	PCB-182/187	4.13e+04	0.72	n	46:07	1.01	4.45		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	*	*	n	NotF	1.08	*		822	2.5	1.49	*	1.080	1.090
Hepta	PCB-185	*	*	n	NotF	1.34	*		822	2.5	1.47	*	0.951	0.961
Hepta	PCB-174	*	*	n	NotF	1.34	*		822	2.5	1.48	*	0.958	0.968
Hepta	PCB-181	*	*	n	NotF	1.36	*		822	2.5	1.45	*	0.961	0.971
Hepta	PCB-177	*	*	n	NotF	1.24	*		822	2.5	1.59	*	0.964	0.974
Hepta	PCB-171	*	*	n	NotF	1.31	*		822	2.5	1.51	*	0.970	0.980
Hepta	PCB-173	*	*	n	NotF	1.16	*		822	2.5	1.71	*	0.979	0.989
Hepta	PCB-172	*	*	n	NotF	1.22	*		822	2.5	1.62	*	0.988	0.998
Hepta	PCB-192	*	*	n	NotF	1.53	*		822	2.5	1.30	*	0.991	1.001
Hepta	PCB-180	5.92e+04	1.22	n	49:20	1.43	5.50		*	2.5	*	1.001	0.995	1.005

Analyst: 

Date: 12/30/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1

Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF	1.65	*		822	2.5	1.20	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF	1.67	*		822	2.5	1.18	*	1.004	1.014
Hepta	PCB-170	*	*	n	NotF	1.50	*		822	2.5	1.54	*	0.995	1.005
Hepta	PCB-190	*	*	n	NotF	2.02	*		822	2.5	1.15	*	0.998	1.008
Hepta	PCB-189	*	*	n	NotF	1.54	*		822	2.5	1.04	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF	1.04	*		540	2.5	1.55	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF	1.10	*		540	2.5	1.46	*	1.006	1.016
Octa	PCB-204	*	*	n	NotF	0.99	*		540	2.5	1.62	*	1.009	1.019
Octa	PCB-197	*	*	n	NotF	1.07	*		540	2.5	1.50	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF	1.02	*		540	2.5	1.58	*	1.032	1.044
Octa	PCB-198	*	*	n	NotF	0.74	*		540	2.5	2.17	*	1.058	1.068
Octa	PCB-199	*	*	n	NotF	0.73	*		540	2.5	2.21	*	1.060	1.070
Octa	PCB-196/203	*	*	n	NotF	0.77	*		540	2.5	2.09	*	1.066	1.076
Octa	PCB-195	*	*	n	NotF	1.20	*		585	2.5	0.662	*	0.979	0.989
Octa	PCB-194	*	*	n	NotF	1.25	*		585	2.5	0.637	*	0.995	1.005
Octa	PCB-205	*	*	n	NotF	1.41	*		585	2.5	0.562	*	1.001	1.011
Nona	PCB-208	*	*	n	NotF	0.96	*		422	2.5	0.454	*	0.995	1.005
Nona	PCB-207	*	*	n	NotF	0.92	*		422	2.5	0.477	*	1.001	1.011
Nona	PCB-206	*	*	n	NotF	1.03	*		422	2.5	0.806	*	0.995	1.005
Deca	PCB-209	*	*	n	NotF	1.18	*		815	2.5	1.80	*	0.995	1.005

Analyst: CC

Date: 12/30/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1
Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.22	*	
Total Di-PCB	*	*	n	NotFnd	1.21	*	
Total Tri-PCB	*	*	n	NotFnd	1.16	*	
Total Tri-PCB	9.37e+04	1.09	y	29:03	1.35	3.17546	Sum:3.17546
Total Tetra-PCB	*	*	n	NotFnd	1.17	*	
Total Penta-PCB	*	*	n	NotFnd	1.21	*	
Total Penta-PCB	*	*	n	NotFnd	1.26	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.92	*	
Total Hexa-PCB	*	*	n	NotFnd	1.08	*	Sum:0.00000
Total Hepta-PCB	*	*	n	NotFnd	1.27	*	
Total Octa-PCB	*	*	n	NotFnd	0.92	*	
Total Octa-PCB	*	*	n	NotFnd	1.29	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	0.96	*	
Total Deca-PCB	*	*	n	NotFnd	1.18	*	

Total PCB Conc: ~~57.7364~~ 4980000
3.18

Integrations by Analyst: CC
Date: 12/30/14

Client ID: Method Blank Filename: 141226E1 S:4 Acq:26-DEC-14 14:35:58 ConCal: ST141226E1-1
Lab ID: B4L0127-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	4.62e+07	3.24 y	0.89	16:07	0.622	0.622	0.628	1760	87.9
13C-PCB-3	4.65e+07	3.31 y	0.93	18:44	0.723	0.721	0.729	1700	84.9
13C-PCB-4	2.57e+07	1.60 y	0.55	20:03	0.774	0.772	0.780	1590	79.6
13C-PCB-9	3.92e+07	1.59 y	0.83	21:50	0.842	0.840	0.848	1610	80.5
13C-PCB-11	4.63e+07	1.58 y	0.94	25:13	0.973	0.968	0.978	1670	83.6
13C-PCB-19	2.38e+07	1.09 y	0.53	24:12	0.934	0.929	0.939	1510	75.6
13C-PCB-28	4.28e+07	1.11 y	0.89	29:04	1.004	0.999	1.009	1880	93.8
13C-PCB-32	3.66e+07	1.09 y	0.81	27:06	1.046	1.041	1.051	1520	76.1
13C-PCB-37	4.04e+07	1.13 y	0.83	32:55	1.137	1.131	1.143	1890	94.3
13C-PCB-47	2.60e+07	0.80 y	0.74	31:58	0.871	0.867	0.875	1620	81.2
13C-PCB-52	2.52e+07	0.81 y	0.71	31:28	0.857	0.853	0.861	1660	82.9
13C-PCB-54	2.99e+07	0.80 y	0.85	27:56	0.761	0.758	0.766	1640	81.8
13C-PCB-70	3.55e+07	0.81 y	0.94	35:29	0.966	0.961	0.971	1750	87.4
13C-PCB-77	3.93e+07	0.80 y	0.89	39:35	1.078	1.073	1.083	2050	102
13C-PCB-80	3.72e+07	0.82 y	0.96	35:54	0.978	0.972	0.982	1800	89.9
13C-PCB-81	3.52e+07	0.82 y	0.84	39:00	1.062	1.057	1.067	1950	97.6
13C-PCB-95	1.54e+07	1.60 y	0.74	35:47	0.913	0.908	0.918	1700	84.9
13C-PCB-97	1.58e+07	1.65 y	0.69	38:45	0.989	0.984	0.994	1880	94.1
13C-PCB-101	1.72e+07	1.66 y	0.79	37:28	0.956	0.951	0.961	1800	89.8
13C-PCB-104	1.97e+07	1.61 y	1.00	32:37	0.832	0.829	0.837	1620	80.9
13C-PCB-105	3.48e+07	1.71 y	1.24	43:01	0.929	0.924	0.934	2180	109
13C-PCB-114	3.22e+07	1.66 y	1.21	42:09	0.910	0.905	0.915	2070	103
13C-PCB-118	2.29e+07	1.59 y	0.98	41:30	1.059	1.054	1.064	1900	95.1
13C-PCB-123	2.21e+07	1.68 y	0.95	41:19	1.054	1.049	1.059	1910	95.3
13C-PCB-126	3.50e+07	1.63 y	1.16	45:15	0.977	0.972	0.982	2340	117
13C-PCB-127	3.82e+07	1.61 y	1.34	43:21	0.936	0.931	0.941	2210	110
13C-PCB-138	2.58e+07	1.27 y	1.04	44:45	0.967	0.961	0.971	1920	95.9
13C-PCB-141	2.66e+07	1.29 y	1.07	43:54	0.948	0.943	0.953	1930	96.4
13C-PCB-153	2.59e+07	1.30 y	1.11	43:10	0.932	0.927	0.937	1800	90.2
13C-PCB-155	1.51e+07	1.28 y	0.83	37:00	0.944	0.939	0.949	1490	74.4
13C-PCB-156	3.24e+07	1.29 y	1.24	48:00	1.037	1.032	1.042	2020	101
13C-PCB-157	3.38e+07	1.32 y	1.31	48:17	1.043	1.037	1.047	2000	99.9
13C-PCB-159	2.99e+07	1.29 y	1.20	46:02	0.994	0.989	0.999	1940	96.8
13C-PCB-167	3.46e+07	1.28 y	1.32	46:43	1.009	1.004	1.014	2030	101
13C-PCB-169	3.40e+07	1.31 y	1.22	50:26	1.089	1.082	1.092	2170	109
13C-PCB-170	1.23e+07	0.48 y	0.54	50:49	1.098	1.089	1.101	1780	89.1
13C-PCB-180	1.51e+07	0.46 y	0.67	49:18	1.065	1.059	1.069	1730	86.7
13C-PCB-188	1.83e+07	0.46 y	0.94	42:48	0.924	0.919	0.929	1520	75.9
13C-PCB-189	1.70e+07	0.49 y	0.72	52:19	1.130	1.120	1.132	1850	92.4
13C-PCB-194	2.75e+07	0.91 y	0.81	53:51	0.995	0.990	1.000	1950	97.4
13C-PCB-202	1.57e+07	0.92 y	0.83	48:13	1.041	1.036	1.046	1460	73.1
13C-PCB-206	2.04e+07	0.80 y	0.66	55:28	1.025	1.021	1.031	1770	88.7
13C-PCB-208	3.09e+07	0.76 y	1.12	53:07	0.981	0.976	0.986	1580	78.8
13C-PCB-209	1.96e+07	1.19 y	0.61	56:50	1.050	1.044	1.054	1830	91.7

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.40e+07	0.80 y	1.01	37:46	1.029	1.023	1.033	2040	102
13C-PCB-178	1.48e+07	0.47 y	0.63	45:35	0.985	0.979	0.989	1820	91.2

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.40e+07	0.80 y	1.20	37:46	0.968	0.963	0.973	2090	104
13C-PCB-178	1.48e+07	0.47 y	0.94	45:35	0.925	0.920	0.930	2100	105

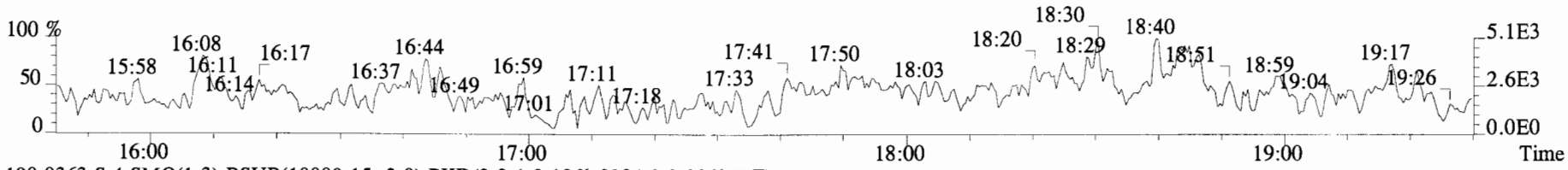
RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	5.91e+07	1.63 y	1.00	25:55	2000
13C-PCB-31	5.15e+07	1.09 y	1.00	28:57	2000
13C-PCB-60	4.30e+07	0.82 y	1.00	36:43	2000
13C-PCB-111	2.44e+07	1.55 y	1.00	39:11	2000
13C-PCB-128	2.58e+07	1.31 y	1.00	46:18	2000
13C-PCB-205	3.49e+07	0.93 y	1.00	54:08	2000

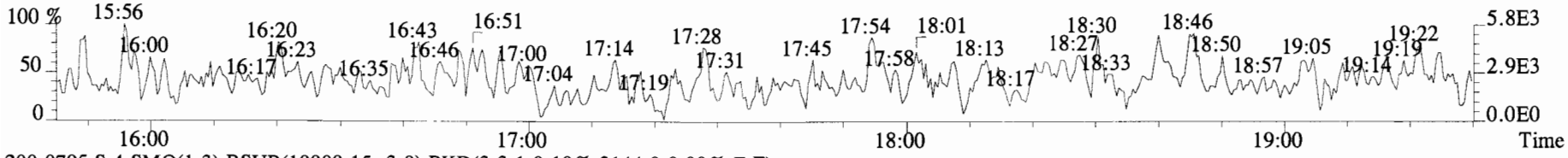
Analyst: CP

Date: 12/30/14

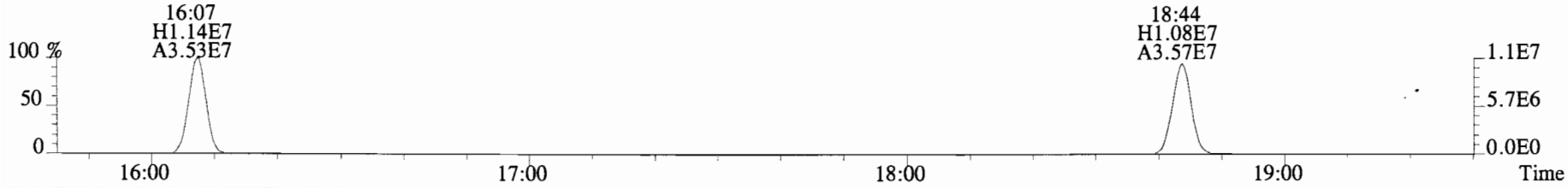
File:141226E1 #1-728 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



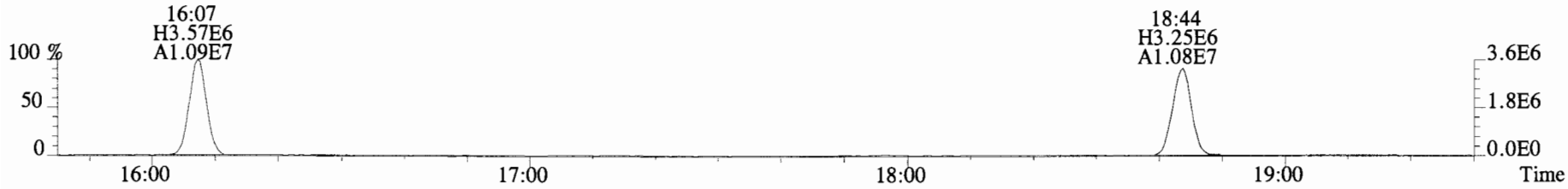
190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3204.0,0.00%,F,F)



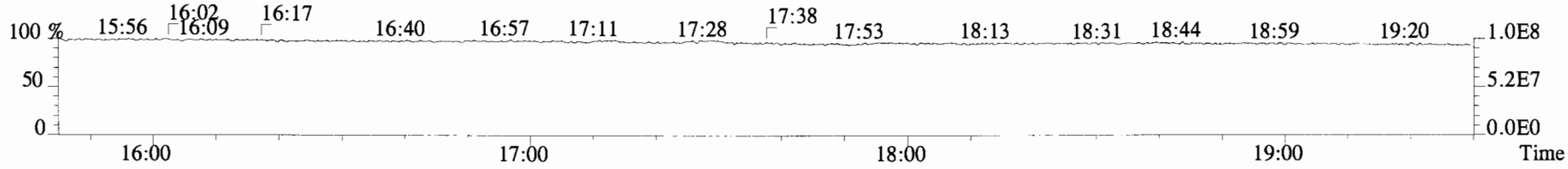
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3144.0,0.00%,F,F)

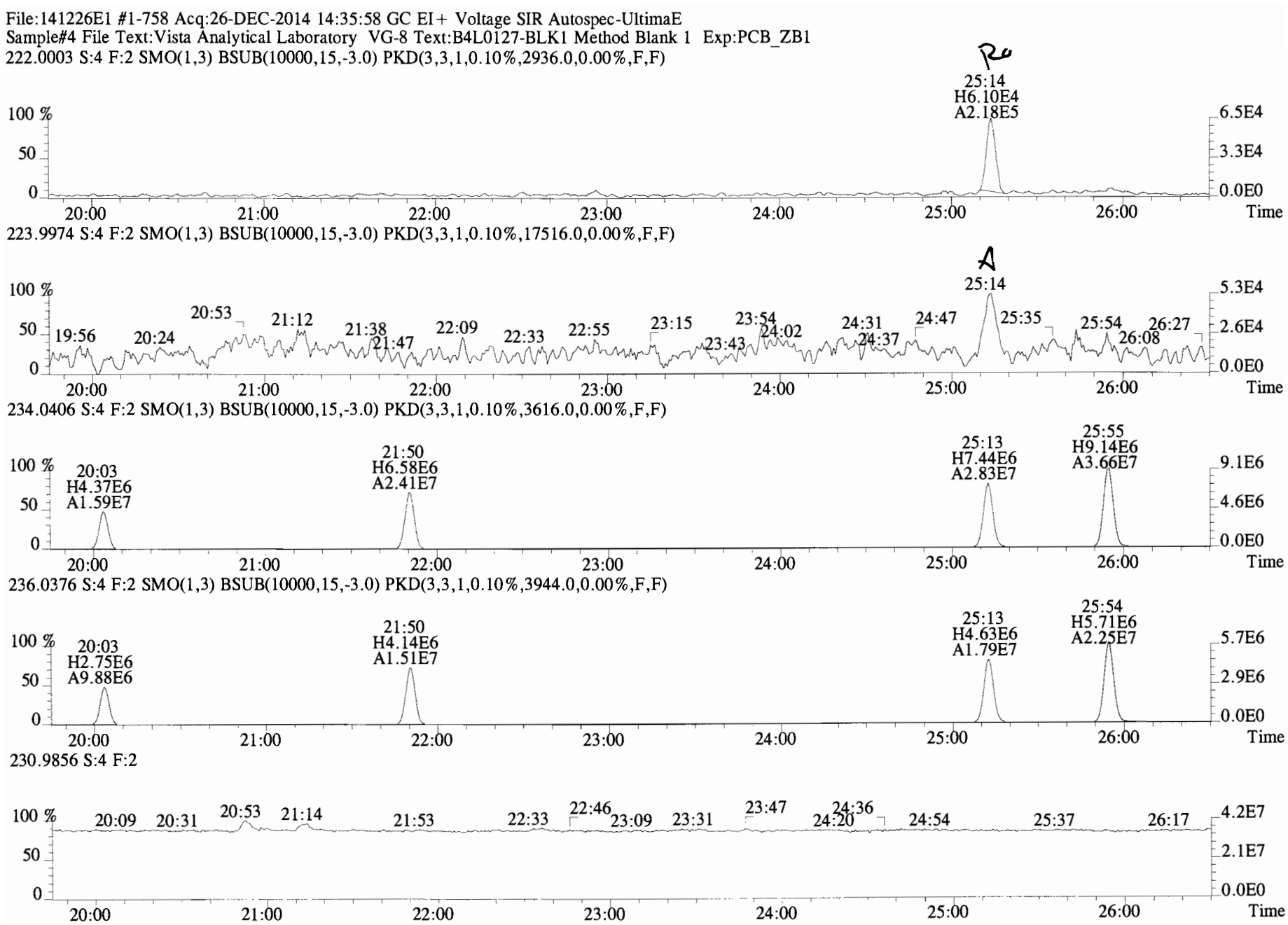


202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,22996.0,0.00%,F,F)

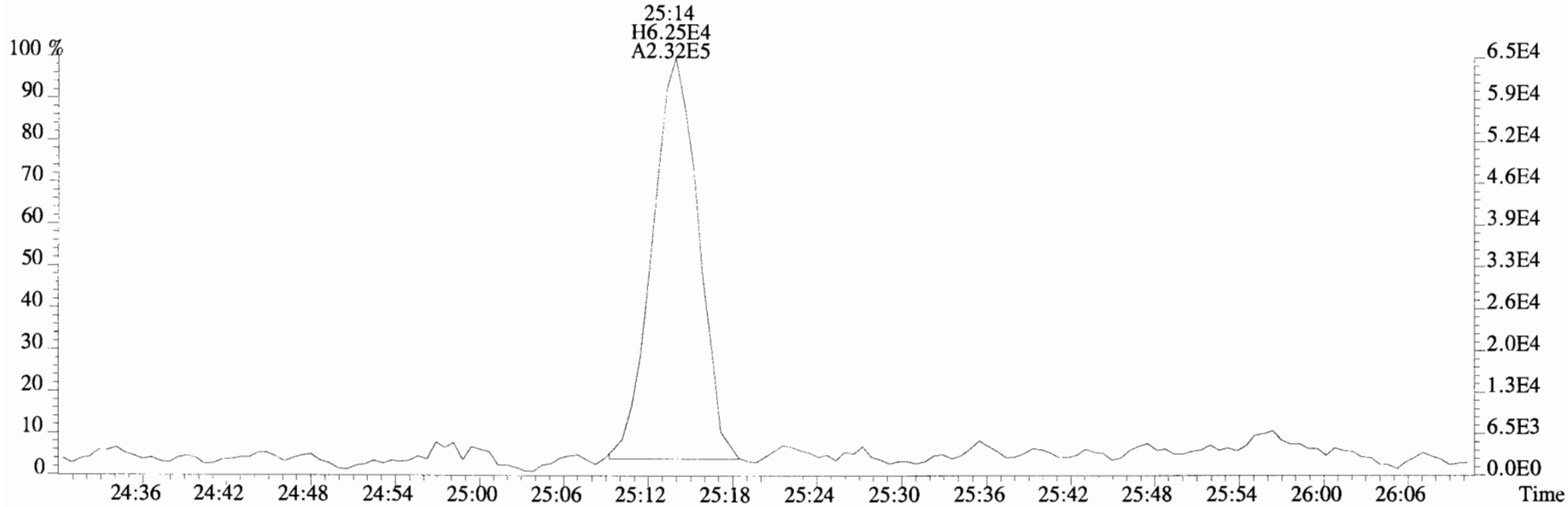


180.9880 S:4

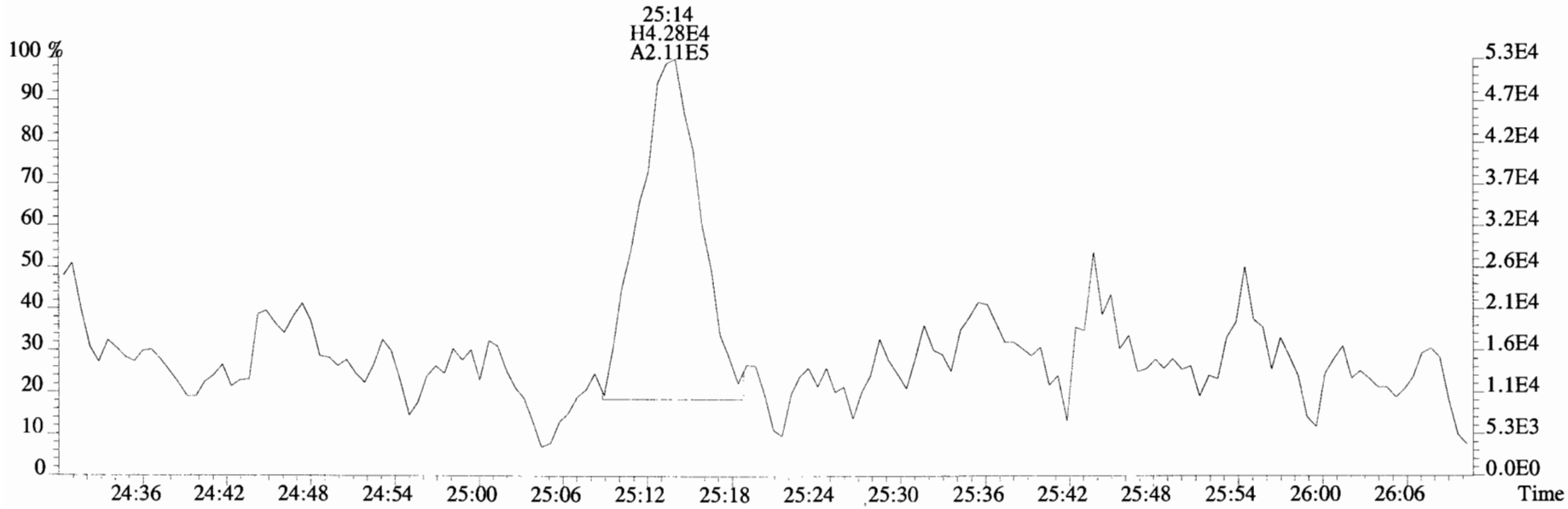



File:141226E1 #1-758 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)
25:14
H6.10E4
A2.18E5
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,17516.0,0.00%,F,F)
25:14
234.0406 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3616.0,0.00%,F,F)
20:03
H4.37E6
A1.59E7
21:50
H6.58E6
A2.41E7
25:13
H7.44E6
A2.83E7
25:55
H9.14E6
A3.66E7
236.0376 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3944.0,0.00%,F,F)
20:03
H2.75E6
A9.88E6
21:50
H4.14E6
A1.51E7
25:13
H4.63E6
A1.79E7
25:54
H5.71E6
A2.25E7
230.9856 S:4 F:2
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
Time
6.5E4
3.3E4
0.0E0
5.3E4
2.6E4
9.1E6
4.6E6
5.7E6
2.9E6
4.2E7
2.1E7

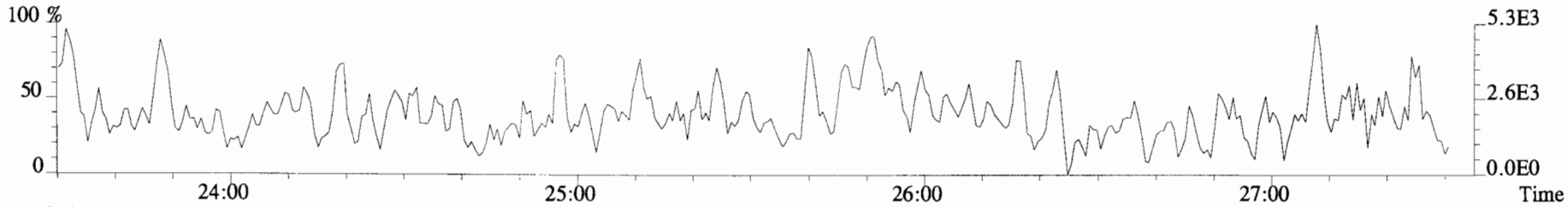
File:141226E1 #1-758 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



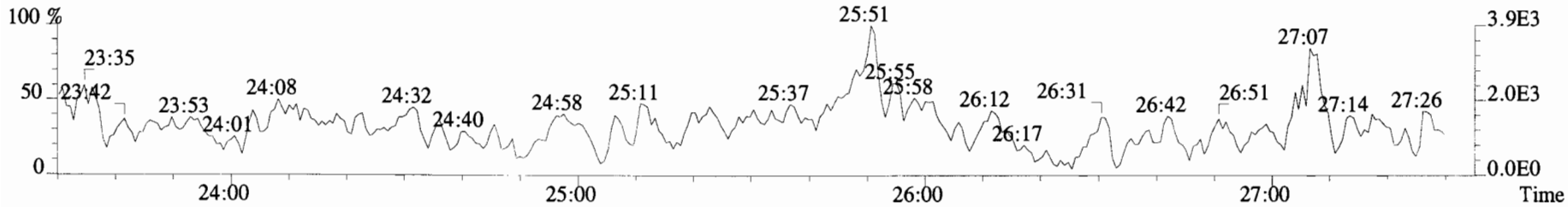
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,17516.0,0.00%,F,F)



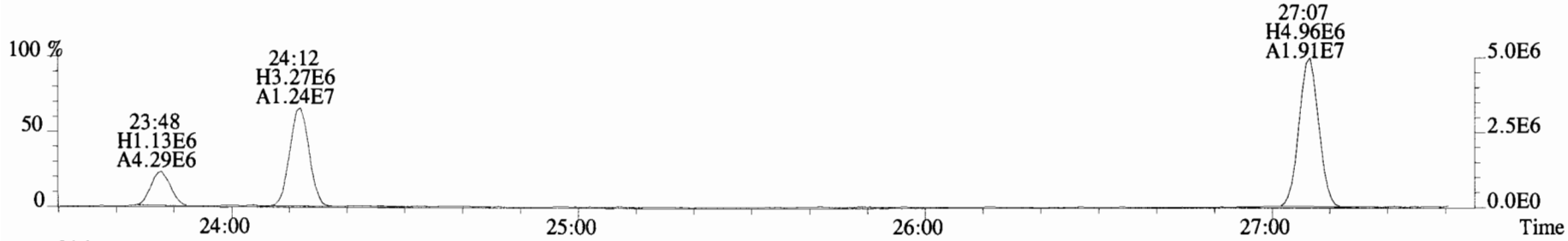
File:141226E1 #1-758 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2512.0,0.00%,F,F)



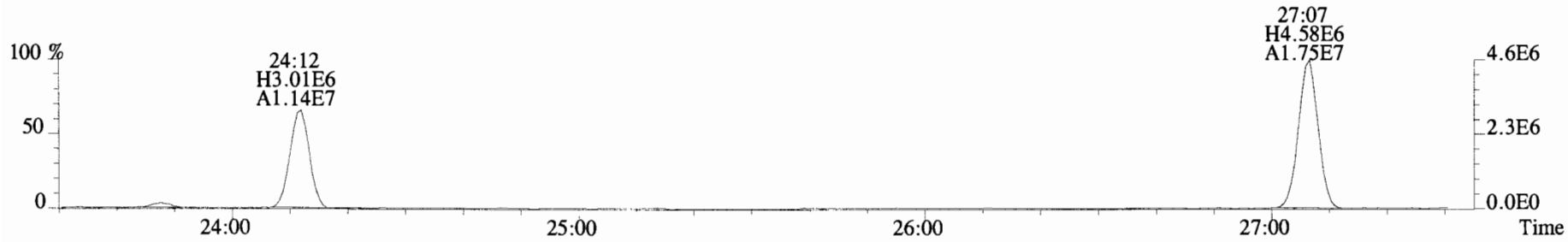
257.9584 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1544.0,0.00%,F,F)



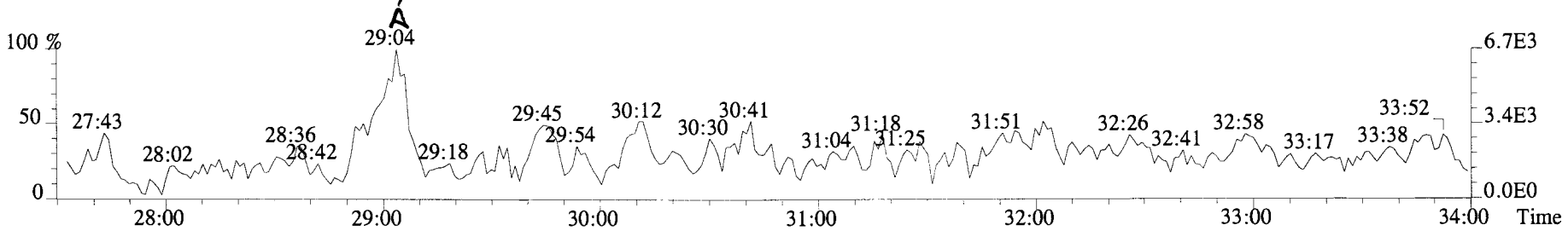
268.0016 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32736.0,0.00%,F,F)



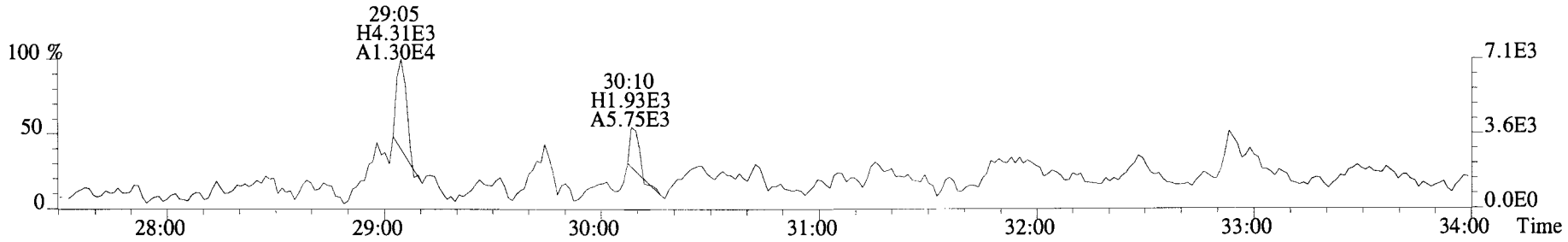
269.9986 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23940.0,0.00%,F,F)



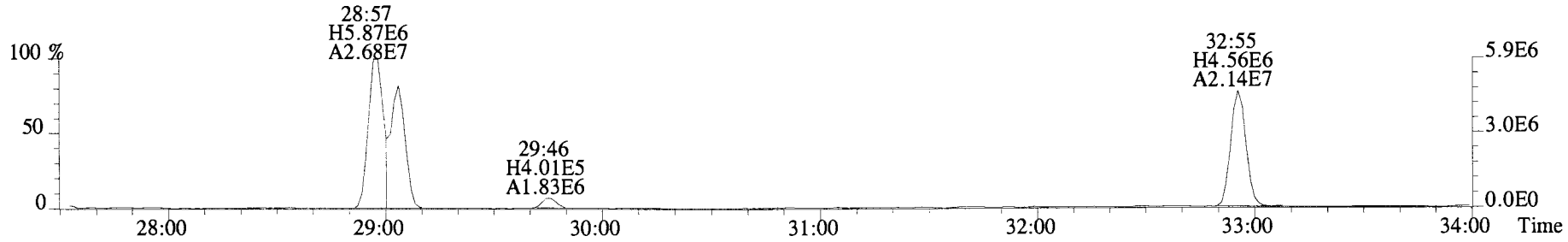
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2392.0,0.00%,F,F)



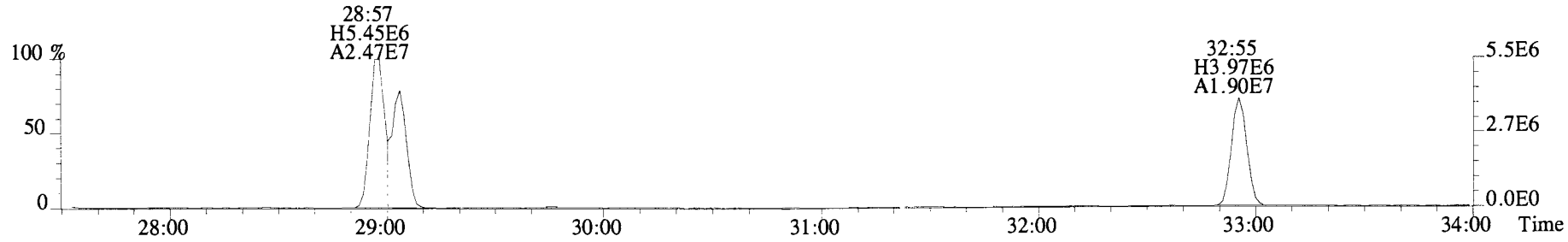
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1640.0,0.00%,F,F)



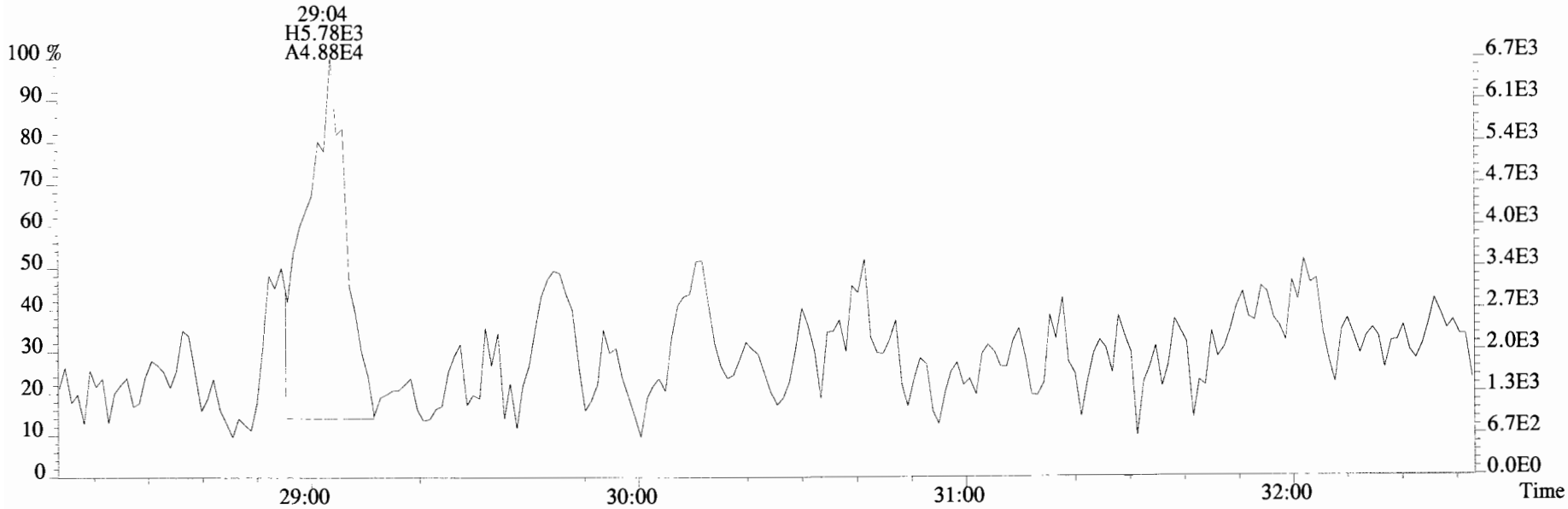
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32092.0,0.00%,F,F)



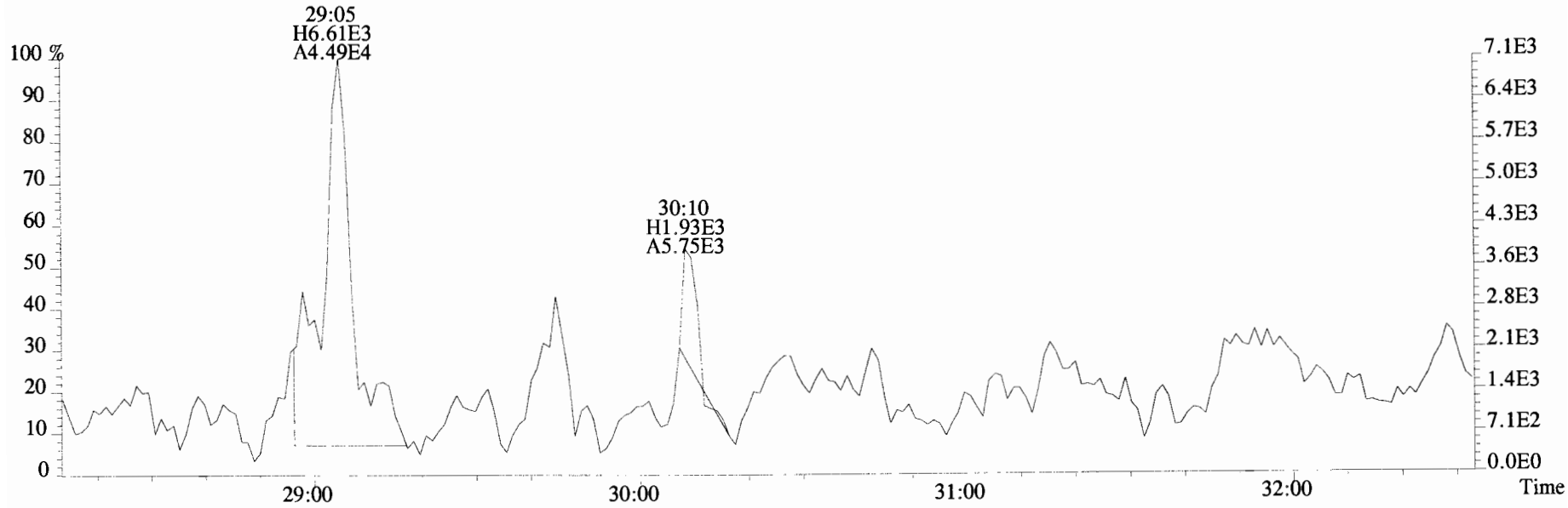
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,15908.0,0.00%,F,F)



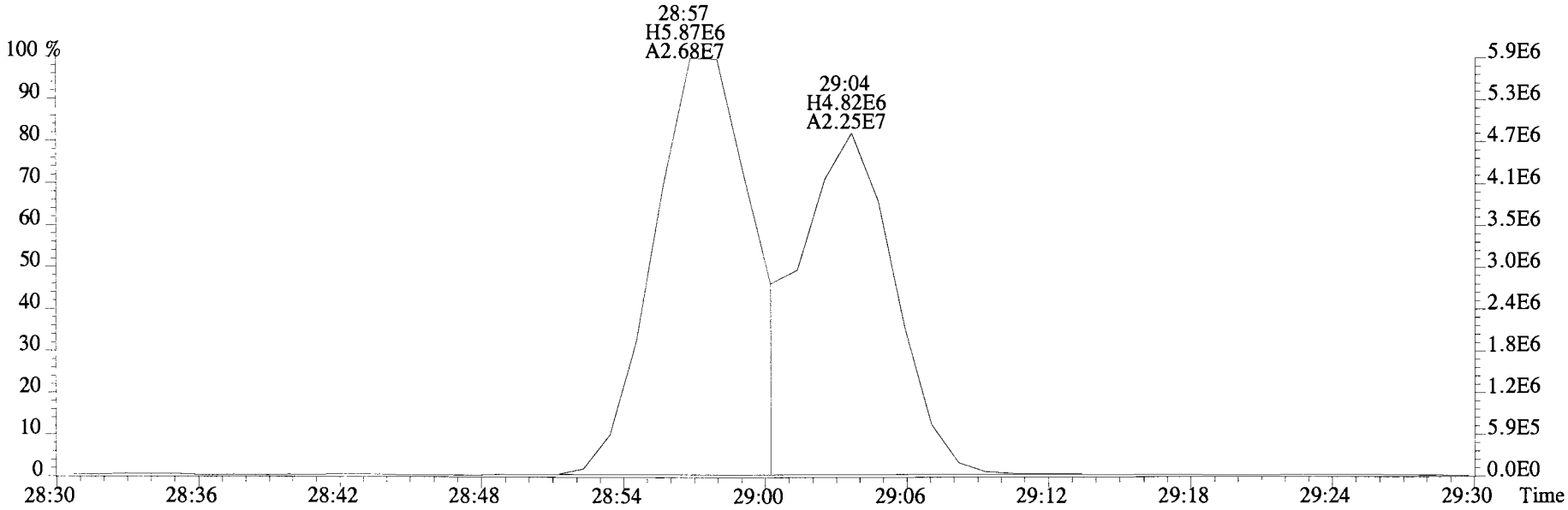
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2392.0,0.00%,F,F)



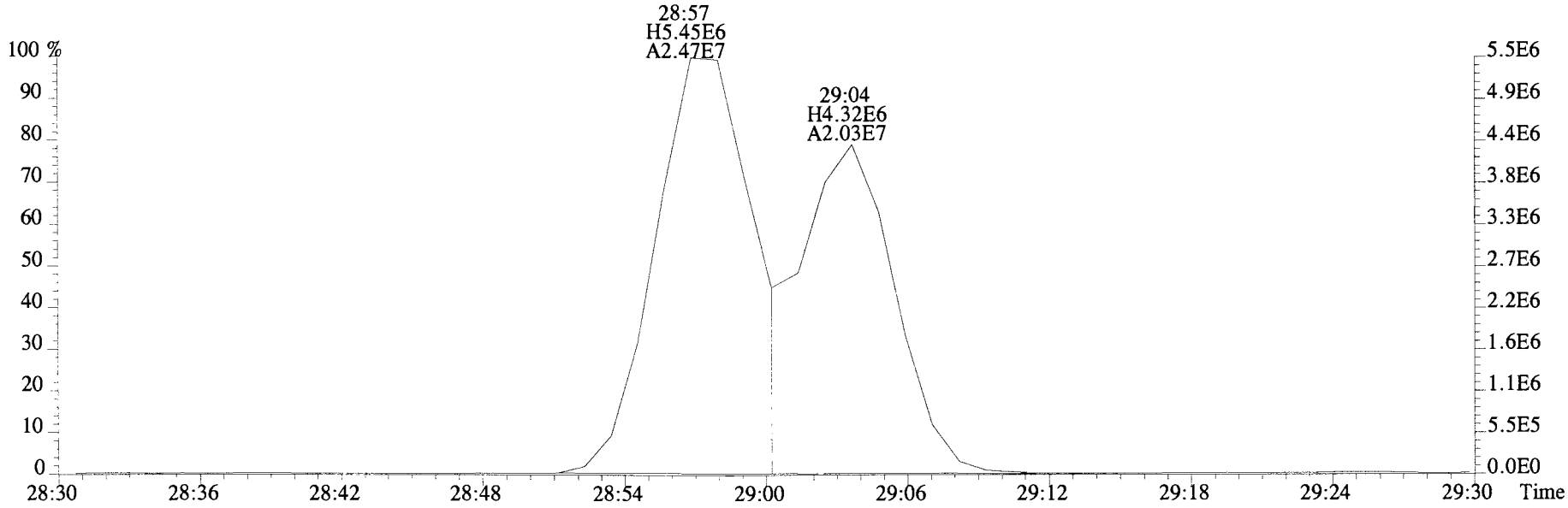
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1640.0,0.00%,F,F)



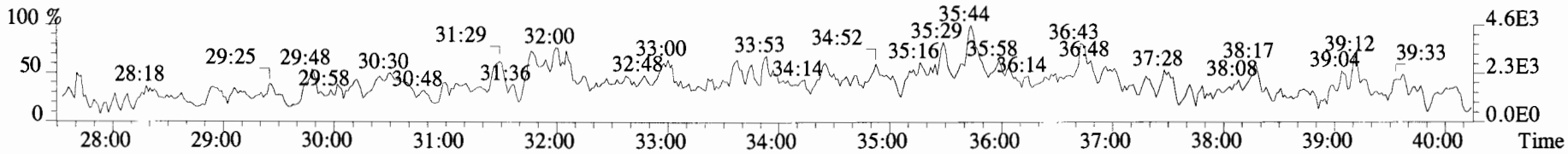
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32092.0,0.00%,F,F)



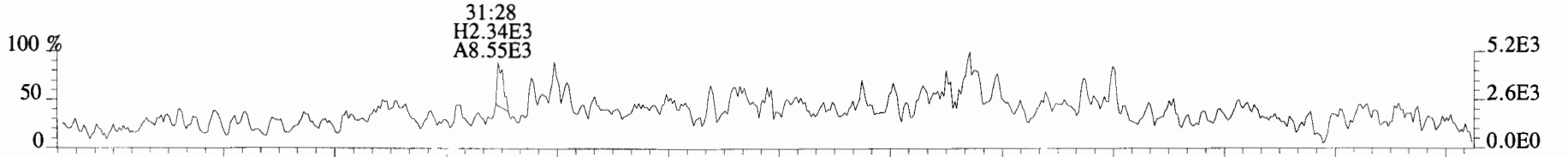
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,15908.0,0.00%,F,F)



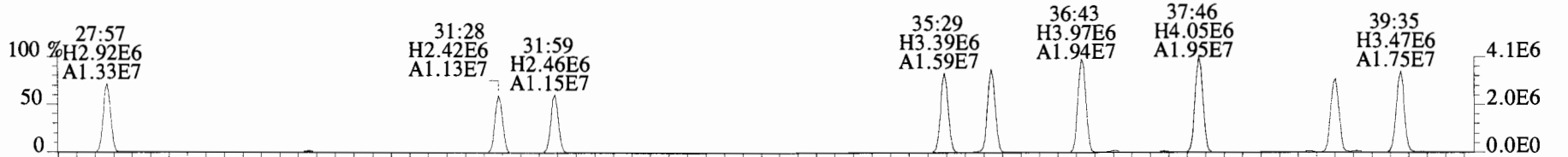
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2140.0,0.00%,F,F)



291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2256.0,0.00%,F,F)

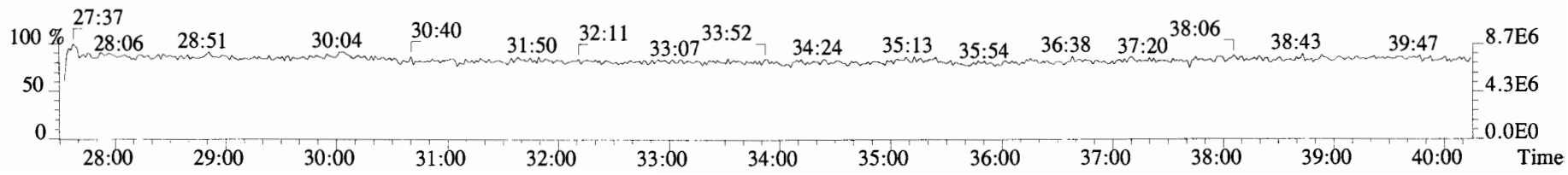


301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5544.0,0.00%,F,F)

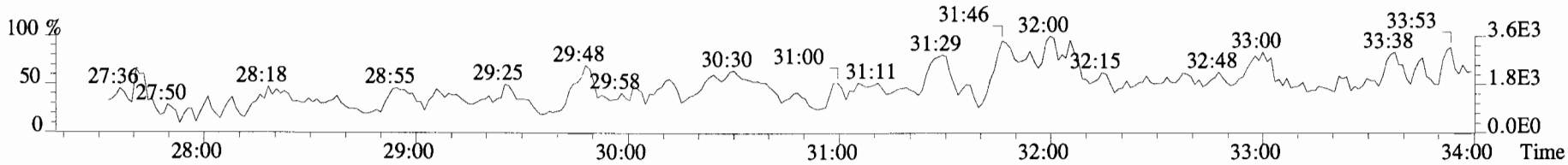


303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4516.0,0.00%,F,F)

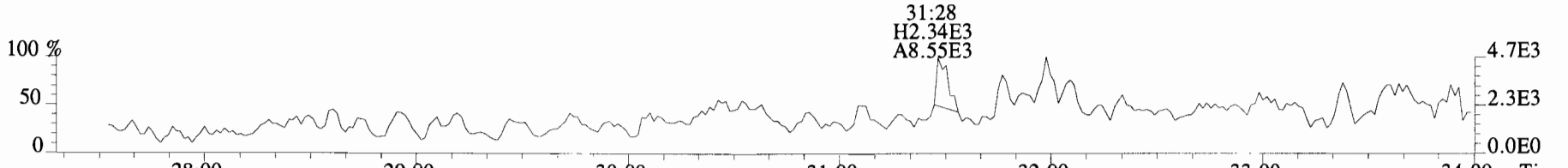
330.9792 S:4 F:3



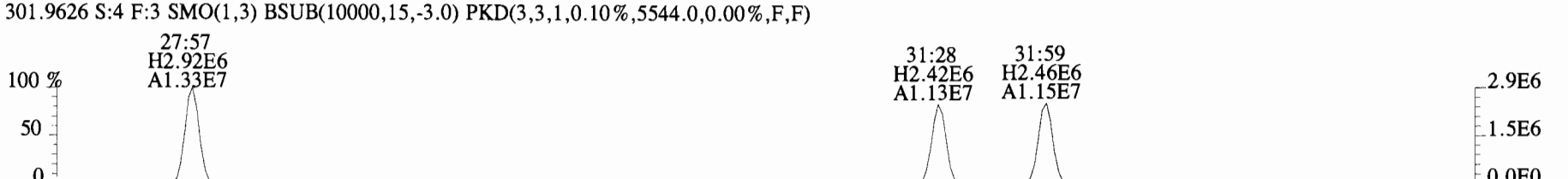
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2140.0,0.00%,F,F)



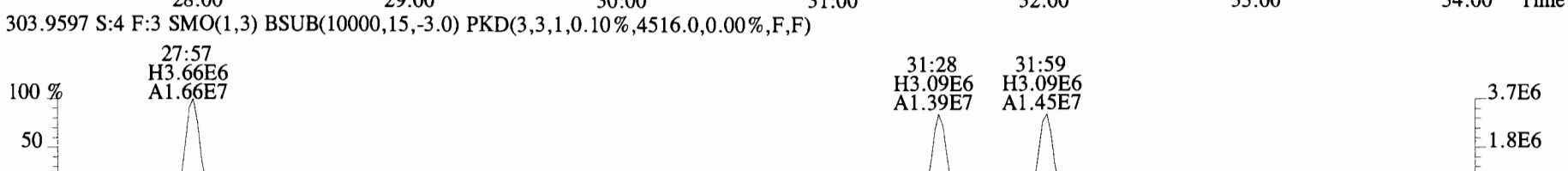
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2256.0,0.00%,F,F)



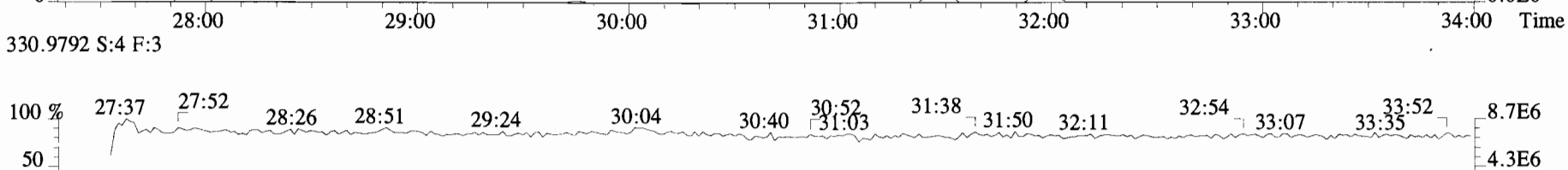
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5544.0,0.00%,F,F)



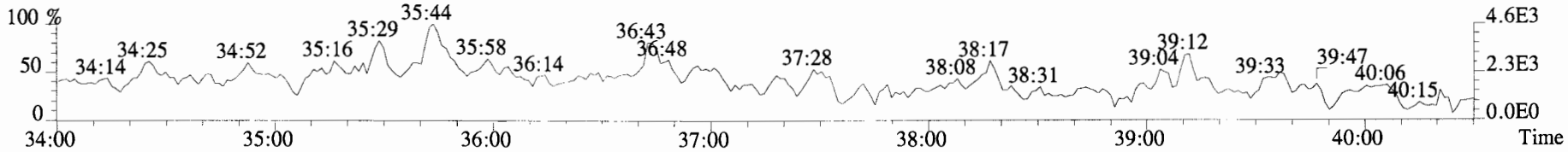
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4516.0,0.00%,F,F)



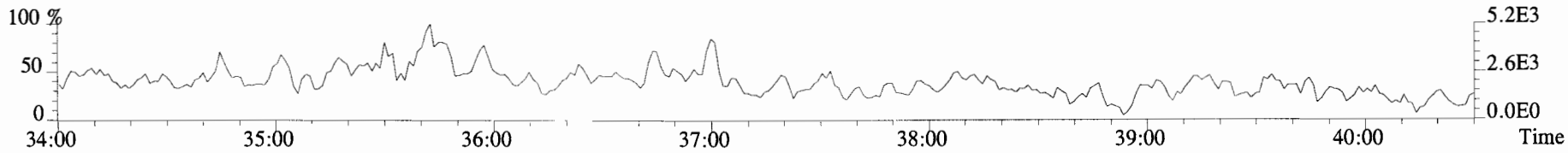
330.9792 S:4 F:3



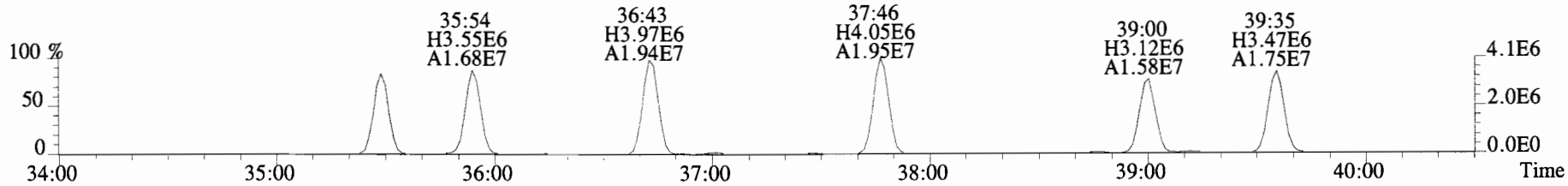
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2140.0,0.00%,F,F)



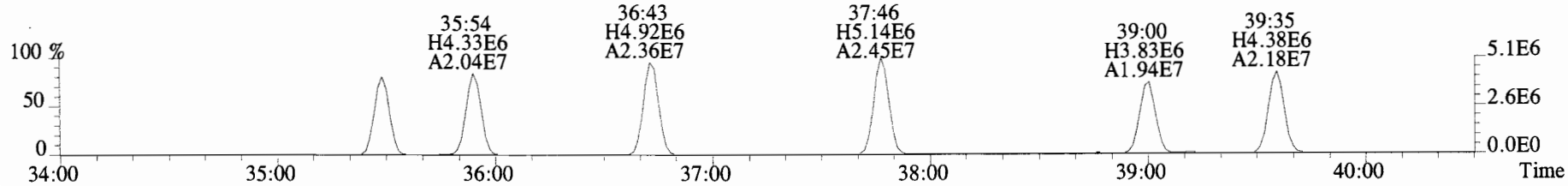
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2256.0,0.00%,F,F)



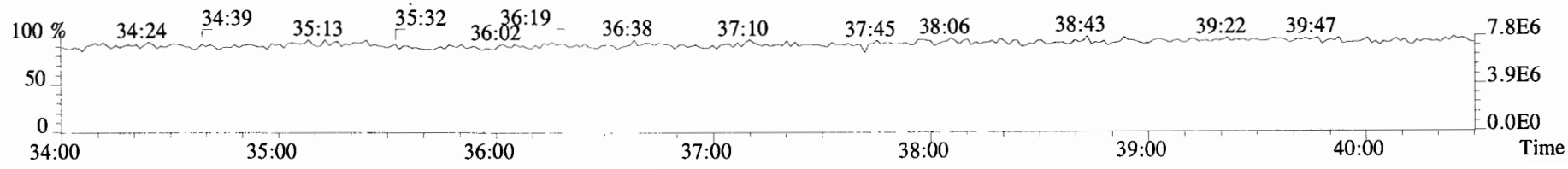
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5544.0,0.00%,F,F)



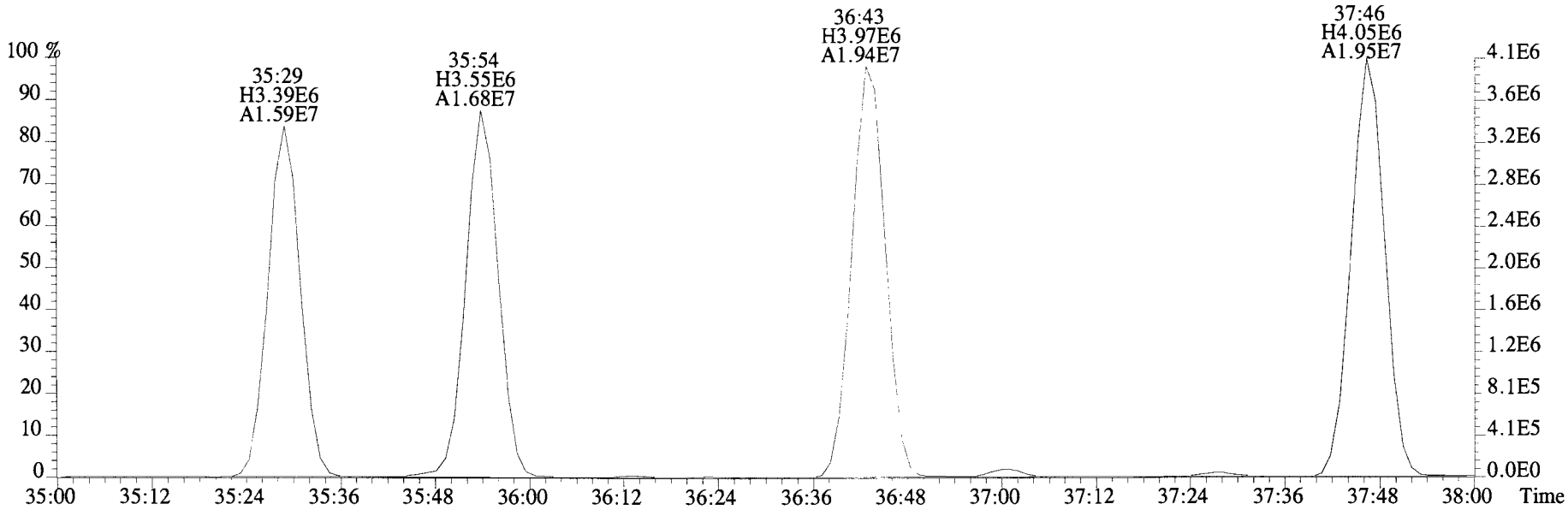
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4516.0,0.00%,F,F)



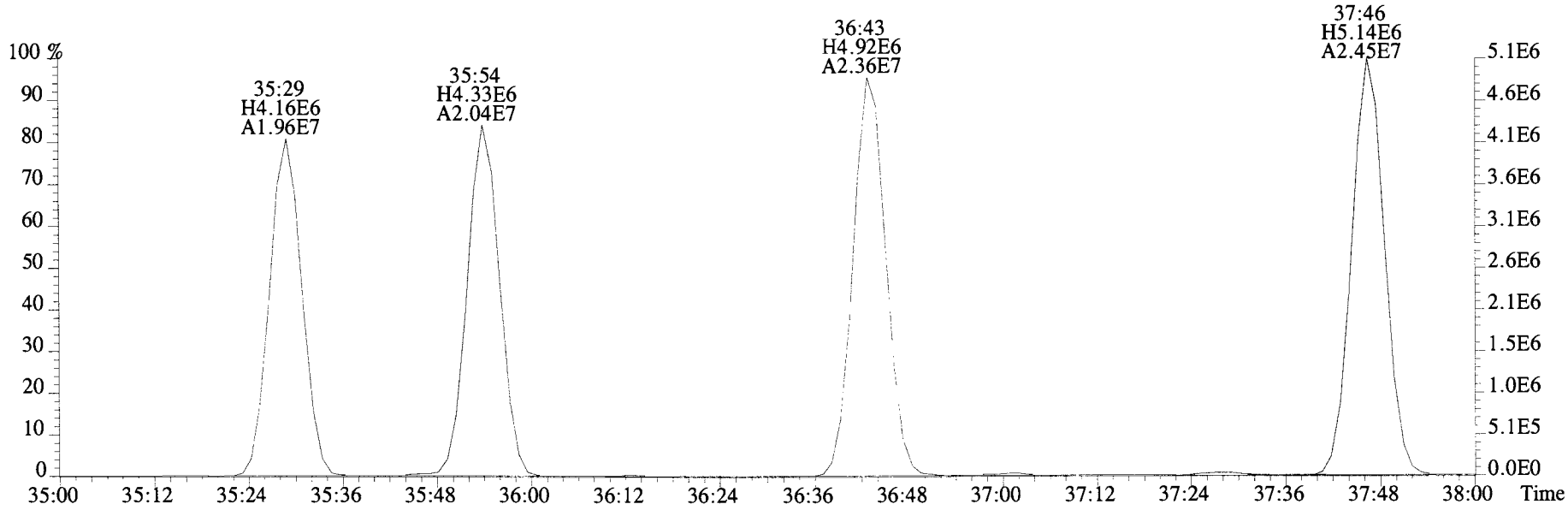
330.9792 S:4 F:3

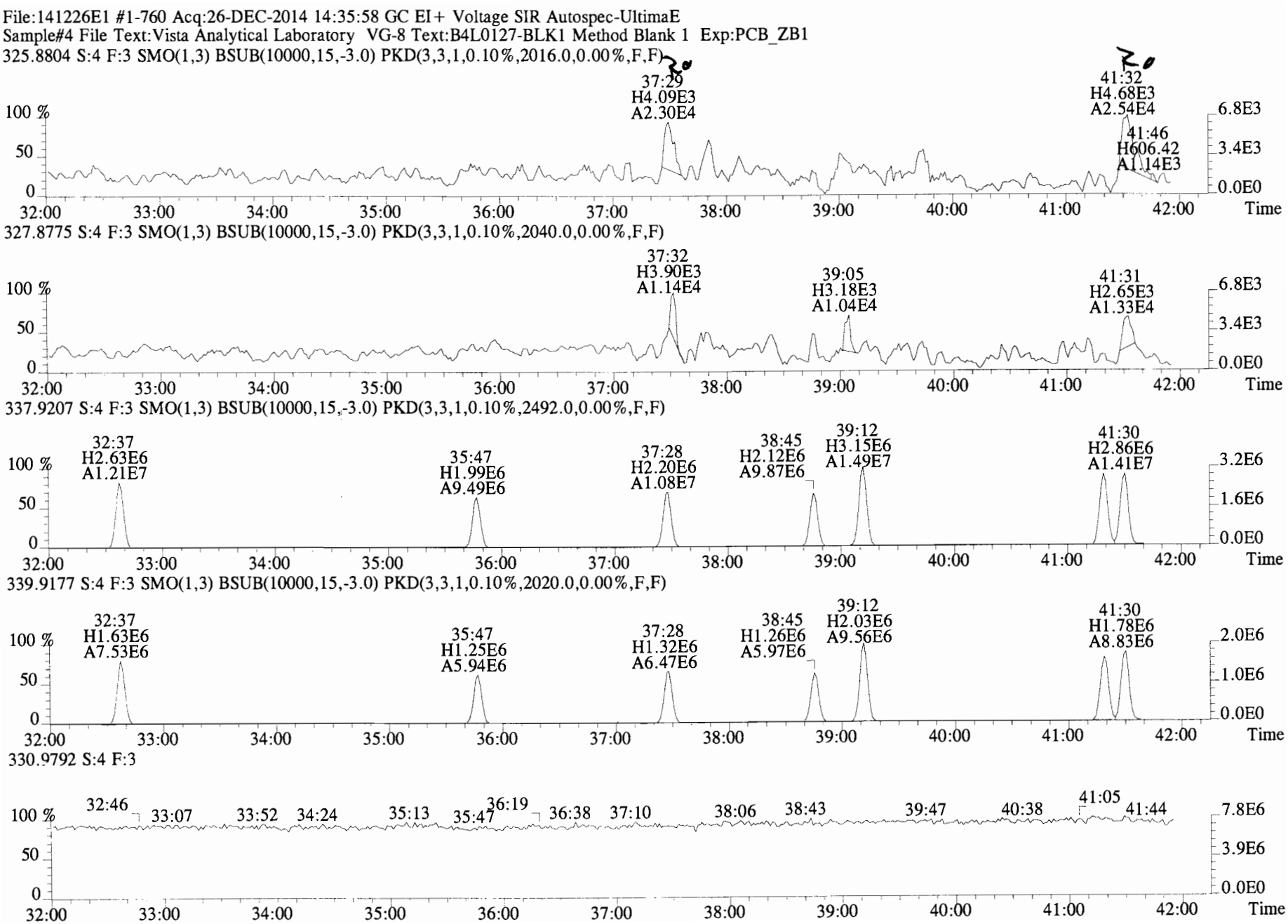


File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5544.0,0.00%,F,F)

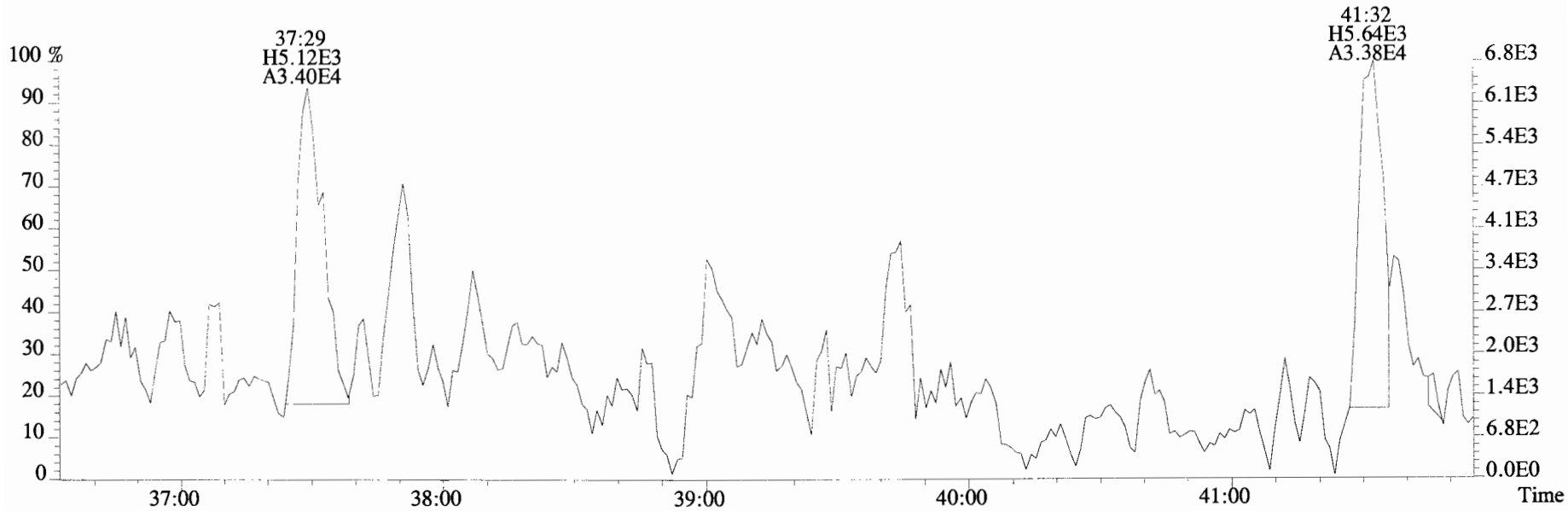


303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4516.0,0.00%,F,F)

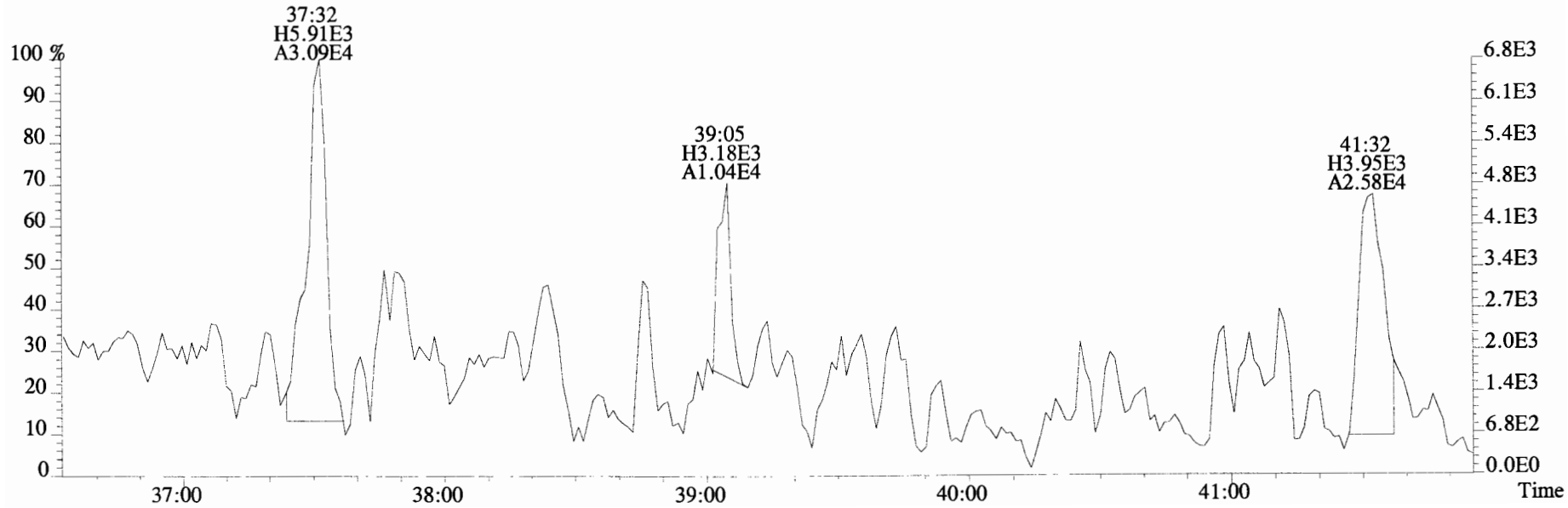



File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2016.0,0.00%,F,F)
37:29 H4.09E3 A2.30E4
41:32 H4.68E3 A2.54E4
41:46 H606.42 A1.14E3
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)
37:32 H3.90E3 A1.14E4
39:05 H3.18E3 A1.04E4
41:31 H2.65E3 A1.33E4
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2492.0,0.00%,F,F)
32:37 H2.63E6 A1.21E7
35:47 H1.99E6 A9.49E6
37:28 H2.20E6 A1.08E7
38:45 H2.12E6 A9.87E6
39:12 H3.15E6 A1.49E7
41:30 H2.86E6 A1.41E7
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)
32:37 H1.63E6 A7.53E6
35:47 H1.25E6 A5.94E6
37:28 H1.32E6 A6.47E6
38:45 H1.26E6 A5.97E6
39:12 H2.03E6 A9.56E6
41:30 H1.78E6 A8.83E6
330.9792 S:4 F:3
32:46 33:07 33:52 34:24 35:13 35:47 36:19 36:38 37:10 38:06 38:43 39:47 40:38 41:05 41:44
100 %
50
0
6.8E3
3.4E3
0.0E0
3.2E6
1.6E6
2.0E6
1.0E6
7.8E6
3.9E6
32:00 33:00 34:00 35:00 36:00 37:00 38:00 39:00 40:00 41:00 42:00
Time

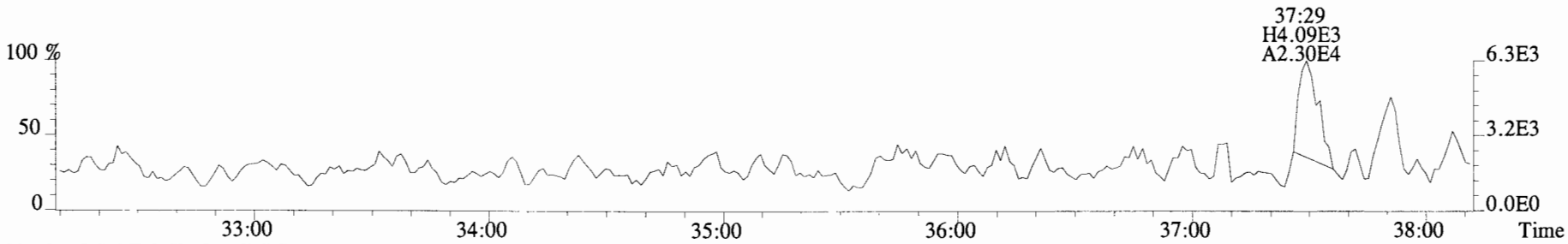
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2016.0,0.00%,F,F)



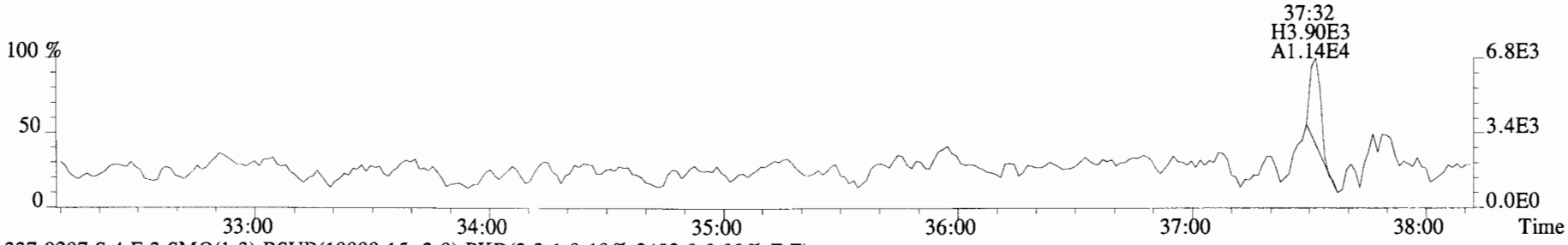
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



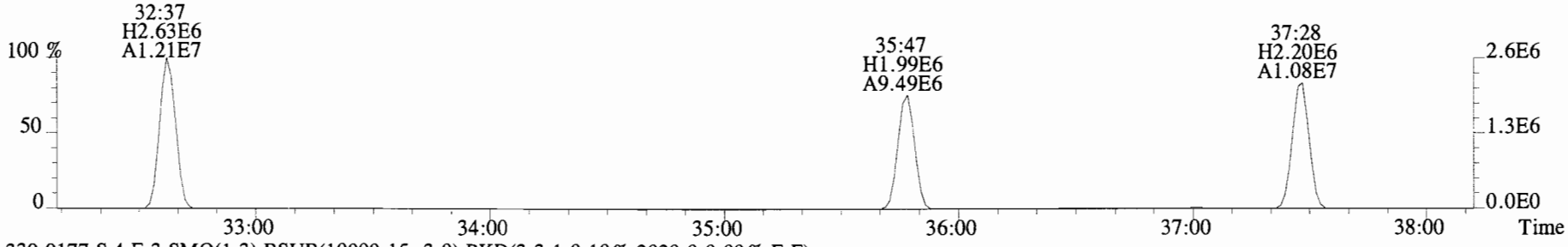
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2016.0,0.00%,F,F)



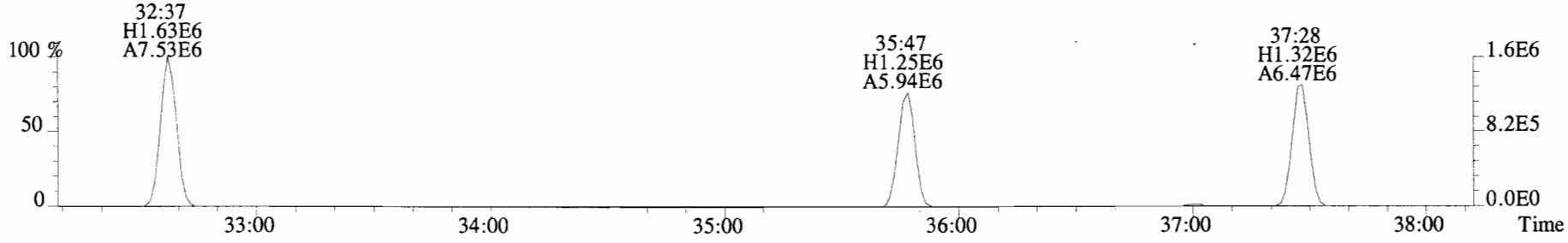
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



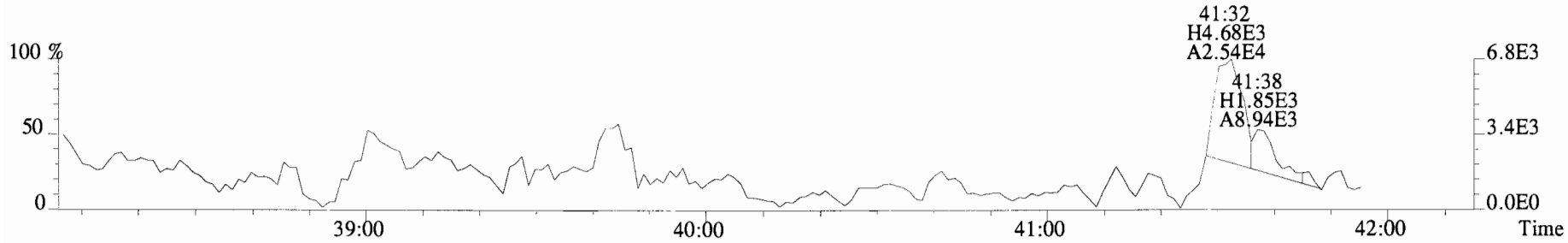
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2492.0,0.00%,F,F)



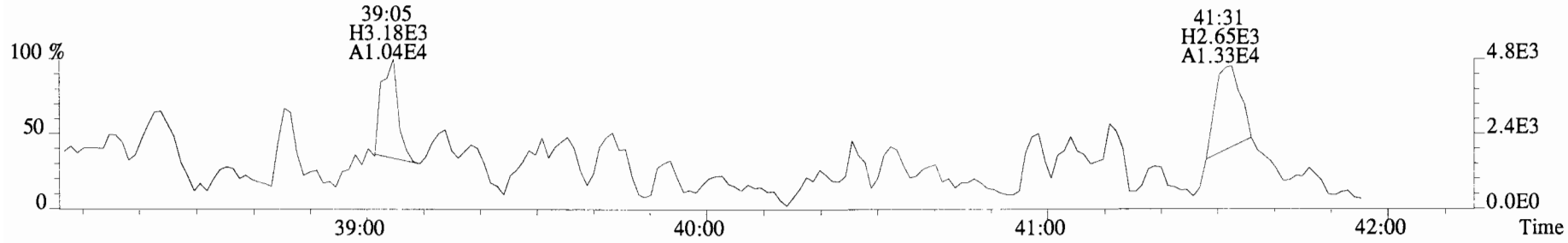
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



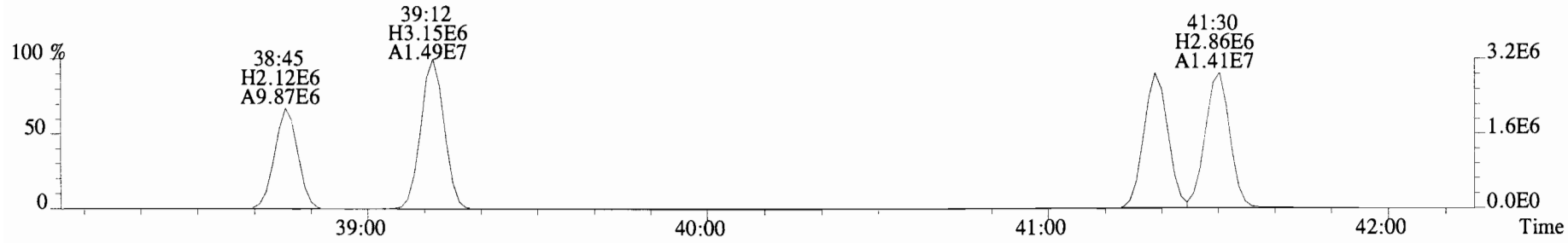
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2016.0,0.00%,F,F)



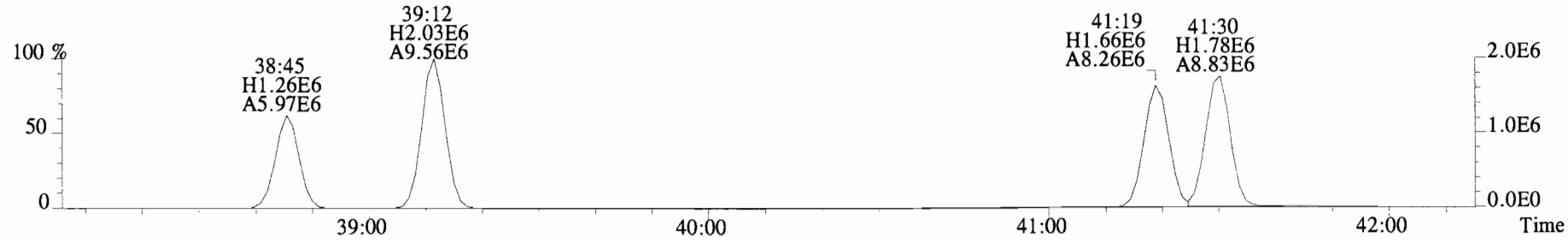
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



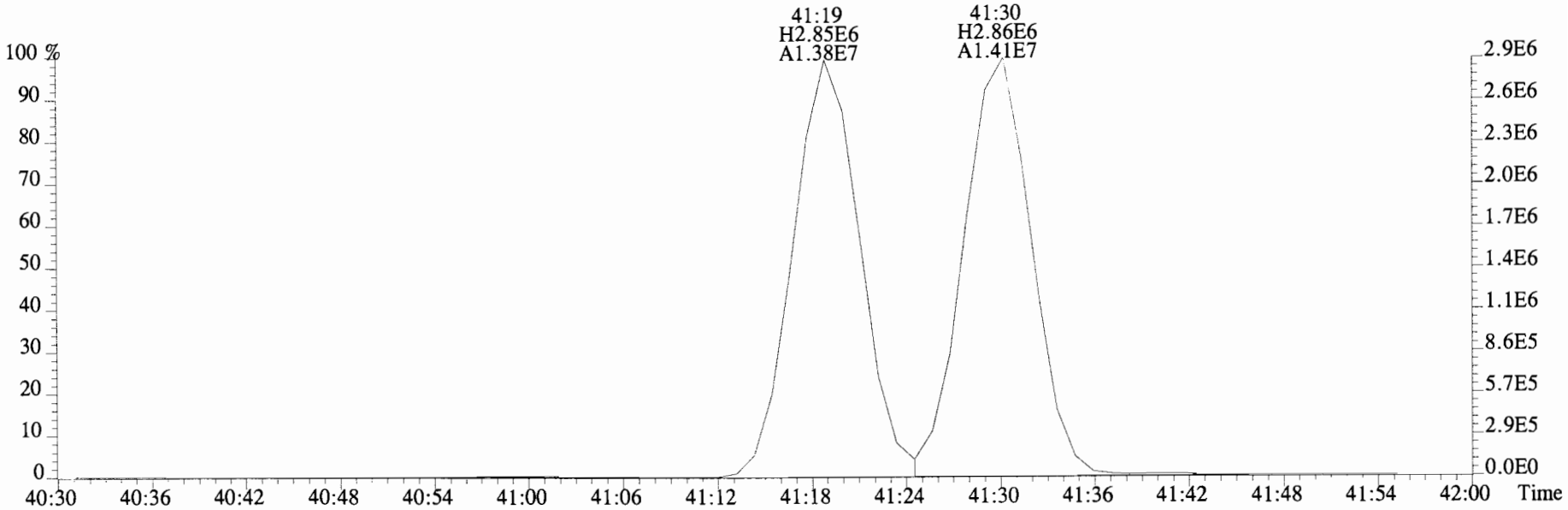
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2492.0,0.00%,F,F)



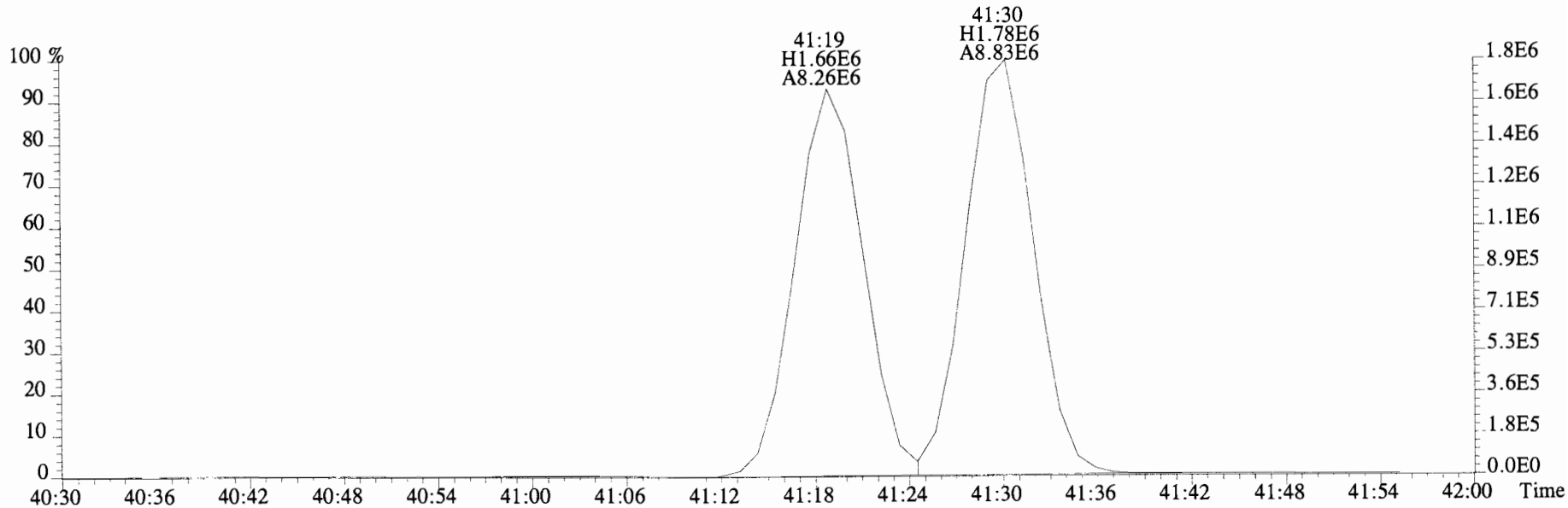
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



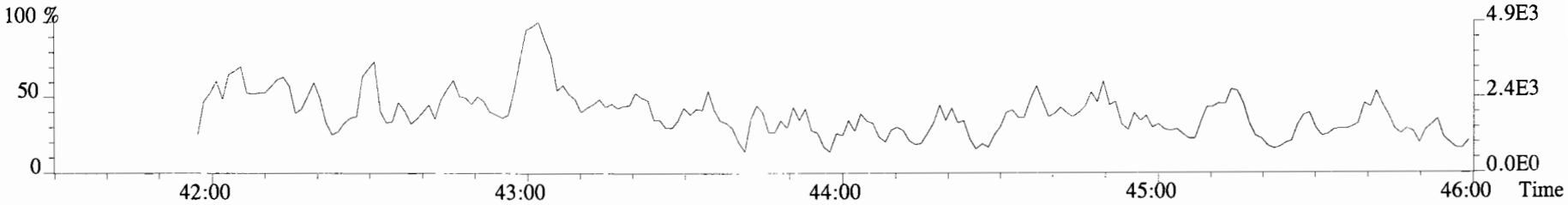
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2492.0,0.00%,F,F)



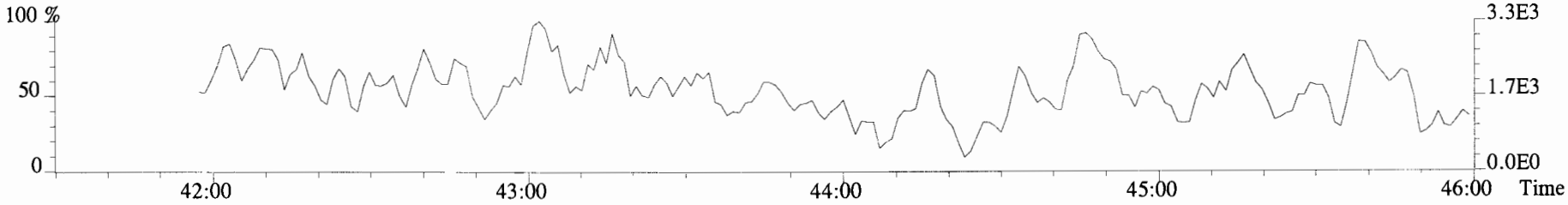
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



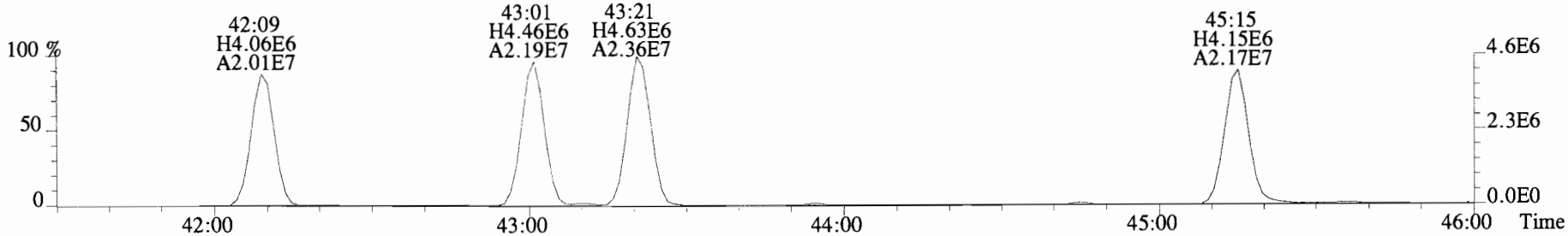
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2244.0,0.00%,F,F)



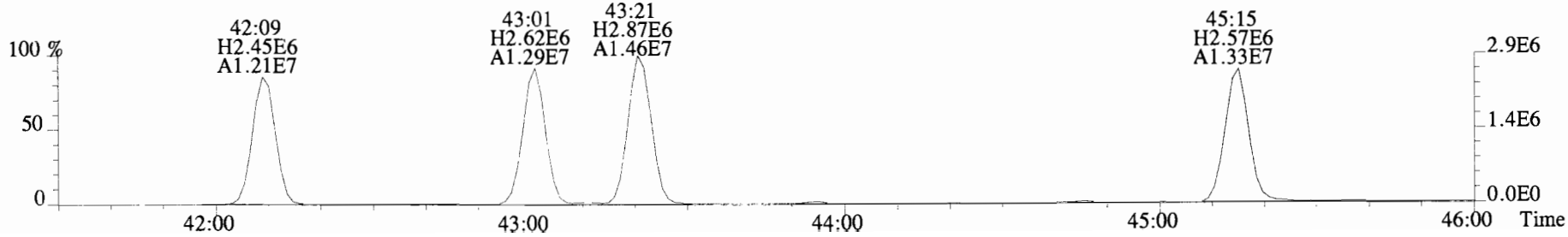
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2256.0,0.00%,F,F)

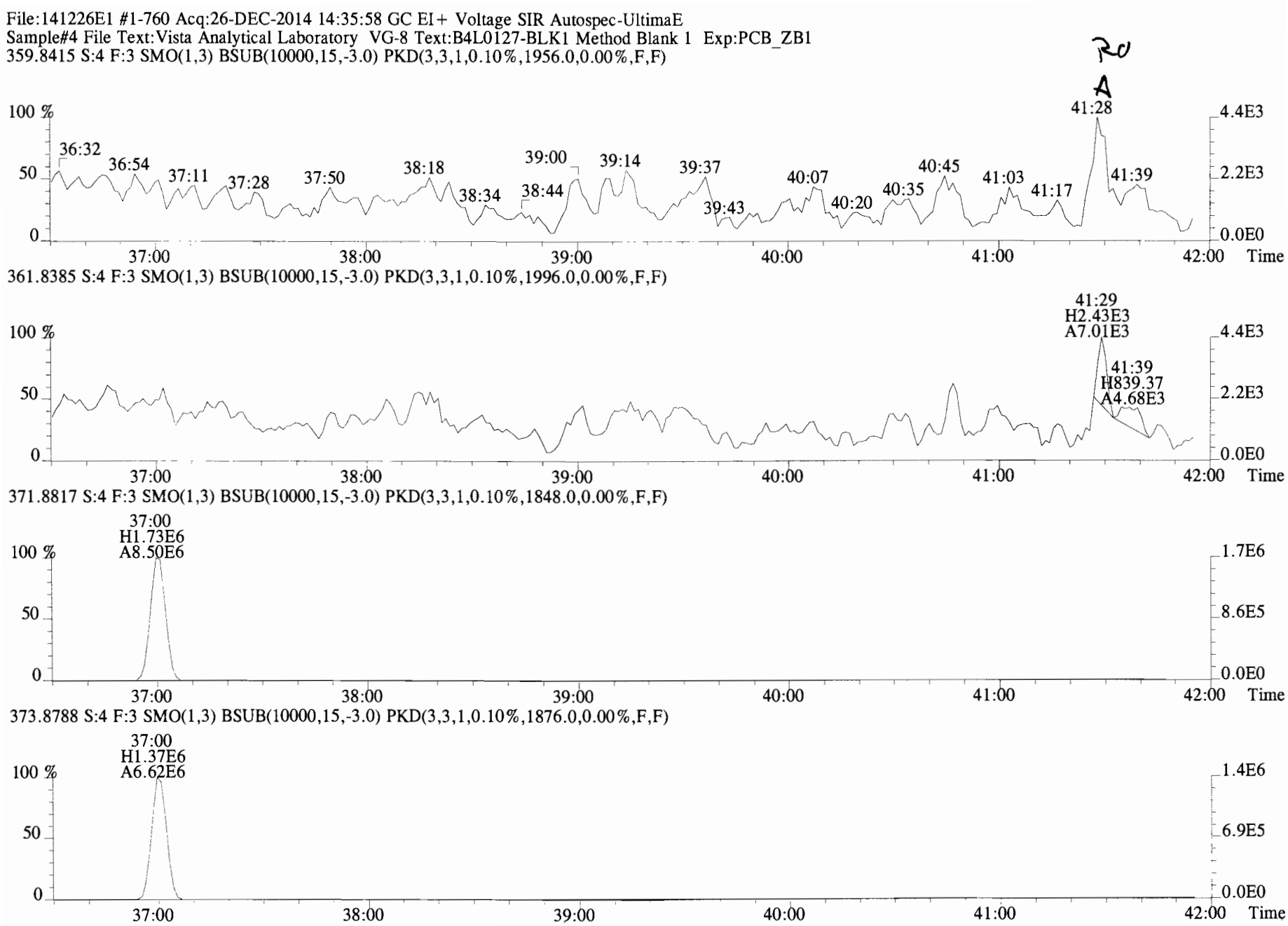


337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4708.0,0.00%,F,F)

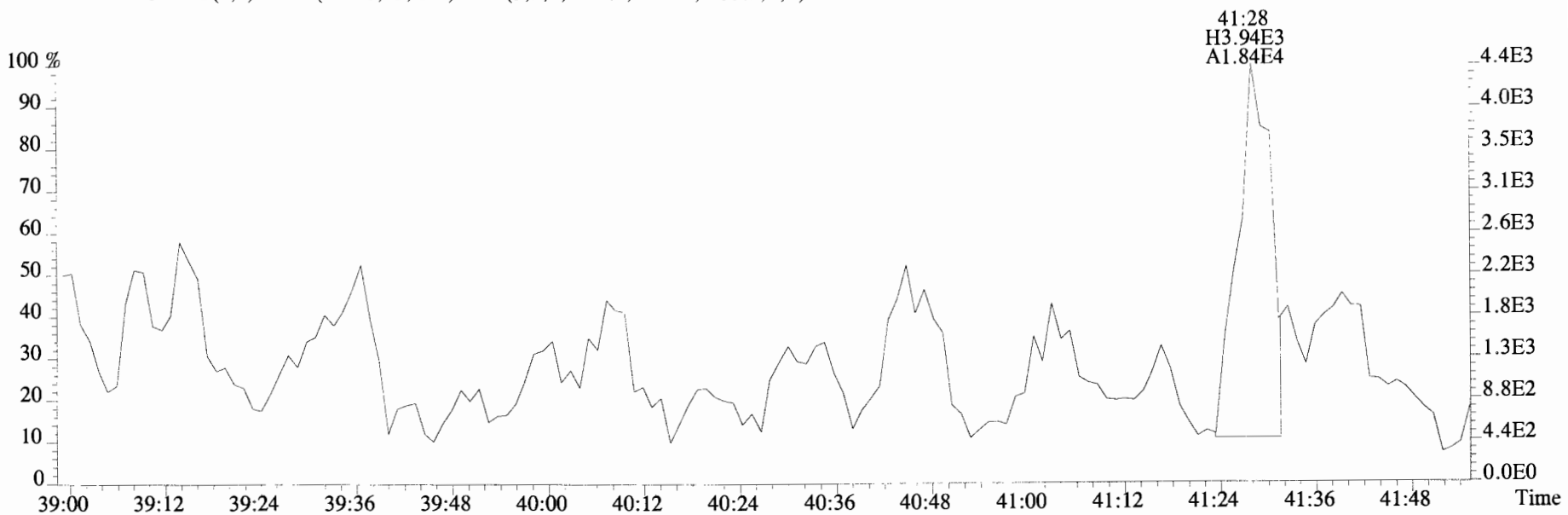


339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4876.0,0.00%,F,F)

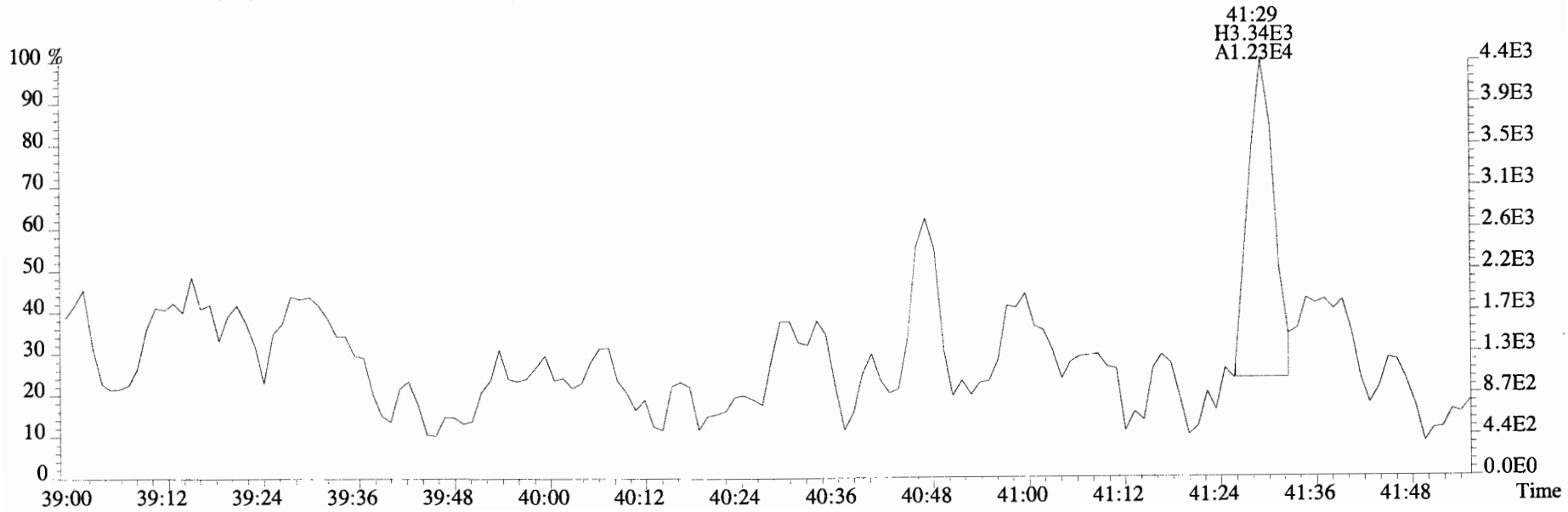



File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1956.0,0.00%,F,F)
R0
A
41:28
36:32
36:54
37:11
37:28
37:50
38:18
38:34
38:44
39:00
39:14
39:37
39:43
40:07
40:20
40:35
40:45
41:03
41:17
41:39
100 %
50
0
4.4E3
2.2E3
0.0E0
37:00
38:00
39:00
40:00
41:00
42:00
Time
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1996.0,0.00%,F,F)
41:29
H2.43E3
A7.01E3
41:39
H839.37
A4.68E3
371.8817 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)
37:00
H1.73E6
A8.50E6
1.7E6
8.6E5
373.8788 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1876.0,0.00%,F,F)
37:00
H1.37E6
A6.62E6
1.4E6
6.9E5

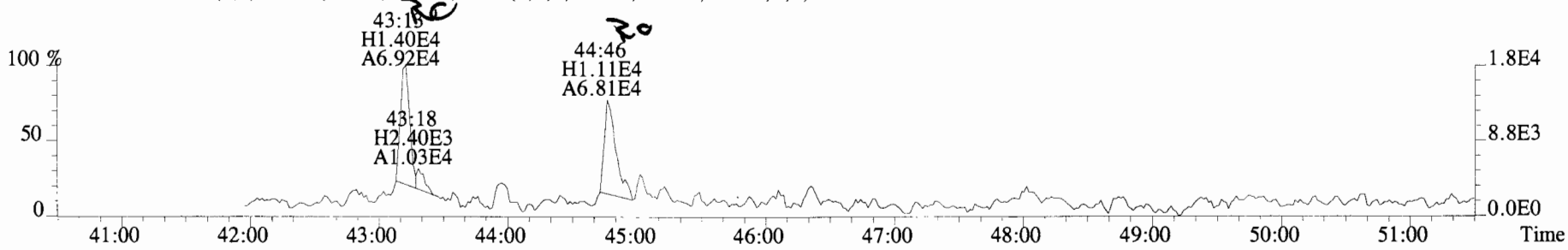
File:141226E1 #1-760 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1956.0,0.00%,F,F)



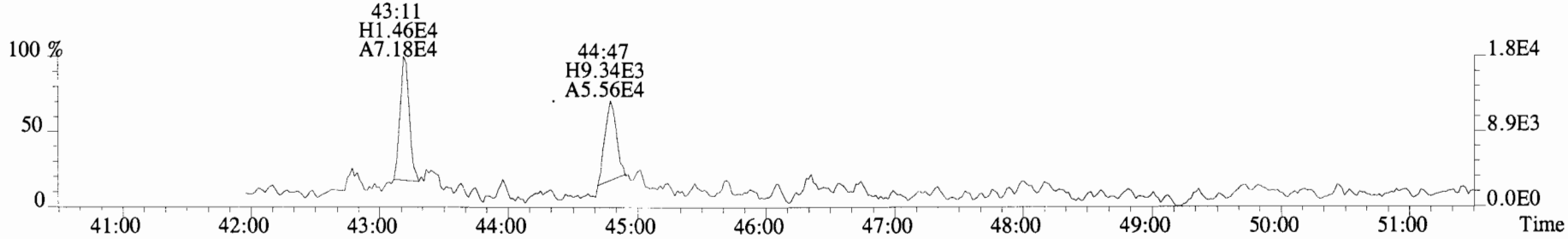
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1996.0,0.00%,F,F)



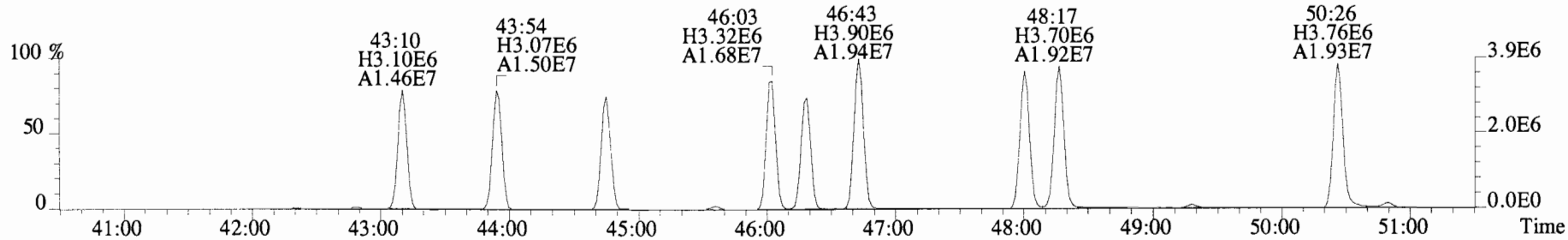
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2208.0,0.00%,F,F)



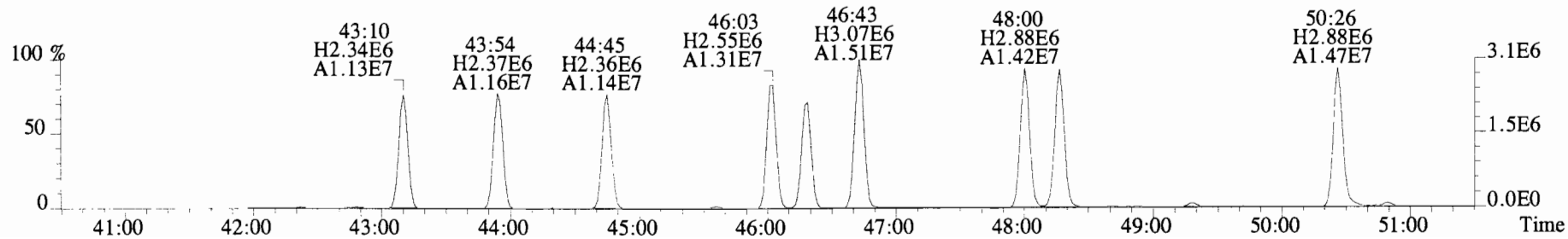
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



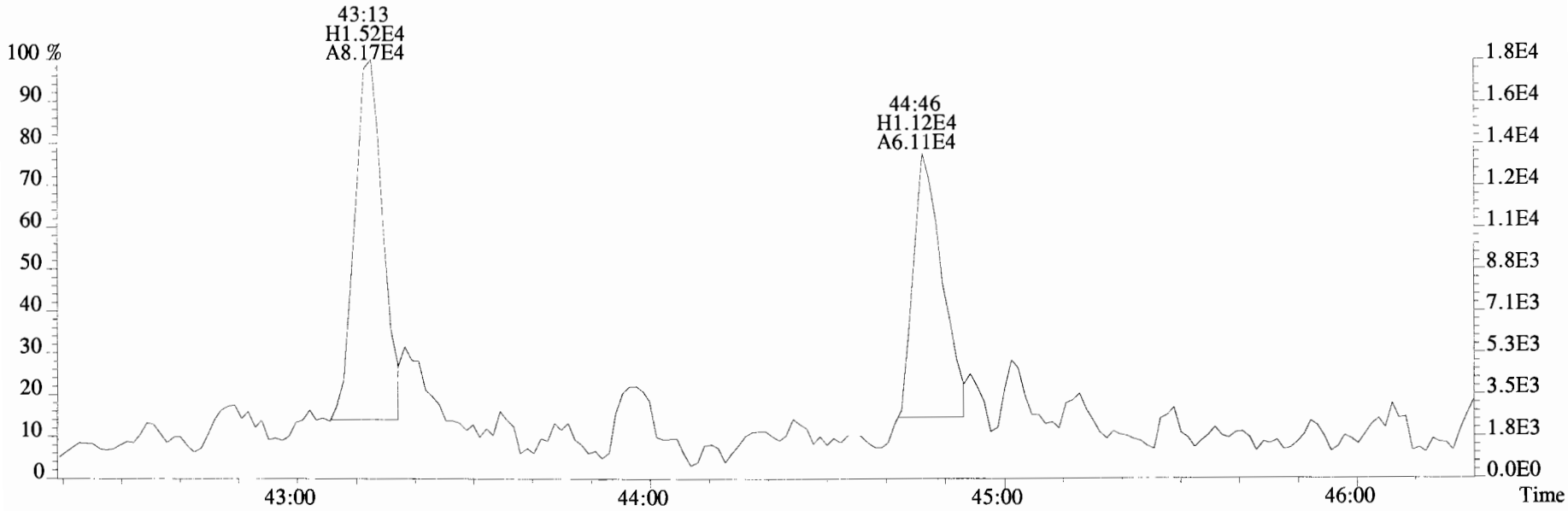
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5160.0,0.00%,F,F)



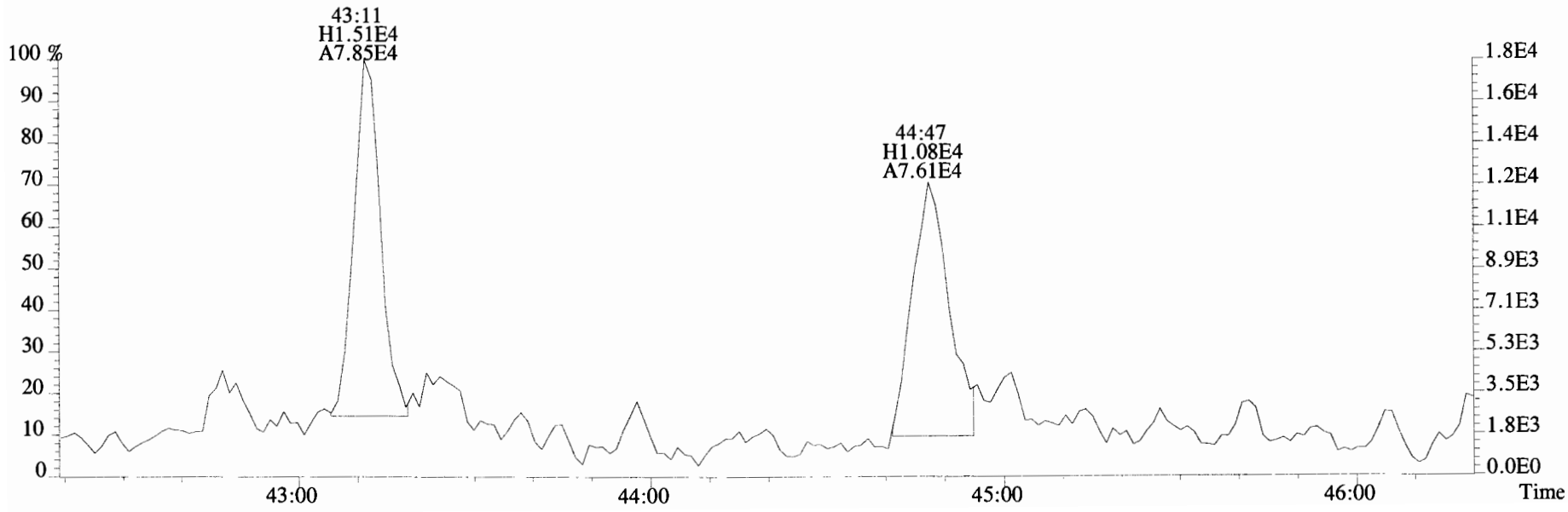
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5004.0,0.00%,F,F)



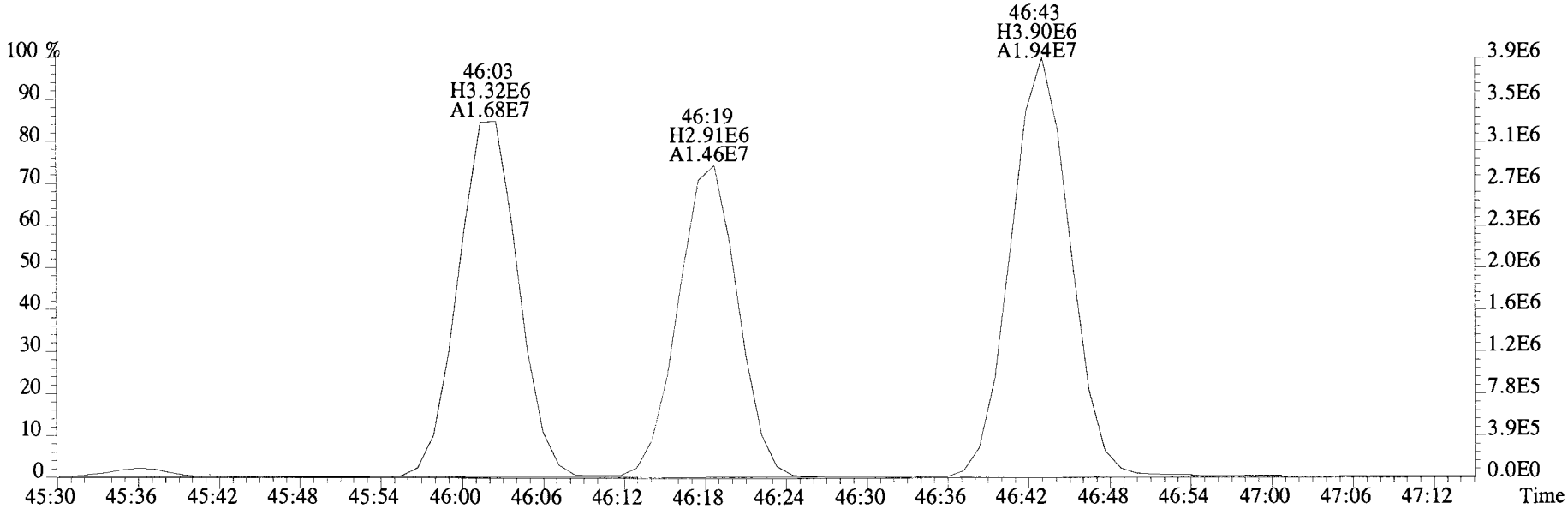
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0)



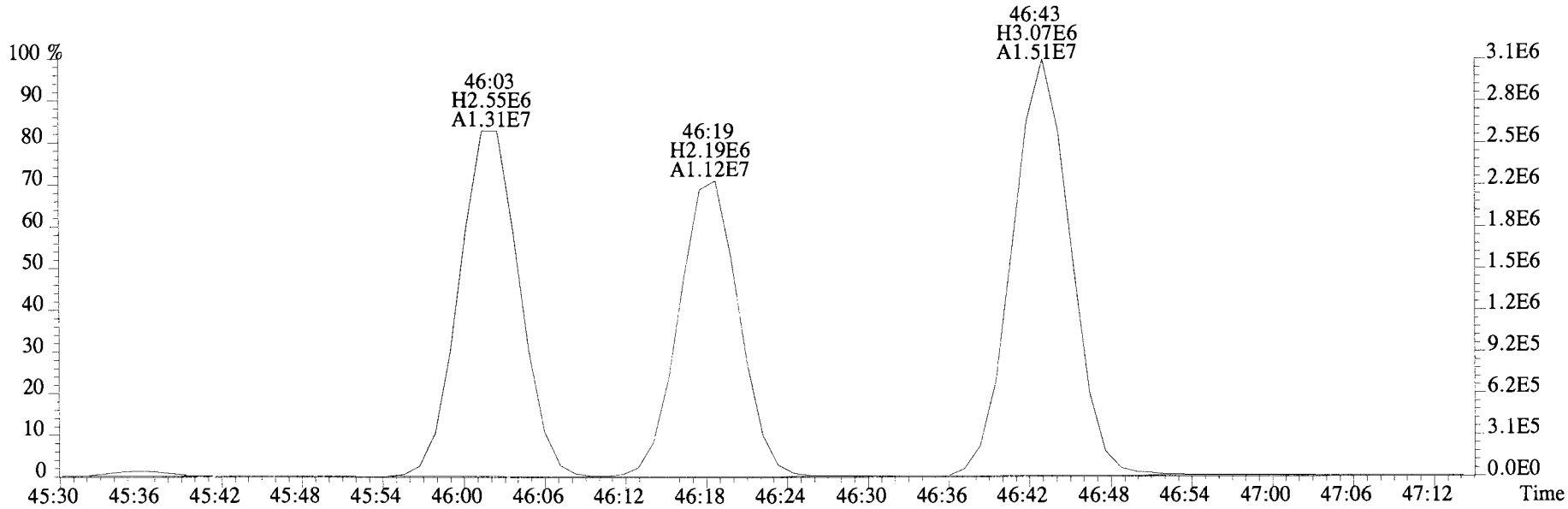
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



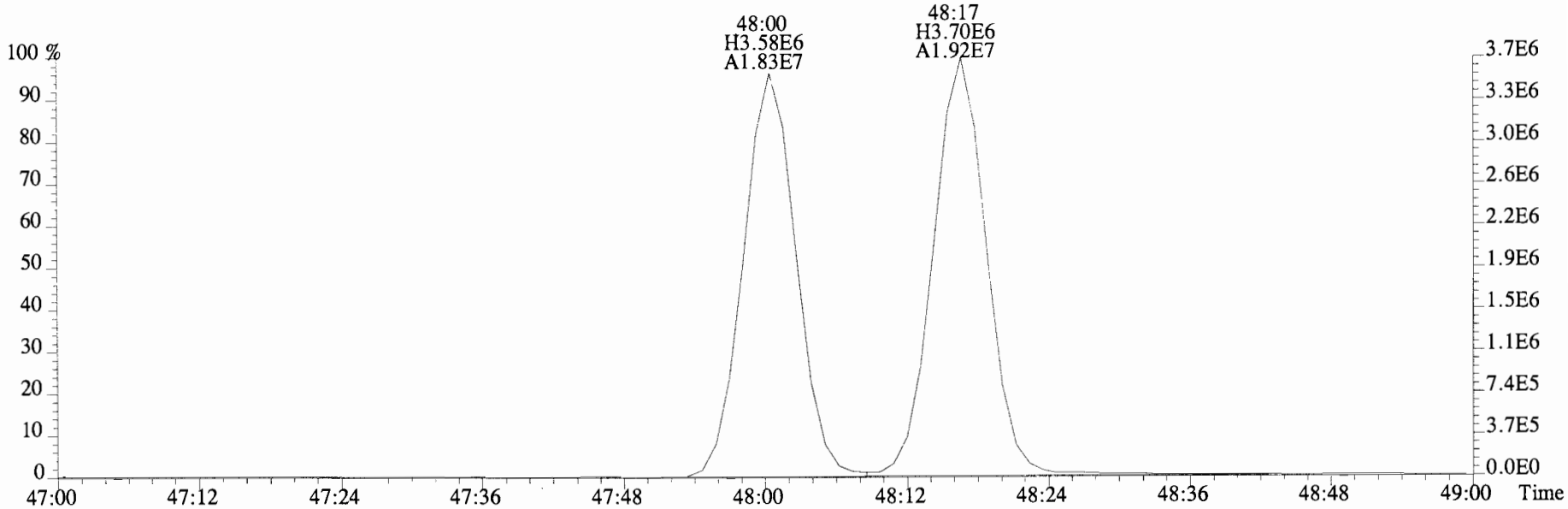
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5160.0,0.00%,F,F)



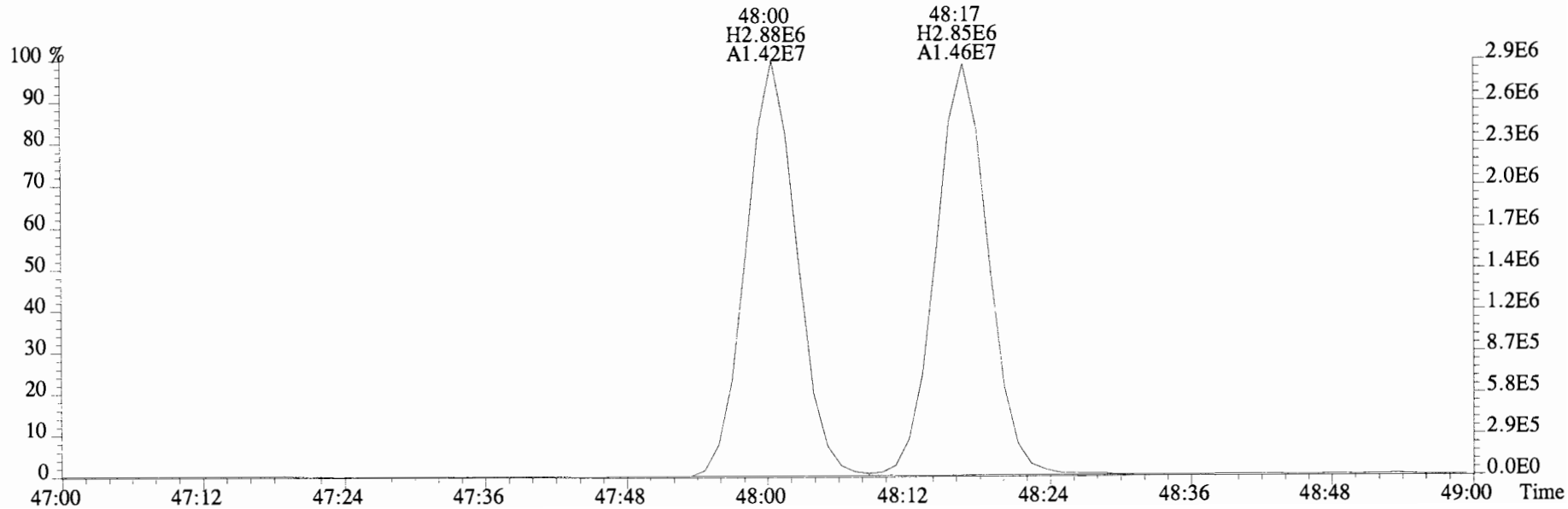
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5004.0,0.00%,F,F)



File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5160.0,0.00%,F,F)

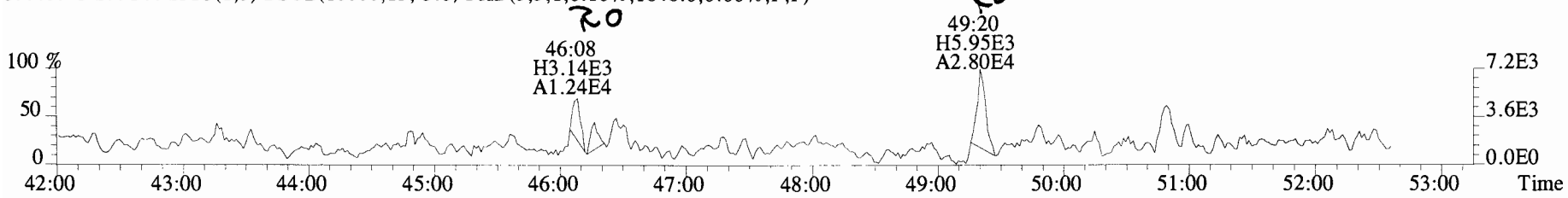


373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5004.0,0.00%,F,F)

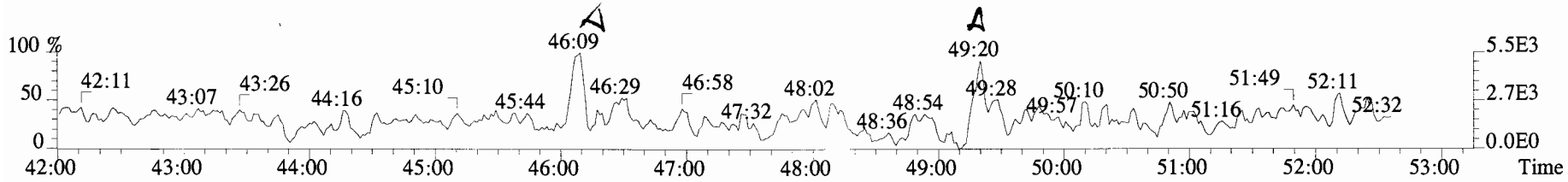


File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1

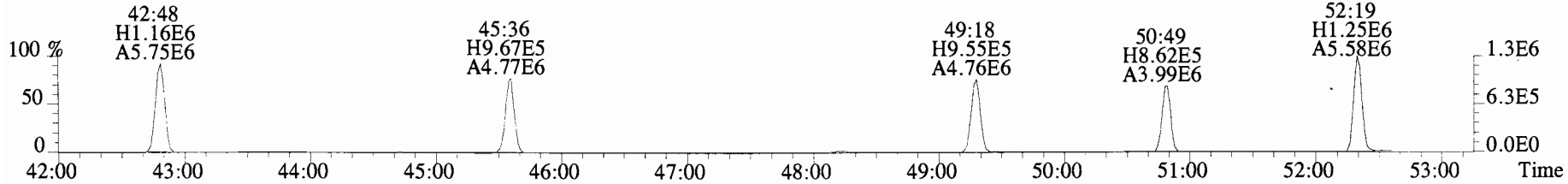
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)



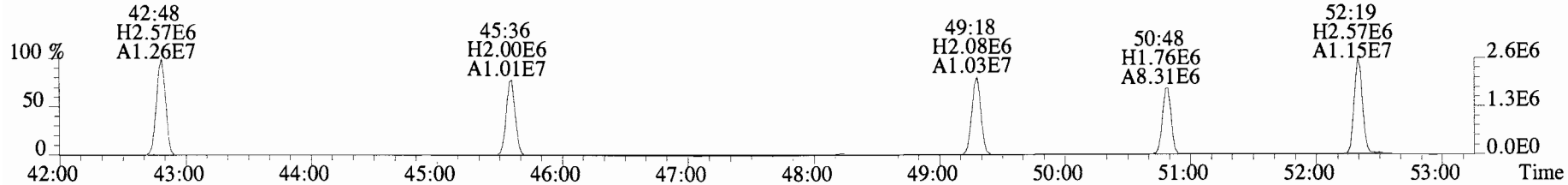
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)



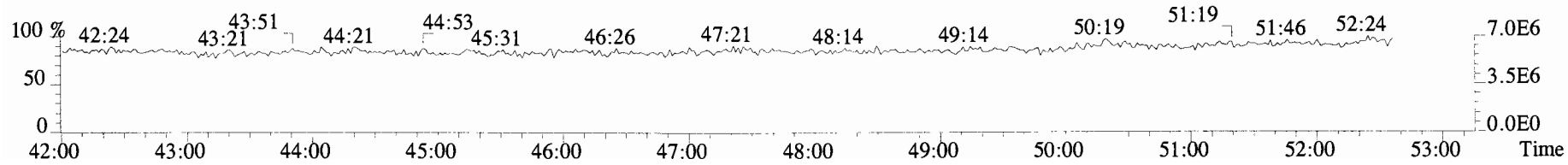
403.8457 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2636.0,0.00%,F,F)



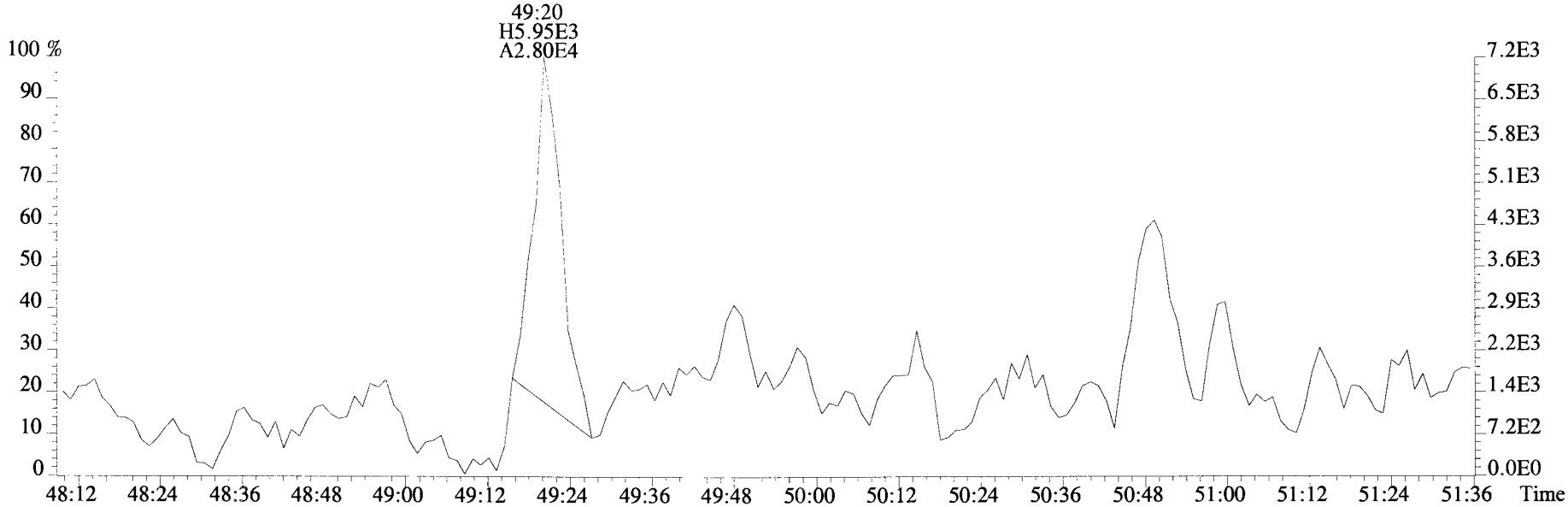
405.8428 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3036.0,0.00%,F,F)



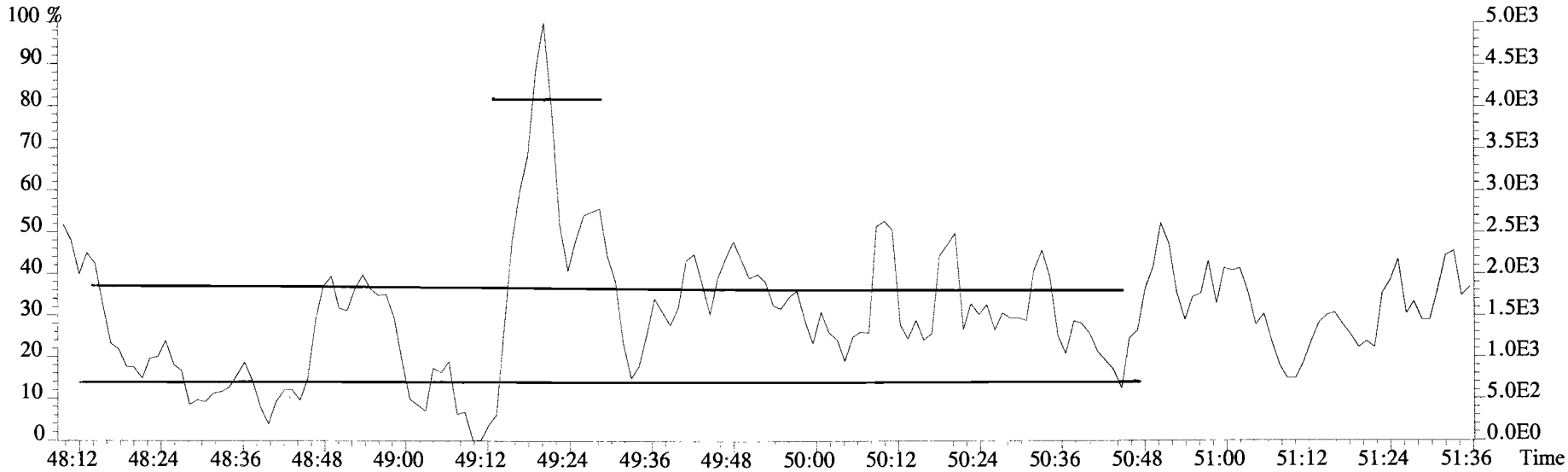
380.9760 S:4 F:4



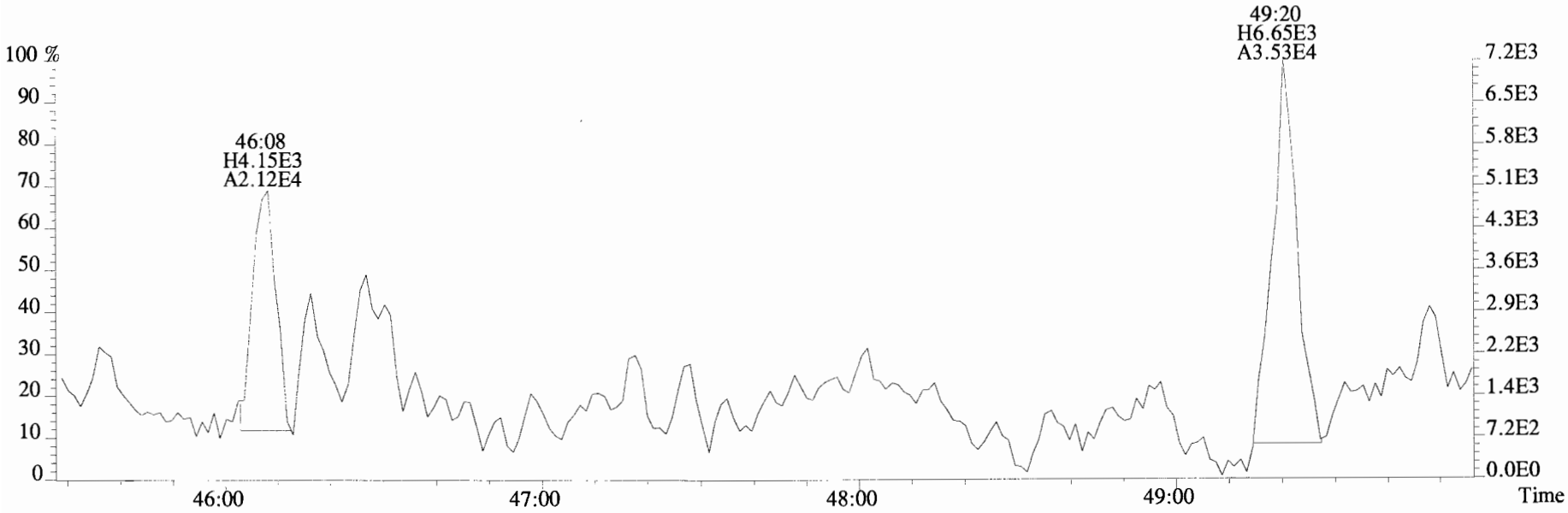
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)



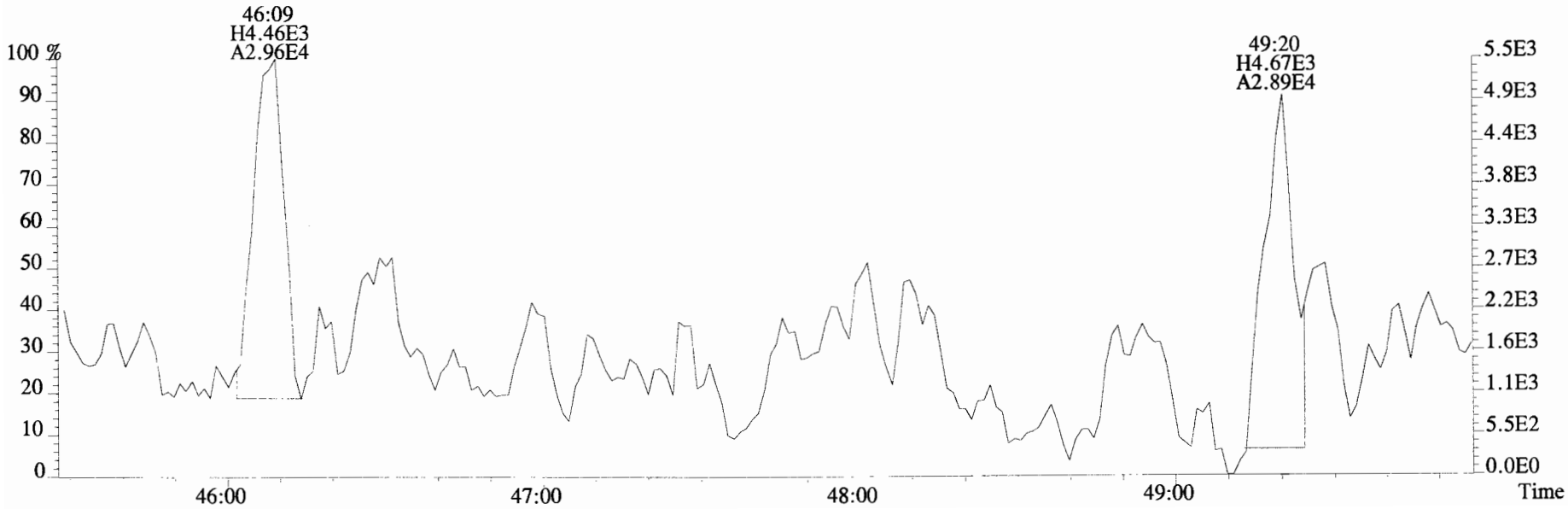
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)



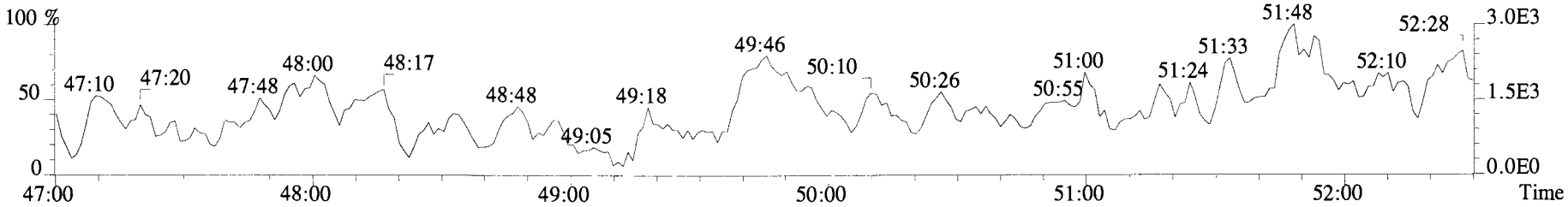
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)



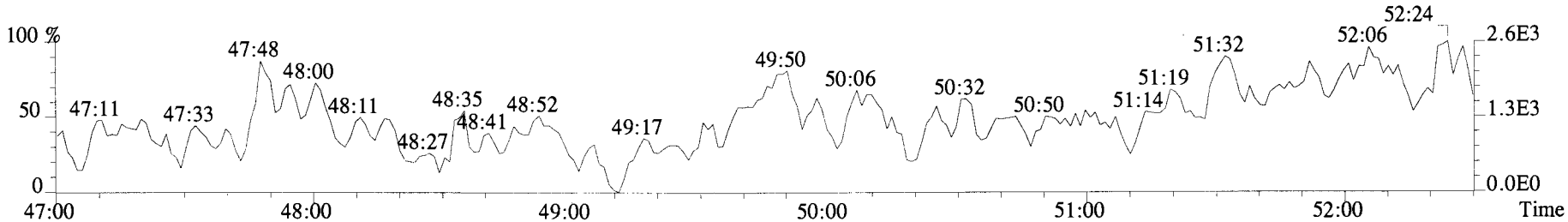
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)



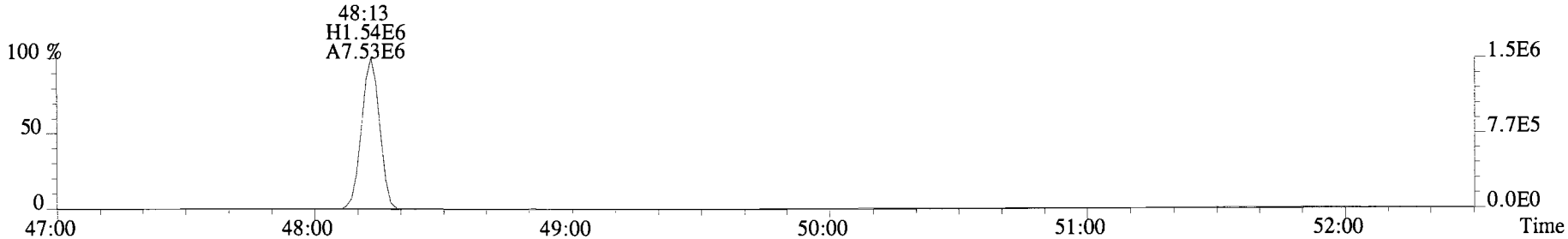
File:141226E1 #1-553 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



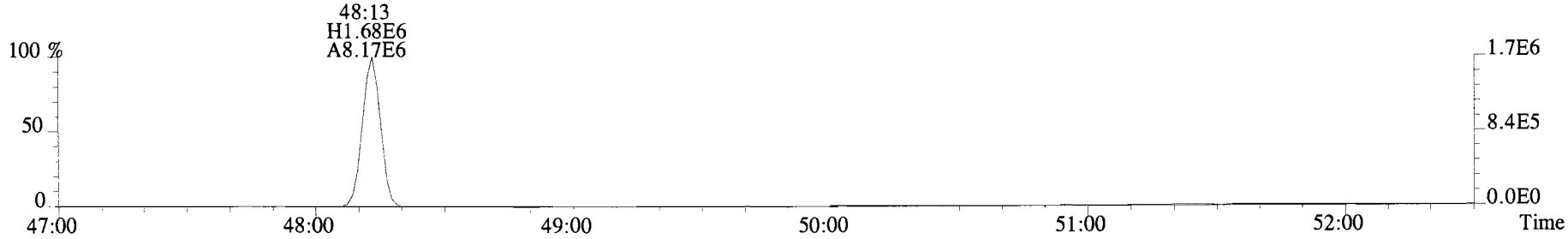
429.7606 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



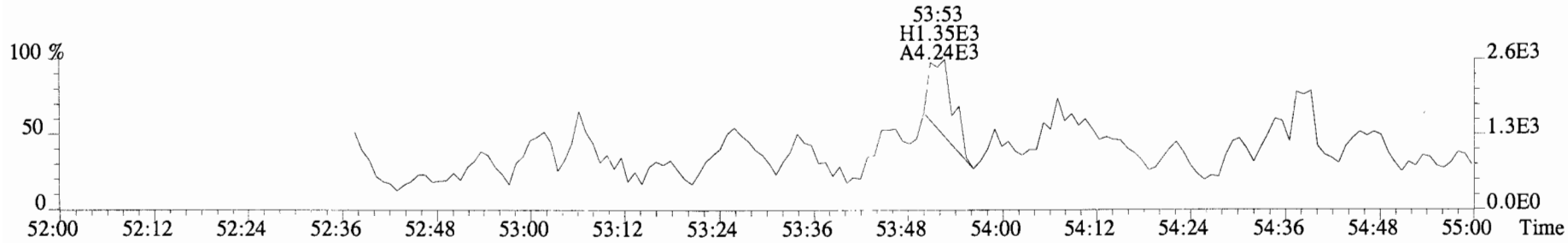
439.8038 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2180.0,0.00%,F,F)



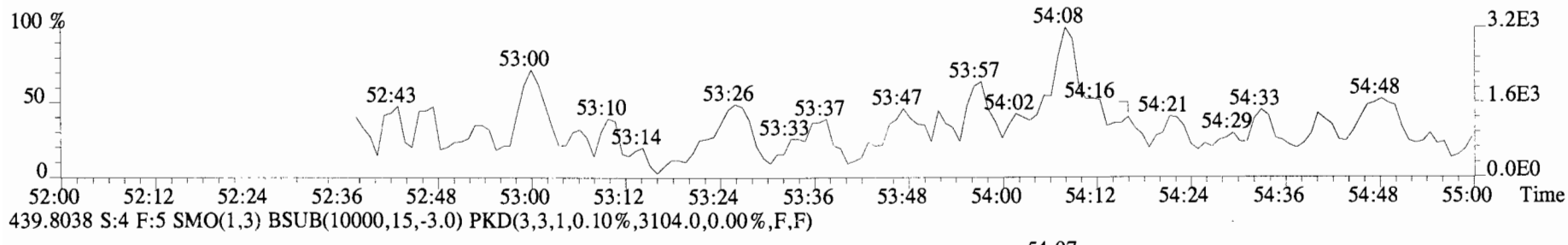
441.8008 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1420.0,0.00%,F,F)



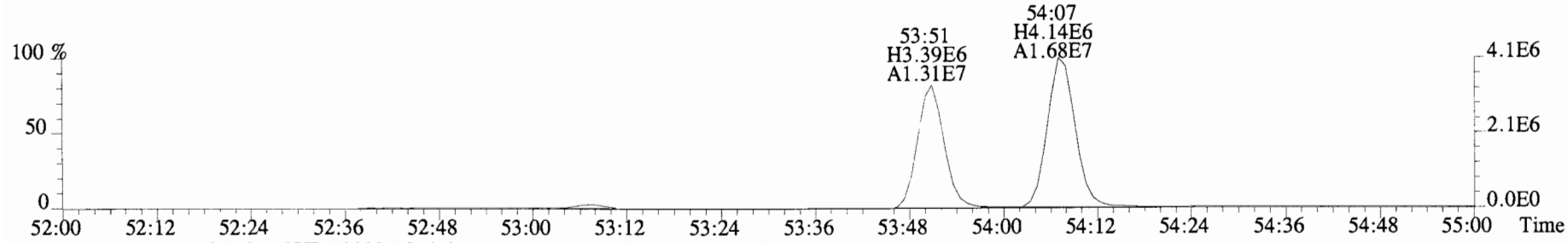
File:141226E1 #1-429 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1312.0,0.00%,F,F)



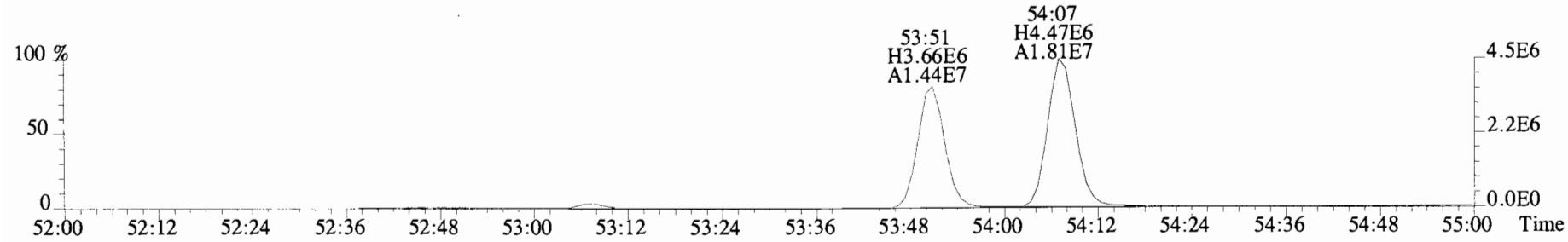
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



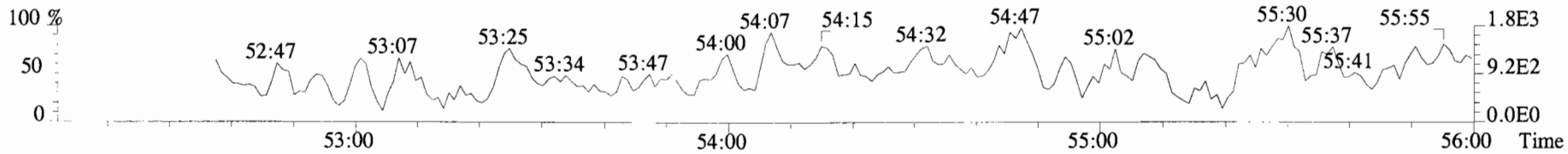
439.8038 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3104.0,0.00%,F,F)



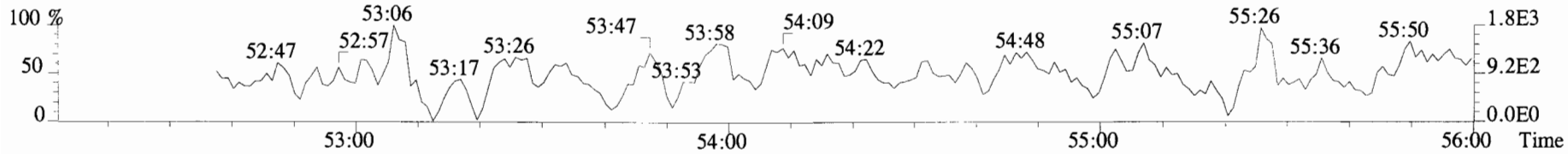
441.8008 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2512.0,0.00%,F,F)



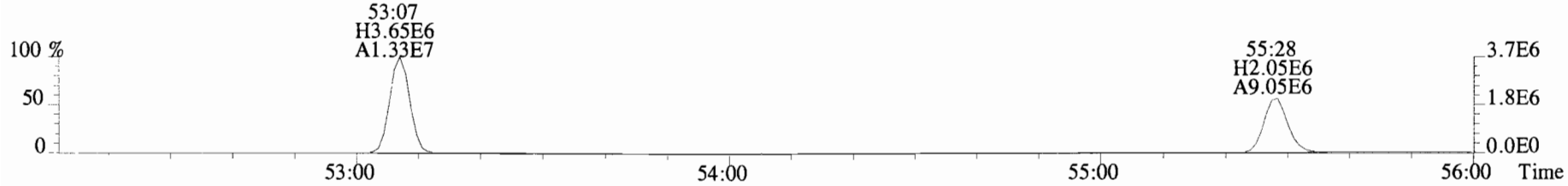
File:141226E1 #1-429 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1188.0,0.00%,F,F)



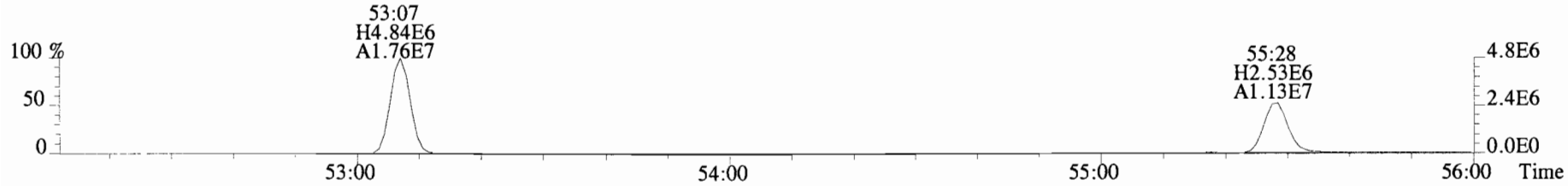
465.7186 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1196.0,0.00%,F,F)



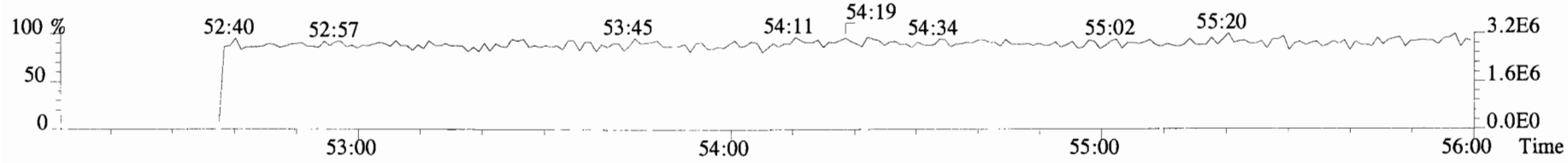
473.7648 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6584.0,0.00%,F,F)



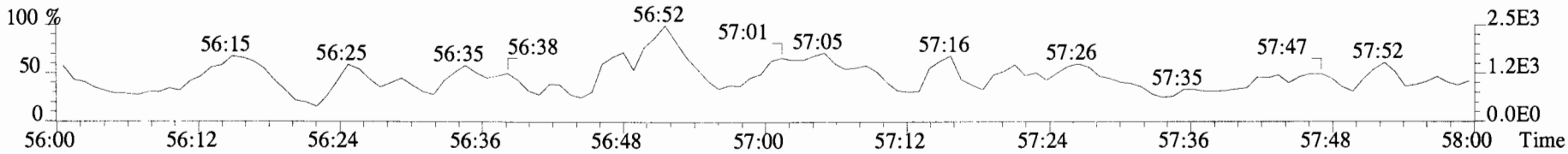
475.7619 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8648.0,0.00%,F,F)



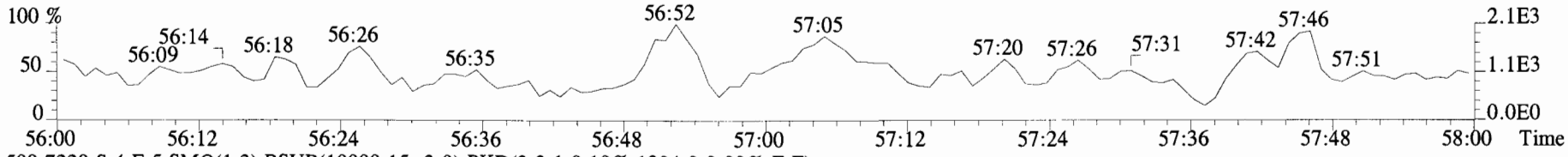
492.9697 S:4 F:5



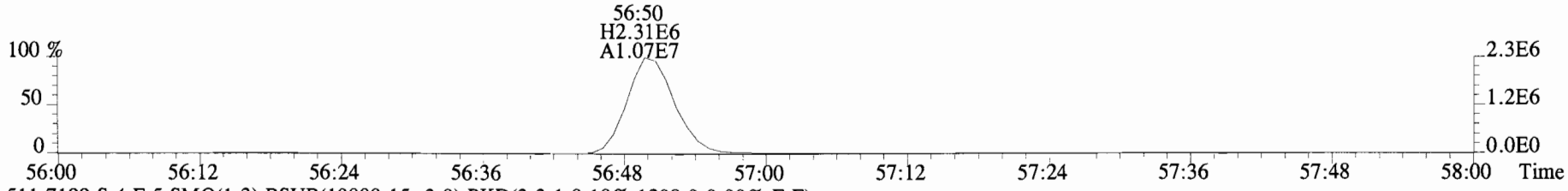
File:141226E1 #1-429 Acq:26-DEC-2014 14:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BLK1 Method Blank 1 Exp:PCB_ZB1
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1284.0,0.00%,F,F)



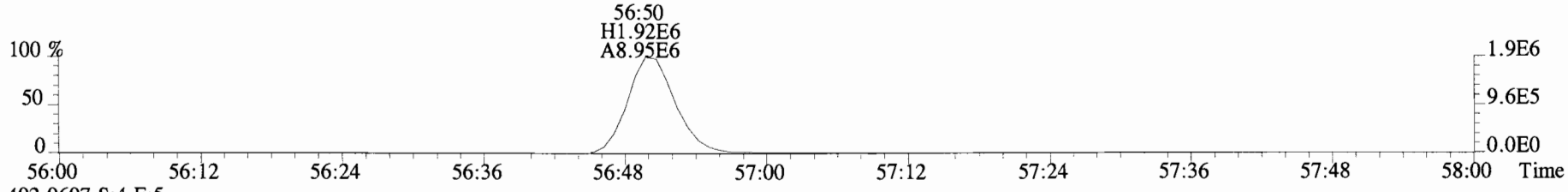
499.6797 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1184.0,0.00%,F,F)



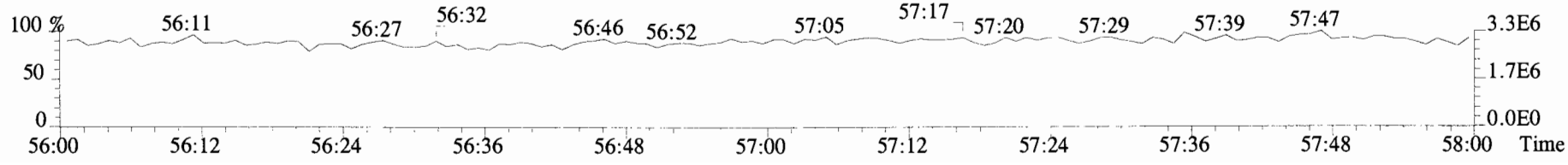
509.7229 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1304.0,0.00%,F,F)



511.7199 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1208.0,0.00%,F,F)



492.9697 S:4 F:5



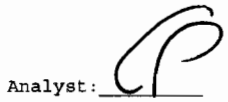
EPA METHOD 1668C PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B4L0127-BS1

Matrix : AQUEOUS Ext. Date: 23-DEC-14 Analysis Date: 26-DEC-14 Time: 12:27:01

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	50.4	30.0-67.5	13C-PCB-1	100	74.0	15-145	13C-PCB-79	100	99.8	40-145
PCB-3	50	50.7	30.0-67.5	13C-PCB-3	100	71.7	15-145	13C-PCB-178	100	88.8	40-145
PCB-4/10	200	248.2	120-270	13C-PCB-4	100	69.1	15-145				
PCB-15	100	120.4	60.0-135	13C-PCB-11	100	76.0	15-145				
PCB-19	50	53.7	30.0-67.5	13C-PCB-19	100	65.3	15-145				
PCB-37	50	54.2	30.0-67.5	13C-PCB-37	100	87.8	15-145				
PCB-54	50	54.3	30.0-67.5	13C-PCB-54	100	74.9	15-145				
PCB-81	50	53.7	30.0-67.5	13C-PCB-81	100	93.2	40-145				
PCB-77	50	54.2	30.0-67.5	13C-PCB-77	100	94.5	40-145				
PCB-104	50	56.2	30.0-67.5	13C-PCB-104	100	74.5	40-145				
PCB-123	50	59.6	30.0-67.5	13C-PCB-123	100	90.5	40-145				
PCB-106/118	100	112.9	60.0-135	13C-PCB-118	100	93.2	40-145				
PCB-114	50	60.0	30.0-67.5	13C-PCB-114	100	100.9	40-145				
PCB-105	50	60.8	30.0-67.5	13C-PCB-105	100	105.8	40-145				
PCB-126	50	59.1	30.0-67.5	13C-PCB-126	100	110.8	40-145				
PCB-155	50	55.4	30.0-67.5	13C-PCB-155	100	71.3	40-145				
PCB-167	50	57.3	30.0-67.5	13C-PCB-167	100	95.1	40-145				
PCB-156	50	57.7	30.0-67.5	13C-PCB-156	100	96.4	40-145				
PCB-157	50	58.1	30.0-67.5	13C-PCB-157	100	95.5	40-145				
PCB-169	50	60.6	30.0-67.5	13C-PCB-169	100	92.5	40-145				
PCB-188	50	54.7	30.0-67.5	13C-PCB-188	100	74.6	40-145				
PCB-189	50	59.5	30.0-67.5	13C-PCB-189	100	86.2	40-145				
PCB-202	50	54.3	30.0-67.5	13C-PCB-202	100	71.5	40-145				
PCB-205	50	59.0	30.0-67.5	13C-PCB-194	100	92.1	40-145				
PCB-208	50	58.9	30.0-67.5	13C-PCB-208	100	70.1	40-145				
PCB-206	50	60.0	30.0-67.5	13C-PCB-206	100	82.2	40-145				
PCB-209	50	58.6	30.0-67.5	13C-PCB-209	100	86.9	40-145				

Analyst: 

Date: 12/30/14

Client ID: OPR Filename: 141226E1 S:2 Acq:26-DEC-14 12:27:01 ConCal: ST141226E1-1
Lab ID: B4L0127-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	2.47e+07	3.05	y 16:08	1.25	50.4		*	2.5	*	1.000	0.996	1.006
Mono	PCB-2	2.44e+07	3.01	y 18:31	1.18	52.4		*	2.5	*	0.988	0.983	0.993
Mono	PCB-3	2.43e+07	3.02	y 18:45	1.22	50.7		*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	8.64e+07	1.64	y 20:07	1.55	248		*	2.5	*	1.003	0.998	1.008
Di	PCB-7/9	1.06e+08	1.63	y 21:53	1.27	241		*	2.5	*	0.868	0.865	0.873
Di	PCB-6	5.36e+07	1.68	y 22:32	1.26	122		*	2.5	*	0.894	0.890	0.899
Di	PCB-5/8	1.08e+08	1.65	y 22:57	1.23	251		*	2.5	*	0.910	0.906	0.916
Di	PCB-14	6.09e+07	1.65	y 24:03	1.23	117		*	2.5	*	0.954	0.949	0.959
Di	PCB-11	5.76e+07	1.65	y 25:14	1.16	118		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	1.13e+08	1.65	y 25:37	1.10	245		*	2.5	*	1.016	1.010	1.020
Di	PCB-15	6.13e+07	1.65	y 25:56	1.21	120		*	2.5	*	1.028	1.024	1.034
Tri	PCB-19	1.43e+07	1.07	y 24:13	1.30	53.7		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	2.09e+07	1.08	y 25:07	1.83	55.5		*	2.5	*	1.038	1.032	1.042
Tri	PCB-18	1.54e+07	1.08	y 25:51	0.86	55.5		*	2.5	*	0.953	0.949	0.959
Tri	PCB-17	1.61e+07	1.08	y 26:02	0.90	55.4		*	2.5	*	0.960	0.955	0.965
Tri	PCB-24/27	4.41e+07	1.08	y 26:36	1.18	116		*	2.5	*	0.981	0.976	0.986
Tri	PCB-16/32	3.77e+07	1.08	y 27:07	1.03	113		*	2.5	*	1.000	0.995	1.005
Tri	PCB-34	2.92e+07	1.06	y 27:55	1.26	60.1		*	2.5	*	0.960	0.956	0.966
Tri	PCB-23	2.57e+07	1.08	y 28:01	1.31	50.8		*	2.5	*	0.964	0.959	0.969
Tri	PCB-29	2.68e+07	1.08	y 28:15	1.33	52.3		*	2.5	*	0.972	0.967	0.977
Tri	PCB-26	2.59e+07	1.08	y 28:28	1.29	52.1		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	2.67e+07	1.06	y 28:37	1.34	51.6		*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	2.74e+07	1.07	y 28:59	1.42	50.1		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	2.93e+07	1.08	y 29:04	1.38	55.2		*	2.5	*	1.000	0.996	1.006
Tri	PCB-20/21/33	8.14e+07	1.06	y 29:42	1.31	161		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	3.05e+07	1.04	y 30:08	1.32	59.8		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	2.71e+07	1.07	y 30:44	1.38	51.3		*	2.5	*	0.933	0.929	0.939
Tri	PCB-39	2.83e+07	1.07	y 31:13	1.42	52.0		*	2.5	*	0.948	0.943	0.953
Tri	PCB-38	2.73e+07	1.08	y 31:59	1.35	52.6		*	2.5	*	0.971	0.967	0.976
Tri	PCB-35	2.78e+07	1.08	y 32:31	1.38	52.8		*	2.5	*	0.987	0.982	0.992
Tri	PCB-37	2.89e+07	1.06	y 32:56	1.39	54.2		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-54	1.76e+07	0.77	y 27:57	1.20	54.3		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-50	1.34e+07	0.81	y 29:08	0.97	51.1		*	2.5	*	1.042	1.037	1.047
Tetra	PCB-53	1.42e+07	0.78	y 29:46	1.19	52.2		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	1.51e+07	0.81	y 30:07	1.15	57.2		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	1.16e+07	0.79	y 30:33	0.97	52.3		*	2.5	*	0.971	0.966	0.976
Tetra	PCB-46	1.06e+07	0.75	y 31:01	0.95	48.7		*	2.5	*	0.986	0.982	0.992

Integrations by:
Analyst: CP
Date: 12/30/14

Reviewed by: [signature] Date: 12/31/14

Client ID: OPR | Filename: 141226E1 | S:2 | Acq:26-DEC-14 12:27:01 | ConCal: ST141226E1-1

Lab ID: B4L0127-BS1 | GC Column ID: ZB-1 | ICal: PCBVG8-6-20-14 wt/vol: 1.000 | EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	3.02e+07	0.78	y 31:30	1.28	103		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	1.86e+07	0.77	y 31:36	1.37	59.0		*	2.5	*	1.004	1.000	1.010
Tetra	PCB-43/49	2.79e+07	0.78	y 31:47	1.11	109		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	1.39e+07	0.78	y 31:59	1.13	50.2		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-48/75	3.34e+07	0.80	y 32:06	1.30	105		*	2.5	*	1.004	0.999	1.009
Tetra	PCB-65	1.80e+07	0.80	y 32:22	1.33	55.3		*	2.5	*	1.012	1.007	1.017
Tetra	PCB-62	1.56e+07	0.78	y 32:29	1.29	49.6		*	2.5	*	1.016	1.011	1.021
Tetra	PCB-44	1.29e+07	0.79	y 32:47	0.94	56.0		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	3.31e+07	0.79	y 33:01	1.22	111		*	2.5	*	1.032	1.028	1.038
Tetra	PCB-41/64/71/72	7.30e+07	0.79	y 33:36	1.31	228		*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	2.05e+07	0.79	y 33:51	1.49	56.6		*	2.5	*	1.058	1.054	1.064
Tetra	PCB-40	1.11e+07	0.80	y 34:04	0.82	55.3		*	2.5	*	1.065	1.061	1.071
Tetra	PCB-57	2.08e+07	0.80	y 34:26	1.11	53.1		*	2.5	*	0.970	0.965	0.975
Tetra	PCB-67	1.96e+07	0.77	y 34:44	1.07	51.8		*	2.5	*	0.979	0.974	0.984
Tetra	PCB-58	2.19e+07	0.78	y 34:51	1.10	56.6		*	2.5	*	0.982	0.977	0.987
Tetra	PCB-63	2.14e+07	0.81	y 35:00	1.12	54.5		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-74	2.26e+07	0.83	y 35:17	1.20	53.5		*	2.5	*	0.994	0.990	1.000
Tetra	PCB-61/70	4.07e+07	0.76	y 35:28	1.08	107		*	2.5	*	1.000	0.994	1.004
Tetra	PCB-76/66	4.33e+07	0.78	y 35:41	1.14	108		*	2.5	*	1.006	1.001	1.011
Tetra	PCB-80	2.41e+07	0.79	y 35:54	1.28	52.6		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-55	2.13e+07	0.80	y 36:14	1.11	53.5		*	2.5	*	1.009	1.005	1.015
Tetra	PCB-56/60	4.27e+07	0.78	y 36:43	1.09	110		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	2.35e+07	0.79	y 37:48	1.12	58.2		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	2.28e+07	0.79	y 38:29	1.24	55.3		*	2.5	*	0.987	0.982	0.992
Tetra	PCB-81	2.47e+07	0.79	y 39:01	1.38	53.7		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-77	2.35e+07	0.82	y 39:36	1.21	54.2		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	1.28e+07	1.59	y 32:39	1.26	56.2		*	2.5	*	1.001	0.996	1.006
Penta	PCB-96	1.21e+07	1.58	y 33:54	1.09	60.8		*	2.5	*	1.039	1.034	1.044
Penta	PCB-103	1.01e+07	1.60	y 34:27	0.93	59.5		*	2.5	*	1.056	1.050	1.060
Penta	PCB-100	1.11e+07	1.66	y 34:47	1.00	60.9		*	2.5	*	1.066	1.061	1.071
Penta	PCB-94	9.59e+06	1.62	y 35:16	1.11	58.1		*	2.5	*	0.986	0.981	0.991
Penta	PCB-95/98/102	3.09e+07	1.63	y 35:45	1.21	171		*	2.5	*	0.999	0.994	1.004
Penta	PCB-93	8.85e+06	1.67	y 35:53	1.13	52.5		*	2.5	*	1.003	0.998	1.008
Penta	PCB-88/91	1.96e+07	1.62	y 36:10	1.02	129		*	2.5	*	1.011	1.006	1.016
Penta	PCB-121	1.34e+07	1.65	y 36:17	1.90	47.3		*	2.5	*	1.014	1.009	1.019
Penta	PCB-84/92	1.95e+07	1.57	y 37:06	1.05	111		*	2.5	*	0.990	0.986	0.996
Penta	PCB-89	9.52e+06	1.59	y 37:17	1.02	56.0		*	2.5	*	0.995	0.991	1.001

Analyst: CP

Date: 12/30/14

Client ID: OPR Filename: 141226E1 S:2 Acq:26-DEC-14 12:27:01 ConCal: ST141226E1-1
Lab ID: B4L0127-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	2.22e+07	1.63	y 37:29	1.19	112		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	1.24e+07	1.62	y 37:42	1.35	54.9		*	2.5	*	1.006	1.002	1.012
Penta	PCB-99	1.27e+07	1.60	y 37:48	1.29	58.8		*	2.5	*	1.009	1.005	1.015
Penta	PCB-119	1.46e+07	1.65	y 38:16	1.72	54.7		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	2.25e+07	1.63	y 38:26	1.29	113		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	1.32e+07	1.57	y 38:35	1.52	56.1		*	2.5	*	0.995	0.991	1.001
Penta	PCB-97	1.09e+07	1.55	y 38:47	1.25	56.0		*	2.5	*	1.000	0.996	1.006
Penta	PCB-86	8.83e+06	1.56	y 38:55	1.02	55.6		*	2.5	*	1.004	1.000	1.010
Penta	PCB-87/117/125	3.96e+07	1.60	y 39:03	1.56	164		*	2.5	*	1.007	1.002	1.012
Penta	PCB-111/115	2.91e+07	1.60	y 39:12	1.75	107		*	2.5	*	1.011	1.007	1.017
Penta	PCB-85/116	2.33e+07	1.64	y 39:20	1.30	115		*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	1.53e+07	1.64	y 39:35	1.78	55.4		*	2.5	*	1.021	1.016	1.026
Penta	PCB-110	1.49e+07	1.64	y 39:43	1.68	57.2		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	8.89e+06	1.60	y 40:20	0.74	57.2		*	2.5	*	0.976	0.972	0.982
Penta	PCB-124	1.63e+07	1.60	y 41:01	1.32	58.6		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	3.02e+07	1.62	y 41:10	1.22	117		*	2.5	*	0.996	0.991	1.001
Penta	PCB-123	1.53e+07	1.60	y 41:21	1.22	59.6		*	2.5	*	1.001	0.995	1.005
Penta	PCB-106/118	3.11e+07	1.62	y 41:32	1.22	113		*	2.5	*	1.001	0.996	1.006
Penta	PCB-114	2.53e+07	1.64	y 42:11	1.36	60.0		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	2.25e+07	1.68	y 42:19	1.24	58.3		*	2.5	*	1.004	0.999	1.009
Penta	PCB-105	2.61e+07	1.63	y 43:02	1.28	60.8		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	2.49e+07	1.63	y 43:22	1.14	59.9		*	2.5	*	1.000	0.995	1.005
Penta	PCB-126	2.50e+07	1.64	y 45:16	1.28	59.1		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	9.15e+06	1.31	y 37:02	1.14	55.4		*	2.5	*	1.001	0.966	1.006
Hexa	PCB-150	9.38e+06	1.27	y 38:18	1.06	60.5		*	2.5	*	1.035	1.030	1.040
Hexa	PCB-152	9.75e+06	1.26	y 38:46	1.10	61.0		*	2.5	*	1.048	1.043	1.053
Hexa	PCB-145	9.64e+06	1.27	y 39:13	1.09	60.6		*	2.5	*	1.060	1.055	1.065
Hexa	PCB-136	1.02e+07	1.28	y 39:32	1.08	64.4		*	2.5	*	1.068	1.064	1.074
Hexa	PCB-148	6.60e+06	1.27	y 39:38	0.74	61.2		*	2.5	*	1.071	1.066	1.076
Hexa	PCB-154	7.96e+06	1.26	y 40:08	0.88	61.9		*	2.5	*	1.085	1.079	1.089
Hexa	PCB-151	7.30e+06	1.23	y 40:46	0.81	62.0		*	2.5	*	1.102	1.097	1.107
Hexa	PCB-135	6.94e+06	1.28	y 40:59	0.78	61.2		*	2.5	*	1.108	1.101	1.113
Hexa	PCB-144	7.34e+06	1.25	y 41:06	0.82	61.5		*	2.5	*	1.111	1.105	1.116
Hexa	PCB-147	8.16e+06	1.31	y 41:13	0.83	67.6		*	2.5	*	1.114	1.011	1.120
Hexa	PCB-139/149	1.57e+07	1.28	y 41:29	0.84	128		*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	7.21e+06	1.30	y 41:40	0.79	63.1		*	2.5	*	1.126	1.120	1.132
Hexa	PCB-134/143	2.57e+07	1.26	y 42:06	0.93	108		*	2.5	*	0.975	0.970	0.980

Analyst: CC

Date: 12/30/14

Client ID: OPR Filename: 141226E1 S:2 Acq:26-DEC-14 12:27:01 ConCal: ST141226E1-1
Lab ID: B4L0127-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

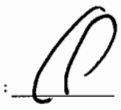
Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	2.58e+07	1.26	y	42:23	0.95	106		*	2.5	*	0.981	0.977	0.987
Hexa	PCB-131	1.25e+07	1.25	y	42:34	0.91	53.1		*	2.5	*	0.986	0.981	0.991
Hexa	PCB-146/165	3.30e+07	1.28	y	42:47	1.16	111		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	3.24e+07	1.26	y	43:02	1.11	113		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	1.70e+07	1.26	y	43:12	1.18	56.0		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	1.94e+07	1.25	y	43:25	1.37	55.1		*	2.5	*	1.005	1.000	1.010
Hexa	PCB-141	1.35e+07	1.25	y	43:56	0.97	54.9		*	2.5	*	1.000	0.996	1.005
Hexa	PCB-137	1.54e+07	1.24	y	44:19	1.07	57.0		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	1.30e+07	1.27	y	44:25	0.85	60.9		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-138/163/164	5.36e+07	1.27	y	44:48	1.23	174		*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	3.79e+07	1.25	y	45:02	1.29	117		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	1.29e+07	1.28	y	45:16	0.92	55.7		*	2.5	*	1.012	1.007	1.017
Hexa	PCB-166	1.84e+07	1.28	y	45:43	1.12	55.5		*	2.5	*	0.993	0.988	0.998
Hexa	PCB-159	1.97e+07	1.25	y	46:03	1.16	57.0		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-128/162	3.36e+07	1.24	y	46:20	1.02	111		*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	1.96e+07	1.30	y	46:44	1.06	57.3		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	2.09e+07	1.27	y	48:02	1.18	57.7		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-157	2.02e+07	1.27	y	48:17	1.08	58.1		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	1.93e+07	1.25	y	50:28	1.11	60.6		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-188	1.37e+07	1.03	y	42:50	1.40	54.7		*	2.5	*	1.001	0.995	1.005
Hepta	PCB-184	1.23e+07	1.03	y	43:17	1.24	55.6		*	2.5	*	1.011	1.006	1.016
Hepta	PCB-179	1.33e+07	1.04	y	44:04	1.30	57.1		*	2.5	*	1.030	1.024	1.034
Hepta	PCB-176	1.42e+07	1.06	y	44:31	1.36	58.3		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	1.37e+07	1.09	y	45:08	1.28	60.0		*	2.5	*	1.055	1.049	1.059
Hepta	PCB-178	9.99e+06	1.04	y	45:37	0.94	59.7		*	2.5	*	1.066	1.061	1.071
Hepta	PCB-175	1.09e+07	1.08	y	45:58	0.97	63.2		*	2.5	*	1.074	1.069	1.079
Hepta	PCB-182/187	2.27e+07	1.06	y	46:08	1.01	125		*	2.5	*	1.078	1.073	1.083
Hepta	PCB-183	1.17e+07	1.06	y	46:27	1.08	60.4		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	1.03e+07	1.06	y	47:07	1.34	51.9		*	2.5	*	0.956	0.951	0.961
Hepta	PCB-174	1.14e+07	1.05	y	47:29	1.34	57.4		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	1.05e+07	1.10	y	47:35	1.36	52.0		*	2.5	*	0.966	0.961	0.971
Hepta	PCB-177	1.01e+07	1.05	y	47:45	1.24	55.1		*	2.5	*	0.969	0.964	0.974
Hepta	PCB-171	1.03e+07	1.07	y	48:02	1.31	53.2		*	2.5	*	0.975	0.970	0.980
Hepta	PCB-173	9.04e+06	1.07	y	48:28	1.16	52.7		*	2.5	*	0.983	0.979	0.989
Hepta	PCB-172	1.01e+07	1.07	y	48:55	1.22	55.8		*	2.5	*	0.993	0.988	0.998
Hepta	PCB-192	1.27e+07	1.06	y	49:07	1.53	56.0		*	2.5	*	0.997	0.991	1.001
Hepta	PCB-180	1.18e+07	1.02	y	49:19	1.43	56.0		*	2.5	*	1.001	0.995	1.005

Analyst: LC

Date: 12/30/14

Client ID: OPR Filename: 141226E1 S:2 Acq:26-DEC-14 12:27:01 ConCal: ST141226E1-1
Lab ID: B4L0127-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	1.36e+07	1.09	y 49:31	1.65	55.5		*	2.5	*	1.005	0.999	1.009
Hepta	PCB-191	1.39e+07	1.09	y 49:47	1.67	56.2		*	2.5	*	1.010	1.004	1.014
Hepta	PCB-170	1.04e+07	1.05	y 50:50	1.50	58.3		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	1.38e+07	1.05	y 51:00	2.02	57.5		*	2.5	*	1.004	0.998	1.008
Hepta	PCB-189	1.45e+07	1.06	y 52:21	1.54	59.5		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	8.60e+06	0.96	y 48:15	1.04	54.3		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	9.45e+06	0.95	y 48:44	1.10	56.2		*	2.5	*	1.010	1.006	1.016
Octa	PCB-204	8.70e+06	0.91	y 48:53	0.99	57.4		*	2.5	*	1.013	1.009	1.019
Octa	PCB-197	9.52e+06	0.91	y 49:11	1.07	58.2		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	9.29e+06	0.89	y 50:05	1.02	59.9		*	2.5	*	1.038	1.032	1.044
Octa	PCB-198	6.35e+06	0.90	y 51:26	0.74	56.1		*	2.5	*	1.066	1.058	1.068
Octa	PCB-199	7.30e+06	0.87	y 51:33	0.73	65.7		*	2.5	*	1.069	1.060	1.070
Octa	PCB-196/203	1.45e+07	0.90	y 51:49	0.77	123		*	2.5	*	1.074	1.066	1.076
Octa	PCB-195	1.54e+07	0.89	y 53:00	1.20	53.8		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	1.72e+07	0.90	y 53:52	1.25	57.9		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	1.99e+07	0.91	y 54:09	1.41	59.0		*	2.5	*	1.006	1.001	1.011
Nona	PCB-208	1.43e+07	1.34	y 53:08	0.96	58.9		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	1.46e+07	1.37	y 53:27	0.92	63.6		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	1.07e+07	1.35	y 55:30	1.03	60.0		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	1.17e+07	1.19	y 56:52	1.18	58.6		*	2.5	*	1.000	0.995	1.005

Analyst: 

Date: 12/30/14

Client ID: OPR Filename: 141226E1 S:2 Acq:26-DEC-14 12:27:01 ConCal: ST141226E1-1

Lab ID: B4L0127-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	3.90e+07	3.27 y	0.89	16:08	0.623	0.622	0.628	74.0	74.0
13C-PCB-3	3.94e+07	3.43 y	0.93	18:44	0.723	0.721	0.729	71.7	71.7
13C-PCB-4	2.24e+07	1.59 y	0.55	20:03	0.774	0.772	0.780	69.1	69.1
13C-PCB-9	3.49e+07	1.61 y	0.83	21:51	0.843	0.840	0.848	71.3	71.3
13C-PCB-11	4.21e+07	1.60 y	0.94	25:13	0.973	0.968	0.978	76.0	76.0
13C-PCB-19	2.06e+07	1.08 y	0.53	24:12	0.934	0.929	0.939	65.3	65.3
13C-PCB-28	3.85e+07	1.11 y	0.89	29:04	1.004	0.999	1.009	82.7	82.7
13C-PCB-32	3.23e+07	1.11 y	0.81	27:07	1.046	1.041	1.051	67.1	67.1
13C-PCB-37	3.83e+07	1.07 y	0.83	32:56	1.138	1.131	1.143	87.8	87.8
13C-PCB-47	2.44e+07	0.78 y	0.74	31:59	0.871	0.867	0.875	77.0	77.0
13C-PCB-52	2.29e+07	0.83 y	0.71	31:28	0.857	0.853	0.861	76.1	76.1
13C-PCB-54	2.71e+07	0.82 y	0.85	27:57	0.761	0.758	0.766	74.9	74.9
13C-PCB-70	3.52e+07	0.81 y	0.94	35:29	0.966	0.961	0.971	87.4	87.4
13C-PCB-77	3.60e+07	0.81 y	0.89	39:36	1.079	1.073	1.083	94.5	94.5
13C-PCB-80	3.59e+07	0.81 y	0.96	35:54	0.978	0.972	0.982	87.5	87.5
13C-PCB-81	3.33e+07	0.81 y	0.84	39:00	1.062	1.057	1.067	93.2	93.2
13C-PCB-95	1.49e+07	1.62 y	0.74	35:47	0.913	0.908	0.918	81.7	81.7
13C-PCB-97	1.55e+07	1.63 y	0.69	38:46	0.989	0.984	0.994	91.9	91.9
13C-PCB-101	1.67e+07	1.64 y	0.79	37:28	0.956	0.951	0.961	86.8	86.8
13C-PCB-104	1.82e+07	1.65 y	1.00	32:38	0.832	0.829	0.837	74.5	74.5
13C-PCB-105	3.35e+07	1.68 y	1.24	43:01	0.929	0.924	0.934	106	106
13C-PCB-114	3.12e+07	1.65 y	1.21	42:10	0.910	0.905	0.915	101	101
13C-PCB-118	2.25e+07	1.60 y	0.98	41:30	1.059	1.054	1.064	93.2	93.2
13C-PCB-123	2.11e+07	1.57 y	0.95	41:19	1.054	1.049	1.059	90.5	90.5
13C-PCB-126	3.29e+07	1.64 y	1.16	45:16	0.977	0.972	0.982	111	111
13C-PCB-127	3.65e+07	1.65 y	1.34	43:21	0.936	0.931	0.941	106	106
13C-PCB-138	2.51e+07	1.30 y	1.04	44:45	0.966	0.961	0.971	94.1	94.1
13C-PCB-141	2.52e+07	1.31 y	1.07	43:55	0.948	0.943	0.953	91.8	91.8
13C-PCB-153	2.57e+07	1.33 y	1.11	43:11	0.932	0.927	0.937	90.3	90.3
13C-PCB-155	1.46e+07	1.35 y	0.83	37:00	0.944	0.939	0.949	71.3	71.3
13C-PCB-156	3.07e+07	1.27 y	1.24	48:01	1.037	1.032	1.042	96.4	96.4
13C-PCB-157	3.20e+07	1.30 y	1.31	48:17	1.042	1.037	1.047	95.5	95.5
13C-PCB-159	2.96e+07	1.30 y	1.20	46:03	0.994	0.989	0.999	96.5	96.5
13C-PCB-167	3.21e+07	1.30 y	1.32	46:44	1.009	1.004	1.014	95.1	95.1
13C-PCB-169	2.88e+07	1.32 y	1.22	50:27	1.089	1.082	1.092	92.5	92.5
13C-PCB-170	1.19e+07	0.46 y	0.54	50:49	1.097	1.089	1.101	86.9	86.9
13C-PCB-180	1.48e+07	0.48 y	0.67	49:17	1.064	1.059	1.069	85.8	85.8
13C-PCB-188	1.79e+07	0.47 y	0.94	42:48	0.924	0.919	0.929	74.6	74.6
13C-PCB-189	1.58e+07	0.45 y	0.72	52:20	1.130	1.120	1.132	86.2	86.2
13C-PCB-194	2.38e+07	0.96 y	0.81	53:51	0.995	0.990	1.000	92.1	92.1
13C-PCB-202	1.52e+07	0.92 y	0.83	48:14	1.041	1.036	1.046	71.5	71.5
13C-PCB-206	1.73e+07	0.79 y	0.66	55:29	1.025	1.021	1.031	82.2	82.2
13C-PCB-208	2.51e+07	0.76 y	1.12	53:07	0.981	0.976	0.986	70.1	70.1
13C-PCB-209	1.70e+07	1.22 y	0.61	56:51	1.050	1.044	1.054	86.9	86.9

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.27e+07	0.80 y	1.01	37:47	1.029	1.023	1.033	99.8	99.8
13C-PCB-178	1.43e+07	0.45 y	0.63	45:35	0.984	0.979	0.989	88.8	88.8

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.27e+07	0.80 y	1.20	37:47	0.969	0.963	0.973	107	107
13C-PCB-178	1.43e+07	0.45 y	0.94	45:35	0.925	0.920	0.930	103	103

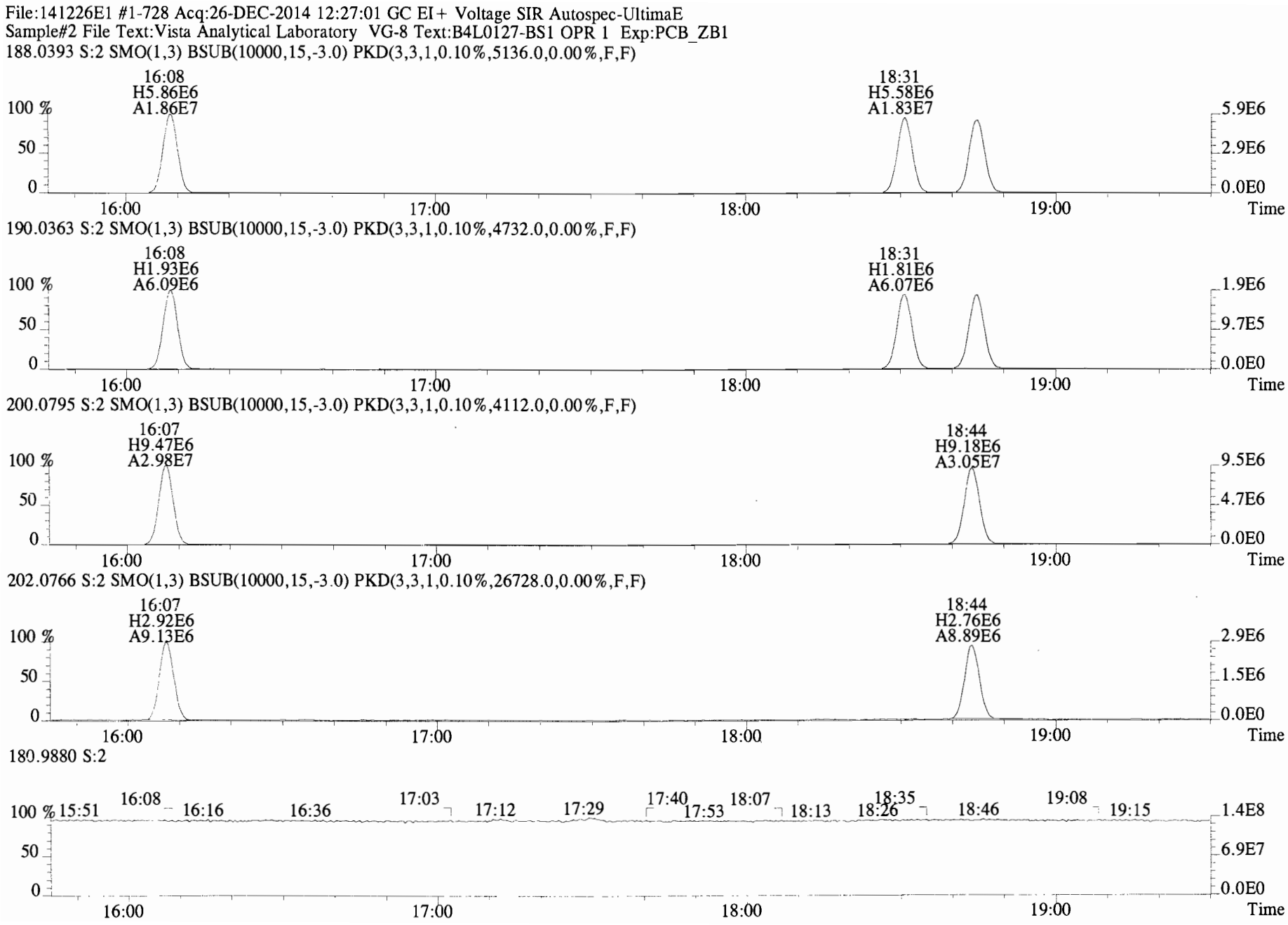
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	5.92e+07	1.61	y	1.00	25:55	100
13C-PCB-31	5.25e+07	1.07	y	1.00	28:57	100
13C-PCB-60	4.26e+07	0.78	y	1.00	36:43	100
13C-PCB-111	2.45e+07	1.62	y	1.00	39:12	100
13C-PCB-128	2.56e+07	1.31	y	1.00	46:19	100
13C-PCB-205	3.19e+07	0.94	y	1.00	54:08	100

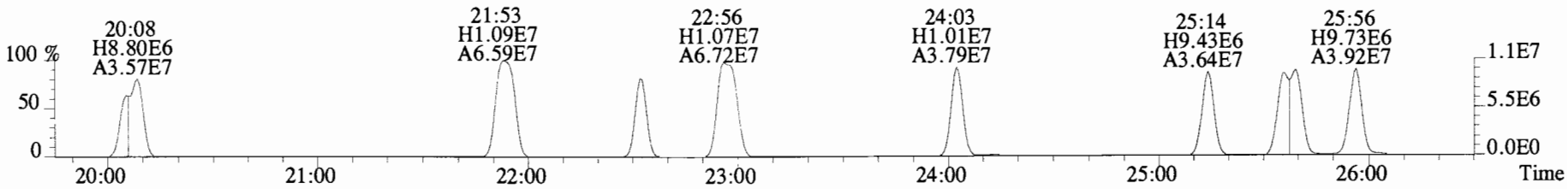
Analyst: _____

Date: 12/30/14

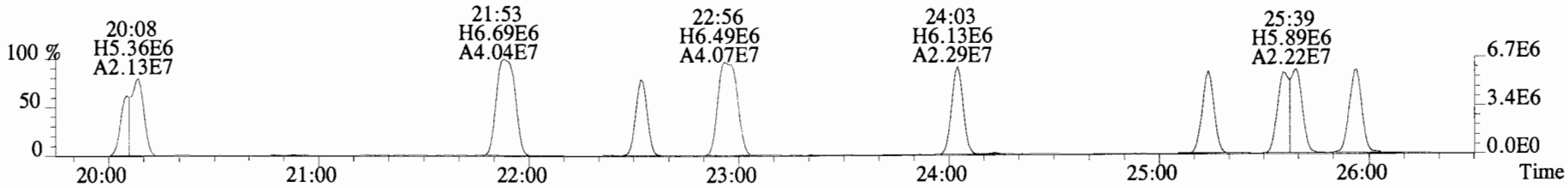
File:141226E1 #1-728 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1



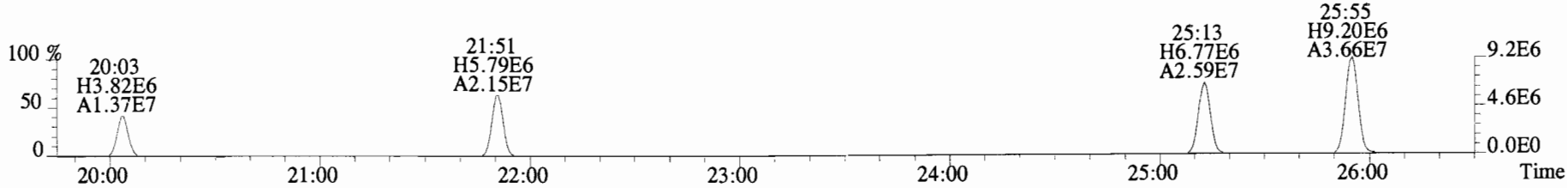
File:141226E1 #1-757 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4656.0,0.00%,F,F)



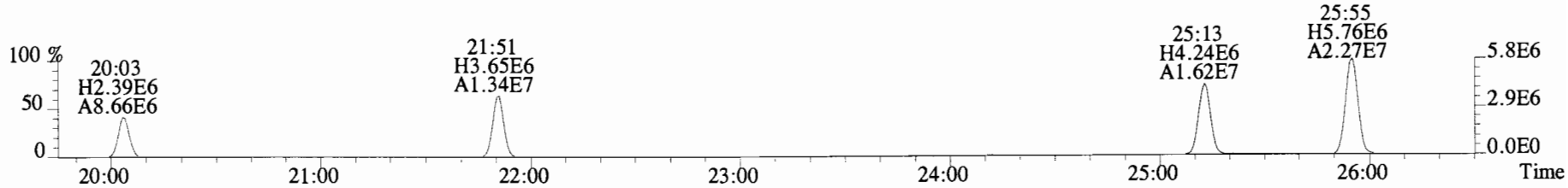
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23636.0,0.00%,F,F)



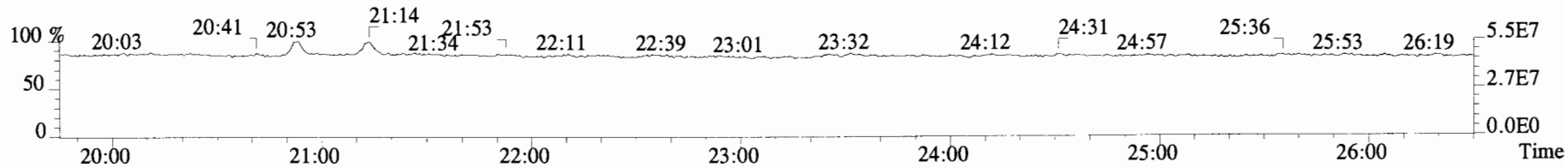
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4104.0,0.00%,F,F)



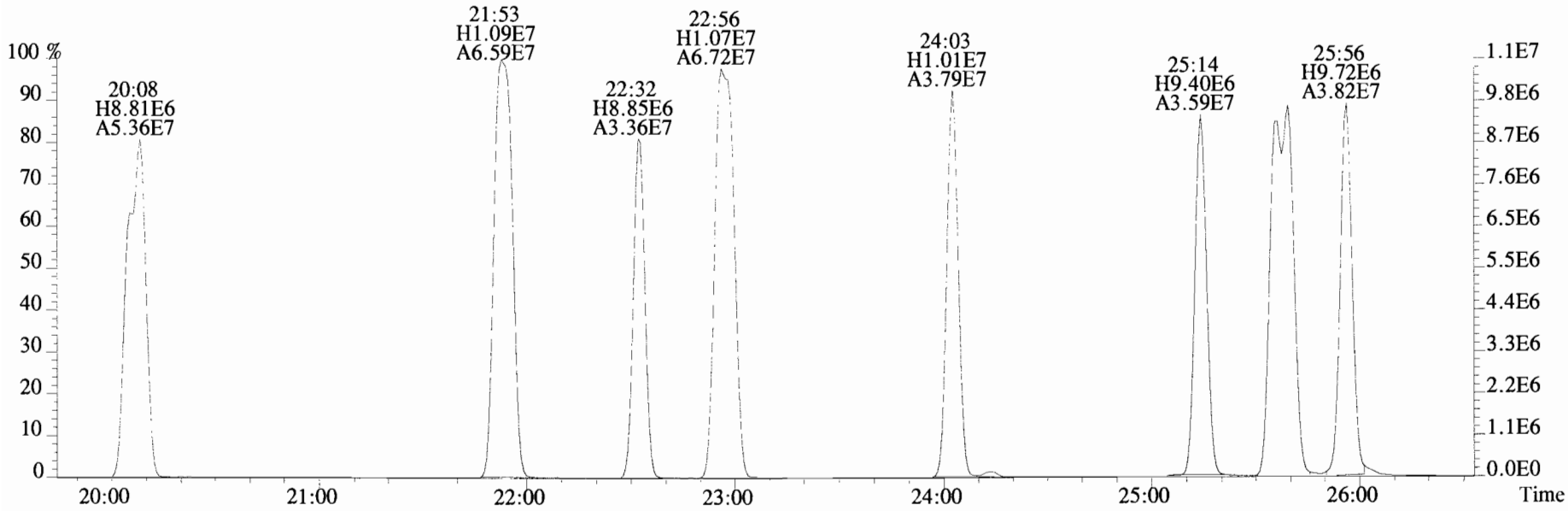
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3920.0,0.00%,F,F)



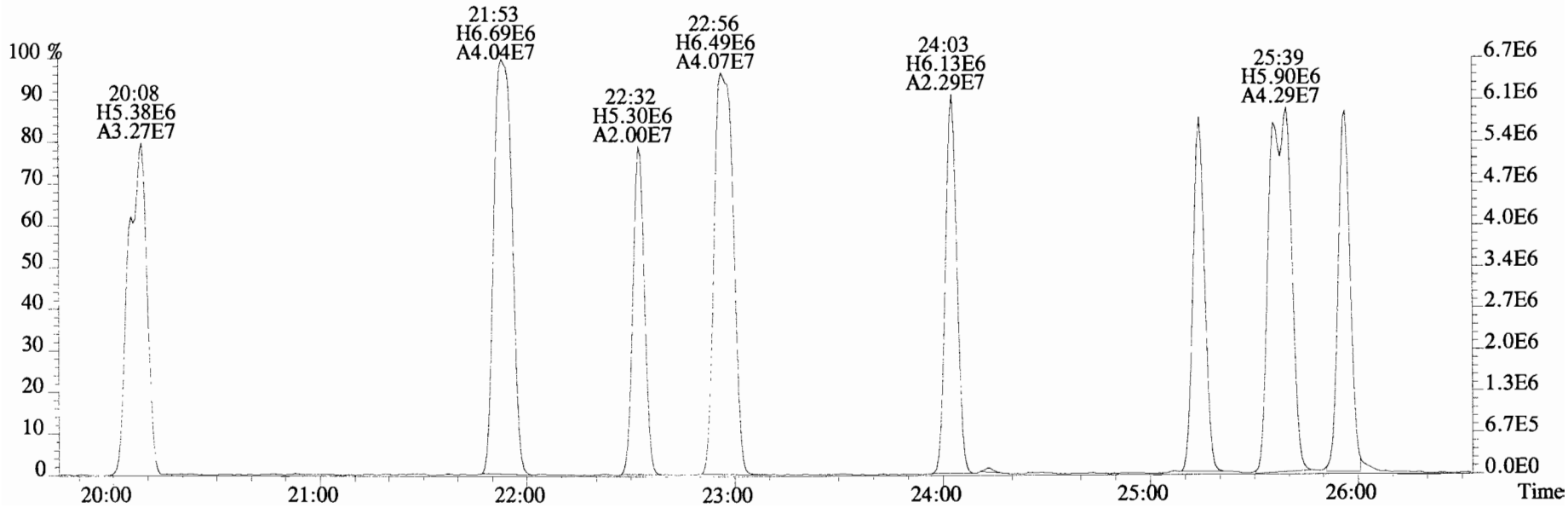
230.9856 S:2 F:2



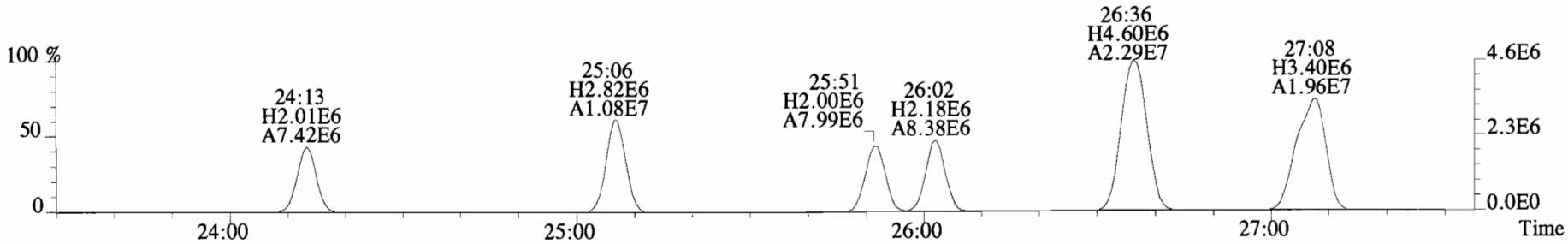
File:141226E1 #1-757 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4656.0,0.00%,F,F)



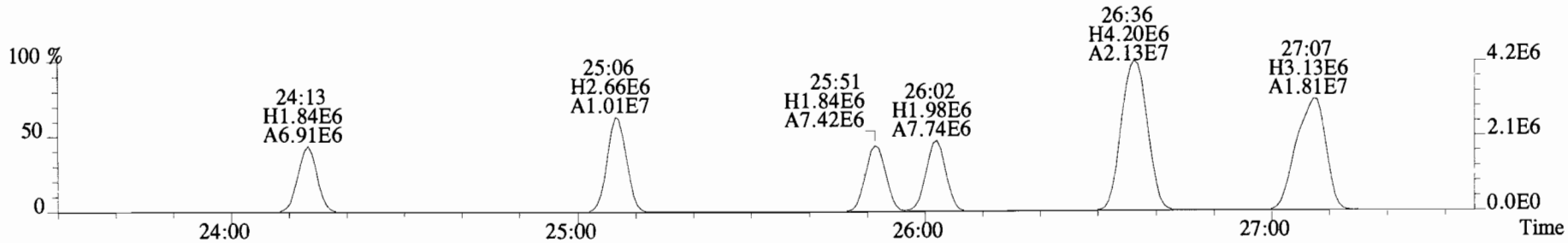
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23636.0,0.00%,F,F)



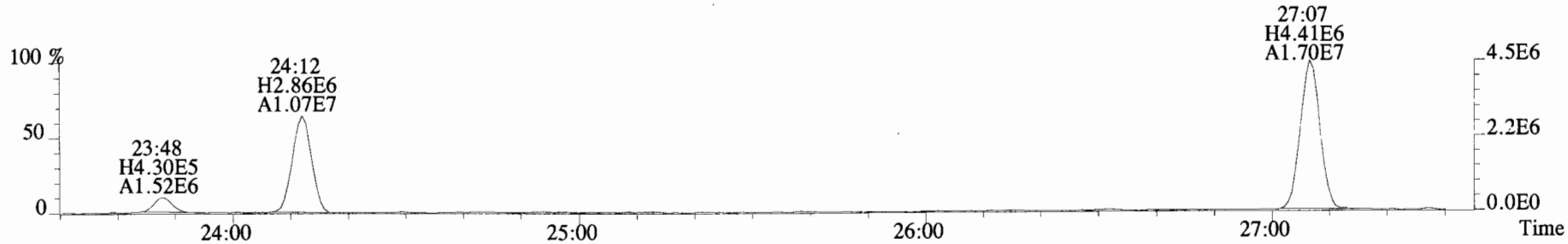
File:141226E1 #1-757 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3884.0,0.00%,F,F)



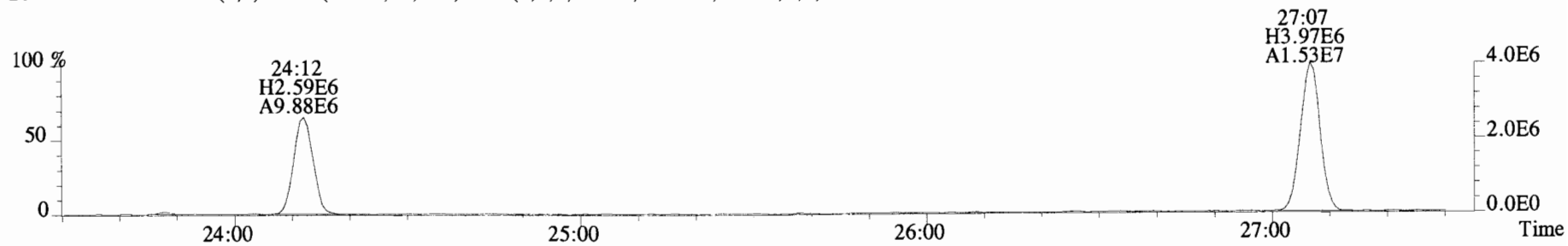
257.9584 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



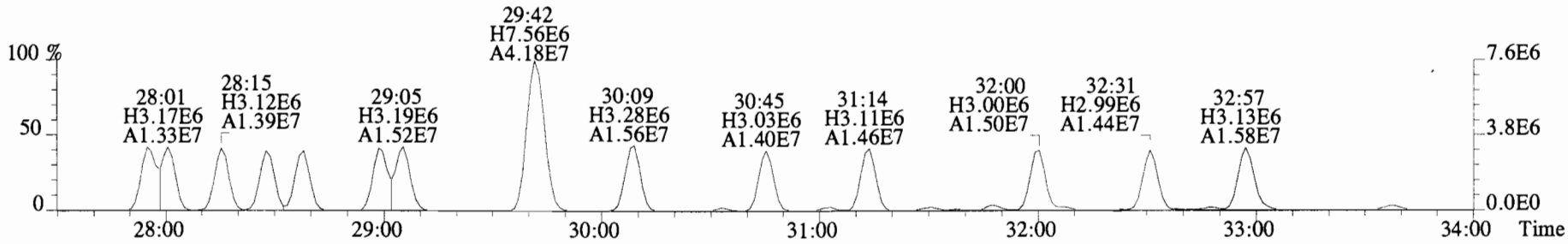
268.0016 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30828.0,0.00%,F,F)



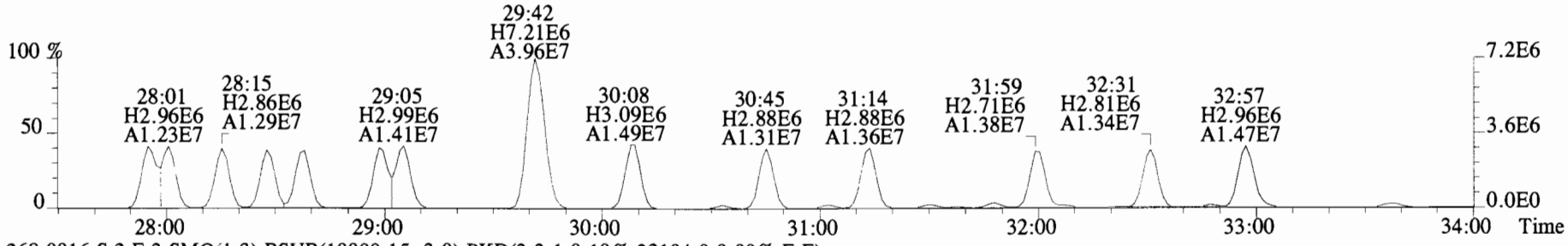
269.9986 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23204.0,0.00%,F,F)



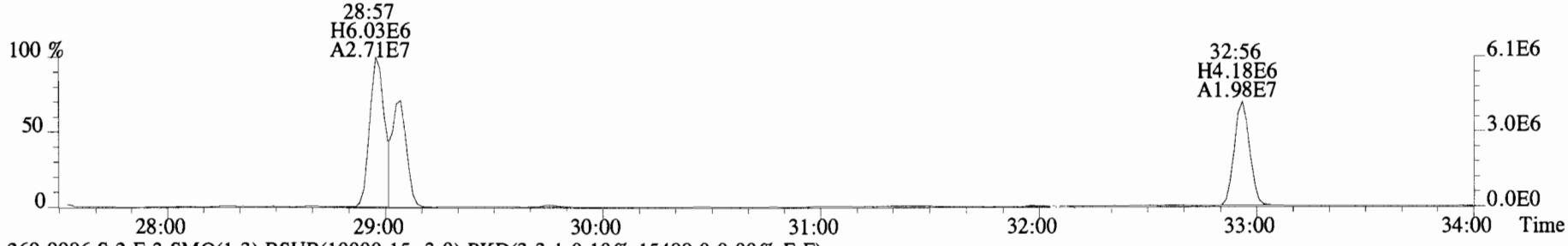
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7020.0,0.00%,F,F)



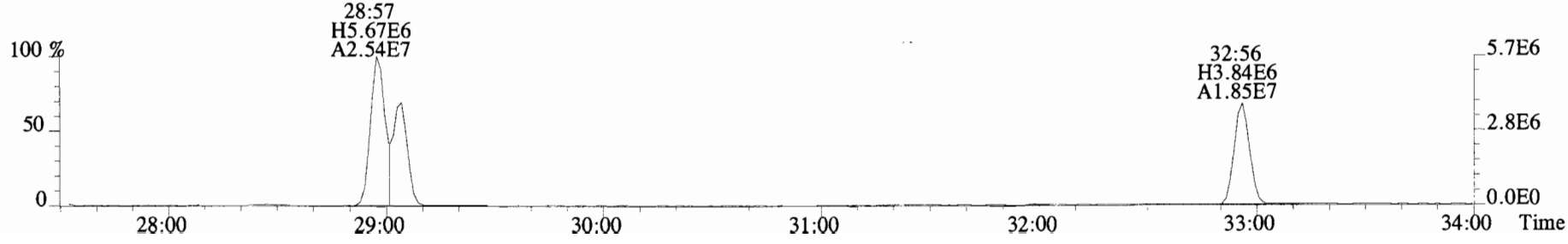
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8600.0,0.00%,F,F)



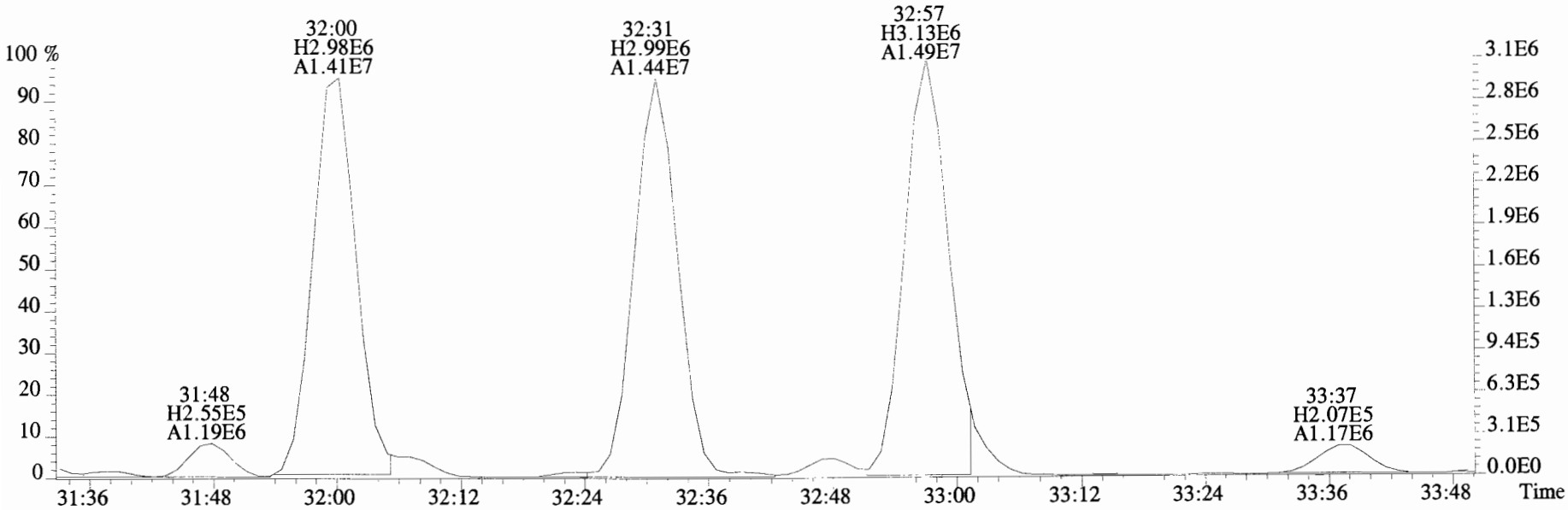
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32104.0,0.00%,F,F)



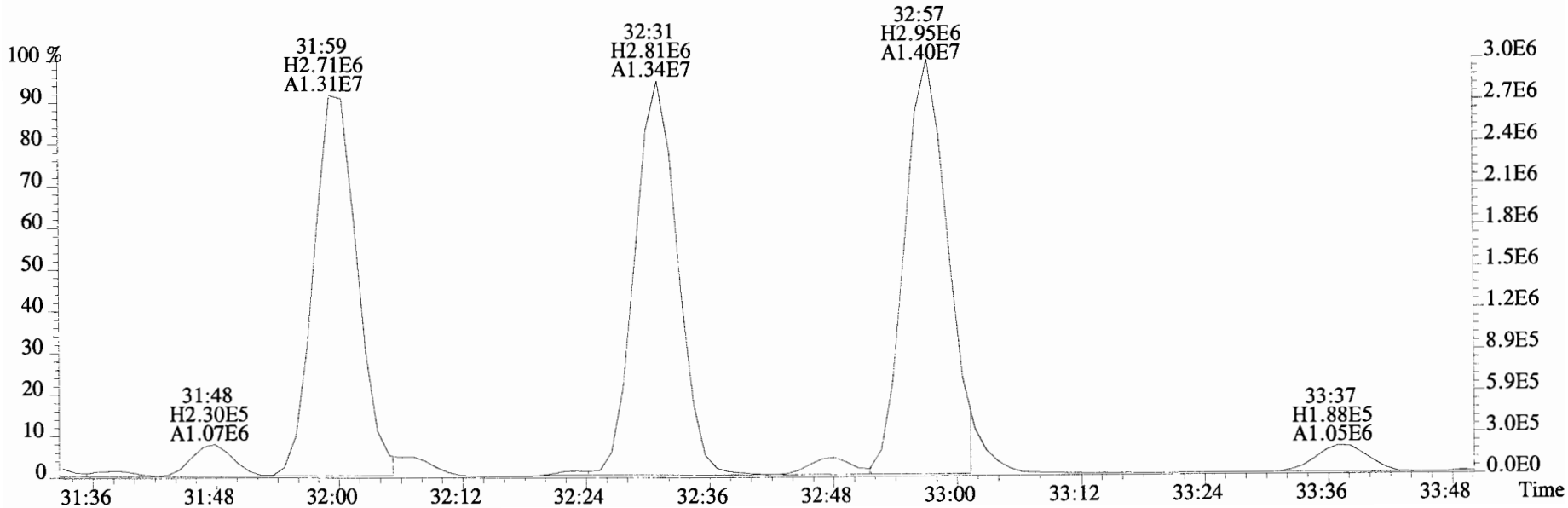
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,15488.0,0.00%,F,F)



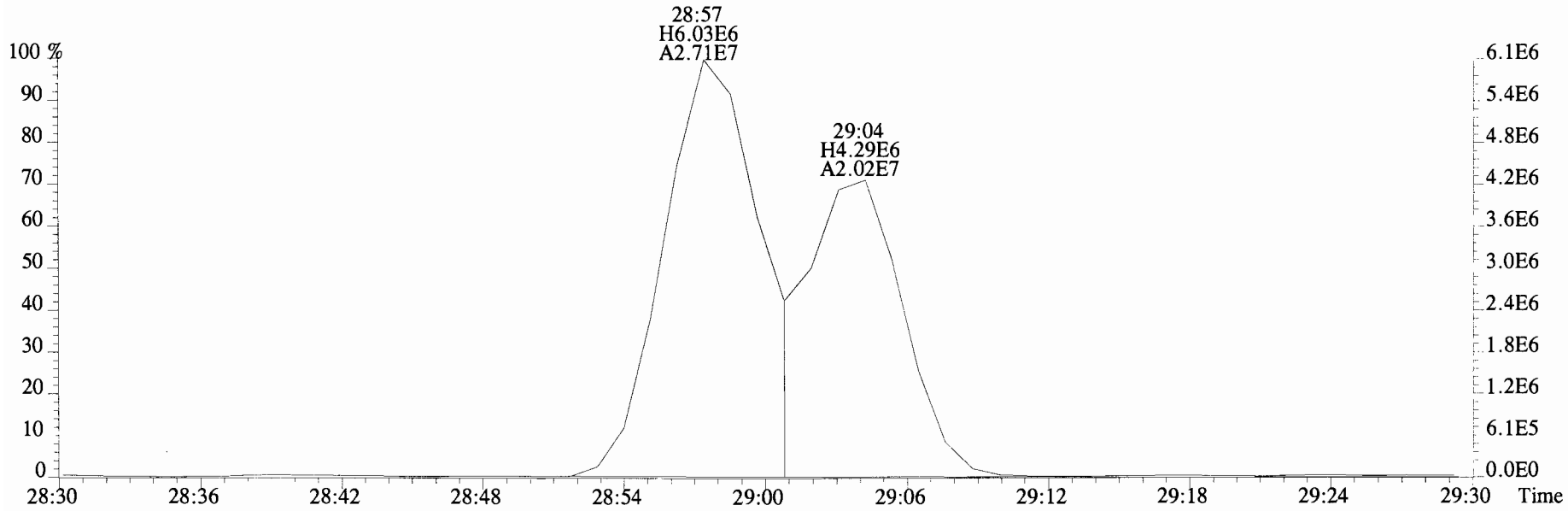
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7020.0,0.00%,F,F)



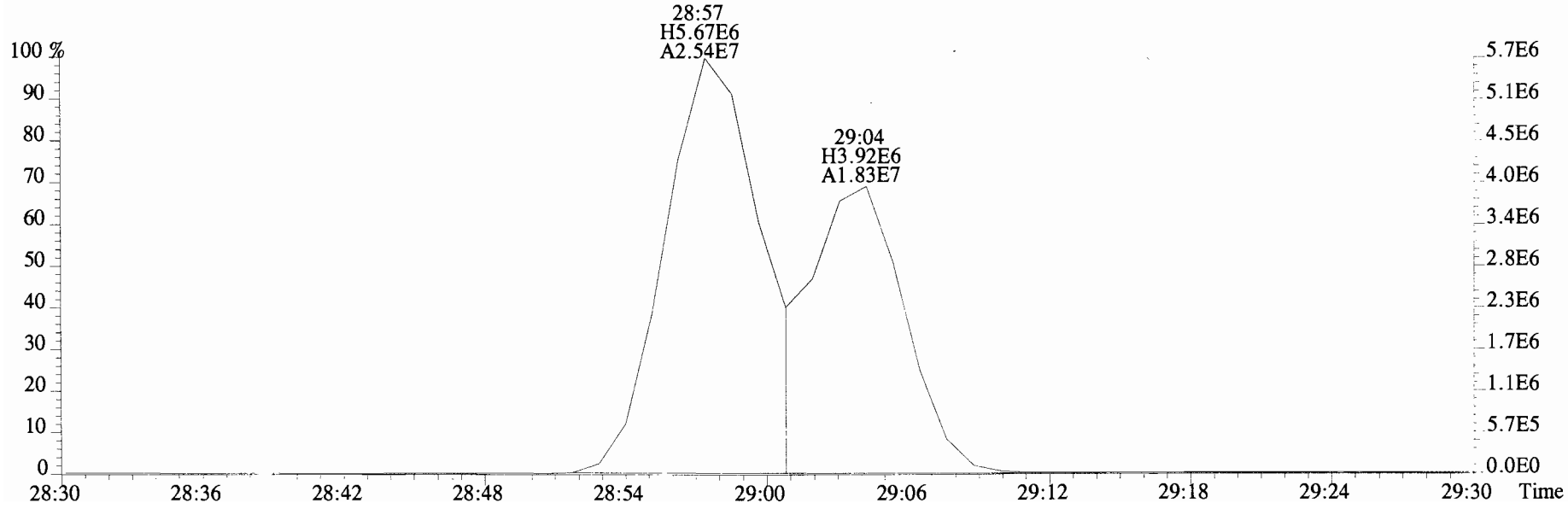
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8604.0,0.00%,F,F)

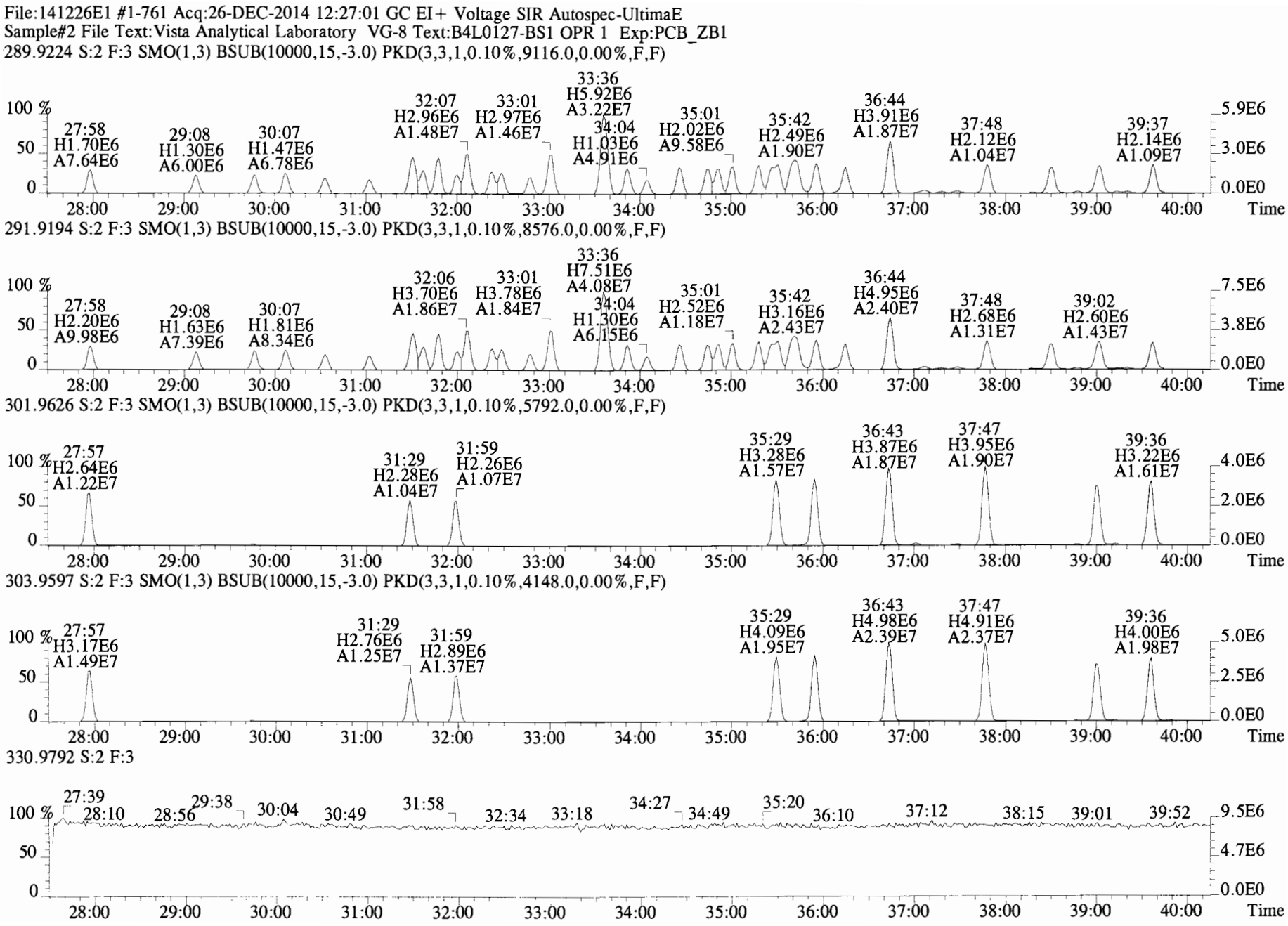


File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32104.0,0.00%,F,F)

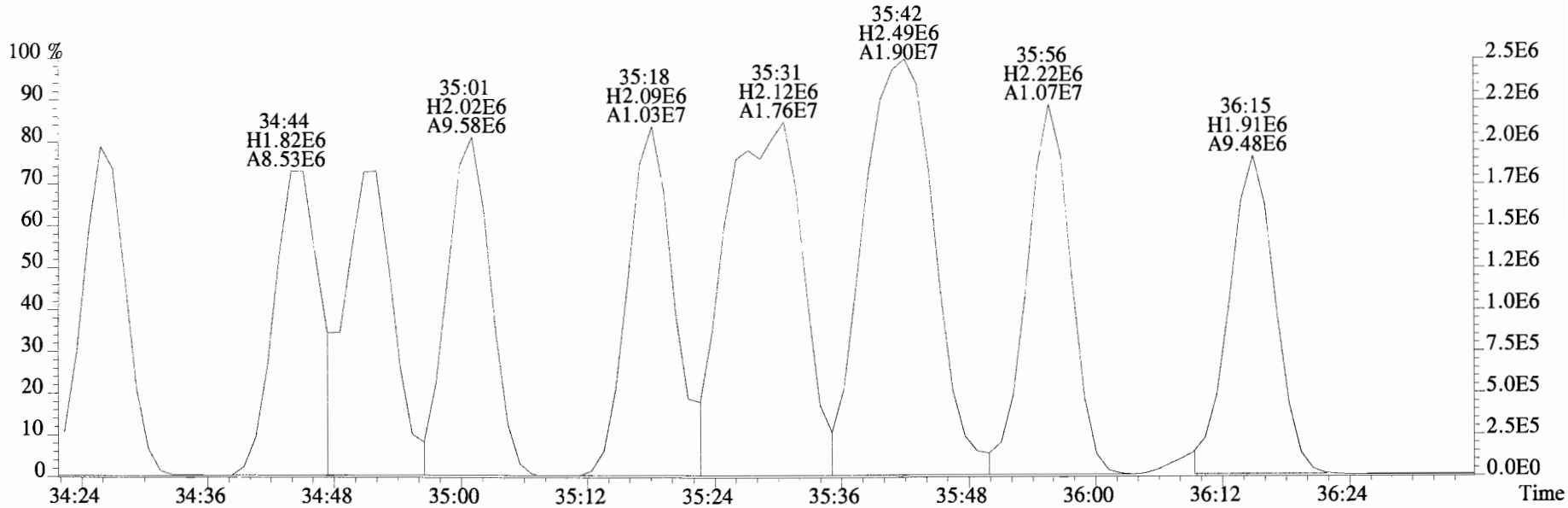


269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,15488.0,0.00%,F,F)

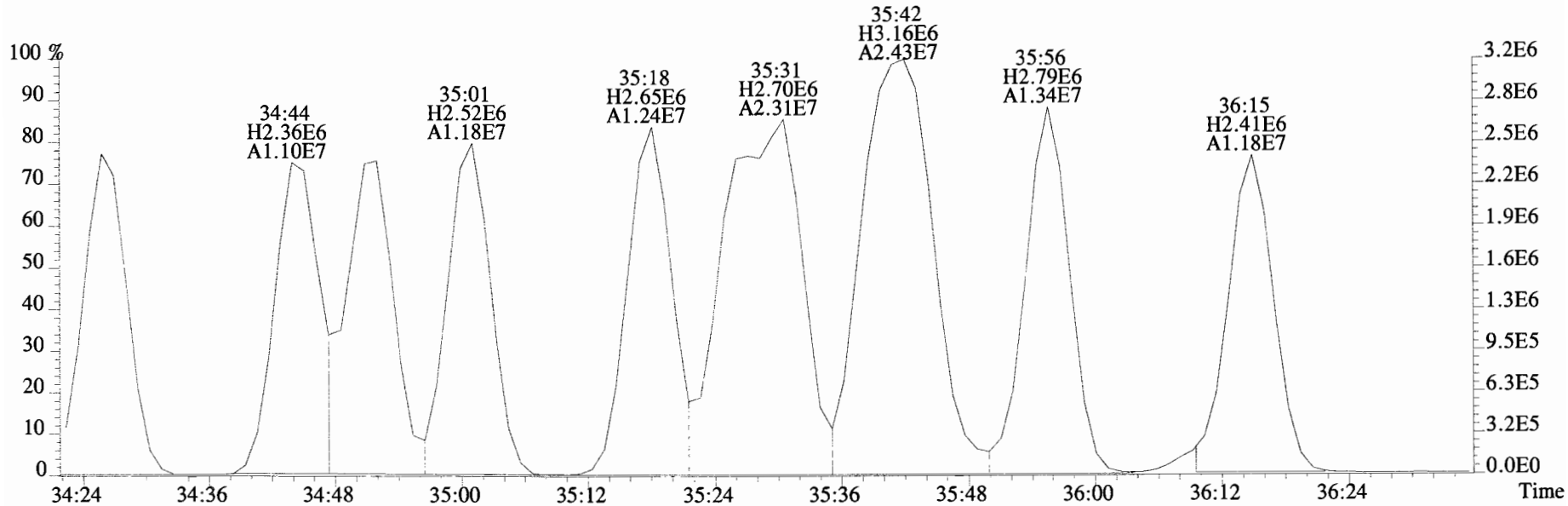


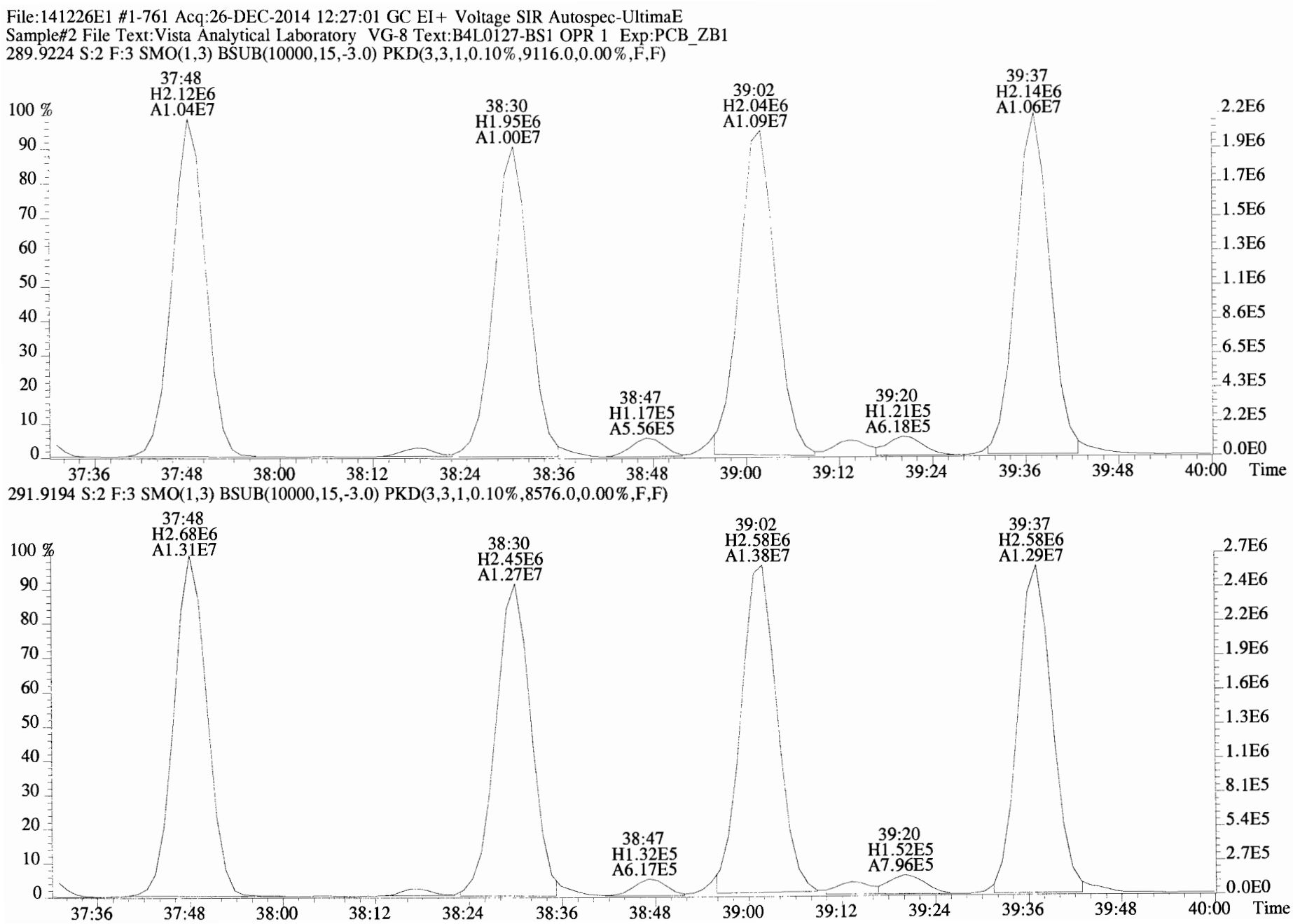

File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9116.0,0.00%,F,F)
27:58 H1.70E6 A7.64E6
29:08 H1.30E6 A6.00E6
30:07 H1.47E6 A6.78E6
32:07 H2.96E6 A1.48E7
33:01 H2.97E6 A1.46E7
33:36 H5.92E6 A3.22E7
34:04 H1.03E6 A4.91E6
35:01 H2.02E6 A9.58E6
35:42 H2.49E6 A1.90E7
36:44 H3.91E6 A1.87E7
37:48 H2.12E6 A1.04E7
39:37 H2.14E6 A1.09E7
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8576.0,0.00%,F,F)
27:58 H2.20E6 A9.98E6
29:08 H1.63E6 A7.39E6
30:07 H1.81E6 A8.34E6
32:06 H3.70E6 A1.86E7
33:01 H3.78E6 A1.84E7
33:36 H7.51E6 A4.08E7
34:04 H1.30E6 A6.15E6
35:01 H2.52E6 A1.18E7
35:42 H3.16E6 A2.43E7
36:44 H4.95E6 A2.40E7
37:48 H2.68E6 A1.31E7
39:02 H2.60E6 A1.43E7
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5792.0,0.00%,F,F)
27:57 H2.64E6 A1.22E7
31:29 H2.28E6 A1.04E7
31:59 H2.26E6 A1.07E7
35:29 H3.28E6 A1.57E7
36:43 H3.87E6 A1.87E7
37:47 H3.95E6 A1.90E7
39:36 H3.22E6 A1.61E7
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4148.0,0.00%,F,F)
27:57 H3.17E6 A1.49E7
31:29 H2.76E6 A1.25E7
31:59 H2.89E6 A1.37E7
35:29 H4.09E6 A1.95E7
36:43 H4.98E6 A2.39E7
37:47 H4.91E6 A2.37E7
39:36 H4.00E6 A1.98E7
330.9792 S:2 F:3
27:39
28:10
28:56
29:38
30:04
30:49
31:58
32:34
33:18
34:27
34:49
35:20
36:10
37:12
38:15
39:01
39:52
100 %
50
0
Time
28:00
29:00
30:00
31:00
32:00
33:00
34:00
35:00
36:00
37:00
38:00
39:00
40:00
5.9E6
3.0E6
0.0E0
7.5E6
3.8E6
4.0E6
2.0E6
5.0E6
2.5E6
9.5E6
4.7E6

File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9116.0,0.00%,F,F)



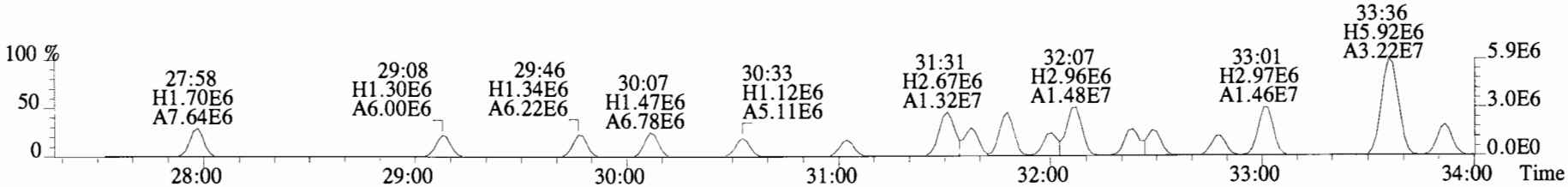
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8576.0,0.00%,F,F)



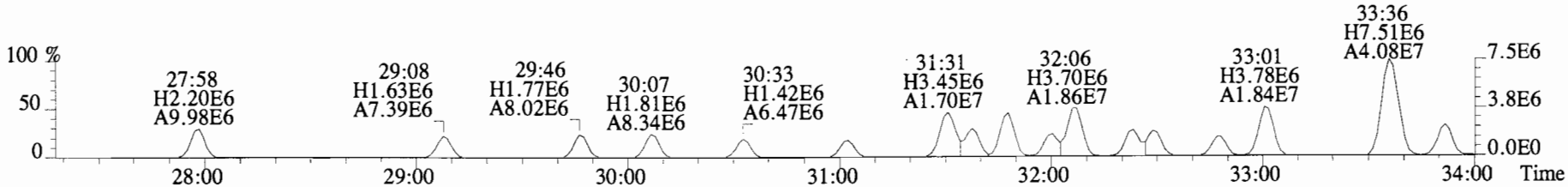

File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9116.0,0.00%,F,F)
37:48
H2.12E6
A1.04E7
38:30
H1.95E6
A1.00E7
38:47
H1.17E5
A5.56E5
39:02
H2.04E6
A1.09E7
39:20
H1.21E5
A6.18E5
39:37
H2.14E6
A1.06E7
100 %
Time
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8576.0,0.00%,F,F)
37:48
H2.68E6
A1.31E7
38:30
H2.45E6
A1.27E7
38:47
H1.32E5
A6.17E5
39:02
H2.58E6
A1.38E7
39:20
H1.52E5
A7.96E5
39:37
H2.58E6
A1.29E7
100 %
Time

File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1

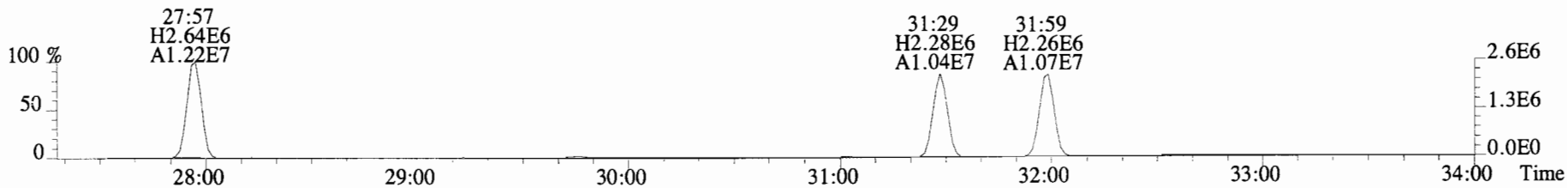
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9116.0,0.00%,F,F)



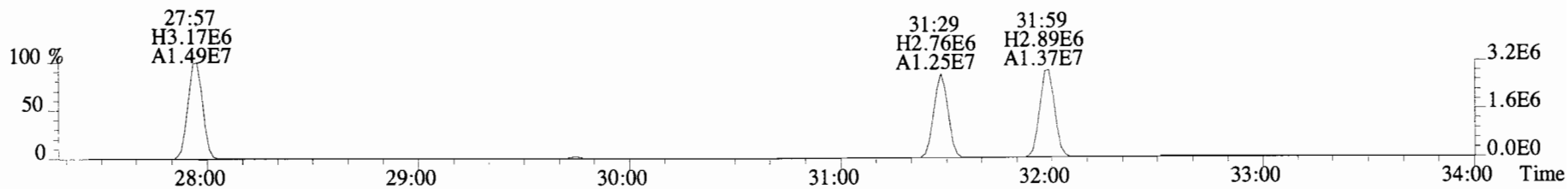
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8576.0,0.00%,F,F)



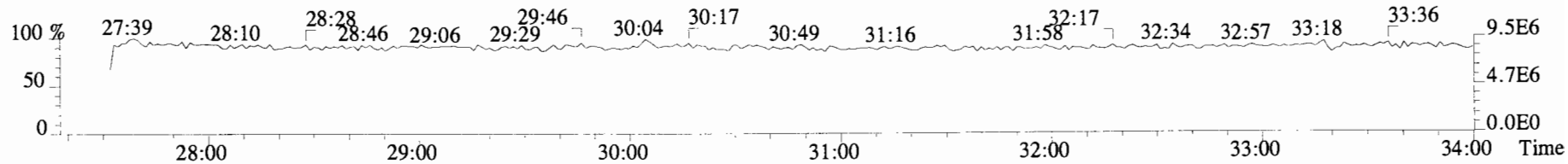
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5792.0,0.00%,F,F)



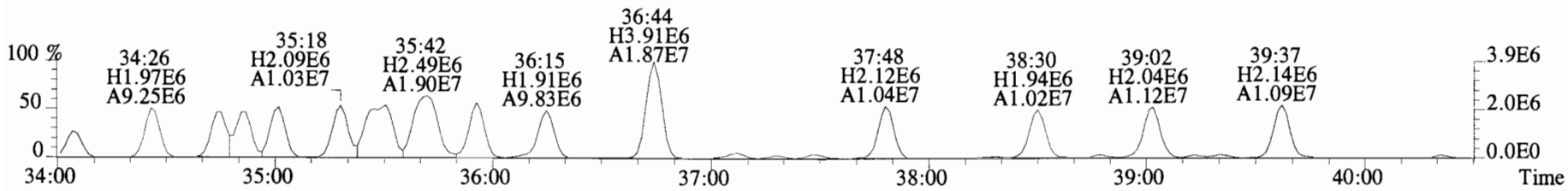
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4148.0,0.00%,F,F)



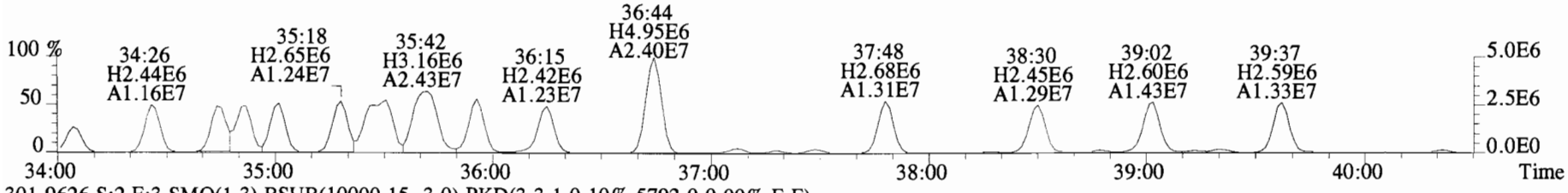
330.9792 S:2 F:3



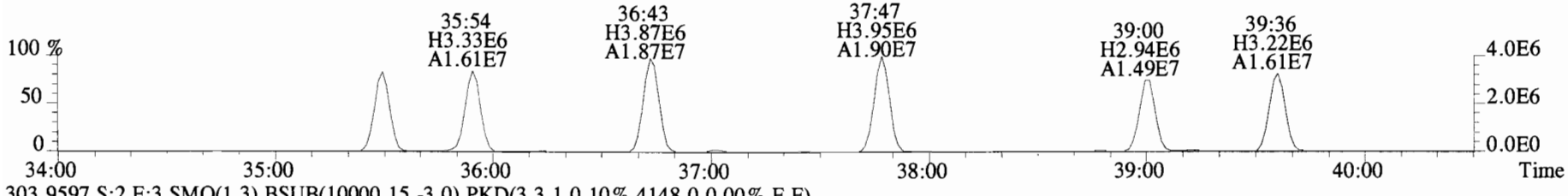
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9116.0,0.00%,F,F)



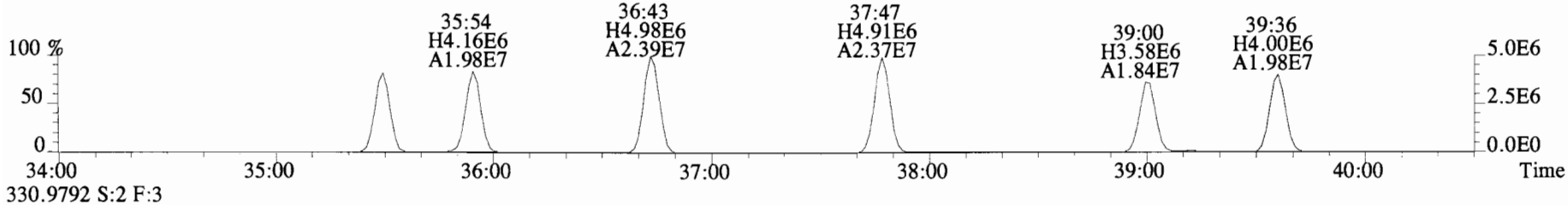
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8576.0,0.00%,F,F)



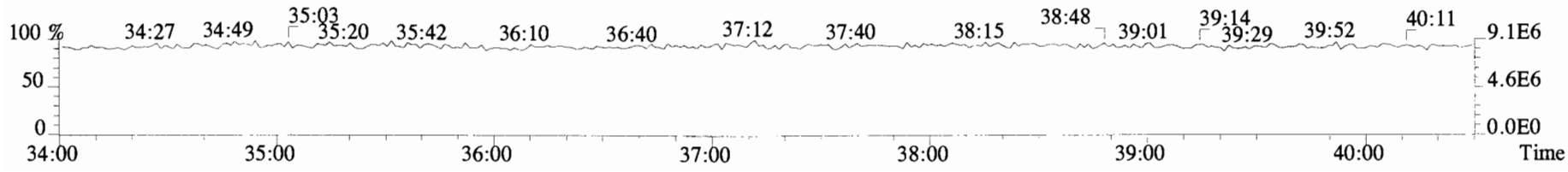
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5792.0,0.00%,F,F)



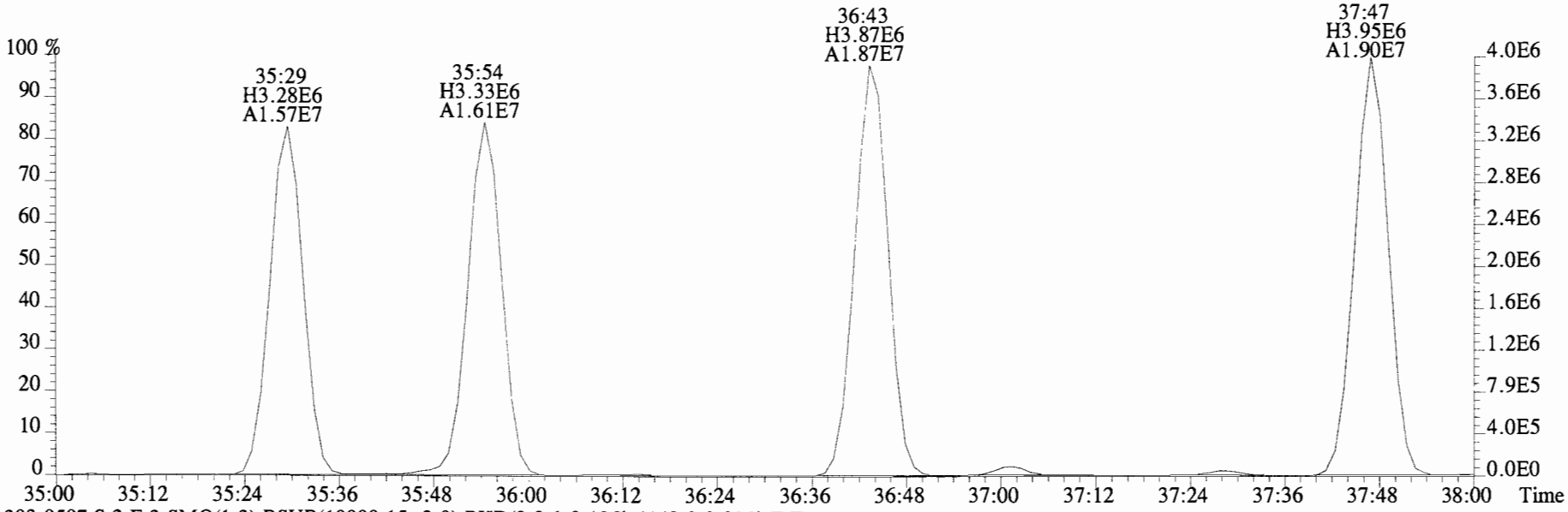
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4148.0,0.00%,F,F)



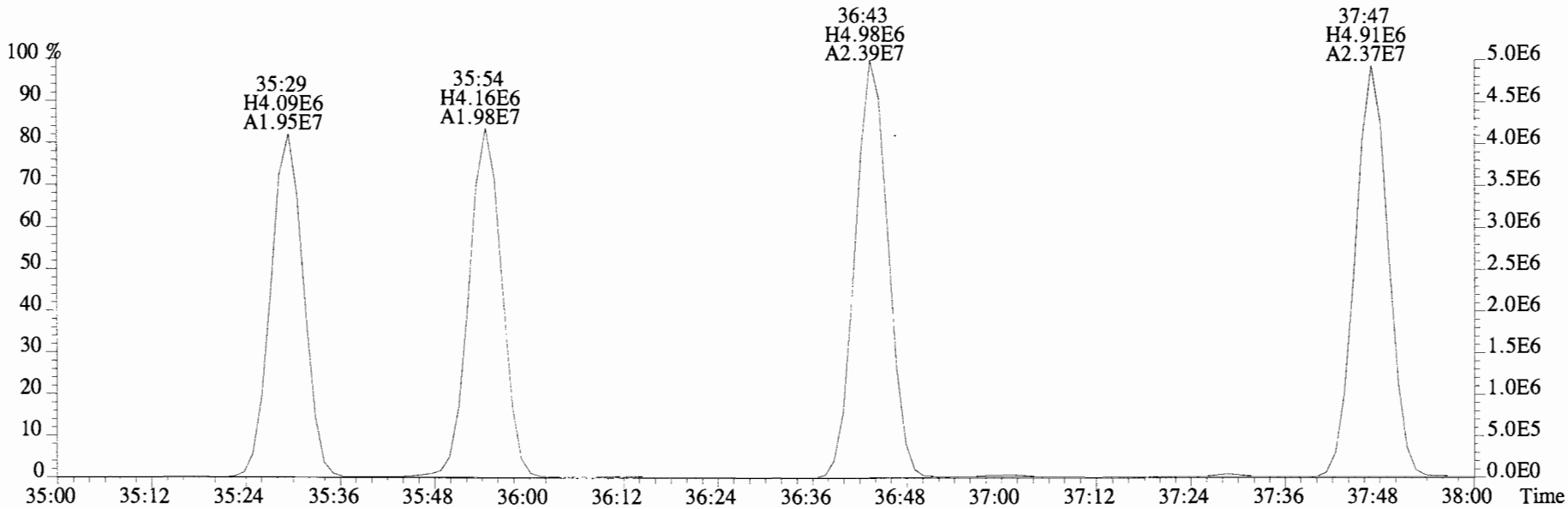
330.9792 S:2 F:3

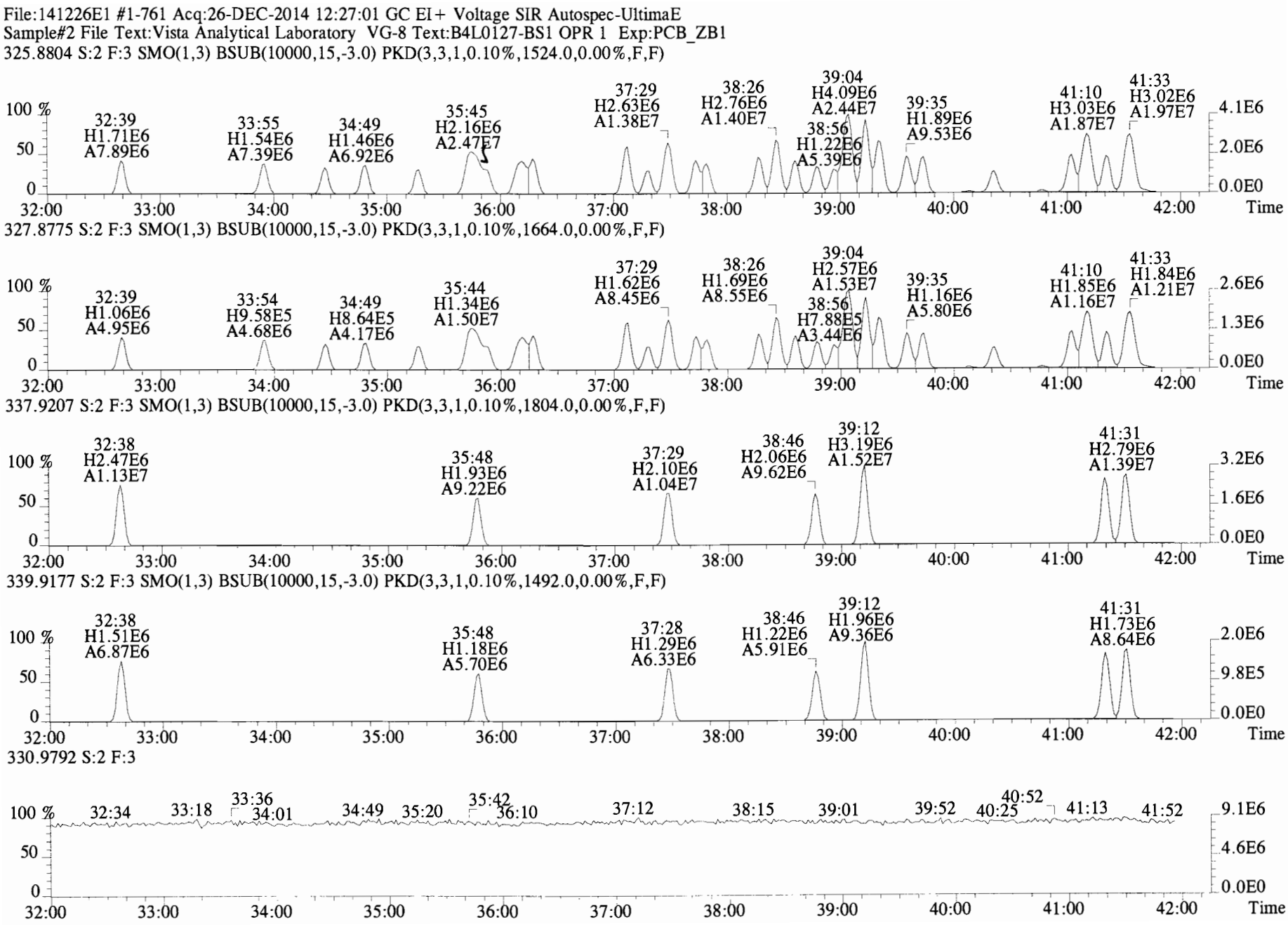


File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5792.0,0.00%,F,F)

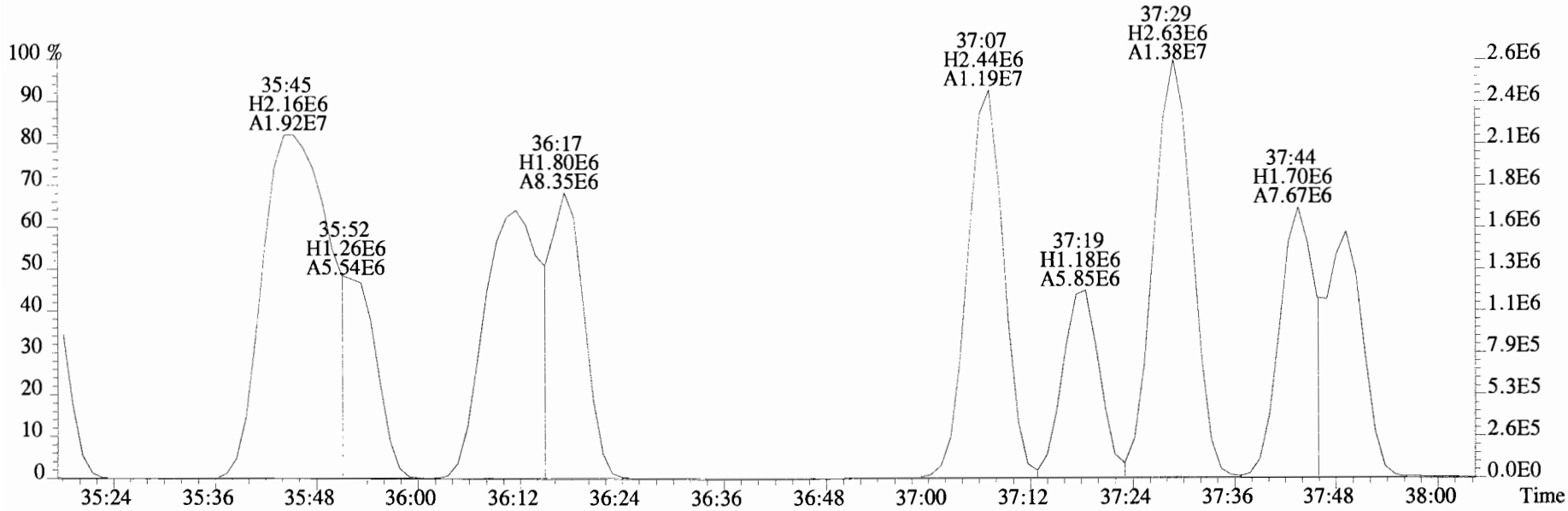


303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4148.0,0.00%,F,F)

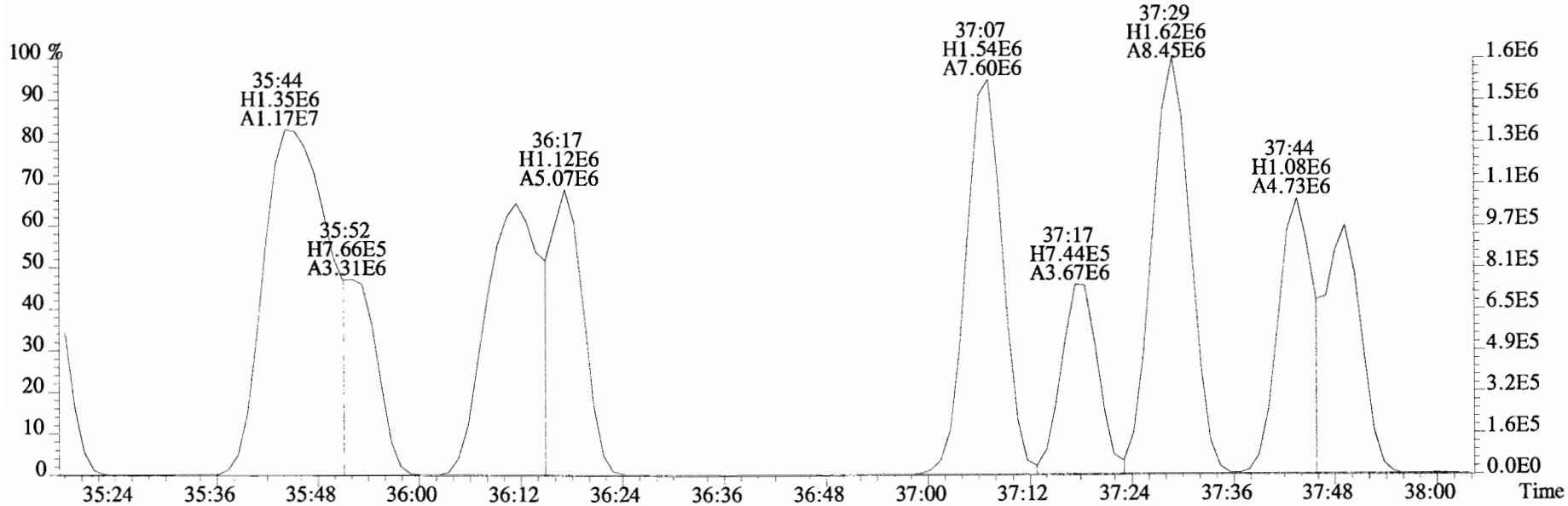



File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)
32:39 H1.71E6 A7.89E6
33:55 H1.54E6 A7.39E6
34:49 H1.46E6 A6.92E6
35:45 H2.16E6 A2.47E7
37:29 H2.63E6 A1.38E7
38:26 H2.76E6 A1.40E7
39:04 H4.09E6 A2.44E7
38:56 H1.22E6 A5.39E6
39:35 H1.89E6 A9.53E6
41:10 H3.03E6 A1.87E7
41:33 H3.02E6 A1.97E7
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)
32:39 H1.06E6 A4.95E6
33:54 H9.58E5 A4.68E6
34:49 H8.64E5 A4.17E6
35:44 H1.34E6 A1.50E7
37:29 H1.62E6 A8.45E6
38:26 H1.69E6 A8.55E6
39:04 H2.57E6 A1.53E7
38:56 H7.88E5 A3.44E6
39:35 H1.16E6 A5.80E6
41:10 H1.85E6 A1.16E7
41:33 H1.84E6 A1.21E7
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)
32:38 H2.47E6 A1.13E7
35:48 H1.93E6 A9.22E6
37:29 H2.10E6 A1.04E7
38:46 H2.06E6 A9.62E6
39:12 H3.19E6 A1.52E7
41:31 H2.79E6 A1.39E7
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1492.0,0.00%,F,F)
32:38 H1.51E6 A6.87E6
35:48 H1.18E6 A5.70E6
37:28 H1.29E6 A6.33E6
38:46 H1.22E6 A5.91E6
39:12 H1.96E6 A9.36E6
41:31 H1.73E6 A8.64E6
330.9792 S:2 F:3
32:34 33:18 33:36 34:01 34:49 35:20 35:42 36:10 37:12 38:15 39:01 39:52 40:25 40:52 41:13 41:52
100 %
50
0
32:00 33:00 34:00 35:00 36:00 37:00 38:00 39:00 40:00 41:00 42:00 Time
4.1E6 2.0E6 0.0E0
2.6E6 1.3E6 0.0E0
3.2E6 1.6E6 0.0E0
2.0E6 9.8E5 0.0E0
9.1E6 4.6E6 0.0E0

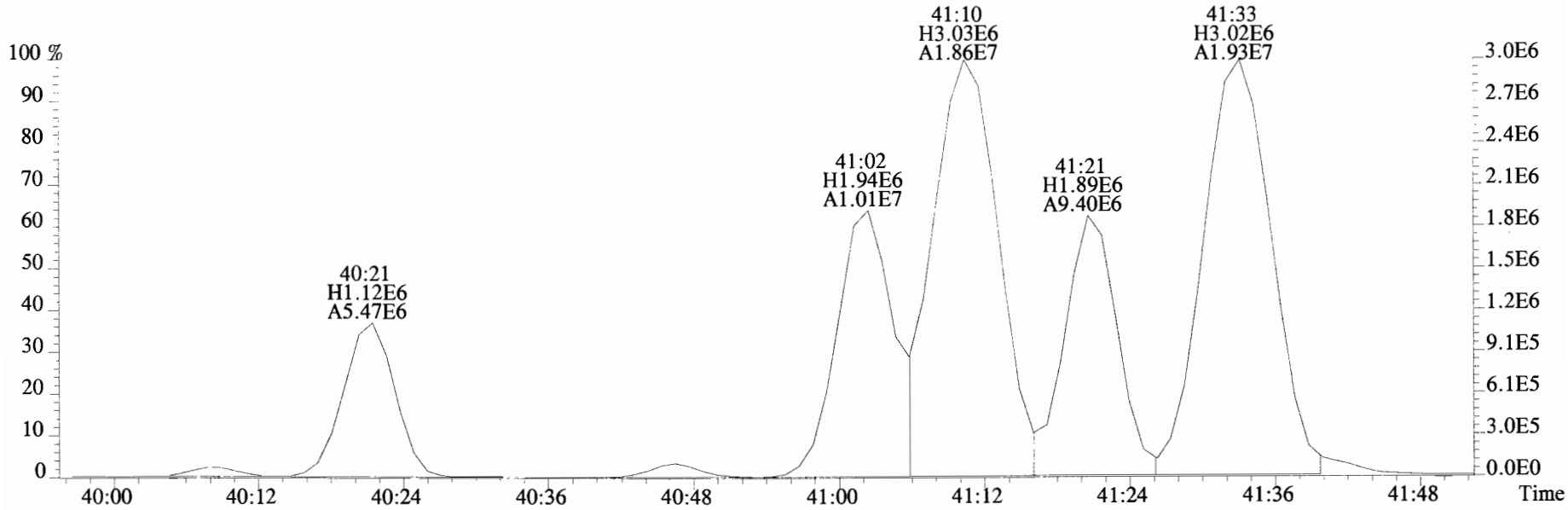
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)



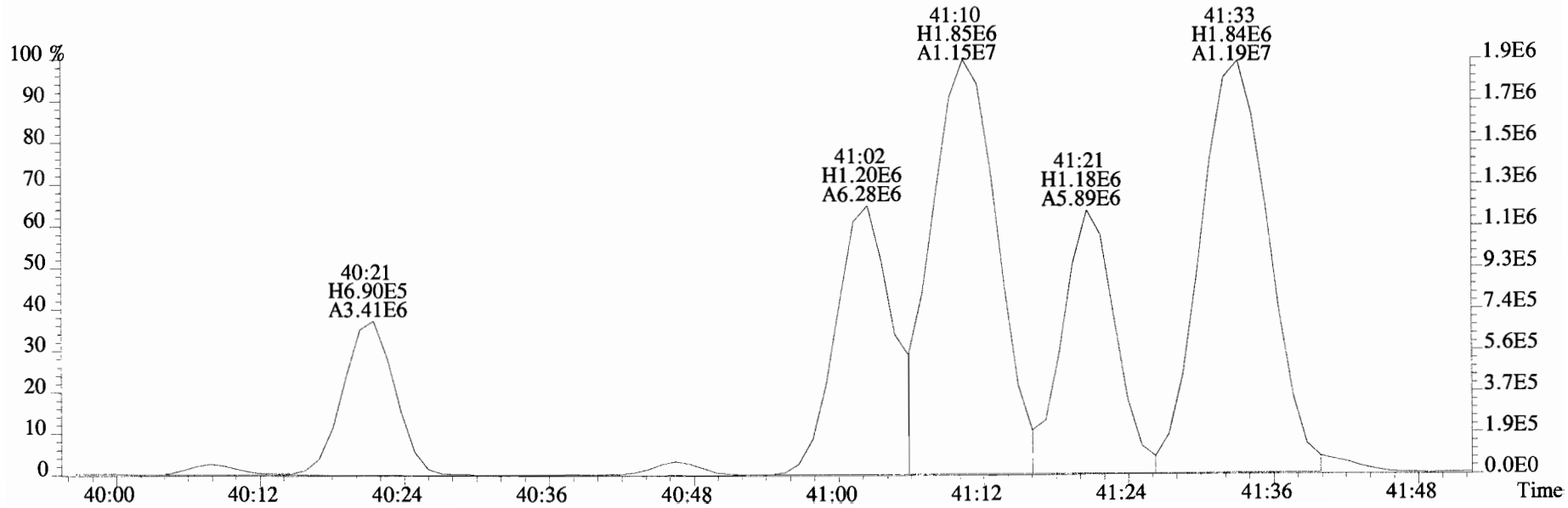
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



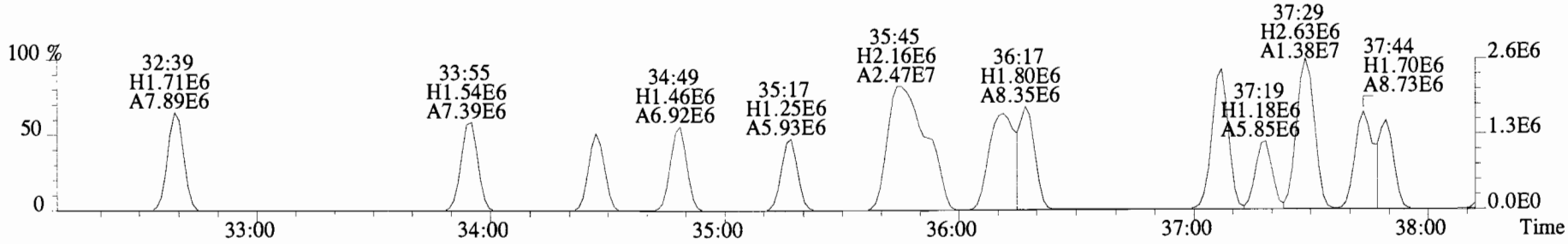
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)



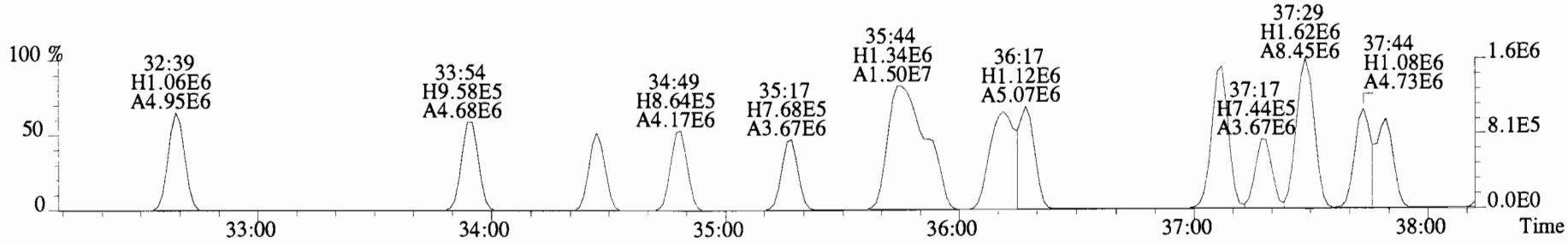
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



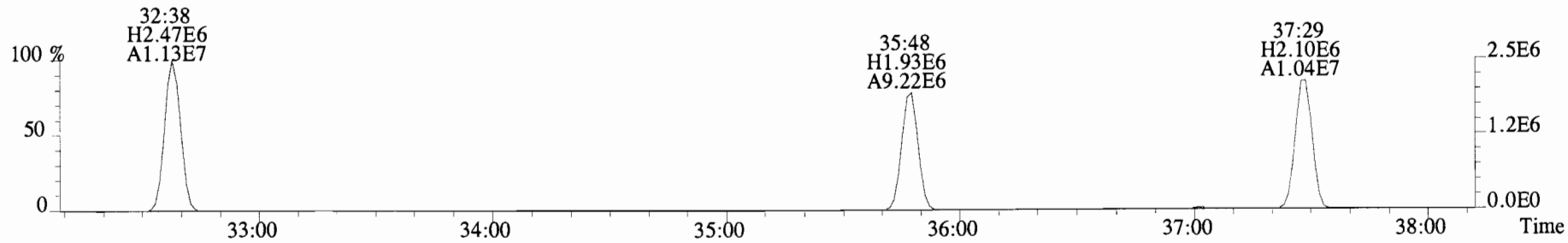
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)



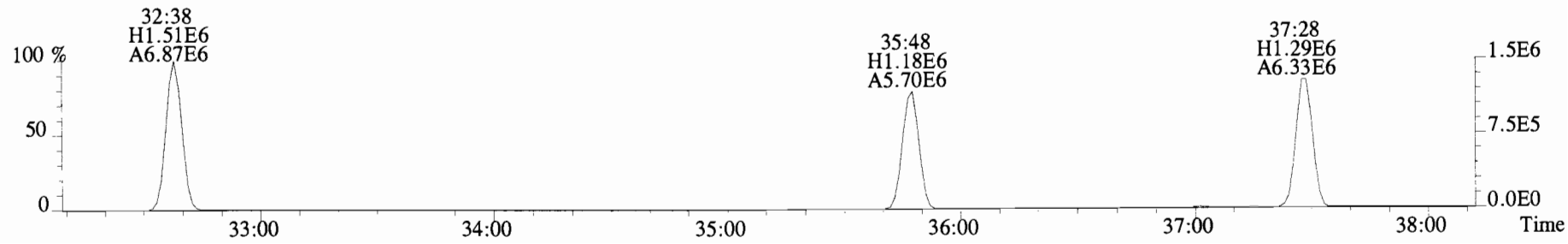
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



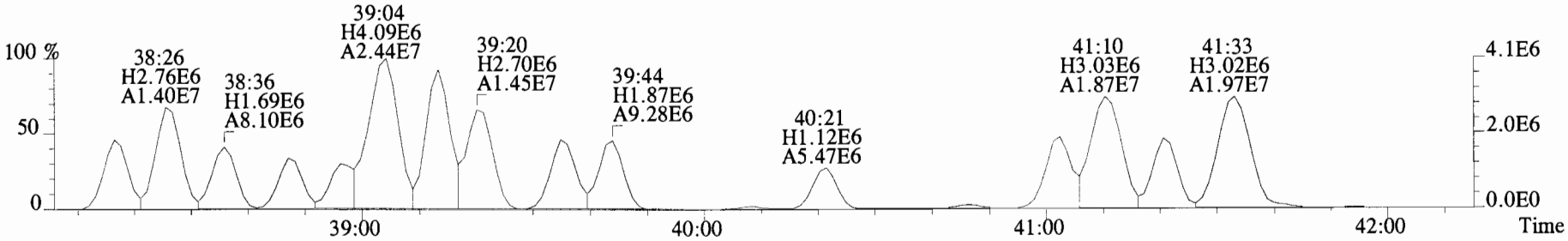
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



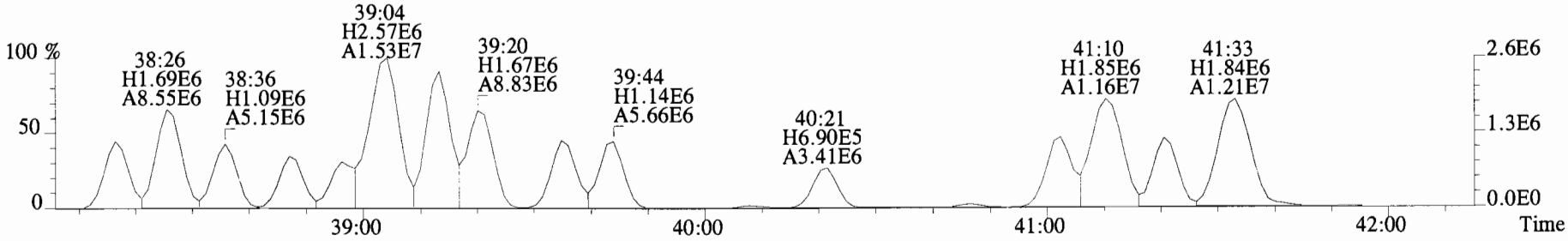
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1492.0,0.00%,F,F)



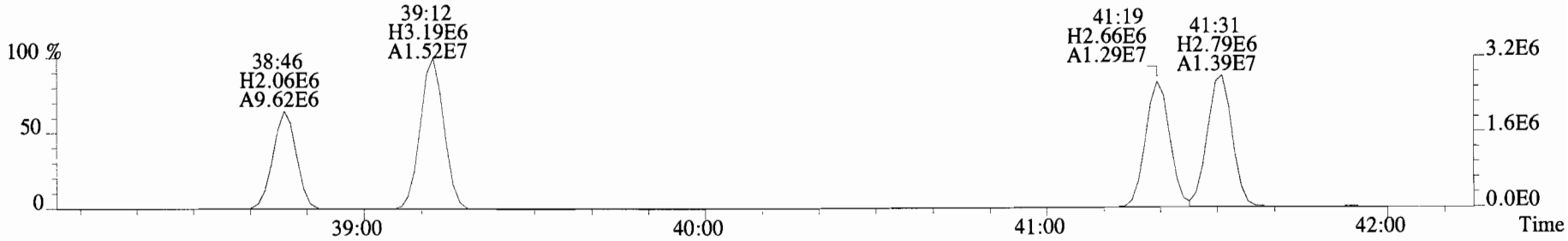
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1524.0,0.00%,F,F)



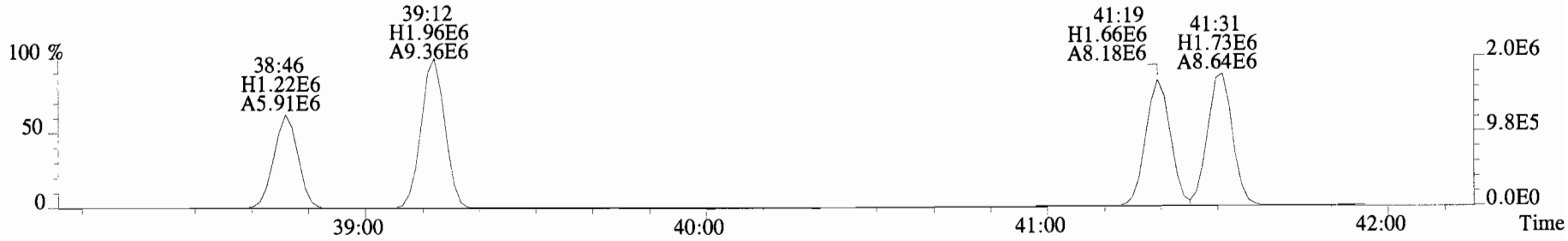
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



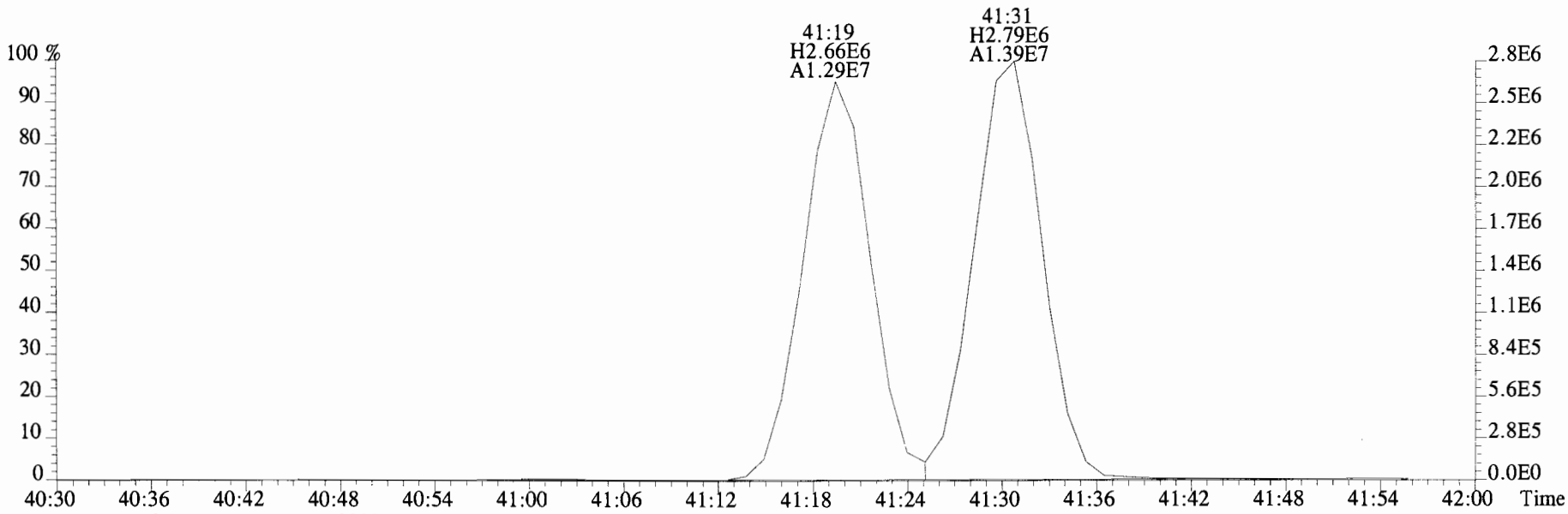
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



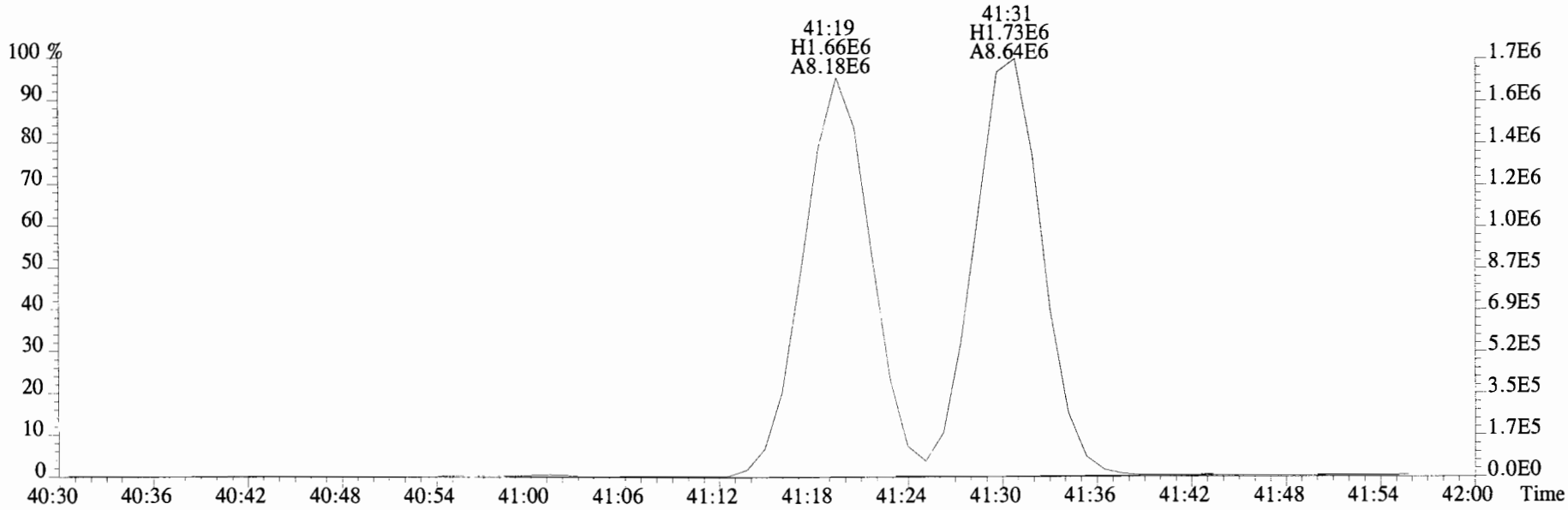
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1492.0,0.00%,F,F)



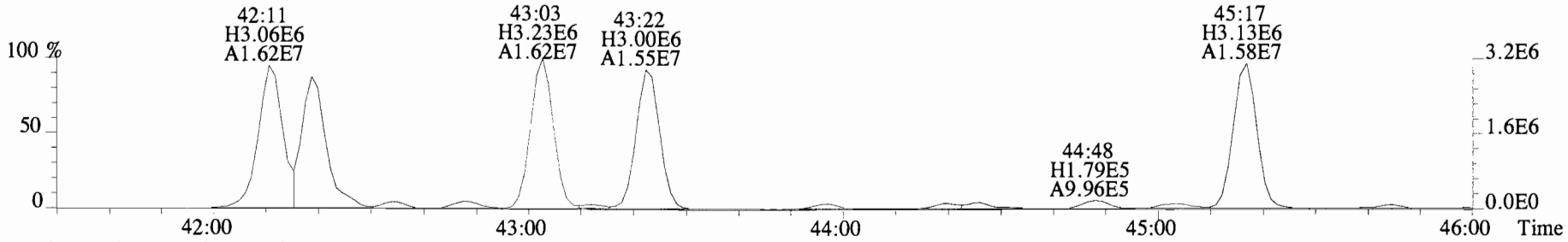
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



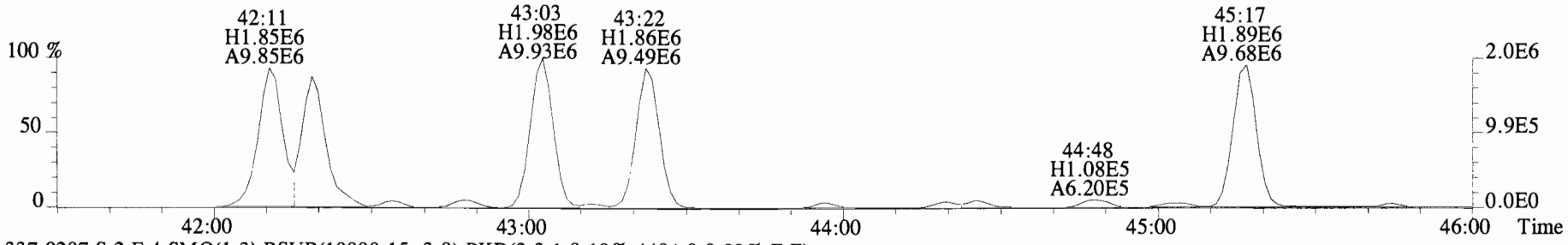
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1492.0,0.00%,F,F)



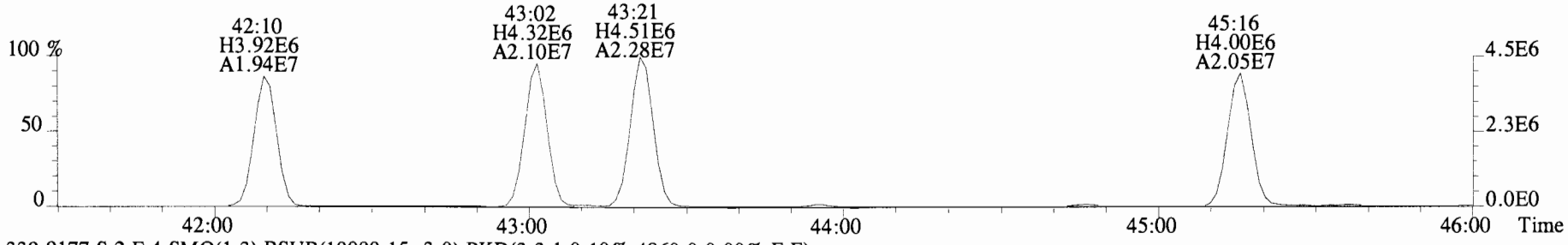
File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5464.0,0.00%,F,F)



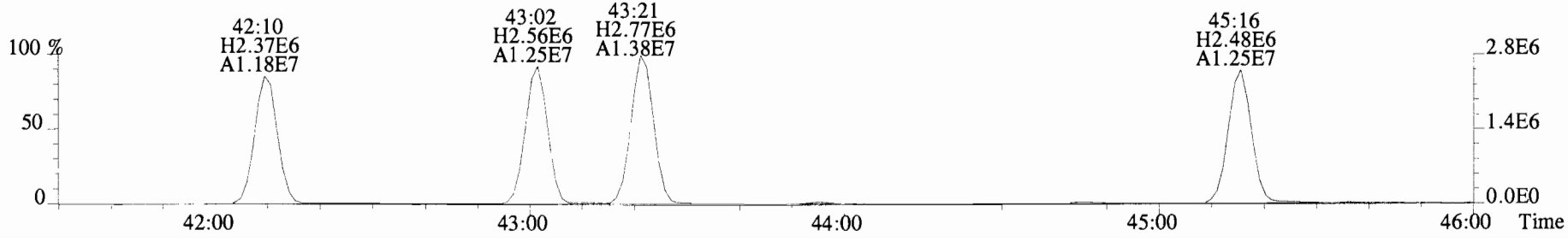
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3704.0,0.00%,F,F)



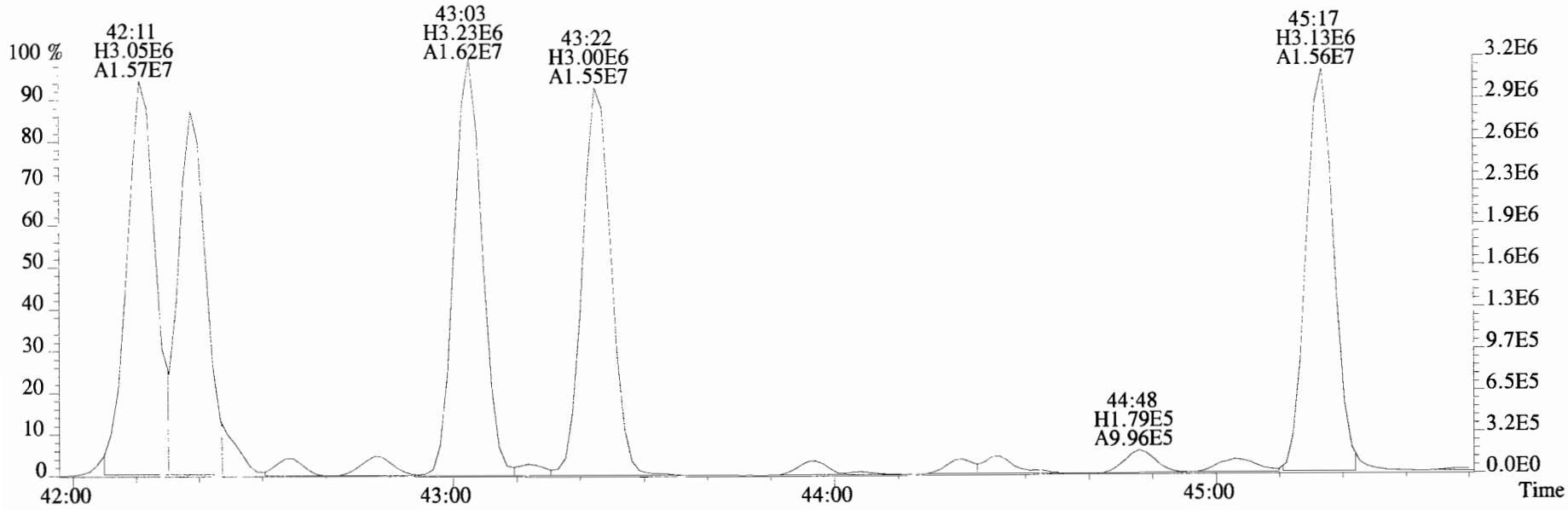
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4404.0,0.00%,F,F)



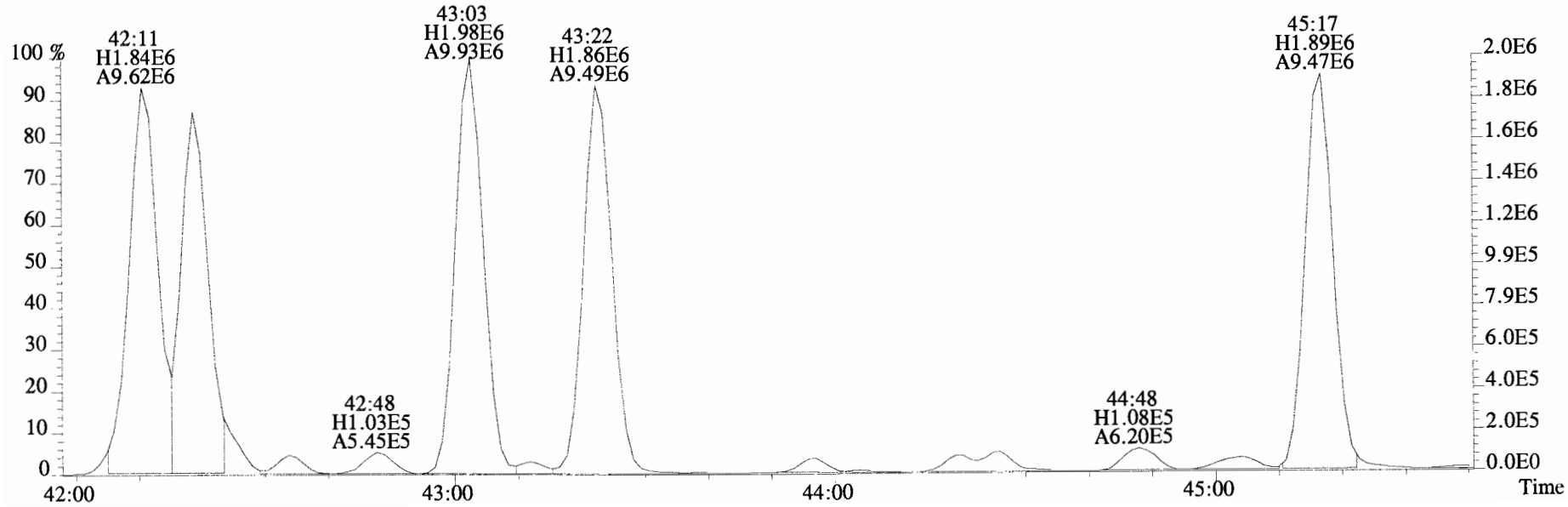
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4860.0,0.00%,F,F)



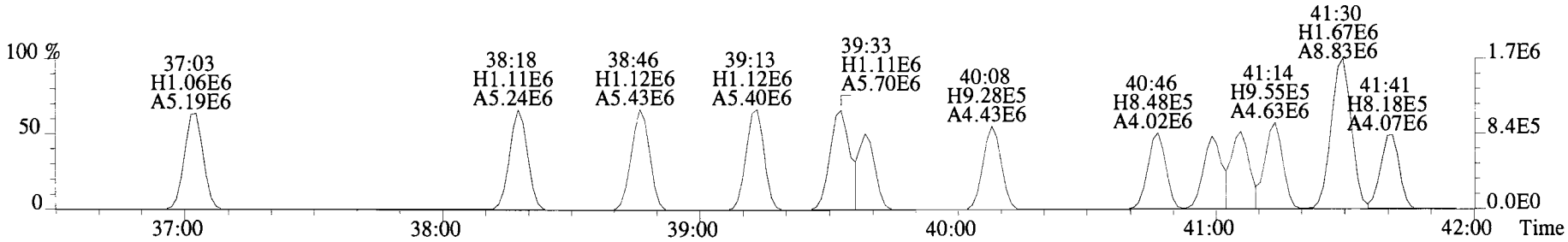
File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5464.0,0.00%,F,F)



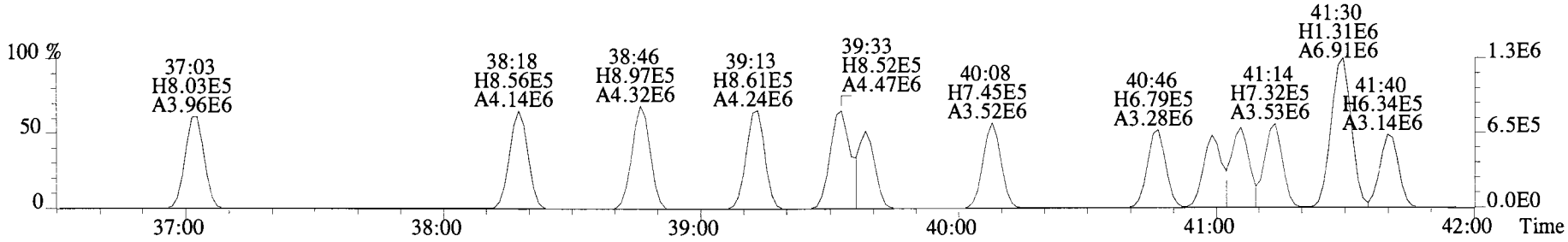
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3704.0,0.00%,F,F)



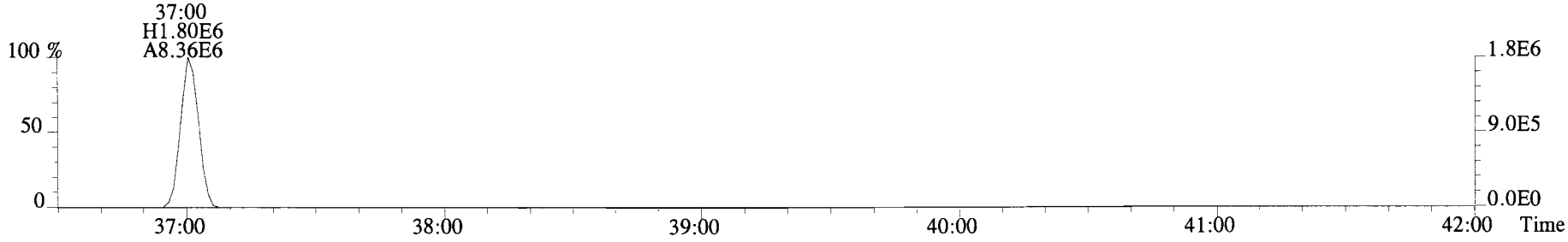
File:141226E1 #1-761 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1460.0,0.00%,F,F)



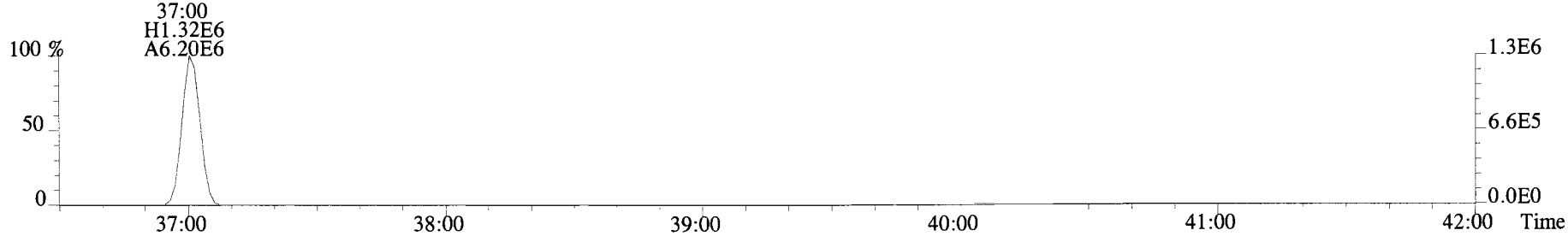
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1464.0,0.00%,F,F)

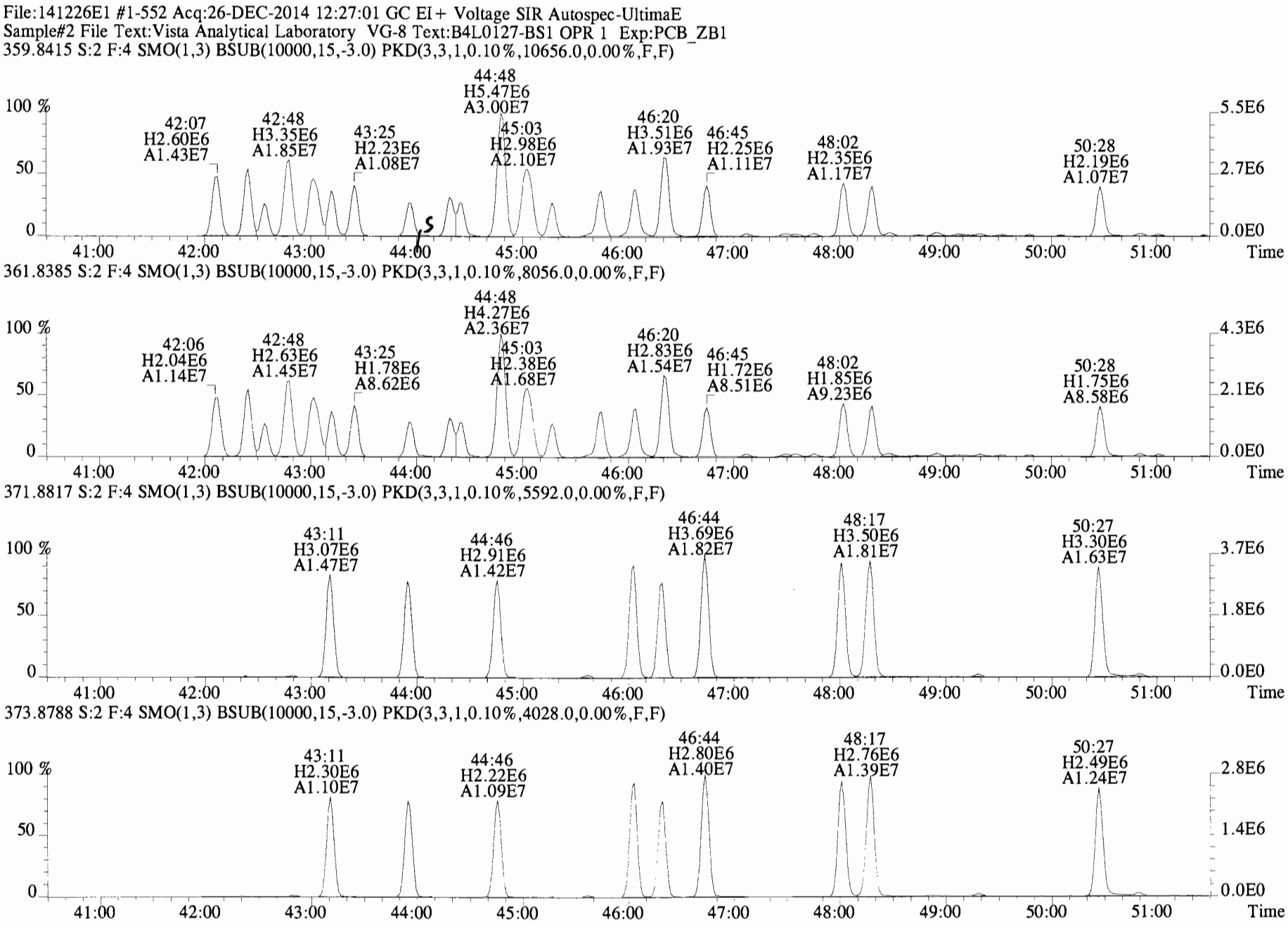


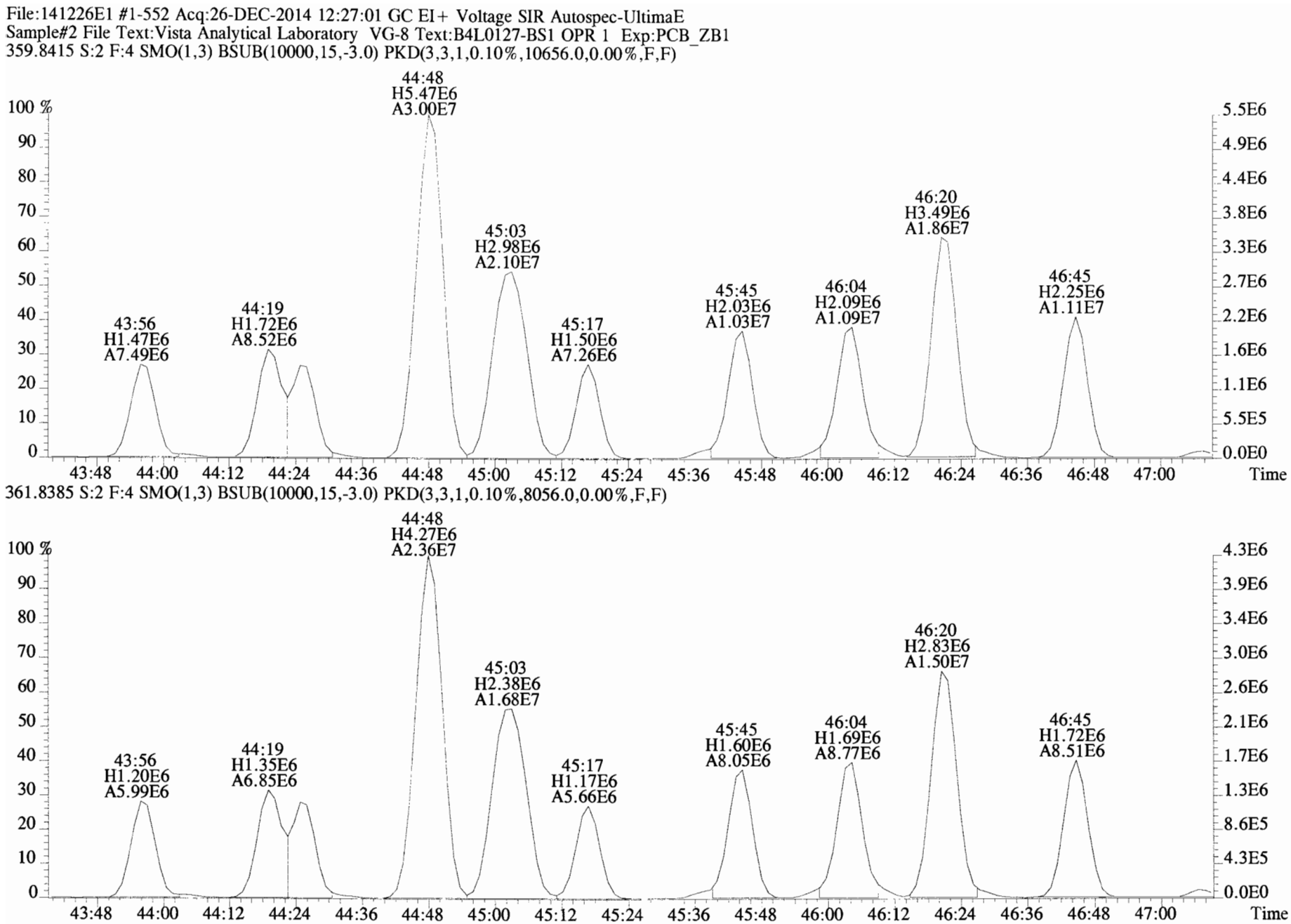
371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1436.0,0.00%,F,F)

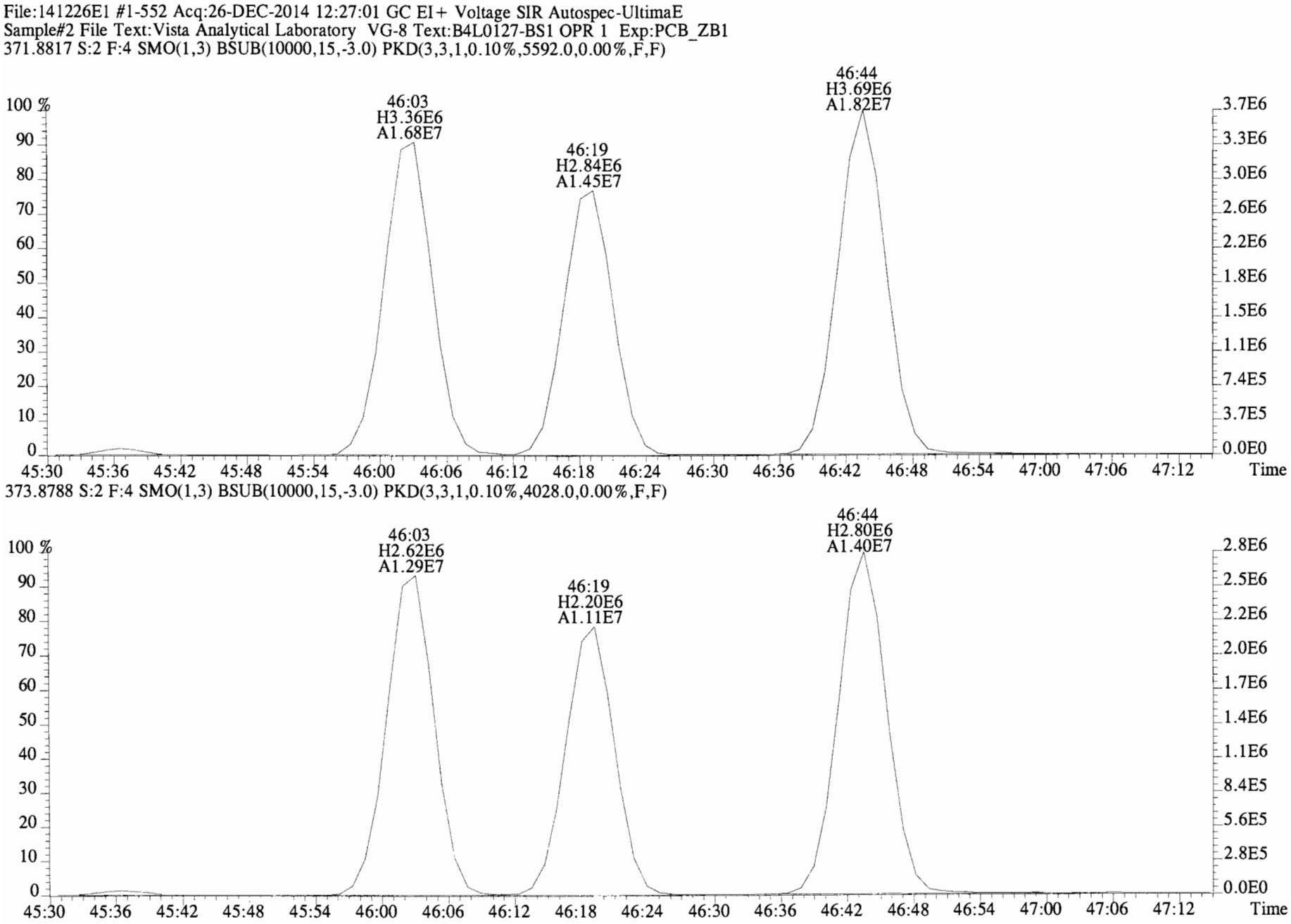


373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1652.0,0.00%,F,F)

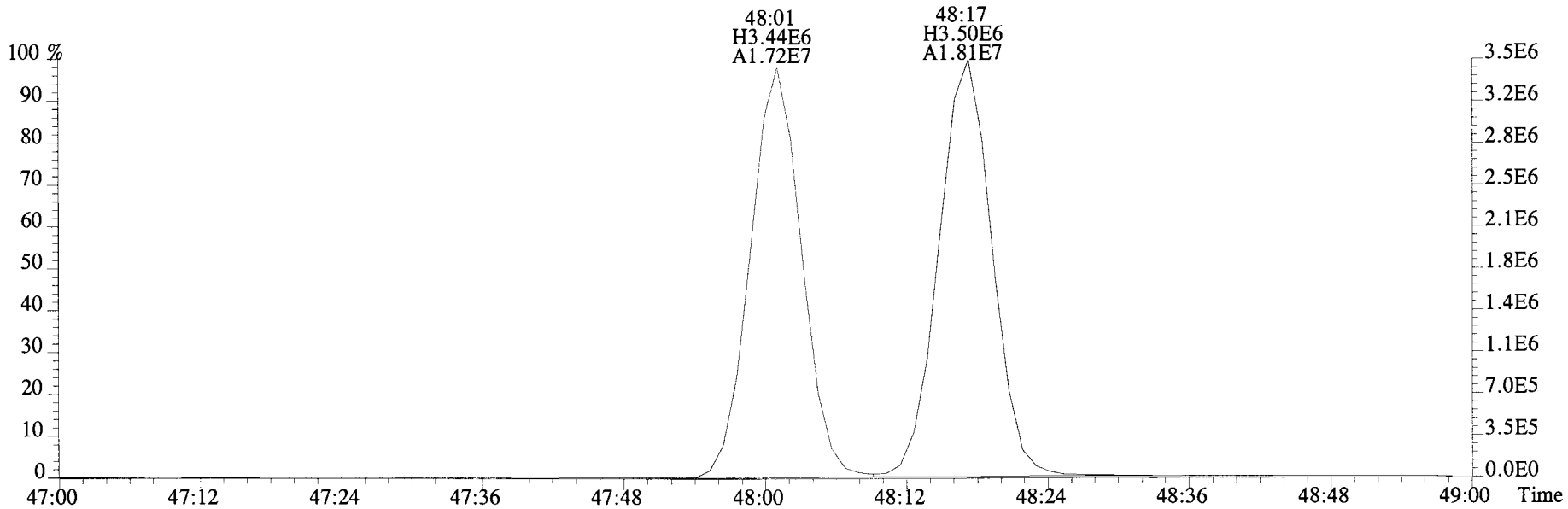



File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10656.0,0.00%,F,F)
42:07 H2.60E6 A1.43E7
42:48 H3.35E6 A1.85E7
43:25 H2.23E6 A1.08E7
44:48 H5.47E6 A3.00E7
45:03 H2.98E6 A2.10E7
46:20 H3.51E6 A1.93E7
46:45 H2.25E6 A1.11E7
48:02 H2.35E6 A1.17E7
50:28 H2.19E6 A1.07E7
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8056.0,0.00%,F,F)
42:06 H2.04E6 A1.14E7
42:48 H2.63E6 A1.45E7
43:25 H1.78E6 A8.62E6
44:48 H4.27E6 A2.36E7
45:03 H2.38E6 A1.68E7
46:20 H2.83E6 A1.54E7
46:45 H1.72E6 A8.51E6
48:02 H1.85E6 A9.23E6
50:28 H1.75E6 A8.58E6
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5592.0,0.00%,F,F)
43:11 H3.07E6 A1.47E7
44:46 H2.91E6 A1.42E7
46:44 H3.69E6 A1.82E7
48:17 H3.50E6 A1.81E7
50:27 H3.30E6 A1.63E7
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4028.0,0.00%,F,F)
43:11 H2.30E6 A1.10E7
44:46 H2.22E6 A1.09E7
46:44 H2.80E6 A1.40E7
48:17 H2.76E6 A1.39E7
50:27 H2.49E6 A1.24E7
100 %
50
0
41:00
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
Time
5.5E6
2.7E6
0.0E0
4.3E6
2.1E6
3.7E6
1.8E6
2.8E6
1.4E6

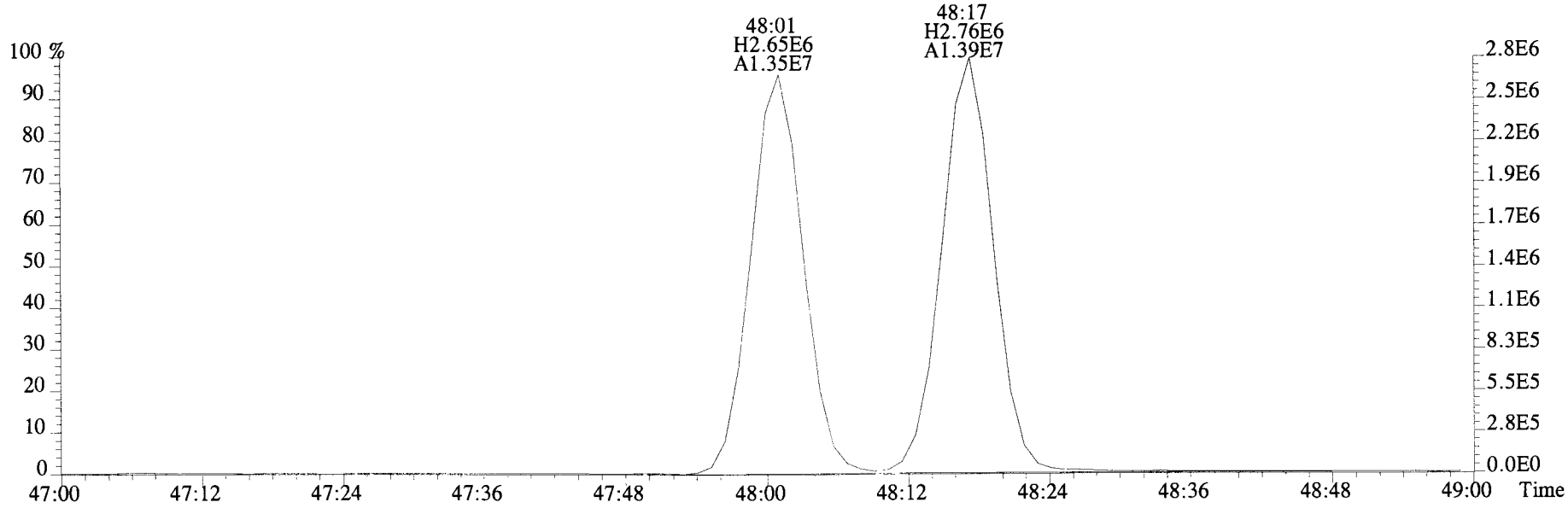

File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10656.0,0.00%,F,F)
44:48 H5.47E6 A3.00E7
45:03 H2.98E6 A2.10E7
46:20 H3.49E6 A1.86E7
43:56 H1.47E6 A7.49E6
44:19 H1.72E6 A8.52E6
45:17 H1.50E6 A7.26E6
45:45 H2.03E6 A1.03E7
46:04 H2.09E6 A1.09E7
46:45 H2.25E6 A1.11E7
100 %
Time
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8056.0,0.00%,F,F)
44:48 H4.27E6 A2.36E7
45:03 H2.38E6 A1.68E7
46:20 H2.83E6 A1.50E7
43:56 H1.20E6 A5.99E6
44:19 H1.35E6 A6.85E6
45:17 H1.17E6 A5.66E6
45:45 H1.60E6 A8.05E6
46:04 H1.69E6 A8.77E6
46:45 H1.72E6 A8.51E6
100 %
Time


File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5592.0,0.00%,F,F)
46:03
H3.36E6
A1.68E7
46:19
H2.84E6
A1.45E7
46:44
H3.69E6
A1.82E7
100 %
90
80
70
60
50
40
30
20
10
0
3.7E6
3.3E6
3.0E6
2.6E6
2.2E6
1.8E6
1.5E6
1.1E6
7.4E5
3.7E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4028.0,0.00%,F,F)
46:03
H2.62E6
A1.29E7
46:19
H2.20E6
A1.11E7
46:44
H2.80E6
A1.40E7
100 %
90
80
70
60
50
40
30
20
10
0
2.8E6
2.5E6
2.2E6
2.0E6
1.7E6
1.4E6
1.1E6
8.4E5
5.6E5
2.8E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time

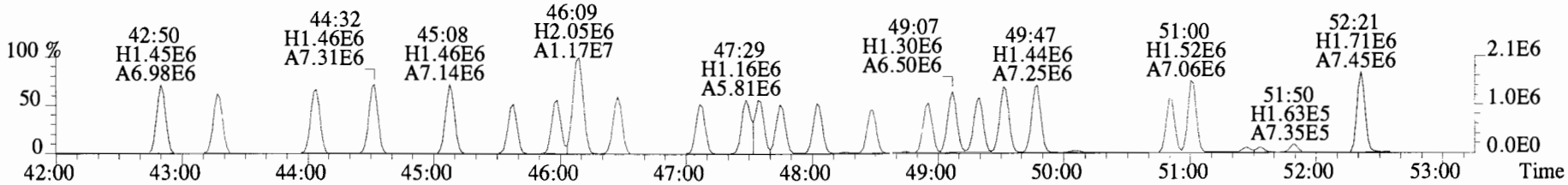
File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5592.0,0.00%,F,F)



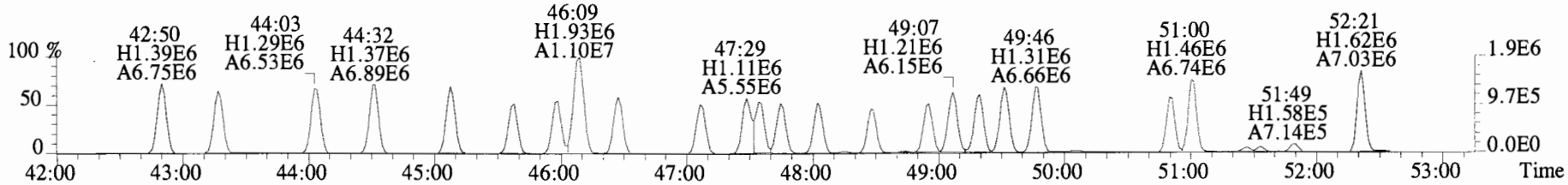
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4028.0,0.00%,F,F)



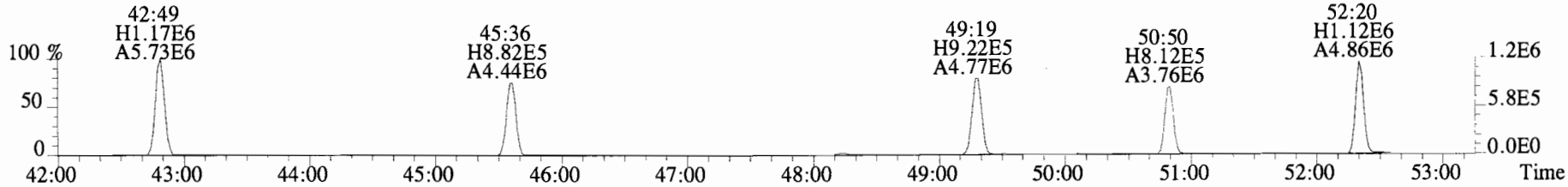
File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)



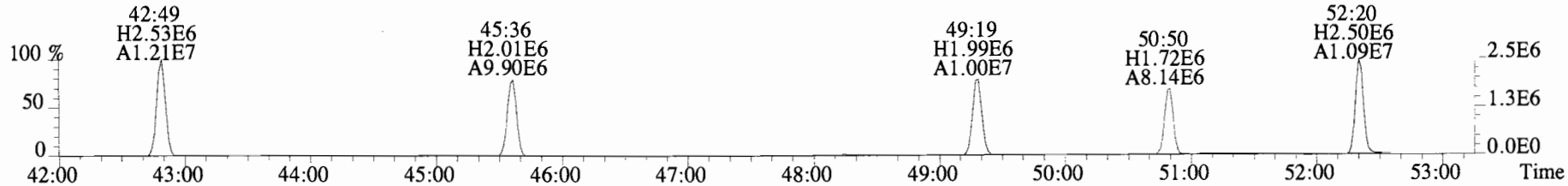
395.7995 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4452.0,0.00%,F,F)



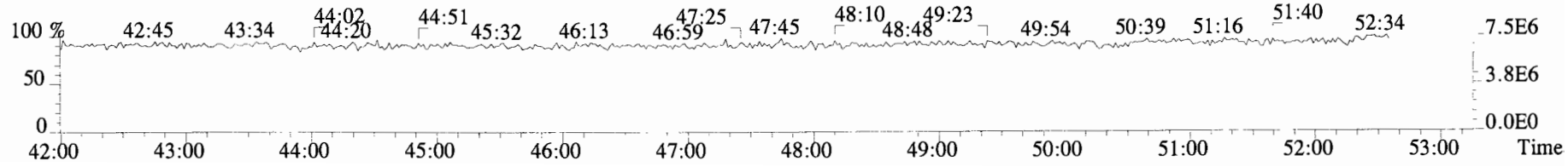
403.8457 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



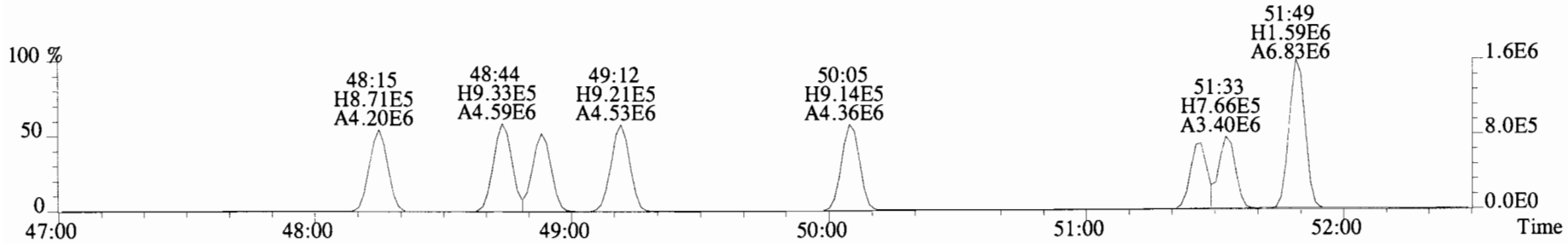
405.8428 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2312.0,0.00%,F,F)



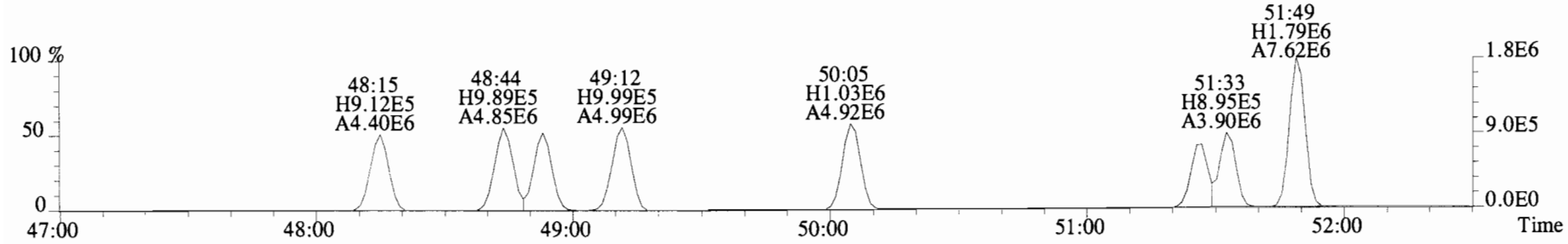
380.9760 S:2 F:4



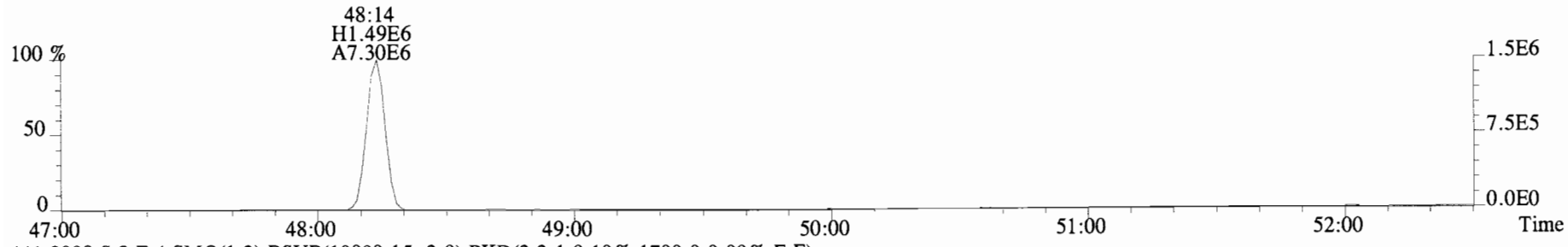
File:141226E1 #1-552 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1600.0,0.00%,F,F)



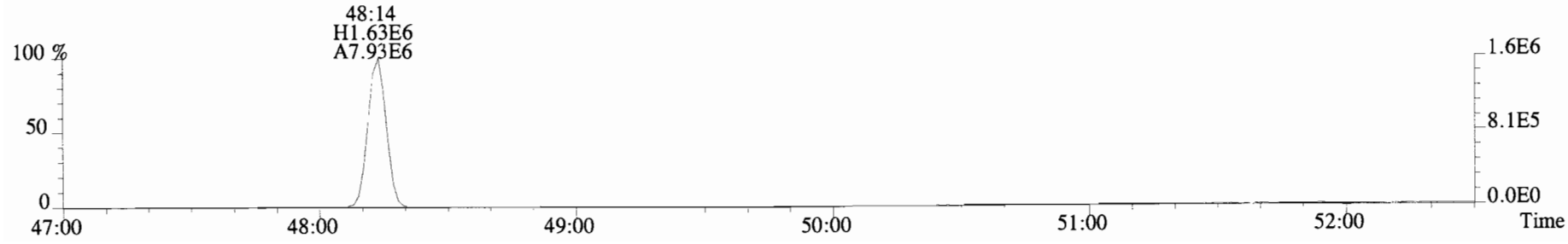
429.7606 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1860.0,0.00%,F,F)



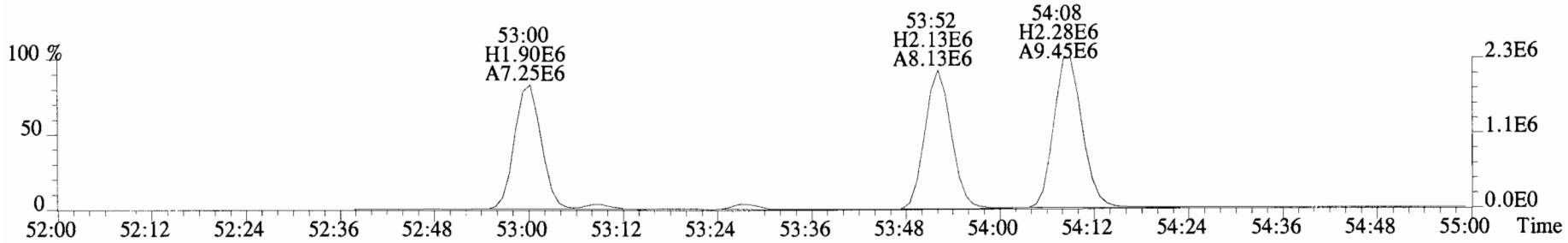
439.8038 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1696.0,0.00%,F,F)



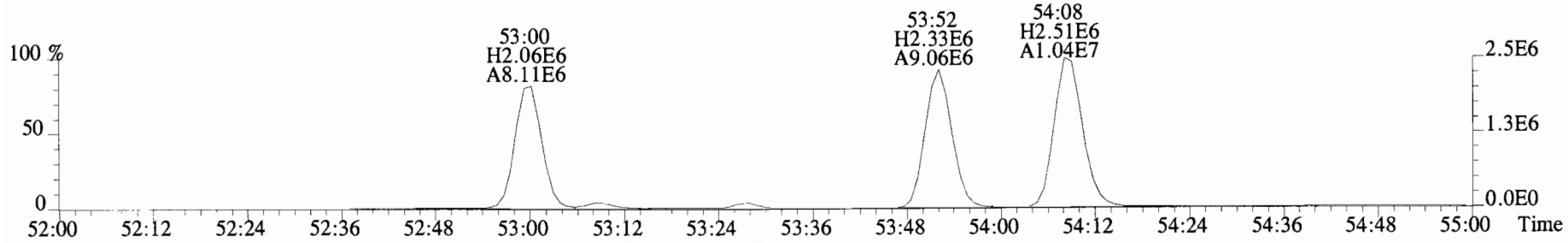
441.8008 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1700.0,0.00%,F,F)



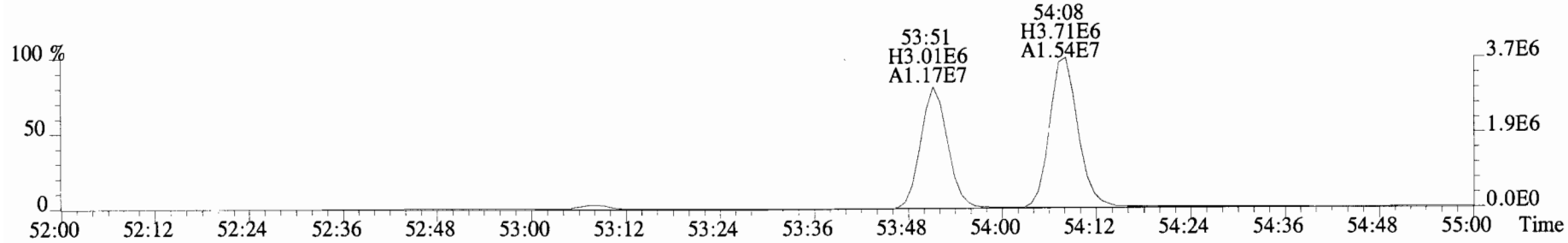
File:141226E1 #1-430 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9996.0,0.00%,F,F)



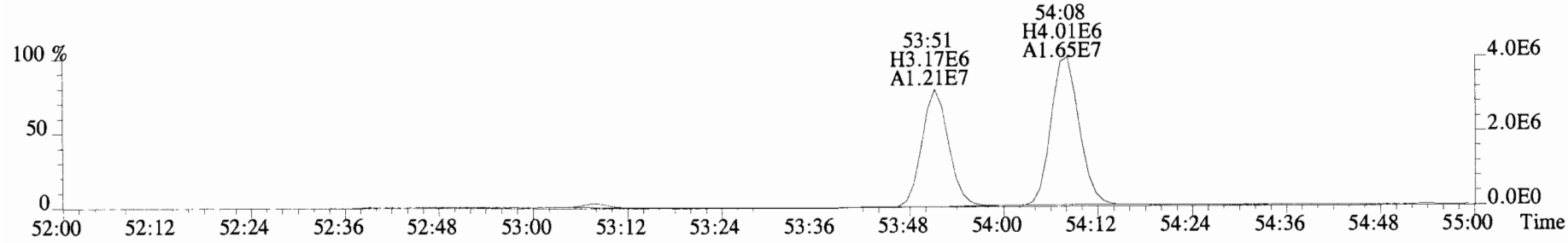
429.7606 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3076.0,0.00%,F,F)



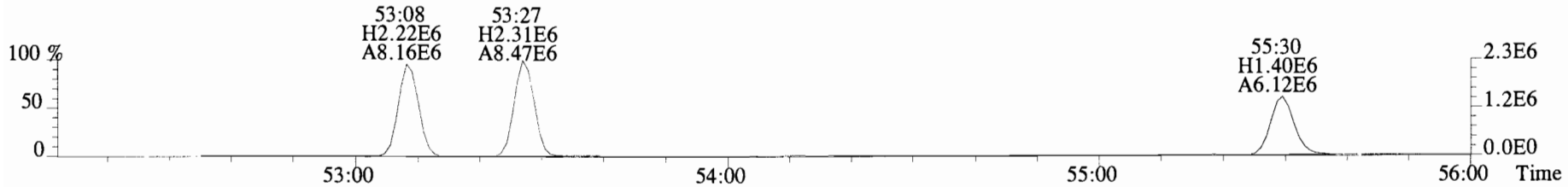
439.8038 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3544.0,0.00%,F,F)



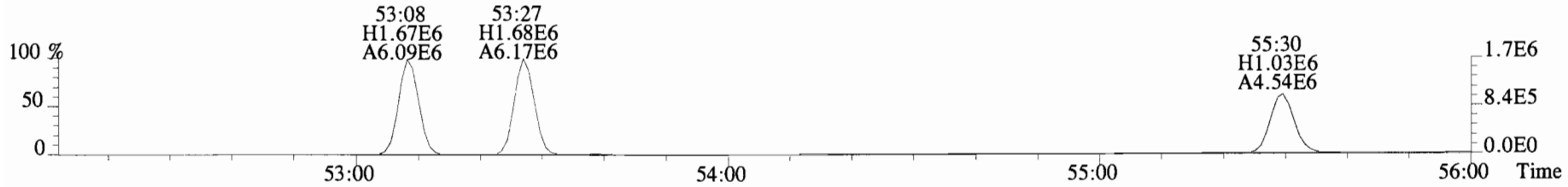
441.8008 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,15020.0,0.00%,F,F)



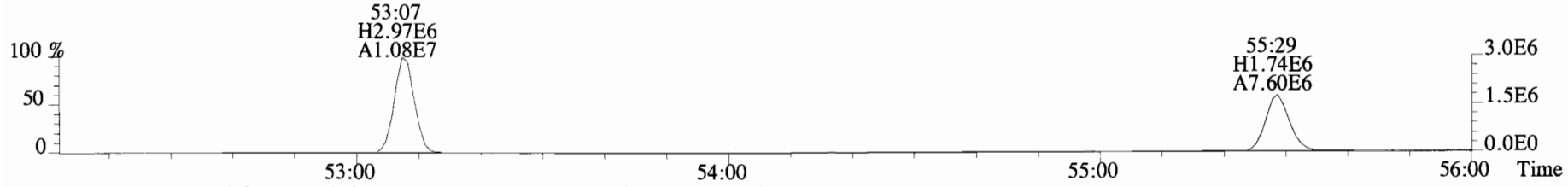
File:141226E1 #1-430 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5908.0,0.00%,F,F)



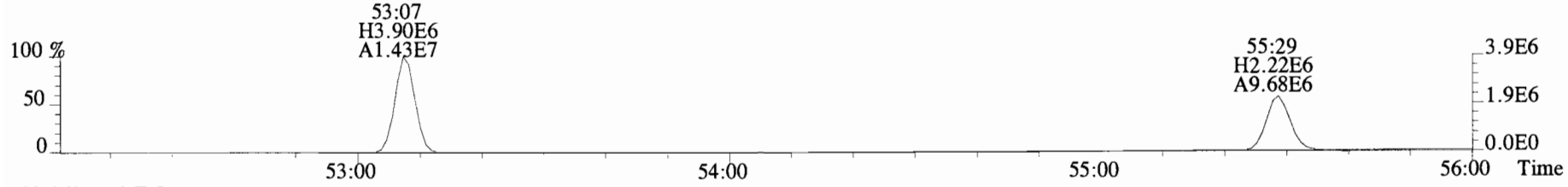
465.7186 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4028.0,0.00%,F,F)



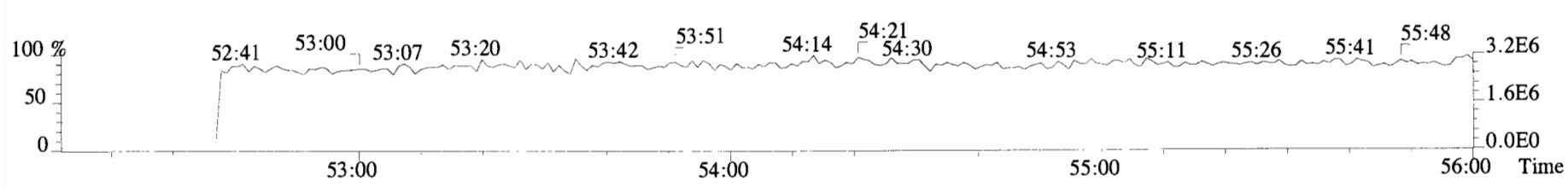
473.7648 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5676.0,0.00%,F,F)



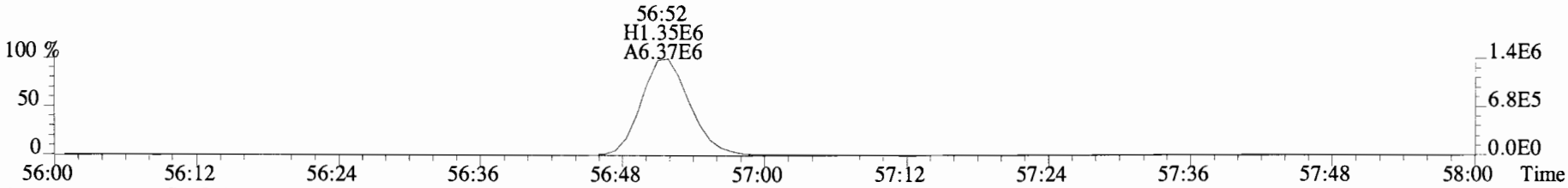
475.7619 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6780.0,0.00%,F,F)



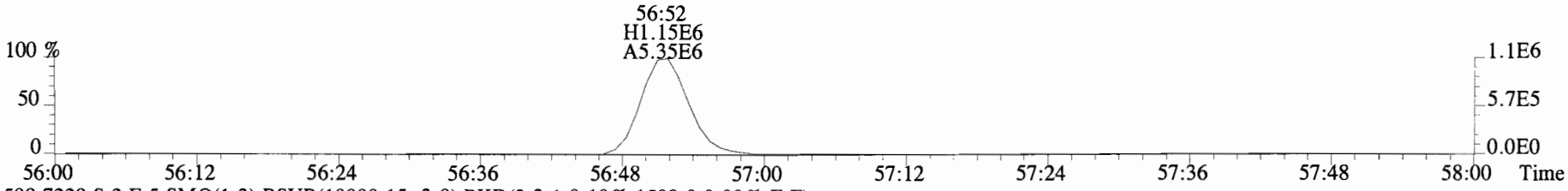
492.9697 S:2 F:5



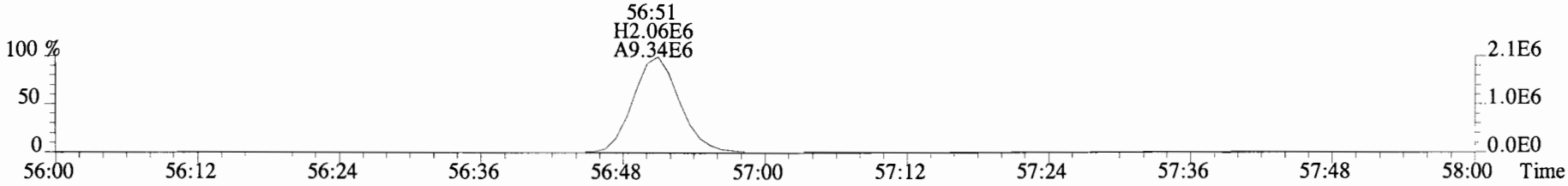
File:141226E1 #1-430 Acq:26-DEC-2014 12:27:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B4L0127-BS1 OPR 1 Exp:PCB_ZB1
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1444.0,0.00%,F,F)



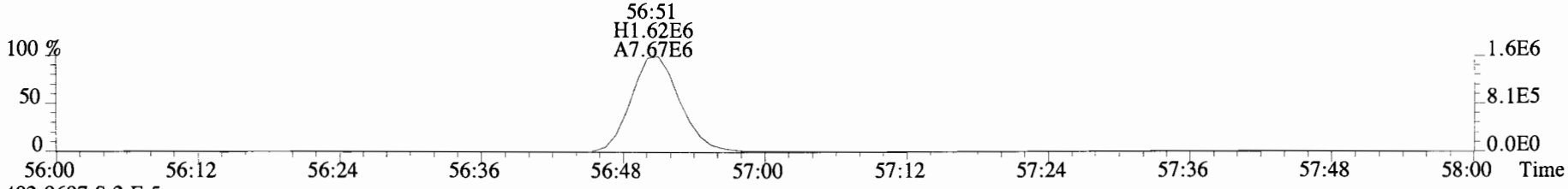
499.6797 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



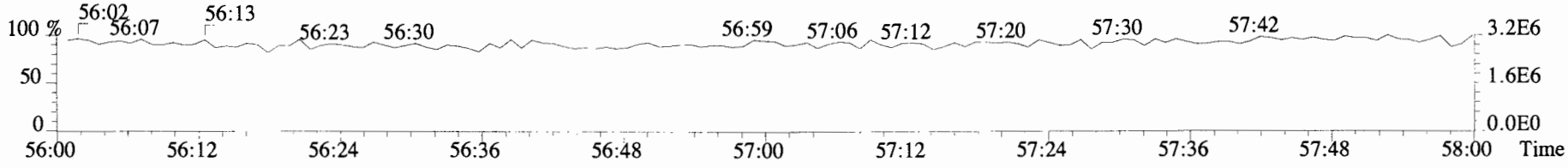
509.7229 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1508.0,0.00%,F,F)



511.7199 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1568.0,0.00%,F,F)



492.9697 S:2 F:5



Client ID: BD-MH-11.31-20141215-W Filename: 141226E3 S:6 Acq:27-DEC-14 18:57:59 ConCal: ST141226E3-1
Lab ID: 1400958-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.019 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Pac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n NotF	1.25	*		4280	1.0	2.55	*	0.996	1.006
Mono	PCB-2	*	*	n NotF	1.18	*		1600	2.5	2.36	*	0.983	0.993
Mono	PCB-3	*	*	n NotF	1.22	*		1600	2.5	2.29	*	0.996	1.006
Di	PCB-4/10	1.92e+05	1.47	y 20:04	1.55	10.2		*	2.5	*	1.001	0.998	1.008
Di	PCB-7/9	*	*	n NotF	1.27	*		6800	2.5	6.91	*	0.865	0.873
Di	PCB-6	1.72e+05	1.53	y 22:31	1.26	7.33		*	2.5	*	0.894	0.890	0.899
Di	PCB-5/8	3.00e+05	1.45	y 22:54	1.23	13.1		*	2.5	*	0.909	0.906	0.916
Di	PCB-14	*	*	n NotF	1.23	*		6800	2.5	5.89	*	0.949	0.959
Di	PCB-11	3.36e+05	1.47	y 25:13	1.16	12.5		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	*	*	n NotF	1.10	*		6800	2.5	6.60	*	1.010	1.020
Di	PCB-15	2.51e+05	1.71	y 25:55	1.21	8.94		*	2.5	*	1.028	1.024	1.034
Tri	PCB-19	9.82e+04	1.17	y 24:12	1.30	7.15		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n NotF	1.83	*		859	2.5	0.889	*	1.032	1.042
Tri	PCB-18	5.24e+05	1.14	y 25:51	0.86	35.5		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	2.30e+05	1.01	y 26:01	0.90	14.8		*	2.5	*	0.960	0.955	0.965
Tri	PCB-24/27	1.53e+05	1.15	y 26:35	1.18	7.57		*	2.5	*	0.981	0.976	0.986
Tri	PCB-16/32	4.28e+05	1.14	y 27:06	1.03	24.2		*	2.5	*	1.000	0.995	1.005
Tri	PCB-34	*	*	n NotF	1.26	*		1100	2.5	1.28	*	0.956	0.966
Tri	PCB-23	*	*	n NotF	1.31	*		1100	2.5	1.23	*	0.959	0.969
Tri	PCB-29	*	*	n NotF	1.33	*		1100	2.5	1.21	*	0.967	0.977
Tri	PCB-26	3.64e+05	1.18	y 28:27	1.29	16.3		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	1.36e+05	0.96	y 28:37	1.34	5.84		*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	5.88e+05	1.14	y 28:57	1.42	23.9		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	8.81e+05	1.02	y 29:04	1.38	36.9		*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	2.96e+05	0.95	y 29:42	1.31	13.0		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	2.77e+05	0.95	y 30:07	1.32	12.1		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	*	*	n NotF	1.38	*		1100	2.5	1.17	*	0.929	0.939
Tri	PCB-39	*	*	n NotF	1.42	*		1100	2.5	1.13	*	0.943	0.953
Tri	PCB-38	*	*	n NotF	1.35	*		1100	2.5	1.19	*	0.967	0.976
Tri	PCB-35	*	*	n NotF	1.38	*		1100	2.5	1.17	*	0.982	0.992
Tri	PCB-37	2.91e+05	1.19	y 32:56	1.39	12.3		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	*	*	n NotF	1.20	*		2240	2.5	2.77	*	0.996	1.006
Tetra	PCB-50	*	*	n NotF	0.97	*		2240	2.5	3.44	*	1.037	1.047
Tetra	PCB-53	1.79e+05	0.69	y 29:45	1.19	12.3		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	1.06e+05	0.83	y 30:06	1.15	7.50		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	5.77e+04	0.67	y 30:32	0.97	4.87		*	2.5	*	0.971	0.966	0.976
Tetra	PCB-46	2.13e+04	0.72	y 31:01	0.95	1.83		*	2.5	*	0.986	0.982	0.992

Integrations by:

Analyst: MJ

Date: 12/31/14

Reviewed by: [signature] Date: 12/31/14

Client ID: BD-MH-11.31-20141215-W Filename: 141226E3 S:6 Acq:27-DEC-14 18:57:59 ConCal: ST141226E3-1
Lab ID: 1400958-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.019 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	8.93e+05	0.72	y 31:28	1.28	56.9		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n NotF	1.37	*		2240	2.5	2.76	*	1.000	1.010
Tetra	PCB-43/49	5.90e+05	0.83	y 31:47	1.11	43.2		*	2.5	*	1.011	1.005	1.015
Tetra	PCB-47	2.64e+05	0.69	y 31:59	1.13	18.0		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	6.90e+04	0.80	y 32:06	1.30	4.08		*	2.5	*	1.004	0.999	1.009
Tetra	PCB-65	*	*	n NotF	1.33	*		2240	2.5	2.68	*	1.007	1.017
Tetra	PCB-62	*	*	n NotF	1.29	*		2240	2.5	2.76	*	1.011	1.021
Tetra	PCB-44	4.39e+05	0.78	y 32:46	0.94	36.0		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	1.98e+05	0.72	y 32:59	1.22	12.6		*	2.5	*	1.032	1.028	1.038
Tetra	PCB-41/64/71/72	5.58e+05	0.80	y 33:35	1.31	32.8		*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	4.92e+04	0.68	y 33:49	1.49	2.56		*	2.5	*	1.058	1.054	1.064
Tetra	PCB-40	8.15e+04	0.87	y 34:03	0.82	7.68		*	2.5	*	1.065	1.061	1.071
Tetra	PCB-57	*	*	n NotF	1.11	*		2240	2.5	2.25	*	0.965	0.975
Tetra	PCB-67	*	*	n NotF	1.07	*		2240	2.5	2.33	*	0.974	0.984
Tetra	PCB-58	*	*	n NotF	1.10	*		2240	2.5	2.27	*	0.977	0.987
Tetra	PCB-63	*	*	n NotF	1.12	*		2240	2.5	2.24	*	0.982	0.992
Tetra	PCB-74	3.13e+05	0.73	y 35:17	1.20	13.4		*	2.5	*	0.995	0.990	1.000
Tetra	PCB-61/70	7.31e+05	0.81	y 35:29	1.08	34.8		*	2.5	*	1.000	0.994	1.004
Tetra	PCB-76/66	6.59e+05	0.86	y 35:42	1.14	29.8		*	2.5	*	1.007	1.001	1.011
Tetra	PCB-80	*	*	n NotF	1.28	*		2240	2.5	1.92	*	0.996	1.006
Tetra	PCB-55	*	*	n NotF	1.11	*		2240	2.5	2.21	*	1.005	1.015
Tetra	PCB-56/60	4.40e+05	0.86	y 36:43	1.09	19.8		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	5.06e+04	0.86	y 37:47	1.12	2.20		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	*	*	n NotF	1.24	*		2240	2.5	2.04	*	0.982	0.992
Tetra	PCB-81	*	*	n NotF	1.38	*		2240	2.5	1.83	*	0.995	1.005
Tetra	PCB-77	1.20e+05	0.86	y 39:36	1.21	4.80		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	*	*	n NotF	1.26	*		1100	2.5	2.45	*	0.996	1.006
Penta	PCB-96	2.43e+04	1.52	y 33:54	1.09	2.02		*	2.5	*	1.039	1.034	1.044
Penta	PCB-103	2.21e+04	1.53	y 34:26	0.93	2.16		*	2.5	*	1.056	1.050	1.060
Penta	PCB-100	*	*	n NotF	1.00	*		1100	2.5	3.07	*	1.061	1.071
Penta	PCB-94	*	*	n NotF	1.11	*		1100	2.5	3.46	*	0.981	0.991
Penta	PCB-95/98/102	7.02e+05	1.64	y 35:48	1.21	65.2		*	2.5	*	1.001	0.994	1.004
Penta	PCB-93	*	*	n NotF	1.13	*		1100	2.5	3.39	*	0.998	1.008
Penta	PCB-88/91	1.39e+05	1.58	y 36:11	1.02	15.4		*	2.5	*	1.012	1.006	1.016
Penta	PCB-121	*	*	n NotF	1.90	*		1100	2.5	2.01	*	1.009	1.019
Penta	PCB-84/92	3.51e+05	1.60	y 37:05	1.05	33.1		*	2.5	*	0.990	0.986	0.996
Penta	PCB-89	*	*	n NotF	1.02	*		1100	2.5	3.41	*	0.991	1.001

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-11.31-20141215-W Filename: 141226E3 S:6 Acq:27-DEC-14 18:57:59 ConCal: ST141226E3-1
Lab ID: 1400958-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.019 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	8.58e+05	1.43	y	37:28	1.19	71.5		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	*	*	n	NotF	1.35	*		1400	2.5	3.27	*	1.002	1.012
Penta	PCB-99	4.00e+05	1.33	y	37:48	1.29	30.7		*	2.5	*	1.009	1.005	1.015
Penta	PCB-119	4.60e+04	1.35	y	38:15	1.72	2.90		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	4.30e+04	1.56	y	38:26	1.29	3.62		*	2.5	*	0.992	0.986	0.996
Penta	PCB-83	*	*	n	NotF	1.52	*		1400	2.5	3.24	*	0.991	1.001
Penta	PCB-97	2.55e+05	1.35	y	38:46	1.25	22.1		*	2.5	*	1.000	0.996	1.006
Penta	PCB-86	*	*	n	NotF	1.02	*		1400	2.5	4.82	*	1.000	1.010
Penta	PCB-87/117/125	3.42e+05	1.60	y	39:03	1.56	23.8		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	2.81e+04	1.33	y	39:12	1.75	1.74		*	2.5	*	1.012	1.007	1.017
Penta	PCB-85/116	1.21e+05	2.12	n	39:19	1.30	10.1	R	*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	*	*	n	NotF	1.78	*		1400	2.5	2.76	*	1.016	1.026
Penta	PCB-110	1.42e+06	1.61	y	39:43	1.68	91.8		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	8.10e+04	1.59	y	40:19	0.74	8.22		*	2.5	*	0.976	0.972	0.982
Penta	PCB-124	7.19e+04	1.63	y	41:00	1.32	4.07		*	2.5	*	0.992	0.988	0.998
Penta	PCB-107/109	1.06e+05	1.54	y	41:10	1.22	6.50		*	2.5	*	0.996	0.991	1.001
Penta	PCB-123	*	*	n	NotF	1.22	*		1400	2.5	2.79	*	0.995	1.005
Penta	PCB-106/118	1.11e+06	1.70	y	41:31	1.22	63.8		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	*	*	n	NotF	1.36	*		1900	2.5	2.12	*	0.995	1.005
Penta	PCB-122	*	*	n	NotF	1.24	*		1900	2.5	2.33	*	0.999	1.009
Penta	PCB-105	7.78e+05	1.65	y	43:01	1.28	27.4		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n	NotF	1.14	*		1900	2.5	2.16	*	0.995	1.005
Penta	PCB-126	*	*	n	NotF	1.28	*		1900	2.5	2.24	*	0.995	1.005
Hexa	PCB-155	*	*	n	NotF	1.14	*		1500	2.5	3.70	*	0.966	1.006
Hexa	PCB-150	*	*	n	NotF	1.06	*		1500	2.5	3.94	*	1.030	1.040
Hexa	PCB-152	*	*	n	NotF	1.10	*		1500	2.5	3.82	*	1.043	1.053
Hexa	PCB-145	*	*	n	NotF	1.09	*		1500	2.5	3.84	*	1.055	1.065
Hexa	PCB-136	1.49e+05	1.21	y	39:31	1.08	13.8		*	2.5	*	1.068	1.064	1.074
Hexa	PCB-148	*	*	n	NotF	0.74	*		1000	2.5	3.78	*	1.066	1.076
Hexa	PCB-154	*	*	n	NotF	0.88	*		1000	2.5	3.17	*	1.079	1.089
Hexa	PCB-151	1.90e+05	1.06	y	40:45	0.81	23.6		*	2.5	*	1.101	1.097	1.107
Hexa	PCB-135	1.02e+05	1.79	n	40:58	0.78	13.2		*	2.5	*	1.107	1.101	1.113
Hexa	PCB-144	4.78e+04	1.32	y	41:05	0.82	5.84		*	2.5	*	1.110	1.105	1.116
Hexa	PCB-147	2.39e+04	1.72	n	41:13	0.83	2.88	R	*	2.5	*	1.114	1.011	1.120
Hexa	PCB-139/149	7.80e+05	1.40	y	41:27	0.84	92.7		*	2.5	*	1.120	1.115	1.127
Hexa	PCB-140	*	*	n	NotF	0.79	*		1000	2.5	3.56	*	1.120	1.132
Hexa	PCB-134/143	8.09e+04	1.27	y	42:06	0.93	4.92		*	2.5	*	0.975	0.970	0.980

Analyst: MJ

Date: 12/30/14

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	5.50e+04	1.31	y 42:23	0.95	3.28		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	*	*	n NotF¶	0.91	*		1600	2.5	2.82	*	0.981	0.991
Hexa	PCB-146/165	3.30e+05	1.29	y 42:46	1.16	16.1		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	7.01e+05	1.41	y 43:03	1.11	35.5		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	2.04e+06	1.29	y 43:11	1.18	97.6		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n NotF¶	1.37	*		1600	2.5	1.88	*	1.000	1.010
Hexa	PCB-141	3.87e+05	1.19	y 43:55	0.97	22.6		*	2.5	*	1.000	0.996	1.005
Hexa	PCB-137	8.68e+04	1.35	y 44:18	1.07	4.61		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	1.17e+05	1.32	y 44:24	0.85	7.87		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-138/163/164	2.63e+06	1.25	y 44:47	1.23	121		*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	2.93e+05	1.17	y 44:59	1.29	12.8		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	8.30e+04	1.31	y 45:16	0.92	5.05		*	2.5	*	1.012	1.007	1.017
Hexa	PCB-166	*	*	n NotF¶	1.12	*		1600	2.5	1.94	*	0.988	0.998
Hexa	PCB-159	*	*	n NotF¶	1.16	*		1600	2.5	1.86	*	0.995	1.005
Hexa	PCB-128/162	4.07e+05	1.30	y 46:19	1.02	18.9		*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	1.39e+05	1.19	y 46:43	1.06	5.68		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	2.45e+05	1.07	y 48:01	1.18	9.45		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-157	8.31e+04	1.30	y 48:17	1.08	3.36		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	*	*	n NotF¶	1.11	*		1600	2.5	1.93	*	0.995	1.005
Hepta	PCB-188	*	*	n NotF¶	1.40	*		2130	2.5	2.12	*	0.995	1.005
Hepta	PCB-184	*	*	n NotF¶	1.24	*		2130	2.5	2.41	*	1.006	1.016
Hepta	PCB-179	2.07e+05	1.20	y 44:02	1.30	12.6		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	6.48e+04	1.10	y 44:29	1.36	3.76		*	2.5	*	1.039	1.035	1.045
Hepta	PCB-186	*	*	n NotF¶	1.28	*		2130	2.5	2.34	*	1.049	1.059
Hepta	PCB-178	8.00e+04	1.09	y 45:36	0.94	6.76		*	2.5	*	1.065	1.061	1.071
Hepta	PCB-175	*	*	n NotF¶	0.97	*		2130	2.5	3.08	*	1.069	1.079
Hepta	PCB-182/187	5.51e+05	0.95	y 46:06	1.01	43.0		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	2.55e+05	0.99	y 46:26	1.08	18.6		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	5.00e+04	1.10	y 47:07	1.34	3.60		*	2.5	*	0.956	0.951	0.961
Hepta	PCB-174	3.95e+05	0.95	y 47:27	1.34	28.5		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	*	*	n NotF¶	1.36	*		2130	2.5	2.69	*	0.961	0.971
Hepta	PCB-177	2.45e+05	0.99	y 47:44	1.24	19.1		*	2.5	*	0.969	0.964	0.974
Hepta	PCB-171	1.23e+05	1.03	y 48:01	1.31	9.04		*	2.5	*	0.974	0.970	0.980
Hepta	PCB-173	*	*	n NotF¶	1.16	*		2130	2.5	3.16	*	0.979	0.989
Hepta	PCB-172	9.04e+04	1.04	y 48:54	1.22	7.14		*	2.5	*	0.992	0.988	0.998
Hepta	PCB-192	*	*	n NotF¶	1.53	*		2130	2.5	2.40	*	0.991	1.001
Hepta	PCB-180	9.82e+05	1.07	y 49:18	1.43	66.4		*	2.5	*	1.000	0.995	1.005

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-11.31-20141215-W Filename: 141226E3 S:6 Acq:27-DEC-14 18:57:59 ConCal: ST141226E3-1
Lab ID: 1400958-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.019 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	5.93e+04	0.92	y 49:30	1.65	3.46		*	2.5	*	1.004	0.999	1.009
Hepta	PCB-191	2.44e+04	1.07	y 49:46	1.67	1.41		*	2.5	*	1.010	1.004	1.014
Hepta	PCB-170	4.43e+05	1.09	y 50:49	1.50	33.6		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	1.11e+05	0.98	y 50:59	2.02	6.25		*	2.5	*	1.003	0.998	1.008
Hepta	PCB-189	2.50e+04	1.08	y 52:20	1.54	1.36		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	4.41e+04	1.00	y 48:16	1.04	3.59		*	2.5	*	1.001	0.995	1.005
Octa	PCB-201	3.67e+04	0.96	y 48:41	1.10	2.82		*	2.5	*	1.010	1.006	1.016
Octa	PCB-204	*	*	n NotF	0.99	*		1200	2.5	2.52	*	1.009	1.019
Octa	PCB-197	*	*	n NotF	1.07	*		1200	2.5	2.33	*	1.015	1.025
Octa	PCB-200	*	*	n NotF	1.02	*		3560	1.0	2.92	*	1.032	1.044
Octa	PCB-198	*	*	n NotF	0.74	*		1200	2.5	3.37	*	1.058	1.068
Octa	PCB-199	1.31e+05	0.73	n 51:31	0.73	15.3	R	*	2.5	*	1.068	1.060	1.070
Octa	PCB-196/203	1.80e+05	0.93	y 51:48	0.77	19.8		*	2.5	*	1.074	1.066	1.076
Octa	PCB-195	9.93e+04	0.79	y 52:58	1.20	5.51		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	2.73e+05	0.84	y 53:51	1.25	14.6		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	*	*	n NotF	1.41	*		2600	1.0	0.861	*	1.001	1.011
Nona	PCB-208	3.71e+04	1.07	n 53:07	0.96	1.99	R	*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	*	*	n NotF	0.92	*		1020	2.5	0.944	*	1.001	1.011
Nona	PCB-206	7.15e+04	1.31	y 55:28	1.03	6.14		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	3.26e+04	1.28	y 56:50	1.18	2.41		*	2.5	*	1.000	0.995	1.005

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-11.31-20141215-W Filename: 141226E3 S:6 Acq:27-DEC-14 18:57:59 ConCal: ST141226E3-1
Lab ID: 1400958-01 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0190 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.22	*	
Total Di-PCB	1.25e+06	1.47	y	20:04	1.21	52.0125	
Total Tri-PCB	1.43e+06	1.17	y	24:12	1.16	89.2215	
Total Tri-PCB	2.83e+06	1.18	y	28:27	1.35	120.359	Sum:209.580
Total Tetra-PCB	5.82e+06	0.69	y	29:45	1.17	344.997	
Total Penta-PCB	6.01e+06	1.52	y	33:54	1.21	448.704	
Total Penta-PCB	7.78e+05	1.65	y	43:01	1.26	27.4261	Sum:476.130
Total Hexa-PCB	1.17e+06	1.21	y	39:31	0.92	135.825	
Total Hexa-PCB	7.68e+06	1.27	y	42:06	1.08	368.729	Sum:504.554
Total Hepta-PCB	3.71e+06	1.20	y	44:02	1.27	264.478	
Total Octa-PCB	2.61e+05	1.00	y	48:16	0.92	26.2127	
Total Octa-PCB	3.72e+05	0.79	y	52:58	1.29	20.0933	Sum:46.3061
Total Nona-PCB	7.15e+04	1.31	y	55:28	0.96	6.13511	
Total Deca-PCB	3.26e+04	1.28	y	56:50	1.18	2.40668	

Total PCB Conc:~~1949.0~~9350800
1910

Integrations by Analyst: VN
Date: 12/31/14

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	3.65e+07	3.46 y	0.89	16:07	0.622	0.622	0.628	1330	67.8
13C-PCB-3	4.11e+07	3.40 y	0.93	18:43	0.723	0.721	0.729	1440	73.3
13C-PCB-4	2.38e+07	1.61 y	0.55	20:03	0.774	0.772	0.780	1410	71.7
13C-PCB-9	3.66e+07	1.59 y	0.83	21:50	0.843	0.840	0.848	1430	73.1
13C-PCB-11	4.56e+07	1.59 y	0.94	25:12	0.973	0.968	0.978	1580	80.4
13C-PCB-32	3.38e+07	1.11 y	0.81	27:06	1.046	1.041	1.051	1340	68.5
13C-PCB-19	2.08e+07	1.13 y	0.53	24:11	0.934	0.929	0.939	1270	64.5
13C-PCB-28	3.40e+07	1.11 y	0.89	29:03	1.004	0.999	1.009	1950	99.5
13C-PCB-52	2.41e+07	0.80 y	0.71	31:27	0.857	0.853	0.861	1490	76.1
13C-PCB-54	2.71e+07	0.82 y	0.85	27:56	0.761	0.758	0.766	1400	71.2
13C-PCB-37	3.34e+07	1.05 y	0.83	32:55	1.138	1.131	1.143	2050	104
13C-PCB-47	2.55e+07	0.78 y	0.74	31:58	0.871	0.867	0.875	1500	76.5
13C-PCB-81	3.88e+07	0.83 y	0.84	39:00	1.062	1.057	1.067	2030	103
13C-PCB-70	3.82e+07	0.82 y	0.94	35:28	0.966	0.961	0.971	1780	90.5
13C-PCB-80	4.02e+07	0.81 y	0.96	35:53	0.977	0.972	0.982	1840	93.5
13C-PCB-104	2.16e+07	1.62 y	1.00	32:37	0.832	0.829	0.837	1480	75.3
13C-PCB-101	1.98e+07	1.67 y	0.79	37:27	0.956	0.951	0.961	1720	87.5
13C-PCB-95	1.74e+07	1.63 y	0.74	35:46	0.913	0.908	0.918	1590	81.1
13C-PCB-77	4.07e+07	0.82 y	0.89	39:35	1.078	1.073	1.083	2000	102
13C-PCB-114	4.26e+07	1.67 y	1.21	42:09	0.910	0.905	0.915	1930	98.2
13C-PCB-118	2.79e+07	1.68 y	0.98	41:30	1.059	1.054	1.064	1930	98.3
13C-PCB-123	2.62e+07	1.62 y	0.95	41:19	1.054	1.049	1.059	1880	95.8
13C-PCB-97	1.81e+07	1.65 y	0.69	38:45	0.989	0.984	0.994	1790	91.3
13C-PCB-127	5.00e+07	1.66 y	1.34	43:21	0.936	0.931	0.941	2040	104
13C-PCB-105	4.34e+07	1.67 y	1.24	43:00	0.929	0.924	0.934	1920	97.7
13C-PCB-141	3.45e+07	1.33 y	1.07	43:54	0.948	0.943	0.953	1760	89.6
13C-PCB-153	3.48e+07	1.30 y	1.11	43:10	0.932	0.927	0.937	1710	87.1
13C-PCB-155	1.96e+07	1.30 y	0.83	37:00	0.944	0.939	0.949	1600	81.7
13C-PCB-126	4.36e+07	1.64 y	1.16	45:14	0.977	0.972	0.982	2050	104
13C-PCB-167	4.53e+07	1.31 y	1.32	46:42	1.009	1.004	1.014	1870	95.5
13C-PCB-156	4.30e+07	1.28 y	1.24	48:00	1.037	1.032	1.042	1890	96.2
13C-PCB-138	3.49e+07	1.31 y	1.04	44:44	0.966	0.961	0.971	1830	93.0
13C-PCB-159	4.14e+07	1.31 y	1.20	46:02	0.994	0.989	0.999	1890	96.1
13C-PCB-157	4.48e+07	1.40 y	1.31	48:16	1.042	1.037	1.047	1870	95.1
13C-PCB-180	2.03e+07	0.47 y	0.67	49:17	1.064	1.059	1.069	1650	84.0
13C-PCB-188	2.48e+07	0.45 y	0.94	42:48	0.924	0.919	0.929	1450	73.9
13C-PCB-169	4.29e+07	1.31 y	1.22	50:26	1.089	1.082	1.092	1930	98.4
13C-PCB-170	1.73e+07	0.47 y	0.54	50:49	1.098	1.089	1.101	1760	89.7
13C-PCB-202	2.31e+07	0.97 y	0.83	48:13	1.041	1.036	1.046	1520	77.4
13C-PCB-189	2.34e+07	0.47 y	0.72	52:20	1.130	1.120	1.132	1790	91.0
13C-PCB-208	3.79e+07	0.79 y	1.12	53:06	0.981	0.976	0.986	1810	92.1
13C-PCB-194	2.95e+07	0.94 y	0.81	53:50	0.995	0.990	1.000	1950	99.2
13C-PCB-206	2.23e+07	0.79 y	0.66	55:28	1.025	1.021	1.031	1810	92.2
13C-PCB-209	2.26e+07	1.21 y	0.61	56:50	1.050	1.044	1.054	1970	100

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.72e+07	0.80 y	1.01	37:46	1.029	1.023	1.033	2060	105
13C-PCB-178	1.99e+07	0.47 y	0.63	45:35	0.985	0.979	0.989	1730	88.0

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.72e+07	0.80 y	1.20	37:46	0.968	0.963	0.973	1990	101
13C-PCB-178	1.99e+07	0.47 y	0.94	45:35	0.925	0.920	0.930	2060	105

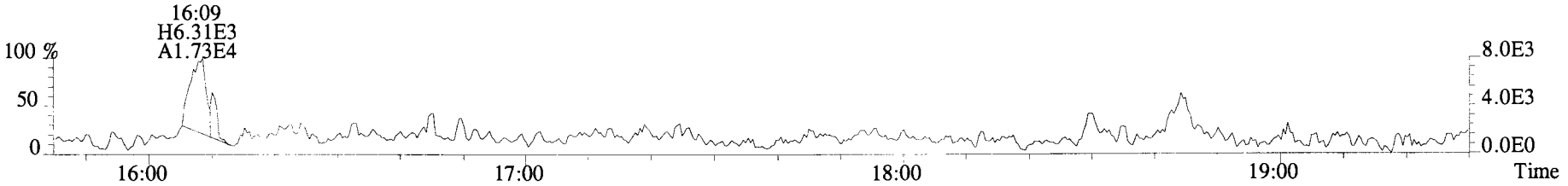
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	6.06e+07	1.59	y	1.00	25:54	1960
13C-PCB-31	3.85e+07	1.10	y	1.00	28:56	1960
13C-PCB-60	4.47e+07	0.82	y	1.00	36:43	1960
13C-PCB-111	2.88e+07	1.64	y	1.00	39:11	1960
13C-PCB-128	3.59e+07	1.29	y	1.00	46:18	1960
13C-PCB-205	3.67e+07	0.90	y	1.00	54:07	1960

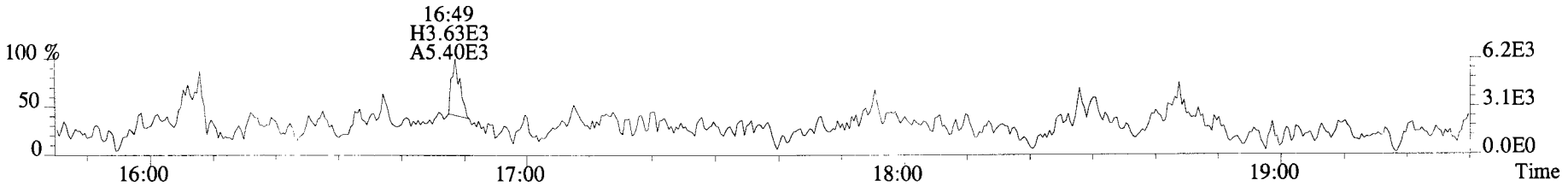
Analyst: MN

Date: 12/31/14

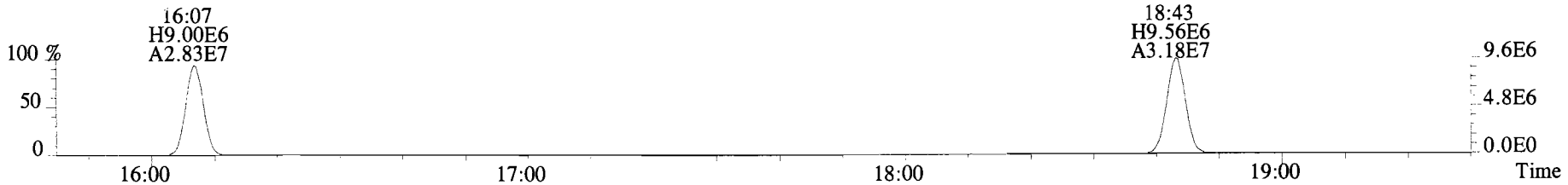
File:141226E3 #1-729 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1624.0,0.00%,F,F)



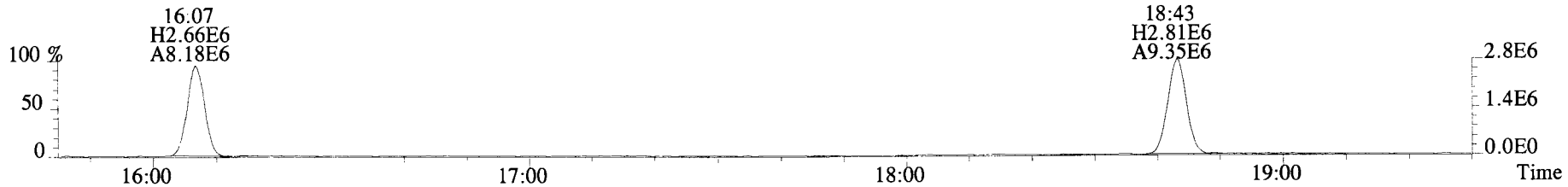
190.0363 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2244.0,0.00%,F,F)



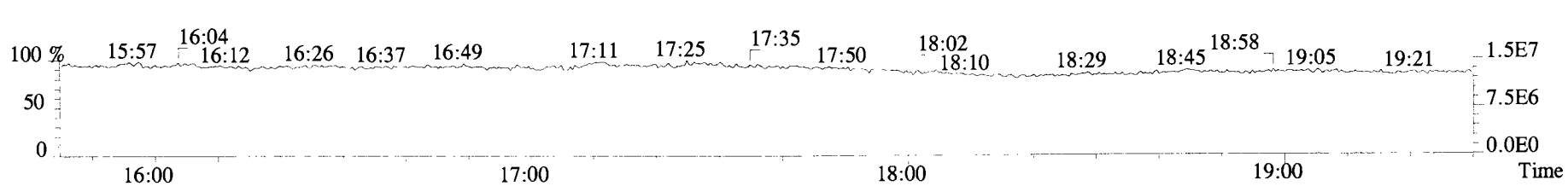
200.0795 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2512.0,0.00%,F,F)

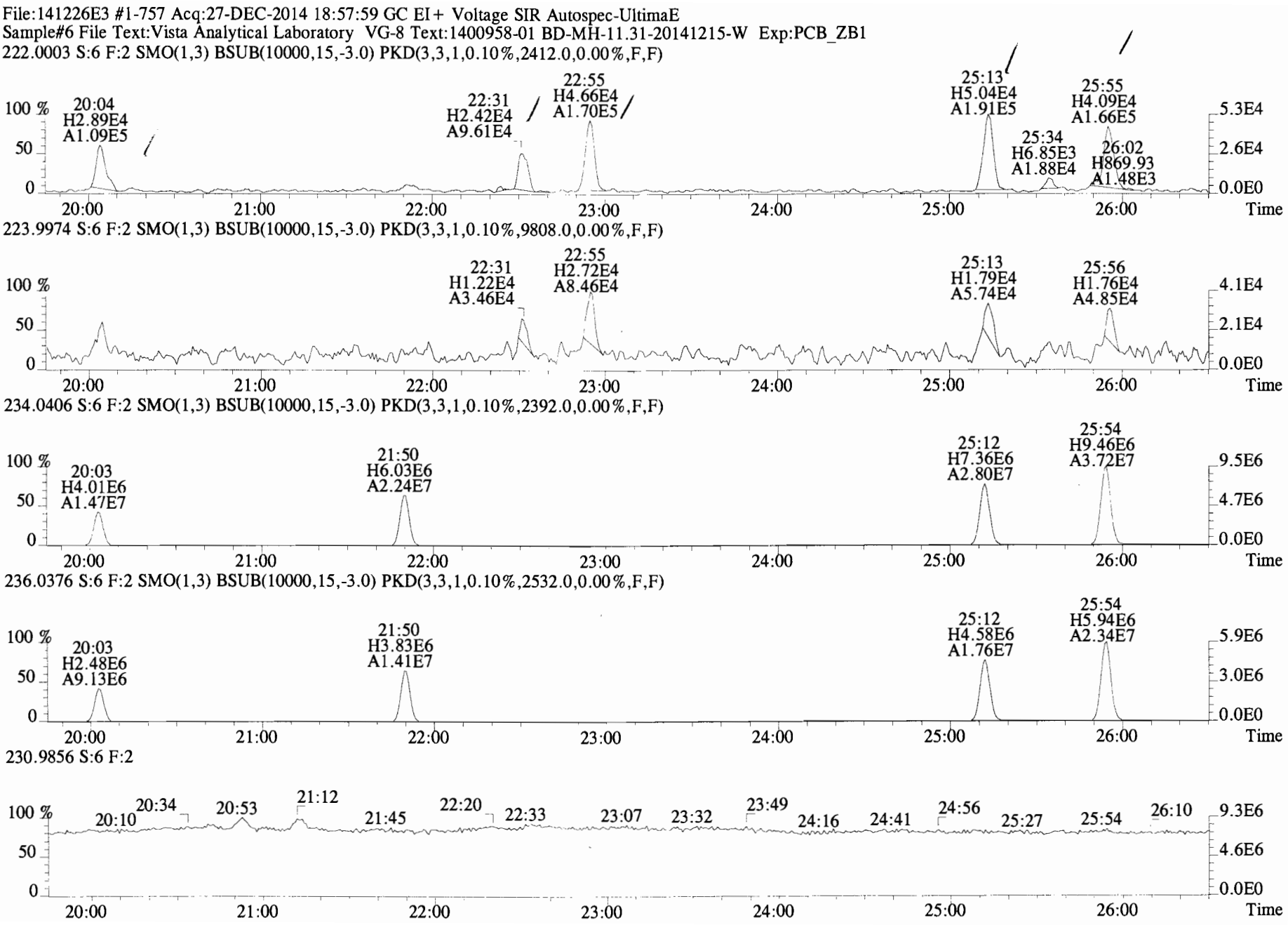


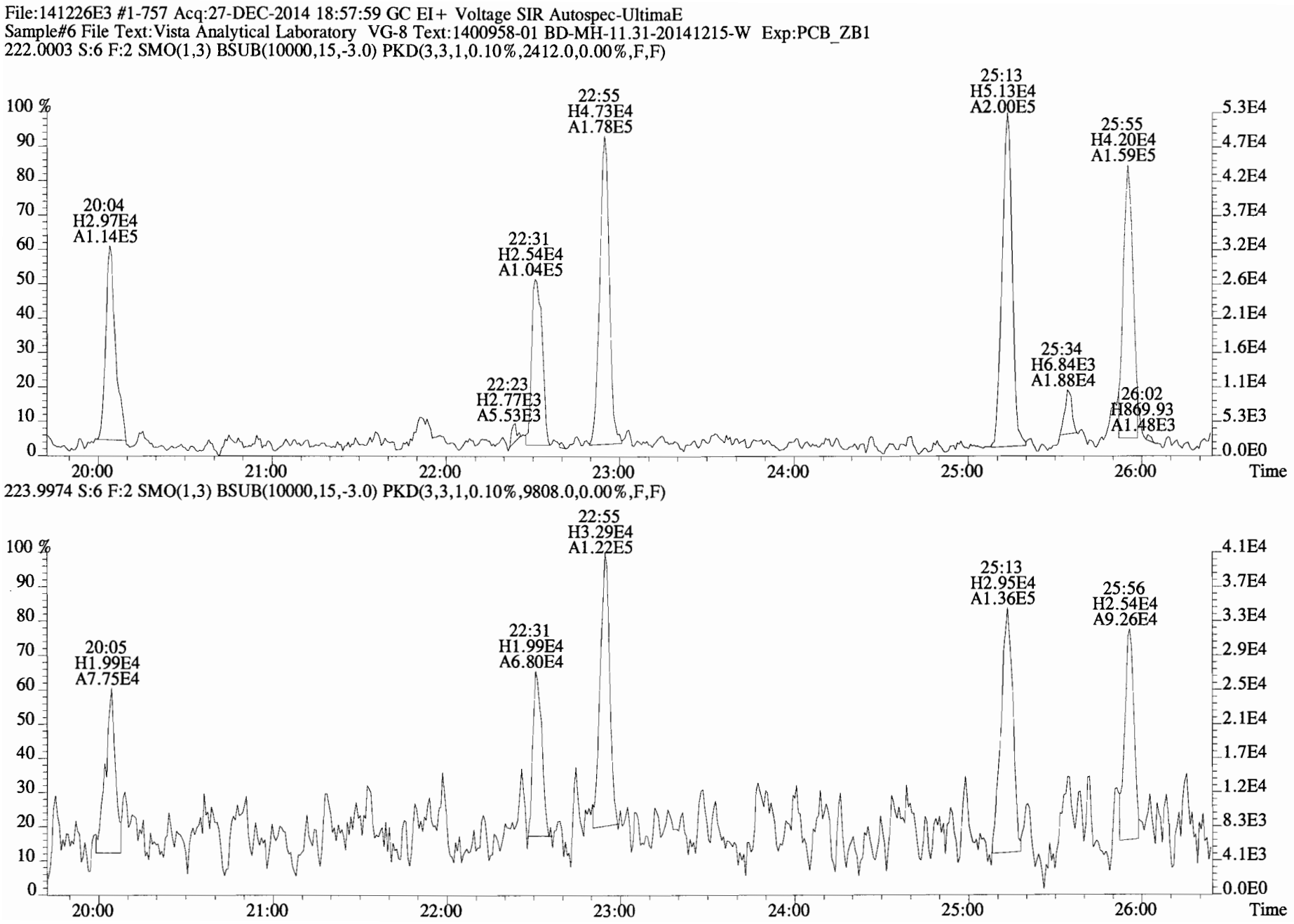
202.0766 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,26292.0,0.00%,F,F)



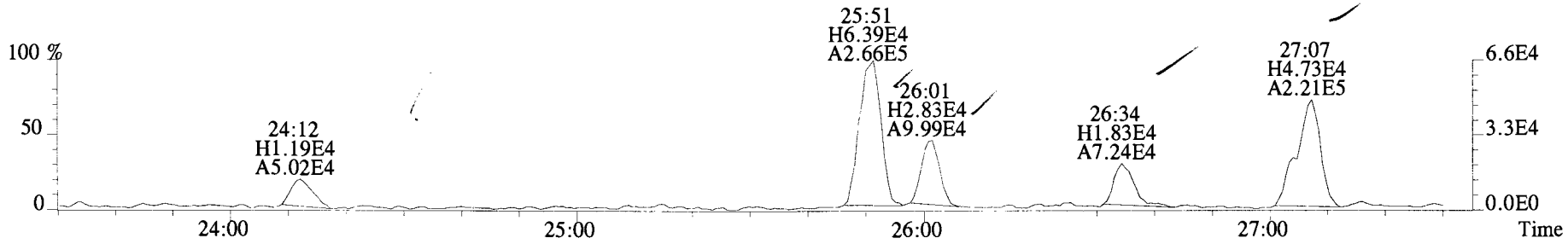
180.9880 S:6



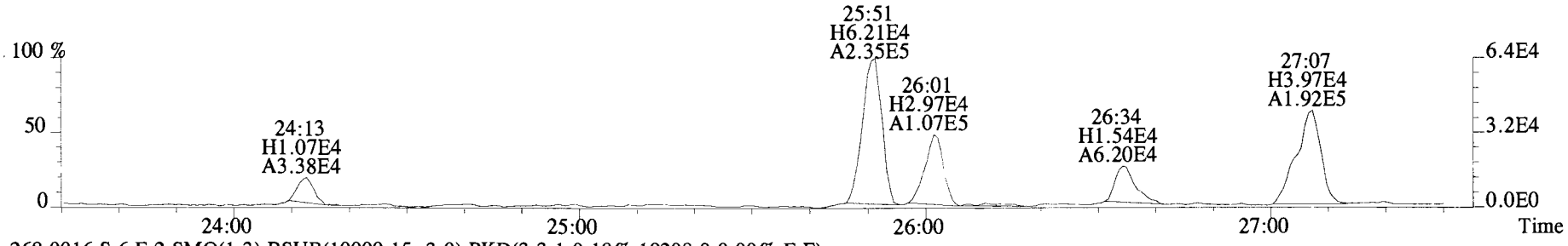

File:141226E3 #1-757 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2412.0,0.00%,F,F)
20:04 H2.89E4 A1.09E5
22:31 H2.42E4 A9.61E4
22:55 H4.66E4 A1.70E5
25:13 H5.04E4 A1.91E5
25:34 H6.85E3 A1.88E4
25:55 H4.09E4 A1.66E5
26:02 H869.93 A1.48E3
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9808.0,0.00%,F,F)
22:31 H1.22E4 A3.46E4
22:55 H2.72E4 A8.46E4
25:13 H1.79E4 A5.74E4
25:56 H1.76E4 A4.85E4
234.0406 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2392.0,0.00%,F,F)
20:03 H4.01E6 A1.47E7
21:50 H6.03E6 A2.24E7
25:12 H7.36E6 A2.80E7
25:54 H9.46E6 A3.72E7
236.0376 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2532.0,0.00%,F,F)
20:03 H2.48E6 A9.13E6
21:50 H3.83E6 A1.41E7
25:12 H4.58E6 A1.76E7
25:54 H5.94E6 A2.34E7
230.9856 S:6 F:2
20:10 20:34 20:53 21:12 21:45 22:20 22:33 23:07 23:32 23:49 24:16 24:41 24:56 25:27 25:54 26:10
100 %
50
0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 Time
5.3E4 2.6E4 0.0E0
4.1E4 2.1E4 0.0E0
9.5E6 4.7E6 0.0E0
5.9E6 3.0E6 0.0E0
9.3E6 4.6E6 0.0E0


File:141226E3 #1-757 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2412.0,0.00%,F,F)
20:04 H2.97E4 A1.14E5
22:23 H2.77E3 A5.53E3
22:31 H2.54E4 A1.04E5
22:55 H4.73E4 A1.78E5
25:13 H5.13E4 A2.00E5
25:34 H6.84E3 A1.88E4
25:55 H4.20E4 A1.59E5
26:02 H869.93 A1.48E3
100 %
Time
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9808.0,0.00%,F,F)
20:05 H1.99E4 A7.75E4
22:31 H1.99E4 A6.80E4
22:55 H3.29E4 A1.22E5
25:13 H2.95E4 A1.36E5
25:56 H2.54E4 A9.26E4
100 %
Time

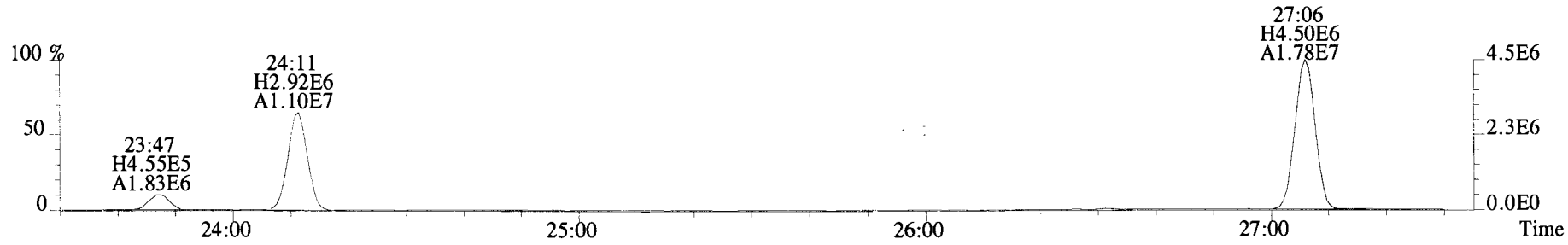
File:141226E3 #1-757 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1948.0,0.00%,F,F)



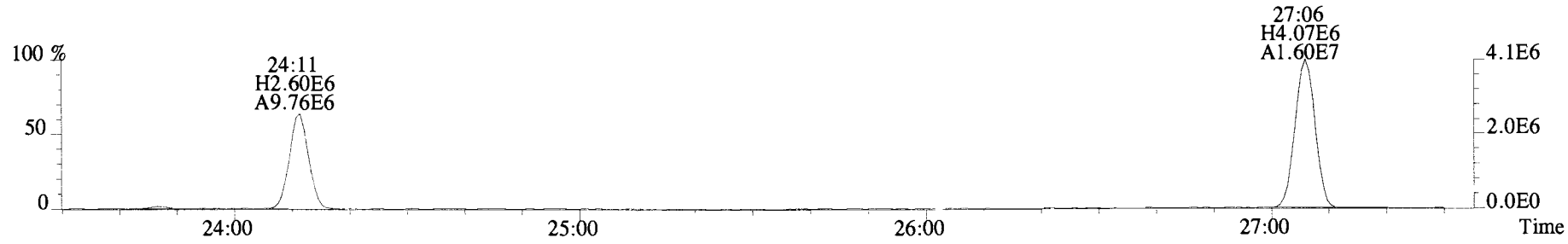
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1436.0,0.00%,F,F)



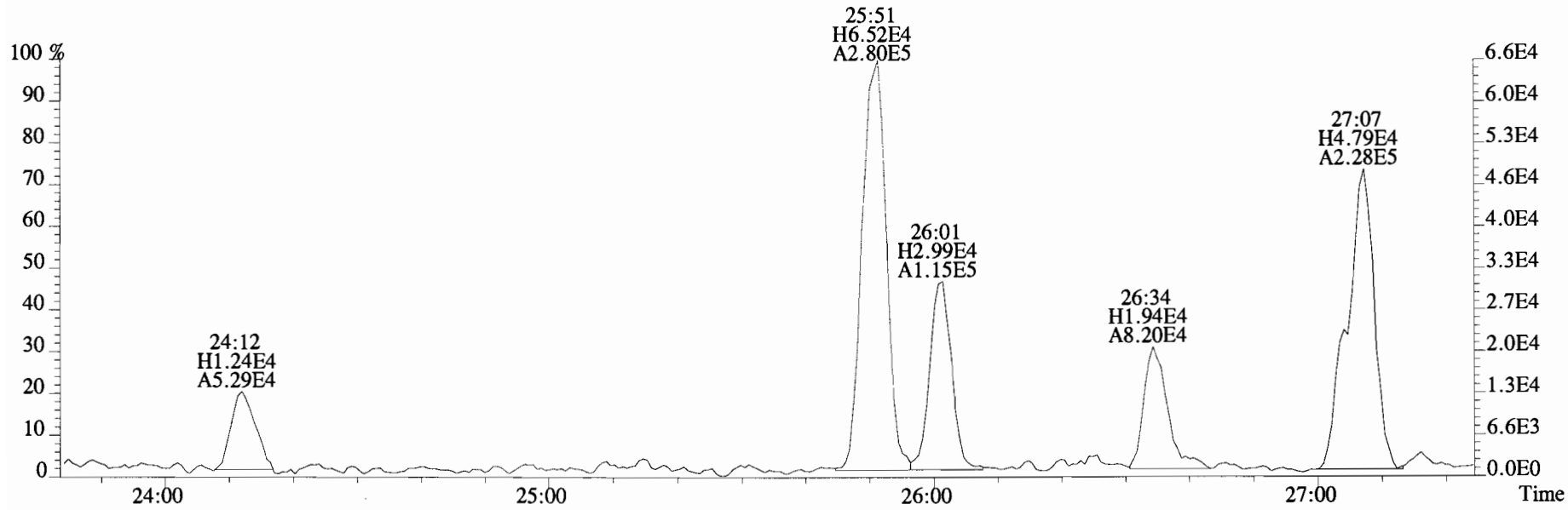
268.0016 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19208.0,0.00%,F,F)



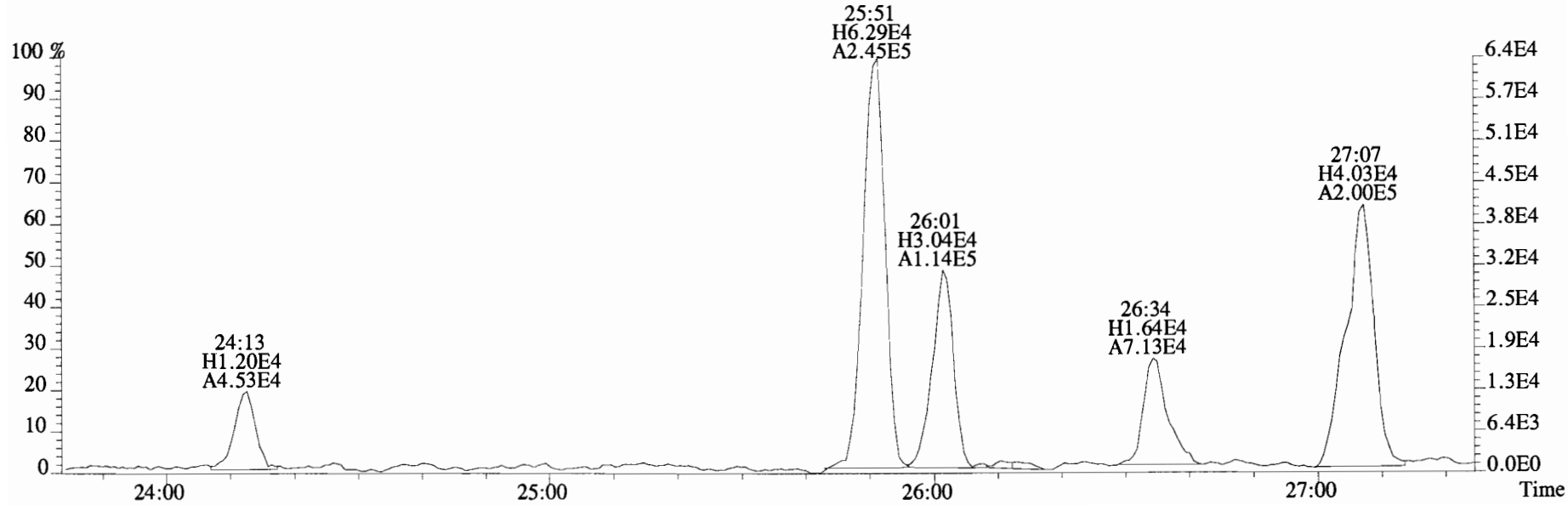
269.9986 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10896.0,0.00%,F,F)



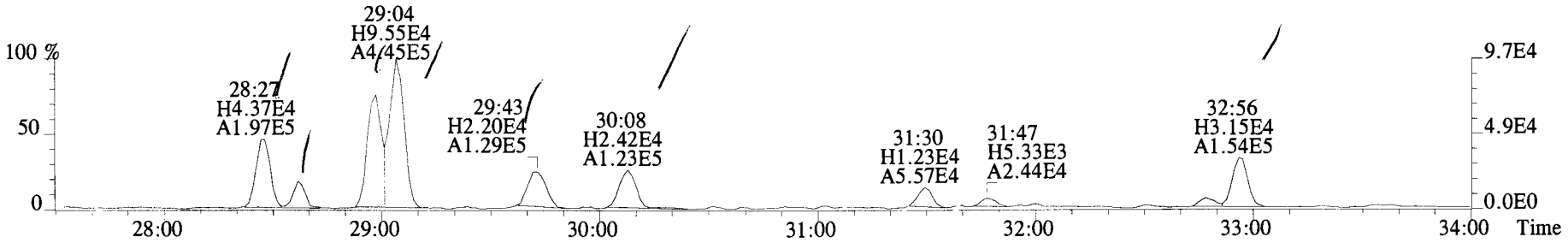
File:141226E3 #1-757 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1948.0,0.00%,F,F)



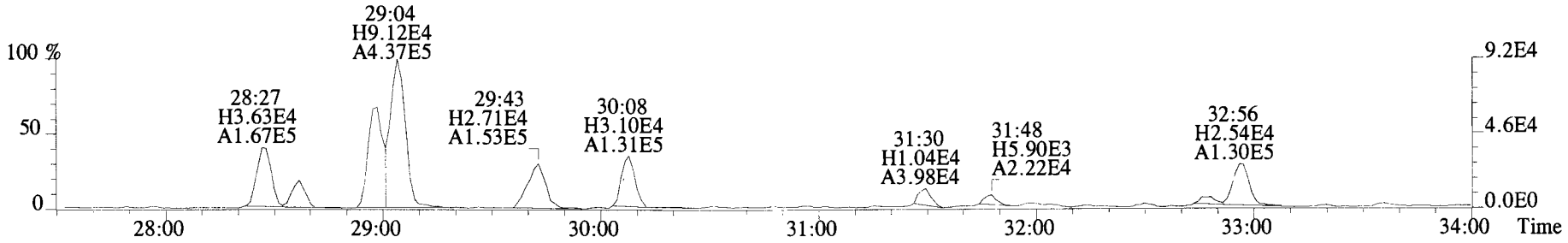
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1436.0,0.00%,F,F)



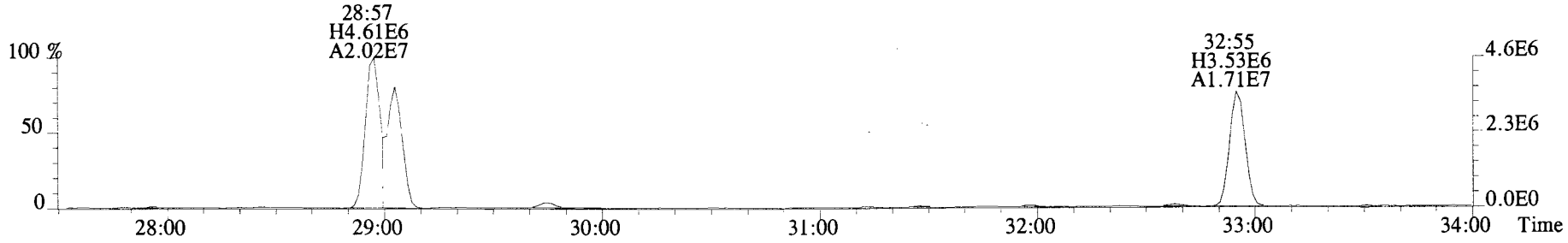
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2180.0,0.00%,F,F)



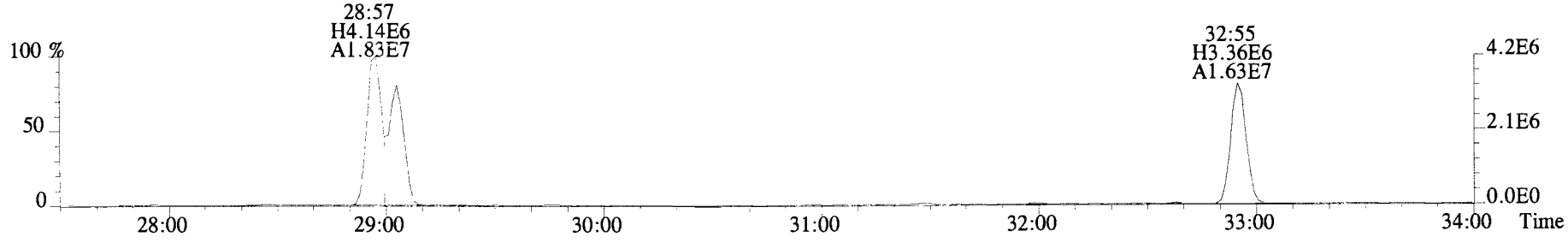
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



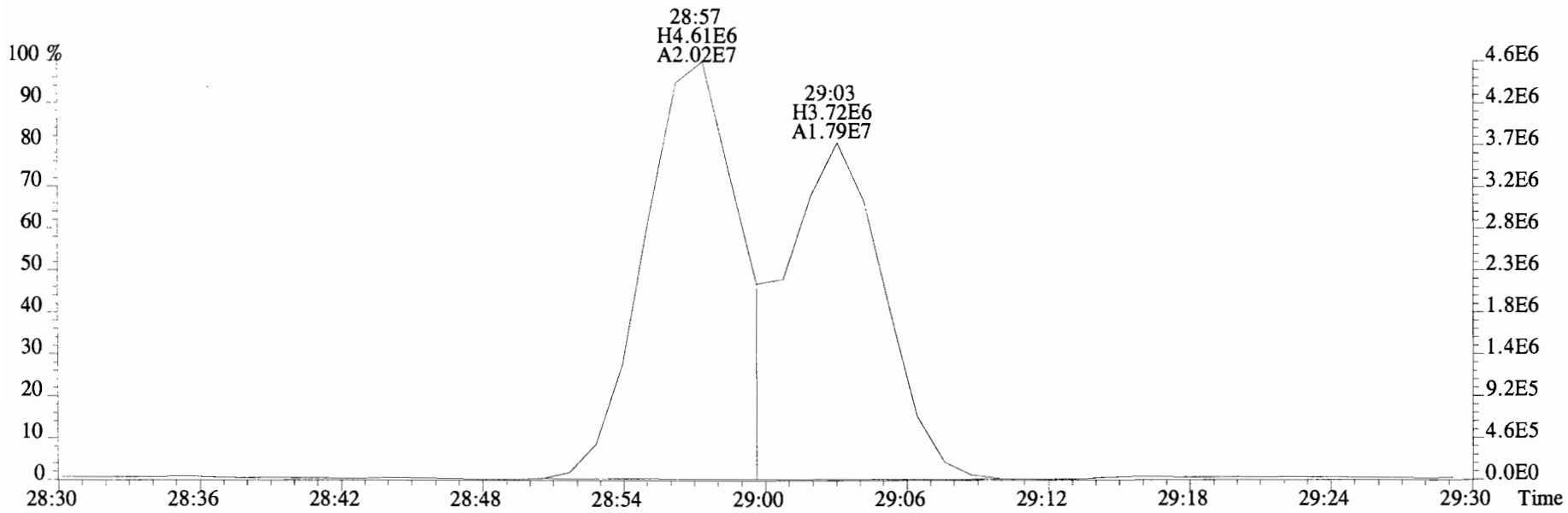
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25292.0,0.00%,F,F)



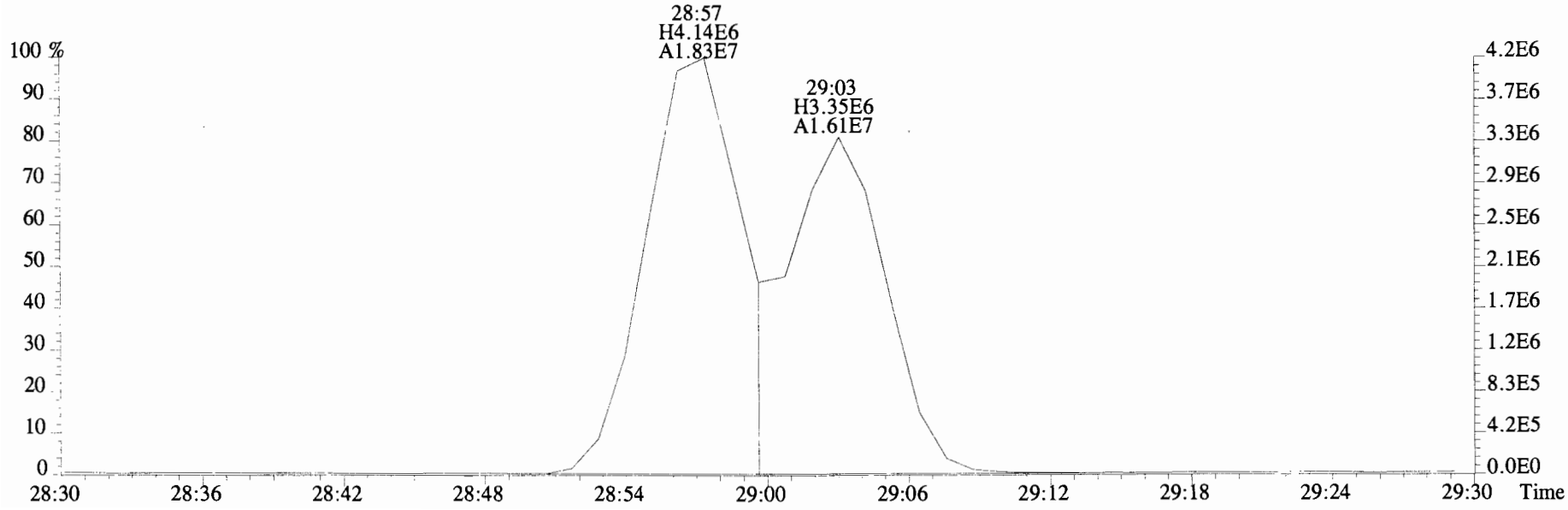
269.9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16804.0,0.00%,F,F)



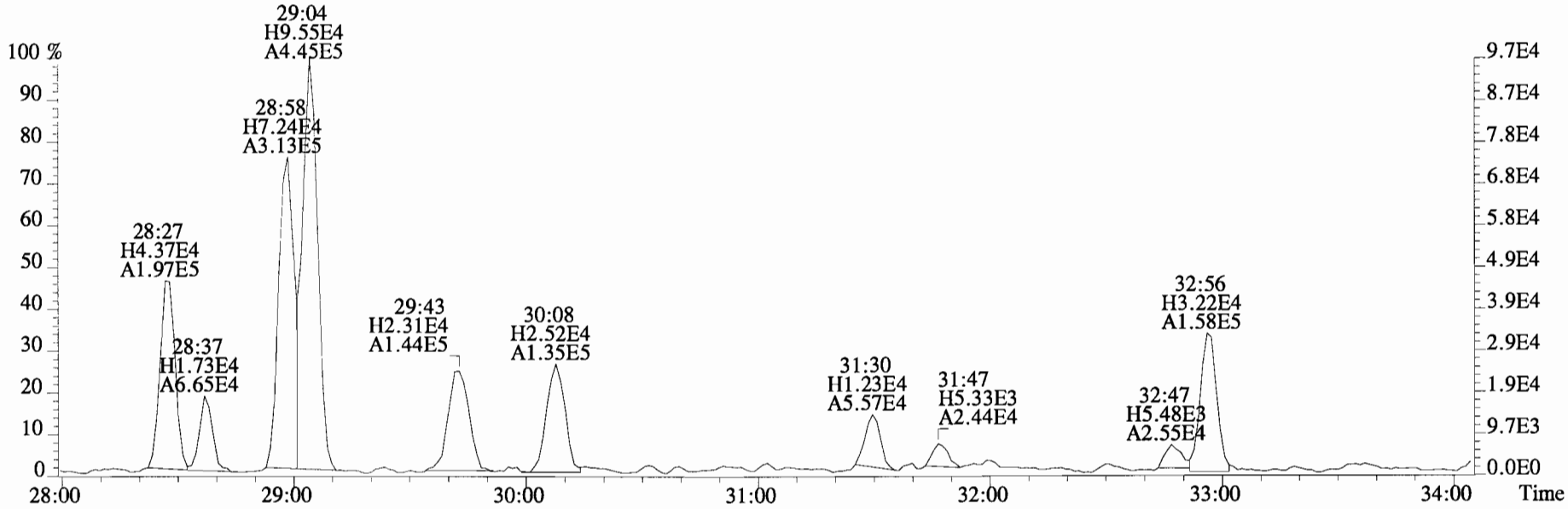
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25292.0,0.00%,F,F)



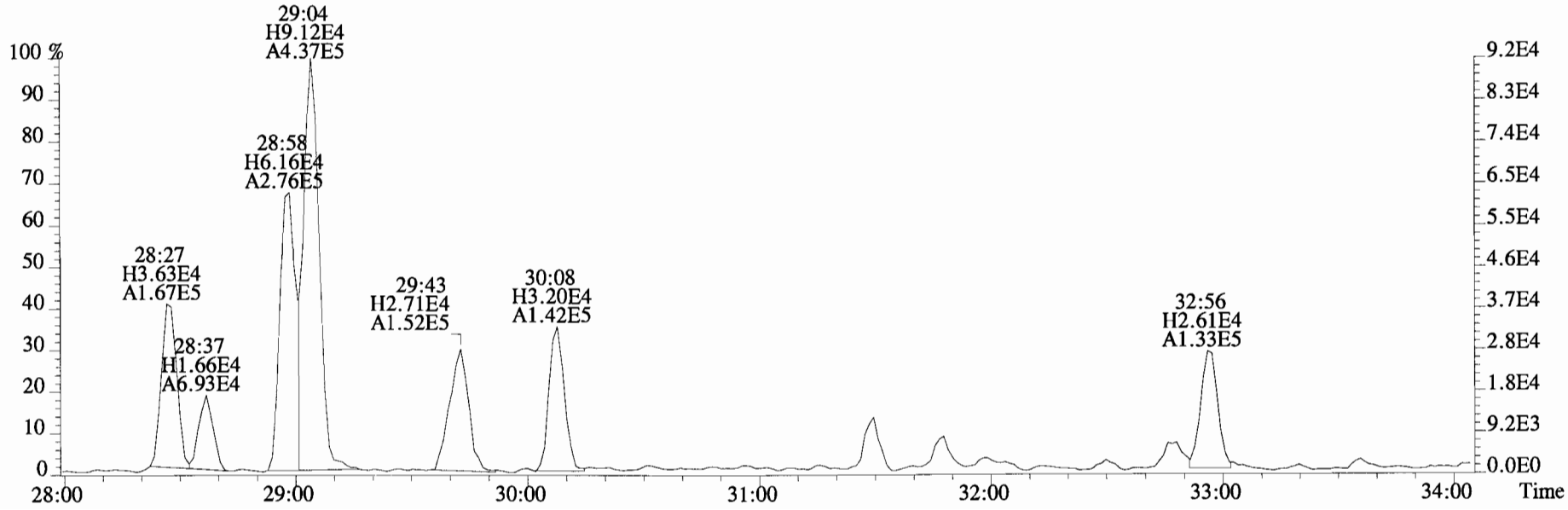
269 9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,16804.0,0.00%,F,F)



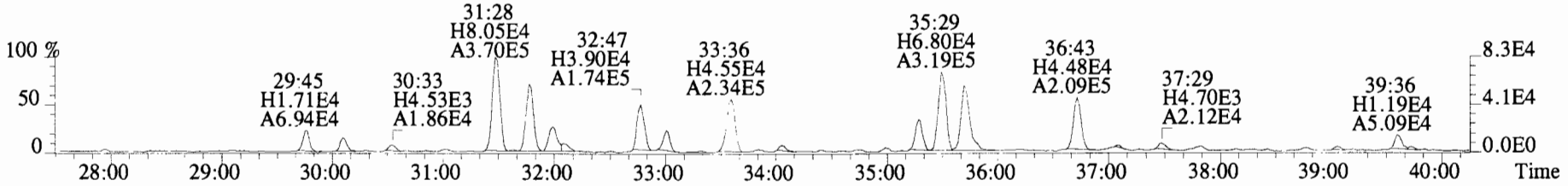
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2180.0,0.00%,F,F)



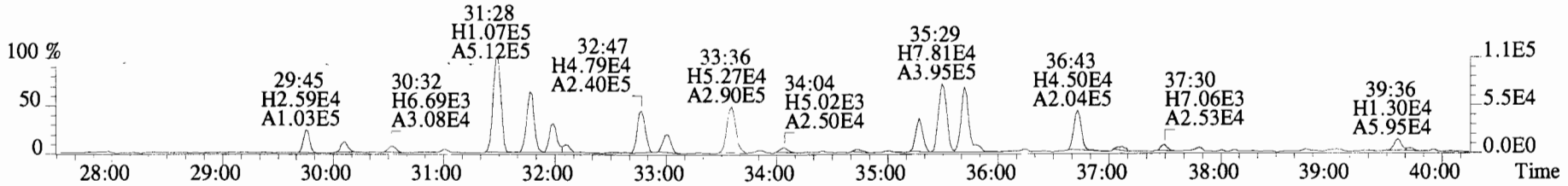
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1912.0,0.00%,F,F)



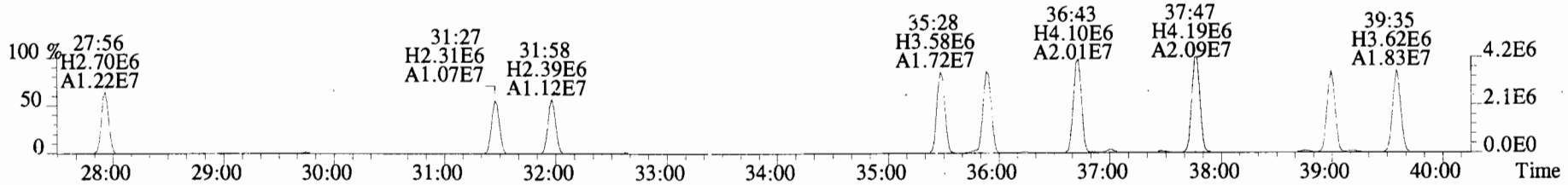
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



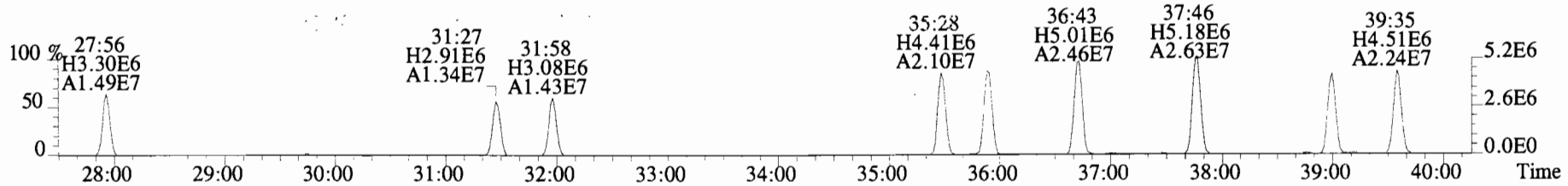
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



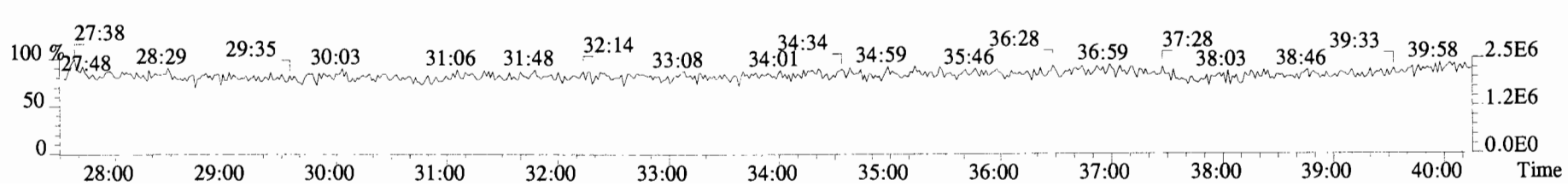
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4376.0,0.00%,F,F)



303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3008.0,0.00%,F,F)

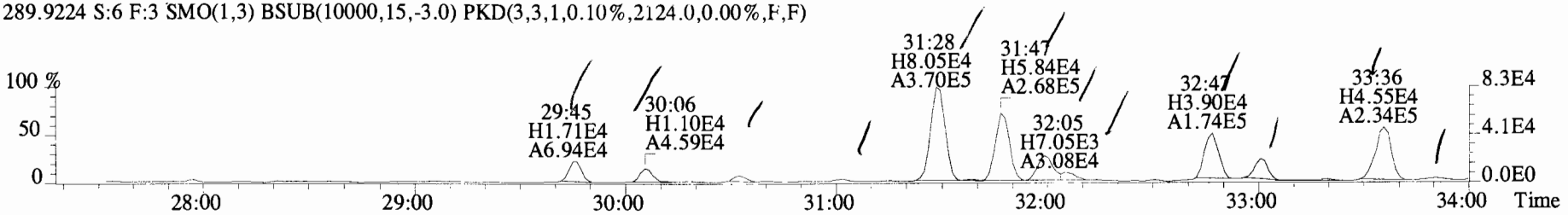


330.9792 S:6 F:3

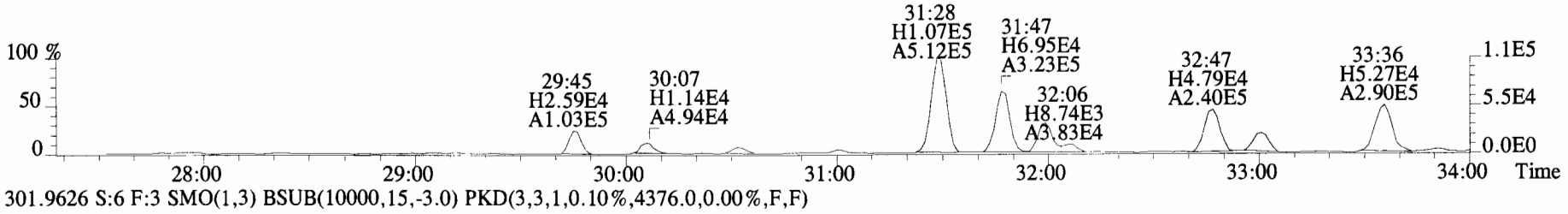


File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1

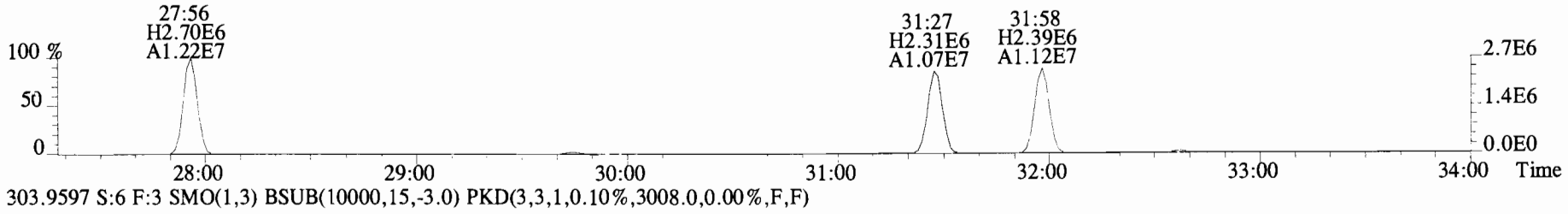
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



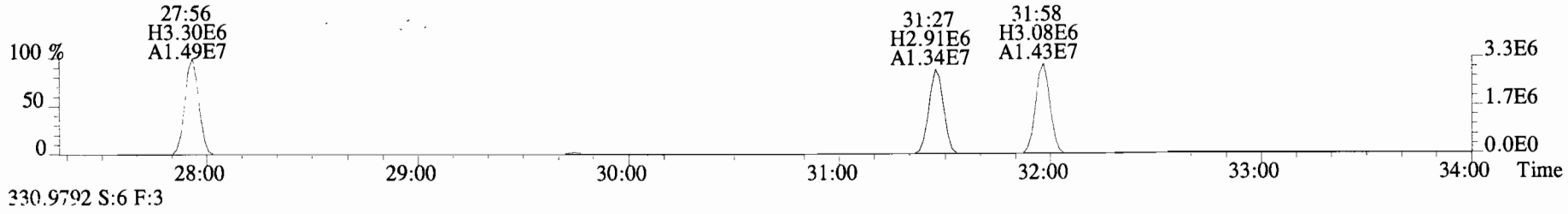
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



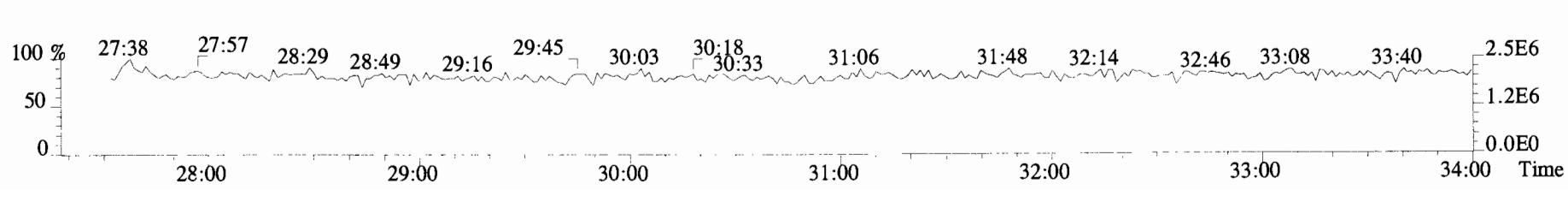
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4376.0,0.00%,F,F)



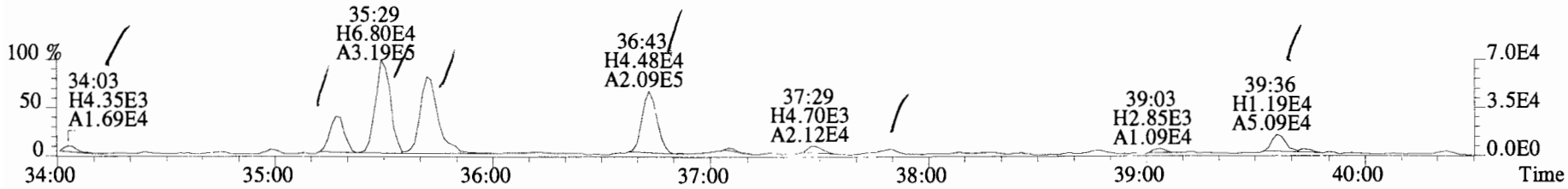
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3008.0,0.00%,F,F)



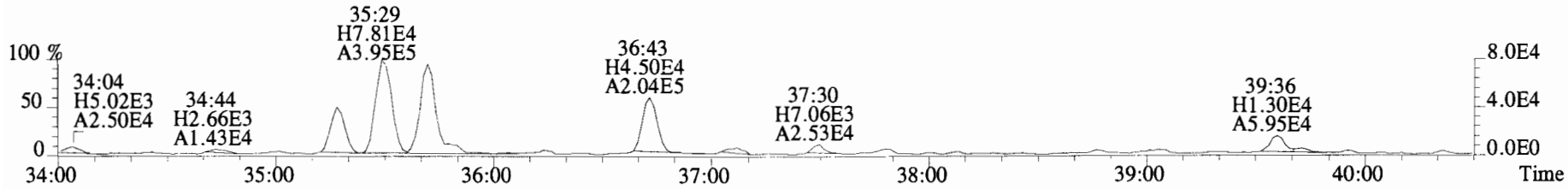
330.9792 S:6 F:3



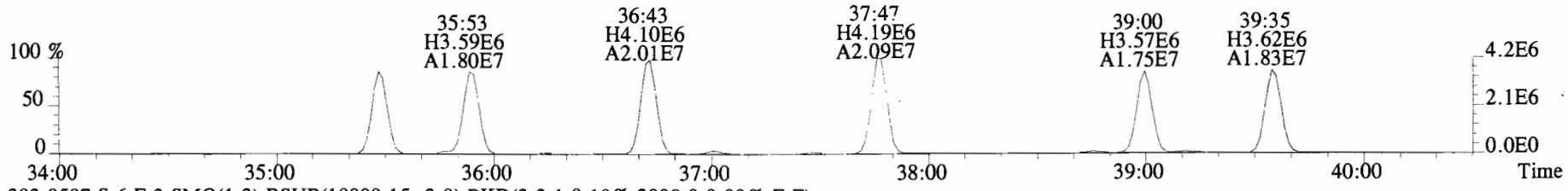
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



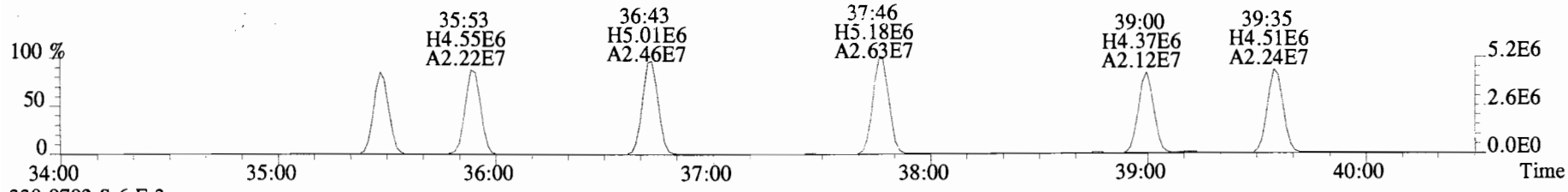
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



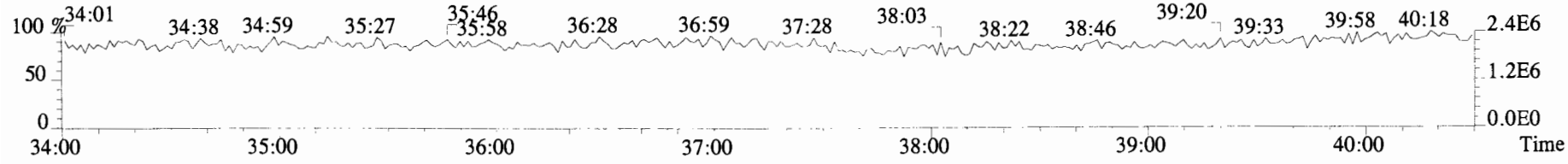
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4376.0,0.00%,F,F)



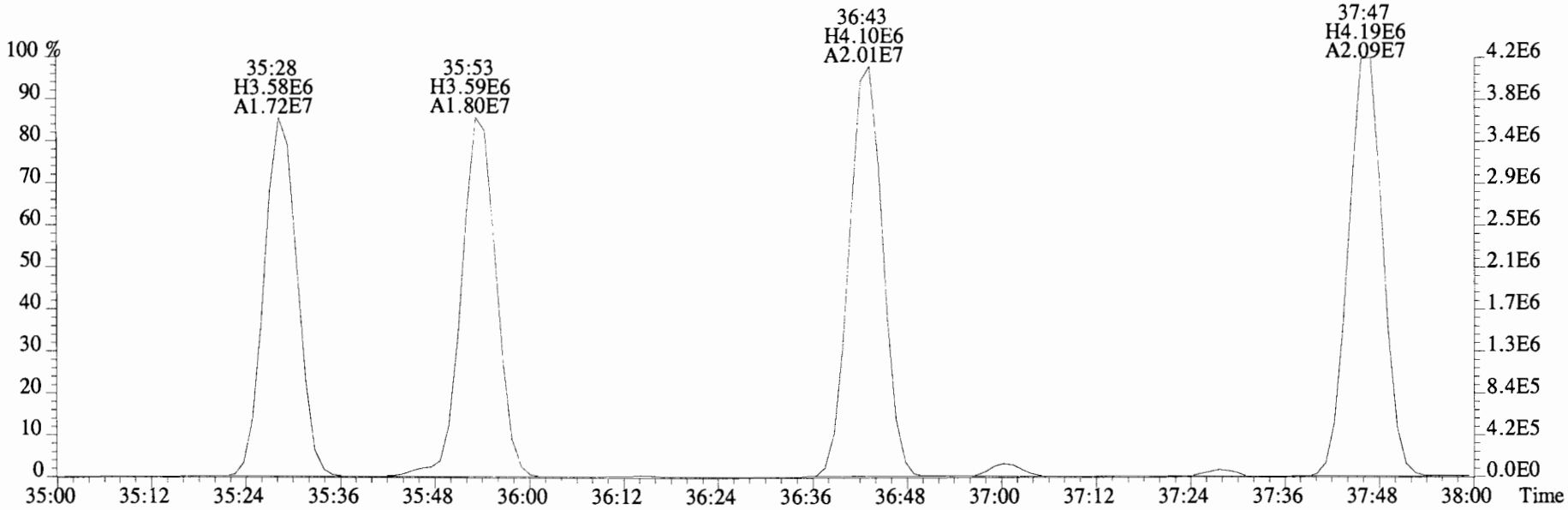
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3008.0,0.00%,F,F)



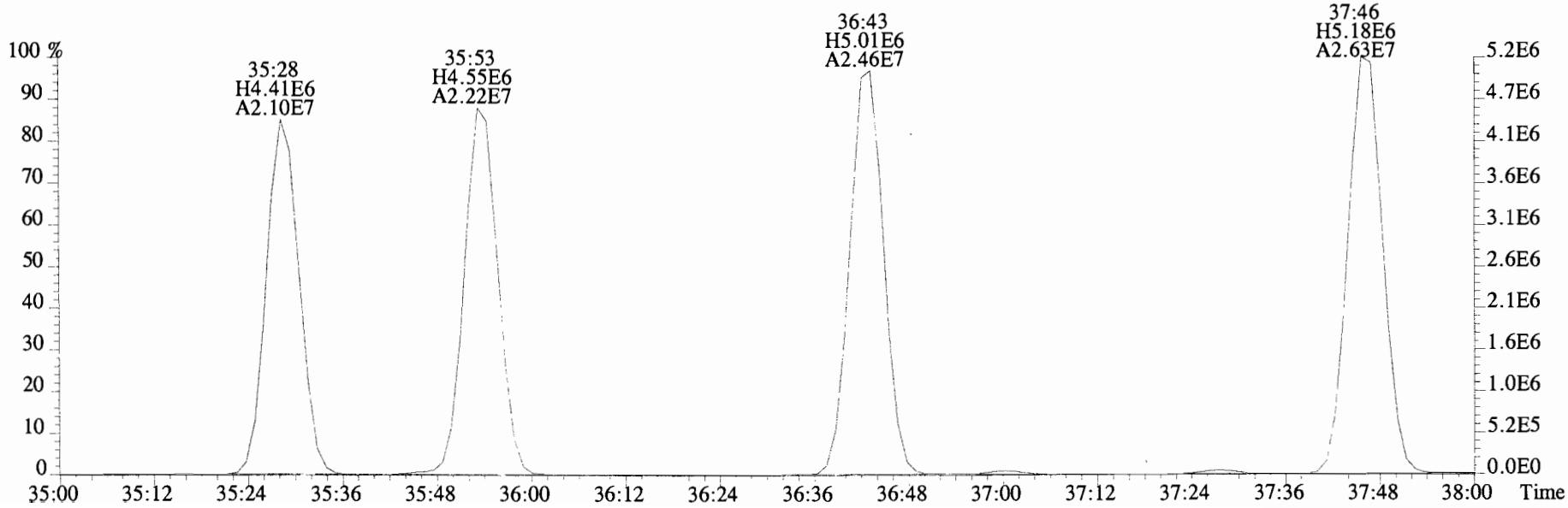
330.9792 S:6 F:3



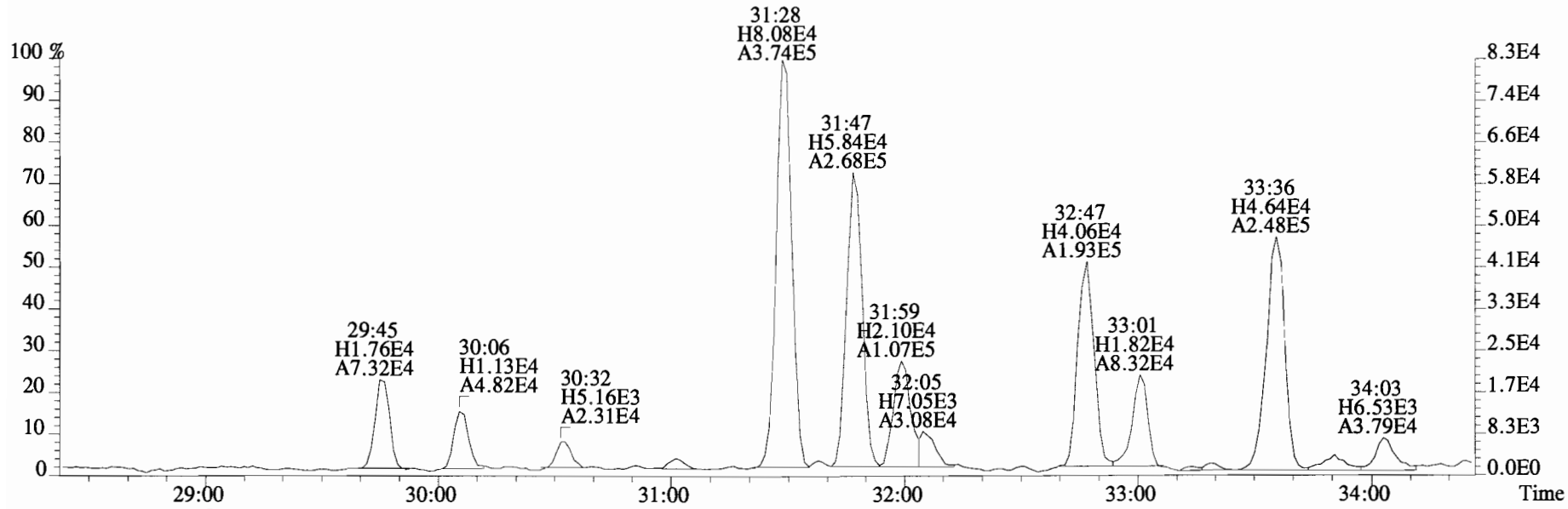
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4376.0,0.00%,F,F)



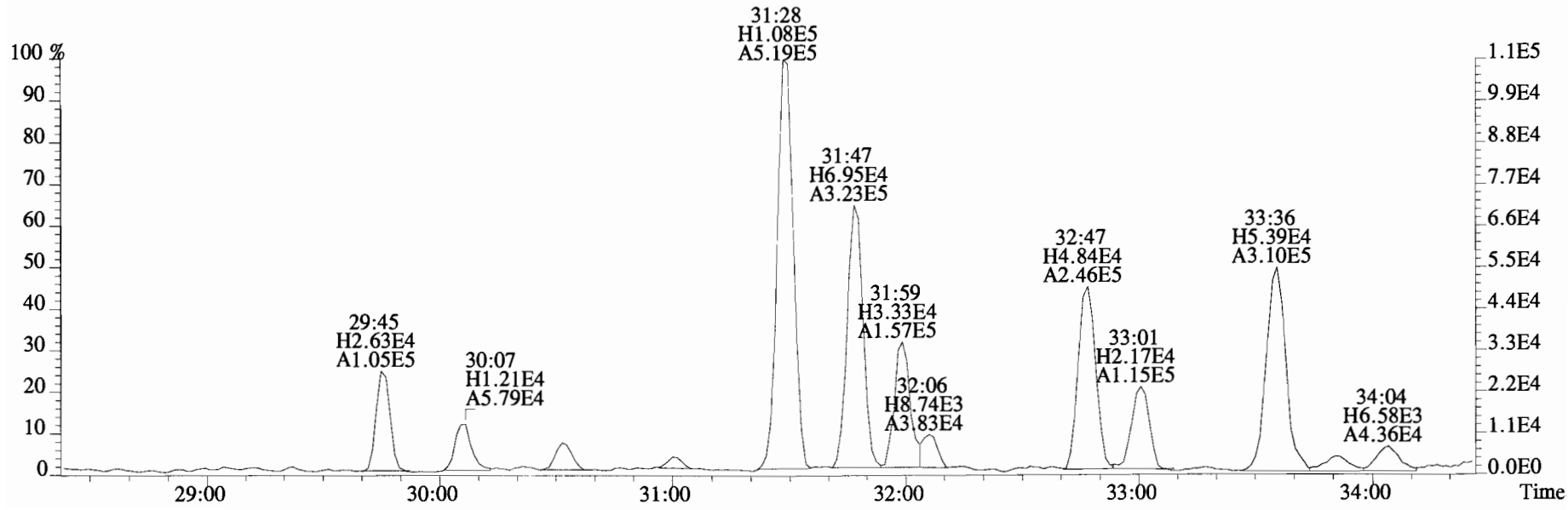
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3008.0,0.00%,F,F)



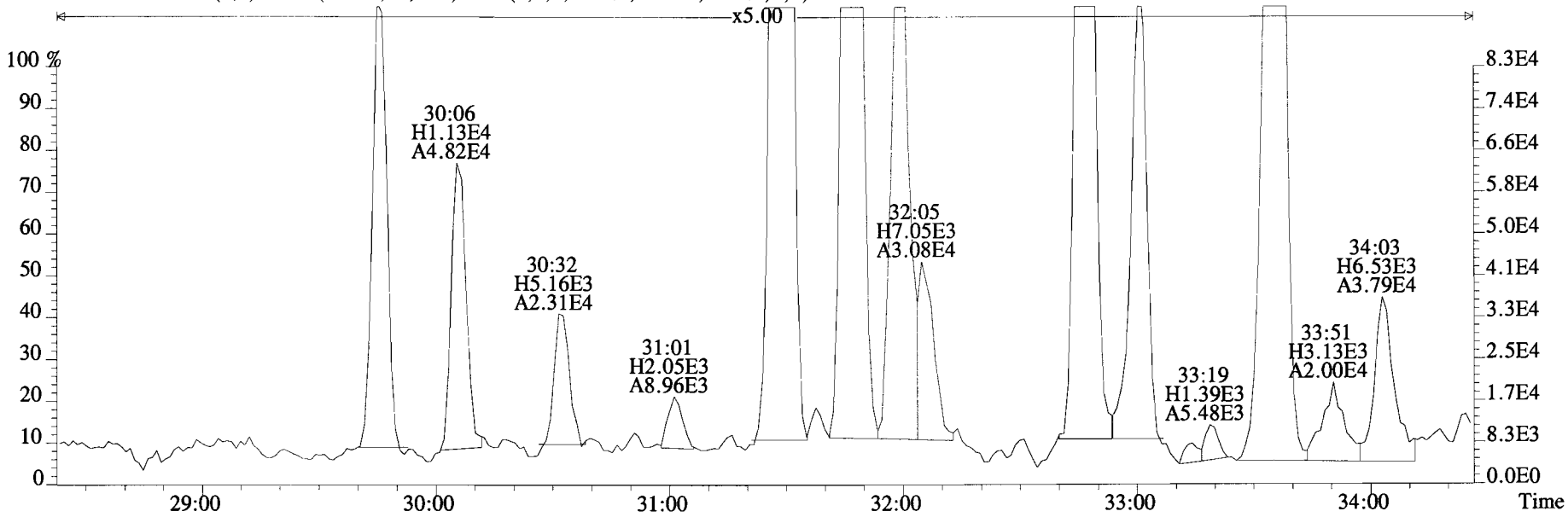
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



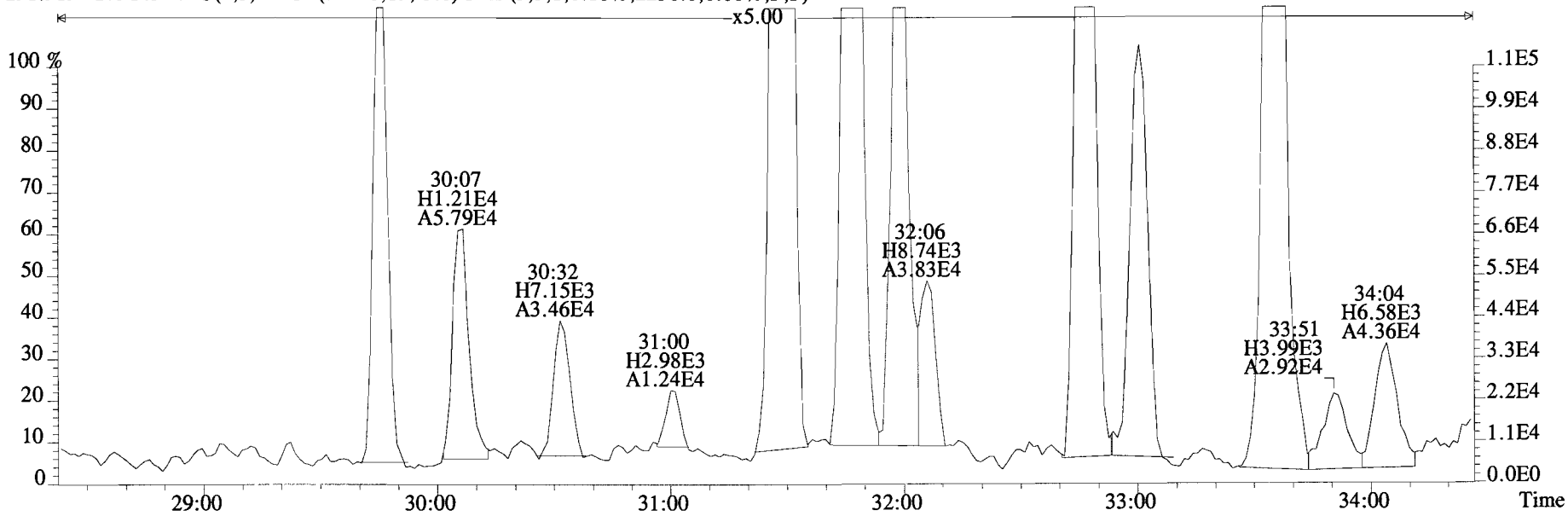
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



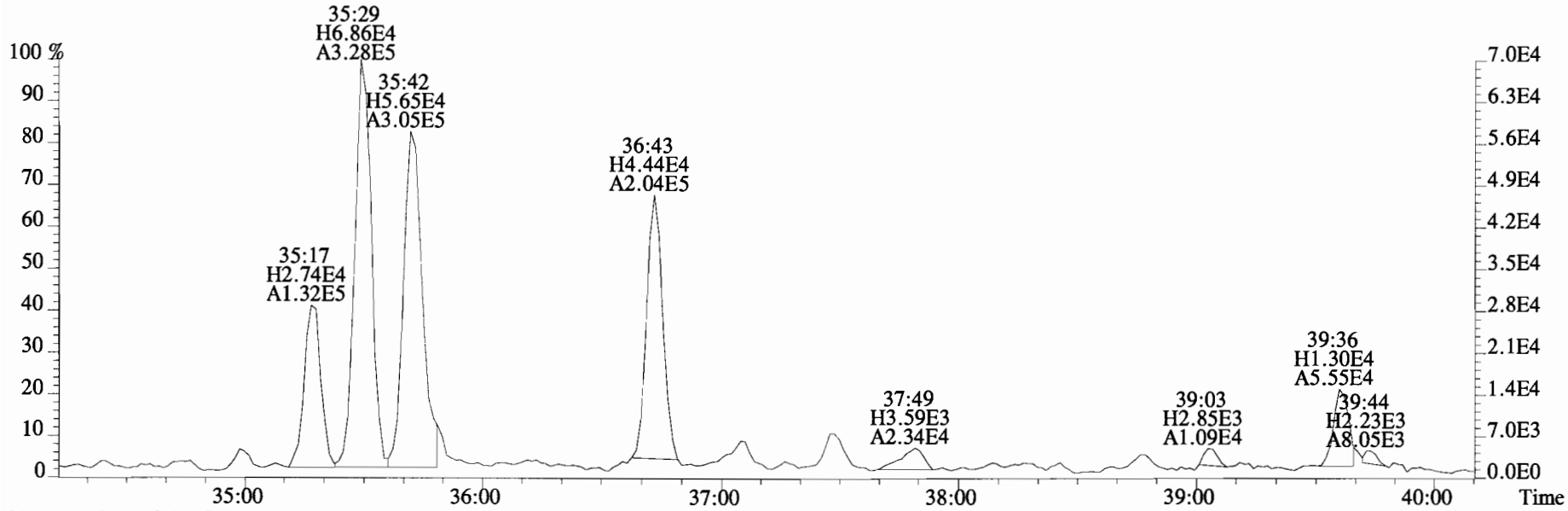
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



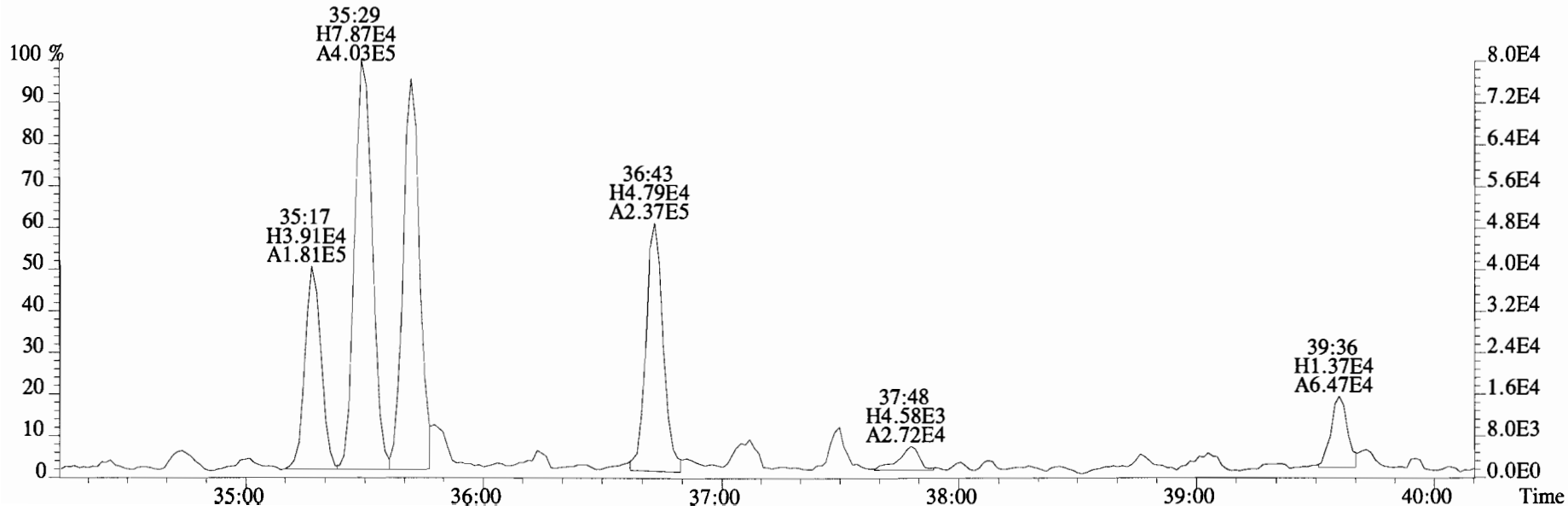
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



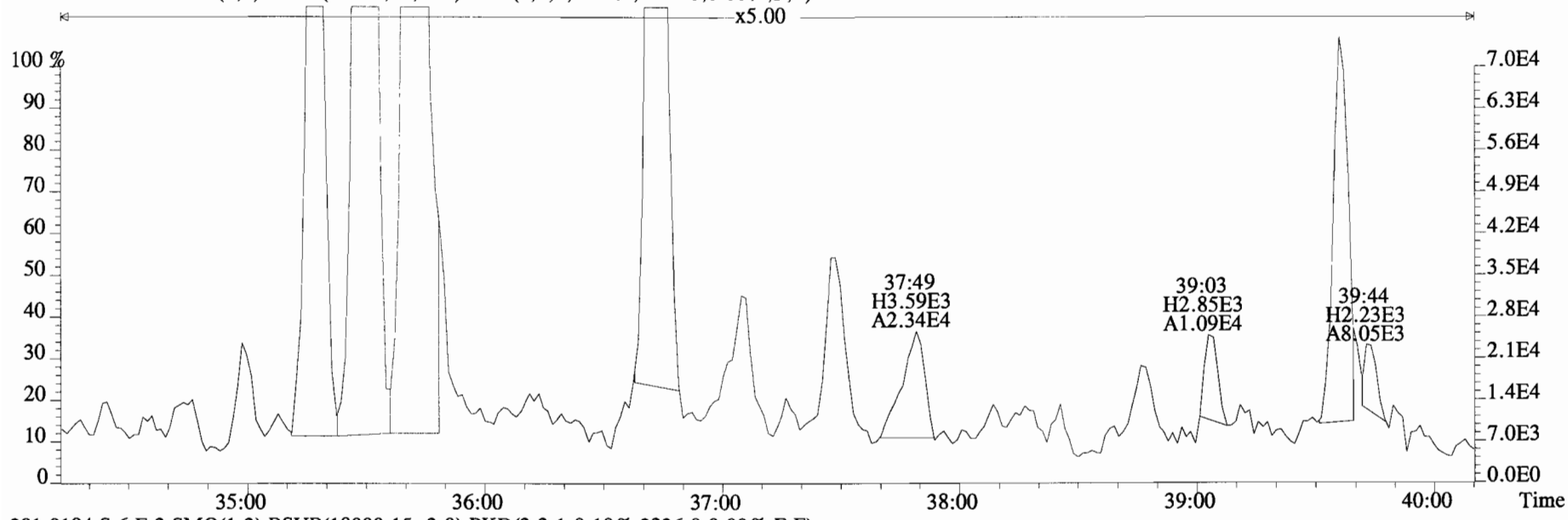
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



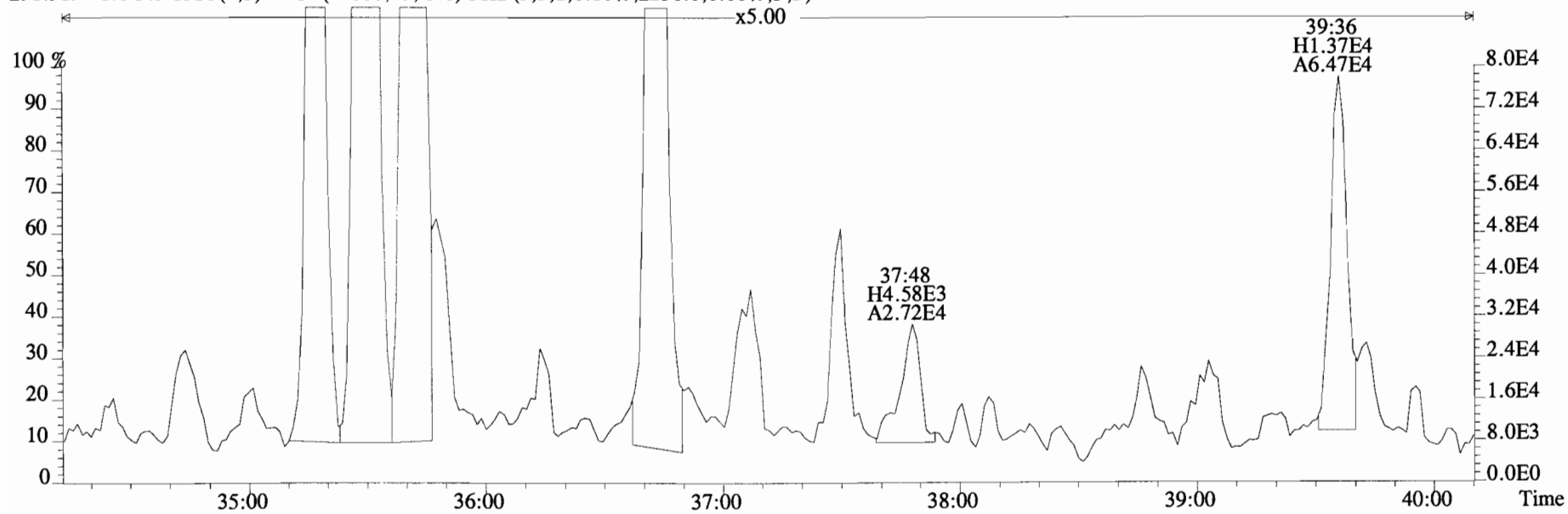
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



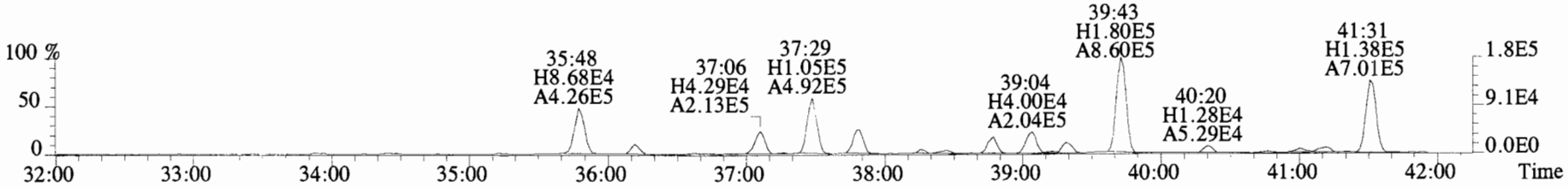
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



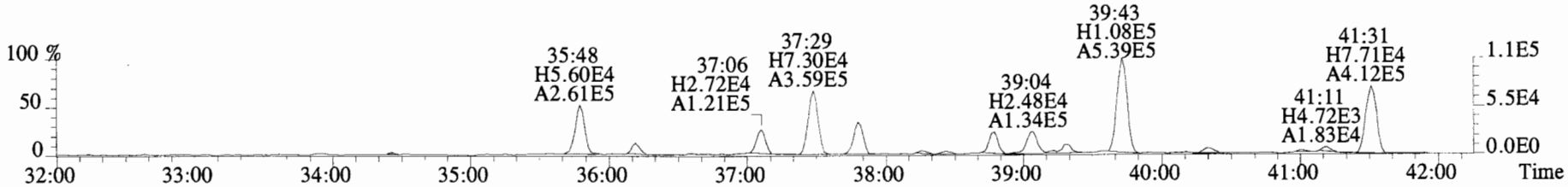
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2236.0,0.00%,F,F)



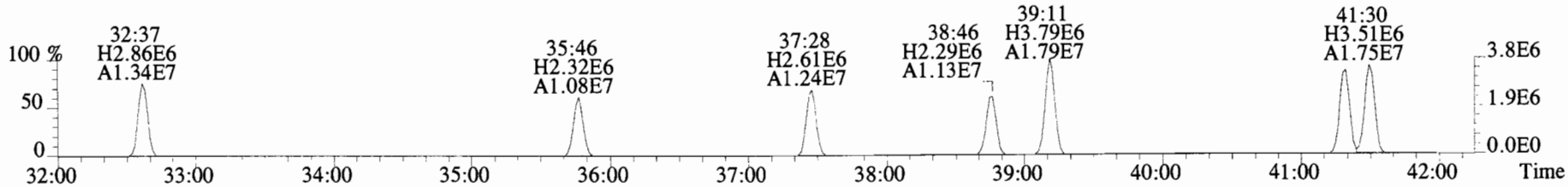
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



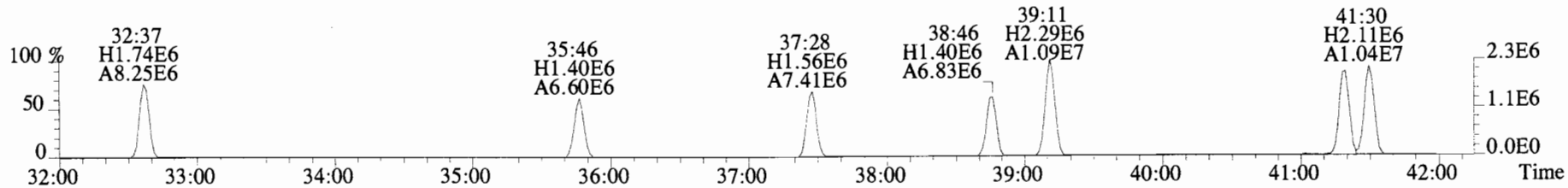
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)



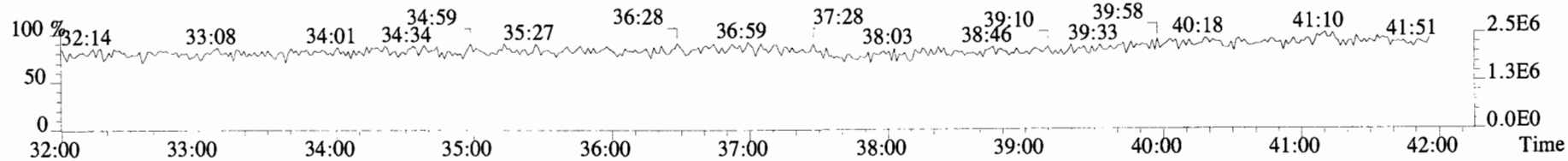
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1700.0,0.00%,F,F)



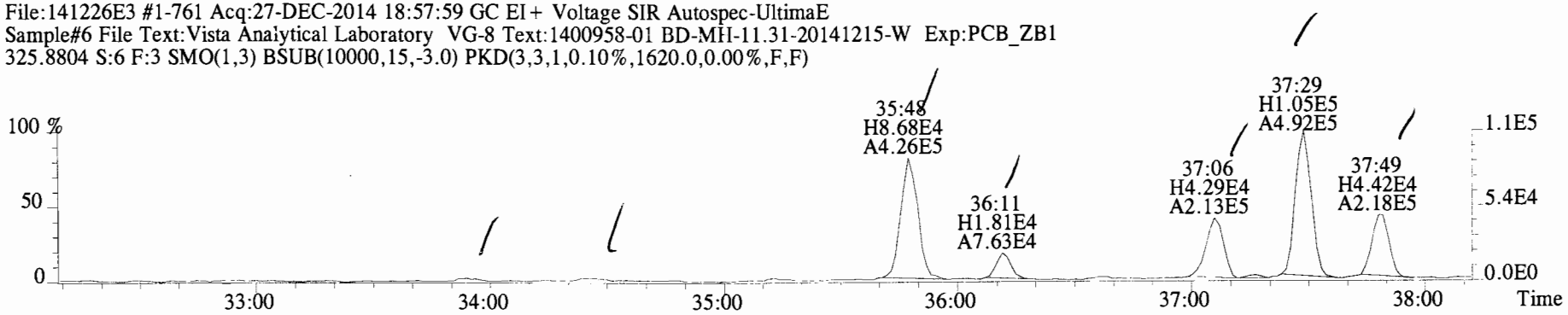
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)



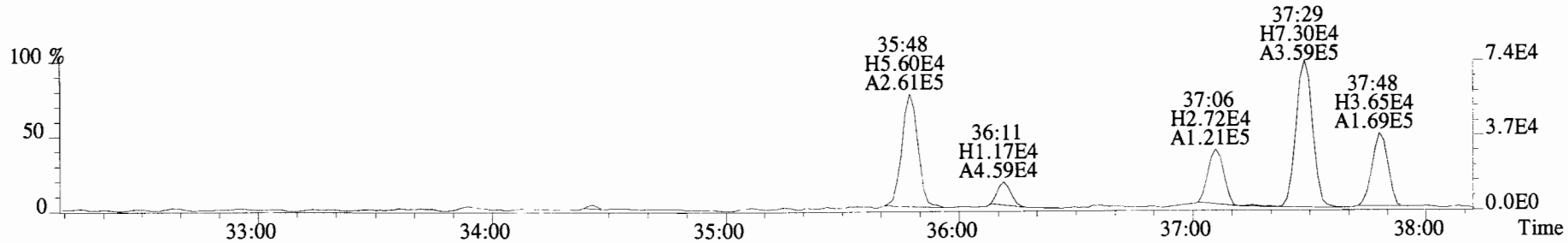
330.9792 S:6 F:3



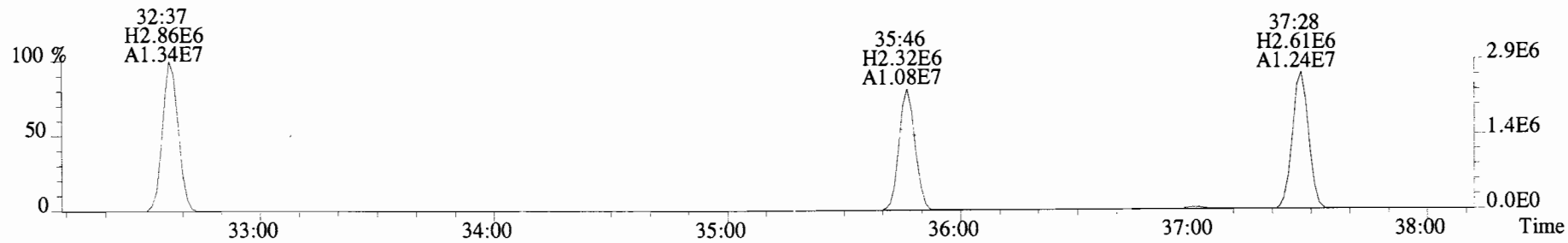
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



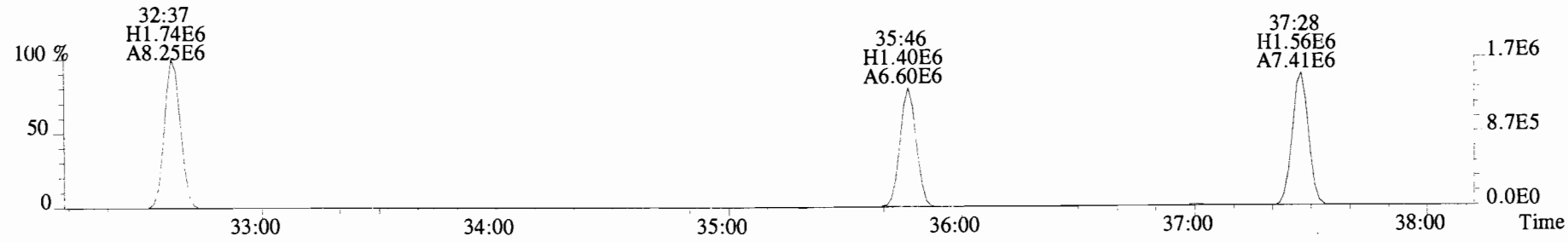
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)



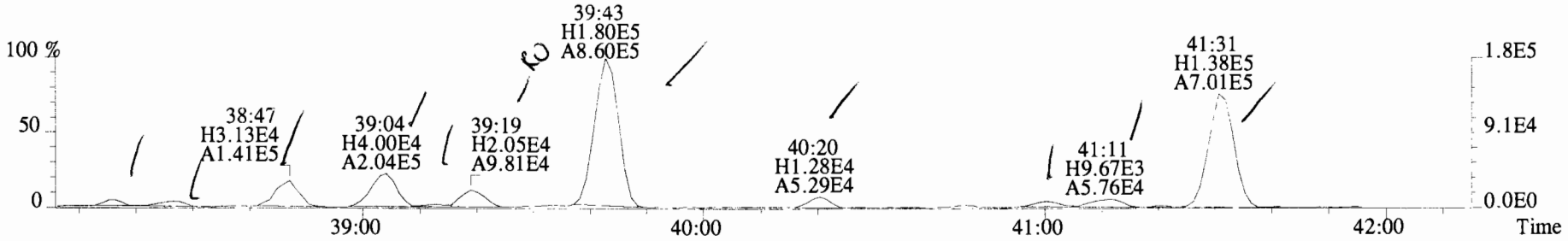
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1700.0,0.00%,F,F)



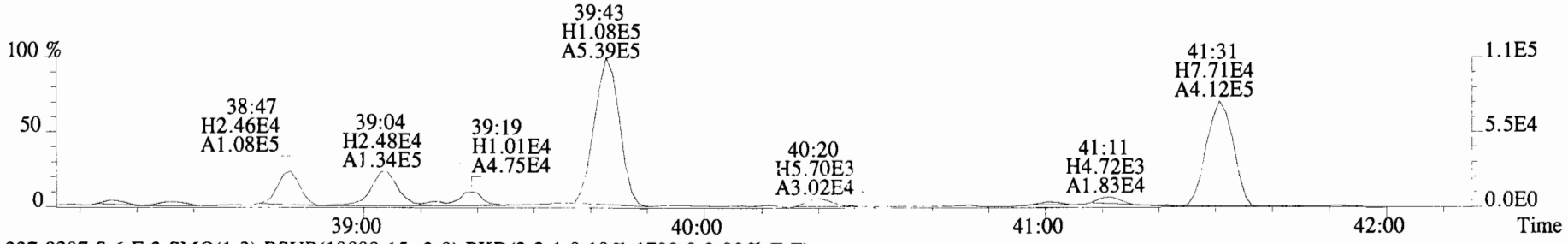
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)



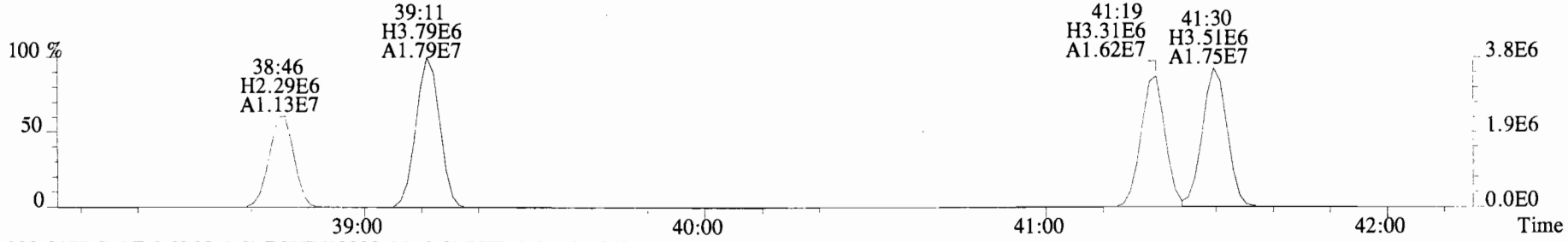
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



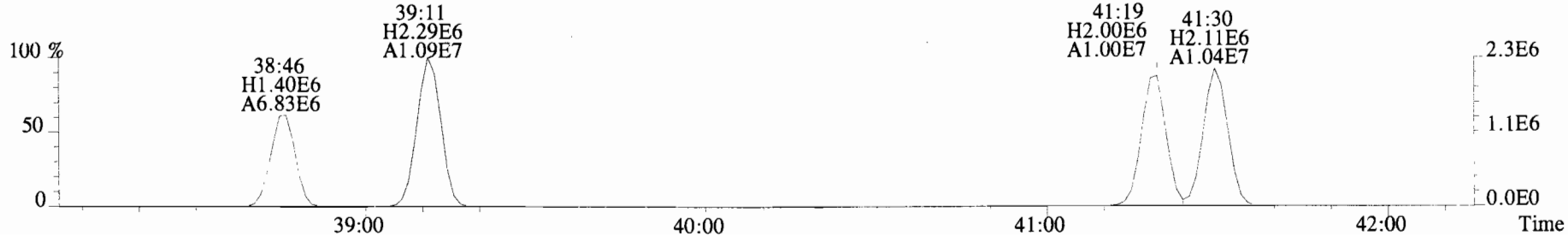
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)



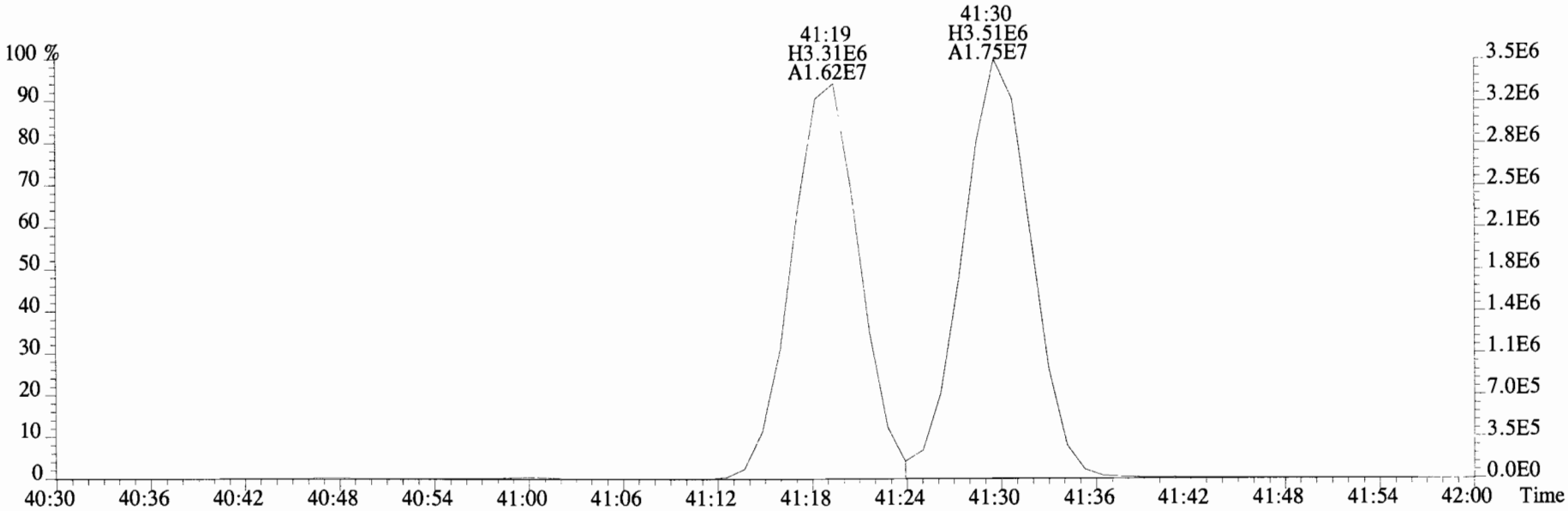
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1700.0,0.00%,F,F)



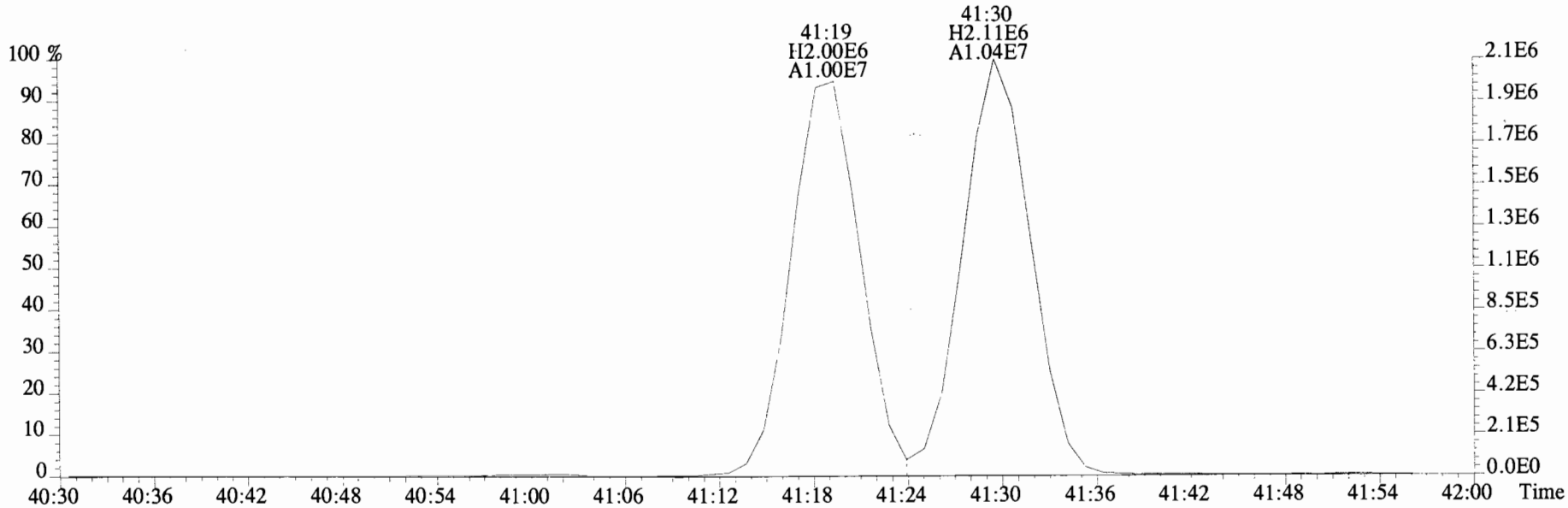
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)



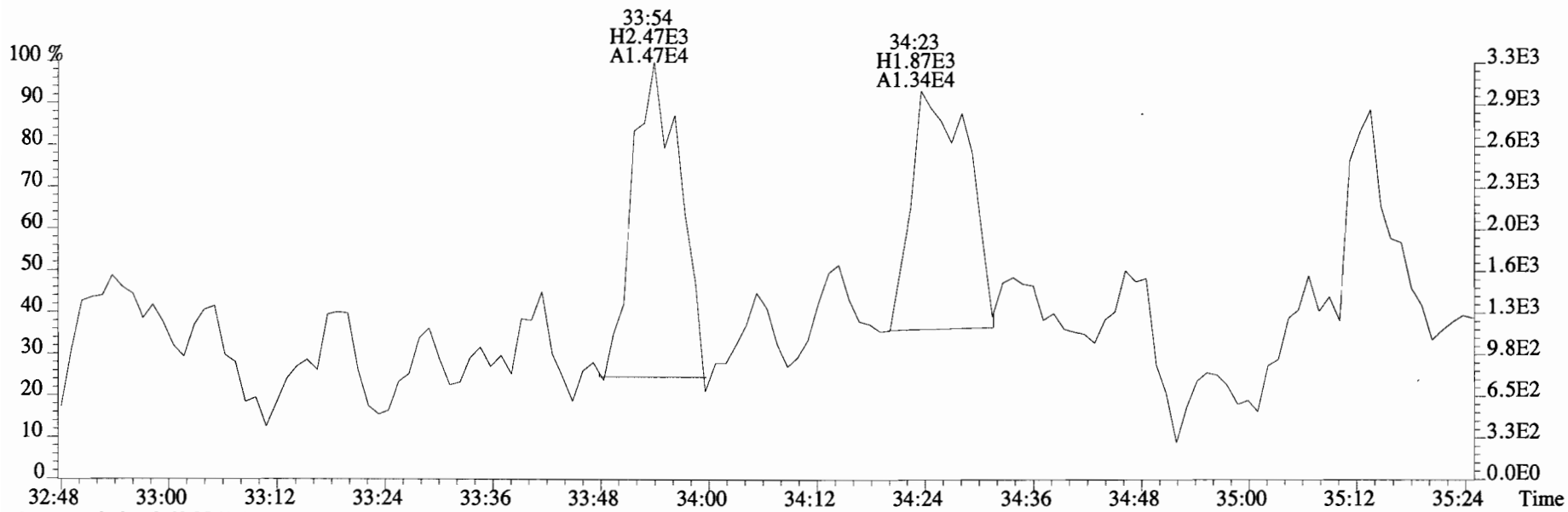
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1700.0,0.00%,F,F)



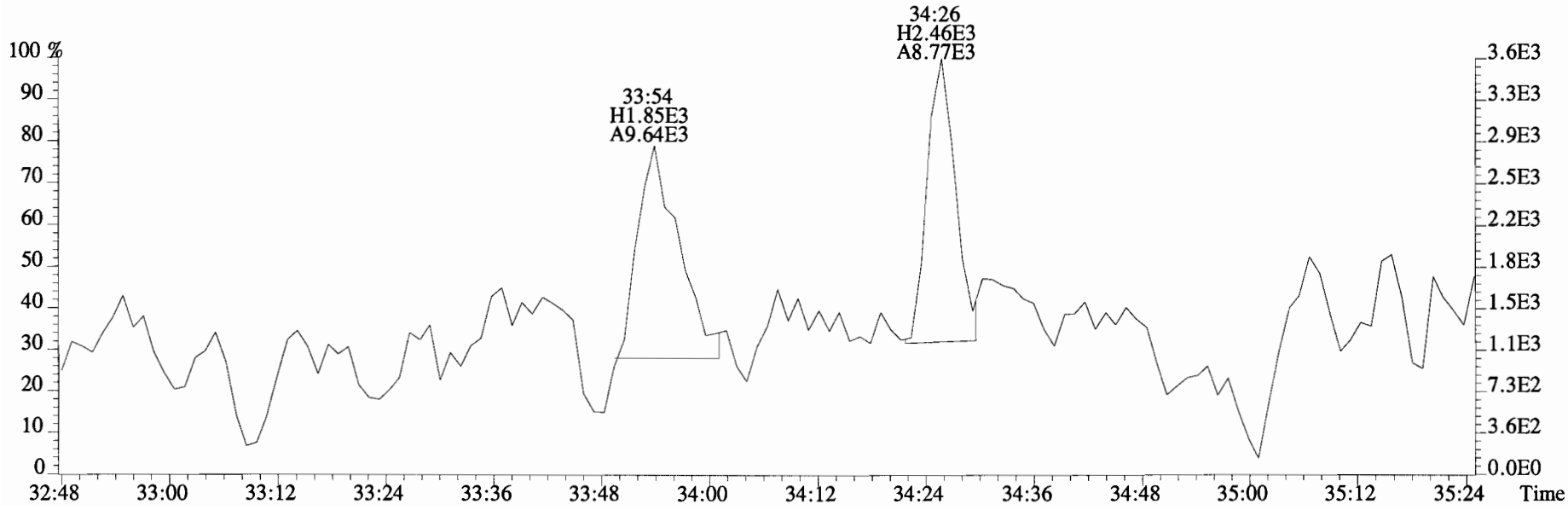
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)



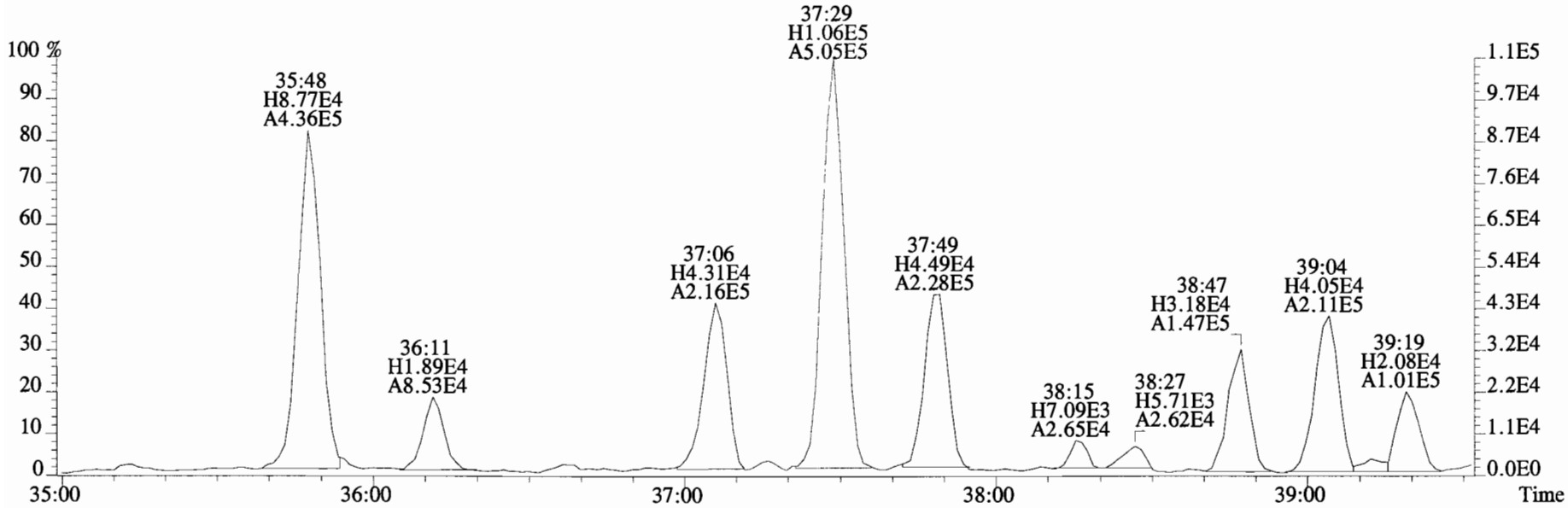
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



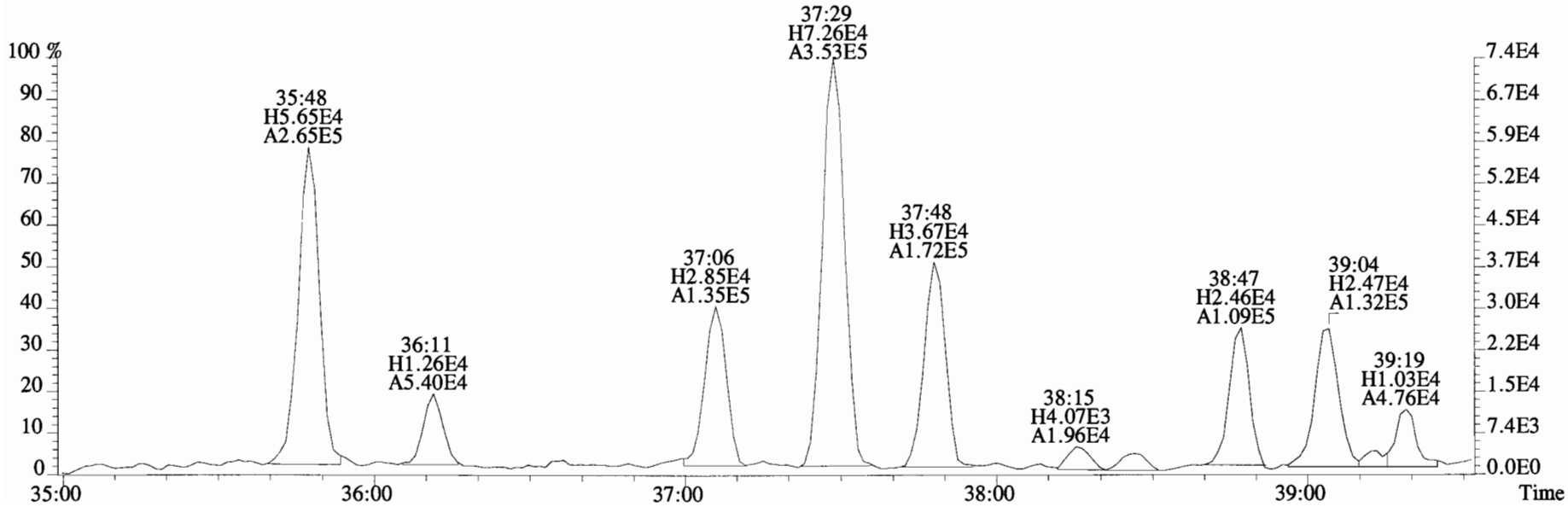
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)

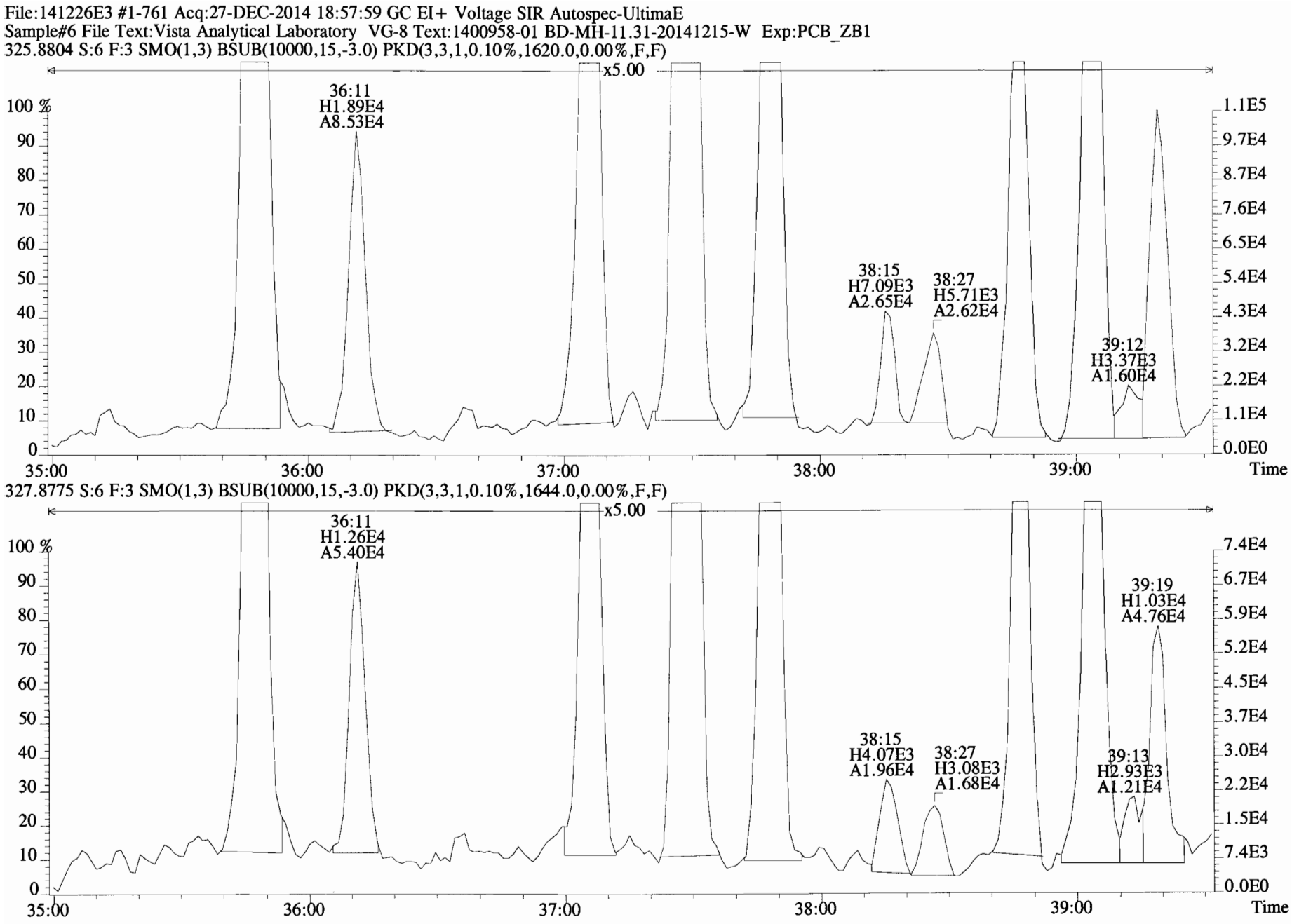


File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)

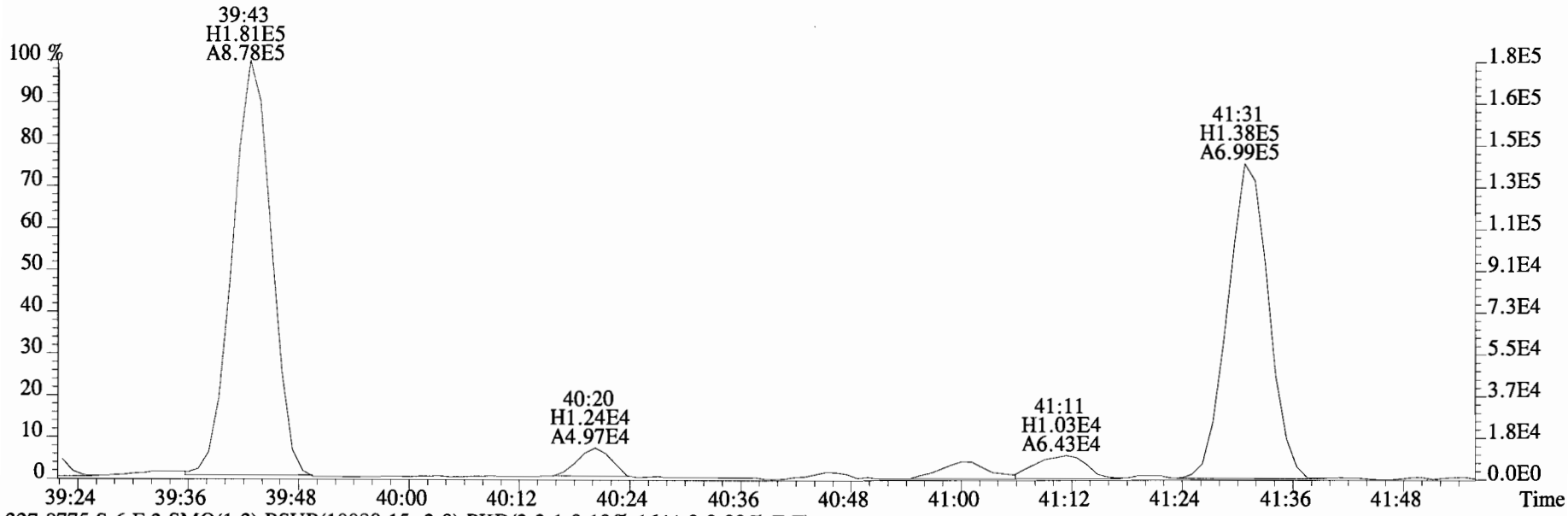


327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)

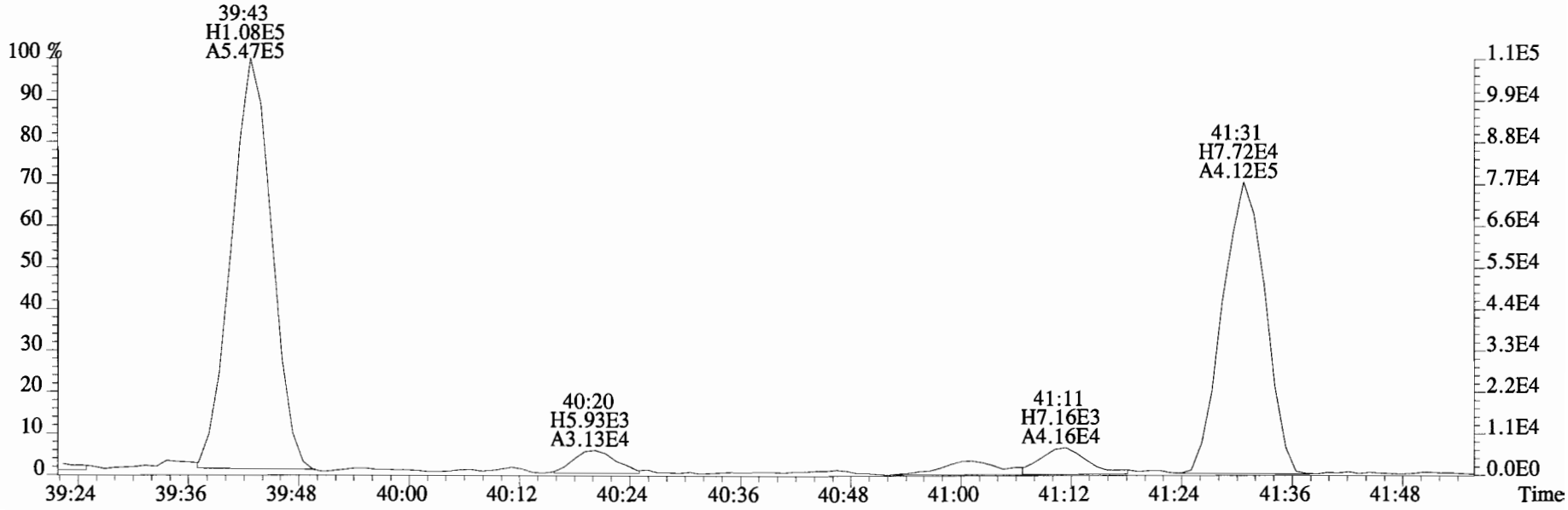


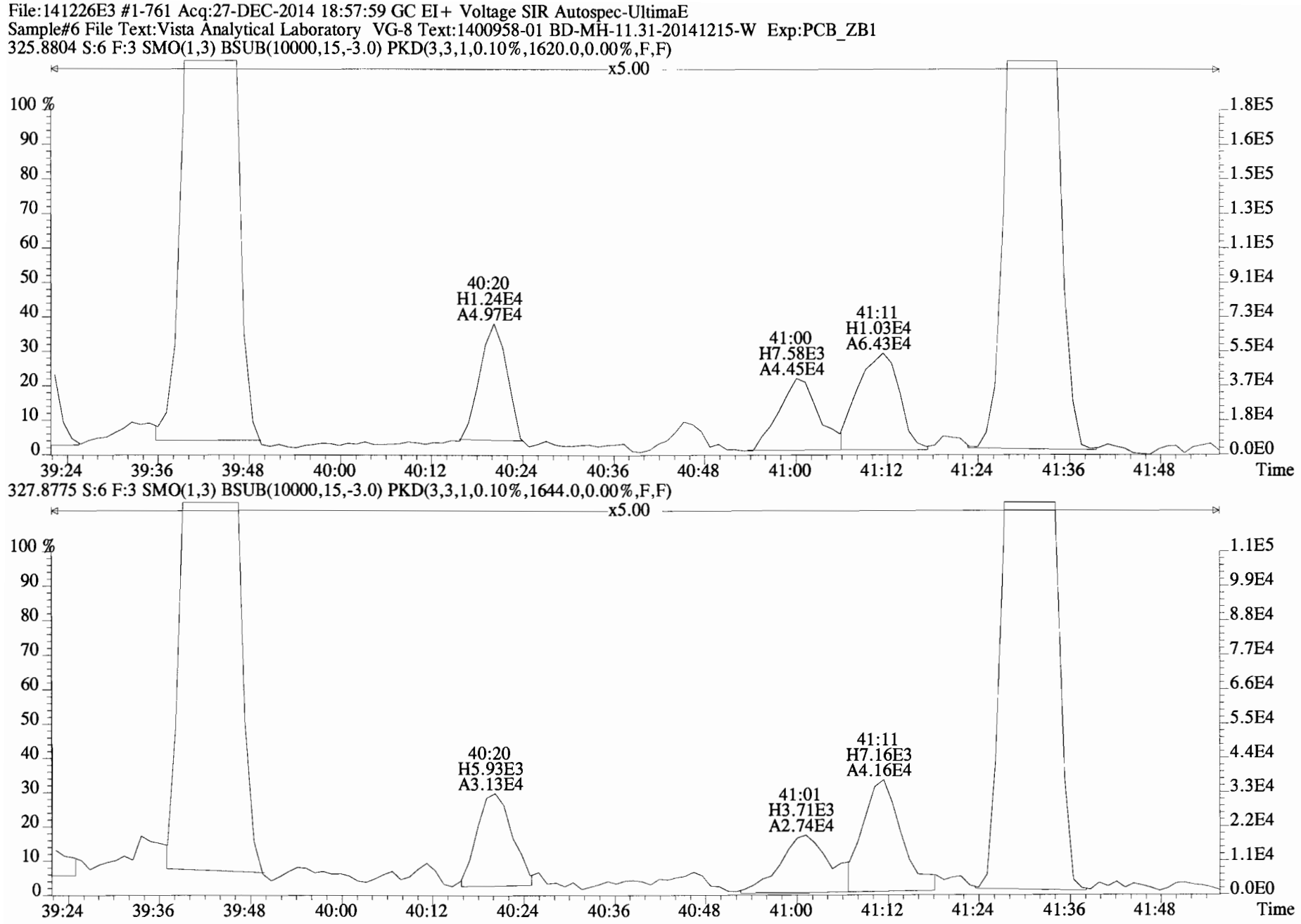

File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)
x5.00
36:11
H1.89E4
A8.53E4
38:15
H7.09E3
A2.65E4
38:27
H5.71E3
A2.62E4
39:12
H3.37E3
A1.60E4
100 %
90
80
70
60
50
40
30
20
10
0
1.1E5
9.7E4
8.7E4
7.6E4
6.5E4
5.4E4
4.3E4
3.2E4
2.2E4
1.1E4
0.0E0
35:00
36:00
37:00
38:00
39:00
Time
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)
x5.00
36:11
H1.26E4
A5.40E4
38:15
H4.07E3
A1.96E4
38:27
H3.08E3
A1.68E4
39:19
H1.03E4
A4.76E4
39:13
H2.93E3
A1.21E4
100 %
90
80
70
60
50
40
30
20
10
0
7.4E4
6.7E4
5.9E4
5.2E4
4.5E4
3.7E4
3.0E4
2.2E4
1.5E4
7.4E3
0.0E0
35:00
36:00
37:00
38:00
39:00
Time

File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)

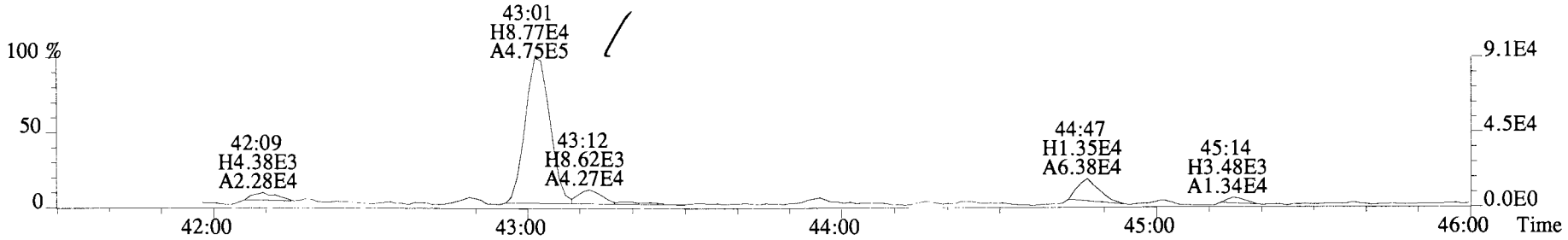


327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)

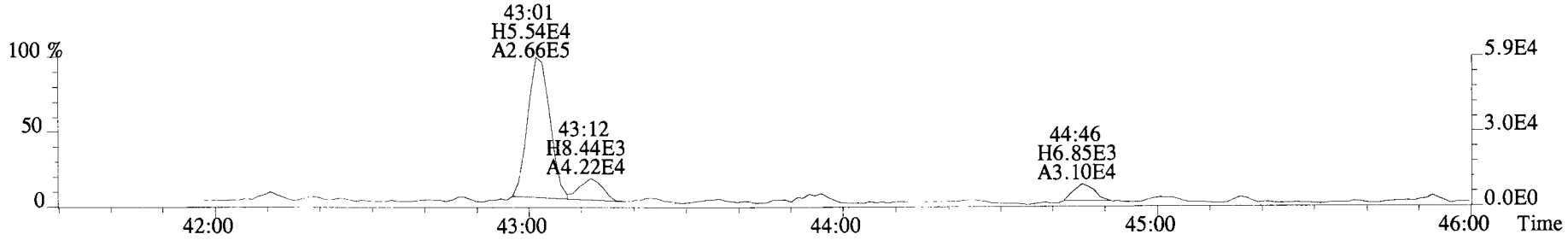



File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)
x5.00
40:20
H1.24E4
A4.97E4
41:00
H7.58E3
A4.45E4
41:11
H1.03E4
A6.43E4
Time
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)
x5.00
40:20
H5.93E3
A3.13E4
41:01
H3.71E3
A2.74E4
41:11
H7.16E3
A4.16E4
Time

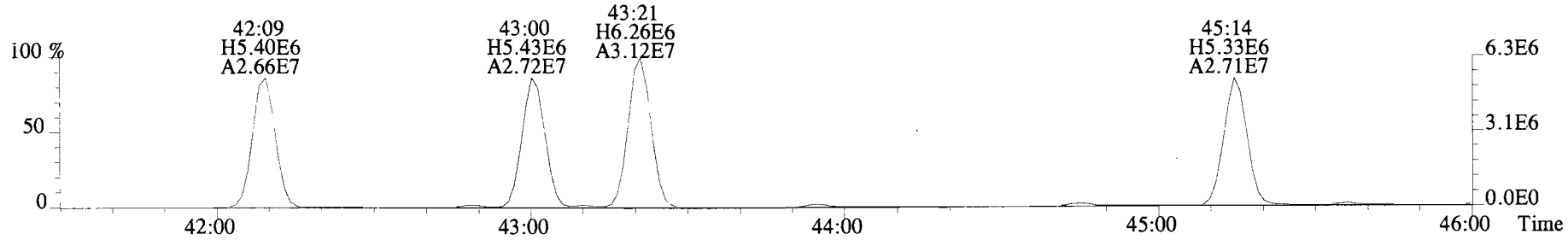
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2912.0,0.00%,F,F)



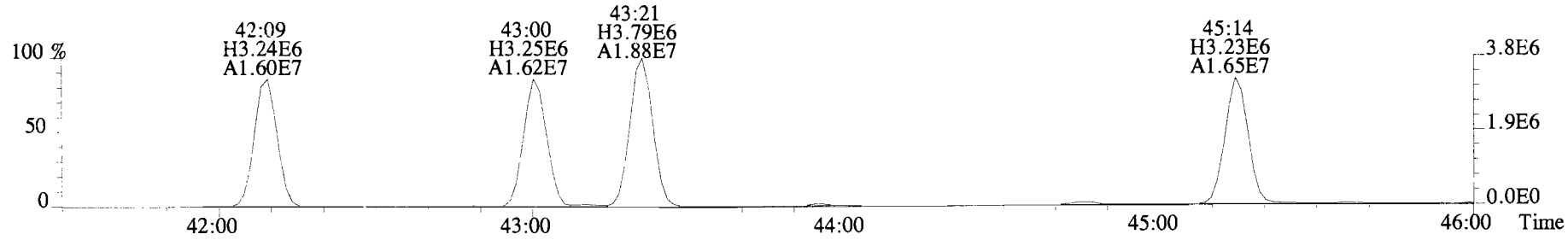
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



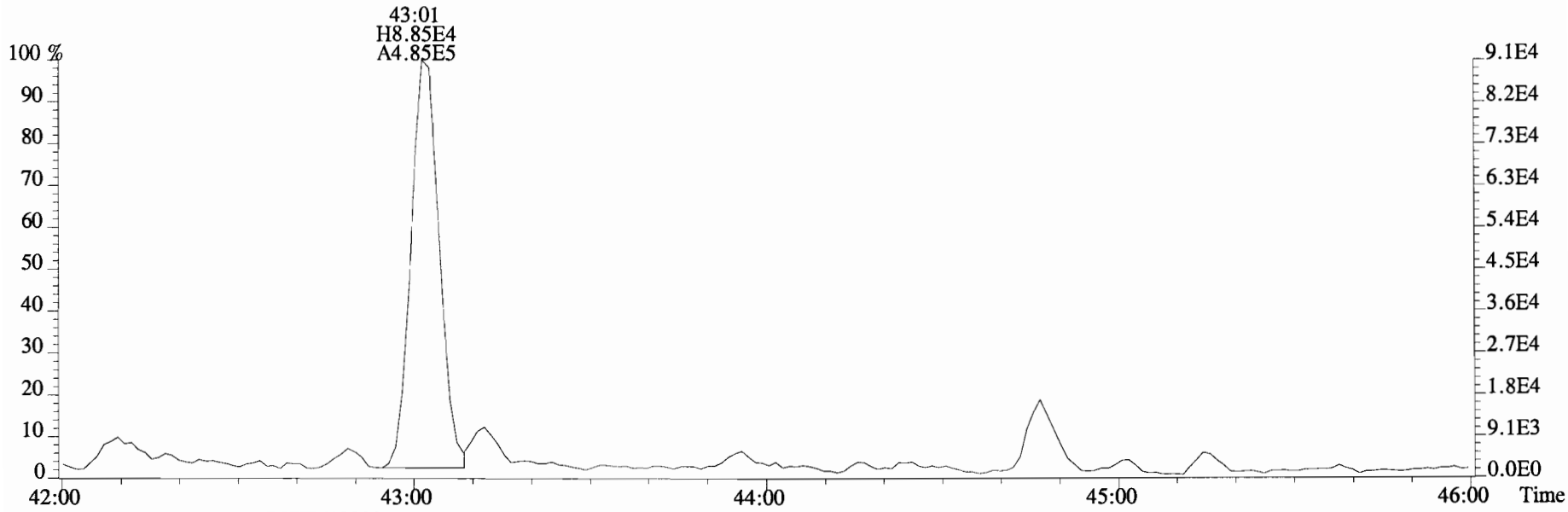
337.9207 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6076.0,0.00%,F,F)



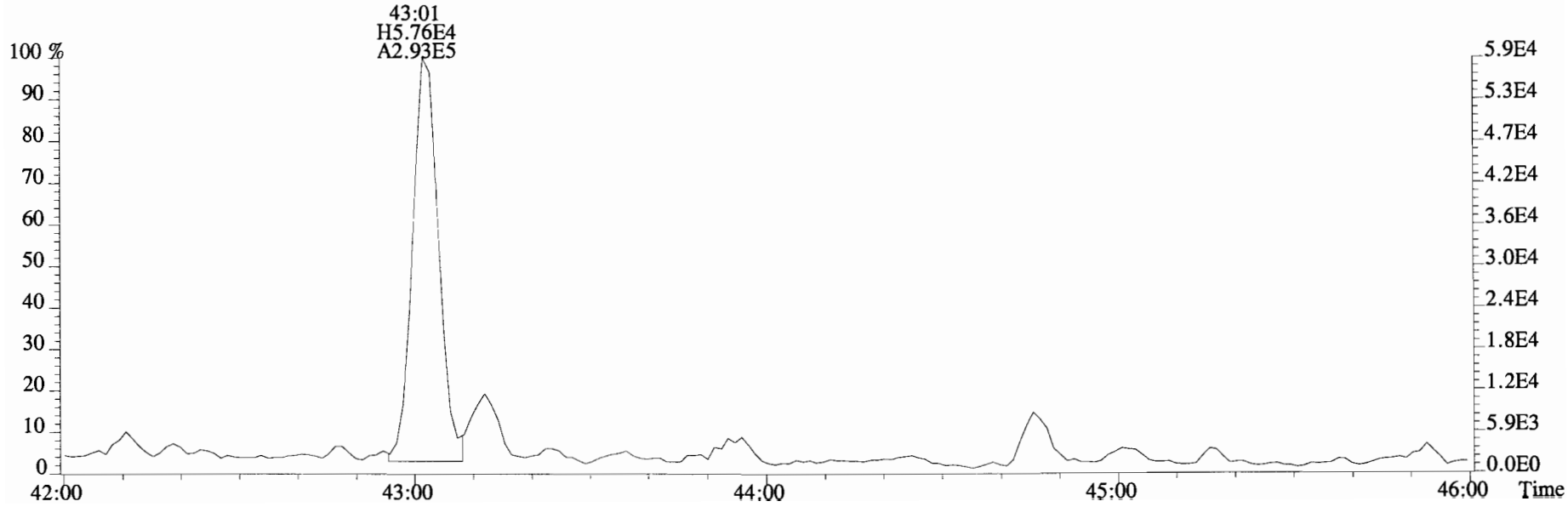
339.9177 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5036.0,0.00%,F,F)



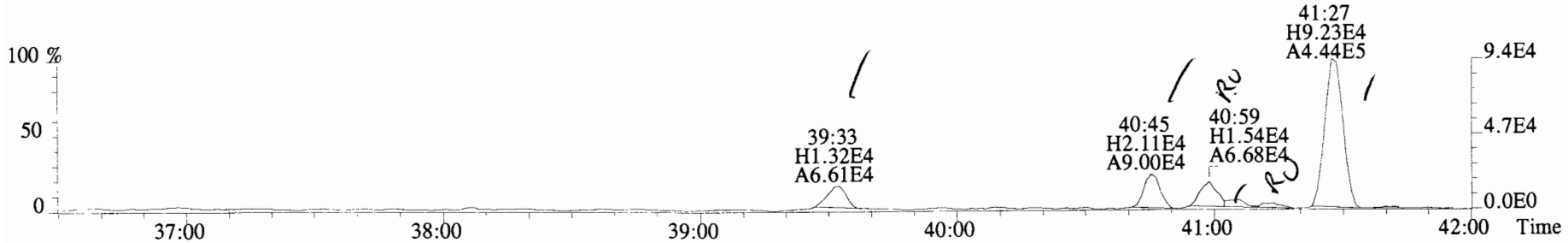
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2912.0,0.00%,F,F)



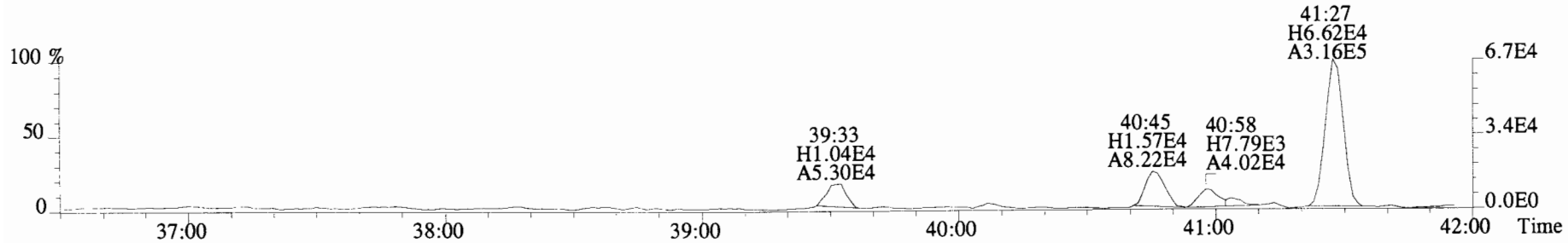
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



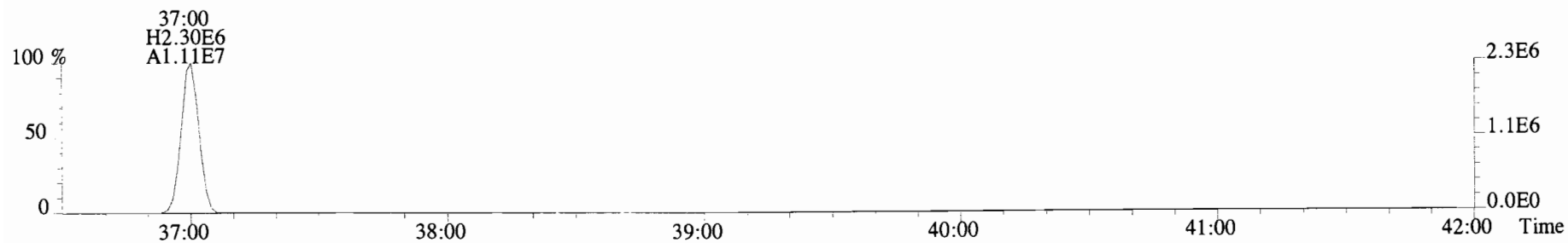
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1764.0,0.00%,F,F)



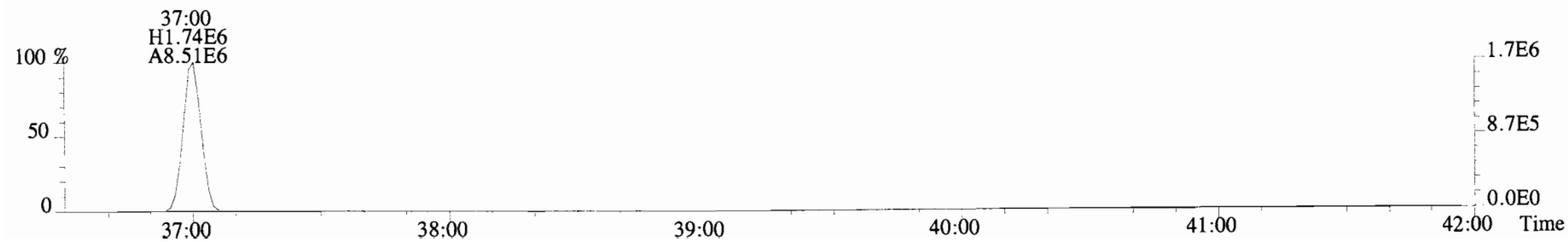
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



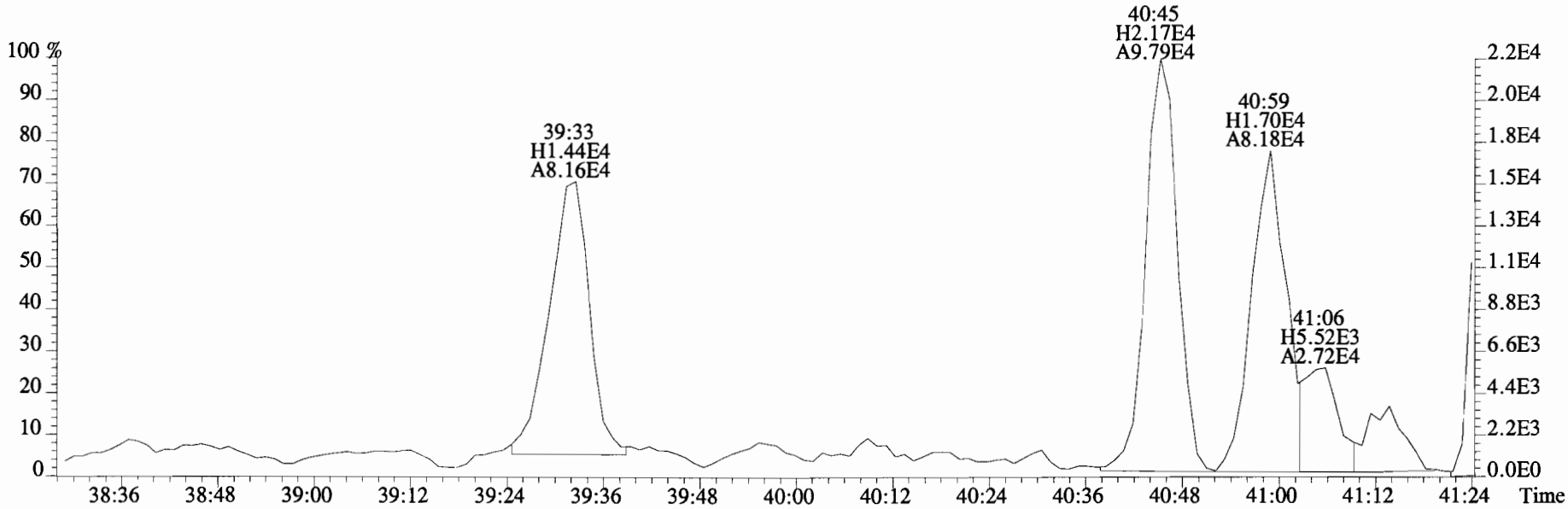
371.8817 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



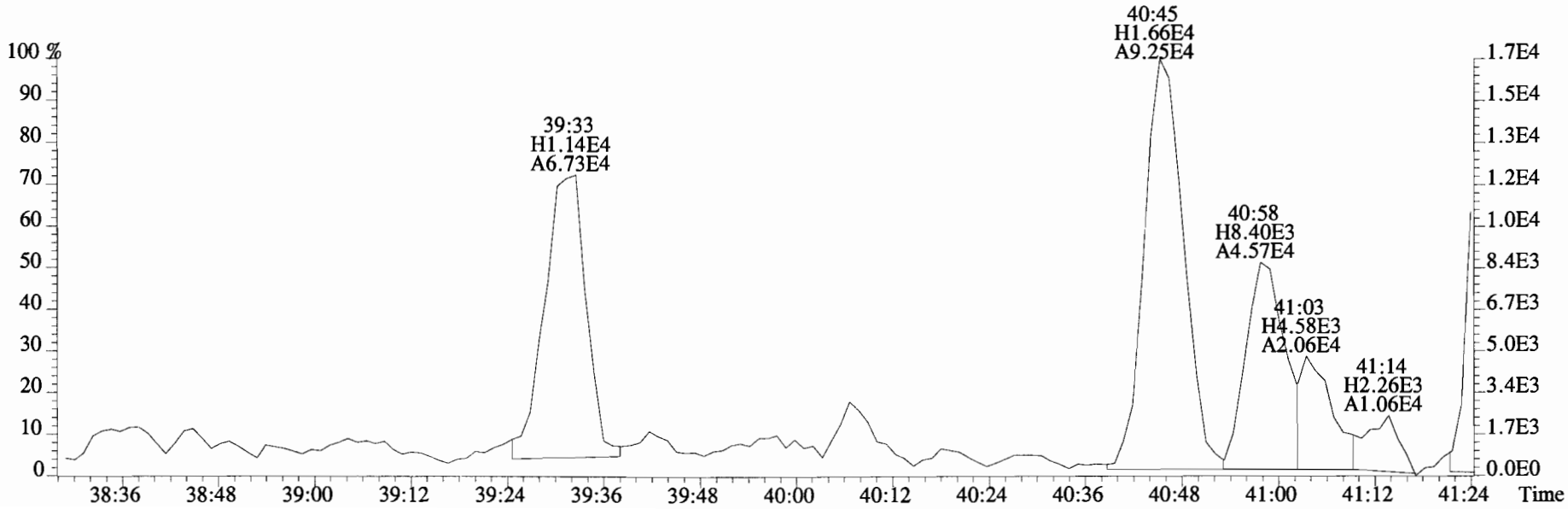
373.8788 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1852.0,0.00%,F,F)



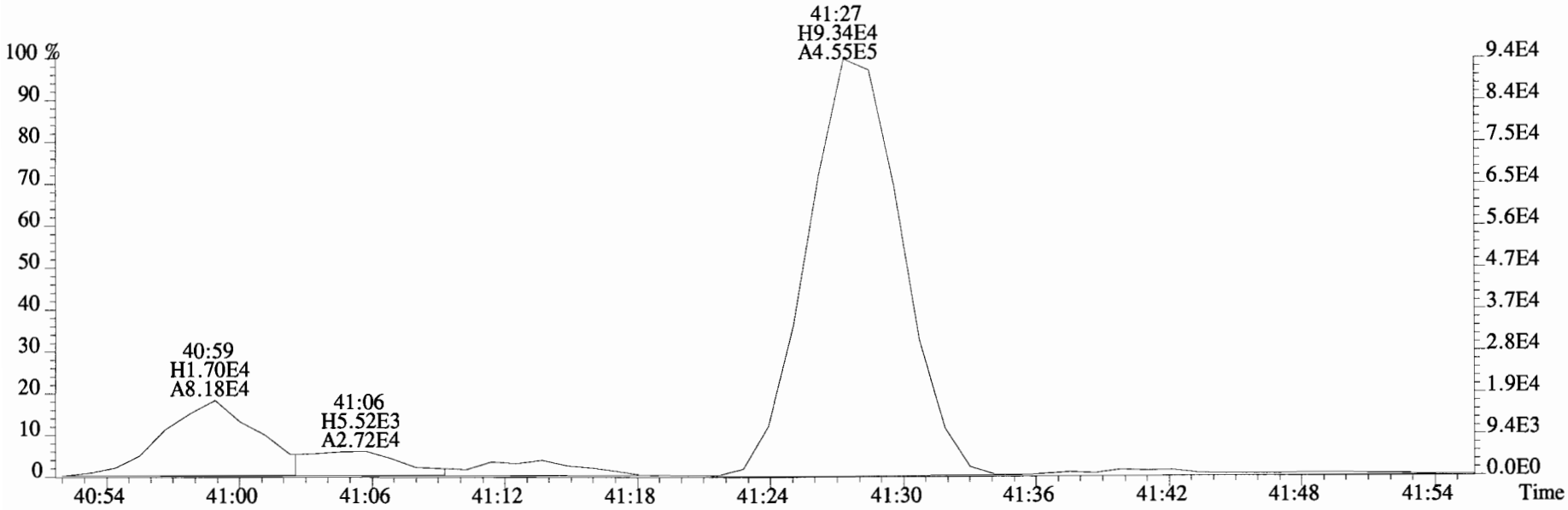
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1764.0,0.00%,F,F)



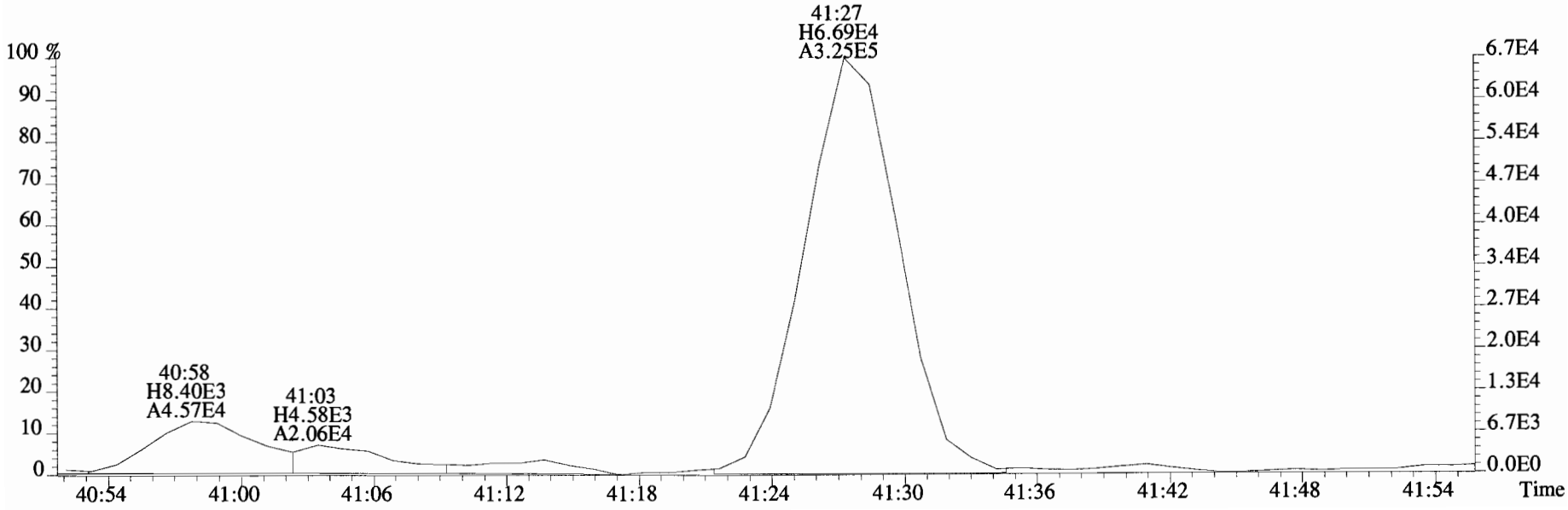
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



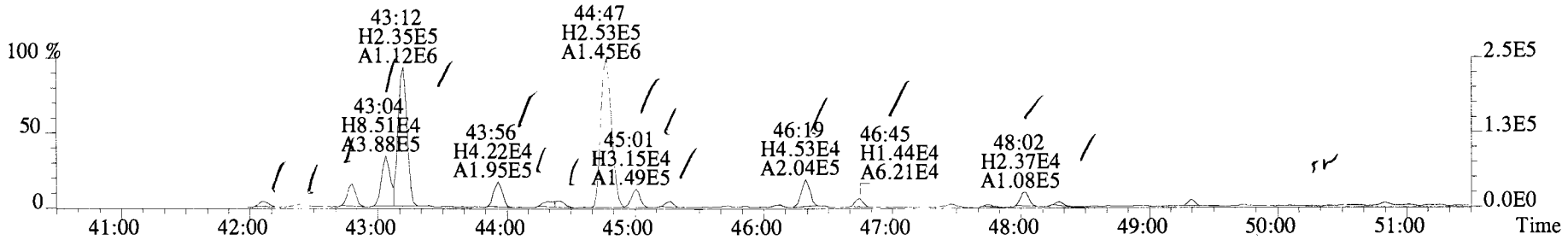
File:141226E3 #1-761 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1764.0,0.00%,F,F)



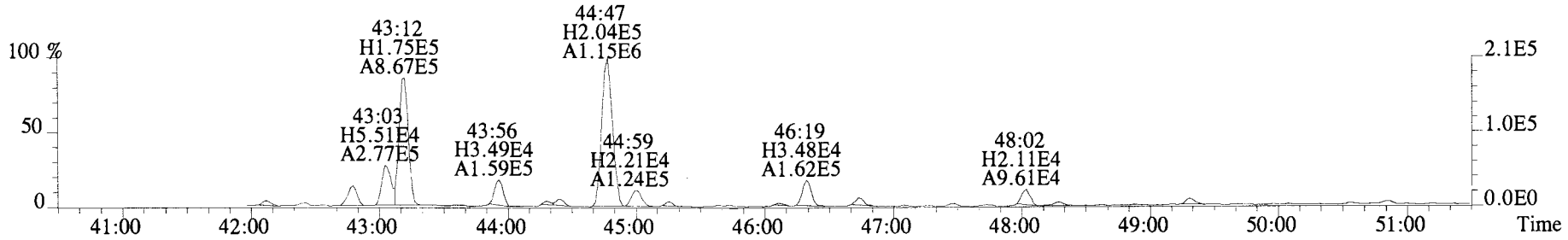
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



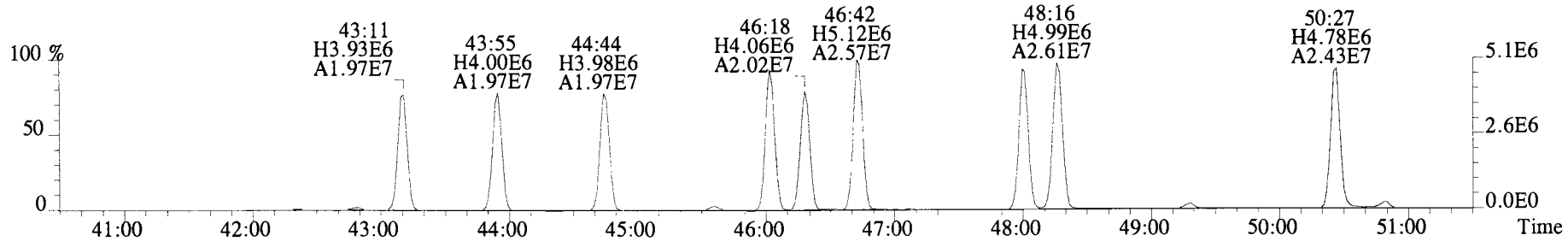
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2884.0,0.00%,F,F)



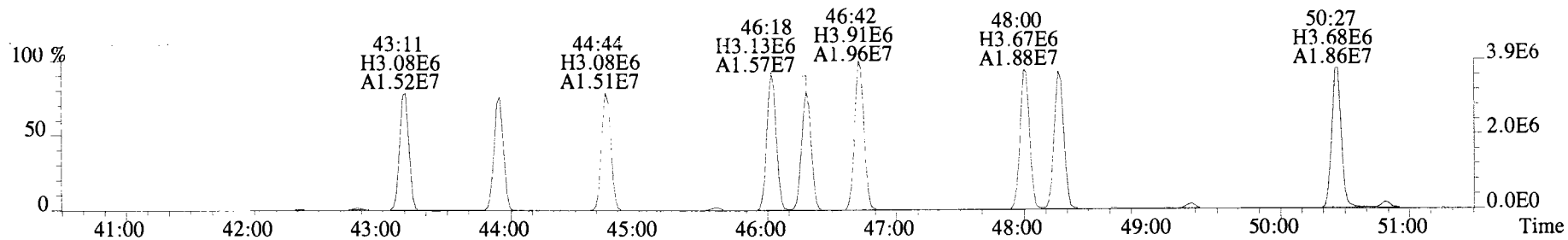
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2672.0,0.00%,F,F)



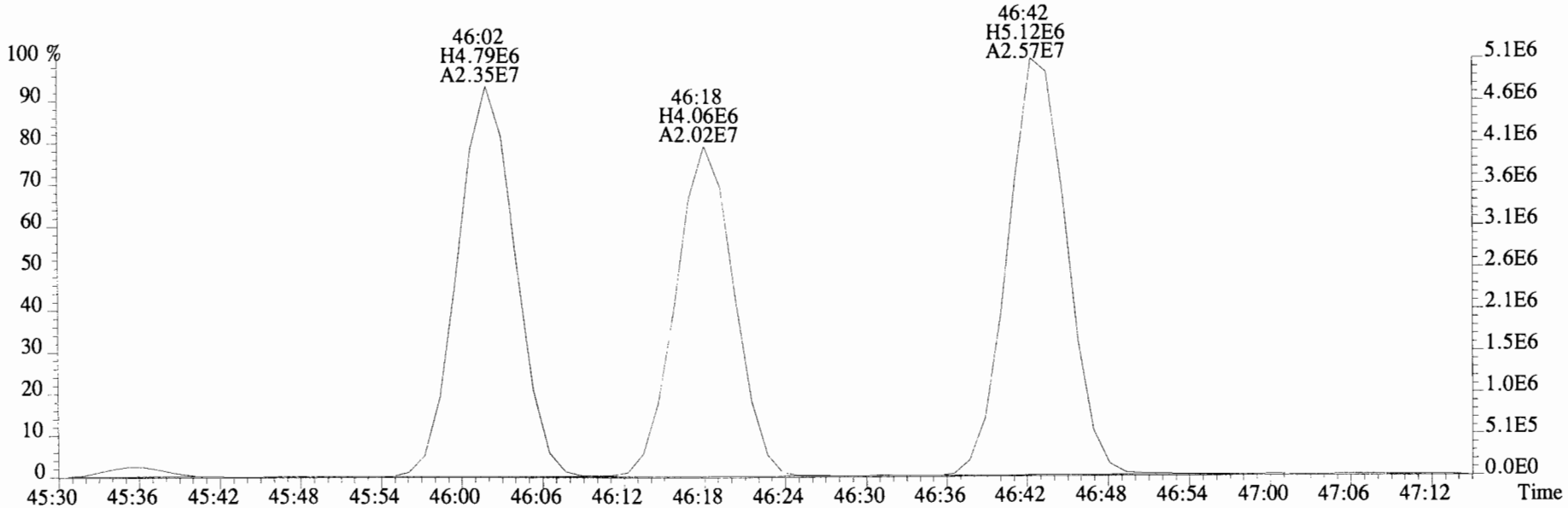
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6612.0,0.00%,F,F)



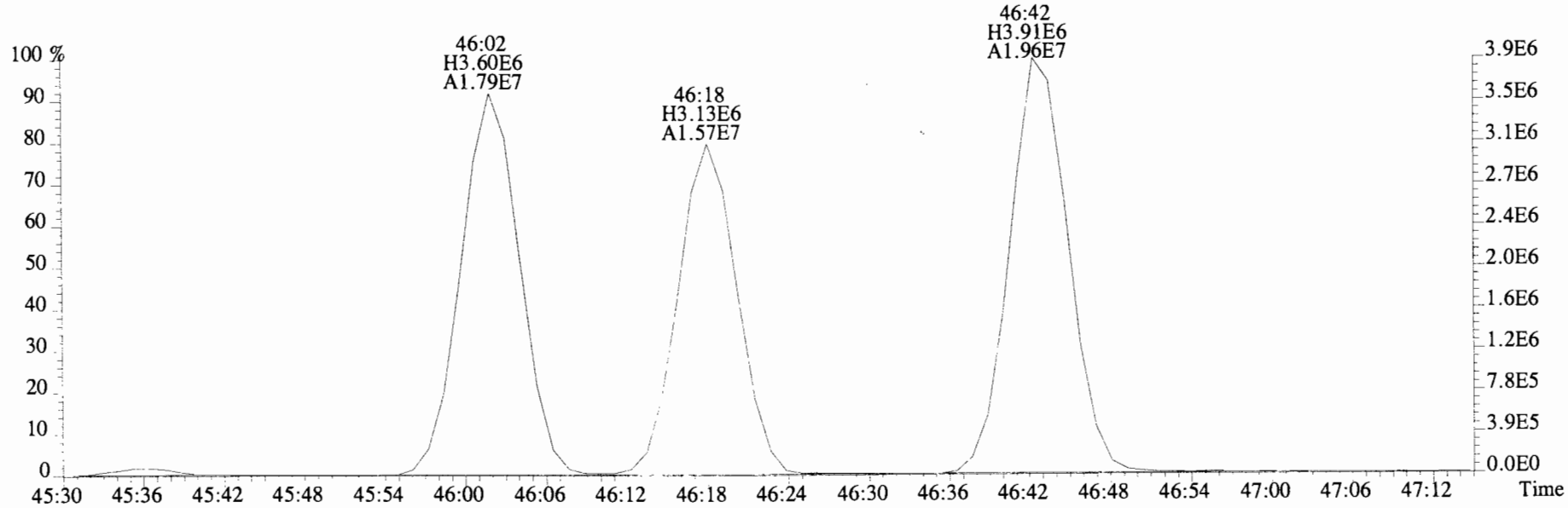
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6172.0,0.00%,F,F)



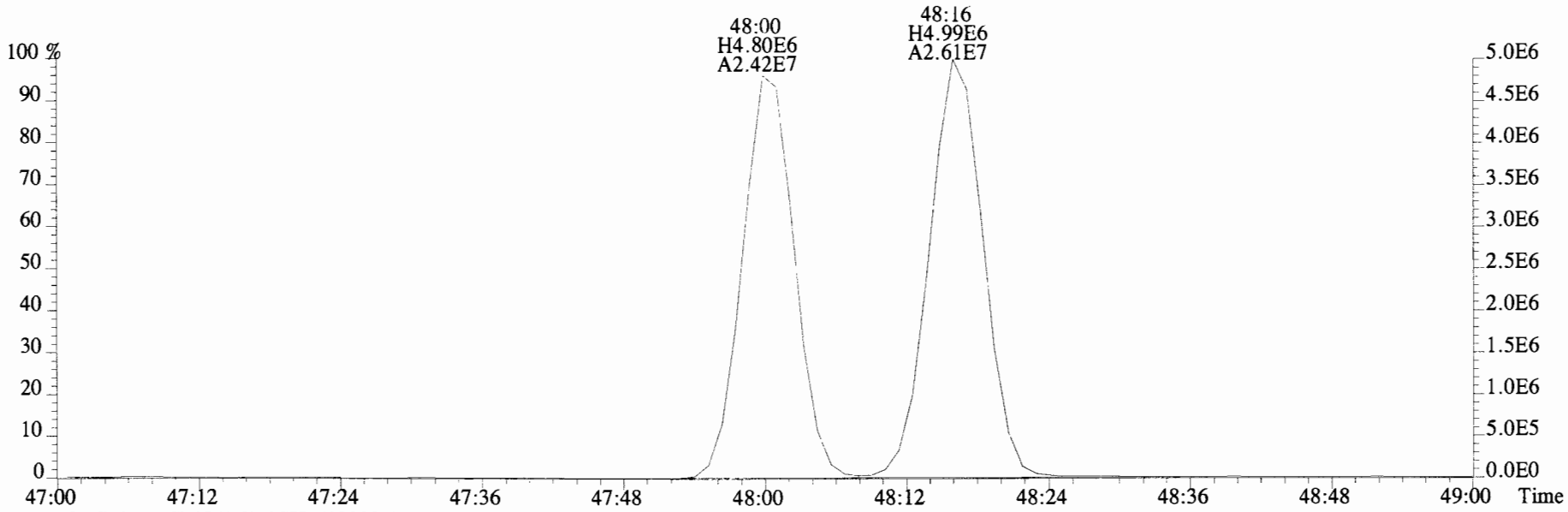
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6612.0,0.00%,F,F)



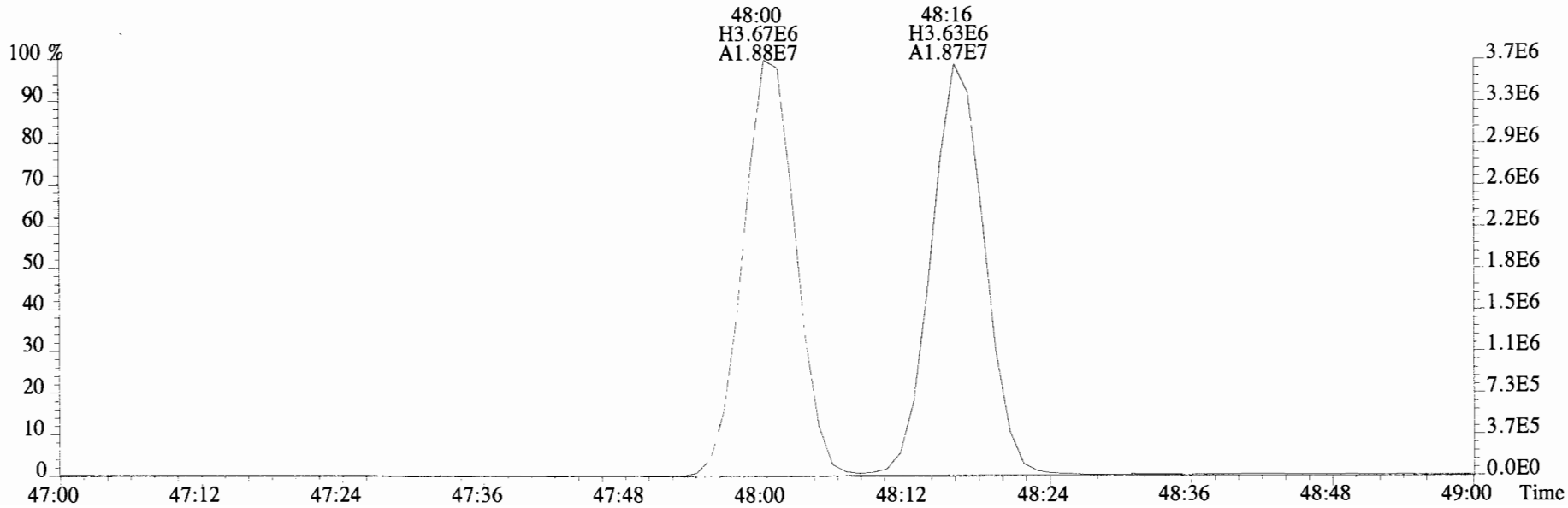
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6172.0,0.00%,F,F)



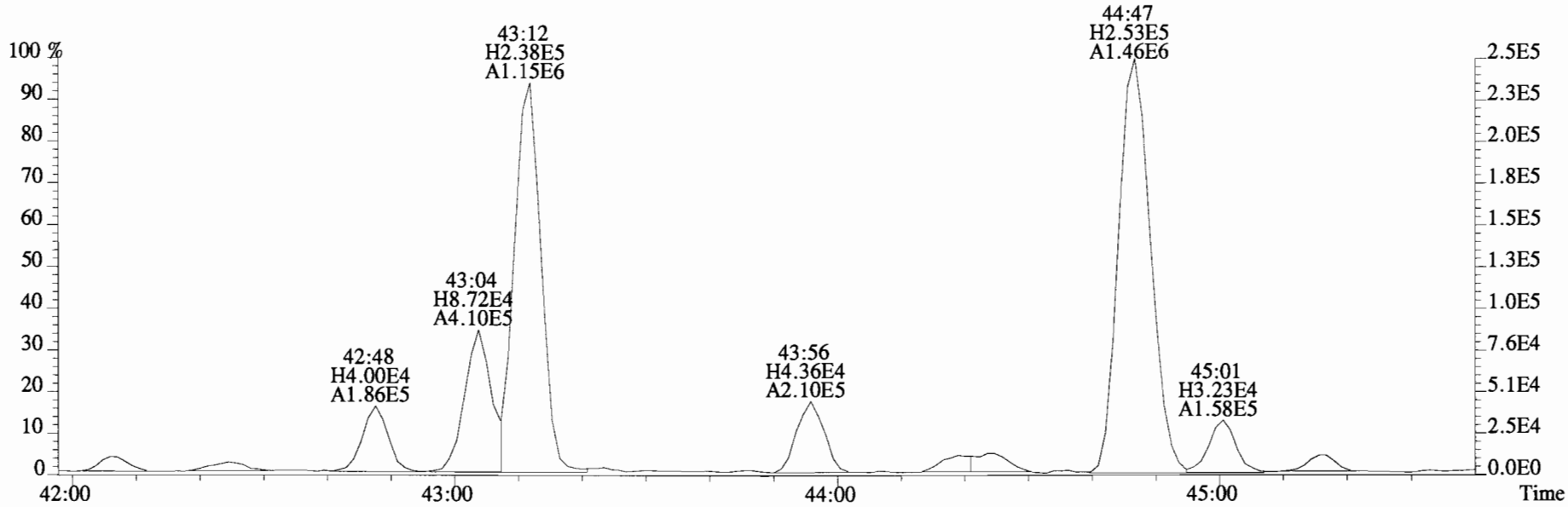
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6612.0,0.00%,F,F)



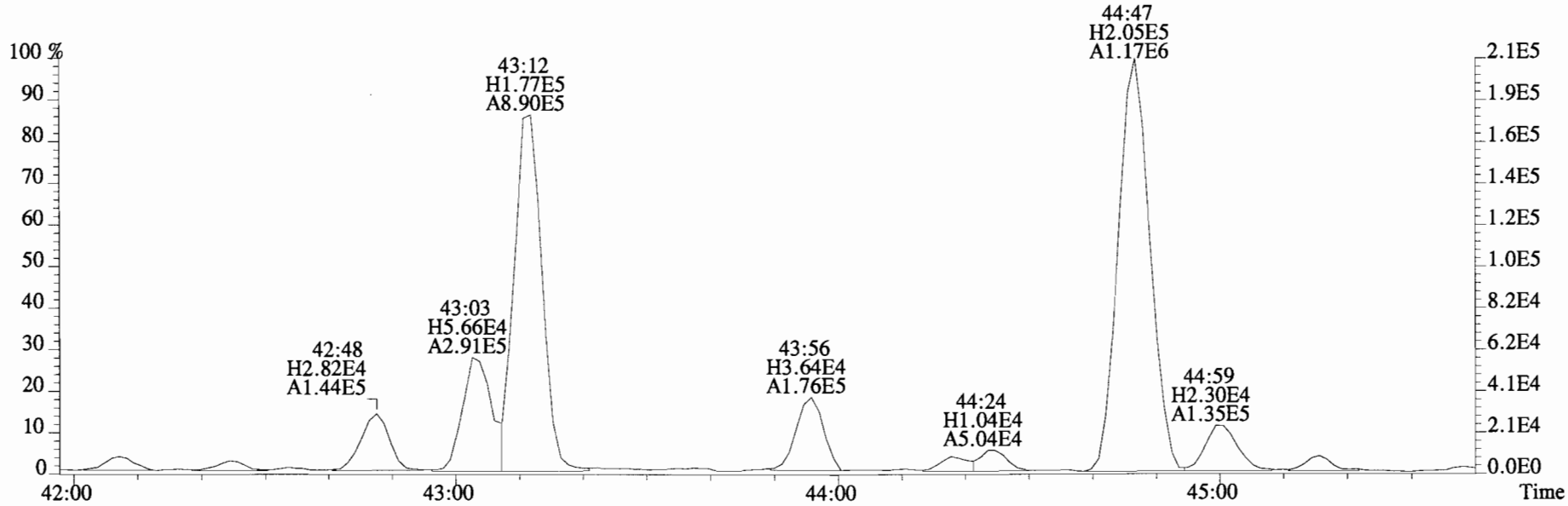
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6172.0,0.00%,F,F)



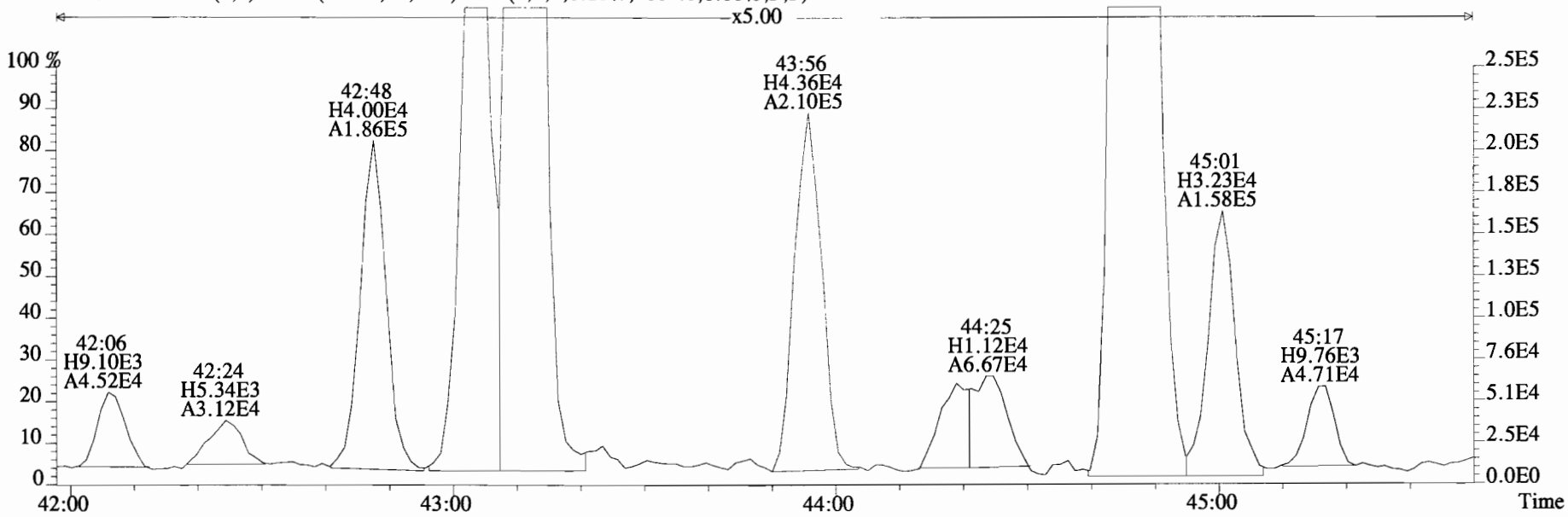
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2884.0,0.00%,F,F)



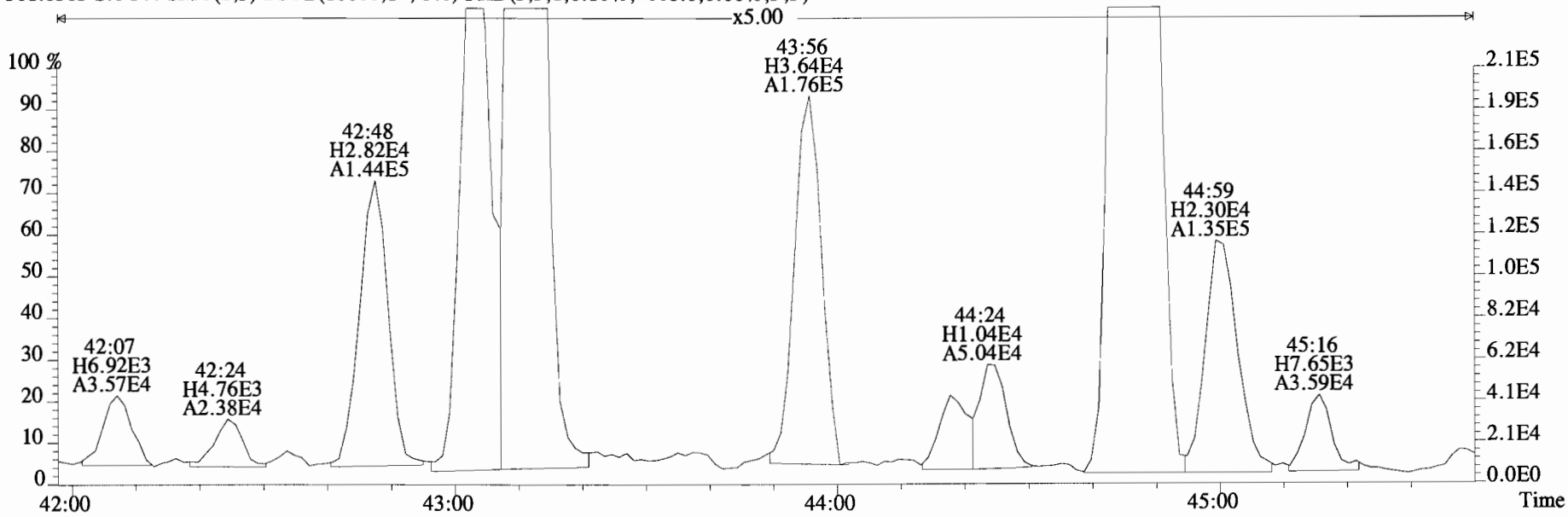
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2668.0,0.00%,F,F)



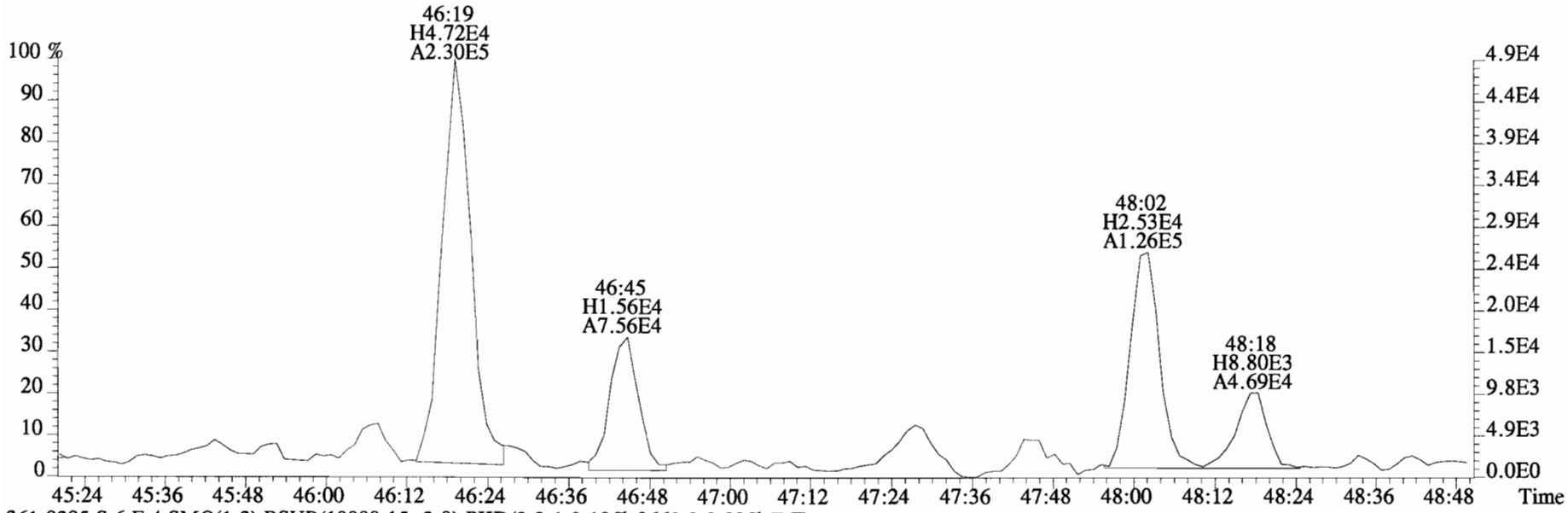
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2884.0,0.00%,F,F)



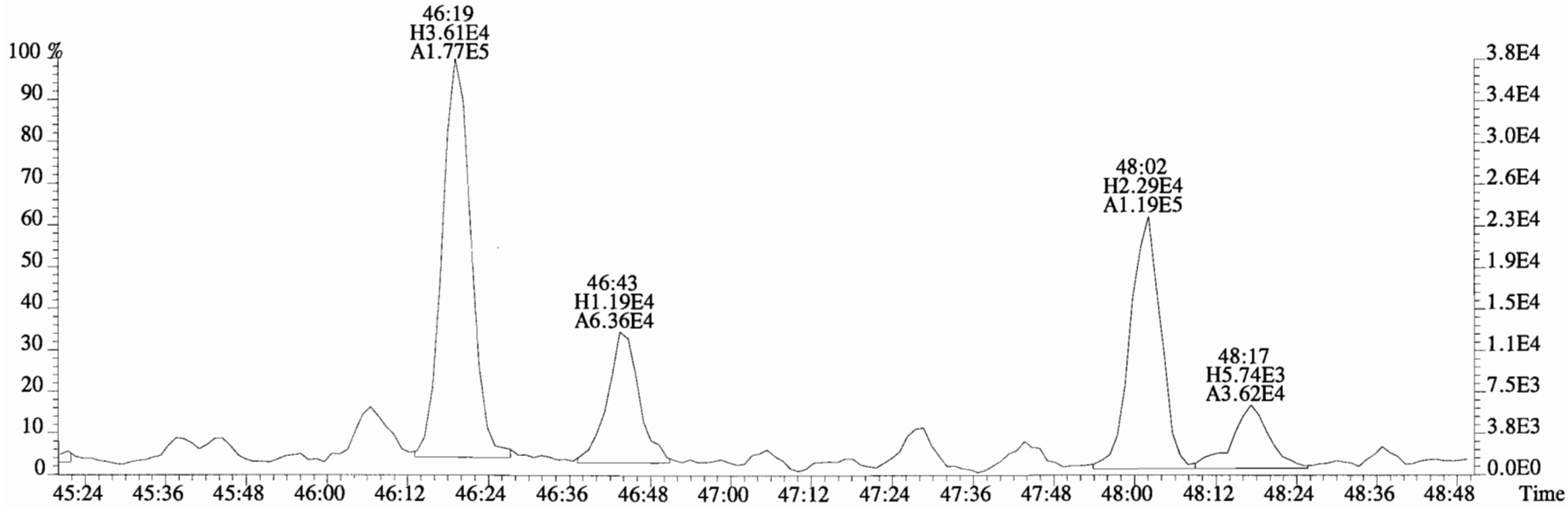
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2668.0,0.00%,F,F)



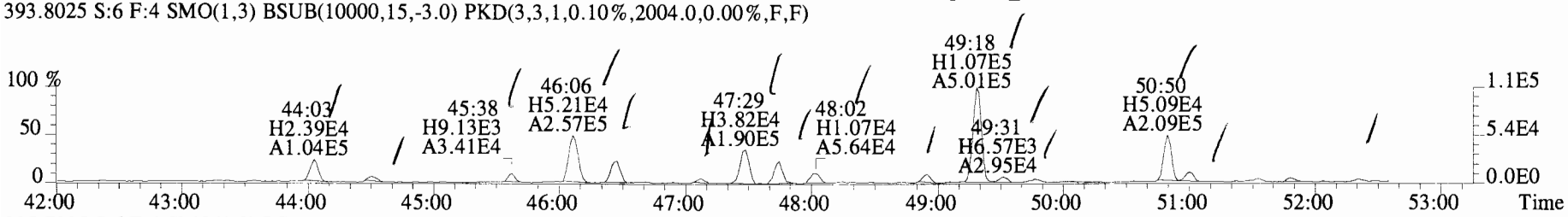
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2884.0,0.00%,F,F)



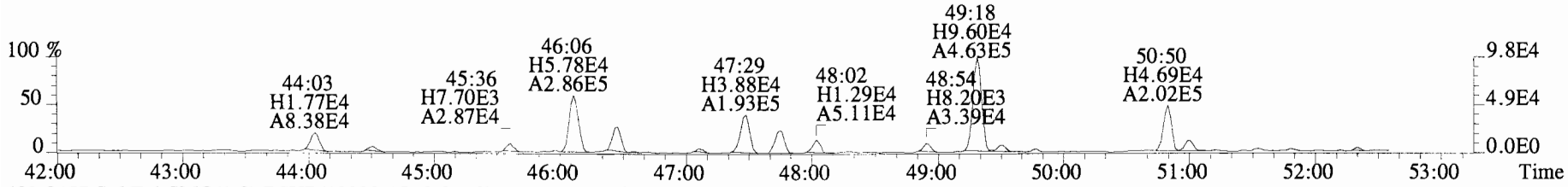
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2668.0,0.00%,F,F)



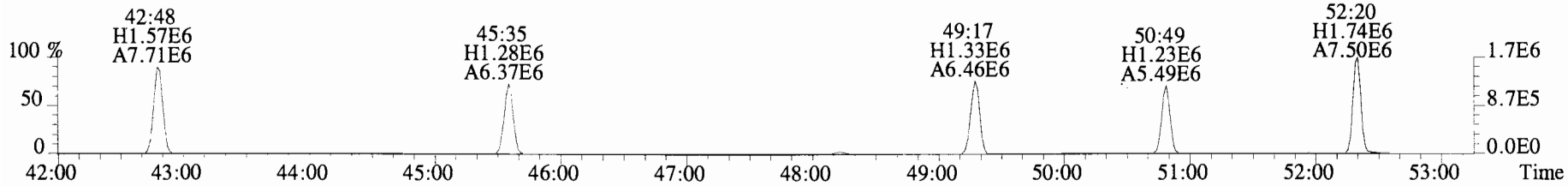
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)



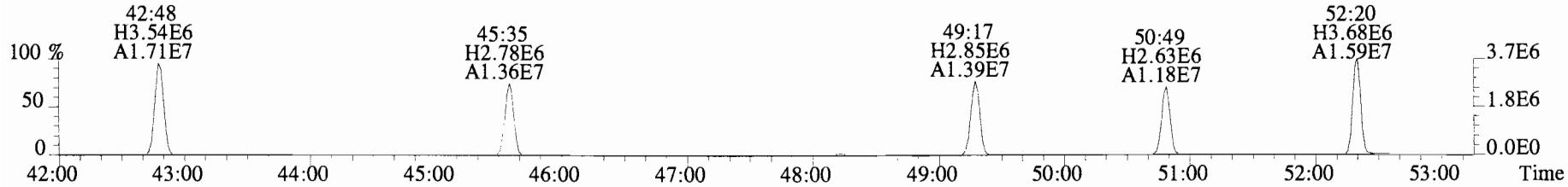
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2132.0,0.00%,F,F)



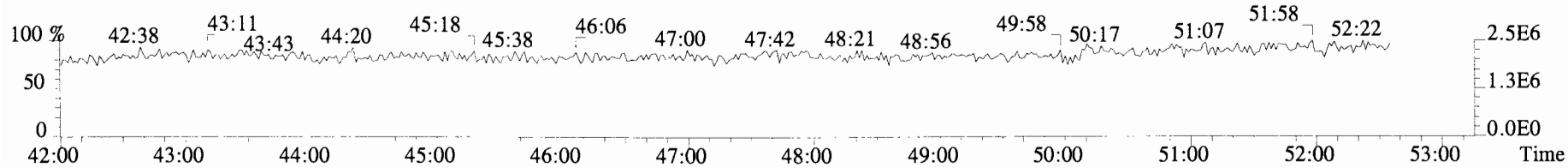
403.8457 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2856.0,0.00%,F,F)



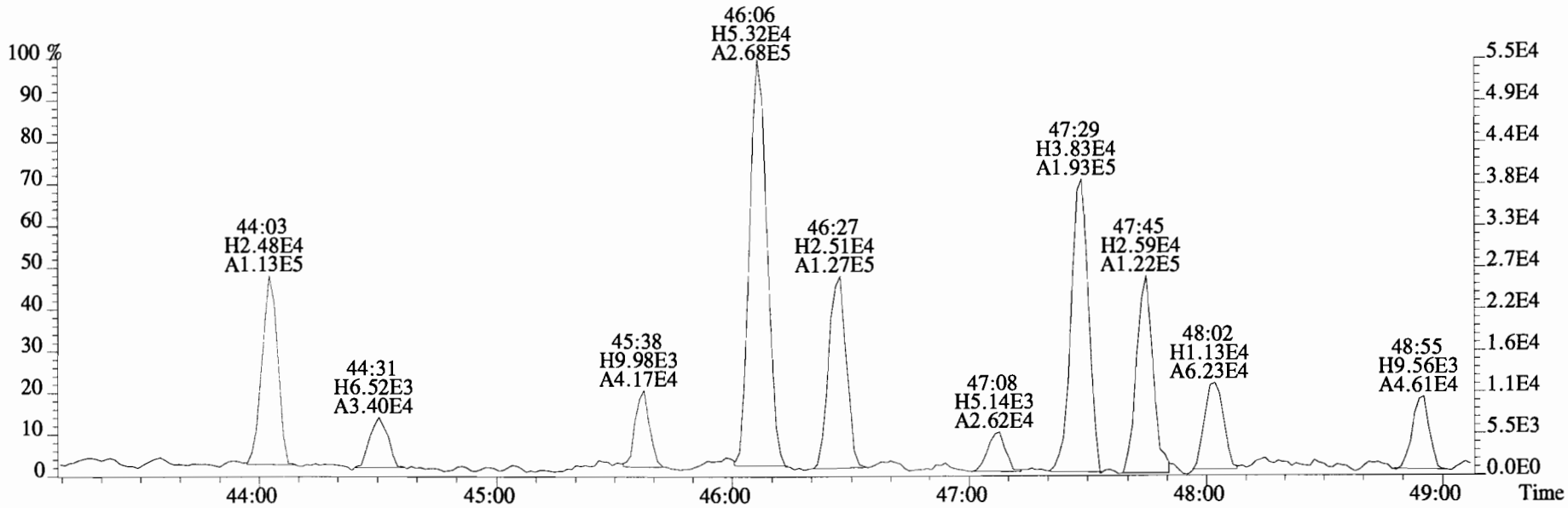
405.8428 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3624.0,0.00%,F,F)



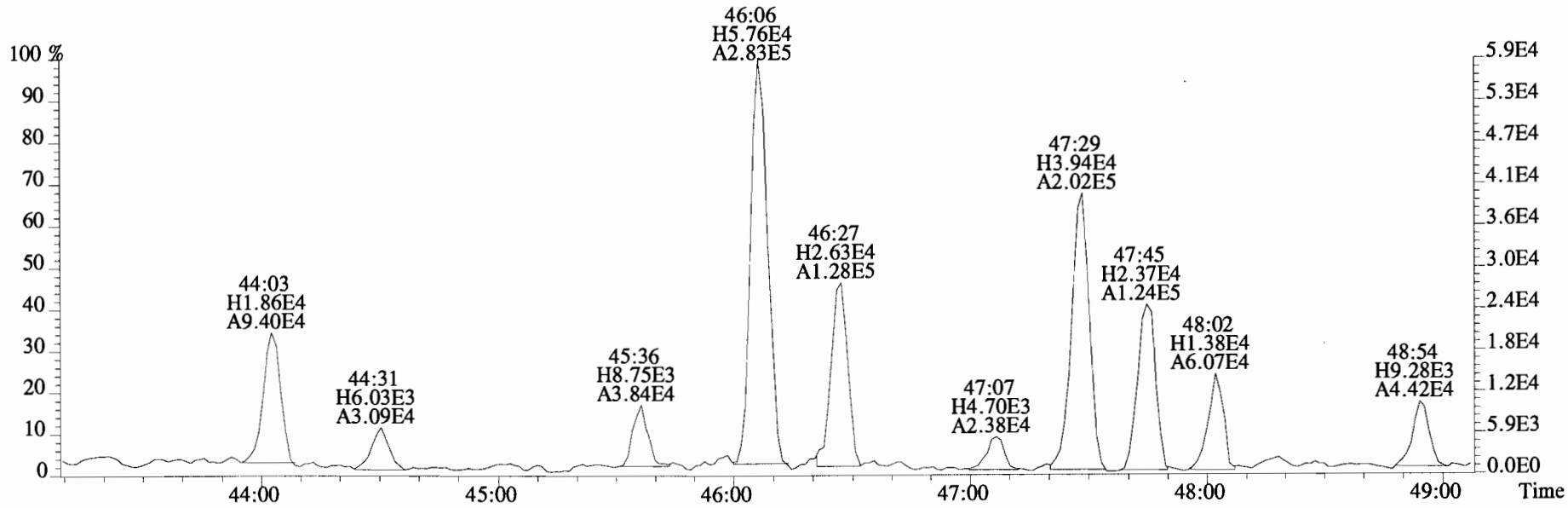
380.9760 S:6 F:4

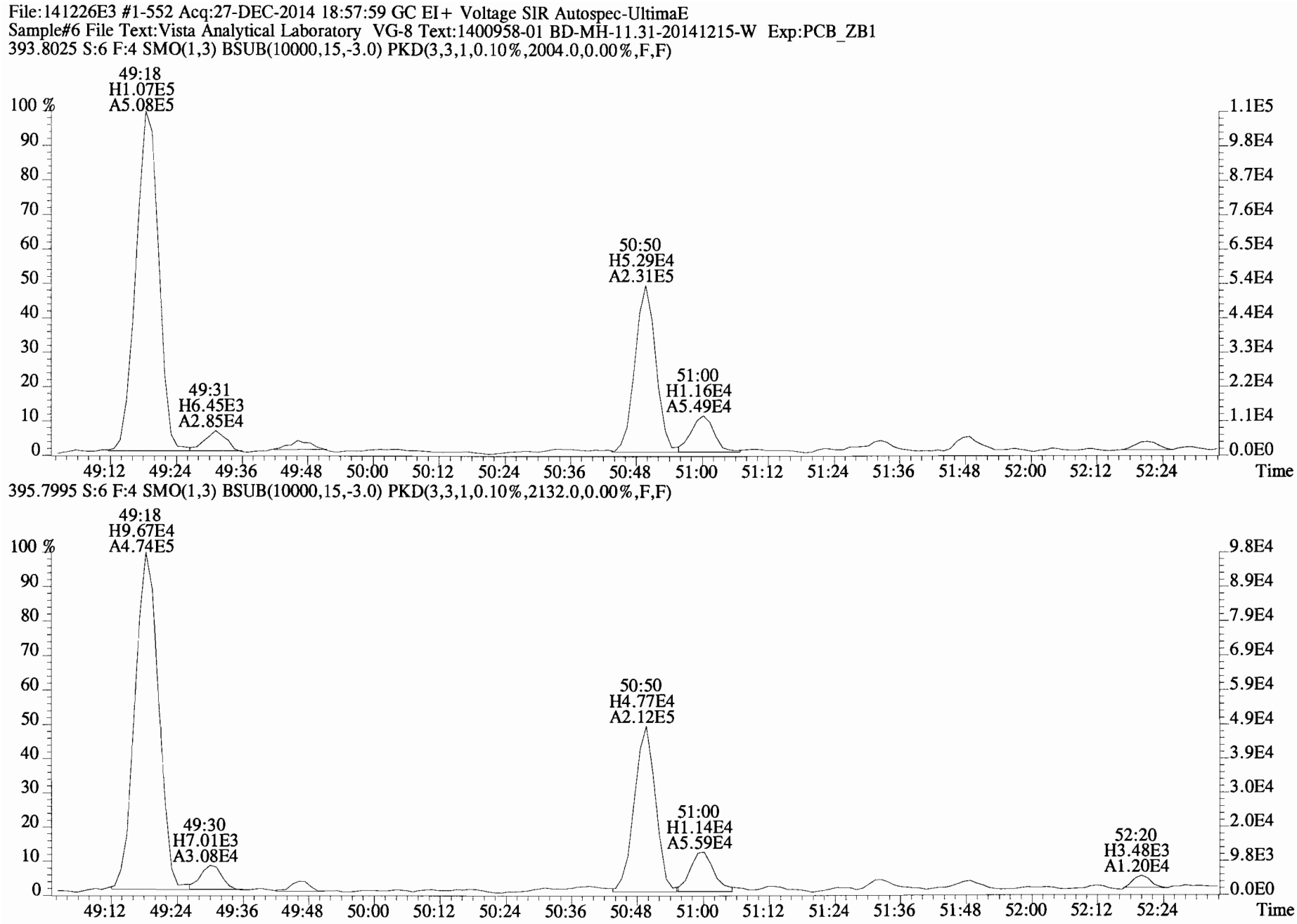


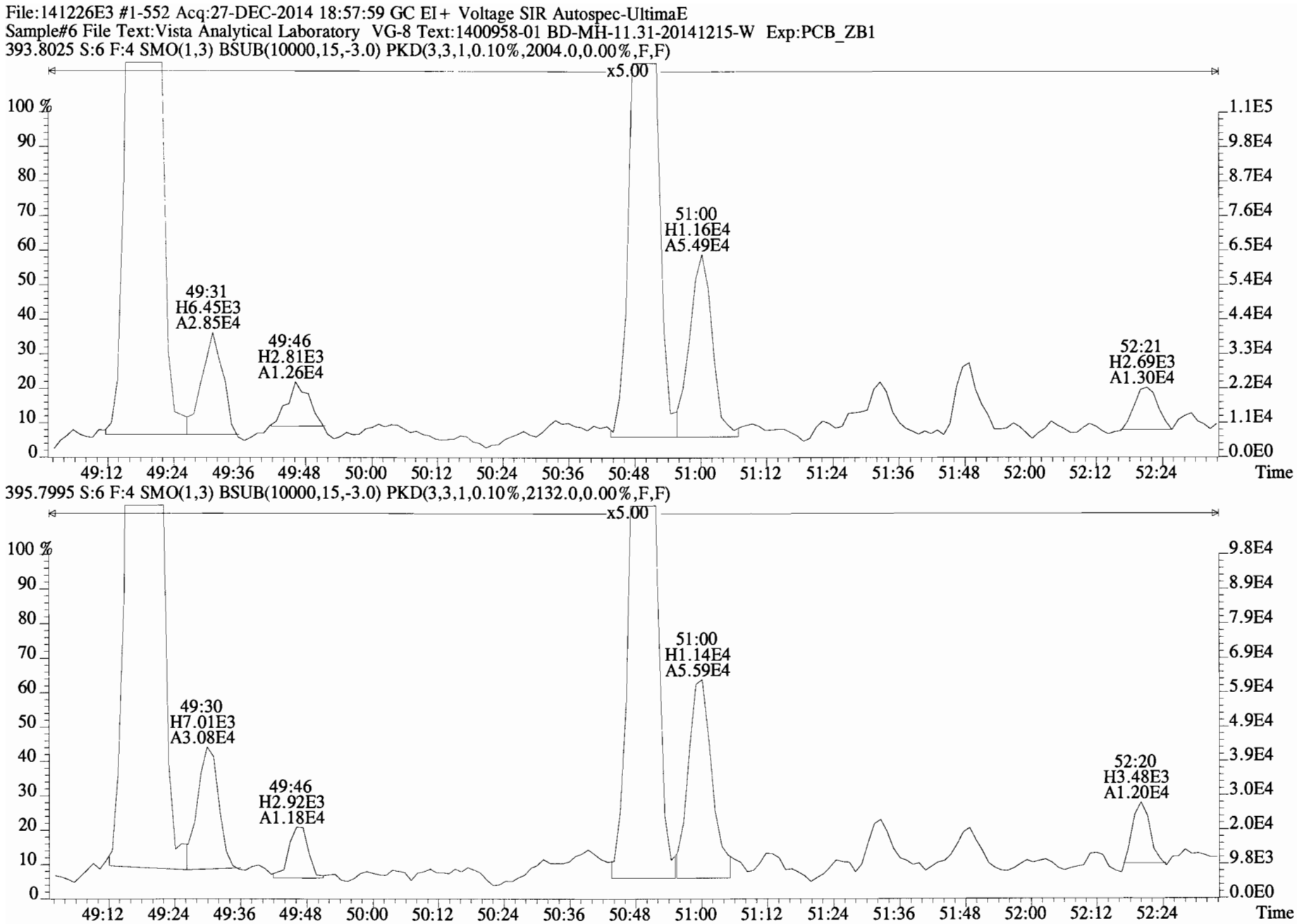
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)

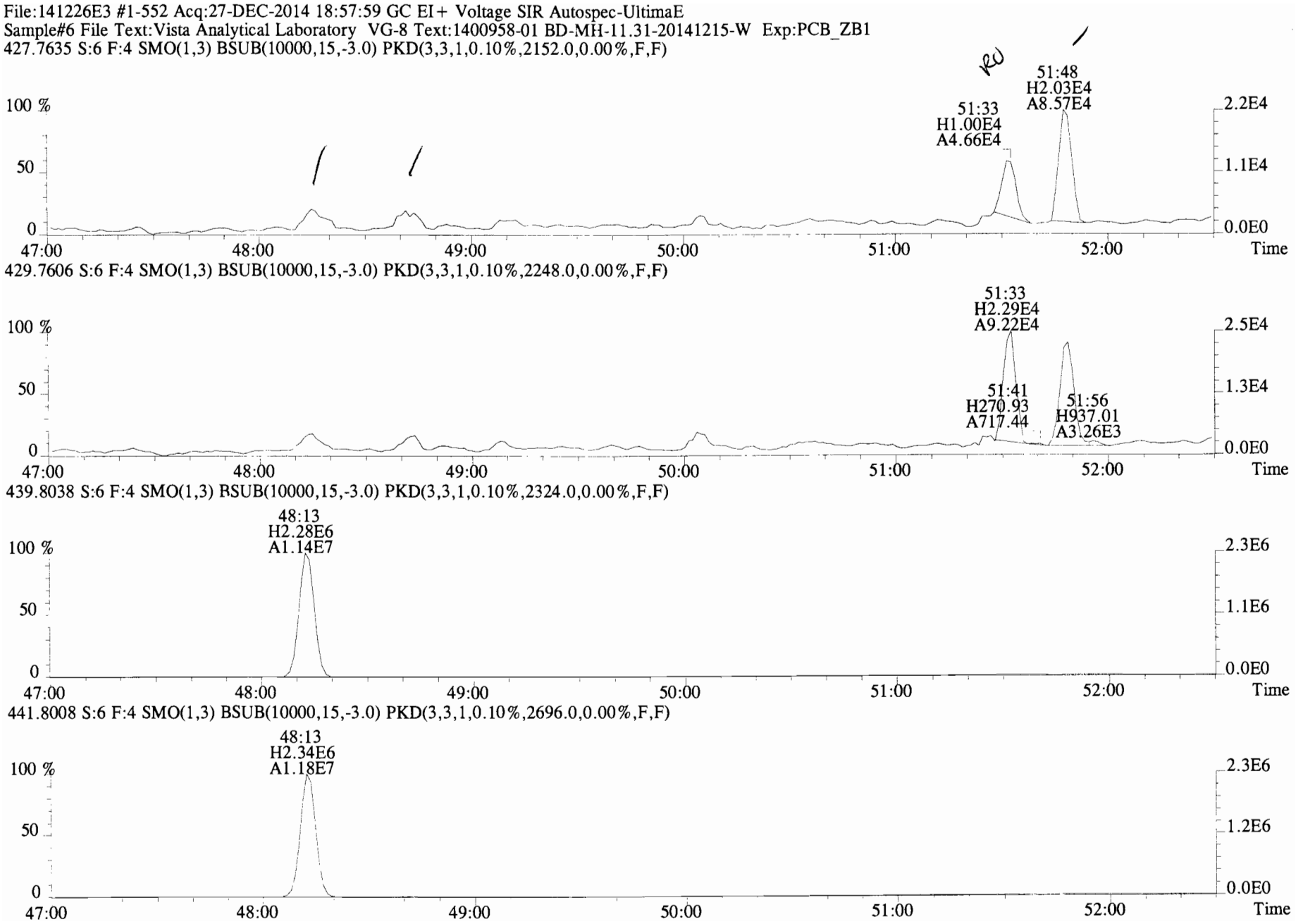


395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2132.0,0.00%,F,F)

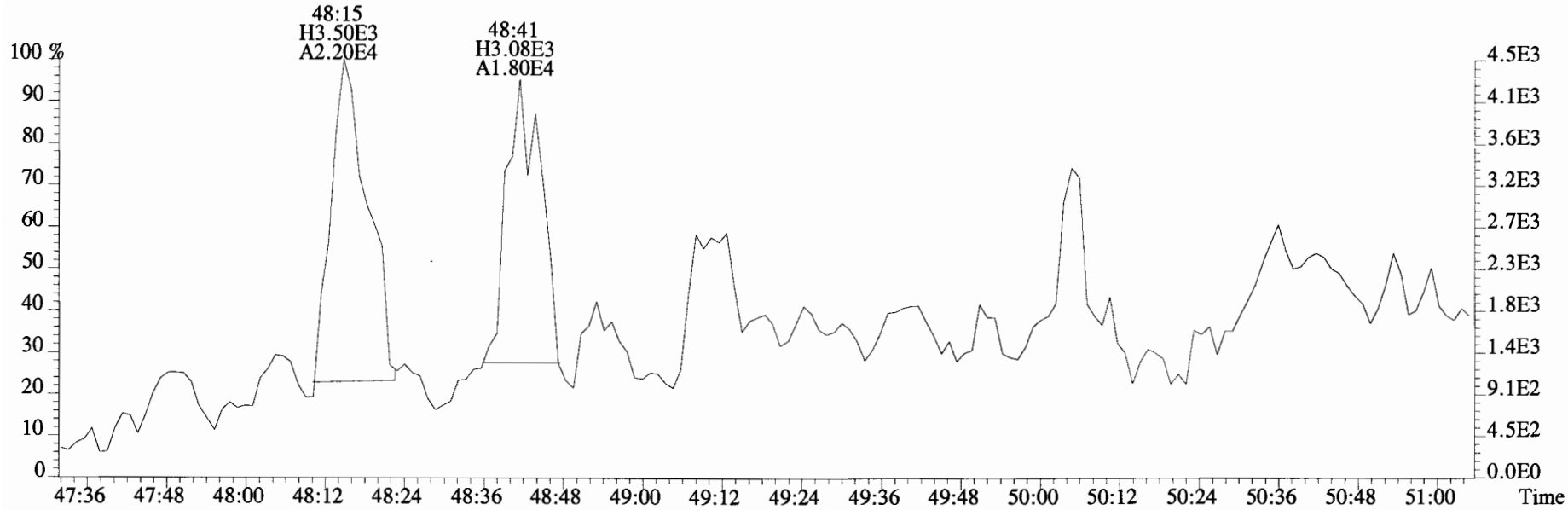



File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)
49:18
H1.07E5
A5.08E5
49:31
H6.45E3
A2.85E4
50:50
H5.29E4
A2.31E5
51:00
H1.16E4
A5.49E4
100 %
90
80
70
60
50
40
30
20
10
0
1.1E5
9.8E4
8.7E4
7.6E4
6.5E4
5.4E4
4.4E4
3.3E4
2.2E4
1.1E4
0.0E0
49:12
49:24
49:36
49:48
50:00
50:12
50:24
50:36
50:48
51:00
51:12
51:24
51:36
51:48
52:00
52:12
52:24
Time
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2132.0,0.00%,F,F)
49:18
H9.67E4
A4.74E5
49:30
H7.01E3
A3.08E4
50:50
H4.77E4
A2.12E5
51:00
H1.14E4
A5.59E4
52:20
H3.48E3
A1.20E4
100 %
90
80
70
60
50
40
30
20
10
0
9.8E4
8.9E4
7.9E4
6.9E4
5.9E4
4.9E4
3.9E4
3.0E4
2.0E4
9.8E3
0.0E0
49:12
49:24
49:36
49:48
50:00
50:12
50:24
50:36
50:48
51:00
51:12
51:24
51:36
51:48
52:00
52:12
52:24
Time

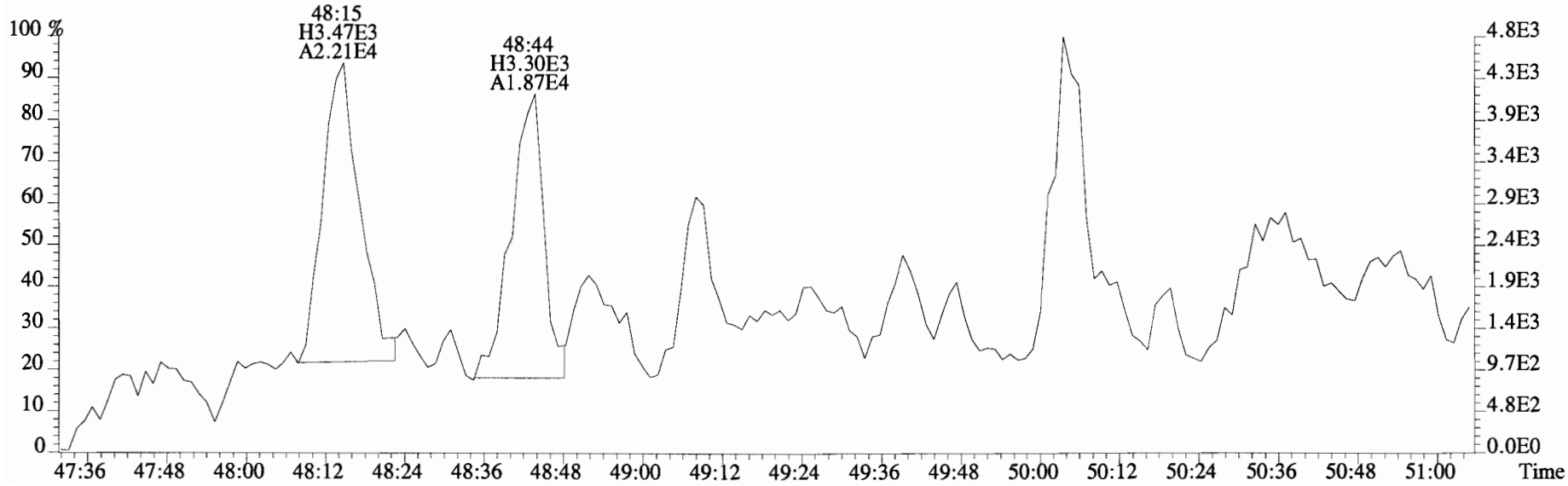

File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)
x5.00
49:31
H6.45E3
A2.85E4
49:46
H2.81E3
A1.26E4
51:00
H1.16E4
A5.49E4
52:21
H2.69E3
A1.30E4
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2132.0,0.00%,F,F)
x5.00
49:30
H7.01E3
A3.08E4
49:46
H2.92E3
A1.18E4
51:00
H1.14E4
A5.59E4
52:20
H3.48E3
A1.20E4
Time


File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2152.0,0.00%,F,F)
51:33
H1.00E4
A4.66E4
51:48
H2.03E4
A8.57E4
100 %
50
0
2.2E4
1.1E4
0.0E0
47:00
48:00
49:00
50:00
51:00
52:00
Time
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2248.0,0.00%,F,F)
51:33
H2.29E4
A9.22E4
51:41
H270.93
A717.44
51:56
H937.01
A3.26E3
100 %
50
0
2.5E4
1.3E4
0.0E0
47:00
48:00
49:00
50:00
51:00
52:00
Time
439.8038 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2324.0,0.00%,F,F)
48:13
H2.28E6
A1.14E7
100 %
50
0
2.3E6
1.1E6
0.0E0
47:00
48:00
49:00
50:00
51:00
52:00
Time
441.8008 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2696.0,0.00%,F,F)
48:13
H2.34E6
A1.18E7
100 %
50
0
2.3E6
1.2E6
0.0E0
47:00
48:00
49:00
50:00
51:00
52:00
Time

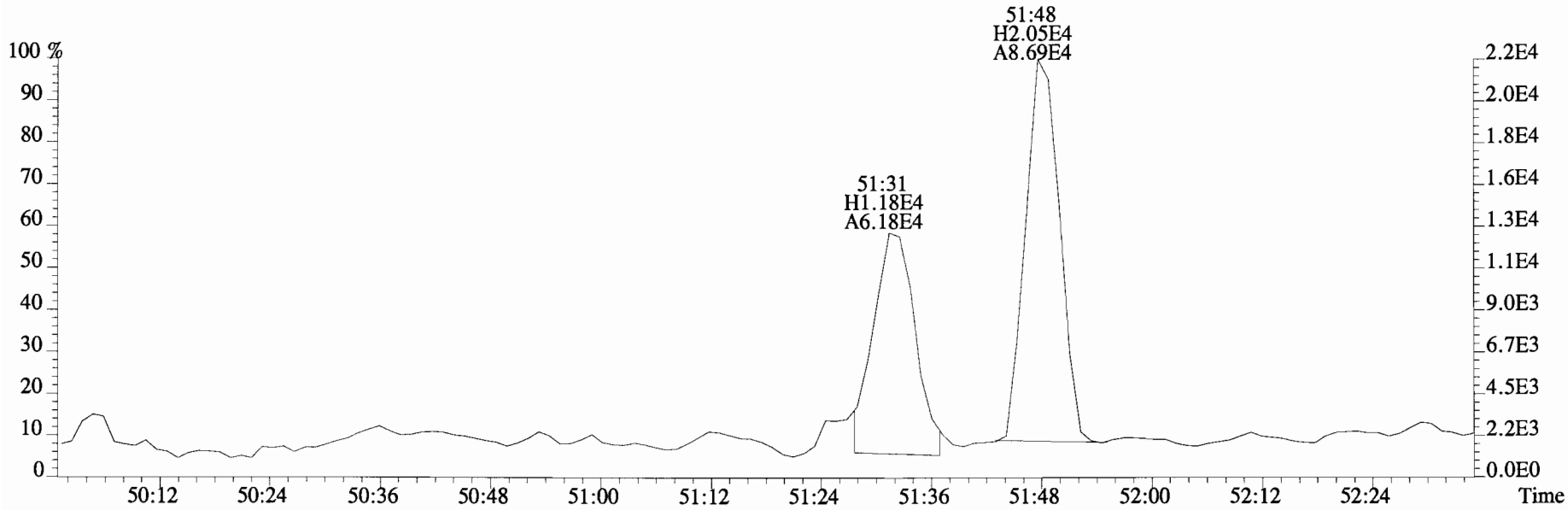
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2152.0,0.00%,F,F)



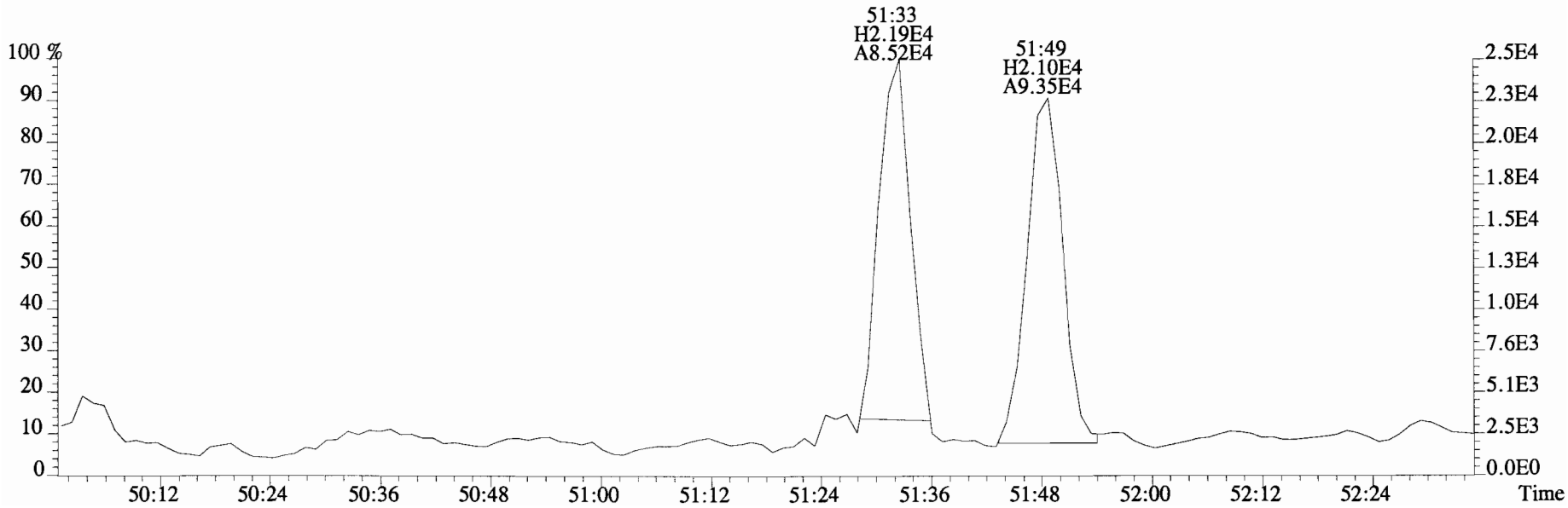
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



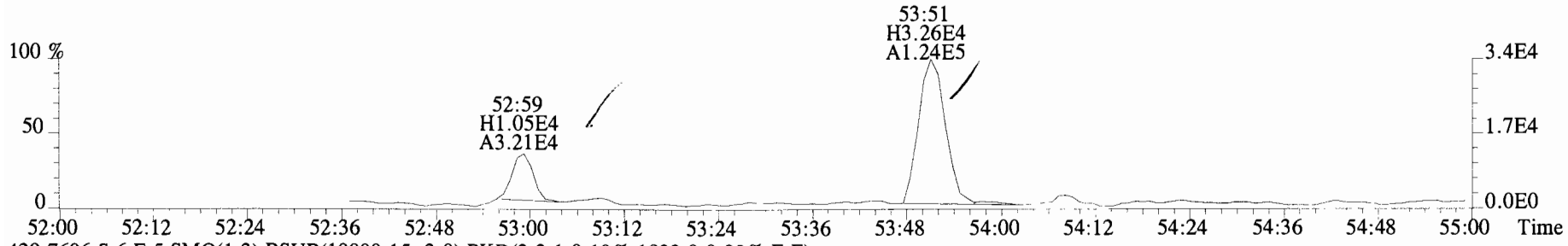
File:141226E3 #1-552 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2152.0,0.00%,F,F)



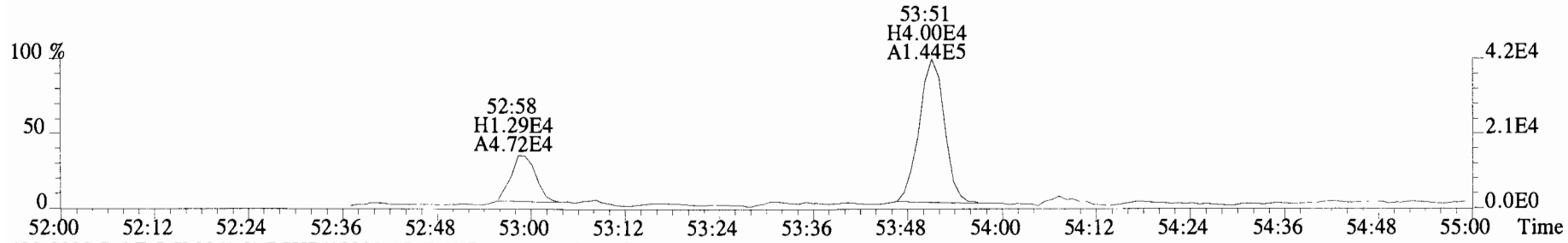
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



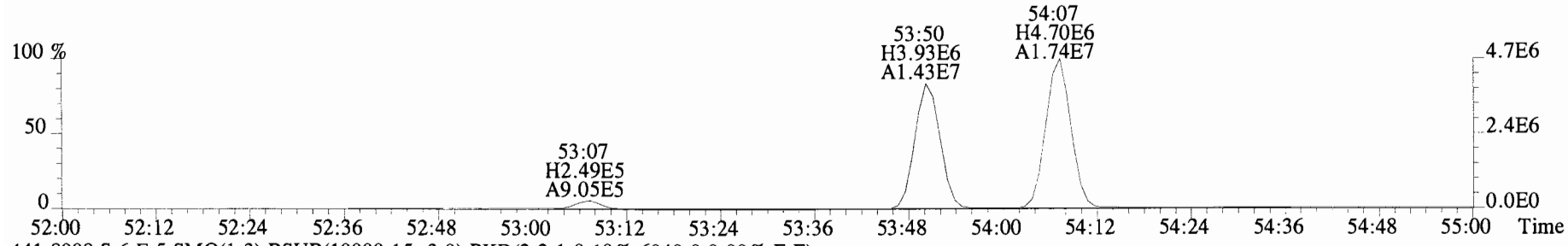
File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



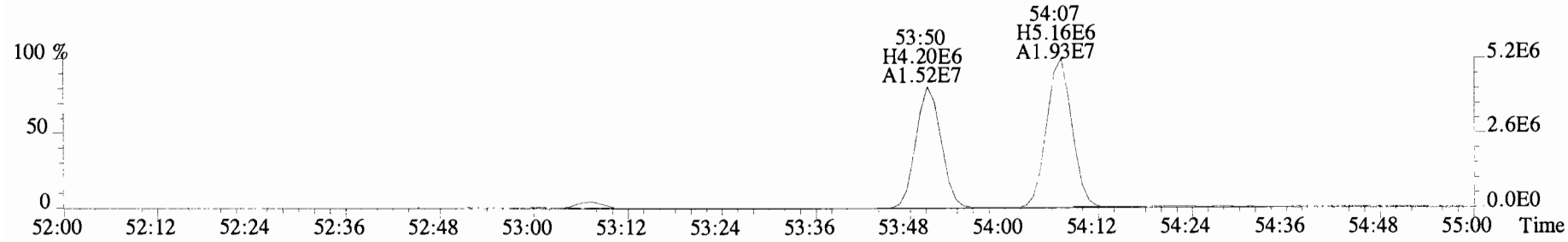
429.7606 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1932.0,0.00%,F,F)



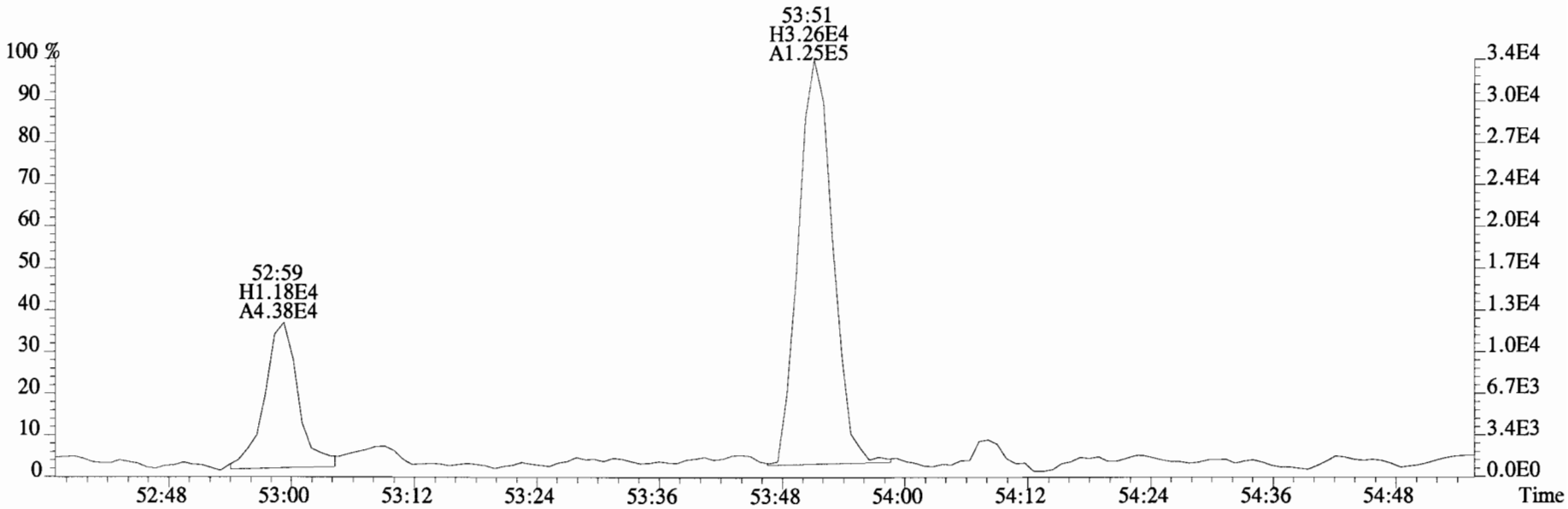
439.8038 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3200.0,0.00%,F,F)



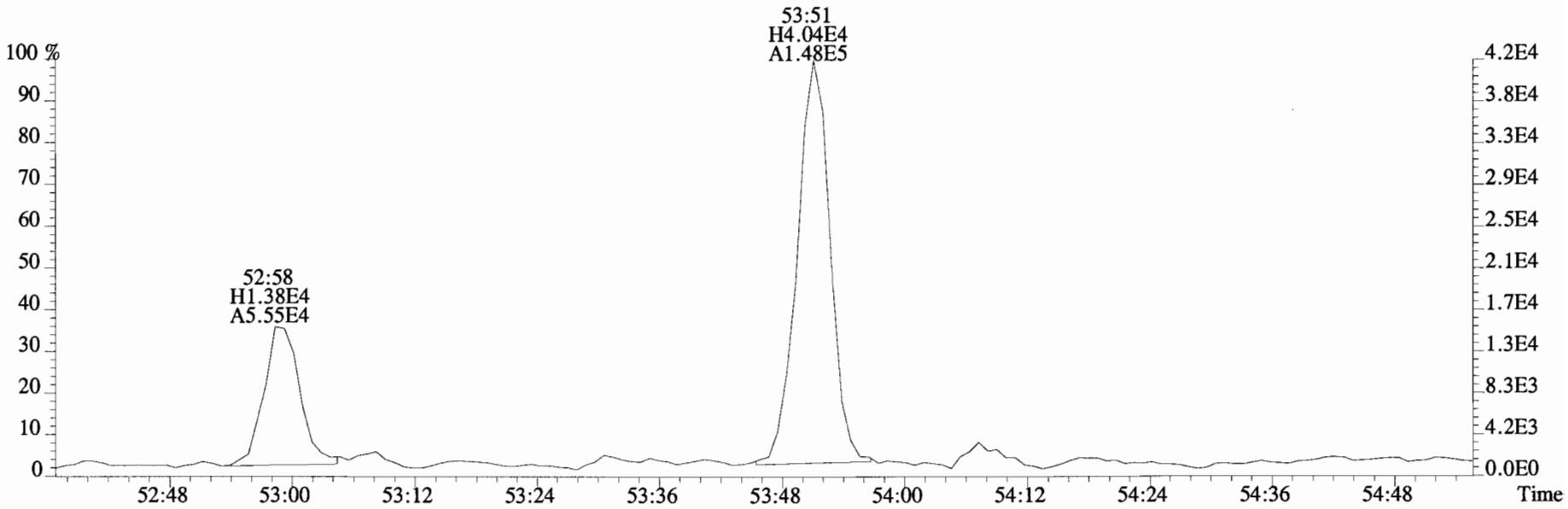
441.8008 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6040.0,0.00%,F,F)



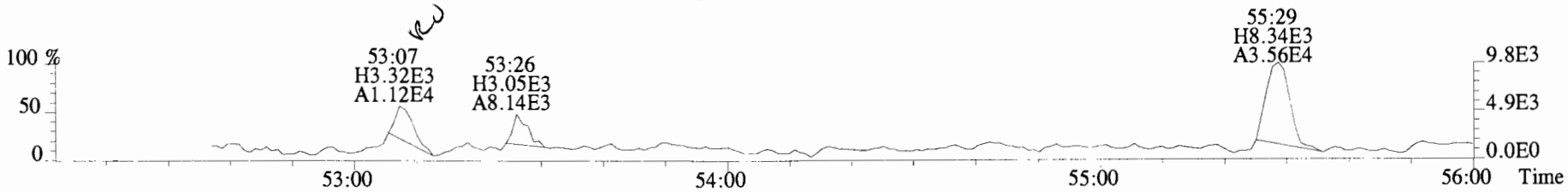
File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



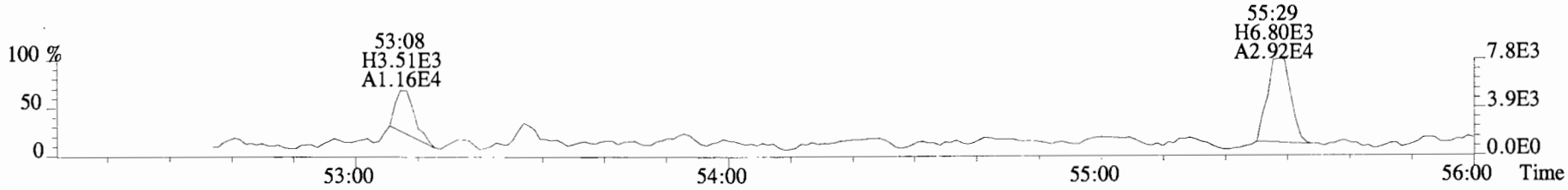
429.7606 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1932.0,0.00%,F,F)



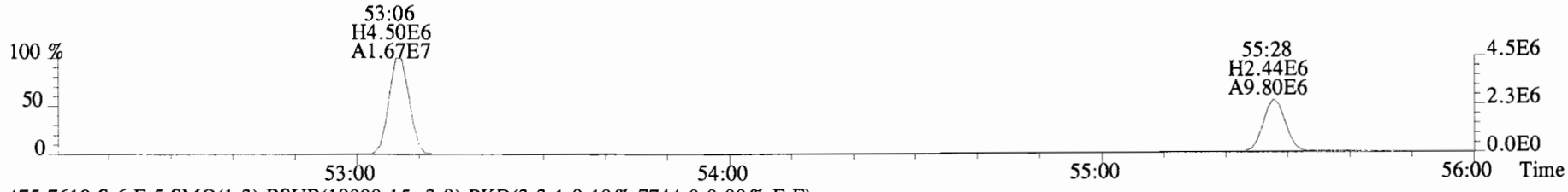
File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1612.0,0.00%,F,F)



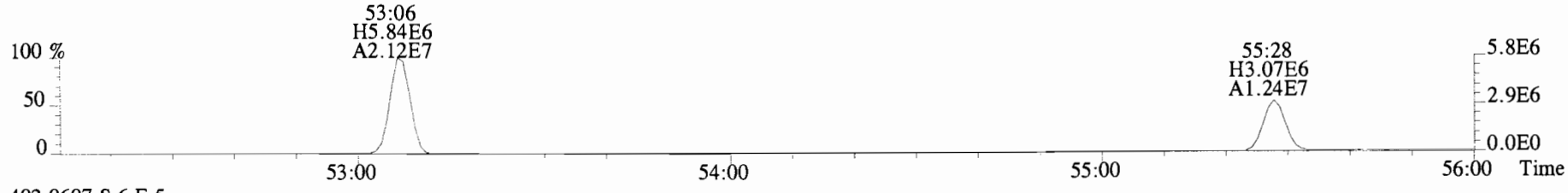
465.7186 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1552.0,0.00%,F,F)



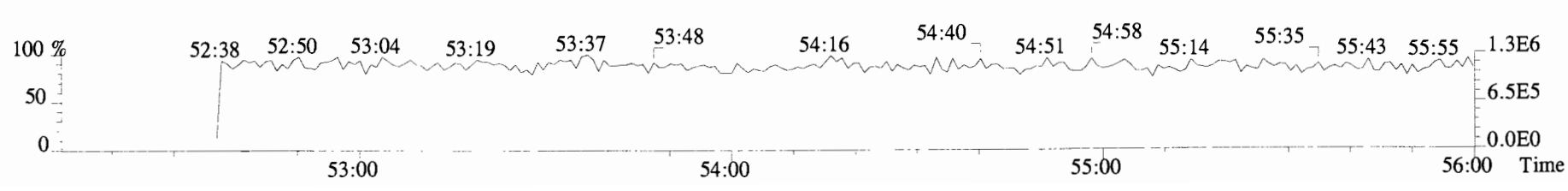
473.7648 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6464.0,0.00%,F,F)



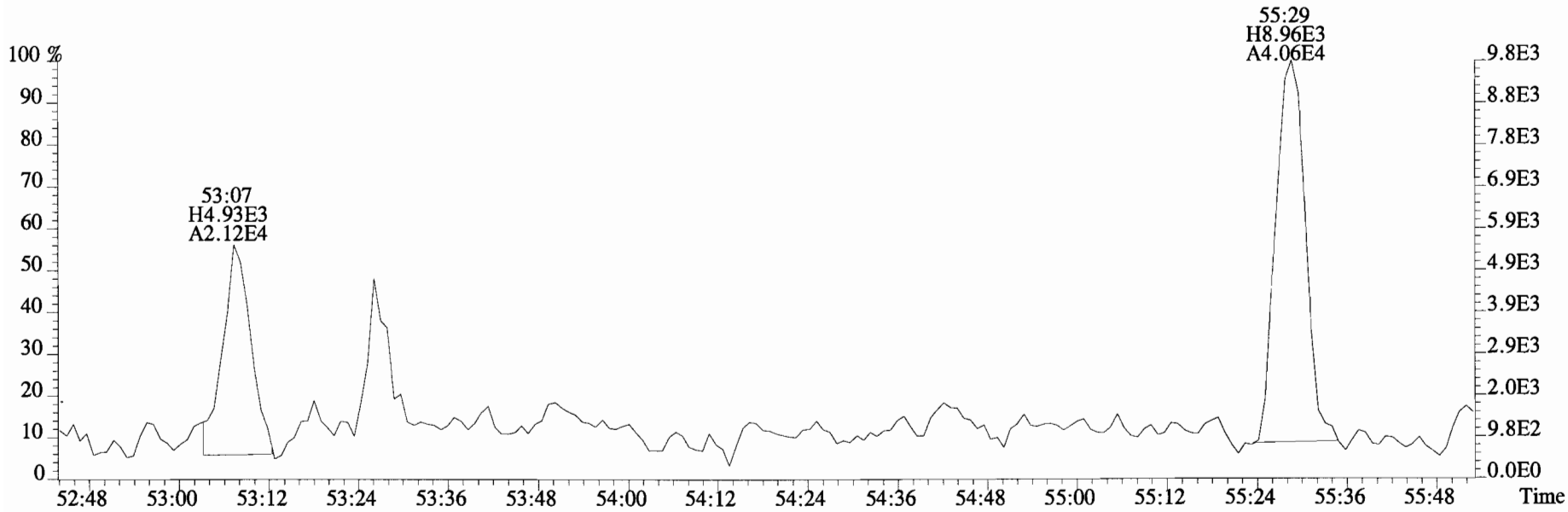
475.7619 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7744.0,0.00%,F,F)



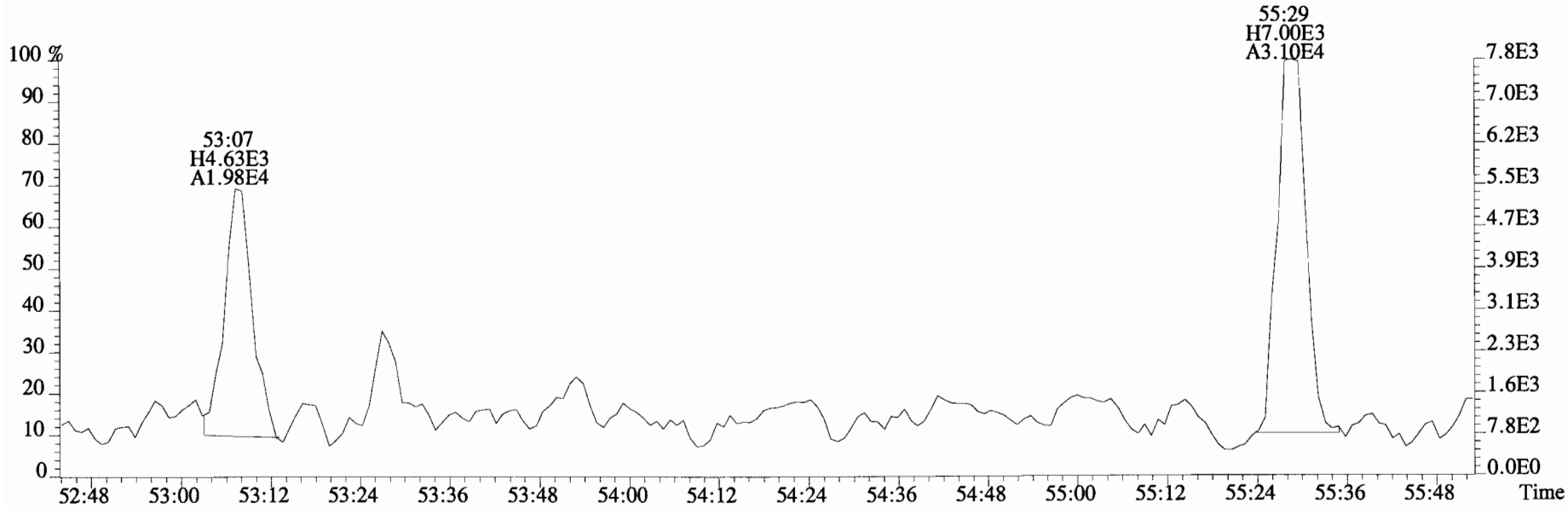
492.9697 S:6 F:5



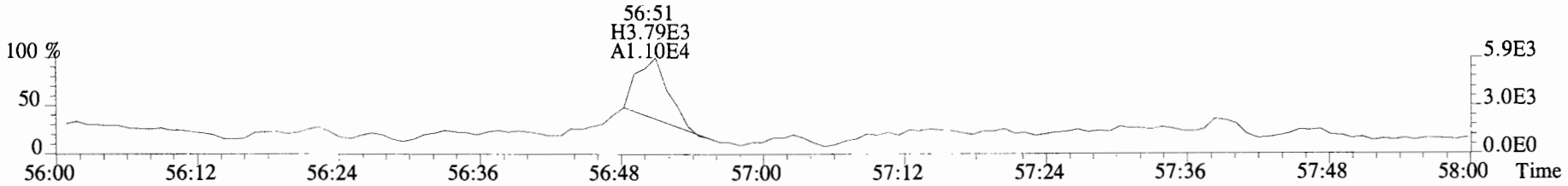
File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1612.0,0.00%,F,F)



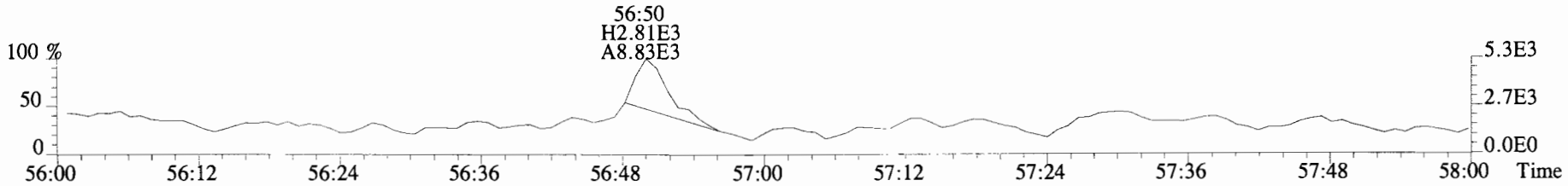
465.7186 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1552.0,0.00%,F,F)



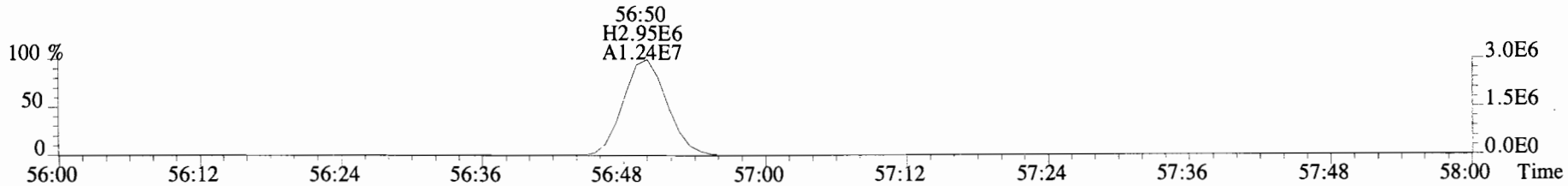
File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1452.0,0.00%,F,F)



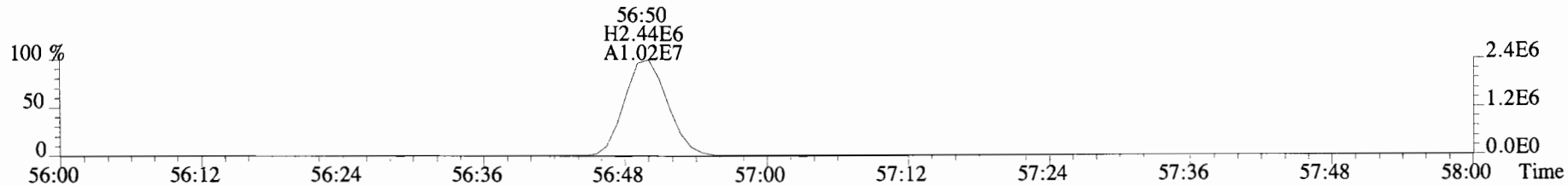
499.6797 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)



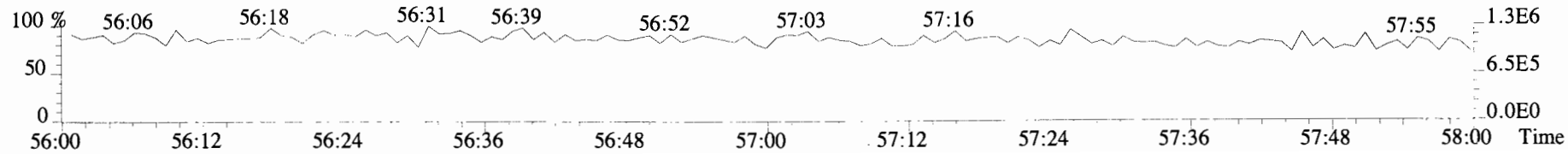
509.7229 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1680.0,0.00%,F,F)



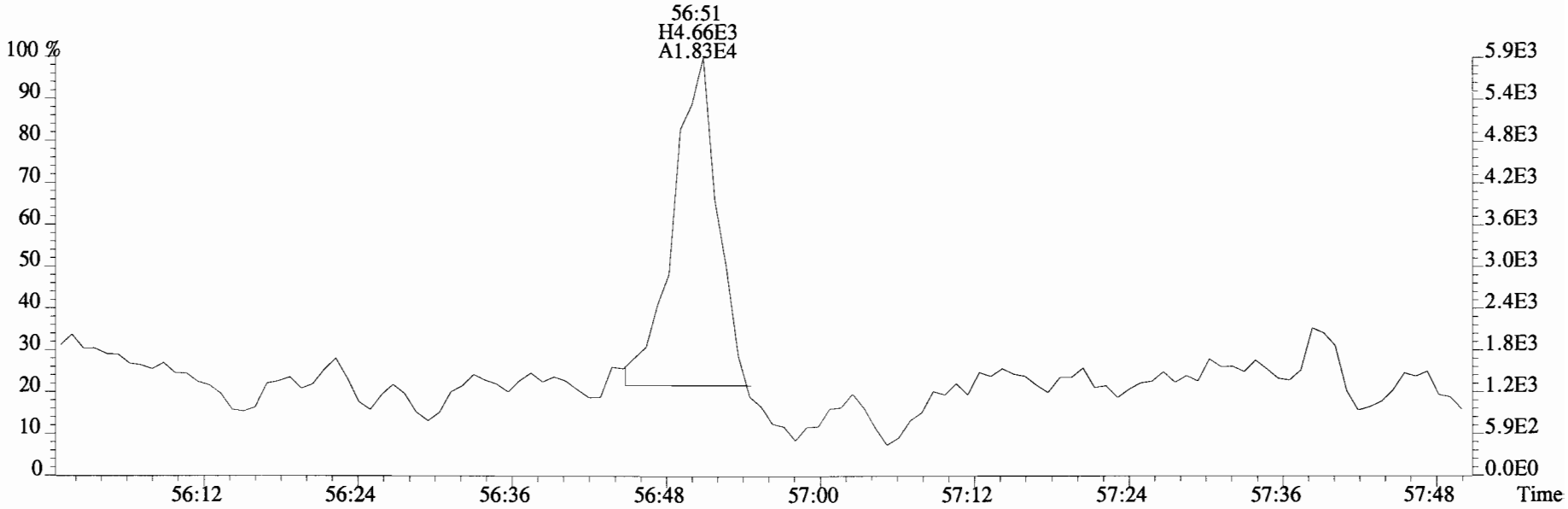
511.7199 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



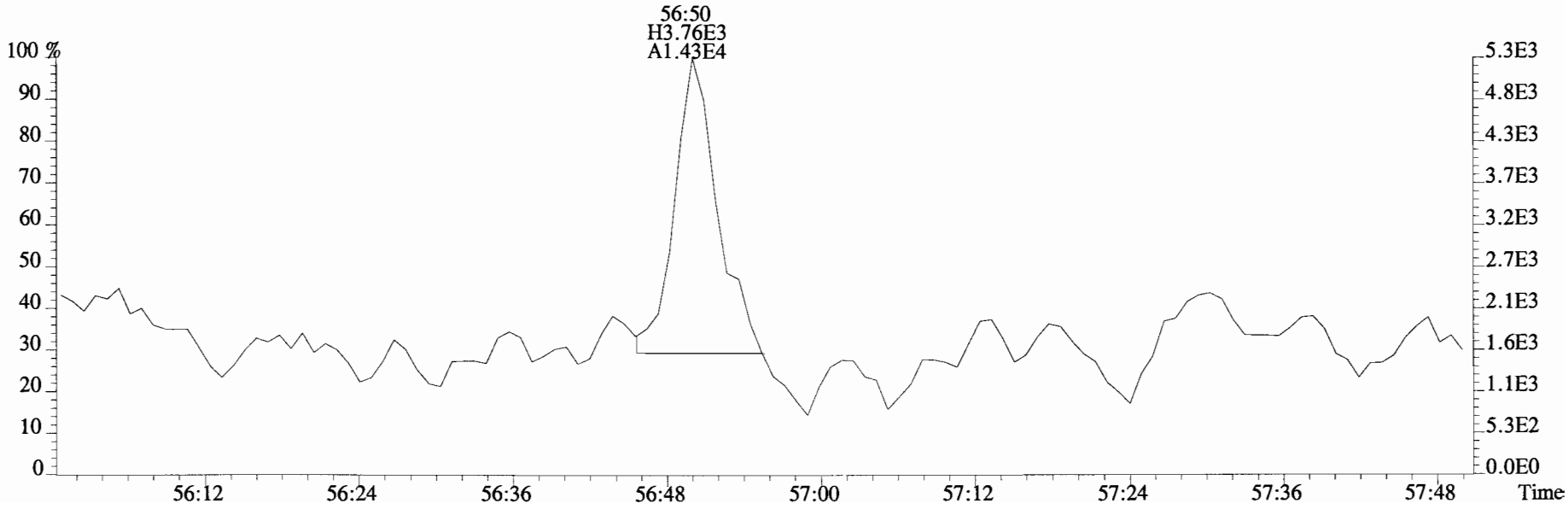
492.9697 S:6 F:5



File:141226E3 #1-430 Acq:27-DEC-2014 18:57:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400958-01 BD-MH-11.31-20141215-W Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1452.0,0.00%,F,F)



499.6797 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)



Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.024 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	3.71e+04	2.79	y 16:08	1.25	1.70		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	*	*	n NotFnd	1.18	*		800	2.5	1.34	*	0.983	0.993
Mono	PCB-3	*	*	n NotFnd	1.22	*		800	2.5	1.30	*	0.996	1.006
Di	PCB-4/10	1.33e+05	1.44	y 20:04	1.55	7.53		*	2.5	*	1.001	0.998	1.008
Di	PCB-7/9	*	*	n NotFnd	1.27	*		4850	2.5	4.98	*	0.865	0.873
Di	PCB-6	1.33e+05	1.43	y 22:31	1.26	5.74		*	2.5	*	0.894	0.890	0.899
Di	PCB-5/8	2.14e+05	1.67	y 22:54	1.23	9.46		*	2.5	*	0.909	0.906	0.916
Di	PCB-14	*	*	n NotFnd	1.23	*		4850	2.5	4.14	*	0.949	0.959
Di	PCB-11	8.69e+05	1.60	y 25:13	1.16	31.2		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	*	*	n NotFnd	1.10	*		4850	2.5	4.64	*	1.010	1.020
Di	PCB-15	3.87e+05	1.38	y 25:55	1.21	13.3		*	2.5	*	1.028	1.024	1.034
Tri	PCB-19	8.54e+04	1.04	y 24:12	1.30	6.22		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n NotFnd	1.83	*		1560	2.5	1.59	*	1.032	1.042
Tri	PCB-18	5.59e+05	1.16	y 25:51	0.86	35.9		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	2.44e+05	1.06	y 26:01	0.90	15.0		*	2.5	*	0.960	0.955	0.965
Tri	PCB-24/27	1.27e+05	1.19	y 26:34	1.18	5.97		*	2.5	*	0.980	0.976	0.986
Tri	PCB-16/32	5.96e+05	1.14	y 27:06	1.03	31.9		*	2.5	*	1.000	0.995	1.005
Tri	PCB-34	*	*	n NotFnd	1.26	*		1900	2.5	2.01	*	0.956	0.966
Tri	PCB-23	*	*	n NotFnd	1.31	*		1900	2.5	1.93	*	0.959	0.969
Tri	PCB-29	*	*	n NotFnd	1.33	*		1900	2.5	1.91	*	0.967	0.977
Tri	PCB-26	3.04e+05	0.96	y 28:27	1.29	12.9		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	1.38e+05	1.14	y 28:36	1.34	5.62		*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	9.59e+05	1.04	y 28:58	1.42	36.9		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	1.35e+06	1.11	y 29:04	1.38	53.4		*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	4.60e+05	1.02	y 29:42	1.31	19.2		*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	4.30e+05	1.05	y 30:07	1.32	17.8		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	*	*	n NotFnd	1.38	*		1900	2.5	1.69	*	0.929	0.939
Tri	PCB-39	*	*	n NotFnd	1.42	*		1900	2.5	1.64	*	0.943	0.953
Tri	PCB-38	4.96e+04	1.13	y 32:00	1.35	1.77		*	2.5	*	0.972	0.967	0.976
Tri	PCB-35	5.90e+04	1.01	y 32:30	1.38	2.08		*	2.5	*	0.987	0.982	0.992
Tri	PCB-37	6.75e+05	0.92	y 32:57	1.39	23.5		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	2.83e+04	0.63	n 27:57	1.20	1.67	R	*	2.5	*	1.001	0.996	1.006
Tetra	PCB-50	*	*	n NotFnd	0.97	*		1500	2.5	2.29	*	1.037	1.047
Tetra	PCB-53	3.54e+05	0.78	y 29:46	1.19	22.7		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	1.91e+05	0.75	y 30:06	1.15	12.7		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	1.71e+05	0.74	y 30:31	0.97	13.5		*	2.5	*	0.970	0.966	0.976
Tetra	PCB-46	7.63e+04	0.67	y 31:01	0.95	6.11		*	2.5	*	0.986	0.982	0.992

Integrations by:

Analyst: MN

Date: 12/31/14

Reviewed by: [signature] Date: 12/31/14

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	3.07e+06	0.75	y	31:28	1.28	183		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.37	*		1500	2.5	1.68	*	1.000	1.010
Tetra	PCB-43/49	1.35e+06	0.85	y	31:46	1.11	92.6		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	5.62e+05	0.80	y	31:59	1.13	36.0		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	2.15e+05	0.85	y	32:07	1.30	11.9		*	2.5	*	1.005	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.33	*		1500	2.5	1.73	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF	1.29	*		1500	2.5	1.78	*	1.011	1.021
Tetra	PCB-44	1.56e+06	0.79	y	32:46	0.94	120		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	5.46e+05	0.86	y	33:00	1.22	32.6		*	2.5	*	1.032	1.028	1.038
Tetra	PCB-41/64/71/72	1.58e+06	0.78	y	33:35	1.31	87.3		*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	3.84e+04	0.66	y	33:49	1.49	1.88		*	2.5	*	1.058	1.054	1.064
Tetra	PCB-40	1.96e+05	0.80	y	34:04	0.82	17.4		*	2.5	*	1.066	1.061	1.071
Tetra	PCB-57	*	*	n	NotF	1.11	*		1500	2.5	1.46	*	0.965	0.975
Tetra	PCB-67	6.09e+04	0.88	y	34:43	1.07	2.79		*	2.5	*	0.978	0.974	0.984
Tetra	PCB-58	*	*	n	NotF	1.10	*		1500	2.5	1.47	*	0.977	0.987
Tetra	PCB-63	9.01e+04	0.82	y	34:59	1.12	3.96		*	2.5	*	0.986	0.982	0.992
Tetra	PCB-74	1.11e+06	0.78	y	35:16	1.20	45.1		*	2.5	*	0.994	0.990	1.000
Tetra	PCB-61/70	3.09e+06	0.81	y	35:29	1.08	140		*	2.5	*	1.000	0.994	1.004
Tetra	PCB-76/66	2.11e+06	0.81	y	35:43	1.14	91.4		*	2.5	*	1.007	1.001	1.011
Tetra	PCB-80	*	*	n	NotF	1.28	*		1500	2.5	1.24	*	0.996	1.006
Tetra	PCB-55	1.02e+05	0.83	y	36:12	1.11	4.28		*	2.5	*	1.008	1.005	1.015
Tetra	PCB-56/60	1.46e+06	0.72	y	36:43	1.09	62.3		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	1.76e+05	0.71	y	37:49	1.12	7.28		*	2.5	*	1.053	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.24	*		1500	2.5	1.42	*	0.982	0.992
Tetra	PCB-81	1.18e+05	0.72	y	39:00	1.38	4.36		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-77	4.34e+05	0.87	y	39:35	1.21	16.8		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.26	*		1100	2.5	2.42	*	0.996	1.006
Penta	PCB-96	4.00e+04	1.53	y	33:53	1.09	3.28		*	2.5	*	1.039	1.034	1.044
Penta	PCB-103	2.14e+04	1.60	y	34:26	0.93	2.05		*	2.5	*	1.056	1.050	1.060
Penta	PCB-100	1.59e+04	0.66	n	34:47	1.00	1.42	R	*	2.5	*	1.066	1.061	1.071
Penta	PCB-94	2.40e+04	1.33	y	35:15	1.11	2.45		*	2.5	*	0.986	0.981	0.991
Penta	PCB-95/98/102	4.10e+06	1.68	y	35:47	1.21	381		*	2.5	*	1.000	0.994	1.004
Penta	PCB-93	*	*	n	NotF	1.13	*		1100	2.5	3.48	*	0.998	1.008
Penta	PCB-88/91	7.55e+05	1.63	y	36:11	1.02	83.6		*	2.5	*	1.012	1.006	1.016
Penta	PCB-121	*	*	n	NotF	1.90	*		1100	2.5	2.07	*	1.009	1.019
Penta	PCB-84/92	2.31e+06	1.71	y	37:05	1.05	211		*	2.5	*	0.990	0.986	0.996
Penta	PCB-89	4.34e+04	1.54	y	37:16	1.02	4.10		*	2.5	*	0.995	0.991	1.001

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.024 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	6.49e+06	1.57	y 37:28	1.19	524		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	*	*	n NotF┐	1.35	*		1100	2.5	2.56	*	1.002	1.012
Penta	PCB-99	2.69e+06	1.60	y 37:47	1.29	201		*	2.5	*	1.009	1.005	1.015
Penta	PCB-119	1.62e+05	1.43	y 38:15	1.72	10.3		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	2.72e+05	1.76	y 38:25	1.29	23.1		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	*	*	n NotF┐	1.52	*		1100	2.5	2.52	*	0.991	1.001
Penta	PCB-97	1.79e+06	1.68	y 38:47	1.25	157		*	2.5	*	1.001	0.996	1.006
Penta	PCB-86	*	*	n NotF┐	1.02	*		1100	2.5	3.75	*	1.000	1.010
Penta	PCB-87/117/125	2.83e+06	1.72	y 39:04	1.56	199		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	1.17e+05	1.77	y 39:12	1.75	7.28		*	2.5	*	1.012	1.007	1.017
Penta	PCB-85/116	1.06e+06	1.56	y 39:18	1.30	89.0		*	2.5	*	1.014	1.010	1.020
Penta	PCB-120	*	*	n NotF┐	1.78	*		1100	2.5	2.15	*	1.016	1.026
Penta	PCB-110	1.04e+07	1.63	y 39:42	1.68	676		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	7.04e+05	1.45	y 40:20	0.74	70.7		*	2.5	*	0.976	0.972	0.982
Penta	PCB-124	3.76e+05	1.53	y 41:01	1.32	21.1		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	5.68e+05	1.33	y 41:11	1.22	34.5		*	2.5	*	0.997	0.991	1.001
Penta	PCB-123	1.20e+05	1.68	y 41:20	1.22	7.32		*	2.5	*	1.000	0.995	1.005
Penta	PCB-106/118	7.45e+06	1.62	y 41:30	1.22	451		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	2.47e+05	1.38	y 42:09	1.36	9.07		*	2.5	*	1.000	0.995	1.005
Penta	PCB-122	1.11e+05	1.60	y 42:18	1.24	4.47		*	2.5	*	1.004	0.999	1.009
Penta	PCB-105	4.64e+06	1.58	y 43:02	1.28	170		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF┐	1.14	*		1600	2.5	2.10	*	0.995	1.005
Penta	PCB-126	1.52e+05	1.69	y 45:15	1.28	5.78		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	*	*	n NotF┐	1.14	*		1100	2.5	2.82	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF┐	1.06	*		1100	2.5	3.01	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF┐	1.10	*		1100	2.5	2.92	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF┐	1.09	*		1100	2.5	2.93	*	1.055	1.065
Hexa	PCB-136	8.12e+05	1.27	y 39:31	1.08	77.0		*	2.5	*	1.068	1.064	1.074
Hexa	PCB-148	*	*	n NotF┐	0.74	*		1100	2.5	4.33	*	1.066	1.076
Hexa	PCB-154	6.86e+04	1.14	y 40:07	0.88	7.99		*	2.5	*	1.084	1.079	1.089
Hexa	PCB-151	1.11e+06	1.26	y 40:45	0.81	141		*	2.5	*	1.101	1.097	1.107
Hexa	PCB-135	6.41e+05	1.14	y 40:58	0.78	84.7		*	2.5	*	1.107	1.101	1.113
Hexa	PCB-144	2.30e+05	1.41	y 41:05	0.82	28.8		*	2.5	*	1.110	1.105	1.116
Hexa	PCB-147	1.22e+05	1.33	y 41:12	0.83	15.2		*	2.5	*	1.114	1.011	1.120
Hexa	PCB-139/149	4.74e+06	1.19	y 41:28	0.84	578		*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	3.19e+04	1.15	y 41:39	0.79	4.18		*	2.5	*	1.126	1.120	1.132
Hexa	PCB-134/143	6.24e+05	1.28	y 42:07	0.93	40.3		*	2.5	*	0.976	0.970	0.980

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.024 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	2.93e+05	1.21	y	42:23	0.95	18.5		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	*	*	n	NotF¶	0.91	*		1850	2.5	3.37	*	0.981	0.991
Hexa	PCB-146/165	1.93e+06	1.28	y	42:47	1.16	99.6		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	4.02e+06	1.32	y	43:03	1.11	216		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	1.31e+07	1.27	y	43:11	1.18	662		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n	NotF¶	1.37	*		1850	2.5	2.25	*	1.000	1.010
Hexa	PCB-141	2.80e+06	1.30	y	43:55	0.97	177		*	2.5	*	1.000	0.996	1.005
Hexa	PCB-137	7.90e+05	1.22	y	44:18	1.07	45.5		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	8.04e+05	1.36	y	44:24	0.85	58.5		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-138/163/164	1.72e+07	1.26	y	44:46	1.23	882		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-158/160	1.99e+06	1.23	y	45:00	1.29	97.2		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	6.12e+05	1.36	y	45:15	0.92	41.7		*	2.5	*	1.011	1.007	1.017
Hexa	PCB-166	*	*	n	NotF¶	1.12	*		5500	1.0	3.09	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF¶	1.16	*		1850	2.5	2.49	*	0.995	1.005
Hexa	PCB-128/162	2.61e+06	1.30	y	46:19	1.02	138		*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	8.10e+05	1.16	y	46:44	1.06	37.1		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	1.66e+06	1.37	y	48:02	1.18	71.6		*	2.5	*	1.001	0.995	1.005
Hexa	PCB-157	4.32e+05	1.31	y	48:17	1.08	19.4		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	*	*	n	NotF¶	1.11	*		1850	2.5	2.26	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotF¶	1.40	*		1580	2.5	1.67	*	0.995	1.005
Hepta	PCB-184	*	*	n	NotF¶	1.24	*		1580	2.5	1.89	*	1.006	1.016
Hepta	PCB-179	1.20e+06	1.05	y	44:02	1.30	76.5		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	3.92e+05	1.15	y	44:30	1.36	24.0		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	*	*	n	NotF¶	1.28	*		1580	2.5	1.83	*	1.049	1.059
Hepta	PCB-178	4.87e+05	0.96	y	45:36	0.94	43.3		*	2.5	*	1.065	1.061	1.071
Hepta	PCB-175	1.12e+05	0.93	y	45:57	0.97	9.63		*	2.5	*	1.074	1.069	1.079
Hepta	PCB-182/187	3.38e+06	1.10	y	46:06	1.01	278		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	1.63e+06	1.00	y	46:26	1.08	125		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	3.05e+05	1.01	y	47:06	1.34	23.3		*	2.5	*	0.956	0.951	0.961
Hepta	PCB-174	2.92e+06	1.05	y	47:27	1.34	224		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	*	*	n	NotF¶	1.36	*		1580	2.5	2.18	*	0.961	0.971
Hepta	PCB-177	1.60e+06	1.11	y	47:44	1.24	132		*	2.5	*	0.969	0.964	0.974
Hepta	PCB-171	8.08e+05	1.06	y	48:02	1.31	63.2		*	2.5	*	0.975	0.970	0.980
Hepta	PCB-173	6.77e+04	1.05	y	48:27	1.16	5.99		*	2.5	*	0.983	0.979	0.989
Hepta	PCB-172	5.70e+05	1.10	y	48:54	1.22	47.9		*	2.5	*	0.992	0.988	0.998
Hepta	PCB-192	*	*	n	NotF¶	1.53	*		1580	2.5	1.94	*	0.991	1.001
Hepta	PCB-180	7.42e+06	1.09	y	49:18	1.43	533		*	2.5	*	1.000	0.995	1.005

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.024 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	4.43e+05	1.13	y 49:31	1.65	27.5		*	2.5	*	1.005	0.999	1.009
Hepta	PCB-191	1.96e+05	0.89	y 49:46	1.67	12.1		*	2.5	*	1.010	1.004	1.014
Hepta	PCB-170	2.92e+06	1.10	y 50:49	1.50	244		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	8.46e+05	1.06	y 51:00	2.02	52.5		*	2.5	*	1.004	0.998	1.008
Hepta	PCB-189	1.72e+05	0.98	y 52:19	1.54	10.2		*	2.5	*	1.000	0.995	1.005
Octa	PCB-202	1.67e+05	0.80	y 48:14	1.04	15.6		*	2.5	*	1.000	0.995	1.005
Octa	PCB-201	1.14e+05	0.91	y 48:42	1.10	10.1		*	2.5	*	1.010	1.006	1.016
Octa	PCB-204	*	*	n NotFnd	0.99	*		618	2.5	1.45	*	1.009	1.019
Octa	PCB-197	4.73e+04	0.76	y 49:10	1.07	4.29		*	2.5	*	1.020	1.015	1.025
Octa	PCB-200	1.27e+05	0.91	y 50:04	1.02	12.1		*	2.5	*	1.038	1.032	1.044
Octa	PCB-198	5.48e+04	0.88	y 51:24	0.74	7.16		*	2.5	*	1.066	1.058	1.068
Octa	PCB-199	8.55e+05	0.83	y 51:32	0.73	114		*	2.5	*	1.069	1.060	1.070
Octa	PCB-196/203	1.03e+06	1.02	y 51:48	0.77	130		*	2.5	*	1.074	1.066	1.076
Octa	PCB-195	5.84e+05	0.87	y 52:58	1.20	37.0		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	1.64e+06	0.92	y 53:51	1.25	99.9		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	9.90e+04	0.97	y 54:08	1.41	5.33		*	2.5	*	1.005	1.001	1.011
Nona	PCB-208	9.84e+04	1.39	y 53:07	0.96	5.98		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	4.87e+04	1.15	y 53:26	0.92	3.11		*	2.5	*	1.006	1.001	1.011
Nona	PCB-206	2.74e+05	1.28	y 55:28	1.03	25.2		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	7.77e+04	1.18	y 56:52	1.18	6.24		*	2.5	*	1.000	0.995	1.005

Analyst: MJ

Date: 12/30/14

Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0240 EndCAL: NA

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	3.71e+04	2.79 y	16:08	1.22	1.70210	
Total Di-PCB	1.74e+06	1.44 y	20:04	1.21	67.1955	
Total Tri-PCB	1.61e+06	1.04 y	24:12	1.16	94.9479	
Total Tri-PCB	4.42e+06	0.96 y	28:27	1.35	173.158	Sum:268.106
Total Tetra-PCB	1.87e+07	0.78 y	29:46	1.17	1016.25	
Total Penta-PCB	4.23e+07	1.53 y	33:53	1.21	3157.89	
Total Penta-PCB	5.15e+06	1.38 y	42:09	1.26	189.103	Sum:3347.00
Total Hexa-PCB	7.75e+06	1.27 y	39:31	0.92	936.622	
Total Hexa-PCB	4.96e+07	1.28 y	42:07	1.08	2604.85	Sum:3541.47
Total Hepta-PCB	2.55e+07	1.05 y	44:02	1.27	1931.97	
Total Octa-PCB	2.40e+06	0.80 y	48:14	0.92	293.066	
Total Octa-PCB	2.32e+06	0.87 y	52:58	1.29	142.234	Sum:435.299
Total Nona-PCB	4.21e+05	1.39 y	53:07	0.96	34.3276	
Total Deca-PCB	7.77e+04	1.18 y	56:52	1.18	6.23773	

Total PCB Conc: ~~10652~~ 10600.6483830

Integrations by Analyst: MN

Date: 12/31/14

Client ID: BD-MH-5.16-20141215-W Filename: 141226E3 S:7 Acq:27-DEC-14 20:02:28 ConCal: ST141226E3-1
Lab ID: 1400958-02 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.024 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	3.39e+07	3.36 y	0.89	16:07	0.622	0.622	0.628	1220	62.5
13C-PCB-3	3.67e+07	3.52 y	0.93	18:43	0.723	0.721	0.729	1270	64.9
13C-PCB-4	2.22e+07	1.62 y	0.55	20:03	0.774	0.772	0.780	1300	66.6
13C-PCB-9	3.58e+07	1.64 y	0.83	21:50	0.843	0.840	0.848	1390	71.2
13C-PCB-11	4.70e+07	1.59 y	0.94	25:12	0.973	0.968	0.978	1610	82.2
13C-PCB-32	3.54e+07	1.11 y	0.81	27:06	1.046	1.041	1.051	1390	71.4
13C-PCB-19	2.07e+07	1.11 y	0.53	24:11	0.934	0.929	0.939	1240	63.7
13C-PCB-28	3.57e+07	1.10 y	0.89	29:03	1.003	0.999	1.009	1660	84.9
13C-PCB-52	2.56e+07	0.82 y	0.71	31:28	0.857	0.853	0.861	1490	76.1
13C-PCB-54	2.77e+07	0.80 y	0.85	27:55	0.760	0.758	0.766	1340	68.5
13C-PCB-37	4.03e+07	1.10 y	0.83	32:55	1.137	1.131	1.143	2000	102
13C-PCB-47	2.69e+07	0.78 y	0.74	31:58	0.871	0.867	0.875	1490	76.1
13C-PCB-81	3.84e+07	0.82 y	0.84	39:00	1.062	1.057	1.067	1880	96.2
13C-PCB-70	3.98e+07	0.83 y	0.94	35:29	0.966	0.961	0.971	1730	88.5
13C-PCB-80	4.20e+07	0.85 y	0.96	35:54	0.978	0.972	0.982	1790	91.7
13C-PCB-104	2.18e+07	1.63 y	1.00	32:37	0.832	0.829	0.837	1480	75.7
13C-PCB-101	2.03e+07	1.63 y	0.79	37:27	0.956	0.951	0.961	1740	89.3
13C-PCB-95	1.73e+07	1.61 y	0.74	35:46	0.913	0.908	0.918	1570	80.3
13C-PCB-77	4.18e+07	0.82 y	0.89	39:35	1.078	1.073	1.083	1920	98.3
13C-PCB-114	3.92e+07	1.68 y	1.21	42:09	0.910	0.905	0.915	2020	103
13C-PCB-118	2.63e+07	1.60 y	0.98	41:30	1.059	1.054	1.064	1800	92.3
13C-PCB-123	2.63e+07	1.60 y	0.95	41:19	1.054	1.049	1.059	1870	95.8
13C-PCB-97	1.79e+07	1.71 y	0.69	38:45	0.989	0.984	0.994	1750	89.4
13C-PCB-127	4.50e+07	1.68 y	1.34	43:21	0.936	0.931	0.941	2080	107
13C-PCB-105	4.16e+07	1.63 y	1.24	43:01	0.929	0.924	0.934	2080	107
13C-PCB-141	3.17e+07	1.30 y	1.07	43:54	0.948	0.943	0.953	1830	93.8
13C-PCB-153	3.27e+07	1.30 y	1.11	43:10	0.932	0.927	0.937	1820	93.2
13C-PCB-155	1.90e+07	1.33 y	0.83	37:00	0.944	0.939	0.949	1540	78.7
13C-PCB-126	4.00e+07	1.67 y	1.16	45:15	0.977	0.972	0.982	2130	109
13C-PCB-167	4.01e+07	1.28 y	1.32	46:43	1.009	1.004	1.014	1880	96.4
13C-PCB-156	3.83e+07	1.35 y	1.24	48:00	1.037	1.032	1.042	1910	97.6
13C-PCB-138	3.11e+07	1.33 y	1.04	44:45	0.967	0.961	0.971	1840	94.4
13C-PCB-159	3.62e+07	1.32 y	1.20	46:02	0.994	0.989	0.999	1870	95.8
13C-PCB-157	4.01e+07	1.36 y	1.31	48:16	1.042	1.037	1.047	1900	97.1
13C-PCB-180	1.90e+07	0.48 y	0.67	49:17	1.064	1.059	1.069	1750	89.6
13C-PCB-188	2.34e+07	0.46 y	0.94	42:48	0.924	0.919	0.929	1550	79.5
13C-PCB-169	3.99e+07	1.29 y	1.22	50:26	1.089	1.082	1.092	2040	104
13C-PCB-170	1.56e+07	0.47 y	0.54	50:48	1.097	1.089	1.101	1810	92.5
13C-PCB-202	2.01e+07	0.95 y	0.83	48:13	1.041	1.036	1.046	1500	76.6
13C-PCB-189	2.15e+07	0.48 y	0.72	52:19	1.130	1.120	1.132	1860	95.2
13C-PCB-208	3.34e+07	0.79 y	1.12	53:07	0.982	0.976	0.986	1690	86.6
13C-PCB-194	2.57e+07	0.97 y	0.81	53:51	0.995	0.990	1.000	1810	92.4
13C-PCB-206	2.06e+07	0.79 y	0.66	55:28	1.025	1.021	1.031	1780	91.2
13C-PCB-209	2.07e+07	1.22 y	0.61	56:52	1.051	1.044	1.054	1920	98.2

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	5.22e+07	0.81 y	1.01	37:46	1.029	1.023	1.033	2130	109
13C-PCB-178	1.83e+07	0.47 y	0.63	45:35	0.985	0.979	0.989	1800	92.1

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	5.22e+07	0.81 y	1.20	37:46	0.968	0.963	0.973	2220	113
13C-PCB-178	1.83e+07	0.47 y	0.94	45:35	0.925	0.920	0.930	2010	103

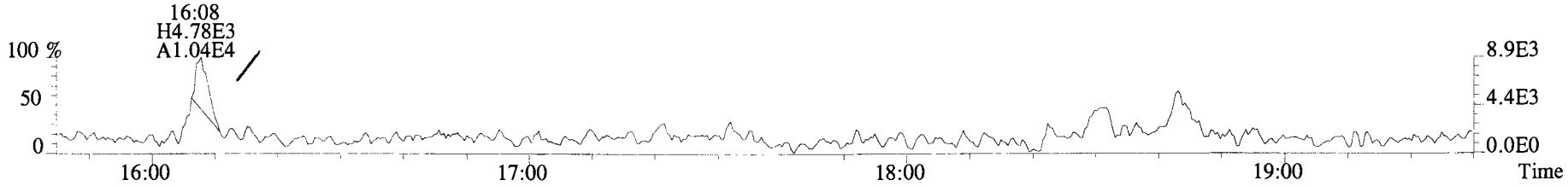
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	6.10e+07	1.62	y	1.00	25:54	1950
13C-PCB-31	4.74e+07	1.07	y	1.00	28:57	1950
13C-PCB-60	4.76e+07	0.83	y	1.00	36:43	1950
13C-PCB-111	2.90e+07	1.61	y	1.00	39:11	1950
13C-PCB-128	3.15e+07	1.28	y	1.00	46:18	1950
13C-PCB-205	3.43e+07	0.93	y	1.00	54:07	1950

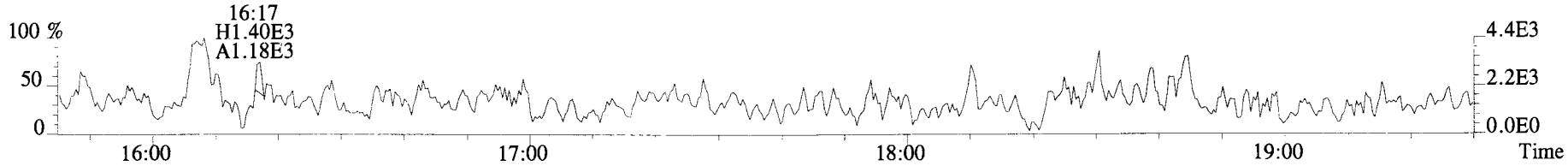
Analyst: MJ

Date: 12/31/14

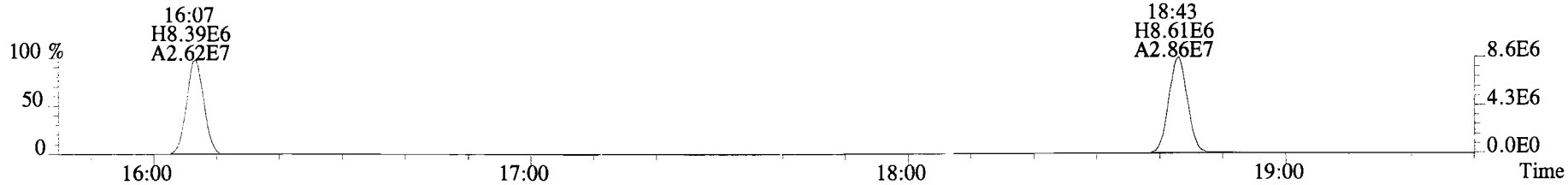
File:141226E3 #1-729 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
188.0393 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)



190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)

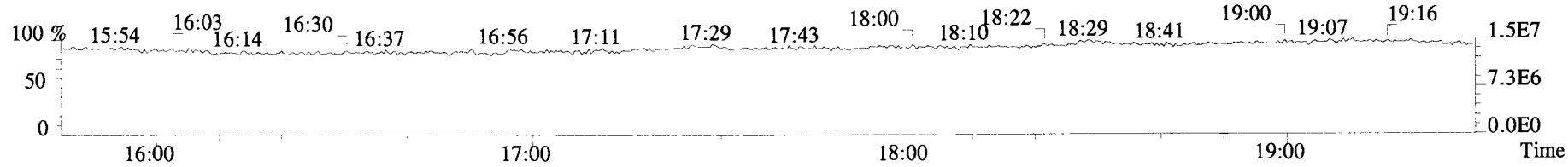


200.0795 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2720.0,0.00%,F,F)

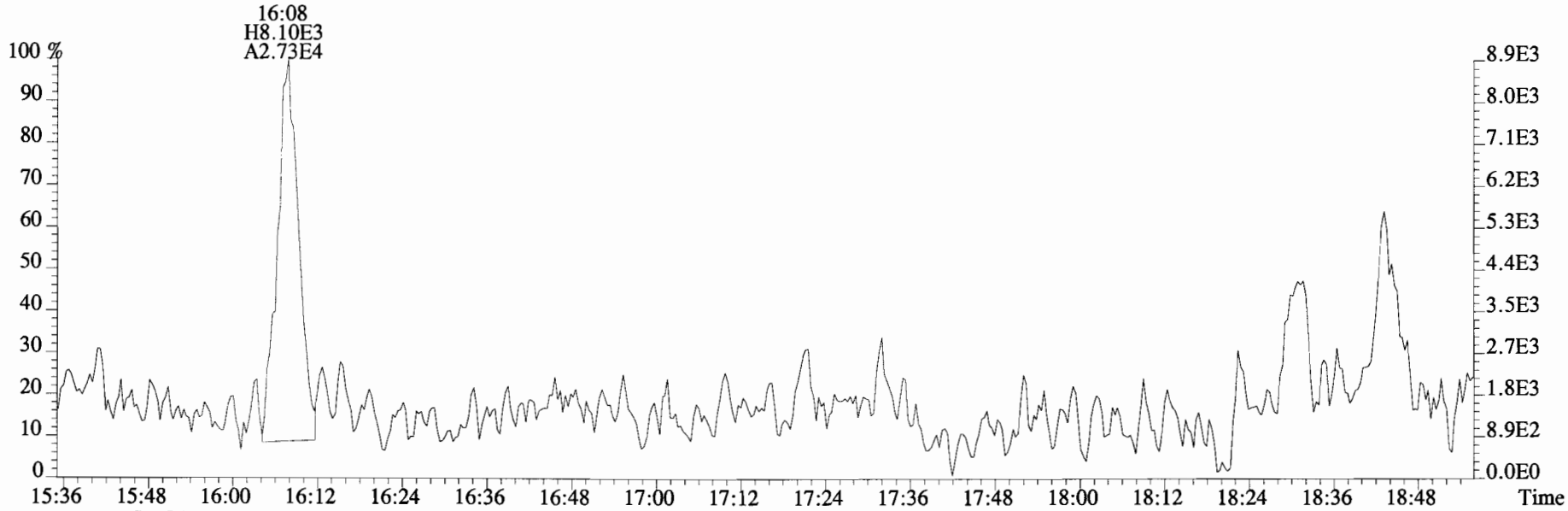


202.0766 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,26572.0,0.00%,F,F)

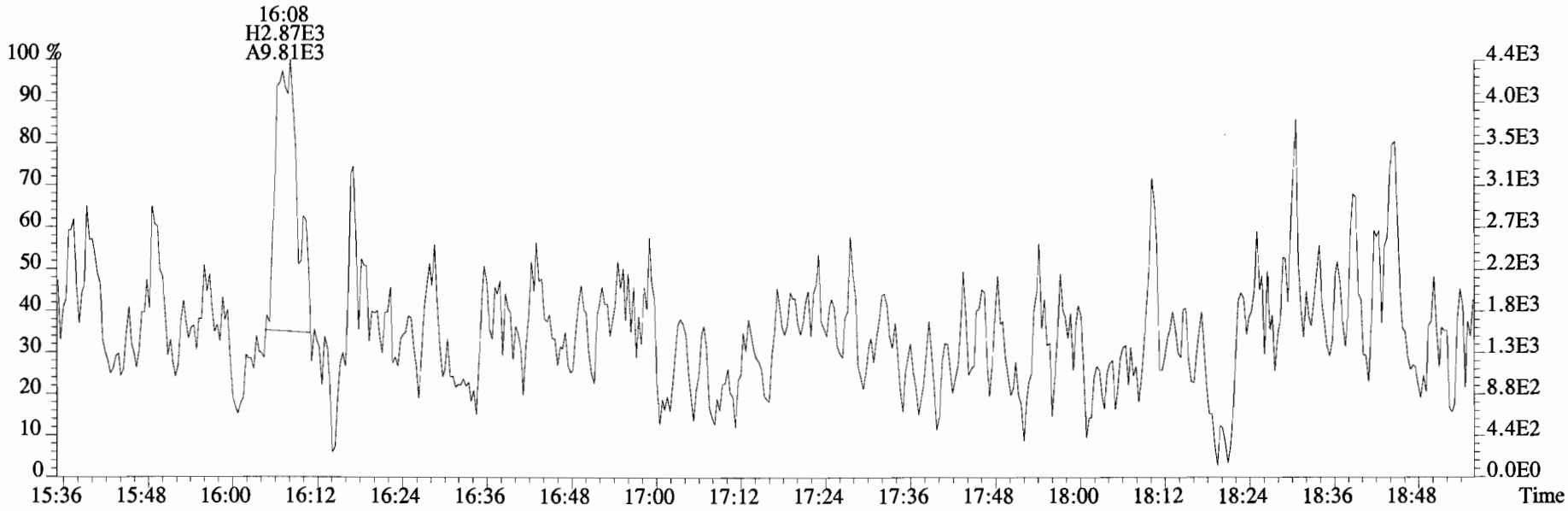
180.9880 S:7

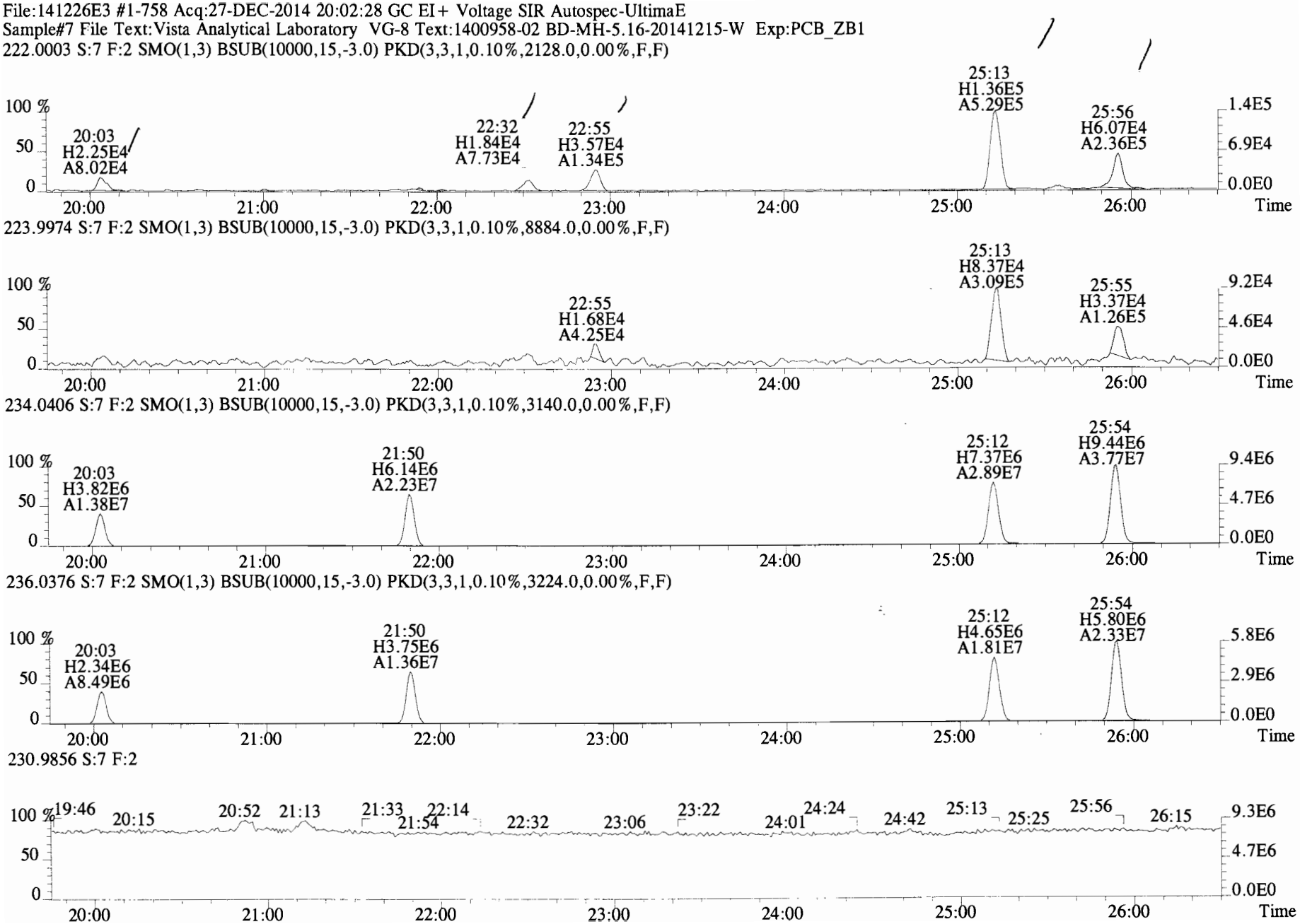


File:141226E3 #1-729 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
188.0393 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1772.0,0.00%,F,F)

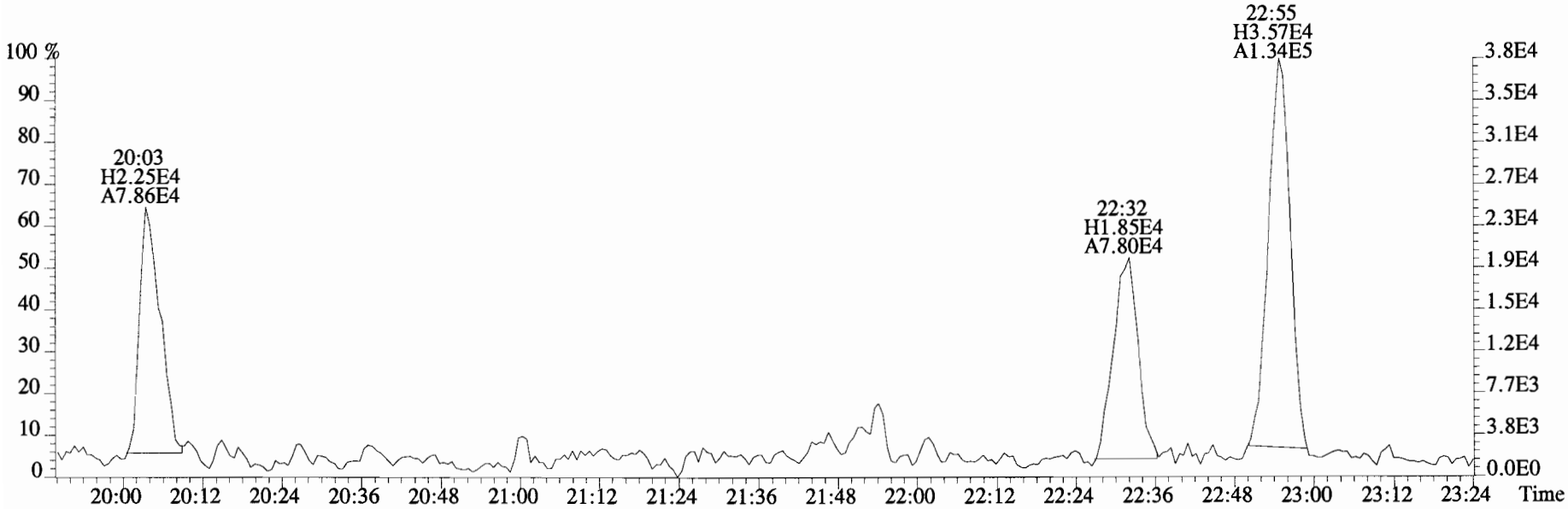


190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1848.0,0.00%,F,F)

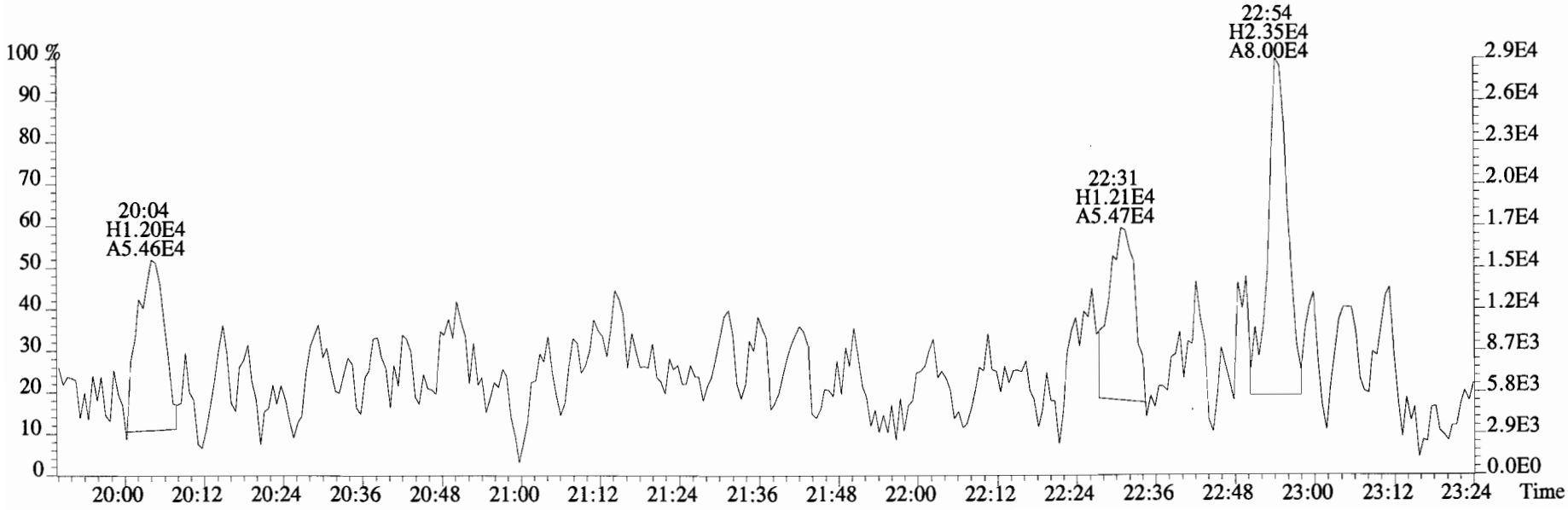



File:141226E3 #1-758 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)
20:03 H2.25E4 A8.02E4
22:32 H1.84E4 A7.73E4
22:55 H3.57E4 A1.34E5
25:13 H1.36E5 A5.29E5
25:56 H6.07E4 A2.36E5
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8884.0,0.00%,F,F)
22:55 H1.68E4 A4.25E4
25:13 H8.37E4 A3.09E5
25:55 H3.37E4 A1.26E5
234.0406 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3140.0,0.00%,F,F)
20:03 H3.82E6 A1.38E7
21:50 H6.14E6 A2.23E7
25:12 H7.37E6 A2.89E7
25:54 H9.44E6 A3.77E7
236.0376 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3224.0,0.00%,F,F)
20:03 H2.34E6 A8.49E6
21:50 H3.75E6 A1.36E7
25:12 H4.65E6 A1.81E7
25:54 H5.80E6 A2.33E7
230.9856 S:7 F:2
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
Time
1.4E5
6.9E4
0.0E0
9.2E4
4.6E4
9.4E6
4.7E6
5.8E6
2.9E6
9.3E6

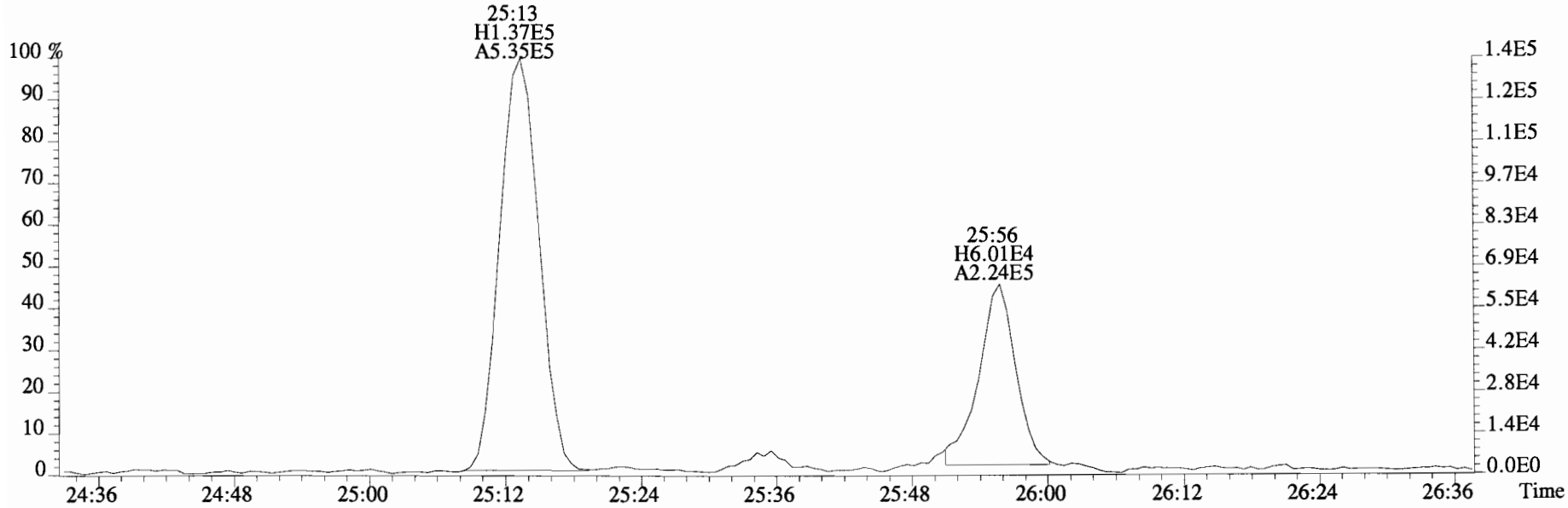
File:141226E3 #1-758 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)



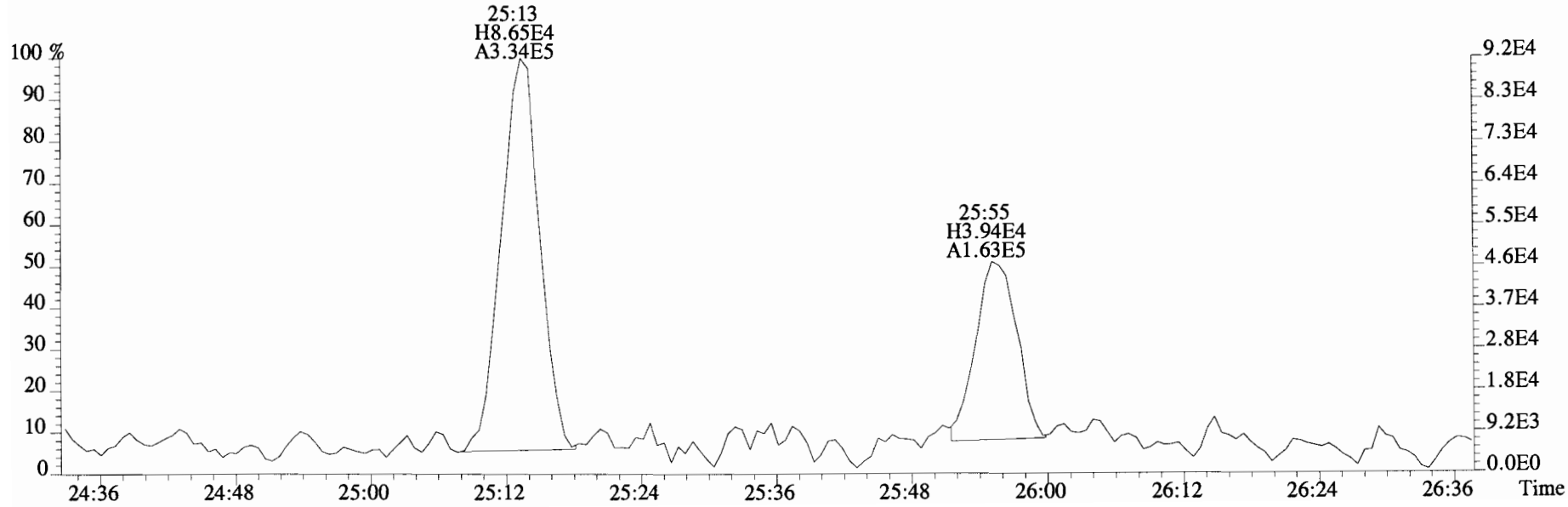
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8884.0,0.00%,F,F)



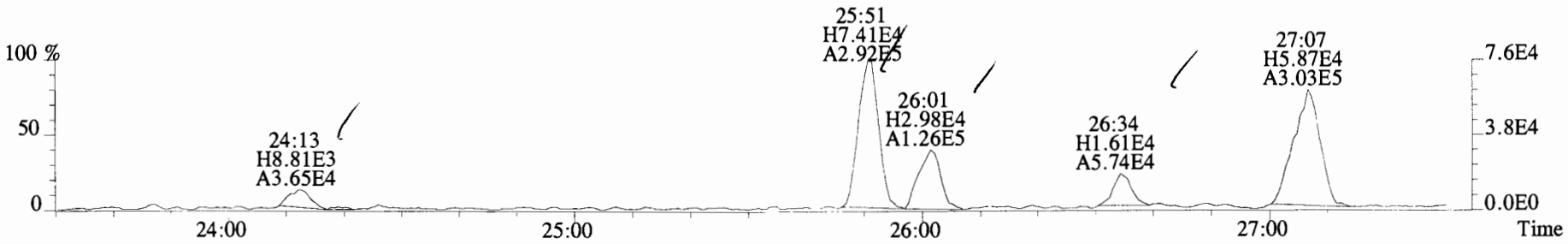
File:141226E3 #1-758 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2128.0,0.00%,F,F)



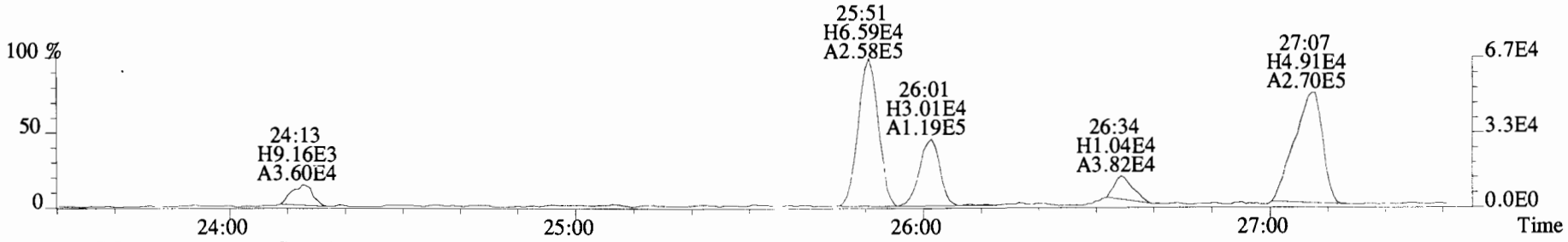
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8884.0,0.00%,F,F)



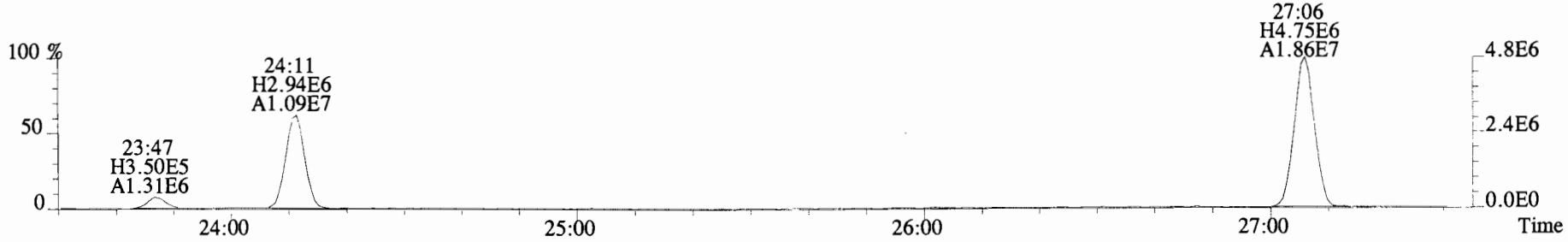
File:141226E3 #1-758 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1980.0,0.00%,F,F)



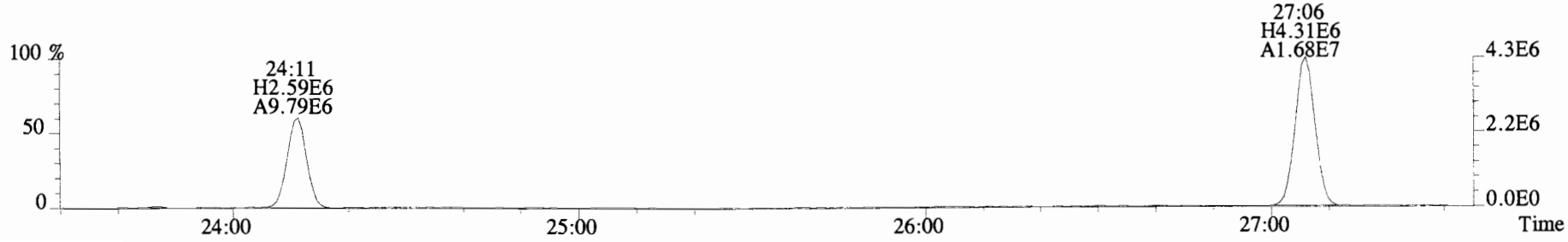
257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



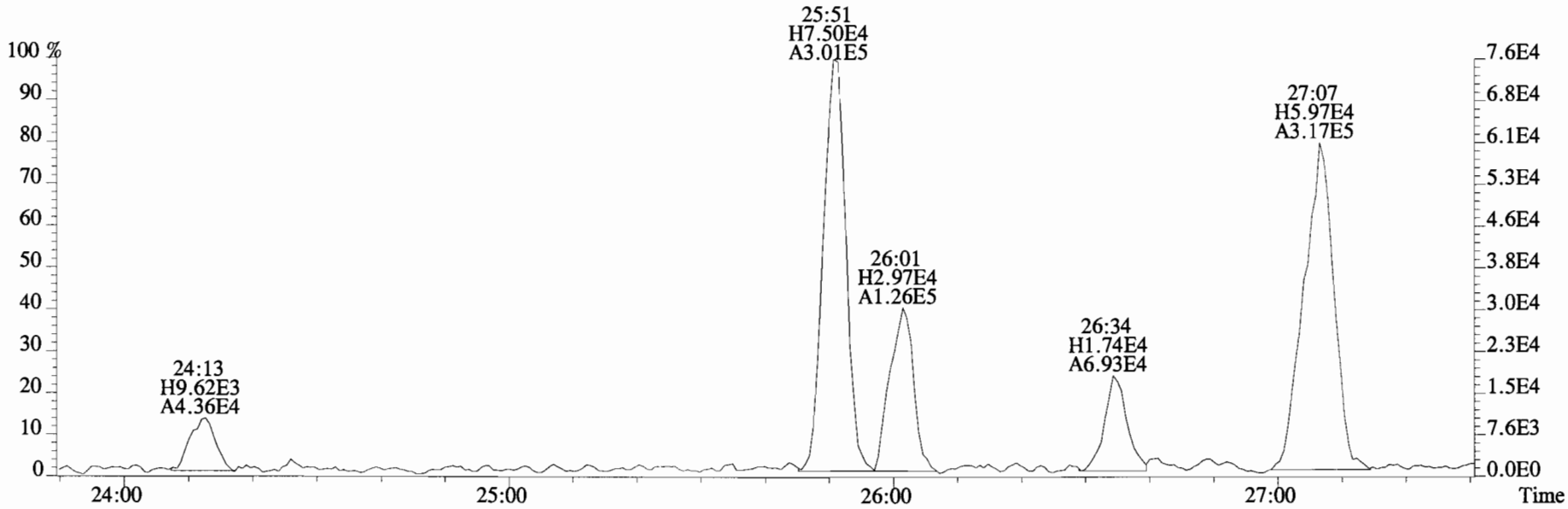
268.0016 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,17896.0,0.00%,F,F)



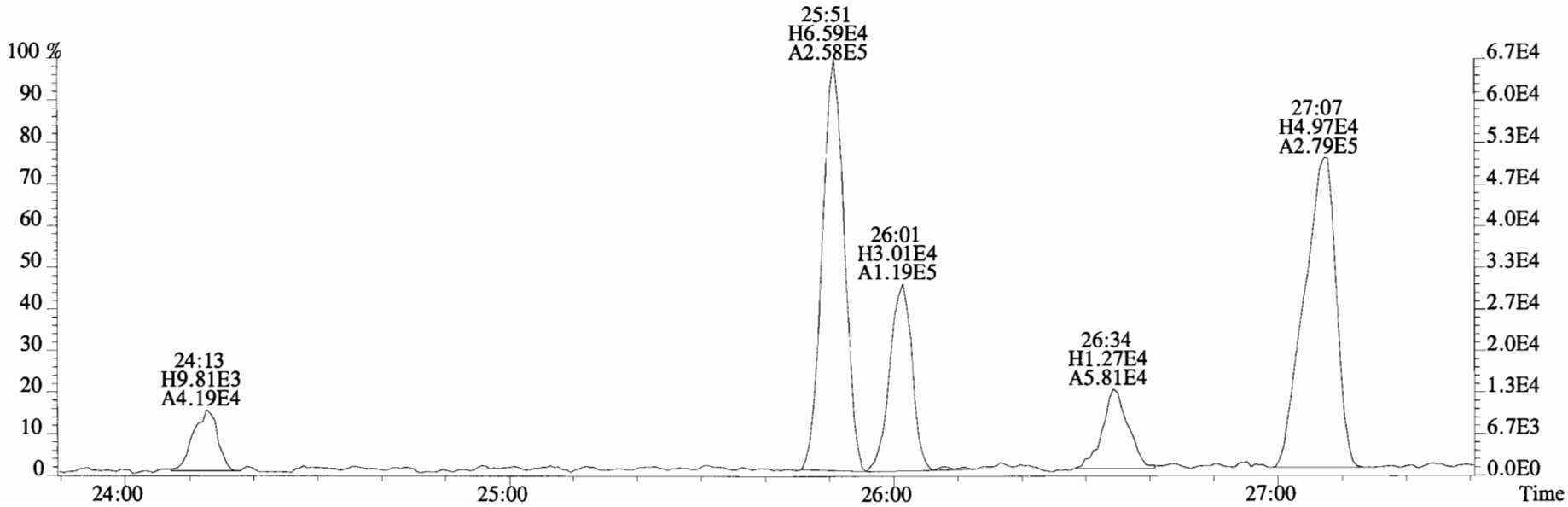
269.9986 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,11420.0,0.00%,F,F)



File:141226E3 #1-758 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1980.0,0.00%,F,F)

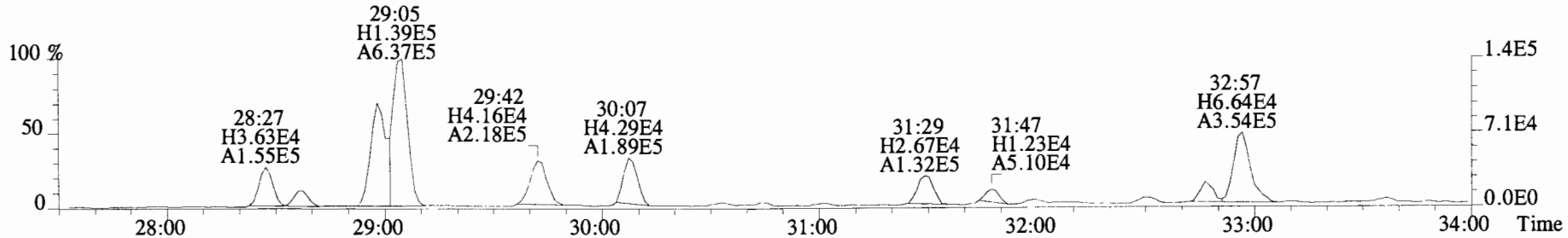


257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)

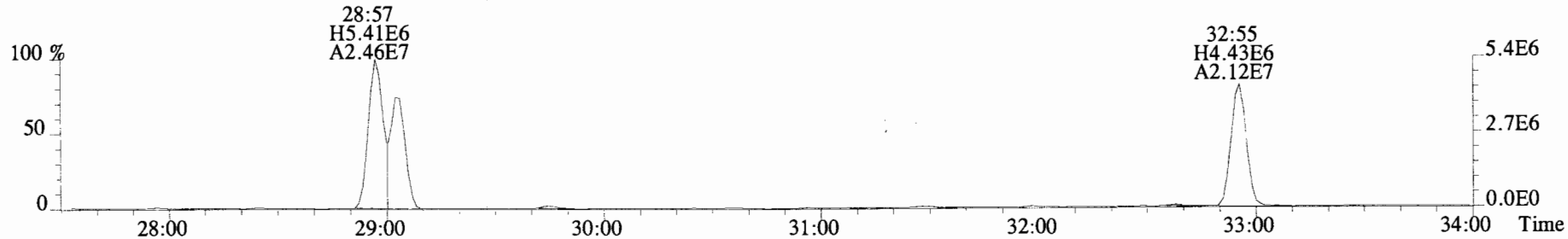


File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3680.0,0.00%,F,F)

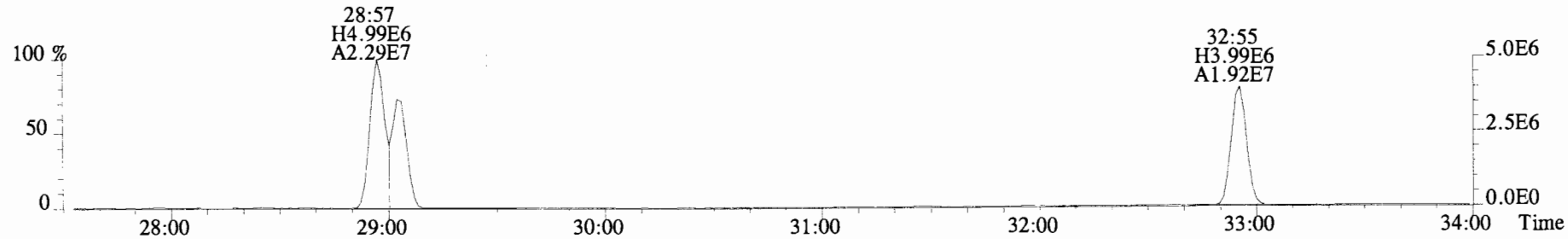
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



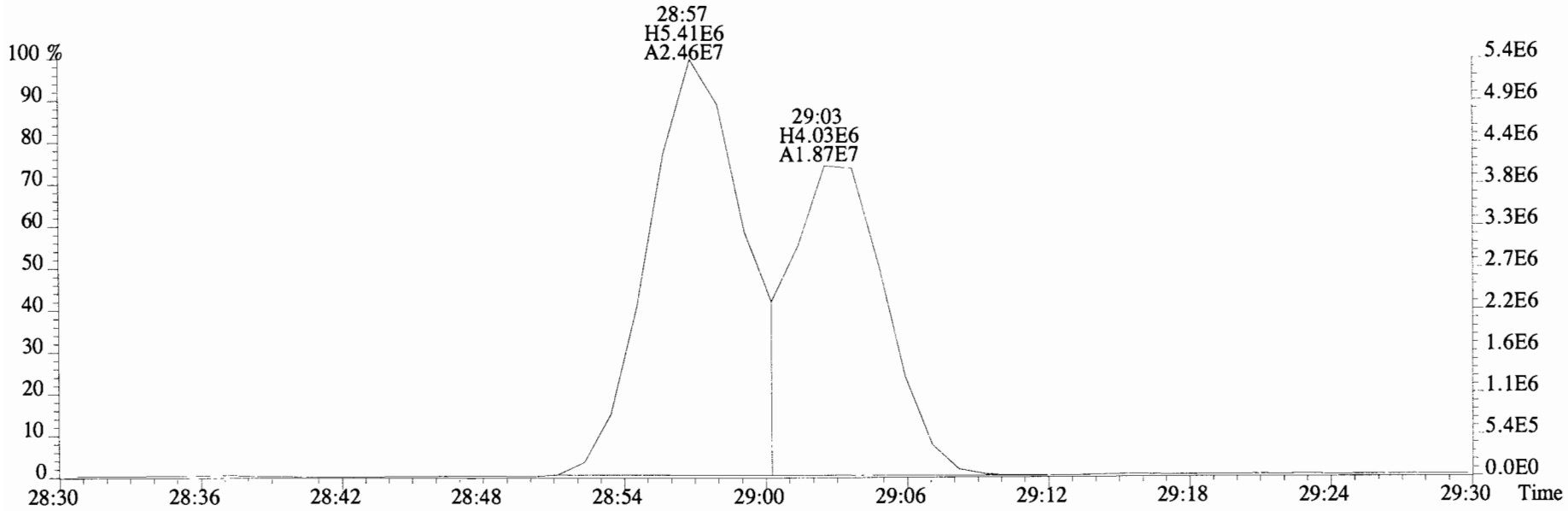
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,27316.0,0.00%,F,F)



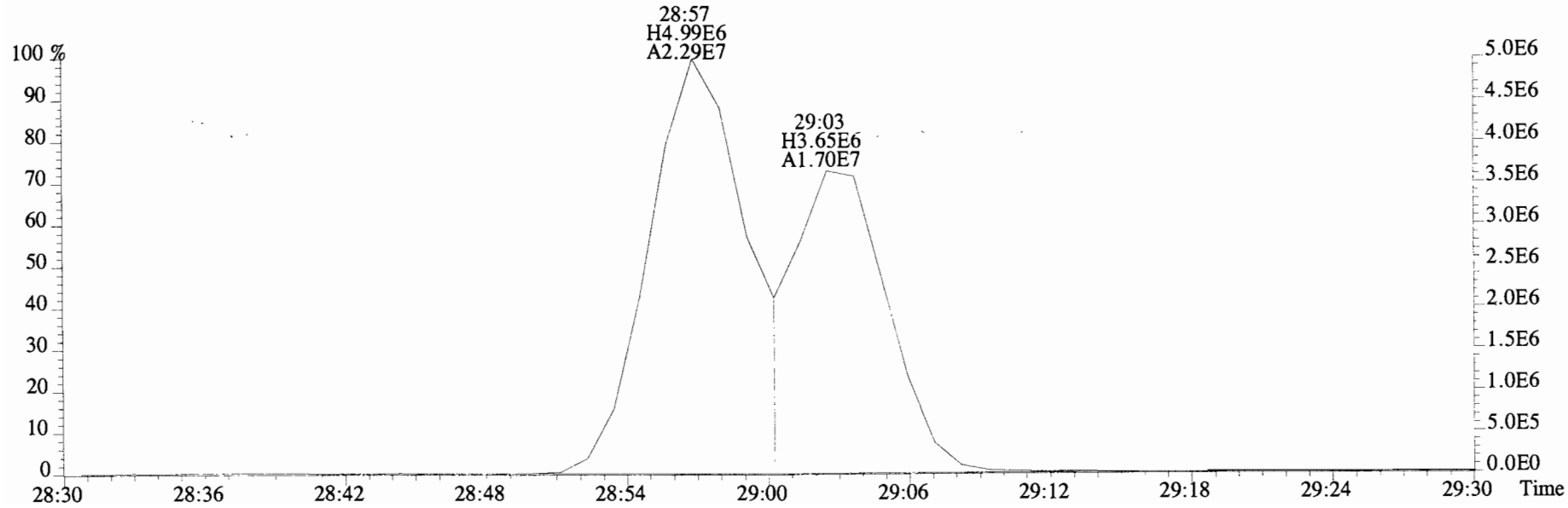
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,17704.0,0.00%,F,F)



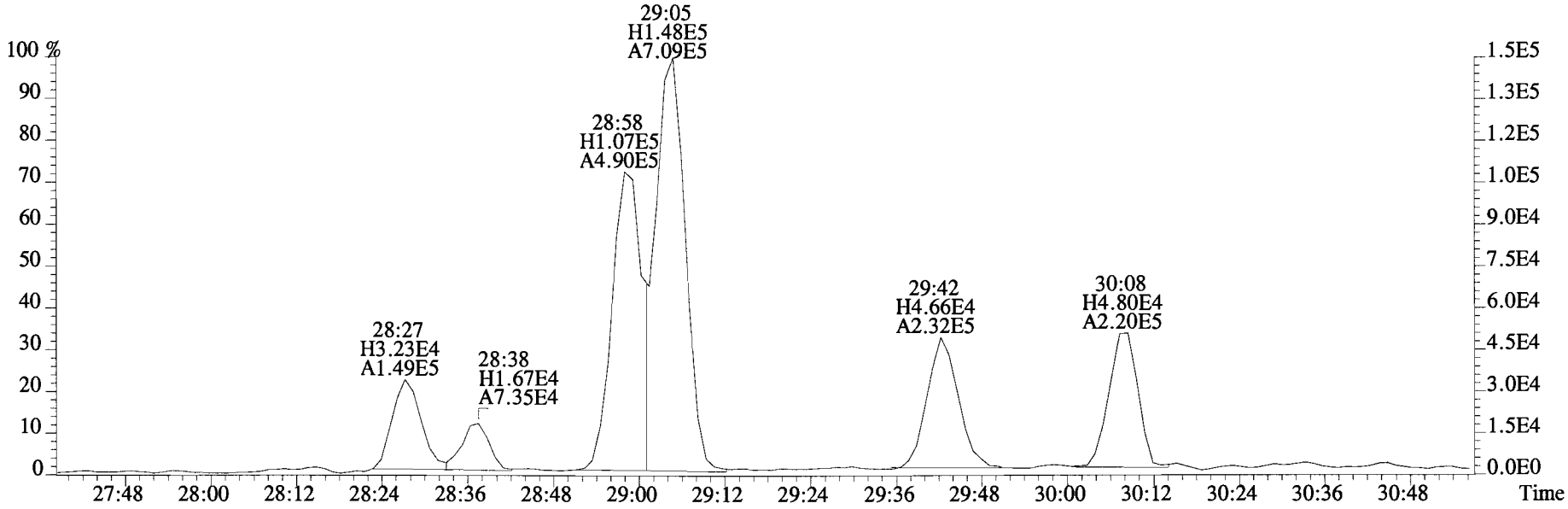
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,27316.0,0.00%,F,F)



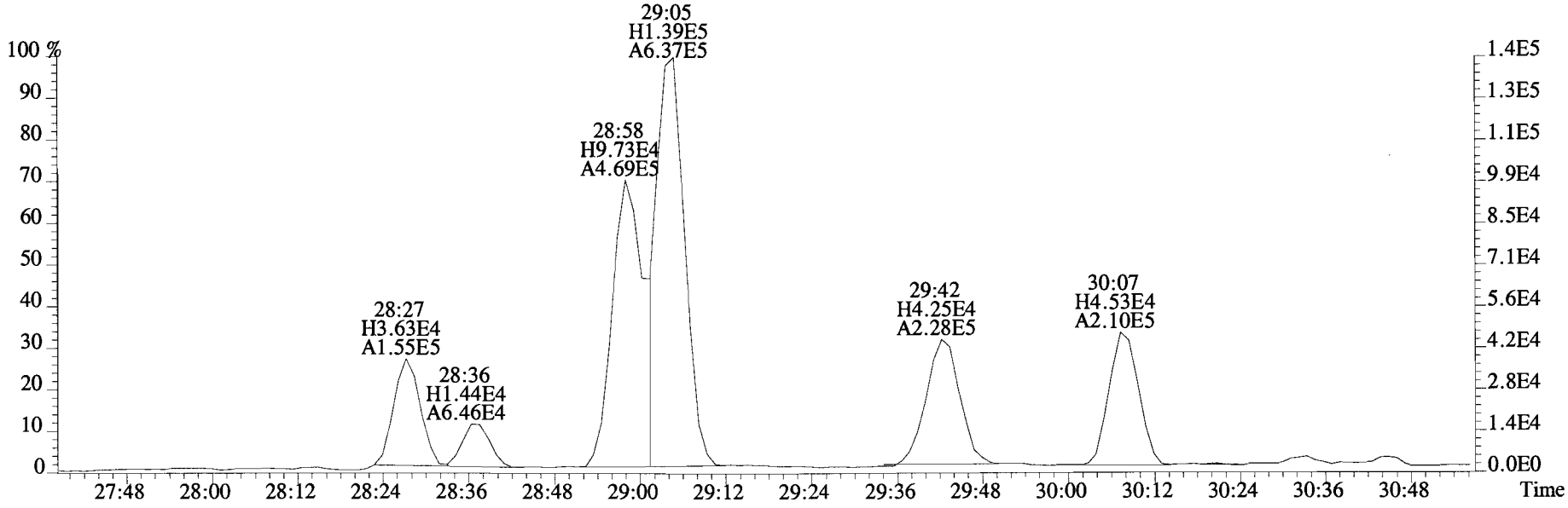
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,17704.0,0.00%,F,F)



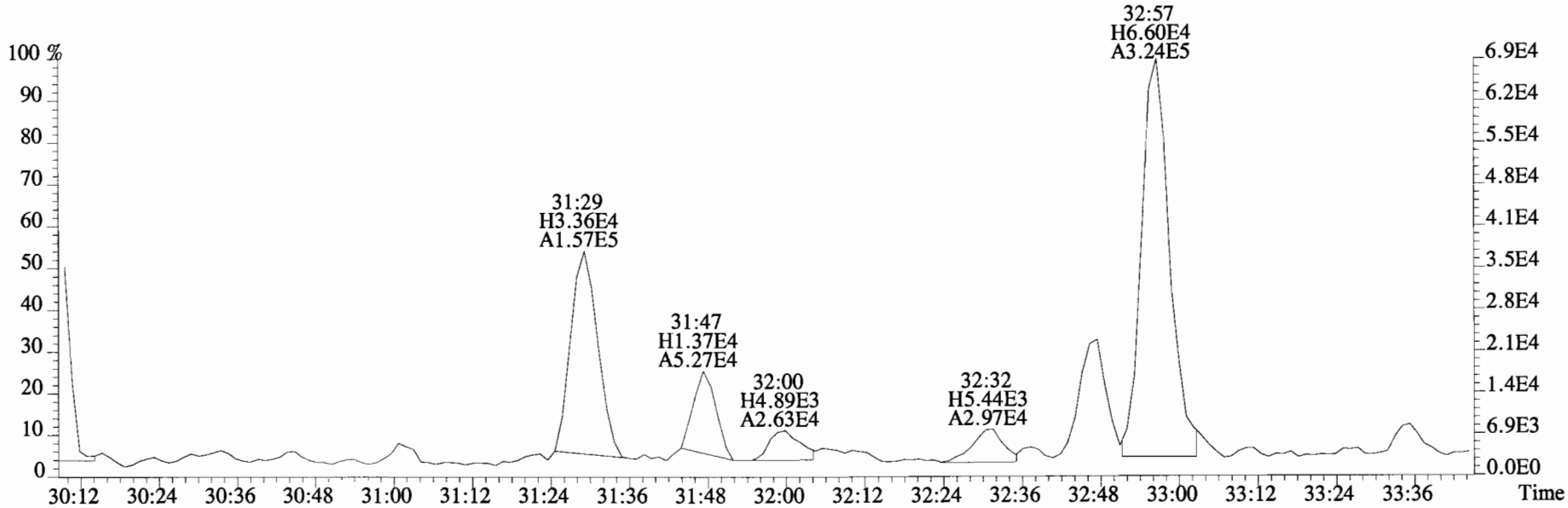
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3680.0,0.00%,F,F)



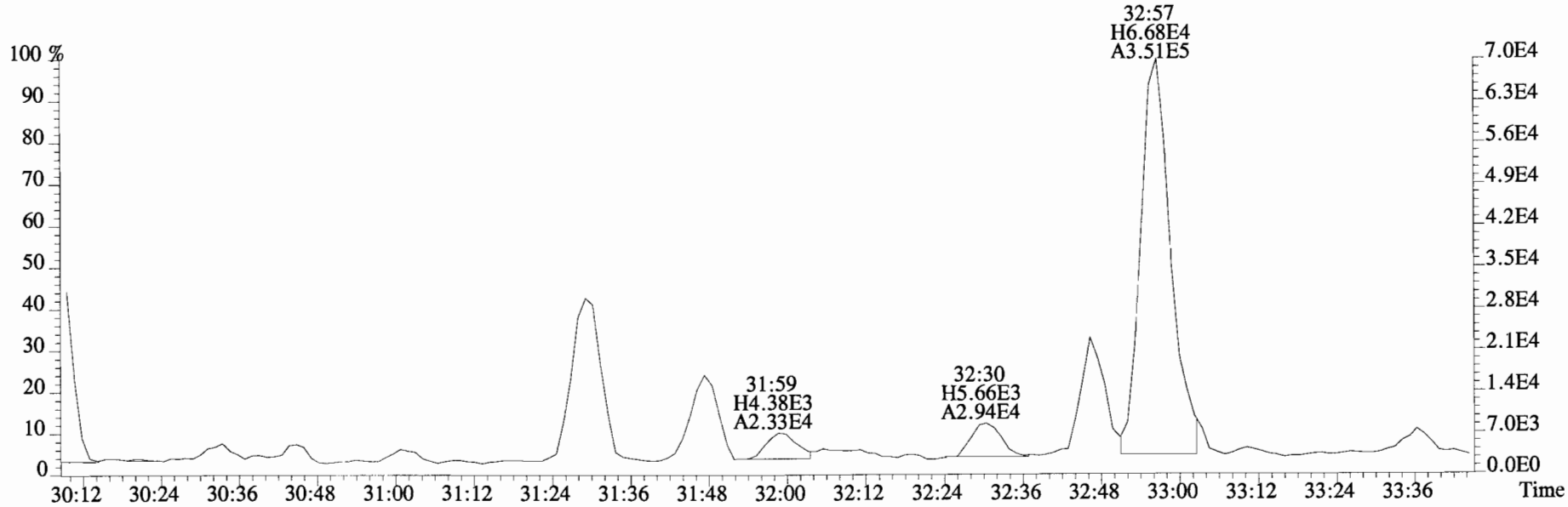
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)

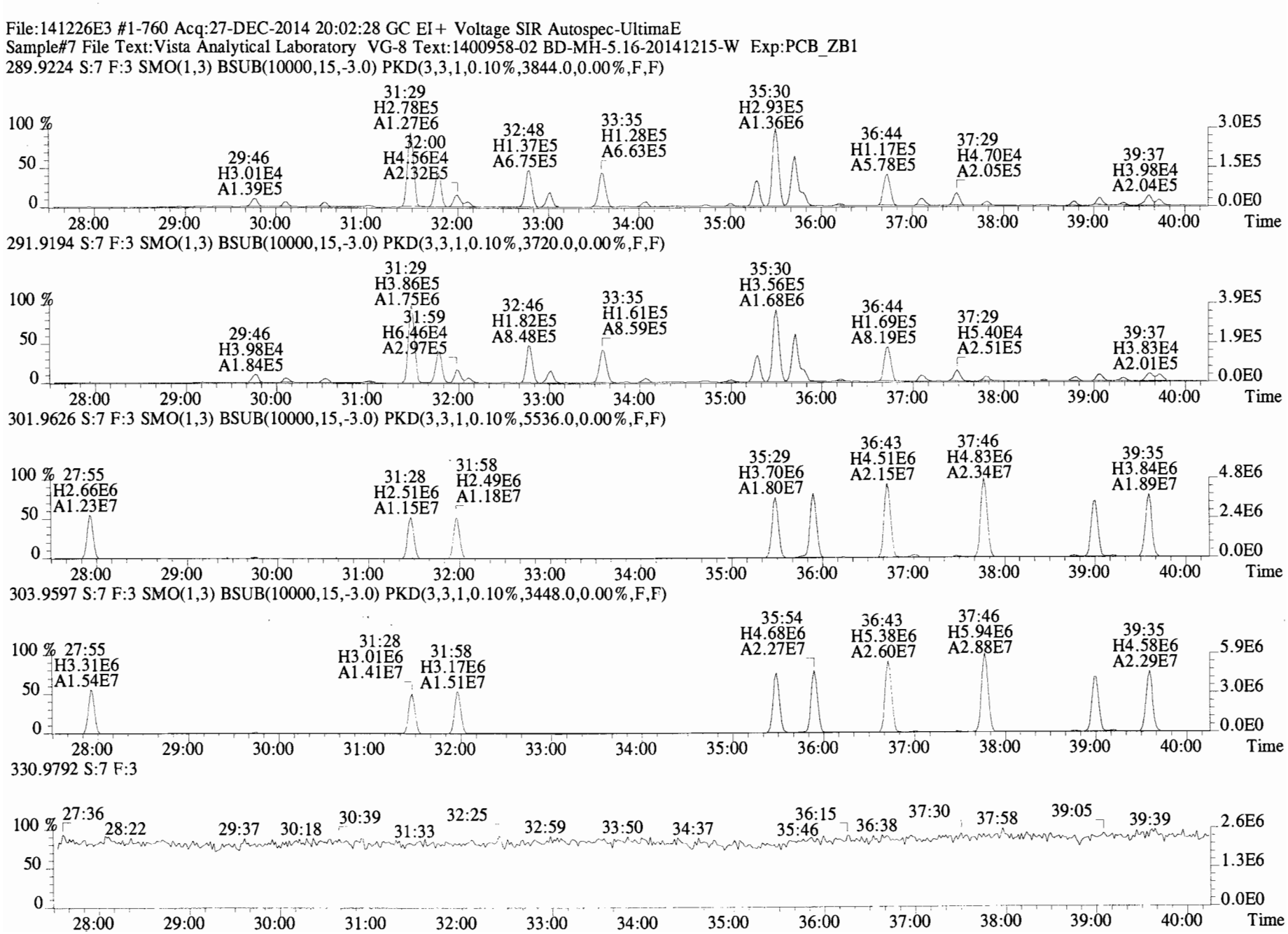


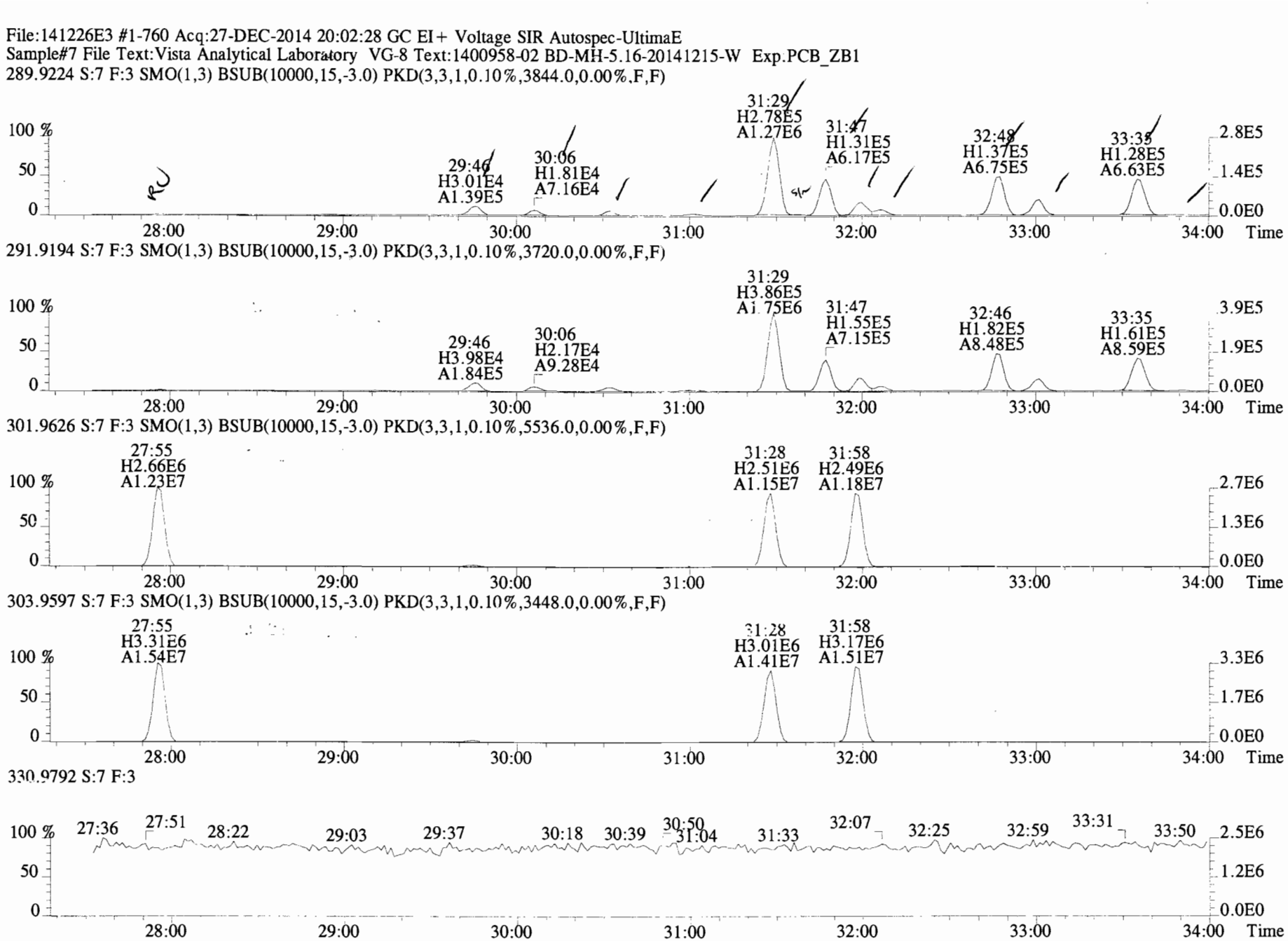
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3680.0,0.00%,F,F)



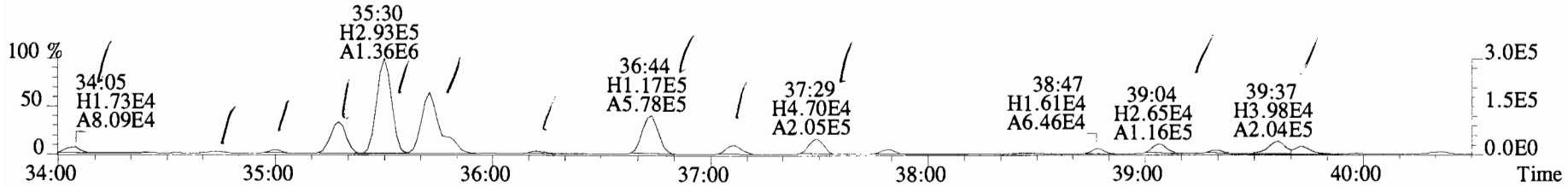
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



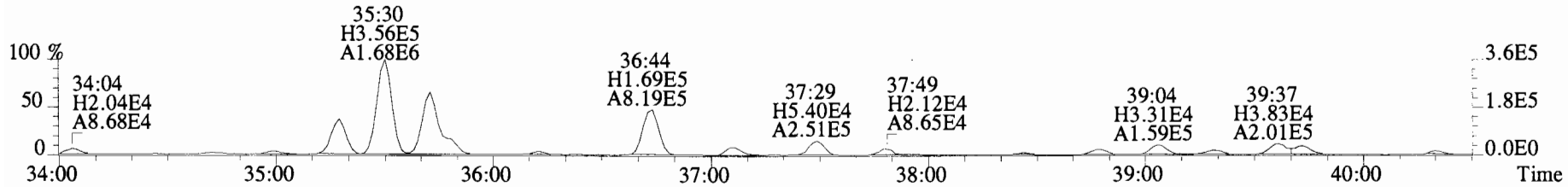

File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)
31:29 H2.78E5 A1.27E6
35:30 H2.93E5 A1.36E6
32:48 H1.37E5 A6.75E5
33:35 H1.28E5 A6.63E5
36:44 H1.17E5 A5.78E5
37:29 H4.70E4 A2.05E5
32:00 H4.56E4 A2.32E5
29:46 H3.01E4 A1.39E5
39:37 H3.98E4 A2.04E5
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)
31:29 H3.86E5 A1.75E6
35:30 H3.56E5 A1.68E6
32:46 H1.82E5 A8.48E5
33:35 H1.61E5 A8.59E5
36:44 H1.69E5 A8.19E5
37:29 H5.40E4 A2.51E5
31:59 H6.46E4 A2.97E5
29:46 H3.98E4 A1.84E5
39:37 H3.83E4 A2.01E5
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5536.0,0.00%,F,F)
27:55 H2.66E6 A1.23E7
31:58 H2.49E6 A1.18E7
36:43 H4.51E6 A2.15E7
37:46 H4.83E6 A2.34E7
31:28 H2.51E6 A1.15E7
35:29 H3.70E6 A1.80E7
39:35 H3.84E6 A1.89E7
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3448.0,0.00%,F,F)
35:54 H4.68E6 A2.27E7
36:43 H5.38E6 A2.60E7
37:46 H5.94E6 A2.88E7
31:28 H3.01E6 A1.41E7
31:58 H3.17E6 A1.51E7
27:55 H3.31E6 A1.54E7
39:35 H4.58E6 A2.29E7
330.9792 S:7 F:3
27:36
28:22
29:37
30:18
30:39
31:33
32:25
32:59
33:50
34:37
35:46
36:15
36:38
37:30
37:58
39:05
39:39
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
35:00
36:00
37:00
38:00
39:00
40:00
Time
3.0E5
1.5E5
0.0E0
3.9E5
1.9E5
0.0E0
4.8E6
2.4E6
0.0E0
5.9E6
3.0E6
0.0E0
2.6E6
1.3E6
0.0E0


File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp.PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)
29:46 H3.01E4 A1.39E5
30:06 H1.81E4 A7.16E4
31:29 H2.78E5 A1.27E6
31:47 H1.31E5 A6.17E5
32:48 H1.37E5 A6.75E5
33:35 H1.28E5 A6.63E5
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)
29:46 H3.98E4 A1.84E5
30:06 H2.17E4 A9.28E4
31:29 H3.86E5 A1.75E6
31:47 H1.55E5 A7.15E5
32:46 H1.82E5 A8.48E5
33:35 H1.61E5 A8.59E5
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5536.0,0.00%,F,F)
27:55 H2.66E6 A1.23E7
31:28 H2.51E6 A1.15E7
31:58 H2.49E6 A1.18E7
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3448.0,0.00%,F,F)
27:55 H3.31E6 A1.54E7
31:28 H3.01E6 A1.41E7
31:58 H3.17E6 A1.51E7
330.9792 S:7 F:3
27:36
27:51
28:22
29:03
29:37
30:18
30:39
30:50
31:04
31:33
32:07
32:25
32:59
33:31
33:50
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
2.8E5
1.4E5
0.0E0
3.9E5
1.9E5
2.7E6
1.3E6
3.3E6
1.7E6
2.5E6
1.2E6

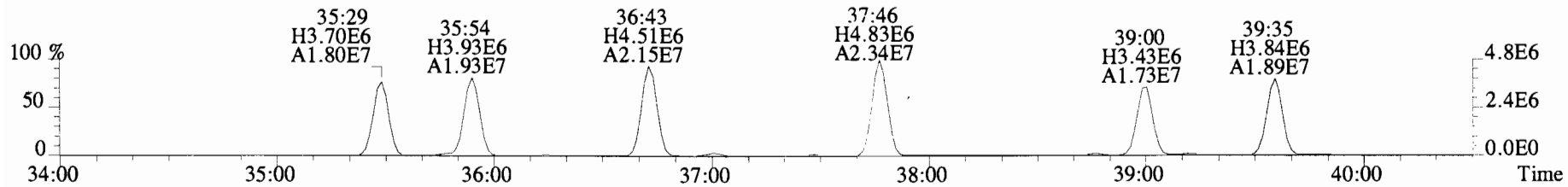
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)



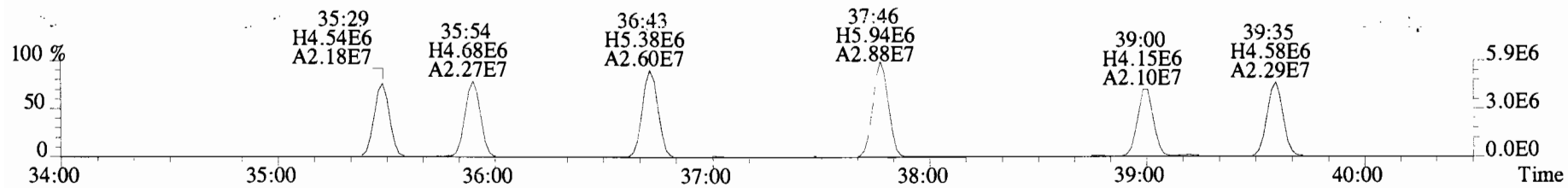
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)



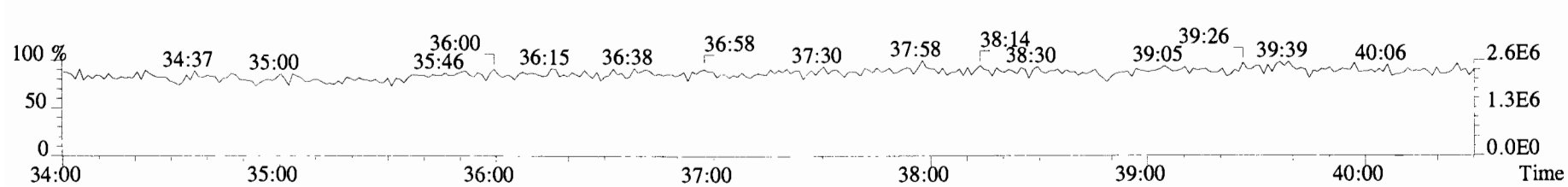
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5536.0,0.00%,F,F)



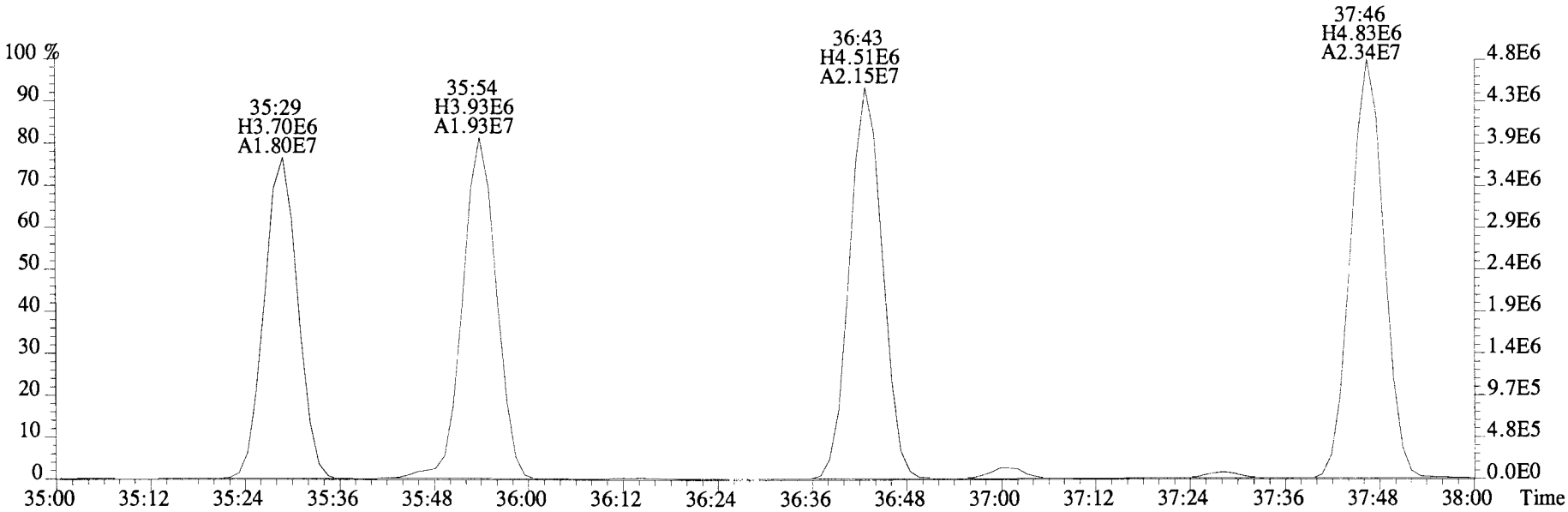
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3448.0,0.00%,F,F)



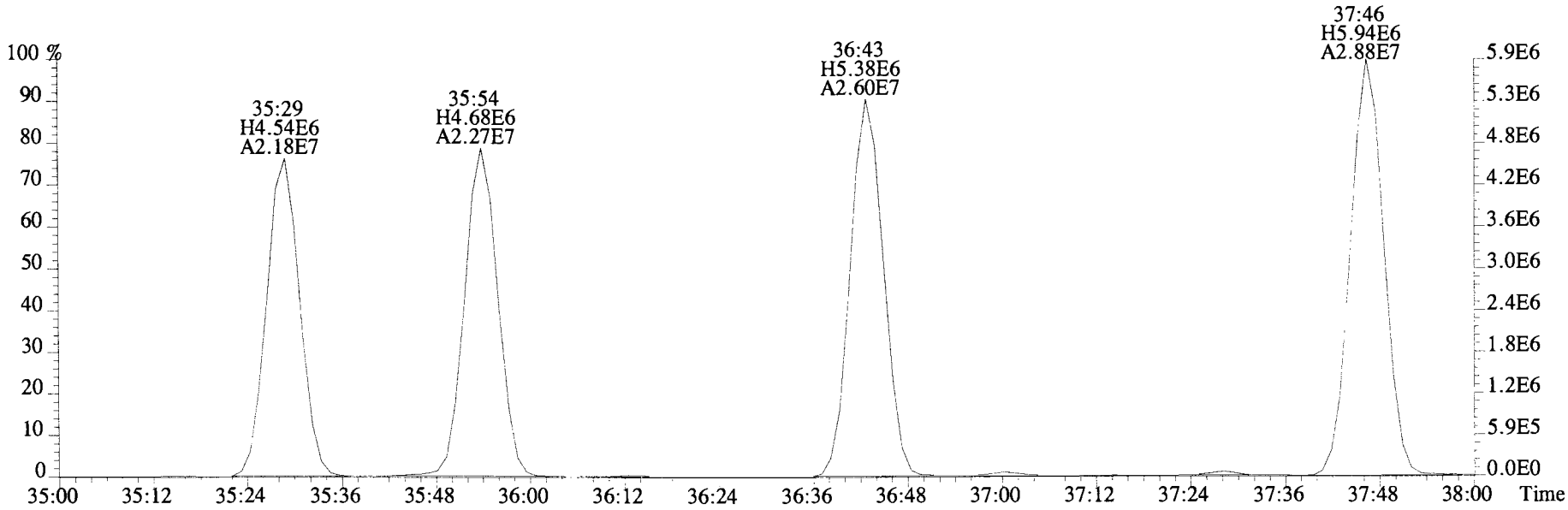
330.9792 S:7 F:3

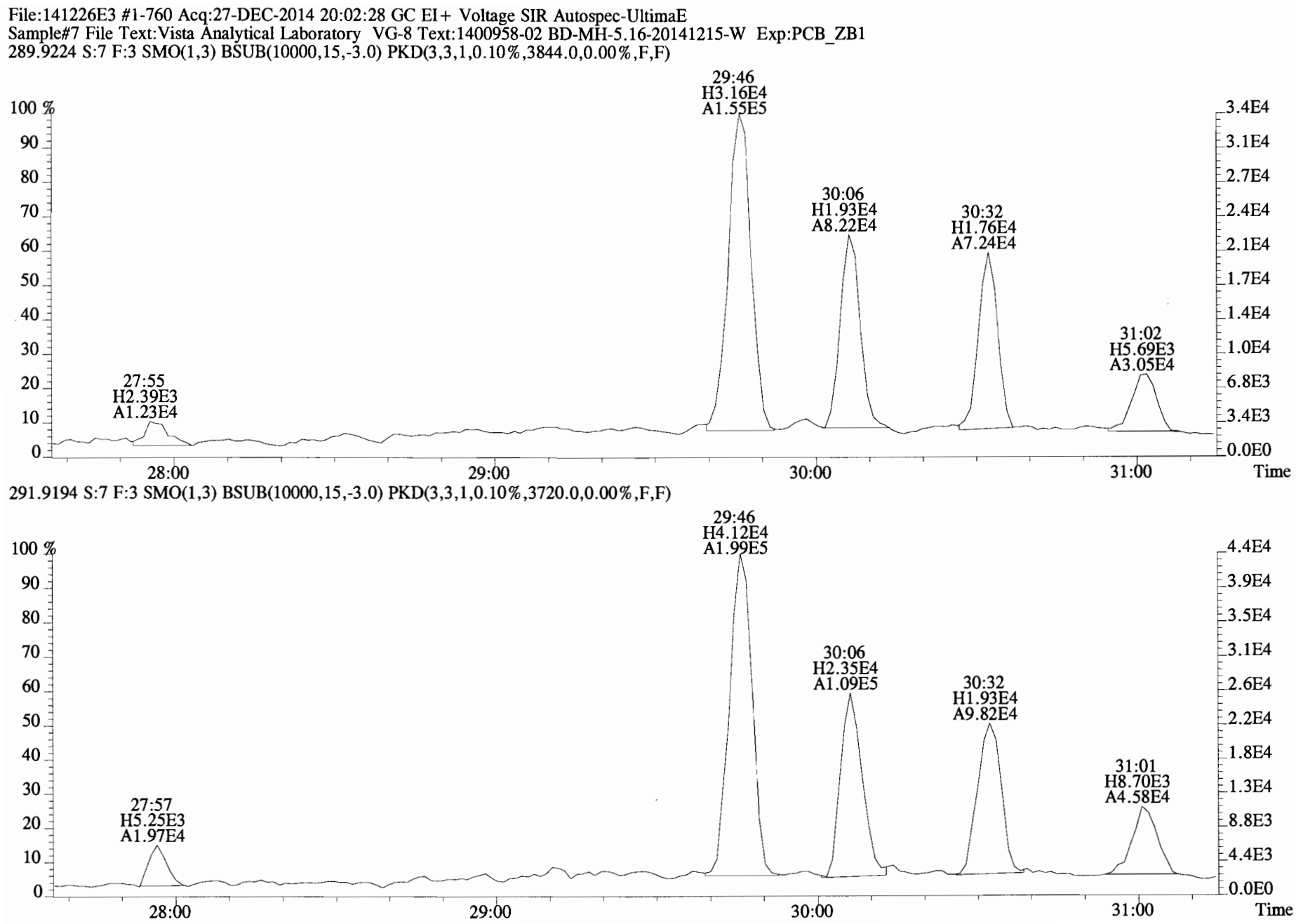


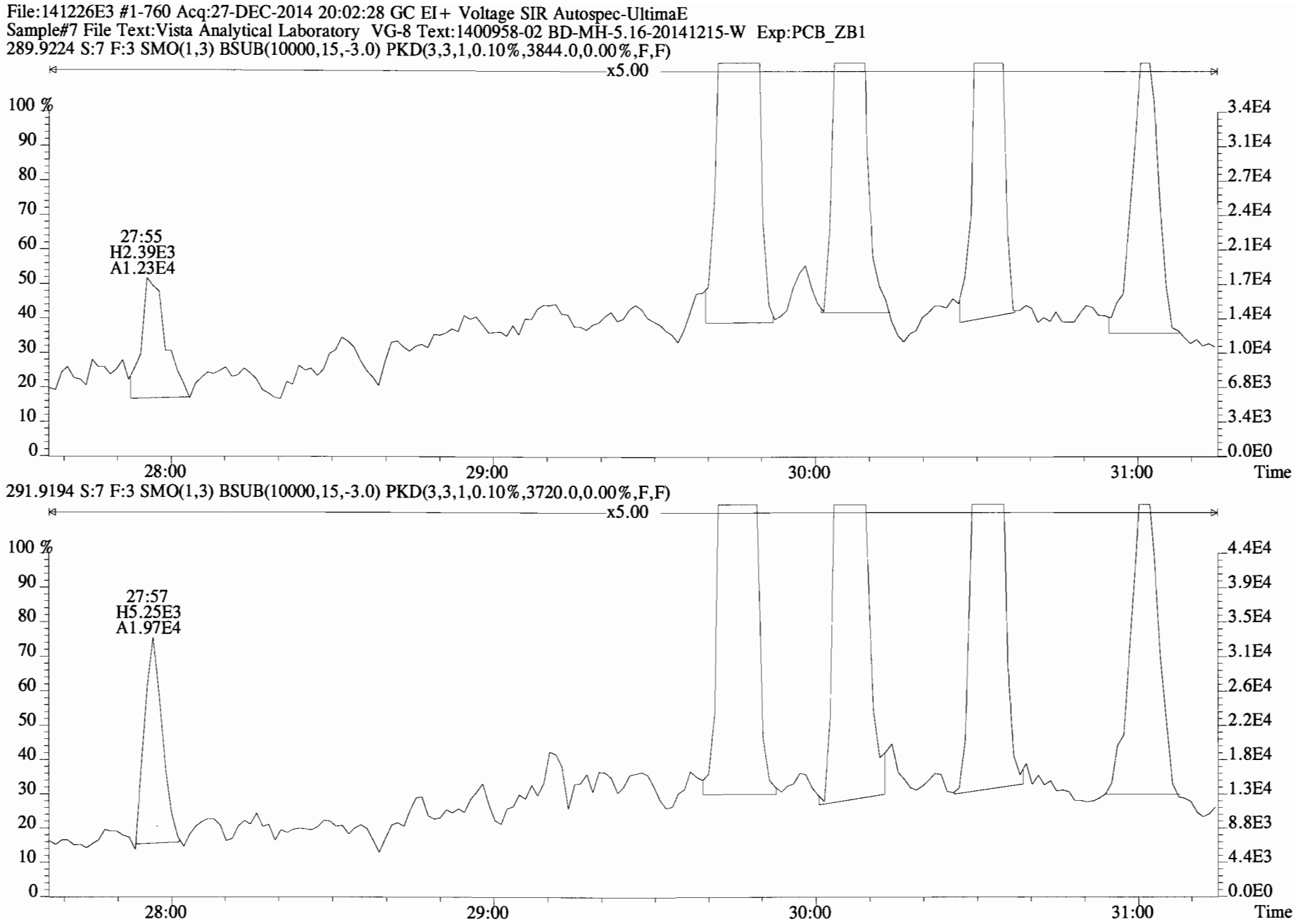
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5536.0,0.00%,F,F)



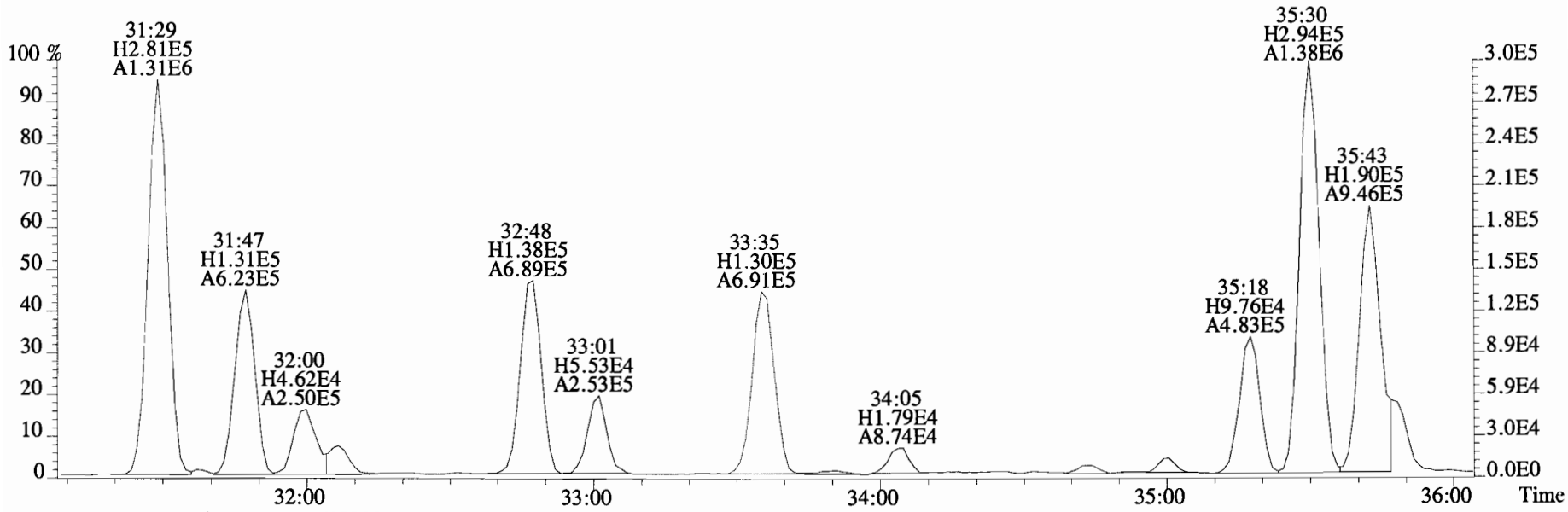
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3448.0,0.00%,F,F)



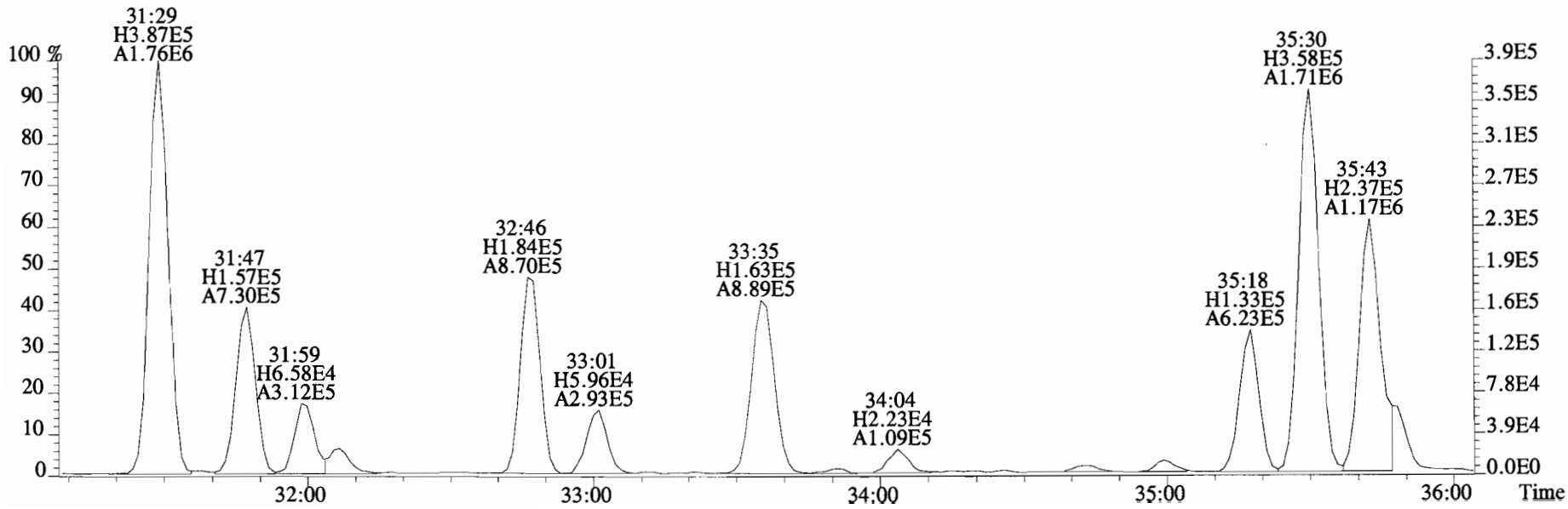

File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)
29:46
H3.16E4
A1.55E5
30:06
H1.93E4
A8.22E4
30:32
H1.76E4
A7.24E4
31:02
H5.69E3
A3.05E4
27:55
H2.39E3
A1.23E4
100 %
90
80
70
60
50
40
30
20
10
0
3.4E4
3.1E4
2.7E4
2.4E4
2.1E4
1.7E4
1.4E4
1.0E4
6.8E3
3.4E3
0.0E0
28:00
29:00
30:00
31:00
Time
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)
29:46
H4.12E4
A1.99E5
30:06
H2.35E4
A1.09E5
30:32
H1.93E4
A9.82E4
31:01
H8.70E3
A4.58E4
27:57
H5.25E3
A1.97E4
100 %
90
80
70
60
50
40
30
20
10
0
4.4E4
3.9E4
3.5E4
3.1E4
2.6E4
2.2E4
1.8E4
1.3E4
8.8E3
4.4E3
0.0E0
28:00
29:00
30:00
31:00
Time

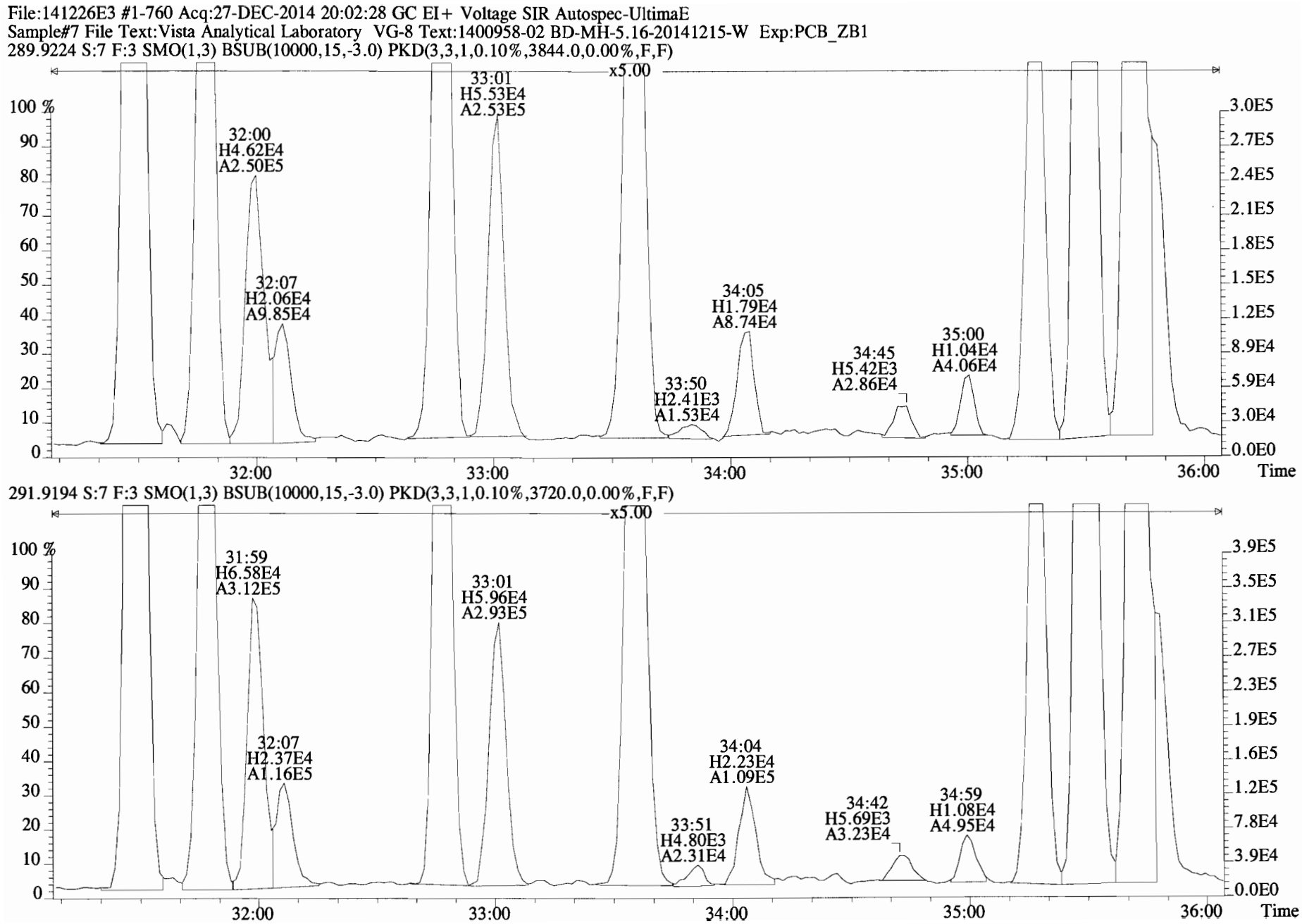

File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
27:55
H2.39E3
A1.23E4
3.4E4
3.1E4
2.7E4
2.4E4
2.1E4
1.7E4
1.4E4
1.0E4
6.8E3
3.4E3
0.0E0
28:00
29:00
30:00
31:00
Time
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
27:57
H5.25E3
A1.97E4
4.4E4
3.9E4
3.5E4
3.1E4
2.6E4
2.2E4
1.8E4
1.3E4
8.8E3
4.4E3
0.0E0
28:00
29:00
30:00
31:00
Time

File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)

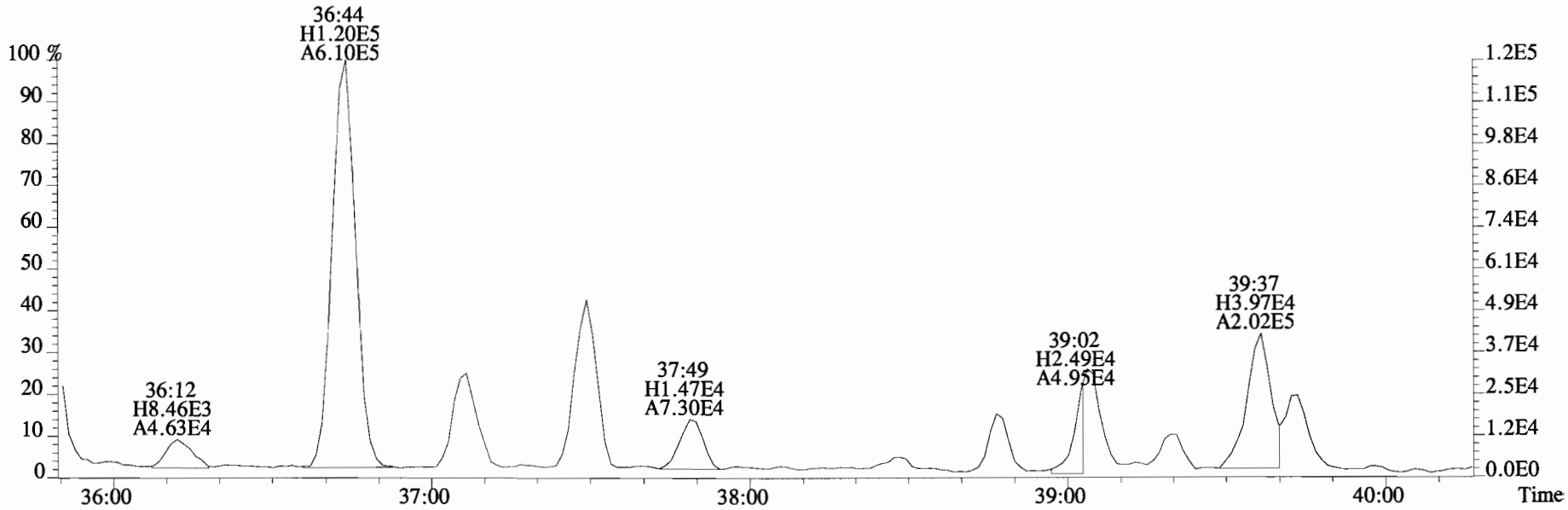


291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)

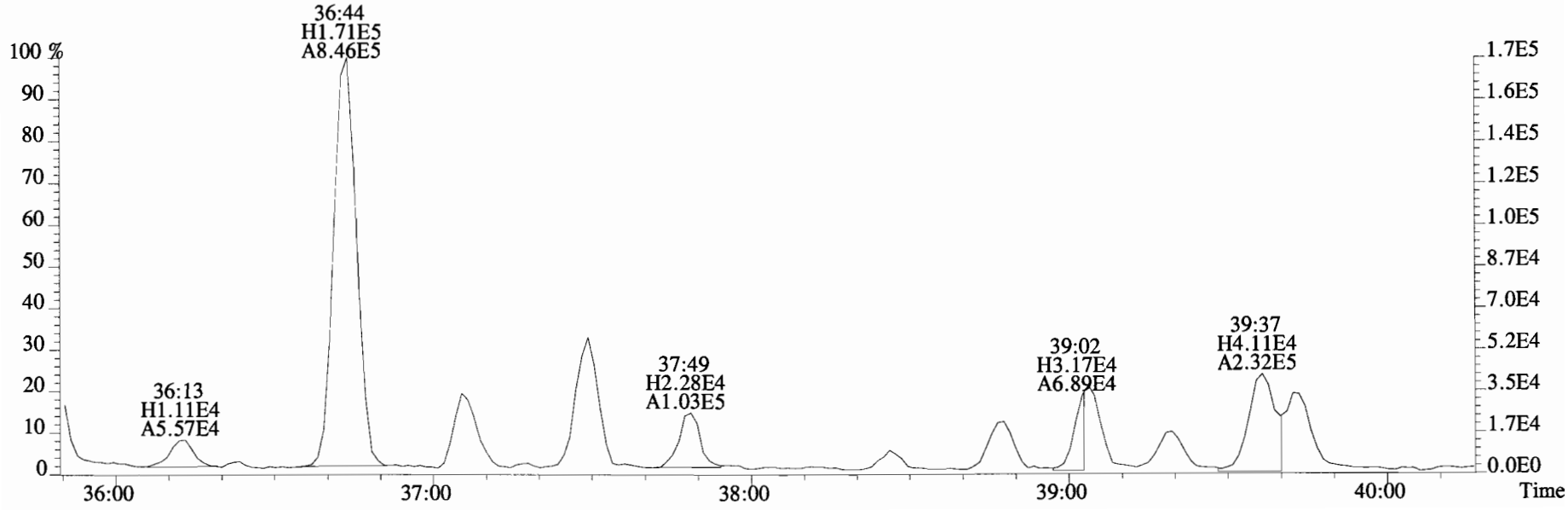



File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)
x5.00
32:00 H4.62E4 A2.50E5
32:07 H2.06E4 A9.85E4
33:01 H5.53E4 A2.53E5
33:50 H2.41E3 A1.53E4
34:05 H1.79E4 A8.74E4
34:45 H5.42E3 A2.86E4
35:00 H1.04E4 A4.06E4
100 %
Time
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)
x5.00
31:59 H6.58E4 A3.12E5
32:07 H2.37E4 A1.16E5
33:01 H5.96E4 A2.93E5
33:51 H4.80E3 A2.31E4
34:04 H2.23E4 A1.09E5
34:42 H5.69E3 A3.23E4
34:59 H1.08E4 A4.95E4
100 %
Time

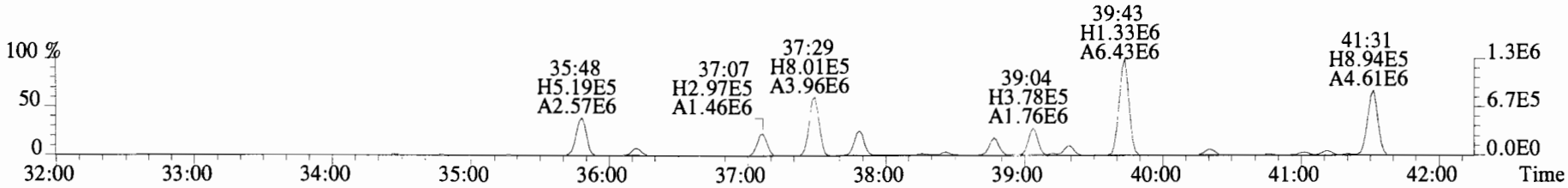
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3844.0,0.00%,F,F)



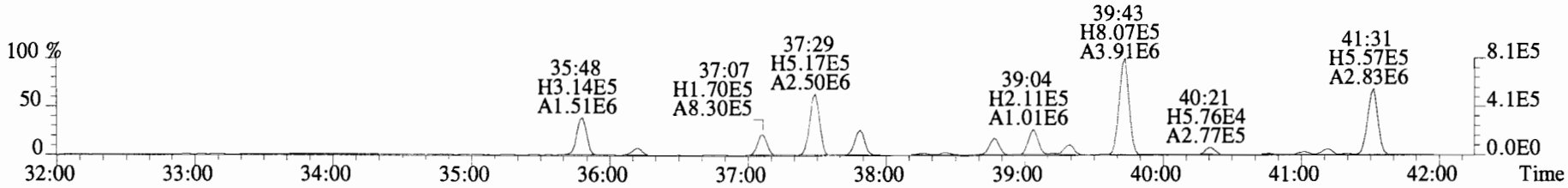
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)



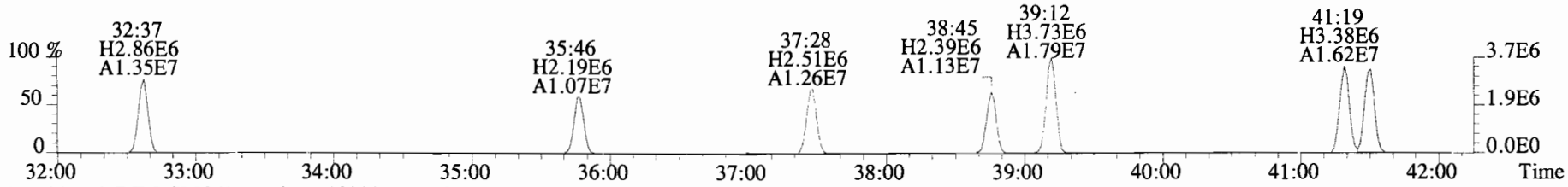
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



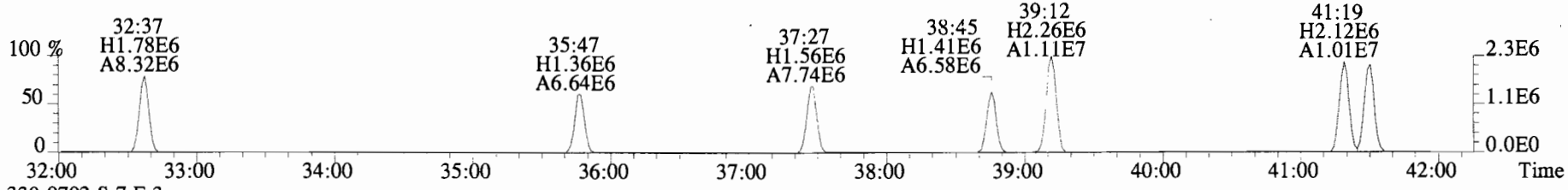
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



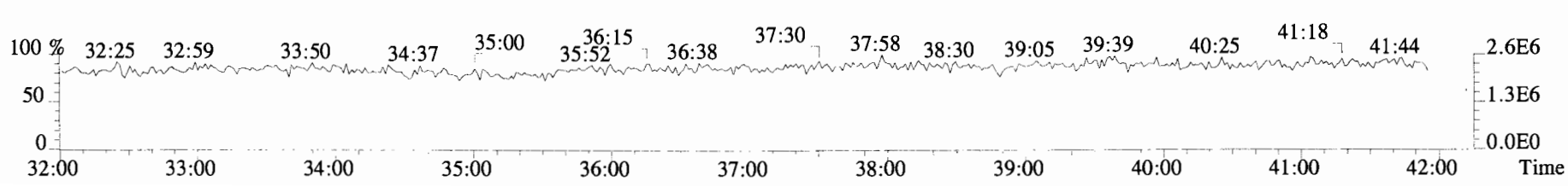
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3384.0,0.00%,F,F)



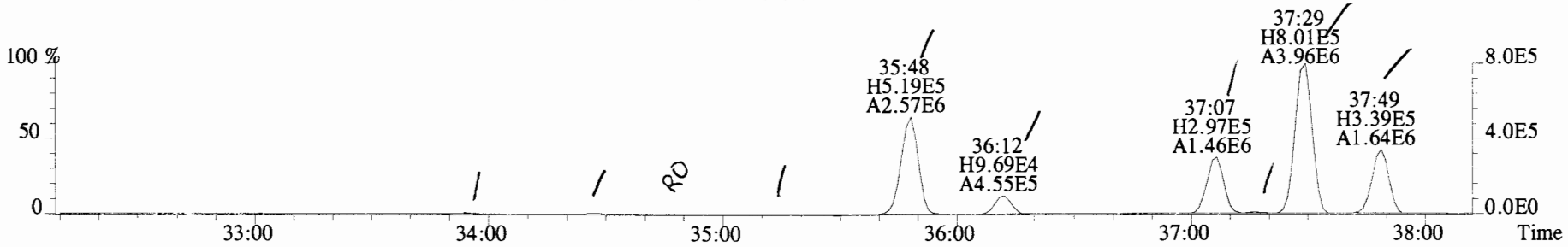
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2920.0,0.00%,F,F)



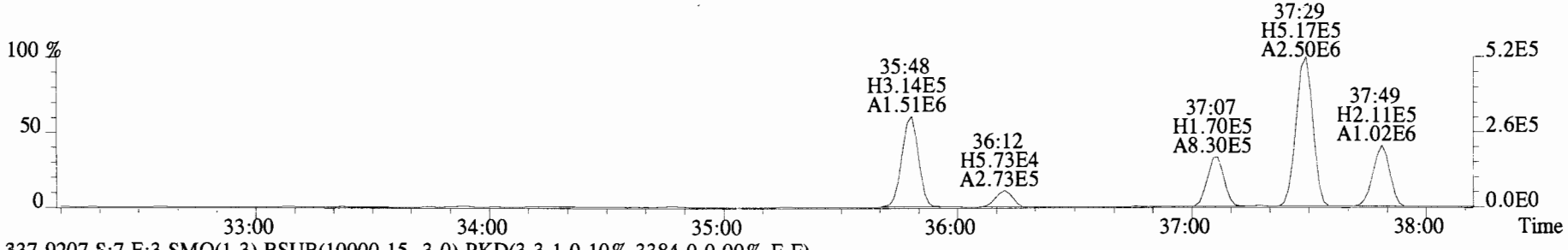
330.9792 S:7 F:3



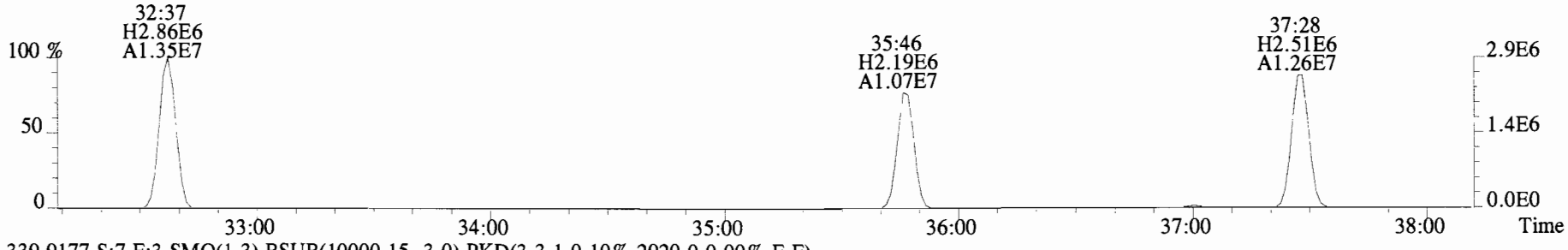
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



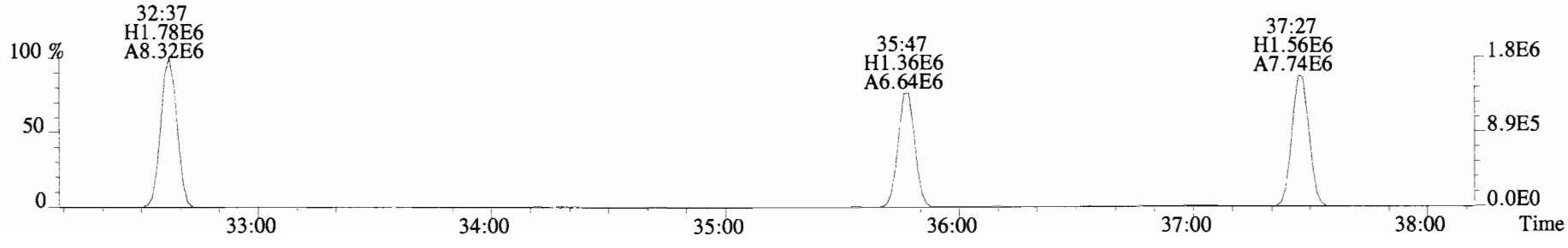
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



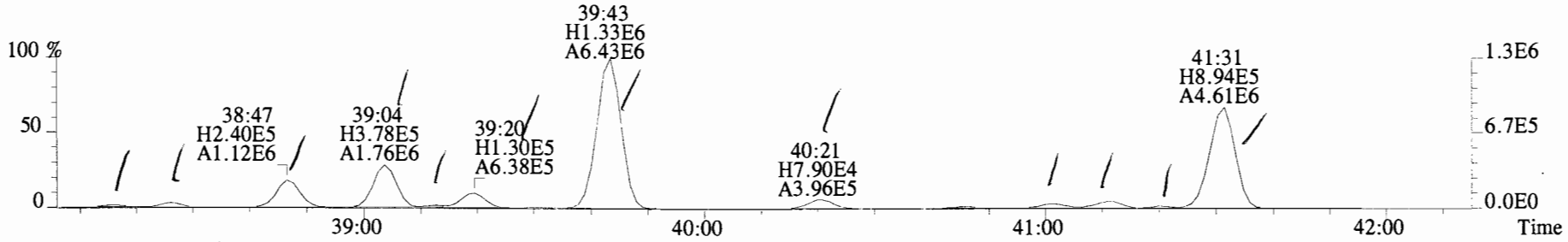
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3384.0,0.00%,F,F)



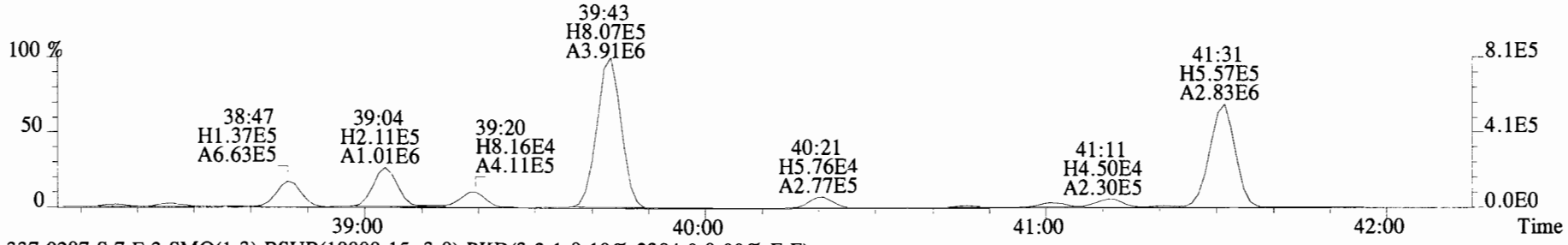
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2920.0,0.00%,F,F)



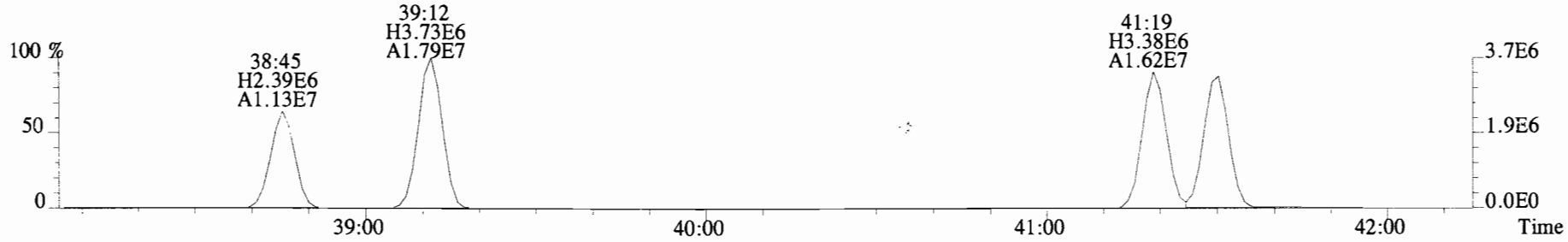
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



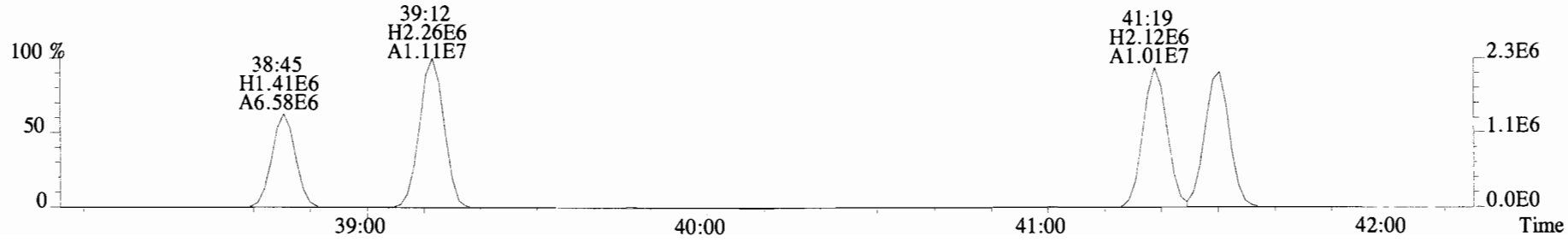
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



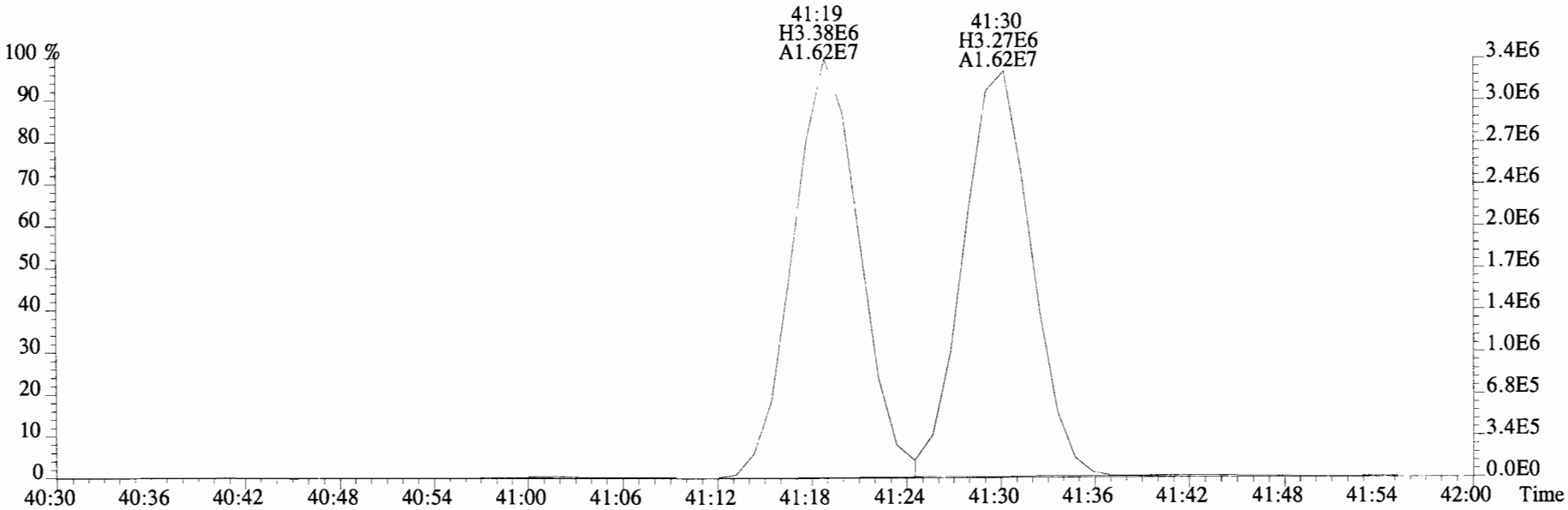
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3384.0,0.00%,F,F)



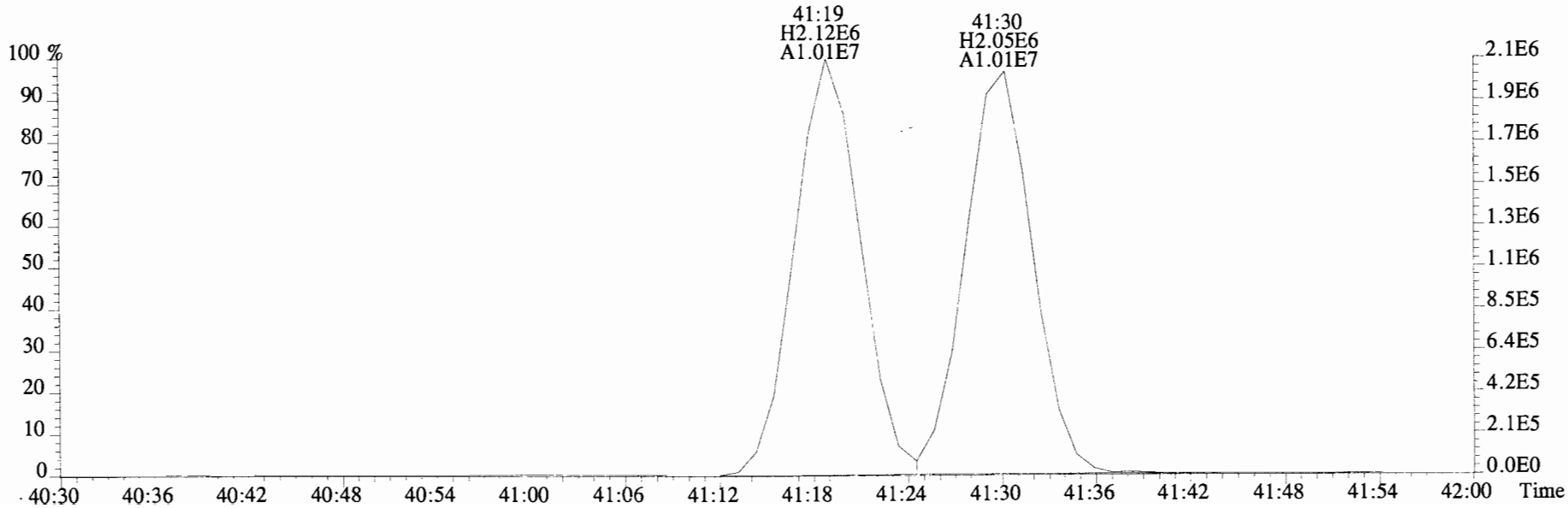
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2920.0,0.00%,F,F)



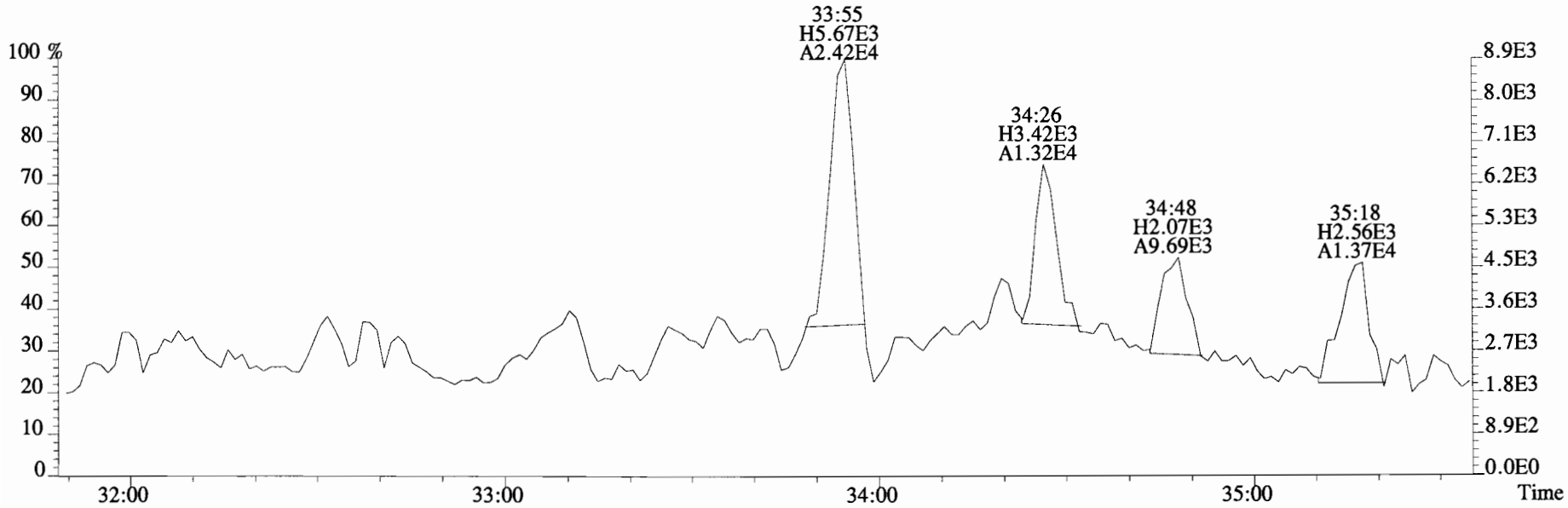
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3384.0,0.00%,F,F)



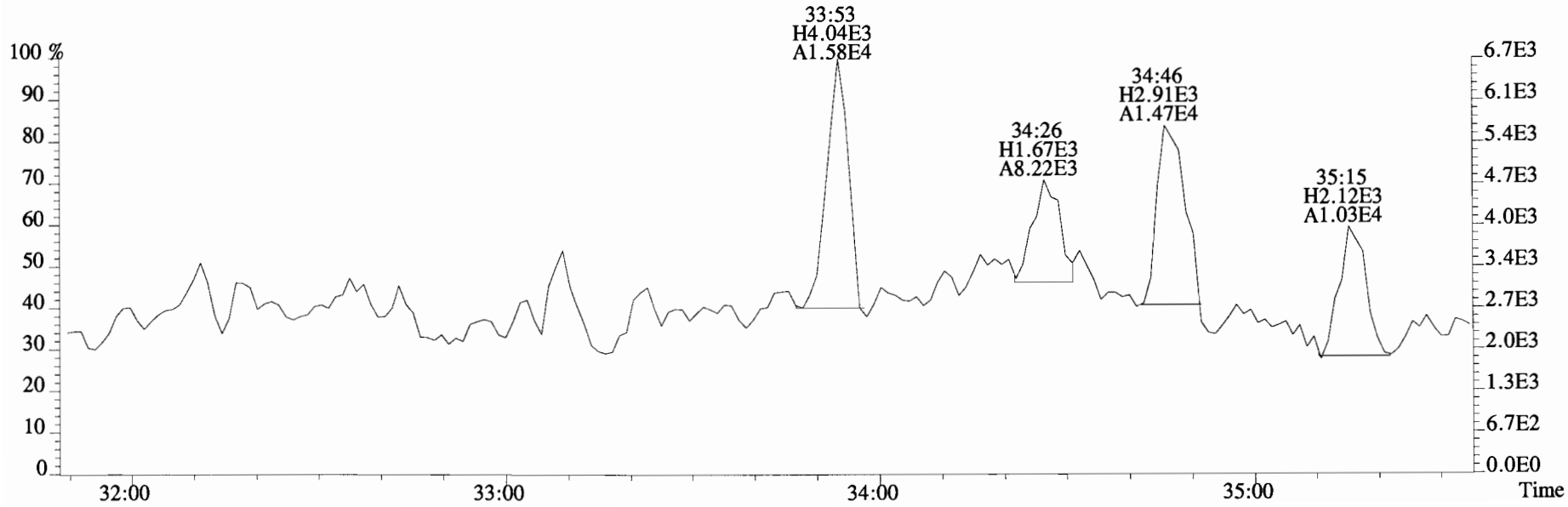
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3.1,0.10%,2920.0,0.00%,F,F)



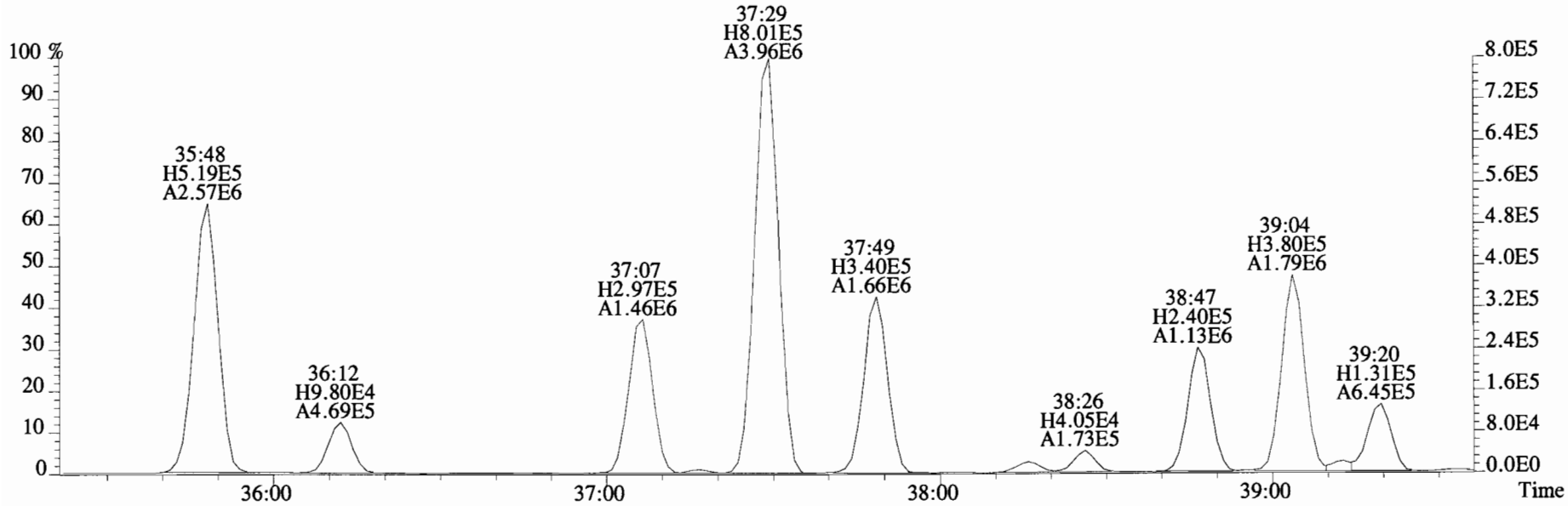
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



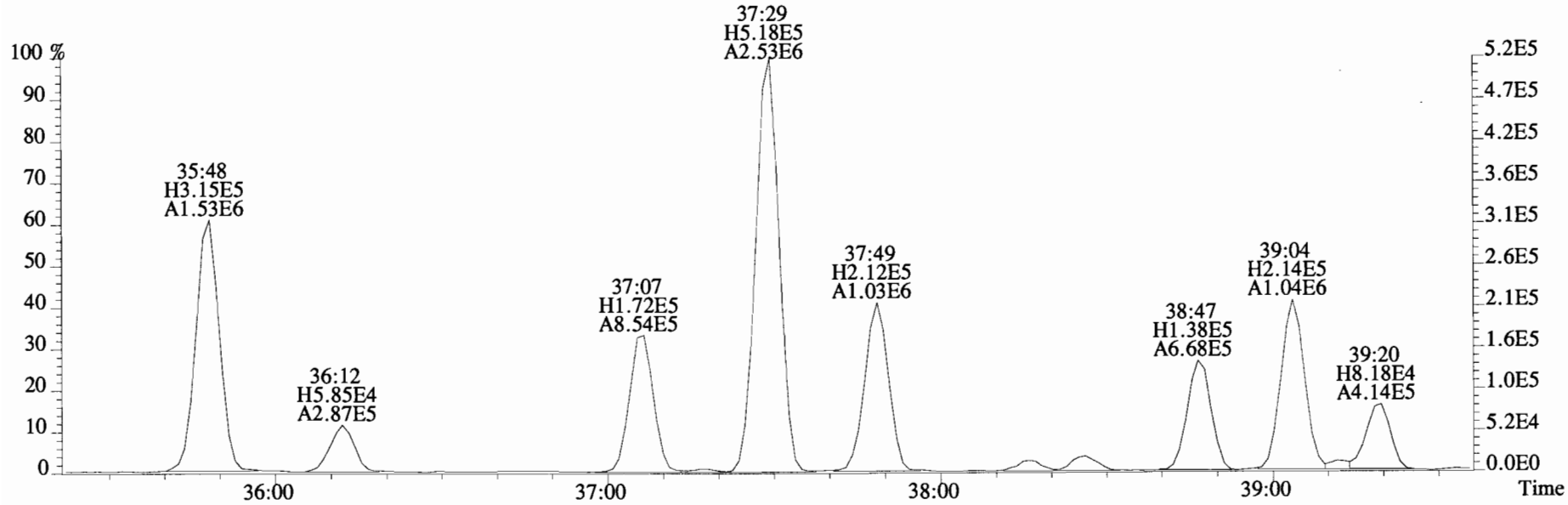
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)

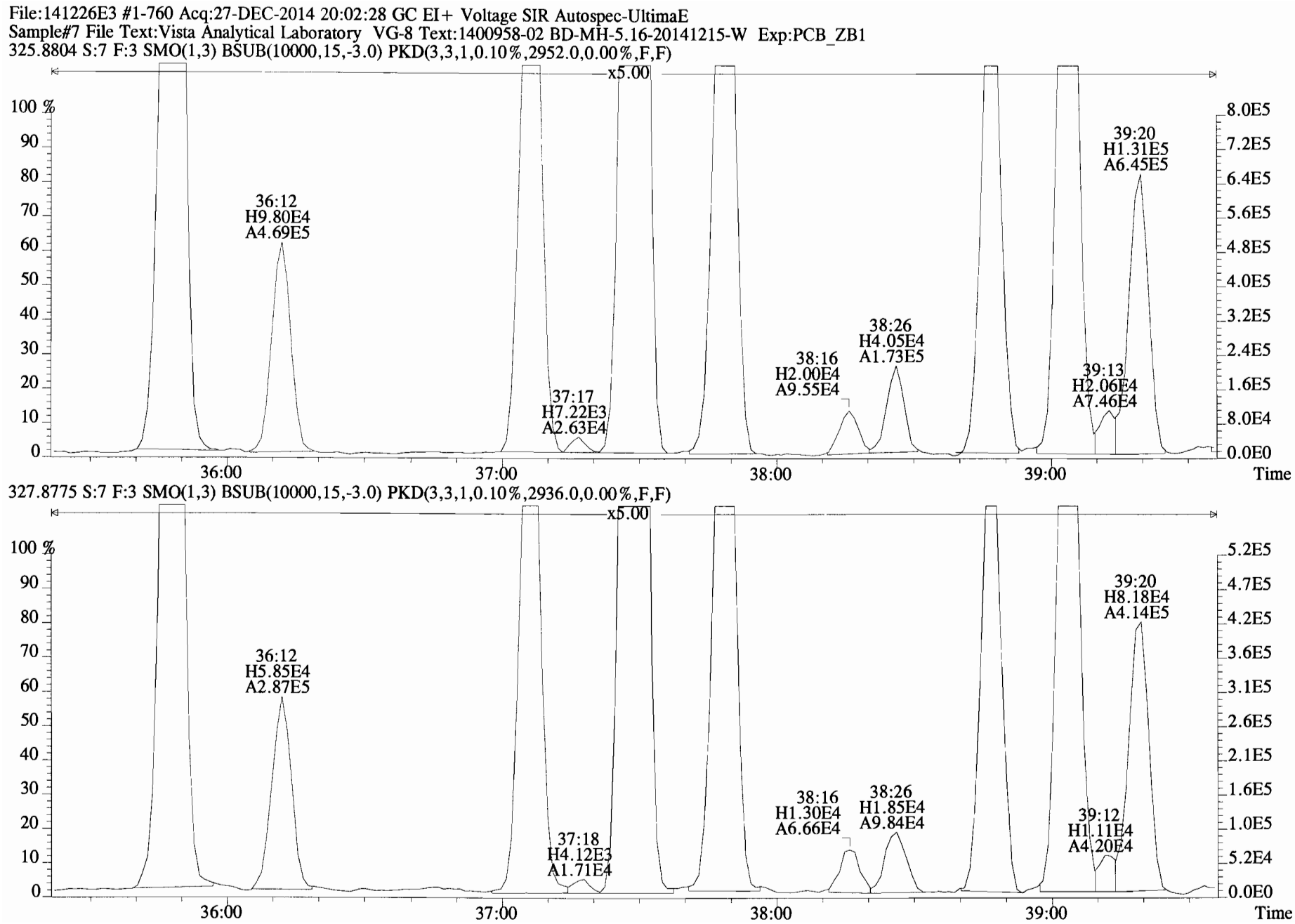


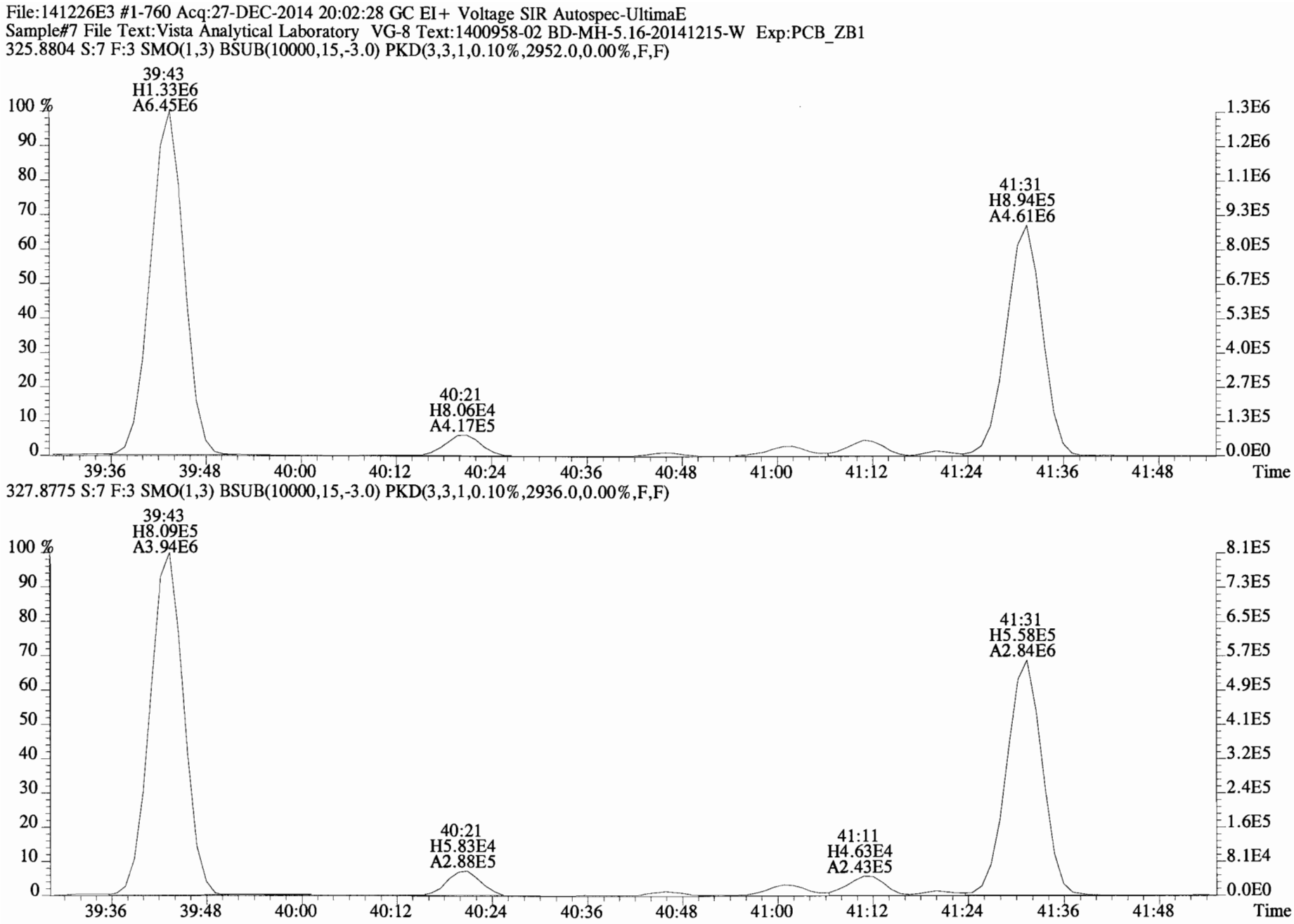
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



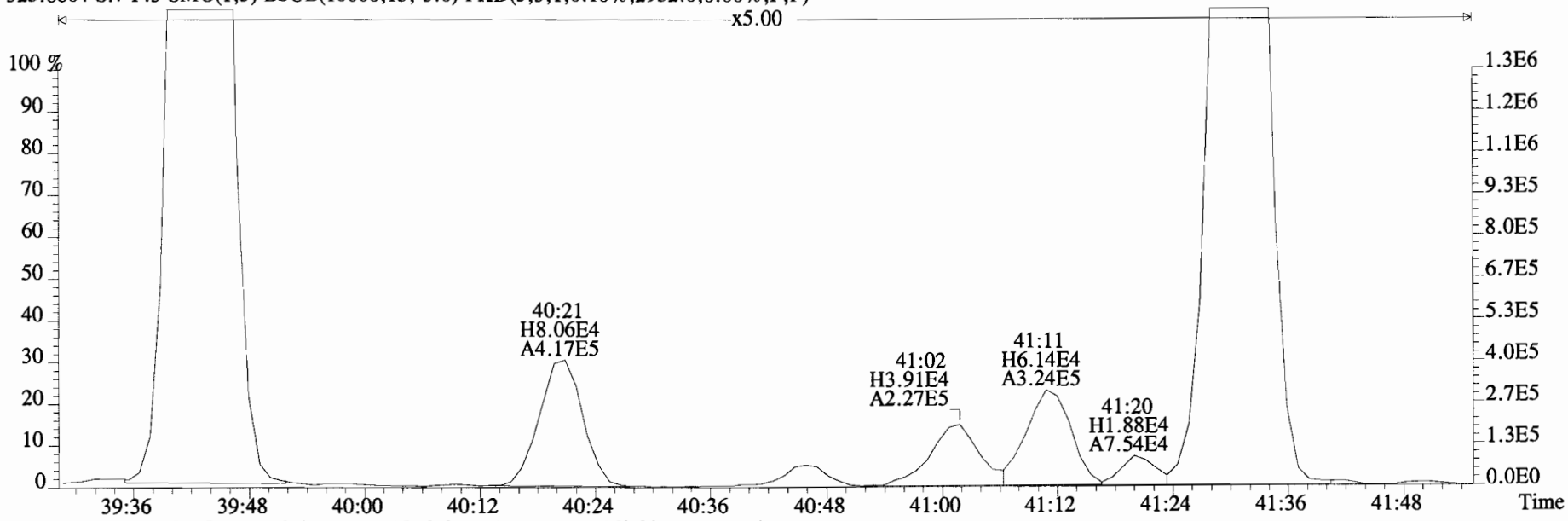
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



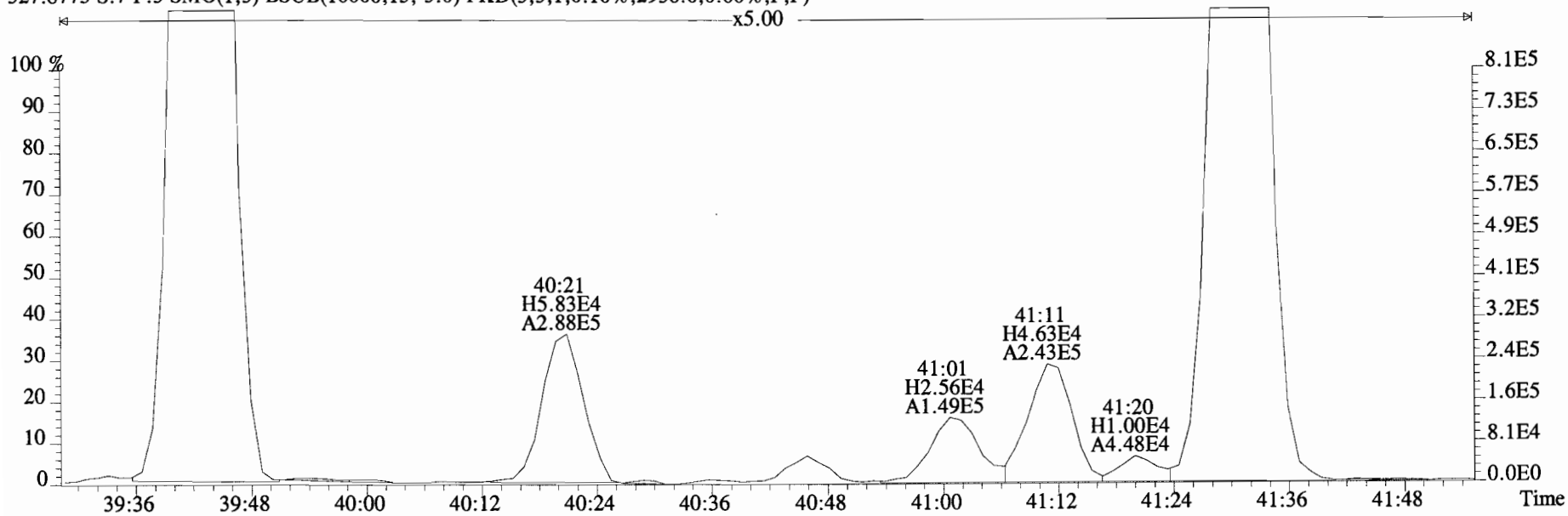

File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)
x5.00
36:12
H9.80E4
A4.69E5
37:17
H7.22E3
A2.63E4
38:16
H2.00E4
A9.55E4
38:26
H4.05E4
A1.73E5
39:13
H2.06E4
A7.46E4
39:20
H1.31E5
A6.45E5
100 %
Time
36:00
37:00
38:00
39:00
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)
x5.00
36:12
H5.85E4
A2.87E5
37:18
H4.12E3
A1.71E4
38:16
H1.30E4
A6.66E4
38:26
H1.85E4
A9.84E4
39:12
H1.11E4
A4.20E4
39:20
H8.18E4
A4.14E5
100 %
Time
36:00
37:00
38:00
39:00


File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)
39:43
H1.33E6
A6.45E6
40:21
H8.06E4
A4.17E5
41:31
H8.94E5
A4.61E6
100 %
90
80
70
60
50
40
30
20
10
0
1.3E6
1.2E6
1.1E6
9.3E5
8.0E5
6.7E5
5.3E5
4.0E5
2.7E5
1.3E5
0.0E0
39:36
39:48
40:00
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
Time
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)
39:43
H8.09E5
A3.94E6
40:21
H5.83E4
A2.88E5
41:11
H4.63E4
A2.43E5
41:31
H5.58E5
A2.84E6
100 %
90
80
70
60
50
40
30
20
10
0
8.1E5
7.3E5
6.5E5
5.7E5
4.9E5
4.1E5
3.2E5
2.4E5
1.6E5
8.1E4
0.0E0
39:36
39:48
40:00
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
Time

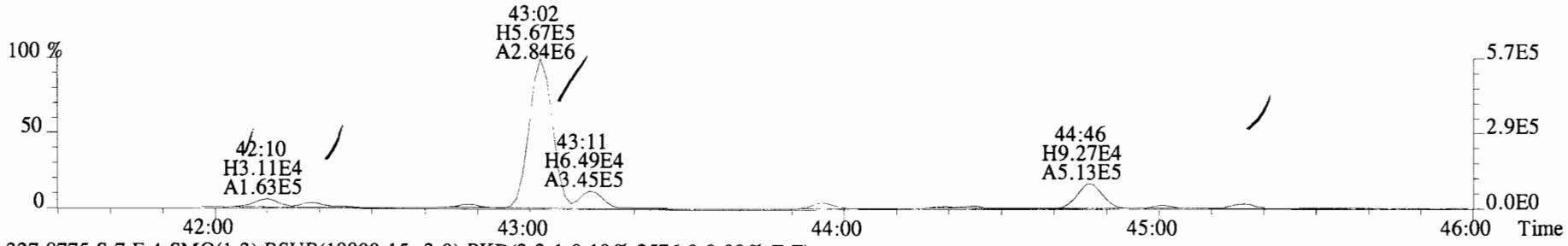
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2952.0,0.00%,F,F)



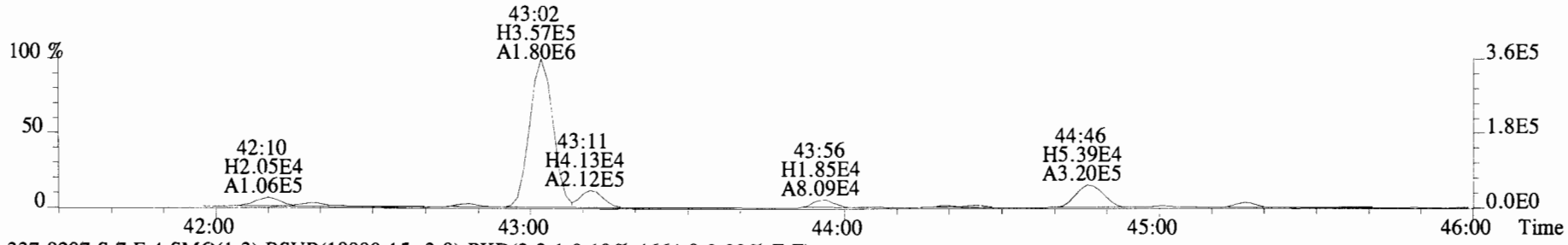
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2936.0,0.00%,F,F)



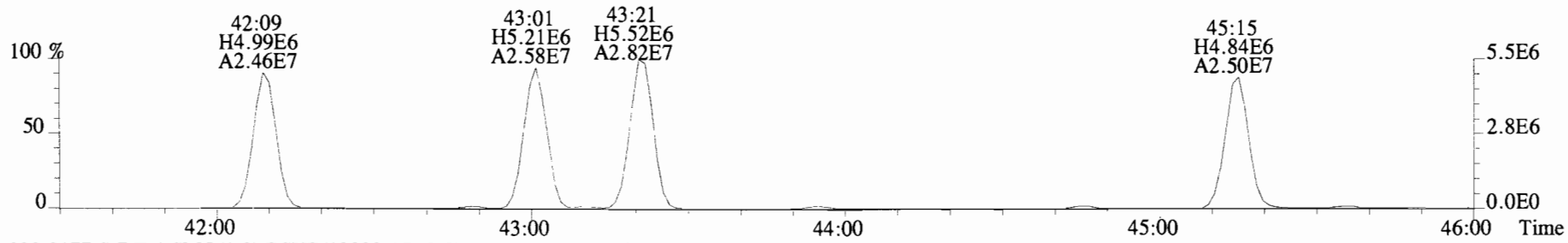
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2744.0,0.00%,F,F)



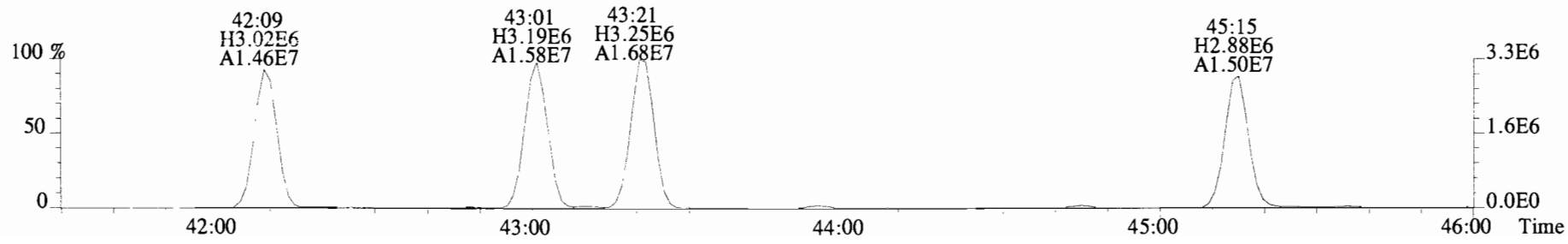
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2576.0,0.00%,F,F)



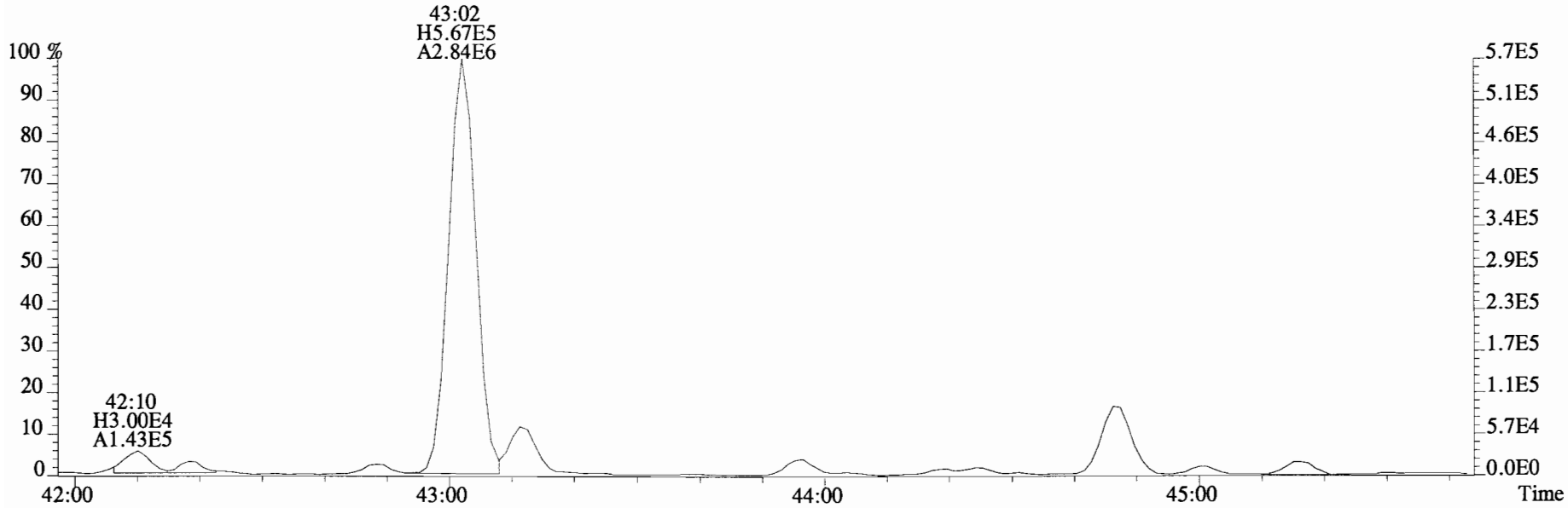
337.9207 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4664.0,0.00%,F,F)



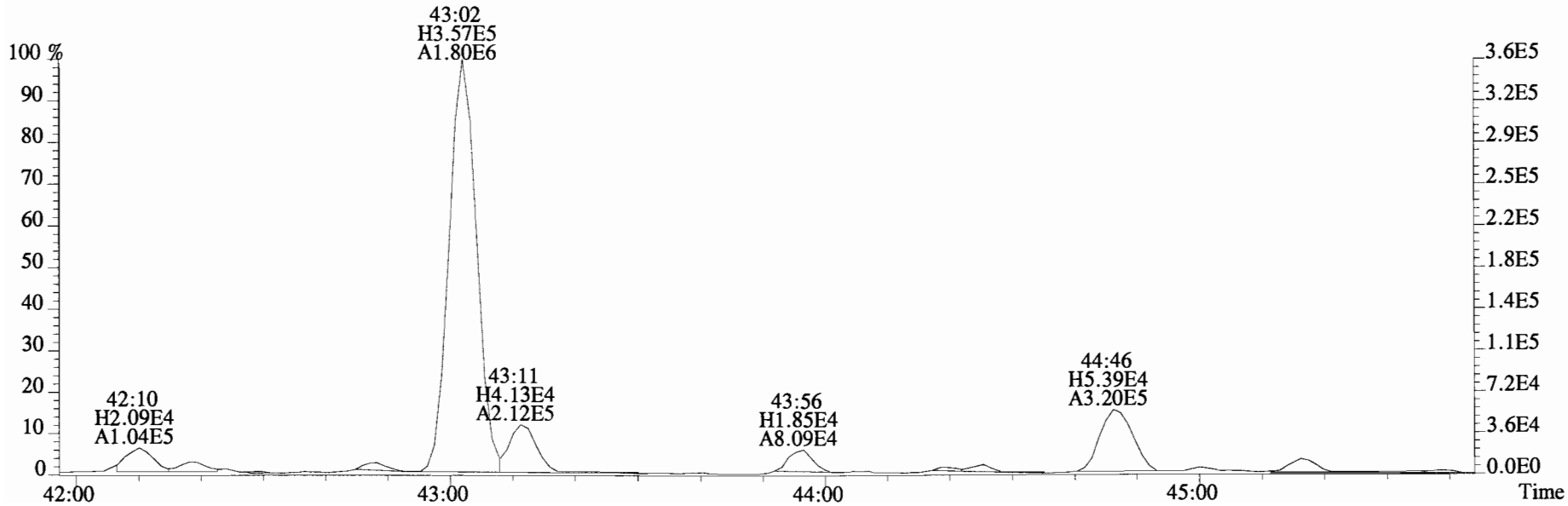
339.9177 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3736.0,0.00%,F,F)

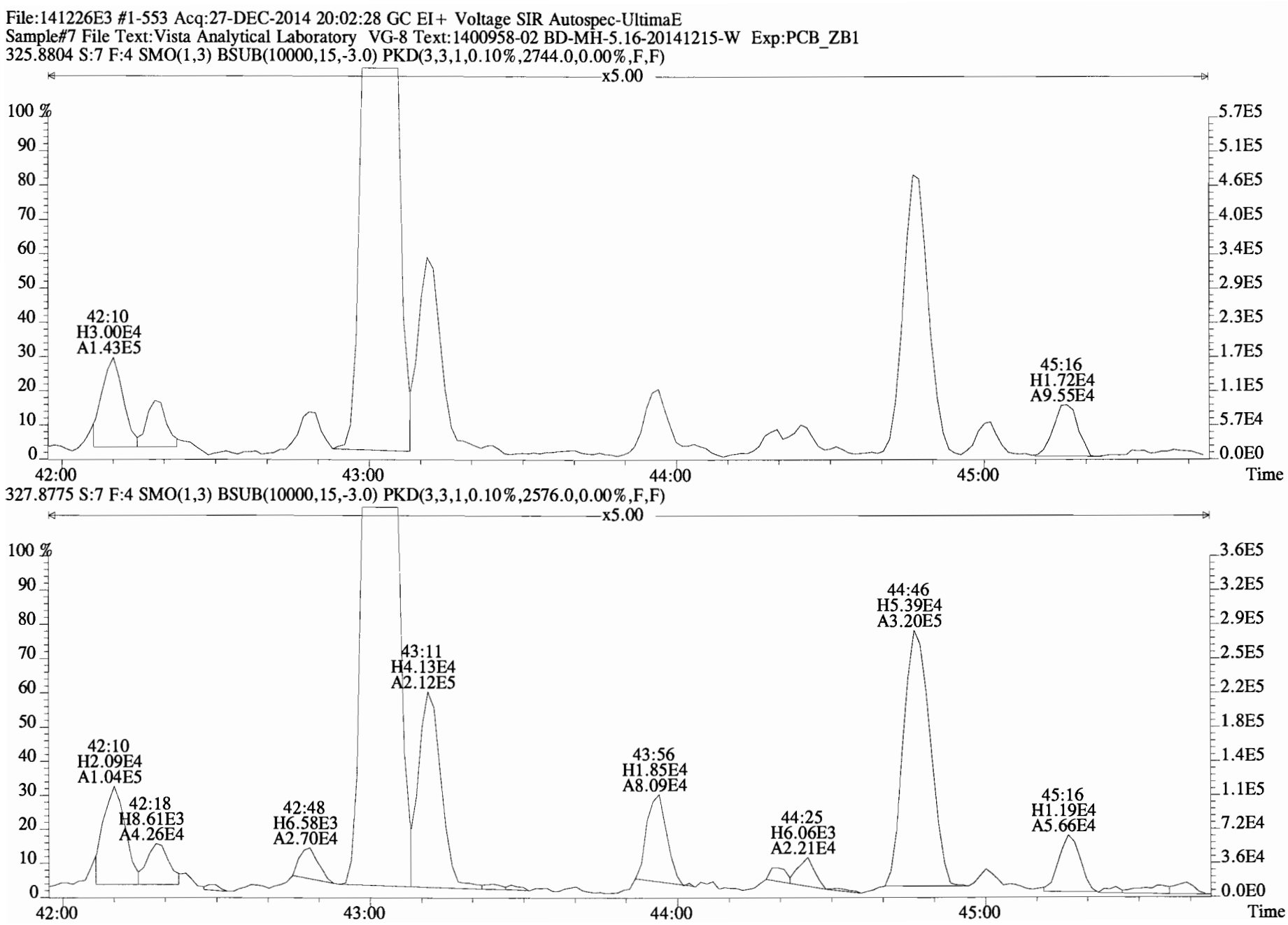


File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2744.0,0.00%,F,F)

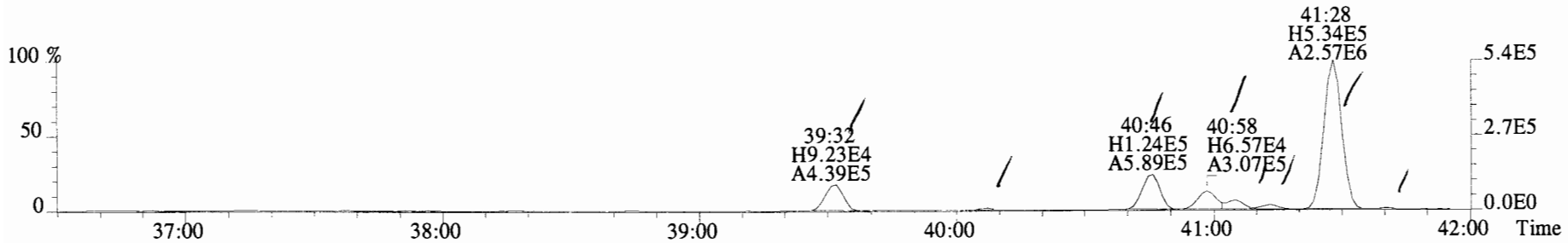


327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2576.0,0.00%,F,F)

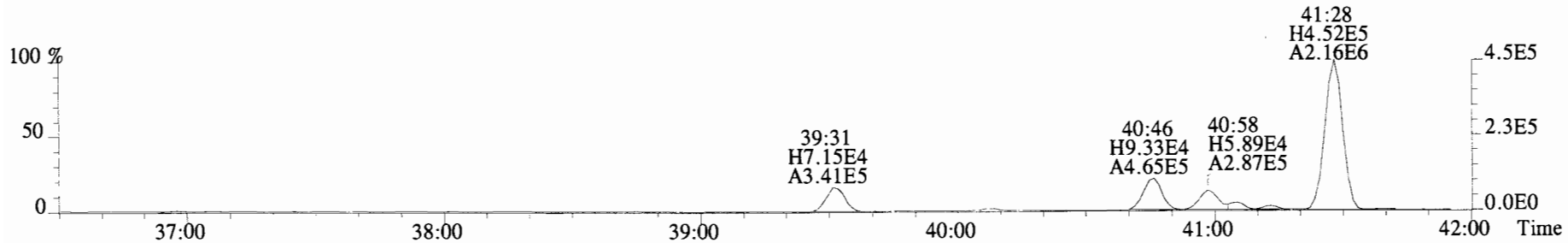



File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2744.0,0.00%,F,F)
x5.00
42:10
H3.00E4
A1.43E5
45:16
H1.72E4
A9.55E4
Time
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2576.0,0.00%,F,F)
x5.00
42:10
H2.09E4
A1.04E5
42:18
H8.61E3
A4.26E4
42:48
H6.58E3
A2.70E4
43:11
H4.13E4
A2.12E5
43:56
H1.85E4
A8.09E4
44:25
H6.06E3
A2.21E4
44:46
H5.39E4
A3.20E5
45:16
H1.19E4
A5.66E4
Time

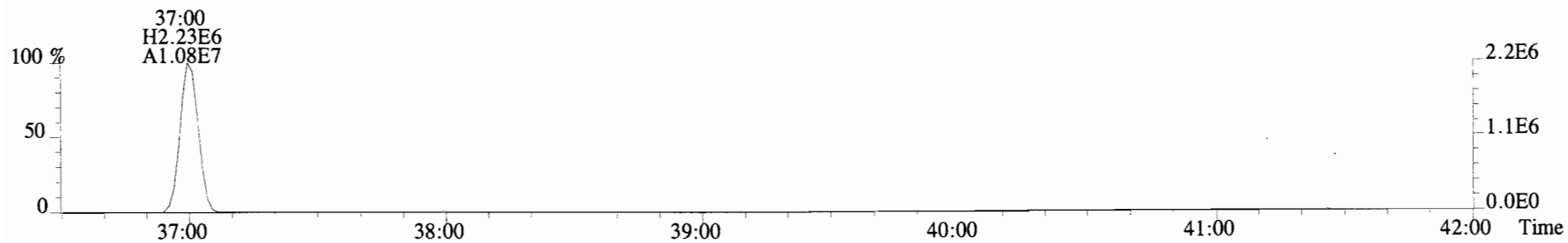
File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3672.0,0.00%,F,F)



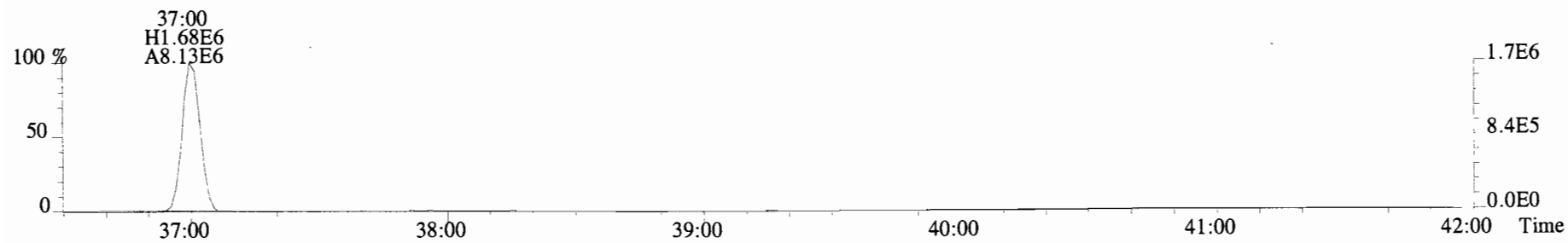
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3484.0,0.00%,F,F)

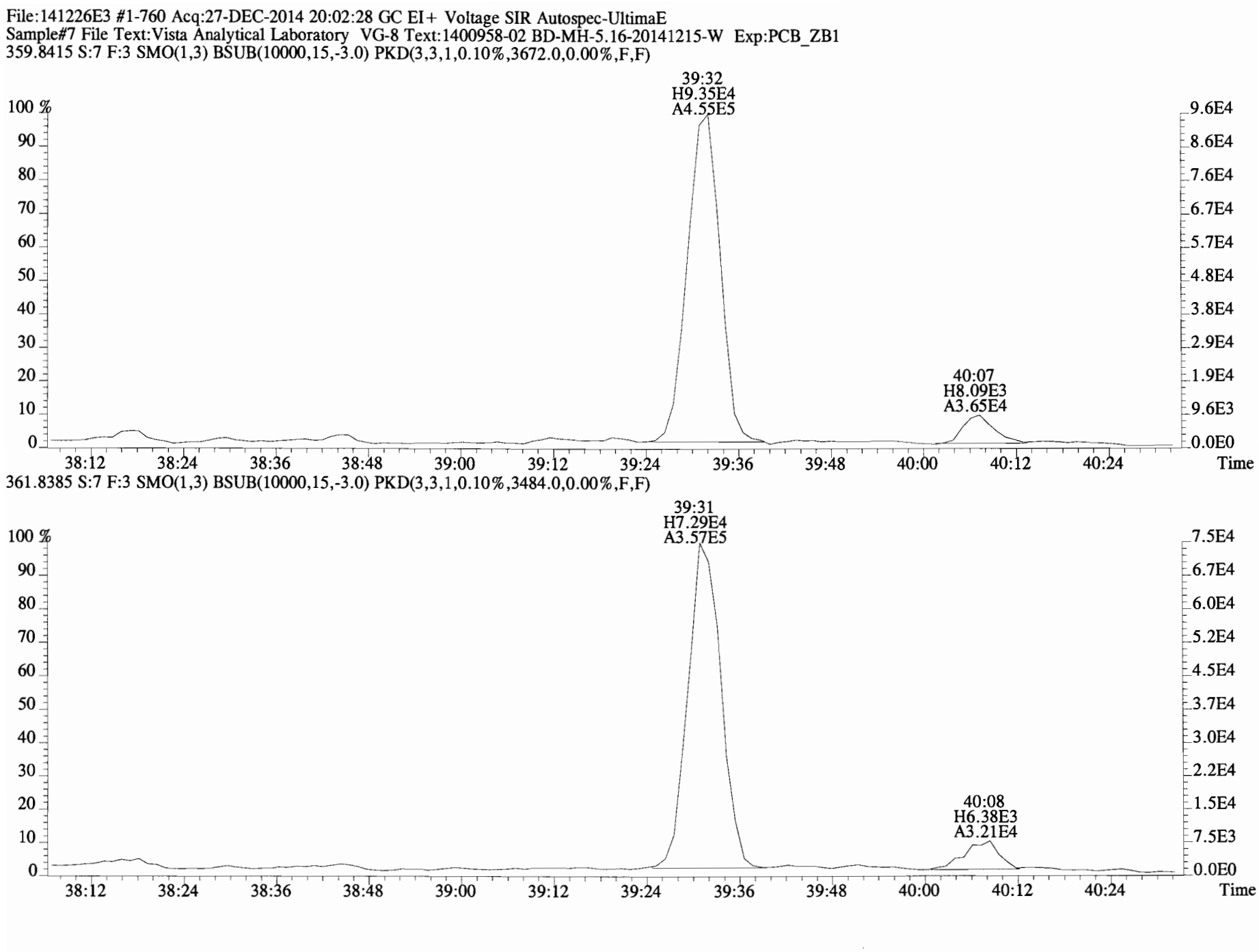


371.8817 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3336.0,0.00%,F,F)

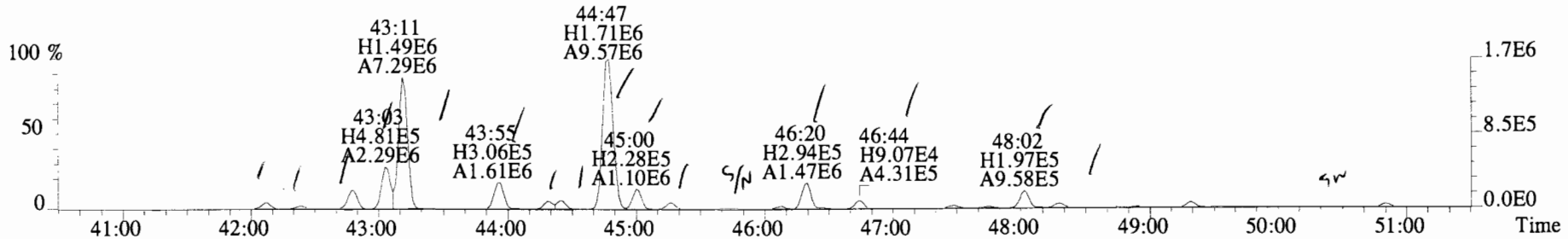


373.8788 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3284.0,0.00%,F,F)

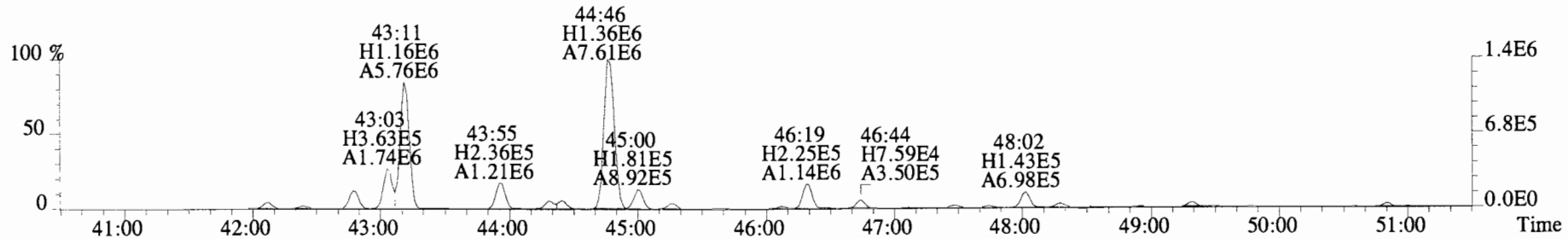



File:141226E3 #1-760 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3672.0,0.00%,F,F)
39:32
H9.35E4
A4.55E5
40:07
H8.09E3
A3.65E4
100 %
90
80
70
60
50
40
30
20
10
0
9.6E4
8.6E4
7.6E4
6.7E4
5.7E4
4.8E4
3.8E4
2.9E4
1.9E4
9.6E3
0.0E0
38:12
38:24
38:36
38:48
39:00
39:12
39:24
39:36
39:48
40:00
40:12
40:24
Time
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3484.0,0.00%,F,F)
39:31
H7.29E4
A3.57E5
40:08
H6.38E3
A3.21E4
100 %
90
80
70
60
50
40
30
20
10
0
7.5E4
6.7E4
6.0E4
5.2E4
4.5E4
3.7E4
3.0E4
2.2E4
1.5E4
7.5E3
0.0E0
38:12
38:24
38:36
38:48
39:00
39:12
39:24
39:36
39:48
40:00
40:12
40:24
Time

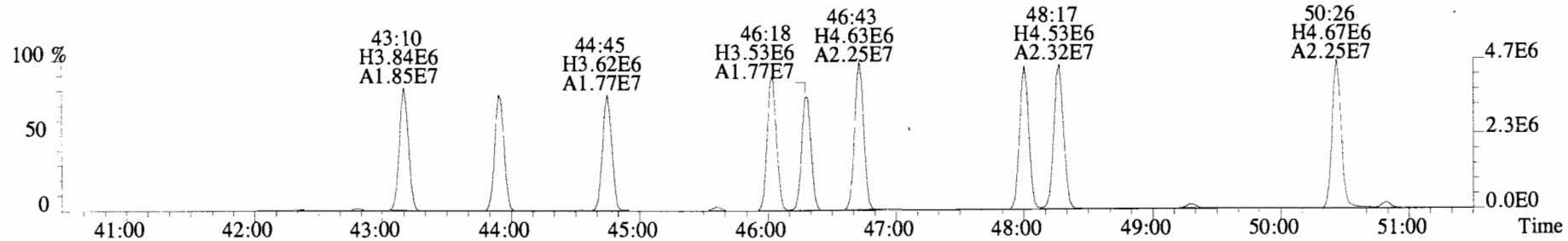
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



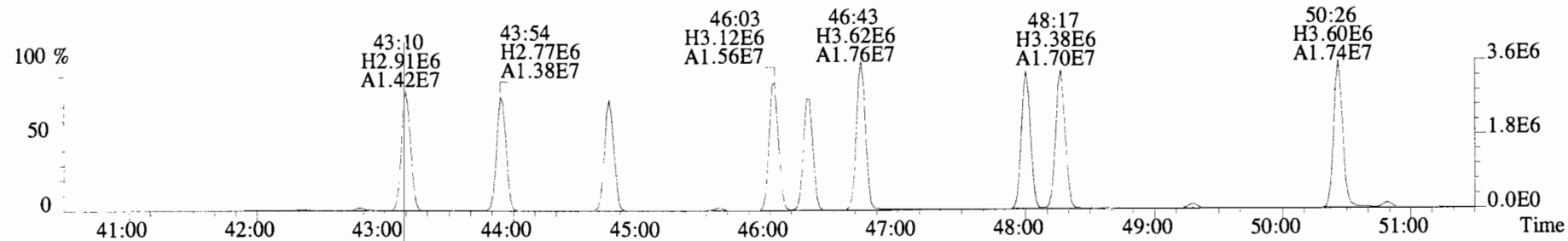
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)



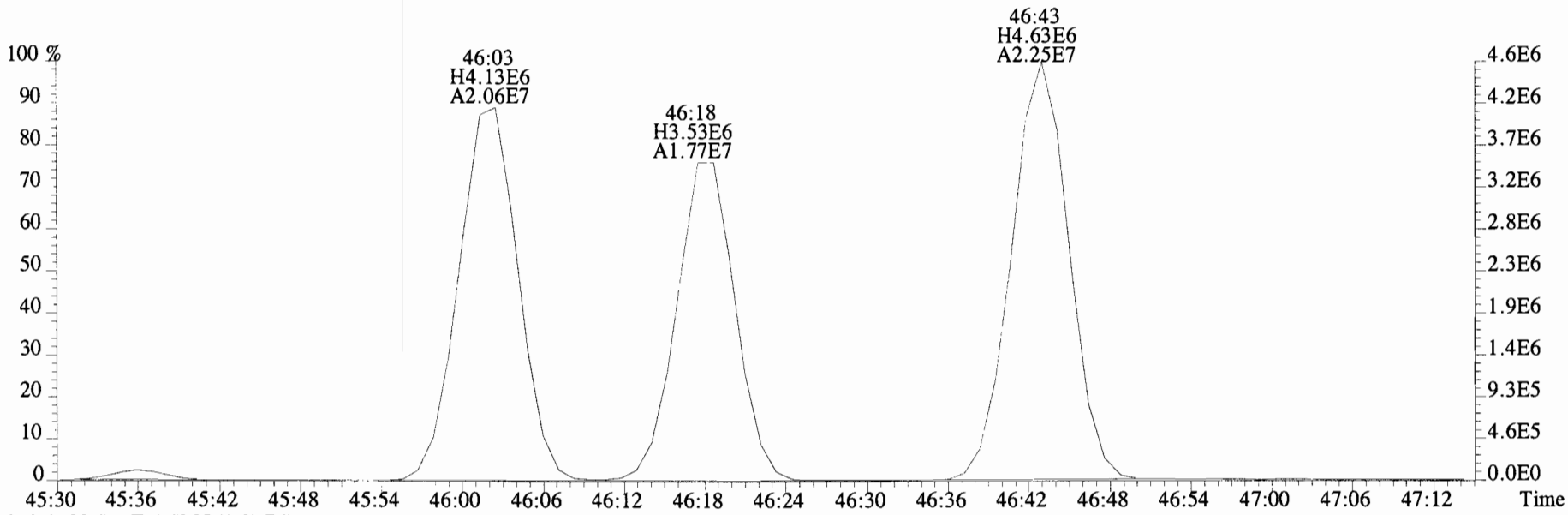
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6928.0,0.00%,F,F)



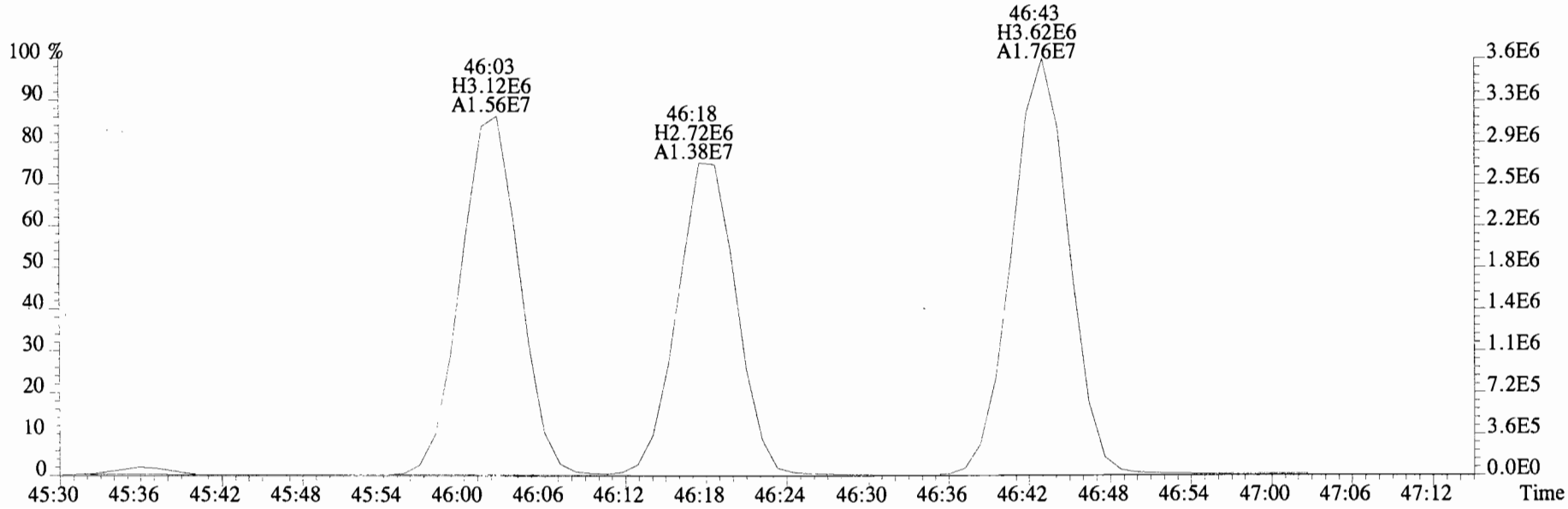
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5436.0,0.00%,F,F)



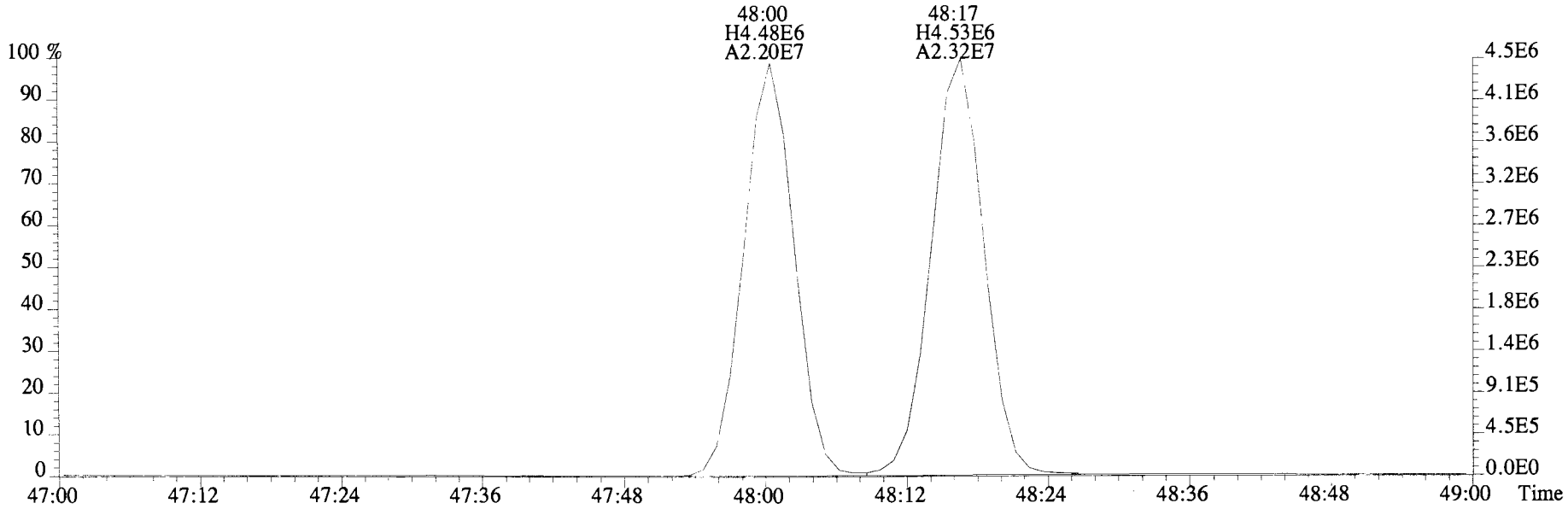
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6928.0,0.00%,F,F)



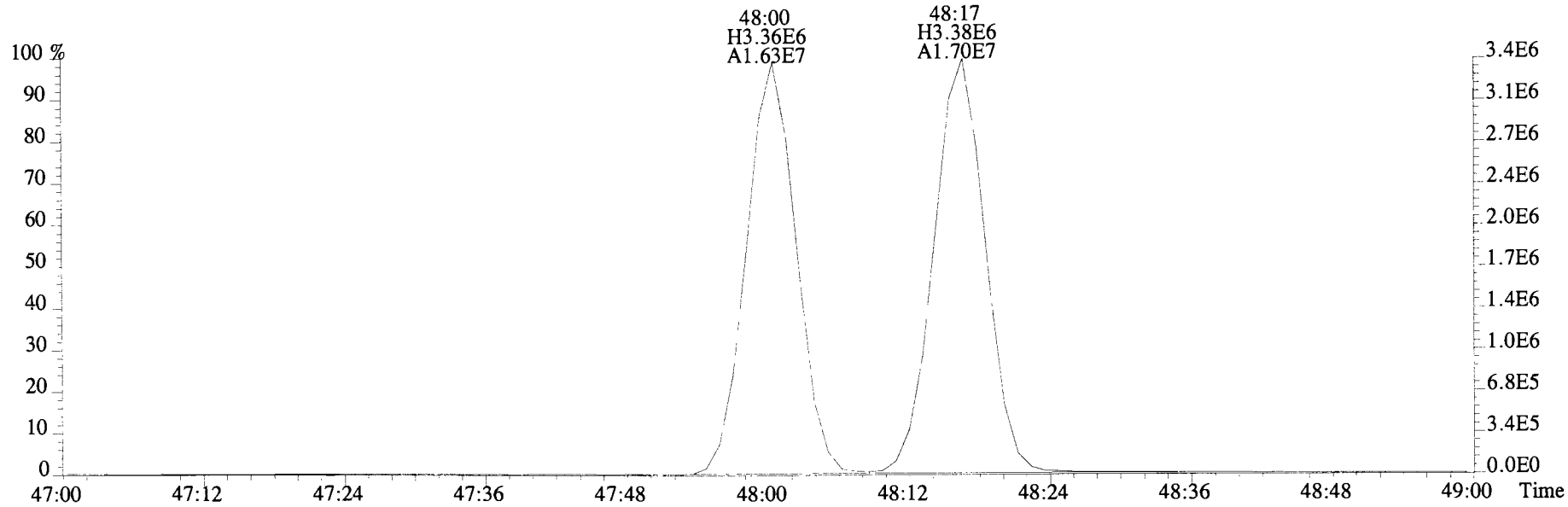
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5436.0,0.00%,F,F)



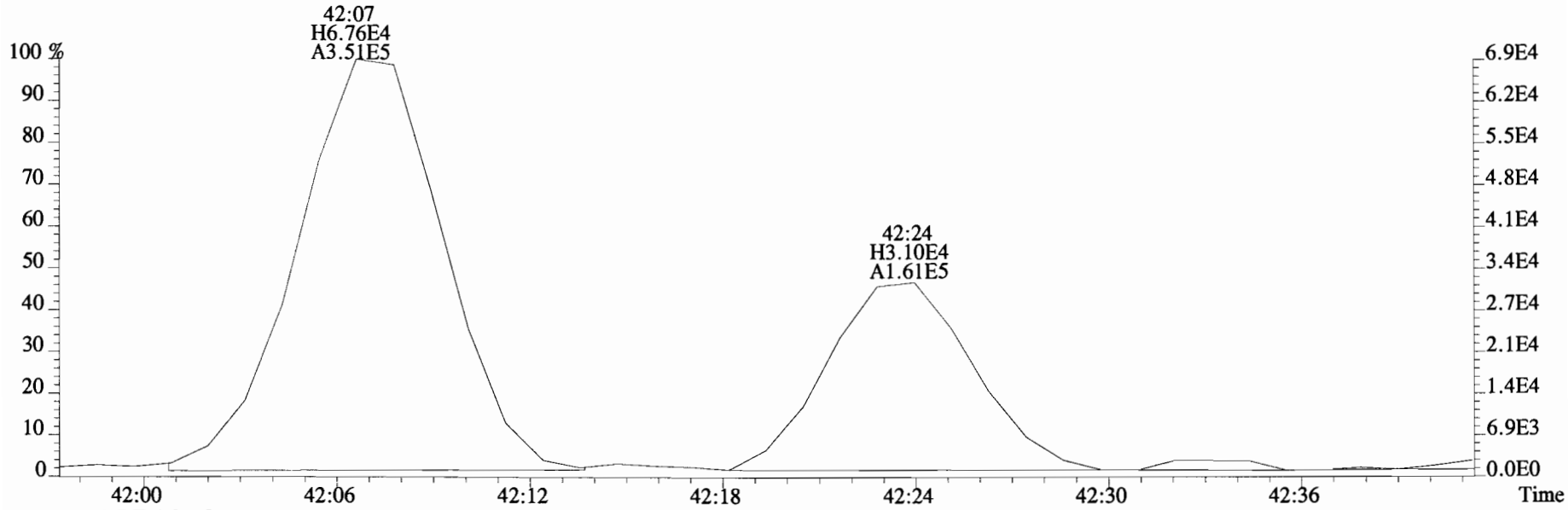
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6928.0,0.00%,F,F)



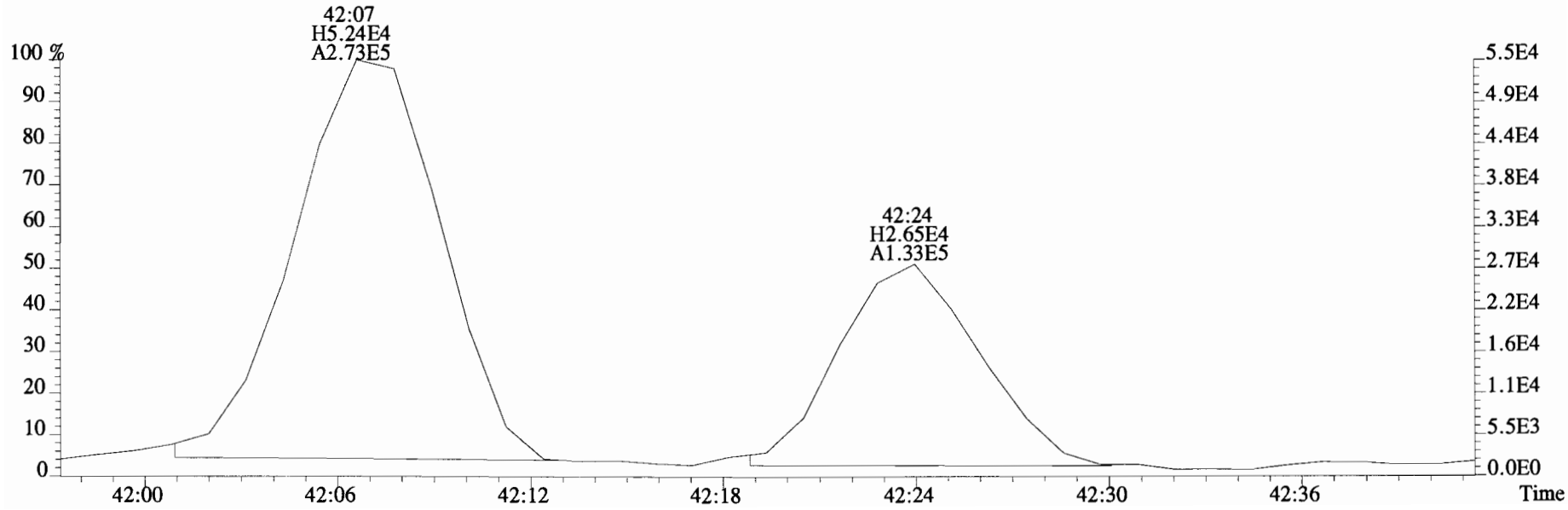
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5436.0,0.00%,F,F)



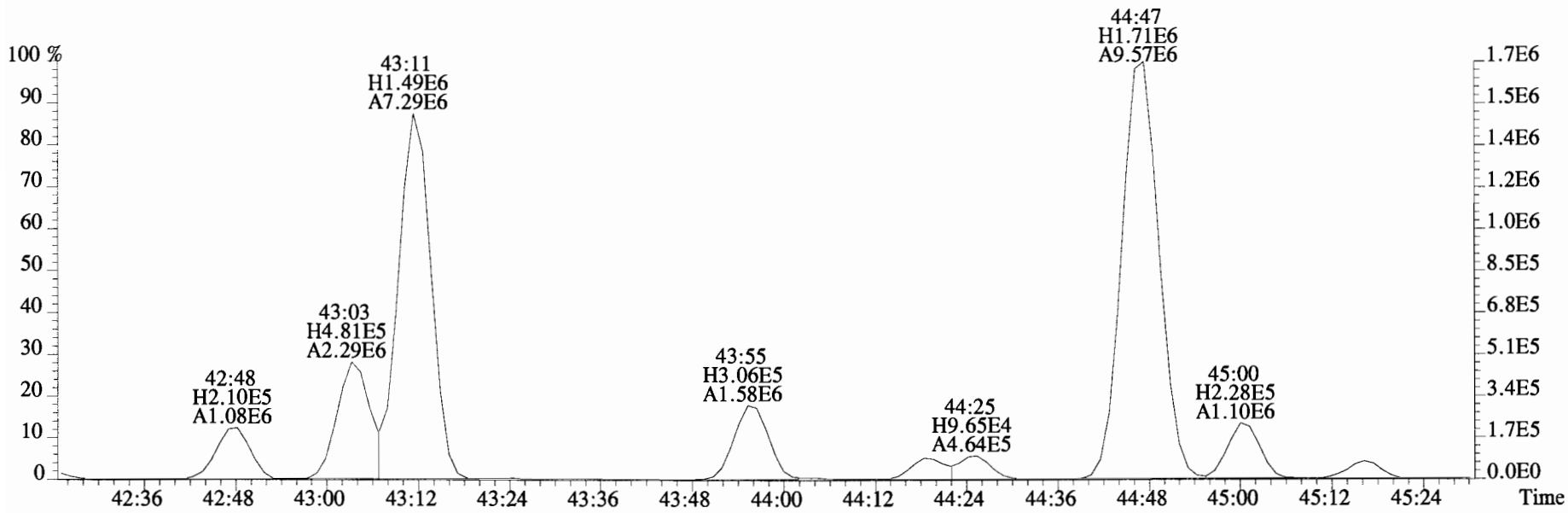
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



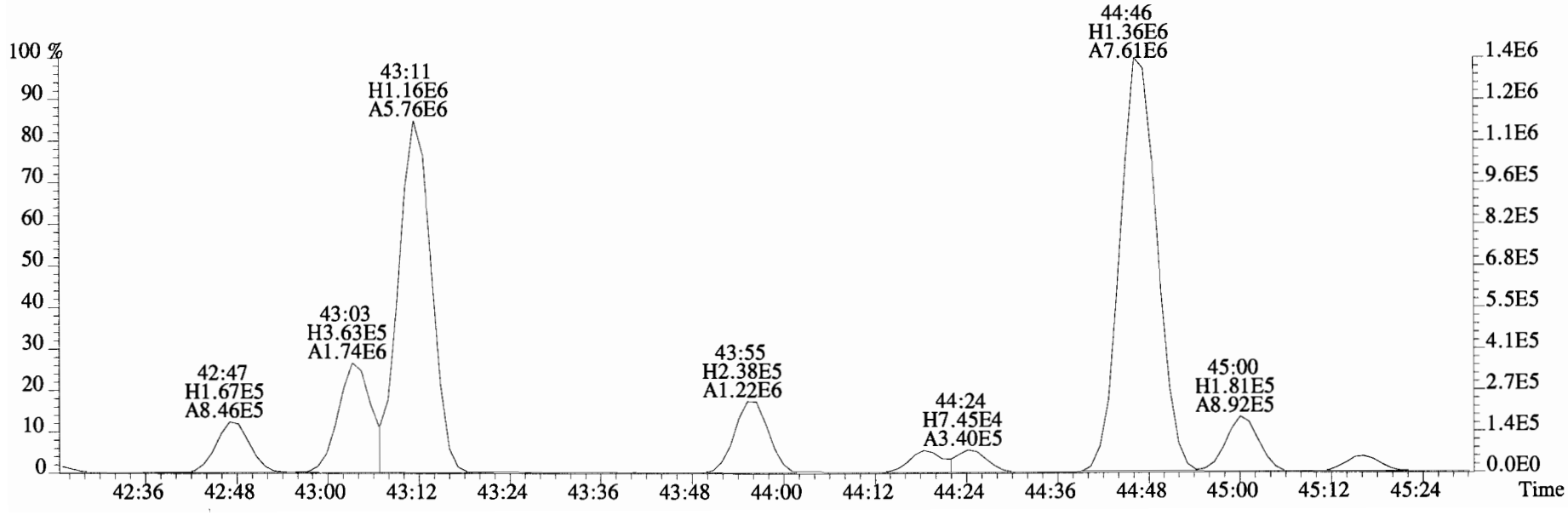
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)



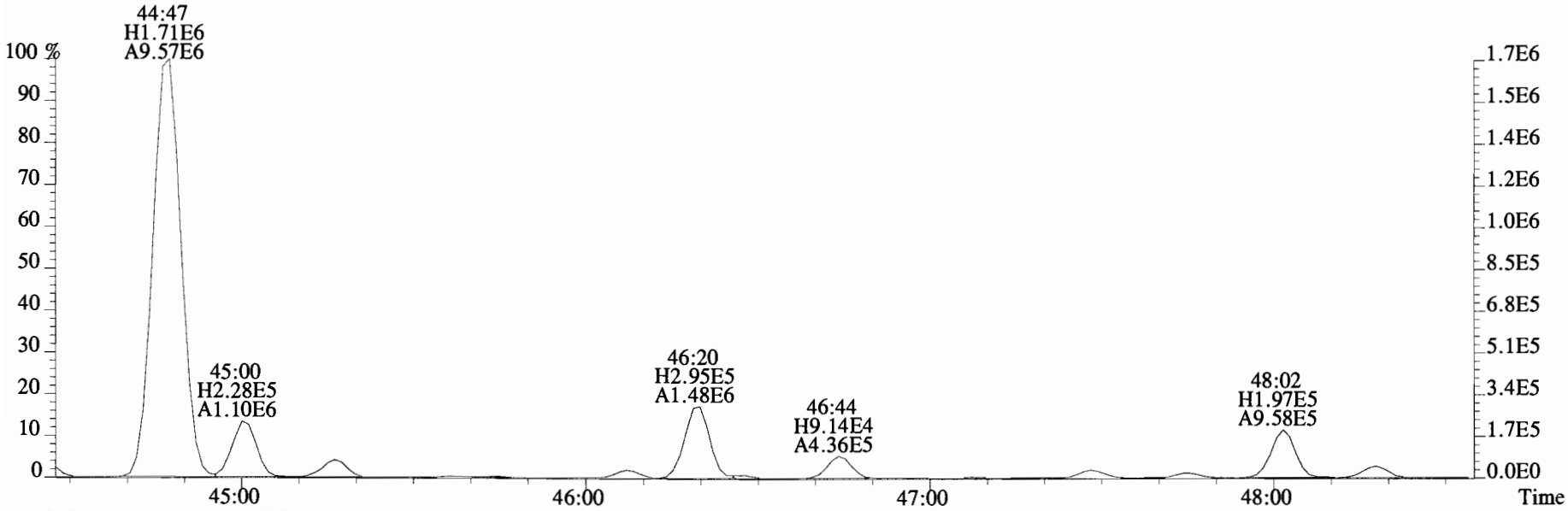
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



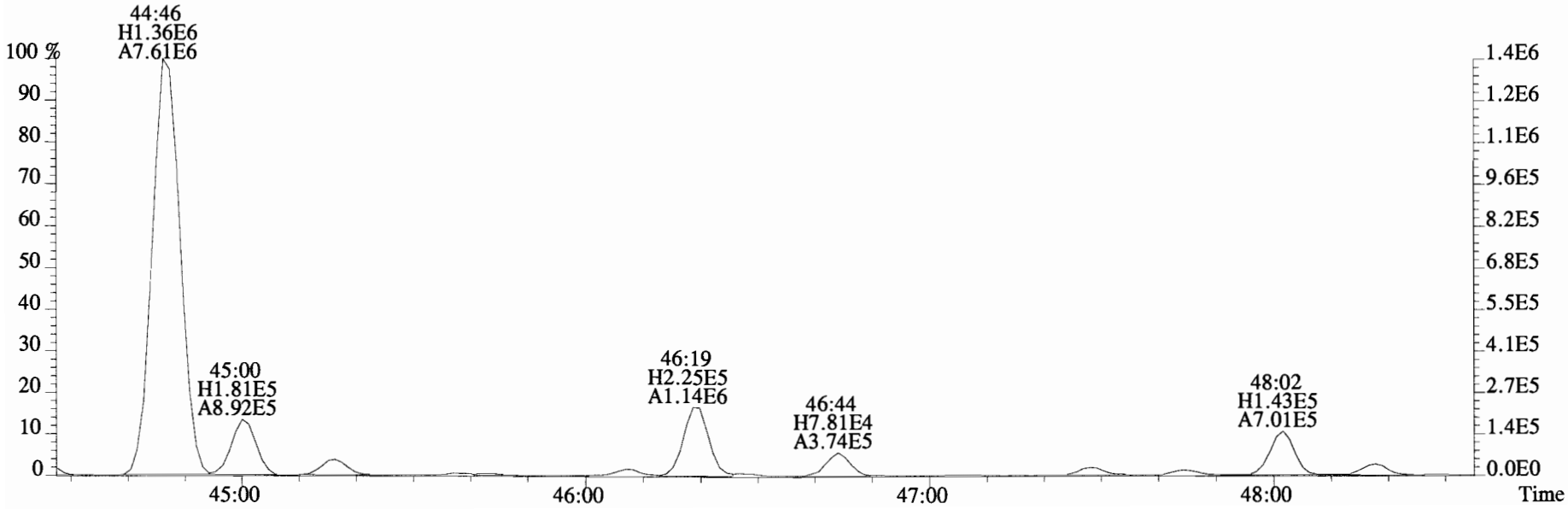
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)

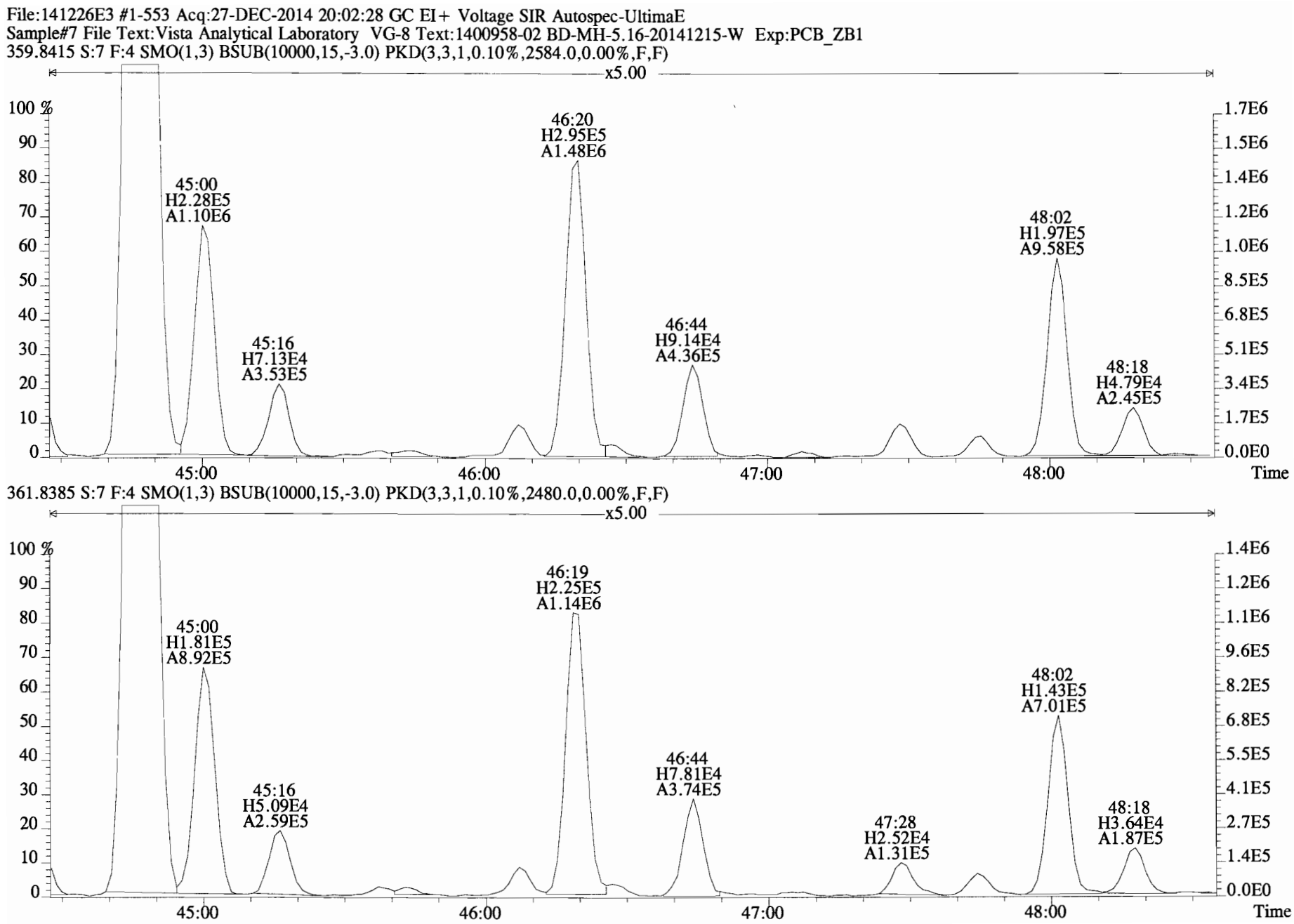


File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)

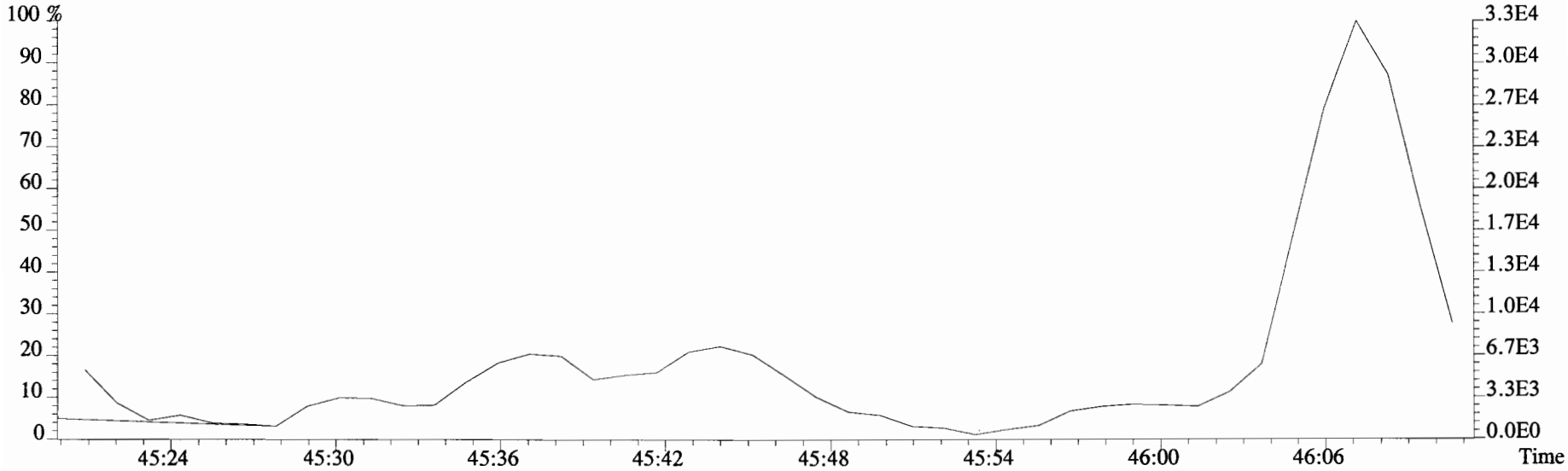


361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)

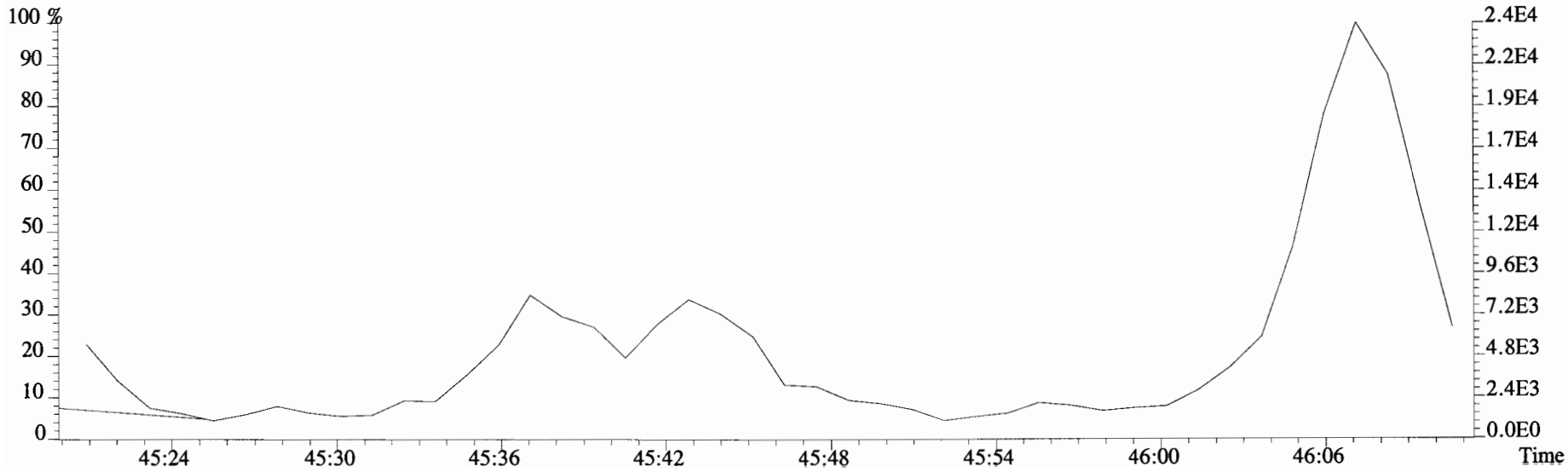



File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)
x5.00
45:00 H2.28E5 A1.10E6
45:16 H7.13E4 A3.53E5
46:20 H2.95E5 A1.48E6
46:44 H9.14E4 A4.36E5
48:02 H1.97E5 A9.58E5
48:18 H4.79E4 A2.45E5
Time
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)
x5.00
45:00 H1.81E5 A8.92E5
45:16 H5.09E4 A2.59E5
46:19 H2.25E5 A1.14E6
46:44 H7.81E4 A3.74E5
47:28 H2.52E4 A1.31E5
48:02 H1.43E5 A7.01E5
48:18 H3.64E4 A1.87E5
Time

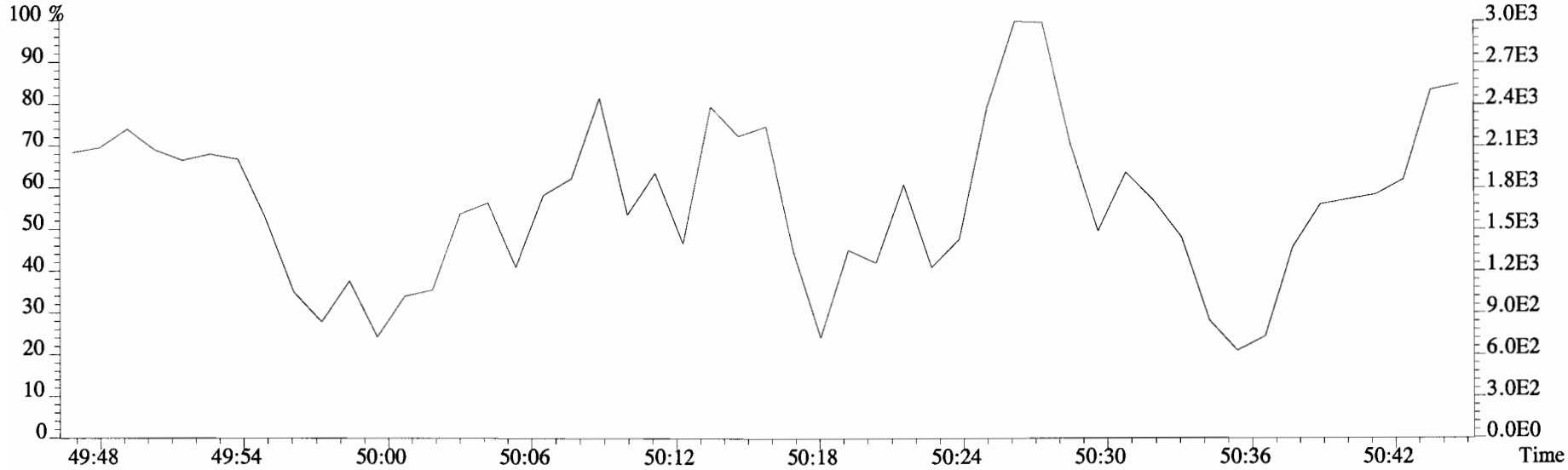
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



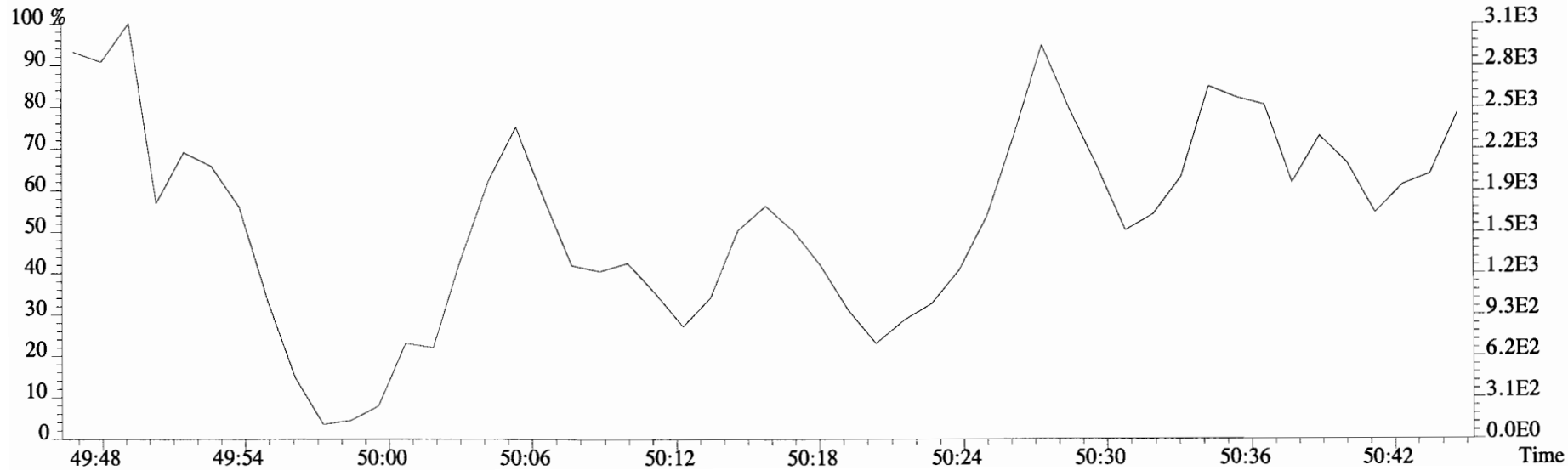
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)



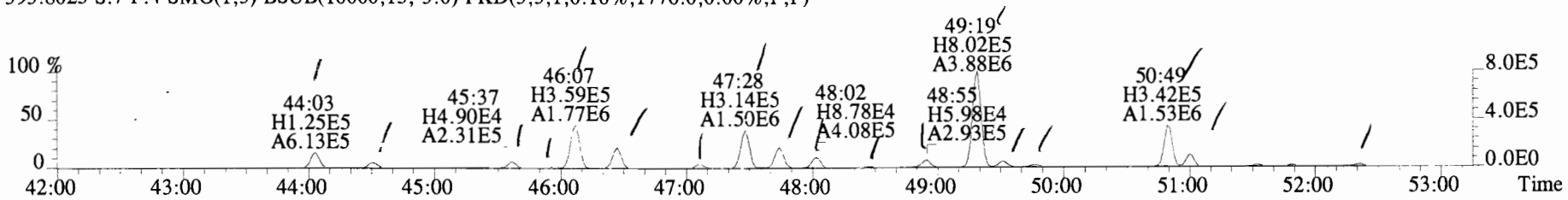
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2584.0,0.00%,F,F)



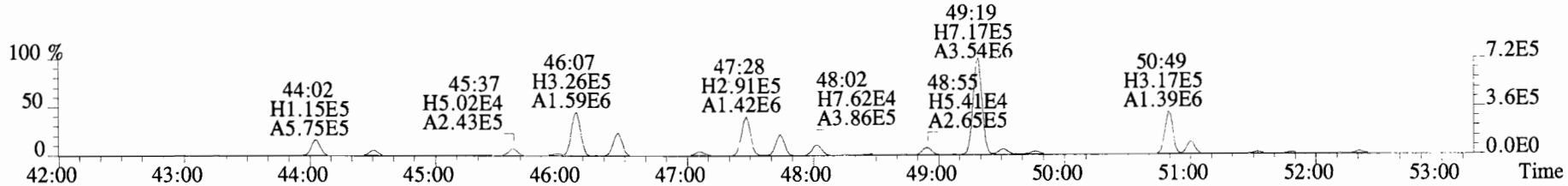
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2480.0,0.00%,F,F)



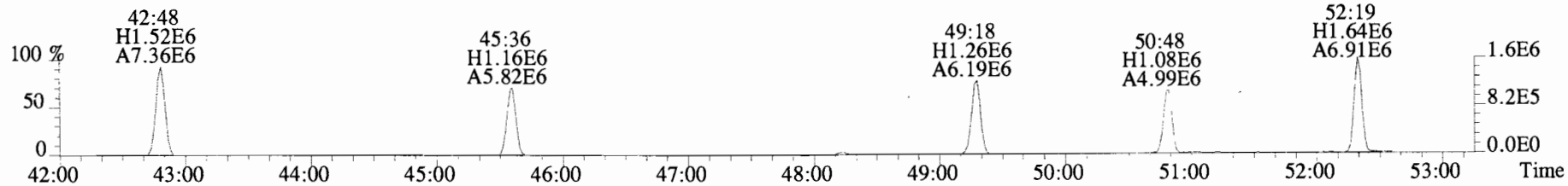
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



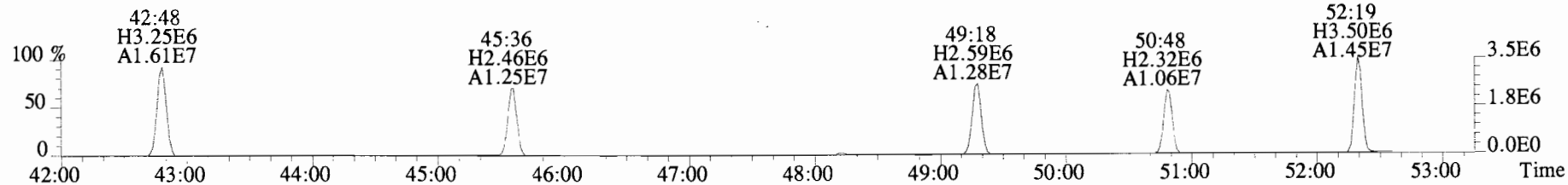
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)



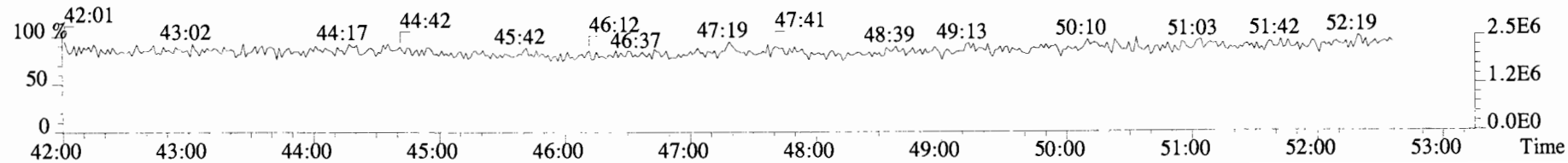
403.8457 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1800.0,0.00%,F,F)



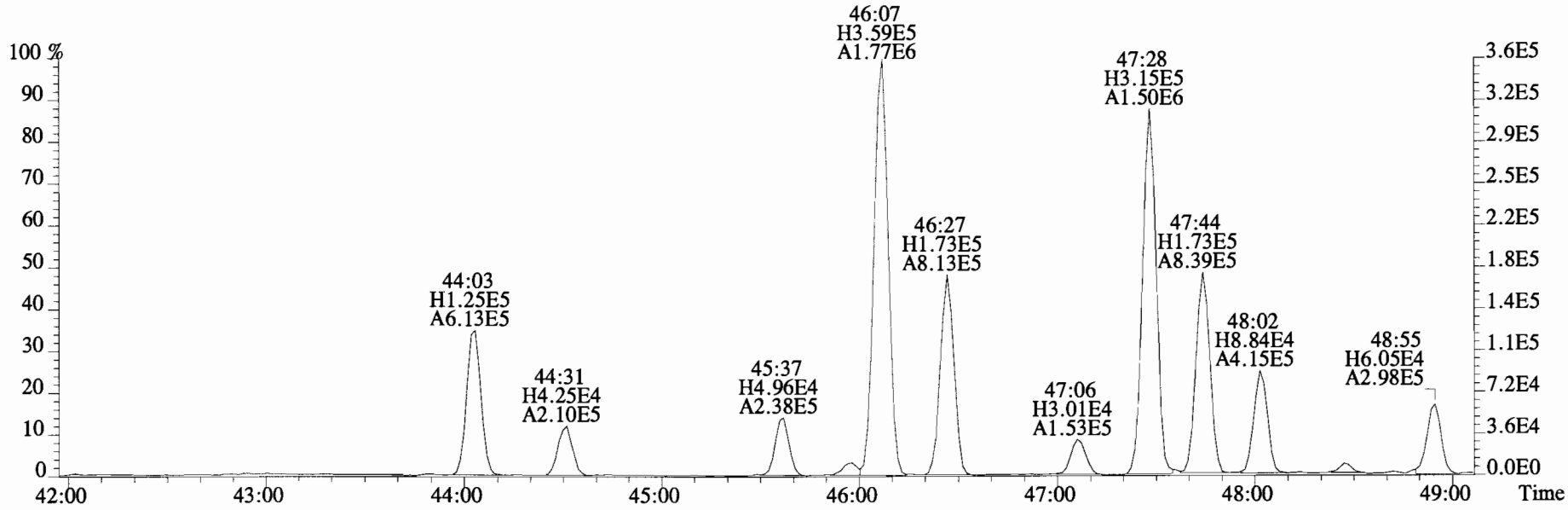
405.8428 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2972.0,0.00%,F,F)



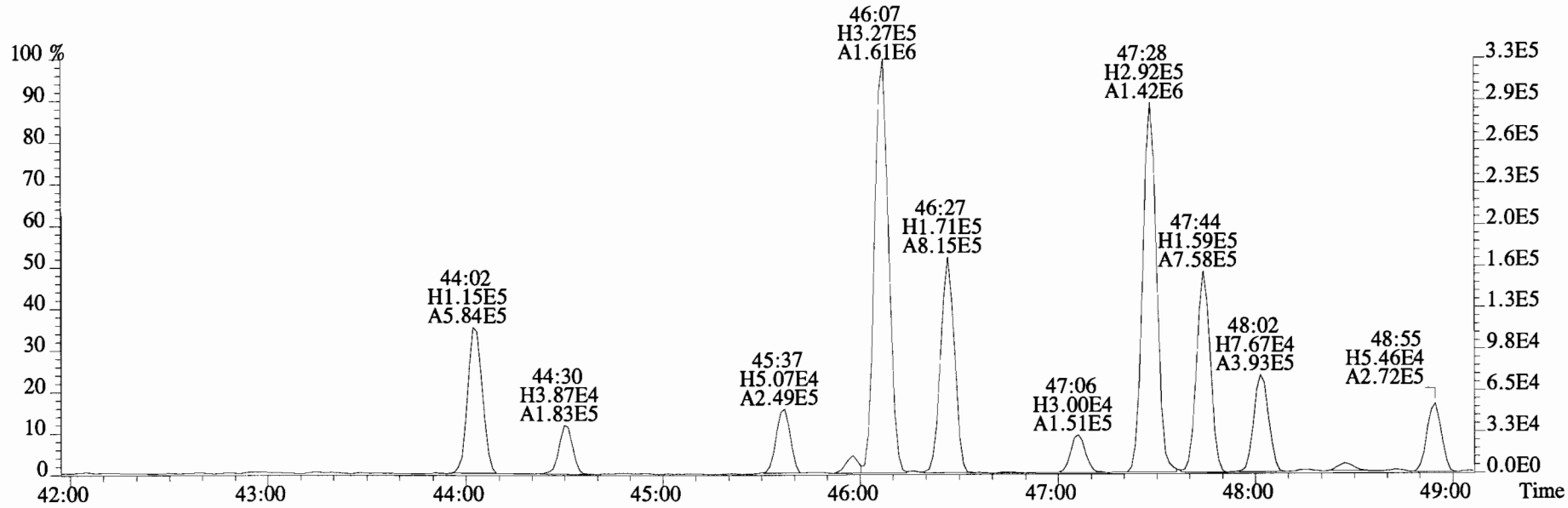
380.9760 S:7 F:4



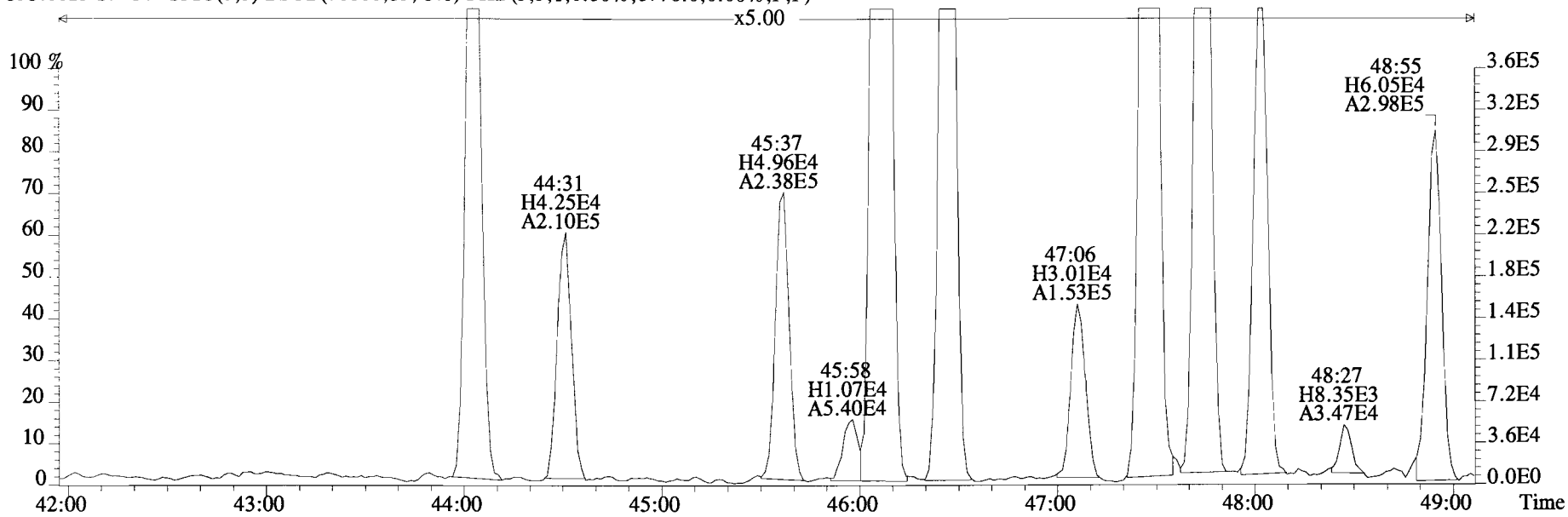
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



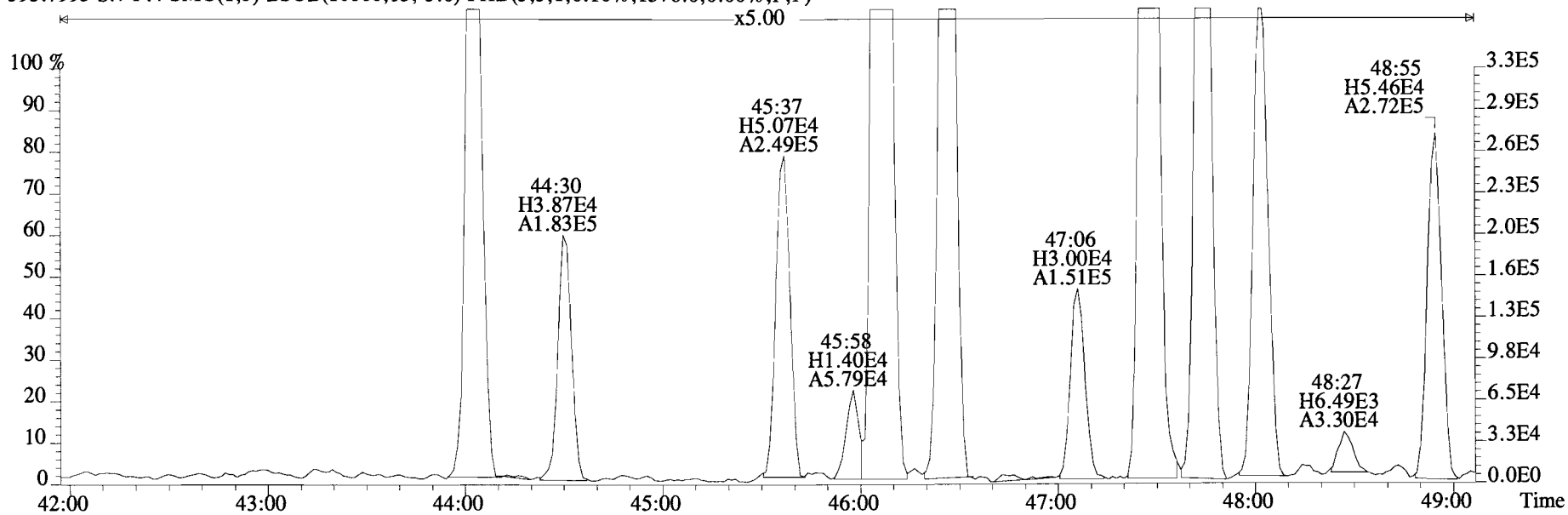
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)



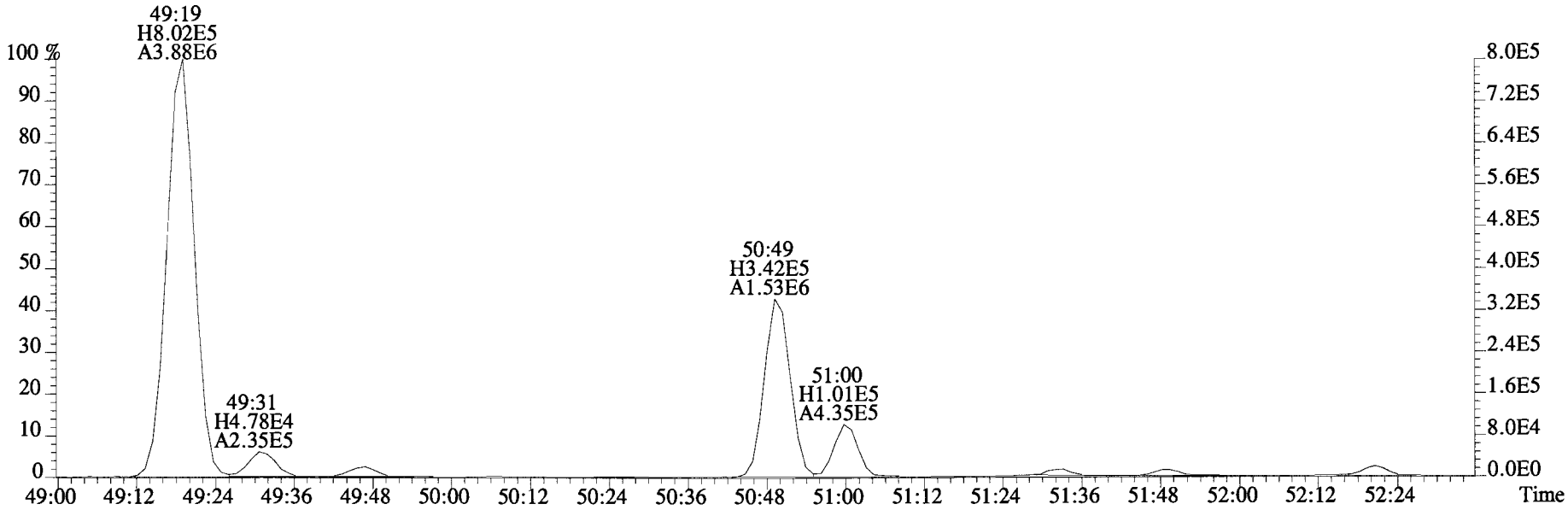
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



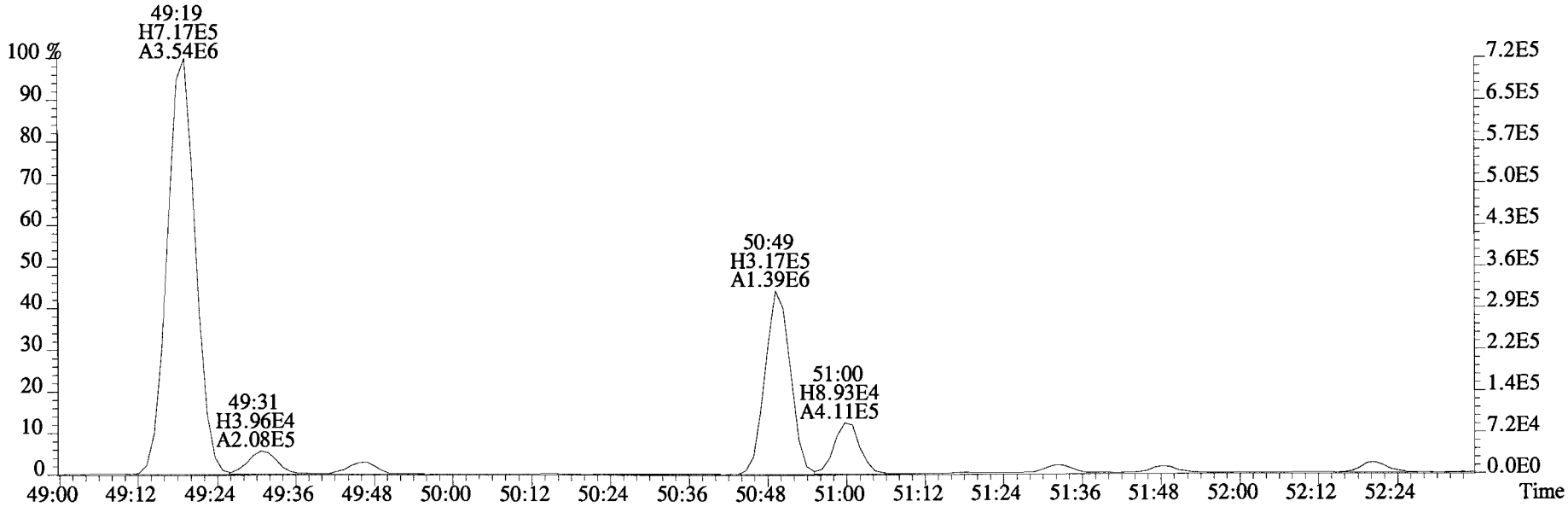
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)

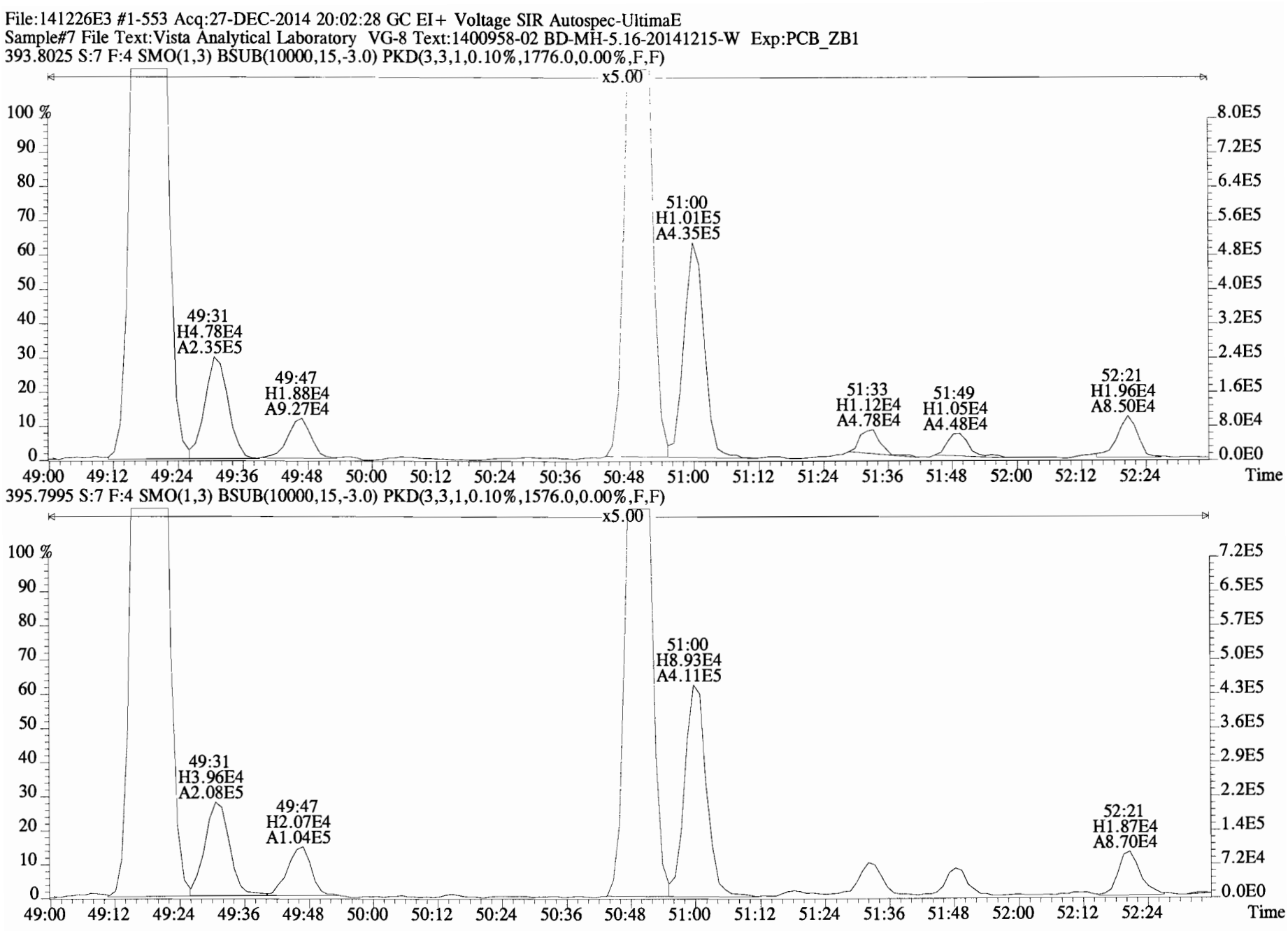


File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)

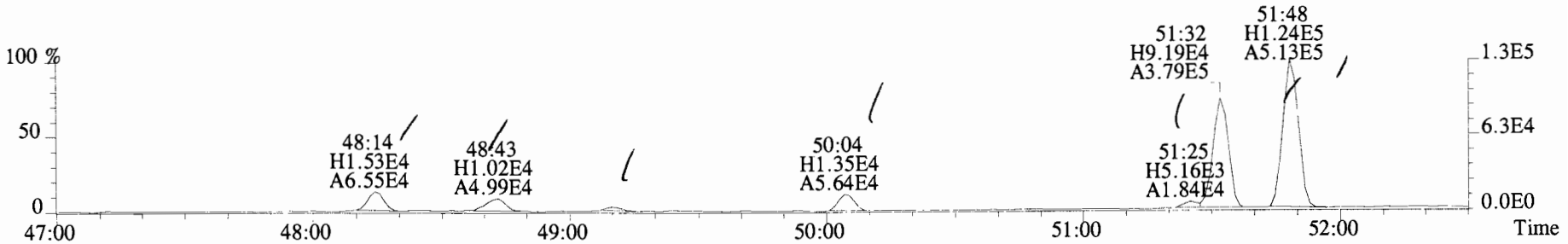


395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)

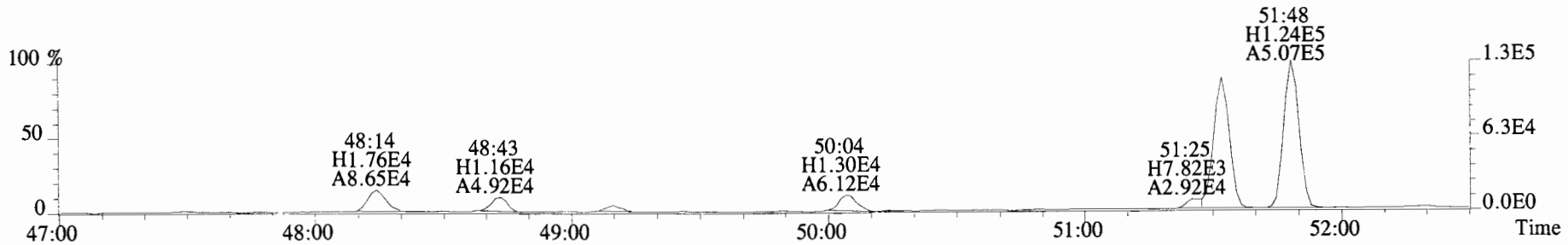



File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)
x5.00
49:31 H4.78E4 A2.35E5
49:47 H1.88E4 A9.27E4
51:00 H1.01E5 A4.35E5
51:33 H1.12E4 A4.78E4
51:49 H1.05E4 A4.48E4
52:21 H1.96E4 A8.50E4
Time
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)
x5.00
49:31 H3.96E4 A2.08E5
49:47 H2.07E4 A1.04E5
51:00 H8.93E4 A4.11E5
52:21 H1.87E4 A8.70E4
Time

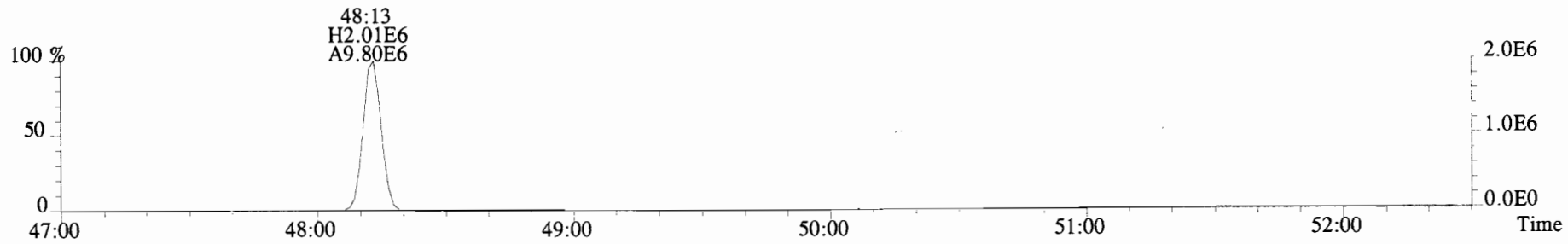
File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



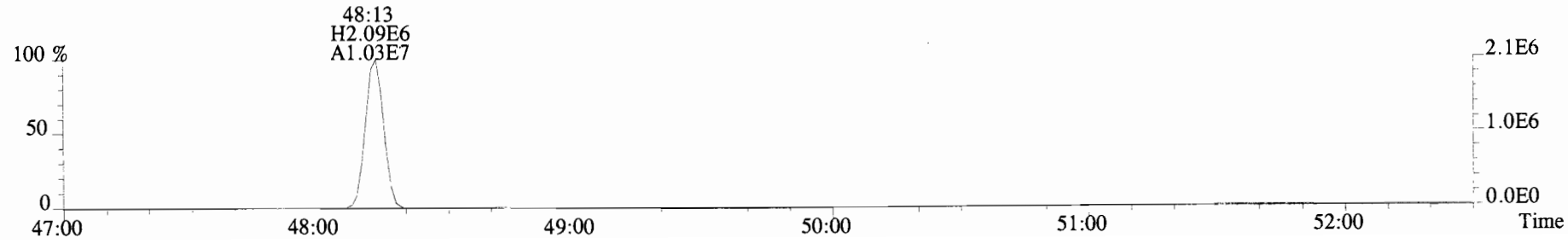
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



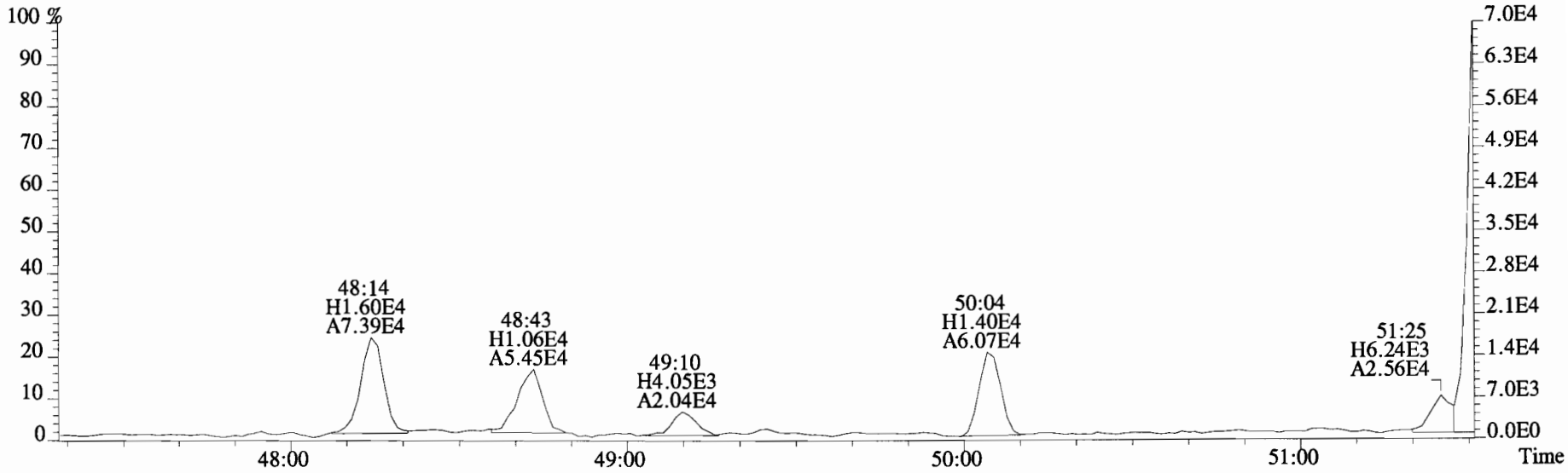
439.8038 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1832.0,0.00%,F,F)



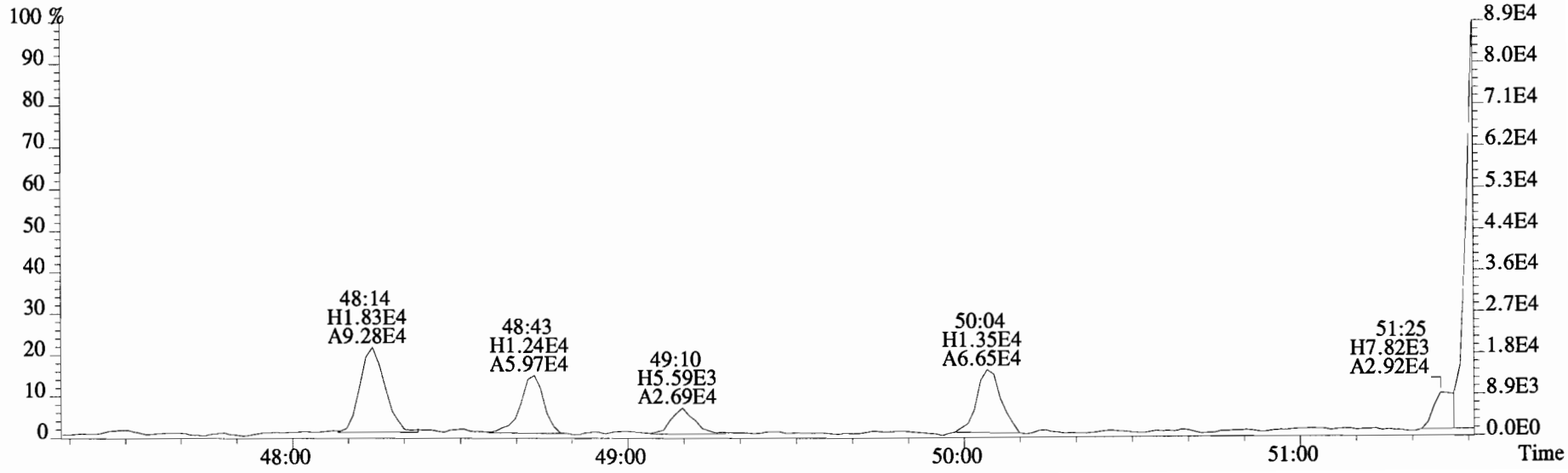
441.8008 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)

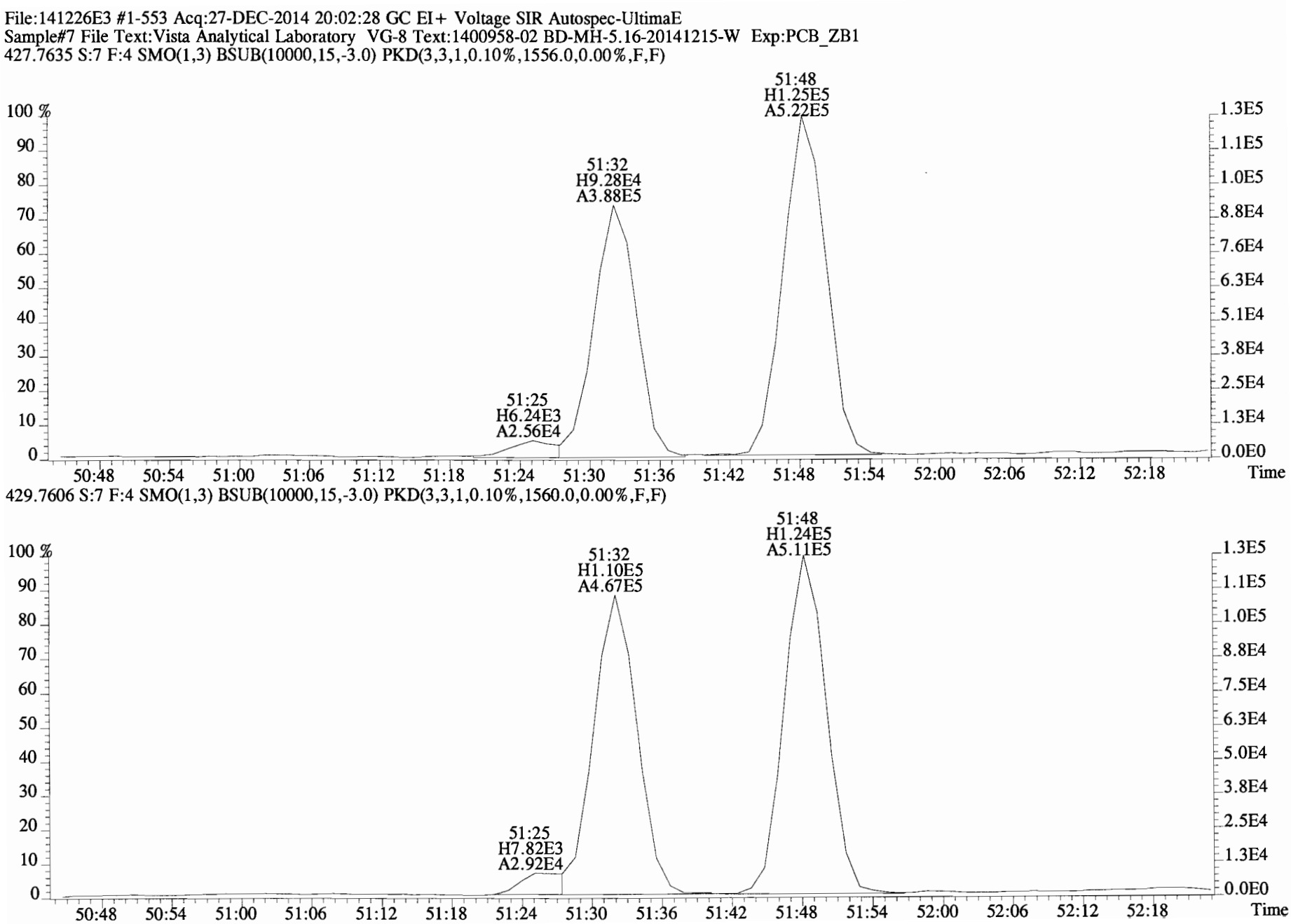


File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)

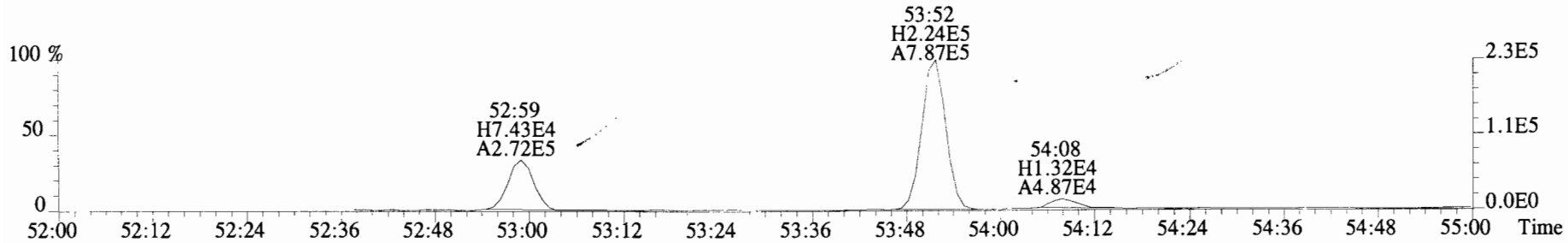


429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)

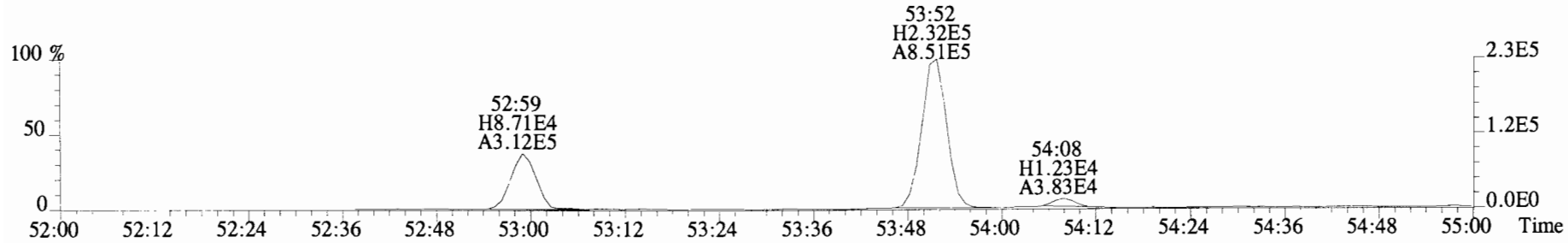



File:141226E3 #1-553 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)
51:48
H1.25E5
A5.22E5
51:32
H9.28E4
A3.88E5
51:25
H6.24E3
A2.56E4
100 %
90
80
70
60
50
40
30
20
10
0
1.3E5
1.1E5
1.0E5
8.8E4
7.6E4
6.3E4
5.1E4
3.8E4
2.5E4
1.3E4
0.0E0
50:48
50:54
51:00
51:06
51:12
51:18
51:24
51:30
51:36
51:42
51:48
51:54
52:00
52:06
52:12
52:18
Time
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)
51:48
H1.24E5
A5.11E5
51:32
H1.10E5
A4.67E5
51:25
H7.82E3
A2.92E4
100 %
90
80
70
60
50
40
30
20
10
0
1.3E5
1.1E5
1.0E5
8.8E4
7.5E4
6.3E4
5.0E4
3.8E4
2.5E4
1.3E4
0.0E0
50:48
50:54
51:00
51:06
51:12
51:18
51:24
51:30
51:36
51:42
51:48
51:54
52:00
52:06
52:12
52:18
Time

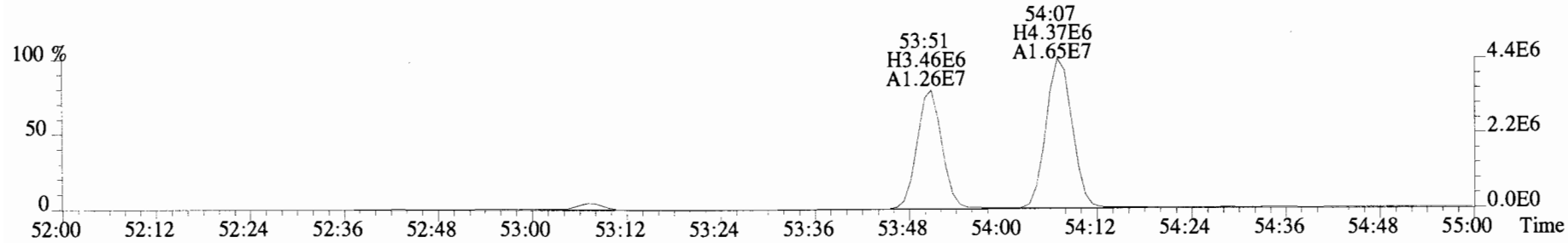
File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1864.0,0.00%,F,F)



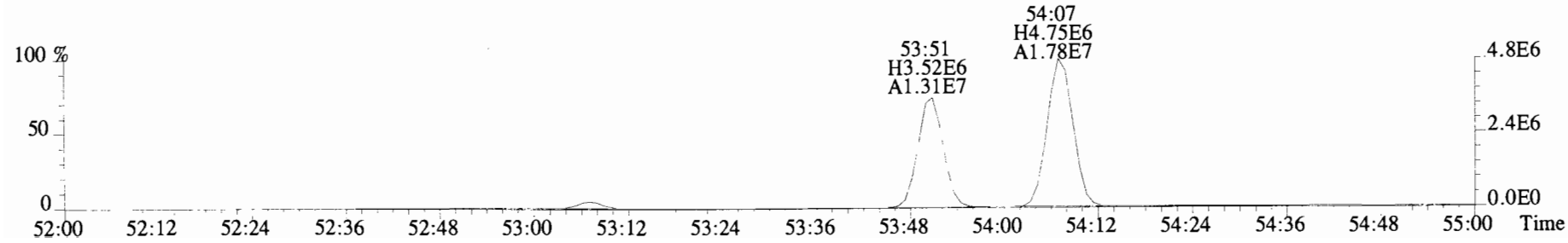
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)



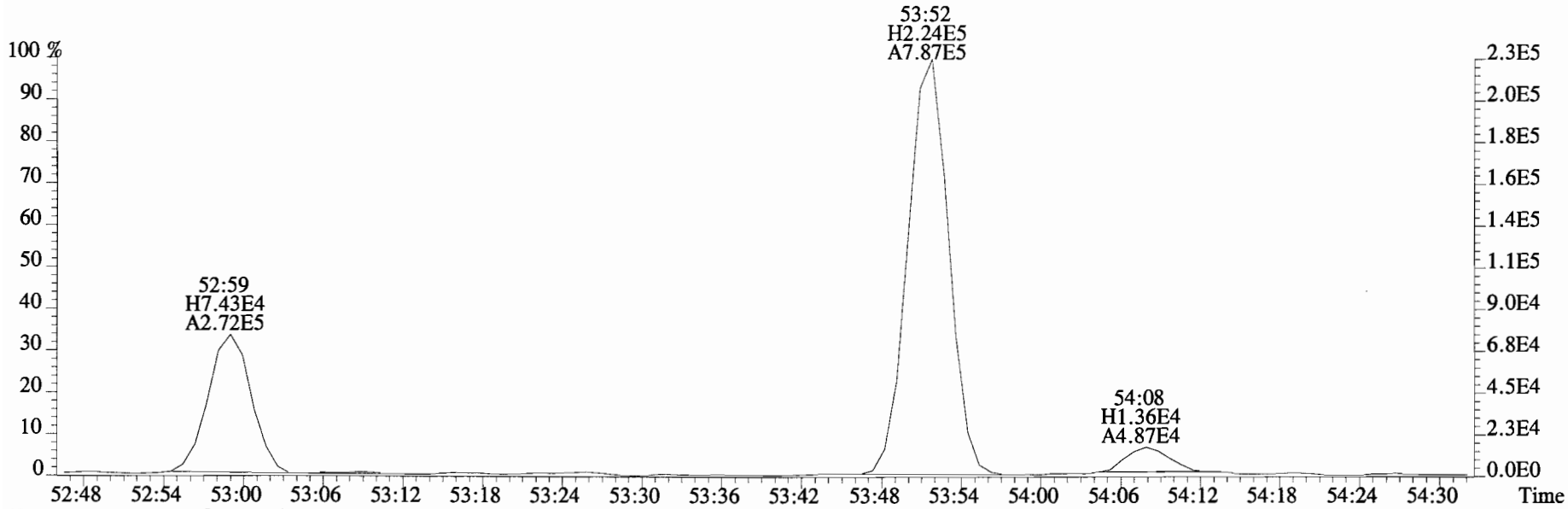
439.8038 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5516.0,0.00%,F,F)



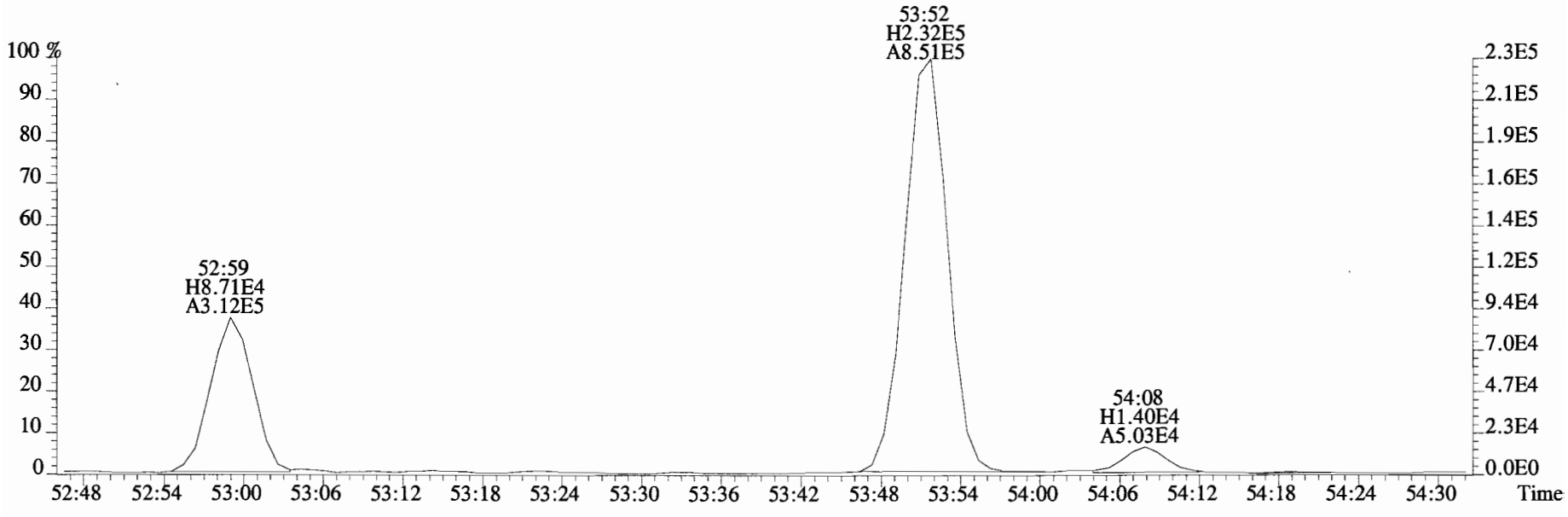
441.8008 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4404.0,0.00%,F,F)



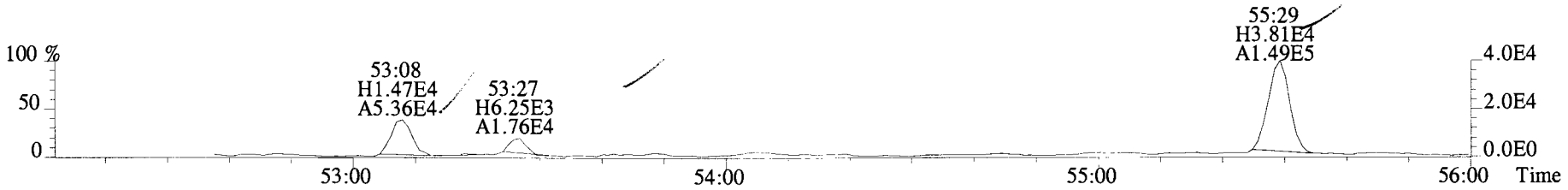
File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1864.0,0.00%,F,F)



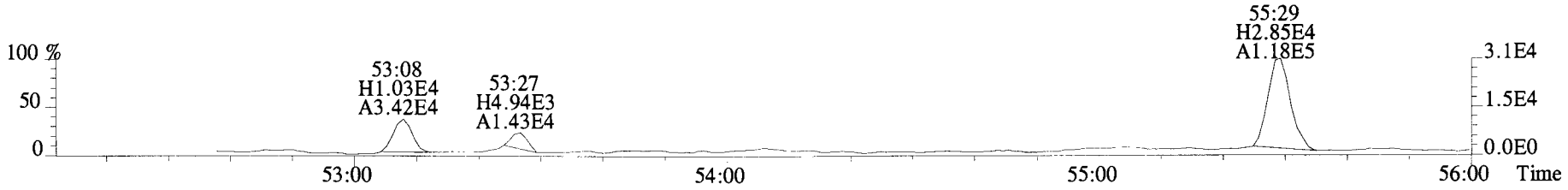
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)



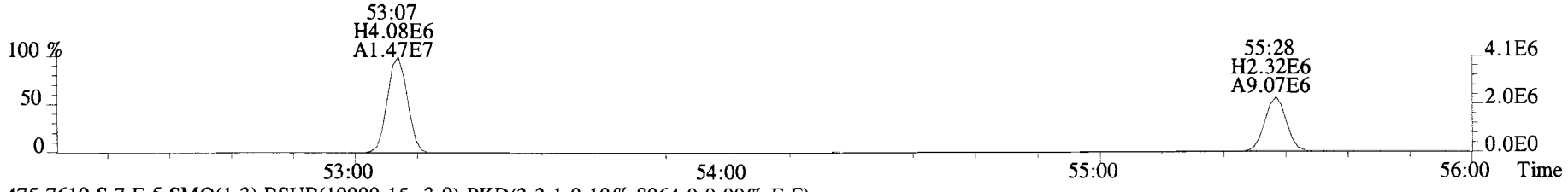
File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1500.0,0.00%,F,F)



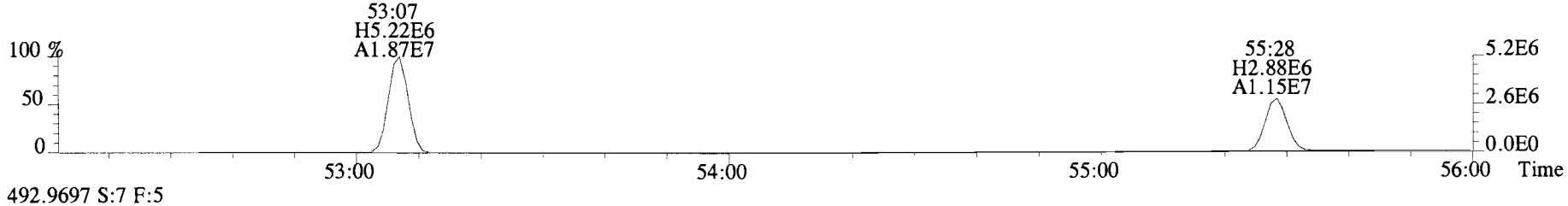
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



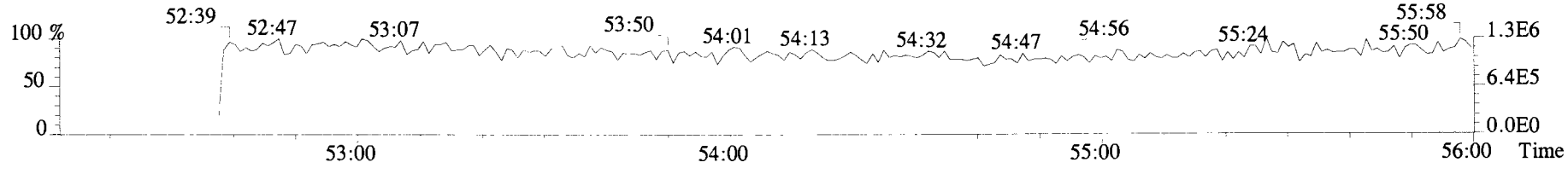
473.7648 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7392.0,0.00%,F,F)



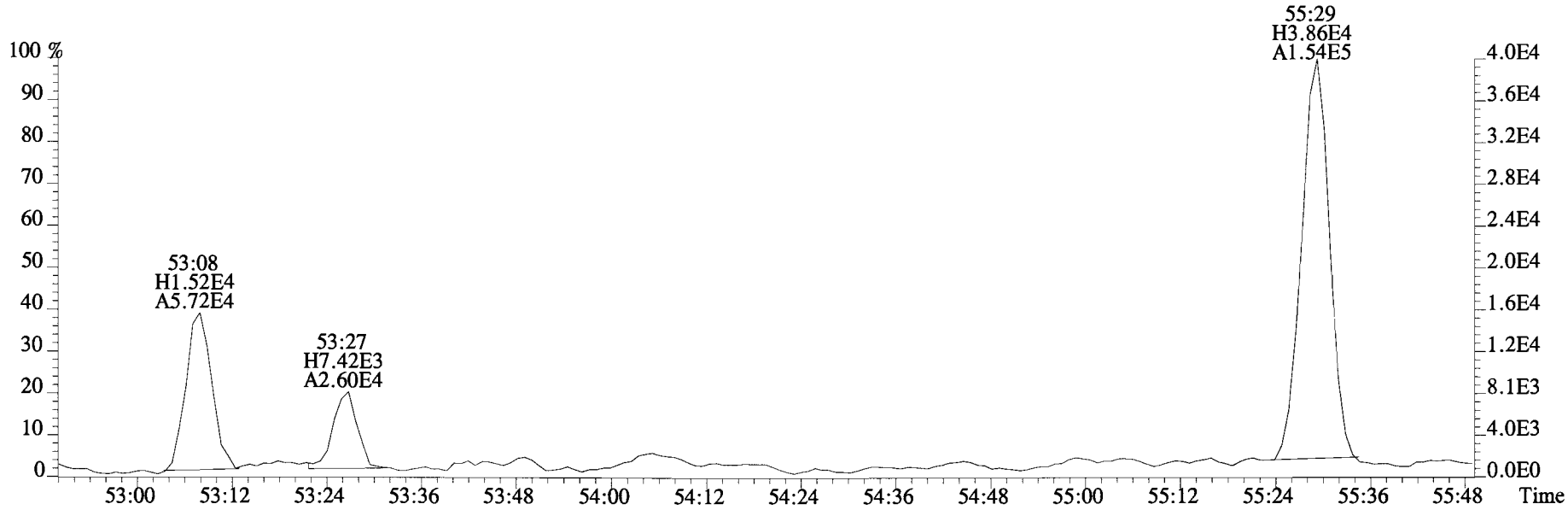
475.7619 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8064.0,0.00%,F,F)



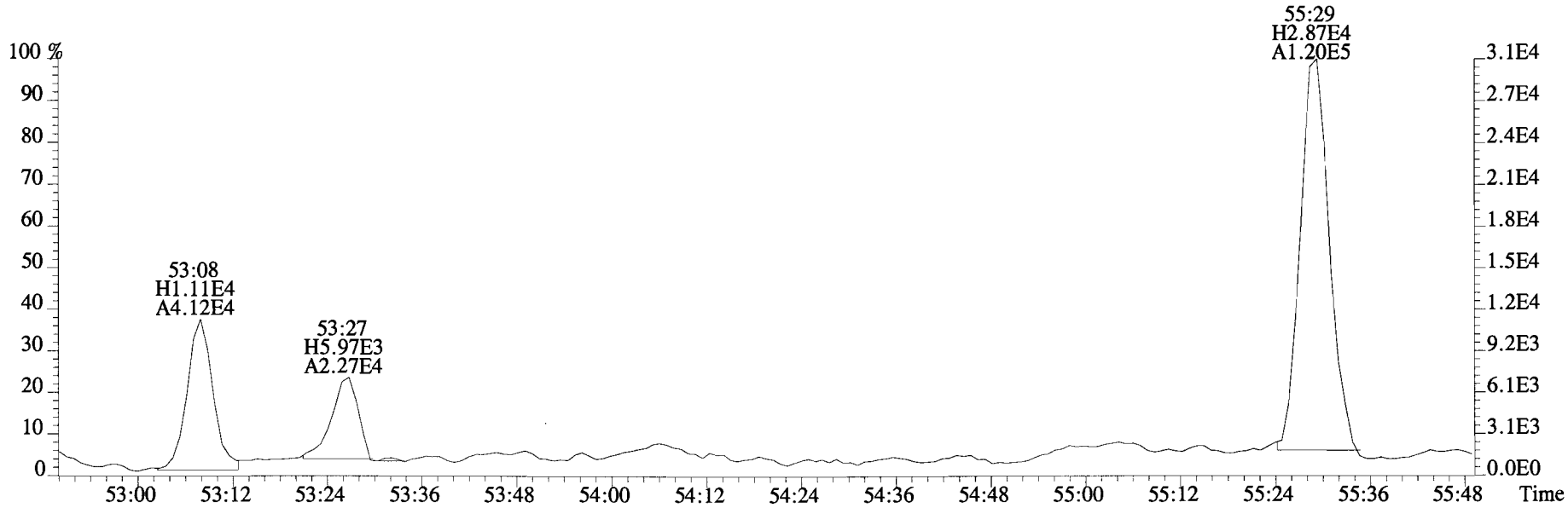
492.9697 S:7 F:5



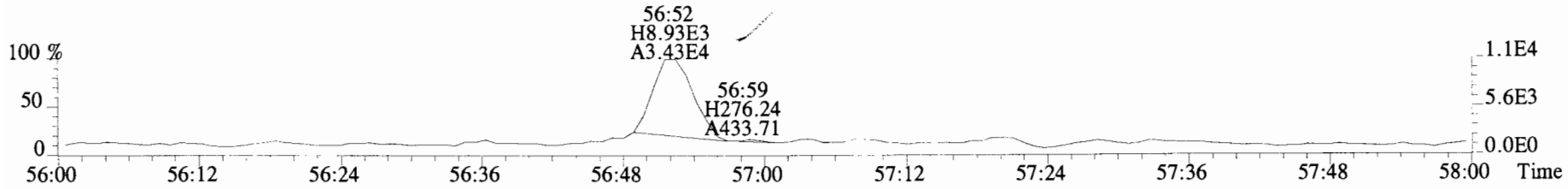
File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1500.0,0.00%,F,F)



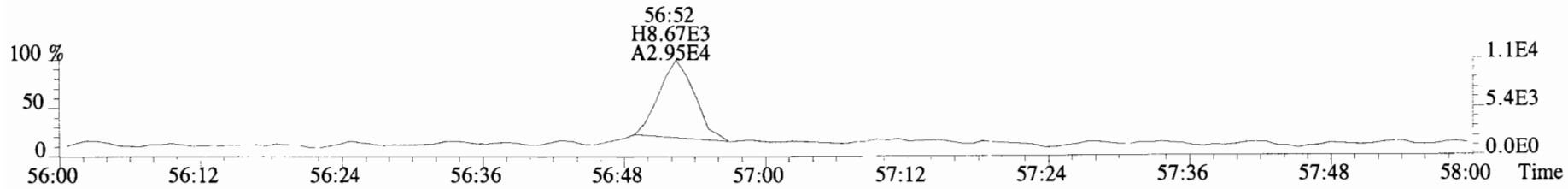
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



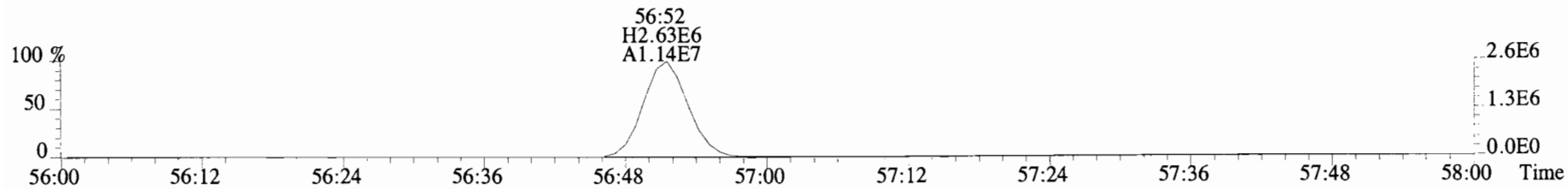
File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1596.0,0.00%,F,F)



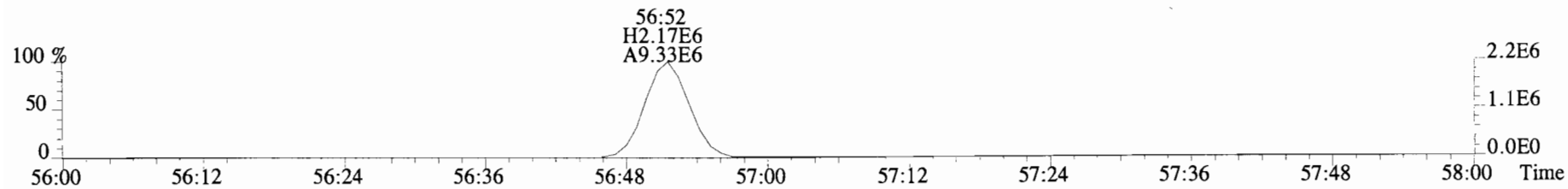
499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1656.0,0.00%,F,F)



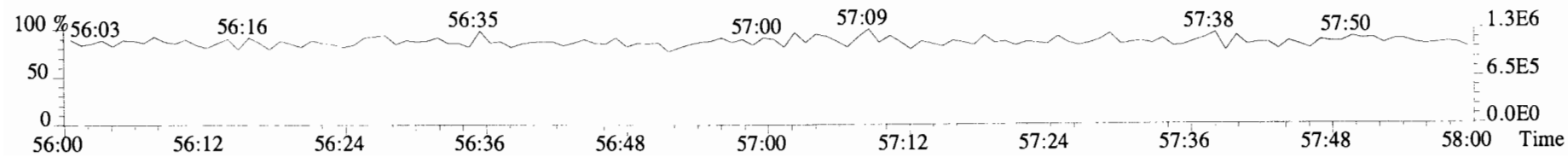
509.7229 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1636.0,0.00%,F,F)



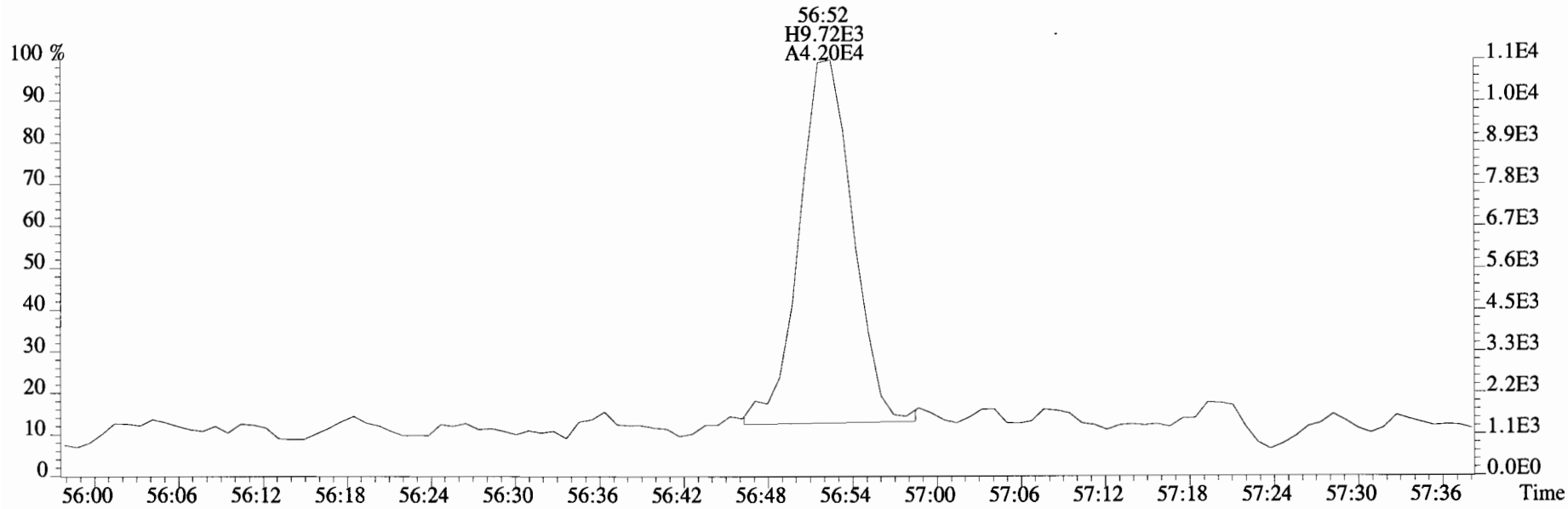
511.7199 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1672.0,0.00%,F,F)



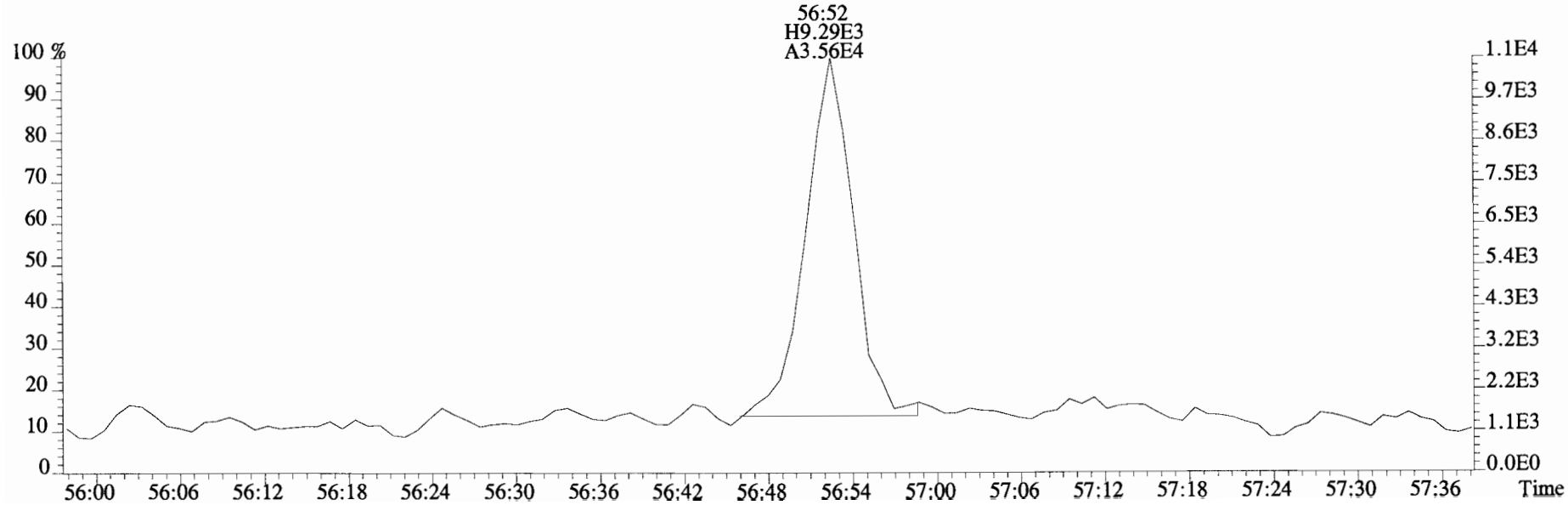
492.9697 S:7 F:5



File:141226E3 #1-429 Acq:27-DEC-2014 20:02:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400958-02 BD-MH-5.16-20141215-W Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1596.0,0.00%,F,F)



499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1656.0,0.00%,F,F)



CONTINUING CALIBRATION

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E1 S#1 Analysis Date: 26-DEC-14 Time: 11:22:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	3.02	2.66-3.60	y	49.1	37.5-62.5
PCB-2	3.05	2.66-3.60	y	48.5	37.5-62.5
PCB-3	3.04	2.66-3.60	y	49.1	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	227.9	150-250
PCB-7/9	1.64	1.33-1.79	y	224.5	150-250
PCB-6	1.64	1.33-1.79	y	107.1	75.0-125
PCB-5/8	1.64	1.33-1.79	y	224.8	150-250
PCB-14	1.65	1.33-1.79	y	114.9	75.0-125
PCB-11	1.65	1.33-1.79	y	113.5	75.0-125
PCB-12/13	1.65	1.33-1.79	y	226.2	150-250
PCB-15	1.65	1.33-1.79	y	111.9	75.0-125
PCB-19	1.09	0.88-1.20	y	51.9	37.5-62.5
PCB-30	1.09	0.88-1.20	y	52.5	37.5-62.5
PCB-18	1.08	0.88-1.20	y	51.3	37.5-62.5
PCB-17	1.08	0.88-1.20	y	51.4	37.5-62.5
PCB-24/27	1.08	0.88-1.20	y	104.6	75.0-125
PCB-16/32	1.08	0.88-1.20	y	102.2	75.0-125
PCB-34	1.07	0.88-1.20	y	57.9	37.5-62.5
PCB-23	1.09	0.88-1.20	y	48.1	37.5-62.5
PCB-29	1.07	0.88-1.20	y	51.9	37.5-62.5
PCB-26	1.07	0.88-1.20	y	51.1	37.5-62.5
PCB-25	1.07	0.88-1.20	y	51.2	37.5-62.5
PCB-31	1.06	0.88-1.20	y	48.7	37.5-62.5
PCB-28	1.08	0.88-1.20	y	54.5	37.5-62.5
PCB-20/21/33	1.07	0.88-1.20	y	152.4	112.5-225
PCB-22	1.07	0.88-1.20	y	52.5	37.5-62.5
PCB-36	1.07	0.88-1.20	y	54.3	37.5-62.5
PCB-39	1.06	0.88-1.20	y	53.8	37.5-62.5
PCB-38	1.06	0.88-1.20	y	55.8	37.5-62.5
PCB-35	1.05	0.88-1.20	y	52.7	37.5-62.5
PCB-37	1.06	0.88-1.20	y	52.4	37.5-62.5
PCB-54	0.79	0.65-0.89	y	50.5	37.5-62.5
PCB-50	0.77	0.65-0.89	y	48.4	37.5-62.5
PCB-53	0.81	0.65-0.89	y	50.4	37.5-62.5
PCB-51	0.80	0.65-0.89	y	53.8	37.5-62.5
PCB-45	0.79	0.65-0.89	y	51.2	37.5-62.5
PCB-46	0.81	0.65-0.89	y	49.5	37.5-62.5
PCB-52/69	0.79	0.65-0.89	y	97.5	75.0-125
PCB-73	0.78	0.65-0.89	y	54.0	37.5-62.5
PCB-43/49	0.80	0.65-0.89	y	97.0	75.0-125
PCB-47	0.79	0.65-0.89	y	49.1	37.5-62.5
PCB-48/75	0.79	0.65-0.89	y	103.6	75.0-125
PCB-65	0.79	0.65-0.89	y	53.5	37.5-62.5
PCB-62	0.79	0.65-0.89	y	46.9	37.5-62.5
PCB-44	0.79	0.65-0.89	y	49.0	37.5-62.5
PCB-42/59	0.79	0.65-0.89	y	99.2	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	203.1	150-250
PCB-68	0.79	0.65-0.89	y	50.3	37.5-62.5
PCB-40	0.78	0.65-0.89	y	49.8	37.5-62.5
PCB-57	0.80	0.65-0.89	y	50.9	37.5-62.5
PCB-67	0.78	0.65-0.89	y	47.2	37.5-62.5
PCB-58	0.80	0.65-0.89	y	50.4	37.5-62.5
PCB-63	0.76	0.65-0.89	y	49.6	37.5-62.5
PCB-74	0.79	0.65-0.89	y	51.3	37.5-62.5
PCB-61/70	0.79	0.65-0.89	y	101.5	75.0-125
PCB-76/66	0.80	0.65-0.89	y	103.1	75.0-125
PCB-80	0.80	0.65-0.89	y	50.0	37.5-62.5
PCB-55	0.81	0.65-0.89	y	48.7	37.5-62.5
PCB-56/60	0.80	0.65-0.89	y	100.3	75.0-125
PCB-79	0.80	0.65-0.89	y	49.0	37.5-62.5
PCB-78	0.78	0.65-0.89	y	52.8	37.5-62.5
PCB-81	0.77	0.65-0.89	y	52.1	37.5-62.5
PCB-77	0.80	0.65-0.89	y	53.0	37.5-62.5
PCB-104	1.63	1.32-1.78	y	53.5	37.5-62.5
PCB-96	1.60	1.32-1.78	y	55.8	37.5-62.5
PCB-103	1.57	1.32-1.78	y	54.4	37.5-62.5
PCB-100	1.60	1.32-1.78	y	53.6	37.5-62.5
PCB-94	1.61	1.32-1.78	y	53.0	37.5-62.5
PCB-95/98/102	1.60	1.32-1.78	y	161.9	112.5-225
PCB-93	1.65	1.32-1.78	y	50.8	37.5-62.5
PCB-88/91	1.58	1.32-1.78	y	121.4	75.0-125
PCB-121	1.63	1.32-1.78	y	43.7	37.5-62.5

Analyst: DMS

Date: 12/26/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E1 S#1 Analysis Date: 26-DEC-14 Time: 11:22:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.62	1.32-1.78	y	105.6	75.0-125	PCB-140	1.26	1.05-1.43	y	50.3	37.5-62.5
PCB-89	1.60	1.32-1.78	y	54.9	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	106.9	75.0-125
PCB-90/101	1.61	1.32-1.78	y	105.4	75.0-125	PCB-133/142	1.26	1.05-1.43	y	102.6	75.0-125
PCB-113	1.57	1.32-1.78	y	49.5	37.5-62.5	PCB-131	1.26	1.05-1.43	y	49.9	37.5-62.5
PCB-99	1.66	1.32-1.78	y	56.0	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	106.1	75.0-125
PCB-119	1.61	1.32-1.78	y	54.2	37.5-62.5	PCB-132/161	1.30	1.05-1.43	y	106.3	75.0-125
PCB-108/112	1.63	1.32-1.78	y	108.9	75.0-125	PCB-153	1.19	1.05-1.43	y	54.9	37.5-62.5
PCB-83	1.61	1.32-1.78	y	54.5	37.5-62.5	PCB-168	1.25	1.05-1.43	y	53.4	37.5-62.5
PCB-97	1.65	1.32-1.78	y	53.6	37.5-62.5	PCB-141	1.26	1.05-1.43	y	52.6	37.5-62.5
PCB-86	1.59	1.32-1.78	y	53.4	37.5-62.5	PCB-137	1.23	1.05-1.43	y	51.0	37.5-62.5
PCB-87/117/125	1.61	1.32-1.78	y	157.3	112.5-225	PCB-130	1.29	1.05-1.43	y	53.6	37.5-62.5
PCB-111/115	1.58	1.32-1.78	y	102.0	75.0-125	PCB-138/163/164	1.26	1.05-1.43	y	162.9	112.5-225
PCB-85/116	1.63	1.32-1.78	y	109.6	75.0-125	PCB-158/160	1.25	1.05-1.43	y	106.8	75.0-125
PCB-120	1.67	1.32-1.78	y	52.6	37.5-62.5	PCB-129	1.27	1.05-1.43	y	51.6	37.5-62.5
PCB-110	1.58	1.32-1.78	y	55.3	37.5-62.5	PCB-166	1.28	1.05-1.43	y	53.0	37.5-62.5
PCB-82	1.60	1.32-1.78	y	56.6	37.5-62.5	PCB-159	1.27	1.05-1.43	y	53.5	37.5-62.5
PCB-124	1.54	1.32-1.78	y	55.5	37.5-62.5	PCB-128/162	1.26	1.05-1.43	y	107.5	75.0-125
PCB-107/109	1.62	1.32-1.78	y	107.1	75.0-125	PCB-167	1.26	1.05-1.43	y	52.4	37.5-62.5
PCB-123	1.59	1.32-1.78	y	54.5	37.5-62.5	PCB-156	1.28	1.05-1.43	y	53.8	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	106.8	75.0-125	PCB-157	1.27	1.05-1.43	y	53.7	37.5-62.5
PCB-114	1.63	1.32-1.78	y	56.8	37.5-62.5	PCB-169	1.26	1.05-1.43	y	52.4	37.5-62.5
PCB-122	1.59	1.32-1.78	y	54.1	37.5-62.5	PCB-188	1.07	0.89-1.21	y	53.2	37.5-62.5
PCB-105	1.60	1.32-1.78	y	57.7	37.5-62.5	PCB-184	1.06	0.89-1.21	y	53.6	37.5-62.5
PCB-127	1.65	1.32-1.78	y	56.3	37.5-62.5	PCB-179	1.06	0.89-1.21	y	50.9	37.5-62.5
PCB-126	1.61	1.32-1.78	y	57.5	37.5-62.5	PCB-176	1.05	0.89-1.21	y	50.9	37.5-62.5
PCB-155	1.30	1.05-1.43	y	52.4	37.5-62.5	PCB-186	1.04	0.89-1.21	y	53.1	37.5-62.5
PCB-150	1.30	1.05-1.43	y	51.6	37.5-62.5	PCB-178	1.06	0.89-1.21	y	51.8	37.5-62.5
PCB-152	1.26	1.05-1.43	y	50.2	37.5-62.5	PCB-175	1.02	0.89-1.21	y	51.3	37.5-62.5
PCB-145	1.26	1.05-1.43	y	49.9	37.5-62.5	PCB-182/187	1.04	0.89-1.21	y	103.9	75.0-125
PCB-136	1.38	1.05-1.43	y	50.0	37.5-62.5	PCB-183	1.07	0.89-1.21	y	50.7	37.5-62.5
PCB-148	1.14	1.05-1.43	y	53.2	37.5-62.5	PCB-185	1.02	0.89-1.21	y	47.8	37.5-62.5
PCB-154	1.25	1.05-1.43	y	54.3	37.5-62.5	PCB-174	1.07	0.89-1.21	y	50.5	37.5-62.5
PCB-151	1.32	1.05-1.43	y	50.4	37.5-62.5	PCB-181	1.07	0.89-1.21	y	46.2	37.5-62.5
PCB-135	1.27	1.05-1.43	y	48.8	37.5-62.5	PCB-177	1.06	0.89-1.21	y	49.4	37.5-62.5
PCB-144	1.28	1.05-1.43	y	49.8	37.5-62.5	PCB-171	1.09	0.89-1.21	y	50.2	37.5-62.5
PCB-147	1.27	1.05-1.43	y	51.0	37.5-62.5	PCB-173	1.05	0.89-1.21	y	48.1	37.5-62.5
PCB-139/149	1.30	1.05-1.43	y	103.4	75.0-125	PCB-172	1.05	0.89-1.21	y	50.6	37.5-62.5

Analyst: DMS

Date: 12/26/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E1 S#1 Analysis Date: 26-DEC-14 Time: 11:22:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.06	0.89-1.21	y	51.2	37.5-62.5
PCB-180	1.05	0.89-1.21	y	51.1	37.5-62.5
PCB-193	1.07	0.89-1.21	y	52.7	37.5-62.5
PCB-191	1.06	0.89-1.21	y	52.5	37.5-62.5
PCB-170	1.04	0.89-1.21	y	55.1	37.5-62.5
PCB-190	1.07	0.89-1.21	y	55.3	37.5-62.5
PCB-189	1.09	0.89-1.21	y	53.9	37.5-62.5
PCB-202	0.90	0.76-1.02	y	49.6	37.5-62.5
PCB-201	0.87	0.76-1.02	y	48.7	37.5-62.5
PCB-204	0.93	0.76-1.02	y	50.9	37.5-62.5
PCB-197	0.91	0.76-1.02	y	51.7	37.5-62.5
PCB-200	0.89	0.76-1.02	y	53.3	37.5-62.5
PCB-198	0.92	0.76-1.02	y	45.2	37.5-62.5
PCB-199	0.92	0.76-1.02	y	54.1	37.5-62.5
PCB-196/203	0.93	0.76-1.02	y	101.1	75.0-125
PCB-195	0.90	0.76-1.02	y	50.0	37.5-62.5
PCB-194	0.94	0.76-1.02	y	53.1	37.5-62.5
PCB-205	0.92	0.76-1.02	y	54.9	37.5-62.5
PCB-208	1.35	1.14-1.54	y	52.2	37.5-62.5
PCB-207	1.38	1.14-1.54	y	54.7	37.5-62.5
PCB-206	1.35	1.14-1.54	y	54.3	37.5-62.5
PCB-209	1.17	0.99-1.33	y	53.7	37.5-62.5

Analyst: DMS

Date: 12/26/14

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E1-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E1 S#1 Analysis Date: 26-DEC-14 Time: 11:22:34

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.25	2.66-3.60	y	116.3	50.0-145
13C-PCB-3	3.31	2.66-3.60	y	114.1	50.0-145
13C-PCB-4	1.61	1.33-1.79	y	108.4	50.0-145
13C-PCB-9	1.62	1.33-1.79	y	107.3	50.0-145
13C-PCB-11	1.61	1.33-1.79	y	101.0	50.0-145
13C-PCB-19	1.09	0.88-1.20	y	89.7	50.0-145
13C-PCB-32	1.08	0.88-1.20	y	90.1	50.0-145
13C-PCB-28	1.09	0.88-1.20	y	100.3	50.0-145
13C-PCB-37	1.08	0.88-1.20	y	92.5	50.0-145
13C-PCB-54	0.80	0.65-0.89	y	106.4	50.0-145
13C-PCB-52	0.81	0.65-0.89	y	99.3	50.0-145
13C-PCB-47	0.79	0.65-0.89	y	99.6	50.0-145
13C-PCB-70	0.79	0.65-0.89	y	98.5	50.0-145
13C-PCB-80	0.80	0.65-0.89	y	100.4	50.0-145
13C-PCB-81	0.80	0.65-0.89	y	96.7	50.0-145
13C-PCB-77	0.80	0.65-0.89	y	97.1	50.0-145
13C-PCB-104	1.61	1.32-1.78	y	99.3	50.0-145
13C-PCB-95	1.59	1.32-1.78	y	100.2	50.0-145
13C-PCB-101	1.56	1.32-1.78	y	100.0	50.0-145
13C-PCB-97	1.65	1.32-1.78	y	101.1	50.0-145
13C-PCB-123	1.56	1.32-1.78	y	100.0	50.0-145
13C-PCB-118	1.60	1.32-1.78	y	102.3	50.0-145
13C-PCB-114	1.64	1.32-1.78	y	114.2	50.0-145
13C-PCB-105	1.64	1.32-1.78	y	115.9	50.0-145
13C-PCB-127	1.64	1.32-1.78	y	115.2	50.0-145
13C-PCB-126	1.68	1.32-1.78	y	112.5	50.0-145
13C-PCB-155	1.26	1.05-1.43	y	99.2	50.0-145
13C-PCB-153	1.32	1.05-1.43	y	102.0	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	101.5	50.0-145
13C-PCB-138	1.26	1.05-1.43	y	102.6	50.0-145
13C-PCB-159	1.30	1.05-1.43	y	99.5	50.0-145
13C-PCB-167	1.26	1.05-1.43	y	101.4	50.0-145
13C-PCB-156	1.33	1.05-1.43	y	97.2	50.0-145
13C-PCB-157	1.37	1.05-1.43	y	99.4	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.30	1.05-1.43	y	103.6	50 - 145
13C-PCB-188	0.49	0.38-0.52	y	96.7	50 - 145
13C-PCB-180	0.45	0.38-0.52	y	99.1	50 - 145
13C-PCB-170	0.49	0.38-0.52	y	91.7	50 - 145
13C-PCB-189	0.45	0.38-0.52	y	90.3	50 - 145
13C-PCB-202	0.96	0.76-1.02	y	93.7	50 - 145
13C-PCB-194	0.95	0.76-1.02	y	99.7	50 - 145
13C-PCB-208	0.78	0.65-0.89	y	83.7	50 - 145
13C-PCB-206	0.79	0.65-0.89	y	93.1	50 - 145
13C-PCB-209	1.19	0.99-1.33	y	101.0	50 - 145

CRS vs. RS

13C-PCB-79	0.78	0.65-0.89	y	100.3	75 - 125
13C-PCB-178	0.47	0.38-0.52	y	99.9	75 - 125

Analyst: DMS

Date: 12/26/14

Client ID: PCB CS3 14L2401 Filename: 141226E1 S:1 Acq:26-DEC-14 11:22:34 ConCal: ST141226E1-1
Lab ID: ST141226E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	4.60e+07	3.02	y	1.25	16:07	1.001	0.996	1.006	49.0610
	PCB-2	4.38e+07	3.05	y	1.18	18:30	0.988	0.983	0.993	48.4802
	PCB-3	4.57e+07	3.04	y	1.22	18:44	1.001	0.996	1.006	49.1032
	PCB-4/10	1.52e+08	1.64	y	1.55	20:06	1.003	0.998	1.008	227.901
	PCB-7/9	1.82e+08	1.64	y	1.27	21:52	0.868	0.865	0.873	224.470
	PCB-6	8.64e+07	1.64	y	1.26	22:31	0.893	0.890	0.899	107.139
	PCB-5/8	1.77e+08	1.64	y	1.23	22:56	0.910	0.906	0.916	224.785
	PCB-14	9.68e+07	1.65	y	1.23	24:02	0.954	0.949	0.959	114.906
	PCB-11	8.99e+07	1.65	y	1.16	25:13	1.001	0.996	1.006	113.468
	PCB-12/13	1.70e+08	1.65	y	1.10	25:37	1.017	1.010	1.020	226.181
	PCB-15	9.24e+07	1.65	y	1.21	25:55	1.028	1.024	1.034	111.876
	PCB-19	2.32e+07	1.09	y	1.30	24:13	1.001	0.996	1.006	51.9110
	PCB-30	3.31e+07	1.09	y	1.83	25:06	1.038	1.032	1.042	52.4544
	PCB-18	2.34e+07	1.08	y	0.86	25:51	0.954	0.949	0.959	51.3106
	PCB-17	2.45e+07	1.08	y	0.90	26:01	0.960	0.955	0.965	51.3844
	PCB-24/27	6.52e+07	1.08	y	1.18	26:36	0.981	0.976	0.986	104.575
-	PCB-16/32	5.58e+07	1.08	y	1.03	27:06	1.000	0.995	1.005	102.232
-	PCB-34	4.24e+07	1.07	y	1.26	27:54	0.960	0.956	0.966	57.9144
	PCB-23	3.66e+07	1.09	y	1.31	28:00	0.964	0.959	0.969	48.0997
	PCB-29	4.00e+07	1.07	y	1.33	28:15	0.972	0.967	0.977	51.8619
	PCB-26	3.84e+07	1.07	y	1.29	28:27	0.979	0.974	0.984	51.1481
	PCB-25	4.00e+07	1.07	y	1.34	28:36	0.984	0.980	0.990	51.2350
	PCB-31	4.02e+07	1.06	y	1.42	28:58	0.997	0.992	1.002	48.7304
	PCB-28	4.36e+07	1.08	y	1.38	29:04	1.000	0.996	1.006	54.5299
	PCB-20/21/33	1.16e+08	1.07	y	1.31	29:41	1.022	1.017	1.027	152.380
	PCB-22	4.03e+07	1.07	y	1.32	30:07	1.037	1.032	1.042	52.5278
	PCB-36	3.75e+07	1.07	y	1.38	30:44	0.934	0.929	0.939	54.3345
	PCB-39	3.83e+07	1.06	y	1.42	31:12	0.948	0.943	0.953	53.7951
	PCB-38	3.79e+07	1.06	y	1.35	31:59	0.971	0.967	0.976	55.7631
	PCB-35	3.64e+07	1.05	y	1.38	32:29	0.987	0.982	0.992	52.7481
	PCB-37	3.66e+07	1.06	y	1.39	32:55	1.000	0.996	1.006	52.4316
	PCB-54	2.59e+07	0.79	y	1.20	27:57	1.001	0.996	1.006	50.5271
	PCB-50	2.01e+07	0.77	y	0.97	29:07	1.042	1.037	1.047	48.4145
	PCB-53	2.00e+07	0.81	y	1.19	29:46	0.946	0.941	0.951	50.3694
	PCB-51	2.07e+07	0.80	y	1.15	30:06	0.957	0.952	0.962	53.8174
	PCB-45	1.65e+07	0.79	y	0.97	30:32	0.970	0.966	0.976	51.2166
	PCB-46	1.57e+07	0.81	y	0.95	31:01	0.986	0.982	0.992	49.5073

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	4.16e+07	0.79	y	1.28	31:29	1.001	0.996	1.006	97.5413
PCB-73	2.47e+07	0.78	y	1.37	31:36	1.004	1.000	1.010	54.0317
PCB-43/49	3.60e+07	0.80	y	1.11	31:46	1.010	1.005	1.015	97.0303
PCB-47	1.96e+07	0.79	y	1.13	31:59	1.000	0.996	1.006	49.1359
PCB-48/75	4.75e+07	0.79	y	1.30	32:05	1.004	0.999	1.009	103.567
PCB-65	2.51e+07	0.79	y	1.33	32:21	1.012	1.007	1.017	53.5466
PCB-62	2.13e+07	0.79	y	1.29	32:28	1.016	1.011	1.021	46.9003
PCB-44	1.62e+07	0.79	y	0.94	32:46	1.025	1.020	1.030	48.9585
PCB-42/59	4.24e+07	0.79	y	1.22	33:00	1.032	1.028	1.038	99.2307
PCB-41/64/71/72	9.37e+07	0.78	y	1.31	33:35	1.050	1.046	1.056	203.143
PCB-68	2.62e+07	0.79	y	1.49	33:50	1.058	1.054	1.064	50.2548
PCB-40	1.43e+07	0.78	y	0.82	34:04	1.066	1.061	1.071	49.7899
PCB-57	2.50e+07	0.80	y	1.11	34:25	0.970	0.965	0.975	50.9394
PCB-67	2.23e+07	0.78	y	1.07	34:43	0.979	0.974	0.984	47.1795
PCB-58	2.45e+07	0.80	y	1.10	34:50	0.982	0.977	0.987	50.4214
PCB-63	2.44e+07	0.76	y	1.12	34:59	0.986	0.982	0.992	49.5894
PCB-74	2.72e+07	0.79	y	1.20	35:16	0.994	0.990	1.000	51.3047
PCB-61/70	4.83e+07	0.79	y	1.08	35:28	1.000	0.994	1.004	101.519
PCB-76/66	5.17e+07	0.80	y	1.14	35:40	1.005	1.001	1.011	103.138
PCB-80	2.92e+07	0.80	y	1.28	35:54	1.000	0.996	1.006	49.9682
PCB-55	2.48e+07	0.81	y	1.11	36:13	1.009	1.005	1.015	48.6946
PCB-56/60	4.99e+07	0.80	y	1.09	36:43	1.023	1.018	1.028	100.312
PCB-79	2.52e+07	0.80	y	1.12	37:47	1.053	1.048	1.058	48.9897
PCB-78	2.51e+07	0.78	y	1.24	38:28	0.986	0.982	0.992	52.7855
PCB-81	2.76e+07	0.77	y	1.38	39:00	1.000	0.995	1.005	52.0736
PCB-77	2.63e+07	0.80	y	1.21	39:35	1.000	0.995	1.005	53.0114
PCB-104	1.80e+07	1.63	y	1.26	32:38	1.000	0.996	1.006	53.5354
PCB-96	1.63e+07	1.60	y	1.09	33:53	1.039	1.034	1.044	55.7688
PCB-103	1.35e+07	1.57	y	0.93	34:26	1.056	1.050	1.060	54.3848
PCB-100	1.43e+07	1.60	y	1.00	34:47	1.066	1.061	1.071	53.5569
PCB-94	1.18e+07	1.61	y	1.11	35:15	0.985	0.981	0.991	53.0209
PCB-95/98/102	3.96e+07	1.60	y	1.21	35:45	0.999	0.994	1.004	161.943
PCB-93	1.16e+07	1.65	y	1.13	35:53	1.003	0.998	1.008	50.8371
PCB-88/91	2.49e+07	1.58	y	1.02	36:10	1.011	1.006	1.016	121.372
PCB-121	1.67e+07	1.63	y	1.90	36:17	1.014	1.009	1.019	43.6647
PCB-84/92	2.36e+07	1.62	y	1.05	37:05	0.990	0.986	0.996	105.573
PCB-89	1.18e+07	1.60	y	1.02	37:17	0.996	0.991	1.001	54.8951

RL: MONO, TRI - DECA: ~~—~~

RL: DI : ~~—~~

Integrations by Analyst: DMS Date: 12/26/14

Reviewed by Analyst: CJ Date: 12/29/14

Client ID: PCB CS3 14L2401 Filename: 141226E1 S:1 Acq:26-DEC-14 11:22:34 ConCal: ST141226E1-1
Lab ID: ST141226E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	2.66e+07	1.61	y	1.19	37:28	1.000	0.996	1.006	105.435
	PCB-113	1.42e+07	1.57	y	1.35	37:42	1.007	1.002	1.012	49.4509
	PCB-99	1.53e+07	1.66	y	1.29	37:47	1.009	1.005	1.015	55.9738
	PCB-119	1.76e+07	1.61	y	1.72	38:16	0.987	0.982	0.992	54.2424
	PCB-108/112	2.64e+07	1.63	y	1.29	38:25	0.991	0.986	0.996	108.901
	PCB-83	1.56e+07	1.61	y	1.52	38:34	0.995	0.991	1.001	54.5003
	PCB-97	1.26e+07	1.65	y	1.25	38:47	1.001	0.996	1.006	53.5763
	PCB-86	1.03e+07	1.59	y	1.02	38:55	1.004	1.000	1.010	53.3577
	B-87/117/125	4.61e+07	1.61	y	1.56	39:02	1.007	1.002	1.012	157.300
	PCB-111/115	3.36e+07	1.58	y	1.75	39:12	1.011	1.007	1.017	102.017
	PCB-85/116	2.69e+07	1.63	y	1.30	39:20	1.015	1.010	1.020	109.584
	PCB-120	1.76e+07	1.67	y	1.78	39:34	1.021	1.016	1.026	52.6249
	PCB-110	1.75e+07	1.58	y	1.68	39:42	1.024	1.020	1.030	55.3219
	PCB-82	1.07e+07	1.60	y	0.74	40:20	0.976	0.972	0.982	56.5594
	PCB-124	1.88e+07	1.54	y	1.32	41:01	0.993	0.988	0.998	55.5492
	PCB-107/109	3.35e+07	1.62	y	1.22	41:10	0.996	0.991	1.001	107.112
	PCB-123	1.70e+07	1.59	y	1.22	41:20	1.000	0.995	1.005	54.4885
-	PCB-106/118	3.56e+07	1.62	y	1.22	41:31	1.000	0.996	1.006	106.792
-	PCB-114	2.78e+07	1.63	y	1.36	42:10	1.000	0.995	1.005	56.7522
	PCB-122	2.42e+07	1.59	y	1.24	42:18	1.004	0.999	1.009	54.1231
	PCB-105	2.79e+07	1.60	y	1.28	43:01	1.000	0.995	1.005	57.6649
	PCB-127	2.60e+07	1.65	y	1.14	43:22	1.001	0.995	1.005	56.3159
	PCB-126	2.53e+07	1.61	y	1.28	45:15	1.000	0.995	1.005	57.4797
	PCB-155	1.33e+07	1.30	y	1.14	37:01	1.001	0.966	1.006	52.3973
	PCB-150	1.22e+07	1.30	y	1.06	38:17	1.035	1.030	1.040	51.5963
	PCB-152	1.23e+07	1.26	y	1.10	38:45	1.048	1.043	1.053	50.1774
	PCB-145	1.22e+07	1.26	y	1.09	39:12	1.060	1.055	1.065	49.8712
	PCB-136	1.21e+07	1.38	y	1.08	39:32	1.068	1.064	1.074	50.0231
	PCB-148	8.79e+06	1.14	y	0.74	39:38	1.071	1.066	1.076	53.1982
	PCB-154	1.07e+07	1.25	y	0.88	40:07	1.084	1.079	1.089	54.2649
	PCB-151	9.10e+06	1.32	y	0.81	40:46	1.102	1.097	1.107	50.4409
	PCB-135	8.48e+06	1.27	y	0.78	40:58	1.108	1.101	1.113	48.8197
	PCB-144	9.10e+06	1.28	y	0.82	41:05	1.110	1.105	1.116	49.7949
	PCB-147	9.42e+06	1.27	y	0.83	41:13	1.114	1.011	1.120	50.9653
	PCB-139/149	1.95e+07	1.30	y	0.84	41:29	1.121	1.115	1.127	103.370
-	PCB-140	8.80e+06	1.26	y	0.79	41:39	1.126	1.120	1.132	50.3010
-	PCB-134/143	2.95e+07	1.24	y	0.93	42:05	0.975	0.970	0.980	106.881

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-133/142	2.89e+07	1.26	y	0.95	42:23	0.982	0.977	0.987	102.635
	PCB-131	1.36e+07	1.26	y	0.91	42:33	0.986	0.981	0.991	49.8732
	PCB-146/165	3.65e+07	1.25	y	1.16	42:46	0.991	0.986	0.996	106.102
	PCB-132/161	3.52e+07	1.30	y	1.11	43:01	0.996	0.992	1.002	106.266
	PCB-153	1.93e+07	1.19	y	1.18	43:11	1.000	0.995	1.005	54.9480
	PCB-168	2.18e+07	1.25	y	1.37	43:24	1.005	1.000	1.010	53.4064
	PCB-141	1.46e+07	1.26	y	0.97	43:55	1.000	0.996	1.005	52.6016
	PCB-137	1.56e+07	1.23	y	1.07	44:18	1.009	1.004	1.014	51.0443
	PCB-130	1.30e+07	1.29	y	0.85	44:24	1.011	1.007	1.017	53.5939
	PCB-138/163/164	5.61e+07	1.26	y	1.23	44:47	1.001	0.996	1.006	162.940
	PCB-158/160	3.87e+07	1.25	y	1.29	45:01	1.006	1.001	1.011	106.779
	PCB-129	1.34e+07	1.27	y	0.92	45:15	1.011	1.007	1.017	51.5618
	PCB-166	1.85e+07	1.28	y	1.12	45:43	0.993	0.988	0.998	53.0093
	PCB-159	1.95e+07	1.27	y	1.16	46:02	1.000	0.995	1.005	53.4771
	PCB-128/162	3.43e+07	1.26	y	1.02	46:20	1.007	1.002	1.012	107.467
	PCB-167	1.96e+07	1.26	y	1.06	46:43	1.000	0.995	1.005	52.4246
	PCB-156	2.02e+07	1.28	y	1.18	48:02	1.001	0.995	1.005	53.7928
	PCB-157	1.99e+07	1.27	y	1.08	48:17	1.000	0.995	1.005	53.6612
	PCB-169	1.92e+07	1.26	y	1.11	50:27	1.000	0.995	1.005	52.3884
	PCB-188	1.77e+07	1.07	y	1.40	42:49	1.001	0.995	1.005	53.2340
	PCB-184	1.57e+07	1.06	y	1.24	43:16	1.011	1.006	1.016	53.6054
	PCB-179	1.58e+07	1.06	y	1.30	44:03	1.029	1.024	1.034	50.8710
	PCB-176	1.65e+07	1.05	y	1.36	44:31	1.040	1.035	1.045	50.9379
	PCB-186	1.61e+07	1.04	y	1.28	45:07	1.054	1.049	1.059	53.0814
	PCB-178	1.15e+07	1.06	y	0.94	45:37	1.066	1.061	1.071	51.7635
	PCB-175	1.18e+07	1.02	y	0.97	45:57	1.074	1.069	1.079	51.2635
	PCB-182/187	2.50e+07	1.04	y	1.01	46:08	1.078	1.073	1.083	103.862
	PCB-183	1.30e+07	1.07	y	1.08	46:27	1.085	1.080	1.090	50.7129
	PCB-185	1.12e+07	1.02	y	1.34	47:06	0.956	0.951	0.961	47.8238
	PCB-174	1.18e+07	1.07	y	1.34	47:28	0.963	0.958	0.968	50.5171
	PCB-181	1.10e+07	1.07	y	1.36	47:35	0.965	0.961	0.971	46.2495
	PCB-177	1.07e+07	1.06	y	1.24	47:44	0.968	0.964	0.974	49.4231
	PCB-171	1.15e+07	1.09	y	1.31	48:02	0.974	0.970	0.980	50.1933
	PCB-173	9.76e+06	1.05	y	1.16	48:28	0.983	0.979	0.989	48.0578
	PCB-172	1.08e+07	1.05	y	1.22	48:54	0.992	0.988	0.998	50.6435
	PCB-192	1.37e+07	1.06	y	1.53	49:06	0.996	0.991	1.001	51.2023
	PCB-180	1.28e+07	1.05	y	1.43	49:19	1.000	0.995	1.005	51.0762

RL: MONO, TRI - DECA: ~~_____~~

Integrations by Analyst: DMS

Date: 12/26/14

Client ID: PCB CS3 14L2401 Filename: 141226E1 S:1 Acq:26-DEC-14 11:22:34 ConCal: ST141226E1-1
Lab ID: ST141226E1-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	1.53e+07	1.07	y	1.65	49:31	1.004	0.999	1.009	52.6816
	PCB-191	1.54e+07	1.06	y	1.67	49:46	1.010	1.004	1.014	52.5322
	PCB-170	1.06e+07	1.04	y	1.50	50:49	1.000	0.995	1.005	55.0817
	PCB-190	1.44e+07	1.07	y	2.02	50:60	1.004	0.998	1.008	55.2871
	PCB-189	1.41e+07	1.09	y	1.54	52:21	1.000	0.995	1.005	53.9014
	PCB-202	1.06e+07	0.90	y	1.04	48:14	1.000	0.995	1.005	49.6379
	PCB-201	1.10e+07	0.87	y	1.10	48:43	1.010	1.006	1.016	48.7498
	PCB-204	1.04e+07	0.93	y	0.99	48:52	1.013	1.009	1.019	50.9134
	PCB-197	1.13e+07	0.91	y	1.07	49:10	1.020	1.015	1.025	51.6677
	PCB-200	1.11e+07	0.89	y	1.02	50:04	1.038	1.032	1.044	53.3109
	PCB-198	6.88e+06	0.92	y	0.74	51:25	1.066	1.058	1.068	45.2265
	PCB-199	8.07e+06	0.92	y	0.73	51:32	1.069	1.060	1.070	54.1053
-	PCB-196/203	1.60e+07	0.93	y	0.77	51:48	1.074	1.066	1.076	101.083
-	PCB-195	1.51e+07	0.90	y	1.20	52:59	0.984	0.979	0.989	50.0390
	PCB-194	1.66e+07	0.94	y	1.25	53:52	1.000	0.995	1.005	53.1109
	PCB-205	1.95e+07	0.92	y	1.41	54:08	1.005	1.001	1.011	54.8823
	PCB-208	1.47e+07	1.35	y	0.96	53:08	1.000	0.995	1.005	52.1614
	PCB-207	1.47e+07	1.38	y	0.92	53:27	1.006	1.001	1.011	54.6571
	PCB-206	1.07e+07	1.35	y	1.03	55:29	1.000	0.995	1.005	54.3183
	PCB-209	1.22e+07	1.17	y	1.18	56:51	1.000	0.995	1.005	53.6915

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.36e+08	3.02	y	16:07	1.22	146.644	
Total Di-PCB	1.05e+09	1.64	y	20:06	1.21	1353.03	
Total Tri-PCB	2.25e+08	1.09	y	24:13	1.16	413.868	
Total Tri-PCB	6.34e+08	1.07	y	27:54	1.35	850.146	Sum:1264.01
Total Tetra-PCB	9.68e+08	0.79	y	27:57	1.17	2138.23	
Total Penta-PCB	5.99e+08	1.63	y	32:38	1.21	2204.88	
Total Penta-PCB	1.40e+08	1.63	y	42:10	1.26	300.730	Sum:2505.61
Total Hexa-PCB	1.46e+08	1.30	y	37:01	0.92	715.220	
Total Hexa-PCB	4.96e+08	1.24	y	42:05	1.08	1512.31	Sum:2227.53
Total Hepta-PCB	3.19e+08	1.07	y	42:49	1.27	1244.14	
Total Octa-PCB	8.53e+07	0.90	y	48:14	0.92	454.695	
Total Octa-PCB	5.20e+07	0.90	y	52:59	1.29	160.459	Sum:615.154
Total Nona-PCB	4.06e+07	1.35	y	53:08	0.96	163.526	
Total Deca-PCB	1.22e+07	1.17	y	56:51	1.18	53.6915	

Total PCB Conc:11610.9534460

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 12/26/14

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	7.48e+07	3.25	y	0.89	16:06	0.622	0.622	0.628	116	116
13C-PCB-3	7.63e+07	3.31	y	0.93	18:43	0.722	0.721	0.729	114	114
13C-PCB-4	4.29e+07	1.61	y	0.55	20:03	0.774	0.772	0.780	108	108
13C-PCB-9	6.40e+07	1.62	y	0.83	21:50	0.843	0.840	0.848	107	107
13C-PCB-11	6.84e+07	1.61	y	0.94	25:12	0.973	0.968	0.978	101	101
13C-PCB-19	3.45e+07	1.09	y	0.53	24:11	0.934	0.929	0.939	89.7	89.7
13C-PCB-28	5.81e+07	1.09	y	0.89	29:03	1.004	0.999	1.009	100	100
13C-PCB-32	5.30e+07	1.08	y	0.81	27:06	1.046	1.041	1.051	90.1	90.1
13C-PCB-37	5.02e+07	1.08	y	0.83	32:55	1.137	1.131	1.143	92.5	92.5
13C-PCB-47	3.51e+07	0.79	y	0.74	31:58	0.871	0.867	0.875	99.6	99.6
13C-PCB-52	3.33e+07	0.81	y	0.71	31:28	0.857	0.853	0.861	99.3	99.3
13C-PCB-54	4.29e+07	0.80	y	0.85	27:56	0.761	0.758	0.766	106	106
13C-PCB-70	4.41e+07	0.79	y	0.94	35:29	0.966	0.961	0.971	98.5	98.5
13C-PCB-77	4.11e+07	0.80	y	0.89	39:35	1.078	1.073	1.083	97.1	97.1
13C-PCB-80	4.58e+07	0.80	y	0.96	35:54	0.978	0.972	0.982	100	100
13C-PCB-81	3.84e+07	0.80	y	0.84	38:60	1.062	1.057	1.067	96.7	96.7
13C-PCB-95	2.01e+07	1.59	y	0.74	35:47	0.913	0.908	0.918	100	100
13C-PCB-97	1.88e+07	1.65	y	0.69	38:45	0.989	0.984	0.994	101	101
13C-PCB-101	2.12e+07	1.56	y	0.79	37:27	0.956	0.951	0.961	100	100
13C-PCB-104	2.67e+07	1.61	y	1.00	32:37	0.832	0.829	0.837	99.3	99.3
13C-PCB-105	3.76e+07	1.64	y	1.24	43:01	0.929	0.924	0.934	116	116
13C-PCB-114	3.62e+07	1.64	y	1.21	42:09	0.910	0.905	0.915	114	114
13C-PCB-118	2.72e+07	1.60	y	0.98	41:30	1.059	1.054	1.064	102	102
13C-PCB-123	2.56e+07	1.56	y	0.95	41:19	1.054	1.049	1.059	100	100
13C-PCB-126	3.43e+07	1.68	y	1.16	45:15	0.977	0.972	0.982	113	113
13C-PCB-127	4.06e+07	1.64	y	1.34	43:21	0.936	0.931	0.941	115	115
13C-PCB-138	2.81e+07	1.26	y	1.04	44:45	0.966	0.961	0.971	103	103
13C-PCB-141	2.85e+07	1.29	y	1.07	43:54	0.948	0.943	0.953	102	102
13C-PCB-153	2.98e+07	1.32	y	1.11	43:10	0.932	0.927	0.937	102	102
13C-PCB-155	2.23e+07	1.26	y	0.83	36:60	0.944	0.939	0.949	99.2	99.2
13C-PCB-156	3.18e+07	1.33	y	1.24	48:00	1.037	1.032	1.042	97.2	97.2
13C-PCB-157	3.42e+07	1.37	y	1.31	48:16	1.043	1.037	1.047	99.4	99.4
13C-PCB-159	3.13e+07	1.30	y	1.20	46:02	0.994	0.989	0.999	99.5	99.5
13C-PCB-167	3.51e+07	1.26	y	1.32	46:43	1.009	1.004	1.014	101	101
13C-PCB-169	3.30e+07	1.30	y	1.22	50:26	1.089	1.082	1.092	104	104
13C-PCB-170	1.29e+07	0.49	y	0.54	50:49	1.097	1.089	1.101	91.7	91.7
13C-PCB-180	1.75e+07	0.45	y	0.67	49:17	1.065	1.059	1.069	99.1	99.1
13C-PCB-188	2.37e+07	0.49	y	0.94	42:48	0.924	0.919	0.929	96.7	96.7
13C-PCB-189	1.69e+07	0.45	y	0.72	52:19	1.130	1.120	1.132	90.3	90.3
13C-PCB-194	2.52e+07	0.95	y	0.81	53:51	0.995	0.990	1.000	99.7	99.7
13C-PCB-202	2.05e+07	0.96	y	0.83	48:13	1.041	1.036	1.046	93.7	93.7
13C-PCB-206	1.91e+07	0.79	y	0.66	55:28	1.025	1.021	1.031	93.1	93.1
13C-PCB-208	2.93e+07	0.78	y	1.12	53:07	0.981	0.976	0.986	83.7	83.7
13C-PCB-209	1.93e+07	1.19	y	0.61	56:51	1.050	1.044	1.054	101	101

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.78e+07	0.78	y	1.01	37:46	1.029	1.023	1.033	100	100
13C-PCB-178	1.65e+07	0.47	y	0.63	45:35	0.985	0.979	0.989	99.9	99.9

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.78e+07	0.78	y	1.20	37:46	0.969	0.963	0.973	104	104
13C-PCB-178	1.65e+07	0.47	y	0.94	45:35	0.925	0.920	0.930	101	101

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	7.23e+07	1.59	y	1.00	25:54	100
13C-PCB-31	6.52e+07	1.08	y	1.00	28:57	100
13C-PCB-60	4.74e+07	0.80	y	1.00	36:43	100
13C-PCB-111	2.70e+07	1.60	y	1.00	39:11	100
13C-PCB-128	2.62e+07	1.30	y	1.00	46:18	100
13C-PCB-205	3.12e+07	0.90	y	1.00	54:08	100

Analyst: DMS

Date: 12/26/14

Vista Analytical Laboratory - Injection Log Run file: 141226E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141226E1	1	ST141226E1-1	DMS	26-DEC-14	11:22:34	ST141226E1-1	NA
141226E1	2	B4L0127-BS1	DMS	26-DEC-14	12:27:01	ST141226E1-1	NA
141226E1	3	SOLVENT BLANK	DMS	26-DEC-14	13:31:29	ST141226E1-1	NA
141226E1	4	B4L0127-BLK1	DMS	26-DEC-14	14:35:58	ST141226E1-1	NA
141226E1	5	1400934-01	DMS	26-DEC-14	15:40:25	ST141226E1-1	NA
141226E1	6	1400934-02	DMS	26-DEC-14	16:44:54	ST141226E1-1	NA
141226E1	7	1400948-04	DMS	26-DEC-14	17:49:21	ST141226E1-1	NA
141226E1	8	1400949-01	DMS	26-DEC-14	18:53:50	ST141226E1-1	NA
141226E1	9	1400949-02	DMS	26-DEC-14	19:58:16	ST141226E1-1	NA
141226E1	10	1400921-01@20X	DMS	26-DEC-14	21:02:49	ST141226E1-1	NA
141226E1	11	1400921-02@20X	DMS	26-DEC-14	22:07:16	ST141226E1-1	NA
141226E1	12	SOLVENT BLANK	DMS	26-DEC-14	23:11:49	ST141226E1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141226E1-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	N/A	
Retention Times within criteria?	DMJ 12/29/14	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > ~~5,000~~, CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	N/A	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: CJ 12/29/14
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E3-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E3 S#1 Analysis Date: 27-DEC-14 Time: 13:35:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	3.04	2.66-3.60	y	50.1	37.5-62.5
PCB-2	3.04	2.66-3.60	y	50.4	37.5-62.5
PCB-3	3.04	2.66-3.60	y	49.9	37.5-62.5
PCB-4/10	1.66	1.33-1.79	y	239.4	150-250
PCB-7/9	1.66	1.33-1.79	y	234.9	150-250
PCB-6	1.67	1.33-1.79	y	111.8	75.0-125
PCB-5/8	1.67	1.33-1.79	y	233.9	150-250
PCB-14	1.66	1.33-1.79	y	118.1	75.0-125
PCB-11	1.66	1.33-1.79	y	115.9	75.0-125
PCB-12/13	1.66	1.33-1.79	y	229.5	150-250
PCB-15	1.64	1.33-1.79	y	113.8	75.0-125
PCB-19	1.11	0.88-1.20	y	51.9	37.5-62.5
PCB-30	1.09	0.88-1.20	y	52.6	37.5-62.5
PCB-18	1.08	0.88-1.20	y	52.2	37.5-62.5
PCB-17	1.09	0.88-1.20	y	52.8	37.5-62.5
PCB-24/27	1.08	0.88-1.20	y	108.2	75.0-125
PCB-16/32	1.07	0.88-1.20	y	104.2	75.0-125
PCB-34	1.06	0.88-1.20	y	61.8	37.5-62.5
PCB-23	1.06	0.88-1.20	y	62.4	37.5-62.5
PCB-29	1.08	0.88-1.20	y	60.6	37.5-62.5
PCB-26	1.09	0.88-1.20	y	56.0	37.5-62.5
PCB-25	1.08	0.88-1.20	y	57.7	37.5-62.5
PCB-31	1.07	0.88-1.20	y	55.3	37.5-62.5
PCB-28	1.07	0.88-1.20	y	58.9	37.5-62.5
PCB-20/21/33	1.08	0.88-1.20	y	169.1	112.5-225
PCB-22	1.08	0.88-1.20	y	59.8	37.5-62.5
PCB-36	1.05	0.88-1.20	y	49.7	37.5-62.5
PCB-39	1.05	0.88-1.20	y	49.7	37.5-62.5
PCB-38	1.11	0.88-1.20	y	53.8	37.5-62.5
PCB-35	1.07	0.88-1.20	y	52.5	37.5-62.5
PCB-37	1.08	0.88-1.20	y	54.3	37.5-62.5
PCB-54	0.80	0.65-0.89	y	49.0	37.5-62.5
PCB-50	0.77	0.65-0.89	y	44.6	37.5-62.5
PCB-53	0.78	0.65-0.89	y	48.7	37.5-62.5
PCB-51	0.78	0.65-0.89	y	50.1	37.5-62.5
PCB-45	0.77	0.65-0.89	y	48.2	37.5-62.5
PCB-46	0.78	0.65-0.89	y	44.8	37.5-62.5

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.76	0.65-0.89	y	96.7	75.0-125
PCB-73	0.78	0.65-0.89	y	53.1	37.5-62.5
PCB-43/49	0.79	0.65-0.89	y	100.1	75.0-125
PCB-47	0.79	0.65-0.89	y	48.5	37.5-62.5
PCB-48/75	0.79	0.65-0.89	y	93.9	75.0-125
PCB-65	0.77	0.65-0.89	y	49.9	37.5-62.5
PCB-62	0.77	0.65-0.89	y	51.7	37.5-62.5
PCB-44	0.77	0.65-0.89	y	49.9	37.5-62.5
PCB-42/59	0.78	0.65-0.89	y	101.6	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	208.5	150-250
PCB-68	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-40	0.77	0.65-0.89	y	49.3	37.5-62.5
PCB-57	0.79	0.65-0.89	y	48.2	37.5-62.5
PCB-67	0.79	0.65-0.89	y	50.1	37.5-62.5
PCB-58	0.80	0.65-0.89	y	49.9	37.5-62.5
PCB-63	0.79	0.65-0.89	y	50.1	37.5-62.5
PCB-74	0.78	0.65-0.89	y	47.7	37.5-62.5
PCB-61/70	0.79	0.65-0.89	y	96.8	75.0-125
PCB-76/66	0.79	0.65-0.89	y	99.7	75.0-125
PCB-80	0.77	0.65-0.89	y	50.2	37.5-62.5
PCB-55	0.80	0.65-0.89	y	50.6	37.5-62.5
PCB-56/60	0.78	0.65-0.89	y	95.2	75.0-125
PCB-79	0.77	0.65-0.89	y	50.6	37.5-62.5
PCB-78	0.76	0.65-0.89	y	55.0	37.5-62.5
PCB-81	0.76	0.65-0.89	y	50.8	37.5-62.5
PCB-77	0.81	0.65-0.89	y	51.2	37.5-62.5
PCB-104	1.66	1.32-1.78	y	54.6	37.5-62.5
PCB-96	1.62	1.32-1.78	y	57.1	37.5-62.5
PCB-103	1.66	1.32-1.78	y	55.9	37.5-62.5
PCB-100	1.58	1.32-1.78	y	59.1	37.5-62.5
PCB-94	1.66	1.32-1.78	y	52.4	37.5-62.5
PCB-95/98/102	1.63	1.32-1.78	y	166.6	112.5-225
PCB-93	1.65	1.32-1.78	y	49.2	37.5-62.5
PCB-88/91	1.65	1.32-1.78	y	118.9	75.0-125
PCB-121	1.65	1.32-1.78	y	54.9	37.5-62.5

Analyst: DMS

Date: 12/29/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E3-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E3 S#1 Analysis Date: 27-DEC-14 Time: 13:35:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.69	1.32-1.78	y	109.7	75.0-125
PCB-89	1.64	1.32-1.78	y	55.1	37.5-62.5
PCB-90/101	1.59	1.32-1.78	y	107.5	75.0-125
PCB-113	1.63	1.32-1.78	y	56.8	37.5-62.5
PCB-99	1.65	1.32-1.78	y	54.9	37.5-62.5
PCB-119	1.60	1.32-1.78	y	59.4	37.5-62.5
PCB-108/112	1.61	1.32-1.78	y	115.6	75.0-125
PCB-83	1.59	1.32-1.78	y	58.4	37.5-62.5
PCB-97	1.65	1.32-1.78	y	54.6	37.5-62.5
PCB-86	1.61	1.32-1.78	y	59.2	37.5-62.5
PCB-87/117/125	1.66	1.32-1.78	y	160.4	112.5-225
PCB-111/115	1.62	1.32-1.78	y	106.3	75.0-125
PCB-85/116	1.67	1.32-1.78	y	117.6	75.0-125
PCB-120	1.60	1.32-1.78	y	55.5	37.5-62.5
PCB-110	1.63	1.32-1.78	y	57.7	37.5-62.5
PCB-82	1.63	1.32-1.78	y	54.2	37.5-62.5
PCB-124	1.59	1.32-1.78	y	52.8	37.5-62.5
PCB-107/109	1.62	1.32-1.78	y	116.8	75.0-125
PCB-123	1.65	1.32-1.78	y	55.2	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	113.0	75.0-125
PCB-114	1.63	1.32-1.78	y	55.3	37.5-62.5
PCB-122	1.66	1.32-1.78	y	53.5	37.5-62.5
PCB-105	1.60	1.32-1.78	y	56.8	37.5-62.5
PCB-127	1.67	1.32-1.78	y	55.8	37.5-62.5
PCB-126	1.64	1.32-1.78	y	57.0	37.5-62.5
PCB-155	1.28	1.05-1.43	y	52.7	37.5-62.5
PCB-150	1.30	1.05-1.43	y	54.5	37.5-62.5
PCB-152	1.27	1.05-1.43	y	51.4	37.5-62.5
PCB-145	1.24	1.05-1.43	y	53.0	37.5-62.5
PCB-136	1.30	1.05-1.43	y	51.6	37.5-62.5
PCB-148	1.30	1.05-1.43	y	56.6	37.5-62.5
PCB-154	1.27	1.05-1.43	y	54.2	37.5-62.5
PCB-151	1.34	1.05-1.43	y	52.7	37.5-62.5
PCB-135	1.31	1.05-1.43	y	52.8	37.5-62.5
PCB-144	1.28	1.05-1.43	y	50.1	37.5-62.5
PCB-147	1.29	1.05-1.43	y	51.9	37.5-62.5
PCB-139/149	1.28	1.05-1.43	y	102.9	75.0-125
PCB-140	1.27	1.05-1.43	y	54.0	37.5-62.5
PCB-134/143	1.27	1.05-1.43	y	100.8	75.0-125
PCB-133/142	1.25	1.05-1.43	y	98.0	75.0-125
PCB-131	1.27	1.05-1.43	y	48.1	37.5-62.5
PCB-146/165	1.26	1.05-1.43	y	99.9	75.0-125
PCB-132/161	1.27	1.05-1.43	y	100.2	75.0-125
PCB-153	1.23	1.05-1.43	y	52.0	37.5-62.5
PCB-168	1.28	1.05-1.43	y	51.9	37.5-62.5
PCB-141	1.25	1.05-1.43	y	51.9	37.5-62.5
PCB-137	1.26	1.05-1.43	y	52.5	37.5-62.5
PCB-130	1.24	1.05-1.43	y	53.0	37.5-62.5
PCB-138/163/164	1.25	1.05-1.43	y	156.0	112.5-225
PCB-158/160	1.27	1.05-1.43	y	104.9	75.0-125
PCB-129	1.29	1.05-1.43	y	48.1	37.5-62.5
PCB-166	1.28	1.05-1.43	y	53.3	37.5-62.5
PCB-159	1.26	1.05-1.43	y	52.0	37.5-62.5
PCB-128/162	1.27	1.05-1.43	y	98.6	75.0-125
PCB-167	1.22	1.05-1.43	y	51.7	37.5-62.5
PCB-156	1.28	1.05-1.43	y	52.2	37.5-62.5
PCB-157	1.30	1.05-1.43	y	52.2	37.5-62.5
PCB-169	1.31	1.05-1.43	y	51.6	37.5-62.5
PCB-188	1.10	0.89-1.21	y	53.9	37.5-62.5
PCB-184	1.07	0.89-1.21	y	57.3	37.5-62.5
PCB-179	1.07	0.89-1.21	y	56.2	37.5-62.5
PCB-176	1.09	0.89-1.21	y	56.2	37.5-62.5
PCB-186	1.10	0.89-1.21	y	57.7	37.5-62.5
PCB-178	1.06	0.89-1.21	y	56.0	37.5-62.5
PCB-175	1.07	0.89-1.21	y	58.8	37.5-62.5
PCB-182/187	1.07	0.89-1.21	y	121.7	75.0-125
PCB-183	1.12	0.89-1.21	y	53.6	37.5-62.5
PCB-185	1.09	0.89-1.21	y	55.4	37.5-62.5
PCB-174	1.07	0.89-1.21	y	52.4	37.5-62.5
PCB-181	1.05	0.89-1.21	y	58.2	37.5-62.5
PCB-177	1.09	0.89-1.21	y	55.5	37.5-62.5
PCB-171	1.05	0.89-1.21	y	52.2	37.5-62.5
PCB-173	1.09	0.89-1.21	y	55.5	37.5-62.5
PCB-172	1.08	0.89-1.21	y	56.5	37.5-62.5

Analyst: DMS

Date: 12/29/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E3-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E3 S#1 Analysis Date: 27-DEC-14 Time: 13:35:34

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.07	0.89-1.21	y	56.9	37.5-62.5
PCB-180	1.11	0.89-1.21	y	54.8	37.5-62.5
PCB-193	1.06	0.89-1.21	y	55.8	37.5-62.5
PCB-191	1.07	0.89-1.21	y	56.4	37.5-62.5
PCB-170	1.09	0.89-1.21	y	54.6	37.5-62.5
PCB-190	1.06	0.89-1.21	y	57.7	37.5-62.5
PCB-189	1.09	0.89-1.21	y	55.8	37.5-62.5
PCB-202	0.90	0.76-1.02	y	50.0	37.5-62.5
PCB-201	0.92	0.76-1.02	y	56.2	37.5-62.5
PCB-204	0.89	0.76-1.02	y	54.2	37.5-62.5
PCB-197	0.92	0.76-1.02	y	56.7	37.5-62.5
PCB-200	0.94	0.76-1.02	y	54.3	37.5-62.5
PCB-198	0.93	0.76-1.02	y	48.4	37.5-62.5
PCB-199	0.93	0.76-1.02	y	53.4	37.5-62.5
PCB-196/203	0.95	0.76-1.02	y	104.2	75.0-125
PCB-195	0.93	0.76-1.02	y	53.0	37.5-62.5
PCB-194	0.94	0.76-1.02	y	56.5	37.5-62.5
PCB-205	0.91	0.76-1.02	y	58.8	37.5-62.5
PCB-208	1.37	1.14-1.54	y	52.8	37.5-62.5
PCB-207	1.38	1.14-1.54	y	54.8	37.5-62.5
PCB-206	1.34	1.14-1.54	y	54.1	37.5-62.5
PCB-209	1.23	0.99-1.33	y	52.5	37.5-62.5

Analyst: DMS

Date: 12/29/14

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST141226E3-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 141226E3 S#1 Analysis Date: 27-DEC-14 Time: 13:35:34

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.38	2.66-3.60	y	117.7	50.0-145
13C-PCB-3	3.42	2.66-3.60	y	112.2	50.0-145
13C-PCB-4	1.61	1.33-1.79	y	109.4	50.0-145
13C-PCB-9	1.64	1.33-1.79	y	106.3	50.0-145
13C-PCB-11	1.61	1.33-1.79	y	101.4	50.0-145
13C-PCB-19	1.11	0.88-1.20	y	87.7	50.0-145
13C-PCB-32	1.13	0.88-1.20	y	85.7	50.0-145
13C-PCB-28	1.08	0.88-1.20	y	112.6	50.0-145
13C-PCB-37	1.10	0.88-1.20	y	115.6	50.0-145
13C-PCB-54	0.82	0.65-0.89	y	101.5	50.0-145
13C-PCB-52	0.77	0.65-0.89	y	93.6	50.0-145
13C-PCB-47	0.84	0.65-0.89	y	91.2	50.0-145
13C-PCB-70	0.80	0.65-0.89	y	97.0	50.0-145
13C-PCB-80	0.82	0.65-0.89	y	99.0	50.0-145
13C-PCB-81	0.80	0.65-0.89	y	93.3	50.0-145
13C-PCB-77	0.81	0.65-0.89	y	96.6	50.0-145
13C-PCB-104	1.56	1.32-1.78	y	97.6	50.0-145
13C-PCB-95	1.63	1.32-1.78	y	98.3	50.0-145
13C-PCB-101	1.62	1.32-1.78	y	100.0	50.0-145
13C-PCB-97	1.57	1.32-1.78	y	98.9	50.0-145
13C-PCB-123	1.64	1.32-1.78	y	98.6	50.0-145
13C-PCB-118	1.62	1.32-1.78	y	96.8	50.0-145
13C-PCB-114	1.68	1.32-1.78	y	105.0	50.0-145
13C-PCB-105	1.68	1.32-1.78	y	106.9	50.0-145
13C-PCB-127	1.69	1.32-1.78	y	106.5	50.0-145
13C-PCB-126	1.66	1.32-1.78	y	104.2	50.0-145
13C-PCB-155	1.32	1.05-1.43	y	95.2	50.0-145
13C-PCB-153	1.28	1.05-1.43	y	102.2	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	102.0	50.0-145
13C-PCB-138	1.29	1.05-1.43	y	102.6	50.0-145
13C-PCB-159	1.30	1.05-1.43	y	103.8	50.0-145
13C-PCB-167	1.33	1.05-1.43	y	101.9	50.0-145
13C-PCB-156	1.33	1.05-1.43	y	96.9	50.0-145
13C-PCB-157	1.30	1.05-1.43	y	100.0	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.34	1.05-1.43	y	98.8	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	91.4	50 - 145
13C-PCB-180	0.47	0.38-0.52	y	94.2	50 - 145
13C-PCB-170	0.48	0.38-0.52	y	90.2	50 - 145
13C-PCB-189	0.48	0.38-0.52	y	92.1	50 - 145
13C-PCB-202	0.91	0.76-1.02	y	91.7	50 - 145
13C-PCB-194	0.95	0.76-1.02	y	97.3	50 - 145
13C-PCB-208	0.78	0.65-0.89	y	76.4	50 - 145
13C-PCB-206	0.81	0.65-0.89	y	84.6	50 - 145
13C-PCB-209	1.23	0.99-1.33	y	98.1	50 - 145

CRS vs. RS

13C-PCB-79	0.82	0.65-0.89	y	105.3	75 - 125
13C-PCB-178	0.48	0.38-0.52	y	100.0	75 - 125

Analyst: DMS

Date: 12/29/14

Client ID: PCB CS3 14L2401 Filename: 141226E3 S:1 Acq:27-DEC-14 13:35:34 ConCal: ST141226E3-1

Lab ID: ST141226E3-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	4.15e+07	3.04	y	1.25	16:07	1.001	0.996	1.006	50.0952
	PCB-2	3.90e+07	3.04	y	1.18	18:29	0.988	0.983	0.993	50.3944
	PCB-3	3.99e+07	3.04	y	1.22	18:43	1.001	0.996	1.006	49.8887
	PCB-4/10	1.40e+08	1.66	y	1.55	20:05	1.002	0.998	1.008	239.385
	PCB-7/9	1.65e+08	1.66	y	1.27	21:52	0.868	0.865	0.873	234.878
	PCB-6	7.78e+07	1.67	y	1.26	22:31	0.894	0.890	0.899	111.768
	PCB-5/8	1.59e+08	1.67	y	1.23	22:55	0.909	0.906	0.916	233.929
	PCB-14	8.71e+07	1.66	y	1.23	24:01	0.953	0.949	0.959	118.137
	PCB-11	8.04e+07	1.66	y	1.16	25:13	1.001	0.996	1.006	115.950
	PCB-12/13	1.51e+08	1.66	y	1.10	25:36	1.016	1.010	1.020	229.450
	PCB-15	8.24e+07	1.64	y	1.21	25:55	1.029	1.024	1.034	113.847
	PCB-19	1.98e+07	1.11	y	1.30	24:12	1.001	0.996	1.006	51.9228
	PCB-30	2.84e+07	1.09	y	1.83	25:06	1.038	1.032	1.042	52.6430
	PCB-18	1.97e+07	1.08	y	0.86	25:51	0.954	0.949	0.959	52.1711
	PCB-17	2.09e+07	1.09	y	0.90	26:01	0.960	0.955	0.965	52.7746
	PCB-24/27	5.59e+07	1.08	y	1.18	26:35	0.981	0.976	0.986	108.238
-	PCB-16/32	4.71e+07	1.07	y	1.03	27:06	1.000	0.995	1.005	104.210
-	PCB-34	2.95e+07	1.06	y	1.26	27:53	0.960	0.956	0.966	61.8383
	PCB-23	3.09e+07	1.06	y	1.31	27:59	0.964	0.959	0.969	62.3570
	PCB-29	3.05e+07	1.08	y	1.33	28:14	0.972	0.967	0.977	60.5519
	PCB-26	2.74e+07	1.09	y	1.29	28:26	0.979	0.974	0.984	55.9689
	PCB-25	2.93e+07	1.08	y	1.34	28:36	0.985	0.980	0.990	57.6939
	PCB-31	2.97e+07	1.07	y	1.42	28:58	0.997	0.992	1.002	55.2812
	PCB-28	3.07e+07	1.07	y	1.38	29:04	1.001	0.996	1.006	58.9474
	PCB-20/21/33	8.39e+07	1.08	y	1.31	29:40	1.022	1.017	1.027	169.113
	PCB-22	2.99e+07	1.08	y	1.32	30:07	1.037	1.032	1.042	59.8188
	PCB-36	2.49e+07	1.05	y	1.38	30:44	0.934	0.929	0.939	49.6637
	PCB-39	2.57e+07	1.05	y	1.42	31:12	0.948	0.943	0.953	49.6766
	PCB-38	2.65e+07	1.11	y	1.35	31:59	0.972	0.967	0.976	53.8035
	PCB-35	2.63e+07	1.07	y	1.38	32:29	0.987	0.982	0.992	52.4803
	PCB-37	2.75e+07	1.08	y	1.39	32:55	1.000	0.996	1.006	54.2609
	PCB-54	2.09e+07	0.80	y	1.20	27:57	1.001	0.996	1.006	48.9917
	PCB-50	1.54e+07	0.77	y	0.97	29:06	1.042	1.037	1.047	44.6435
	PCB-53	1.58e+07	0.78	y	1.19	29:45	0.946	0.941	0.951	48.7105
	PCB-51	1.58e+07	0.78	y	1.15	30:05	0.956	0.952	0.962	50.1213
	PCB-45	1.27e+07	0.77	y	0.97	30:31	0.970	0.966	0.976	48.2097
	PCB-46	1.16e+07	0.78	y	0.95	31:01	0.986	0.982	0.992	44.7640

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	3.38e+07	0.76	y	1.28	31:29	1.001	0.996	1.006	96.6868
PCB-73	1.99e+07	0.78	y	1.37	31:36	1.004	1.000	1.010	53.0863
PCB-43/49	3.04e+07	0.79	y	1.11	31:46	1.010	1.005	1.015	100.089
PCB-47	1.54e+07	0.79	y	1.13	31:59	1.001	0.996	1.006	48.4564
PCB-48/75	3.43e+07	0.79	y	1.30	32:05	1.004	0.999	1.009	93.8787
PCB-65	1.86e+07	0.77	y	1.33	32:21	1.012	1.007	1.017	49.9051
PCB-62	1.87e+07	0.77	y	1.29	32:27	1.015	1.011	1.021	51.7035
PCB-44	1.31e+07	0.77	y	0.94	32:46	1.025	1.020	1.030	49.8732
PCB-42/59	3.46e+07	0.78	y	1.22	33:00	1.033	1.028	1.038	101.621
PCB-41/64/71/72	7.67e+07	0.78	y	1.31	33:35	1.051	1.046	1.056	208.550
PCB-68	2.22e+07	0.77	y	1.49	33:50	1.059	1.054	1.064	53.3261
PCB-40	1.13e+07	0.77	y	0.82	34:04	1.066	1.061	1.071	49.2841
PCB-57	2.03e+07	0.79	y	1.11	34:25	0.970	0.965	0.975	48.2417
PCB-67	2.03e+07	0.79	y	1.07	34:43	0.979	0.974	0.984	50.1079
PCB-58	2.08e+07	0.80	y	1.10	34:50	0.982	0.977	0.987	49.9189
PCB-63	2.11e+07	0.79	y	1.12	34:59	0.986	0.982	0.992	50.0624
PCB-74	2.17e+07	0.78	y	1.20	35:16	0.994	0.990	1.000	47.7180
PCB-61/70	3.95e+07	0.79	y	1.08	35:27	0.999	0.994	1.004	96.8035
PCB-76/66	4.28e+07	0.79	y	1.14	35:40	1.005	1.001	1.011	99.7411
PCB-80	2.52e+07	0.77	y	1.28	35:54	1.000	0.996	1.006	50.1589
PCB-55	2.21e+07	0.80	y	1.11	36:13	1.009	1.005	1.015	50.5985
PCB-56/60	4.06e+07	0.78	y	1.09	36:43	1.023	1.018	1.028	95.1668
PCB-79	2.23e+07	0.77	y	1.12	37:46	1.052	1.048	1.058	50.5524
PCB-78	2.20e+07	0.76	y	1.24	38:28	0.987	0.982	0.992	54.9818
PCB-81	2.27e+07	0.76	y	1.38	39:00	1.000	0.995	1.005	50.8040
PCB-77	2.20e+07	0.81	y	1.21	39:35	1.000	0.995	1.005	51.2045
PCB-104	1.57e+07	1.66	y	1.26	32:37	1.000	0.996	1.006	54.6061
PCB-96	1.43e+07	1.62	y	1.09	33:53	1.039	1.034	1.044	57.0873
PCB-103	1.20e+07	1.66	y	0.93	34:25	1.055	1.050	1.060	55.9271
PCB-100	1.36e+07	1.58	y	1.00	34:47	1.067	1.061	1.071	59.1418
PCB-94	1.00e+07	1.66	y	1.11	35:15	0.986	0.981	0.991	52.3596
PCB-95/98/102	3.49e+07	1.63	y	1.21	35:44	0.999	0.994	1.004	166.606
PCB-93	9.61e+06	1.65	y	1.13	35:53	1.003	0.998	1.008	49.2496
PCB-88/91	2.09e+07	1.65	y	1.02	36:09	1.011	1.006	1.016	118.902
PCB-121	1.80e+07	1.65	y	1.90	36:15	1.014	1.009	1.019	54.8559
PCB-84/92	2.14e+07	1.69	y	1.05	37:05	0.990	0.986	0.996	109.654
PCB-89	1.04e+07	1.64	y	1.02	37:17	0.996	0.991	1.001	55.1125

RL: MONO, TRI - DECA: —

RL: DI : —

Integrations by Analyst: DMS Date: 12/29/14

Reviewed by Analyst: [signature] Date: 12/29/14

Client ID: PCB CS3 14L2401 Filename: 141226E3 S:1 Acq:27-DEC-14 13:35:34 ConCal: ST141226E3-1

Lab ID: ST141226E3-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	2.37e+07	1.59 y	1.19	37:27	1.000	0.996	1.006	107.475
	PCB-113	1.42e+07	1.63 y	1.35	37:42	1.007	1.002	1.012	56.8010
	PCB-99	1.31e+07	1.65 y	1.29	37:47	1.009	1.005	1.015	54.9069
	PCB-119	1.65e+07	1.60 y	1.72	38:15	0.987	0.982	0.992	59.4000
	PCB-108/112	2.39e+07	1.61 y	1.29	38:25	0.991	0.986	0.996	115.551
	PCB-83	1.43e+07	1.59 y	1.52	38:34	0.995	0.991	1.001	58.3950
	PCB-97	1.10e+07	1.65 y	1.25	38:45	1.000	0.996	1.006	54.6150
	PCB-86	9.74e+06	1.61 y	1.02	38:55	1.004	1.000	1.010	59.1923
	B-87/117/125	4.02e+07	1.66 y	1.56	39:02	1.007	1.002	1.012	160.394
	PCB-111/115	3.00e+07	1.62 y	1.75	39:12	1.012	1.007	1.017	106.261
	PCB-85/116	2.46e+07	1.67 y	1.30	39:20	1.015	1.010	1.020	117.611
	PCB-120	1.59e+07	1.60 y	1.78	39:34	1.021	1.016	1.026	55.4696
	PCB-110	1.56e+07	1.63 y	1.68	39:42	1.024	1.020	1.030	57.7497
	PCB-82	8.85e+06	1.63 y	0.74	40:20	0.976	0.972	0.982	54.2052
	PCB-124	1.54e+07	1.59 y	1.32	41:01	0.993	0.988	0.998	52.7752
	PCB-107/109	3.15e+07	1.62 y	1.22	41:09	0.996	0.991	1.001	116.766
	PCB-123	1.49e+07	1.65 y	1.22	41:20	1.001	0.995	1.005	55.1944
-	PCB-106/118	3.12e+07	1.62 y	1.22	41:31	1.001	0.996	1.006	112.998
-	PCB-114	2.24e+07	1.63 y	1.36	42:09	1.000	0.995	1.005	55.3443
	PCB-122	1.98e+07	1.66 y	1.24	42:17	1.003	0.999	1.009	53.5423
	PCB-105	2.28e+07	1.60 y	1.28	43:01	1.000	0.995	1.005	56.8177
	PCB-127	2.15e+07	1.67 y	1.14	43:21	1.000	0.995	1.005	55.8302
	PCB-126	2.09e+07	1.64 y	1.28	45:15	1.000	0.995	1.005	57.0445
	PCB-155	1.12e+07	1.28 y	1.14	37:01	1.001	0.966	1.006	52.6565
	PCB-150	1.08e+07	1.30 y	1.06	38:17	1.035	1.030	1.040	54.5138
	PCB-152	1.05e+07	1.27 y	1.10	38:45	1.048	1.043	1.053	51.3606
	PCB-145	1.08e+07	1.24 y	1.09	39:12	1.059	1.055	1.065	53.0156
	PCB-136	1.05e+07	1.30 y	1.08	39:31	1.068	1.064	1.074	51.6458
	PCB-148	7.84e+06	1.30 y	0.74	39:38	1.071	1.066	1.076	56.6097
	PCB-154	8.96e+06	1.27 y	0.88	40:07	1.084	1.079	1.089	54.2245
	PCB-151	7.98e+06	1.34 y	0.81	40:45	1.101	1.097	1.107	52.7449
	PCB-135	7.70e+06	1.31 y	0.78	40:58	1.107	1.101	1.113	52.8226
	PCB-144	7.68e+06	1.28 y	0.82	41:05	1.110	1.105	1.116	50.1421
	PCB-147	8.05e+06	1.29 y	0.83	41:12	1.114	1.011	1.120	51.9413
	PCB-139/149	1.62e+07	1.28 y	0.84	41:28	1.121	1.115	1.127	102.912
-	PCB-140	7.92e+06	1.27 y	0.79	41:39	1.126	1.120	1.132	53.9793
-	PCB-134/143	2.51e+07	1.27 y	0.93	42:05	0.975	0.970	0.980	100.789

	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
	PCB-133/142	2.49e+07	1.25 y	0.95	42:23	0.982	0.977	0.987	97.9919
	PCB-131	1.18e+07	1.27 y	0.91	42:32	0.985	0.981	0.991	48.1462
	PCB-146/165	3.10e+07	1.26 y	1.16	42:46	0.991	0.986	0.996	99.8693
	PCB-132/161	3.00e+07	1.27 y	1.11	43:01	0.997	0.992	1.002	100.204
	PCB-153	1.65e+07	1.23 y	1.18	43:10	1.000	0.995	1.005	52.0484
	PCB-168	1.91e+07	1.28 y	1.37	43:23	1.005	1.000	1.010	51.8764
	PCB-141	1.31e+07	1.25 y	0.97	43:55	1.000	0.996	1.005	51.8839
	PCB-137	1.45e+07	1.26 y	1.07	44:17	1.009	1.004	1.014	52.5384
	PCB-130	1.16e+07	1.24 y	0.85	44:24	1.011	1.007	1.017	53.0185
	PCB-138/163/164	4.83e+07	1.25 y	1.23	44:46	1.001	0.996	1.006	155.997
	PCB-158/160	3.42e+07	1.27 y	1.29	45:01	1.006	1.001	1.011	104.872
	PCB-129	1.12e+07	1.29 y	0.92	45:15	1.011	1.007	1.017	48.1238
	PCB-166	1.75e+07	1.28 y	1.12	45:43	0.993	0.988	0.998	53.2947
	PCB-159	1.78e+07	1.26 y	1.16	46:02	1.000	0.995	1.005	52.0149
	PCB-128/162	2.95e+07	1.27 y	1.02	46:20	1.007	1.002	1.012	98.5906
	PCB-167	1.74e+07	1.22 y	1.06	46:43	1.000	0.995	1.005	51.6923
	PCB-156	1.76e+07	1.28 y	1.18	48:00	1.000	0.995	1.005	52.2272
	PCB-157	1.75e+07	1.30 y	1.08	48:17	1.001	0.995	1.005	52.1733
	PCB-169	1.62e+07	1.31 y	1.11	50:26	1.000	0.995	1.005	51.6125
	PCB-188	1.53e+07	1.10 y	1.40	42:49	1.001	0.995	1.005	53.9050
	PCB-184	1.43e+07	1.07 y	1.24	43:16	1.011	1.006	1.016	57.3328
	PCB-179	1.46e+07	1.07 y	1.30	44:02	1.029	1.024	1.034	56.1866
	PCB-176	1.55e+07	1.09 y	1.36	44:30	1.040	1.035	1.045	56.1735
	PCB-186	1.49e+07	1.10 y	1.28	45:07	1.054	1.049	1.059	57.6615
	PCB-178	1.06e+07	1.06 y	0.94	45:36	1.065	1.061	1.071	56.0460
	PCB-175	1.15e+07	1.07 y	0.97	45:57	1.074	1.069	1.079	58.7548
	PCB-182/187	2.50e+07	1.07 y	1.01	46:07	1.078	1.073	1.083	121.735
	PCB-183	1.17e+07	1.12 y	1.08	46:26	1.085	1.080	1.090	53.5746
	PCB-185	1.11e+07	1.09 y	1.34	47:06	0.956	0.951	0.961	55.3548
	PCB-174	1.05e+07	1.07 y	1.34	47:27	0.963	0.958	0.968	52.4495
	PCB-181	1.19e+07	1.05 y	1.36	47:34	0.965	0.961	0.971	58.1878
	PCB-177	1.03e+07	1.09 y	1.24	47:44	0.969	0.964	0.974	55.4545
	PCB-171	1.03e+07	1.05 y	1.31	48:02	0.975	0.970	0.980	52.2496
	PCB-173	9.65e+06	1.09 y	1.16	48:27	0.983	0.979	0.989	55.4810
	PCB-172	1.04e+07	1.08 y	1.22	48:54	0.992	0.988	0.998	56.5071
	PCB-192	1.30e+07	1.07 y	1.53	49:05	0.996	0.991	1.001	56.8969
	PCB-180	1.17e+07	1.11 y	1.43	49:18	1.000	0.995	1.005	54.8087

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 12/29/14

Client ID: PCB CS3 14L2401 Filename: 141226E3 S:1 Acq:27-DEC-14 13:35:34 ConCal: ST141226E3-1

Lab ID: ST141226E3-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	1.38e+07	1.06	y	1.65	49:30	1.005	0.999	1.009	55.7802
	PCB-191	1.41e+07	1.07	y	1.67	49:46	1.010	1.004	1.014	56.3860
	PCB-170	9.34e+06	1.09	y	1.50	50:49	1.000	0.995	1.005	54.5616
	PCB-190	1.33e+07	1.06	y	2.02	50:60	1.004	0.998	1.008	57.7489
	PCB-189	1.34e+07	1.09	y	1.54	52:21	1.000	0.995	1.005	55.8172
	PCB-202	9.37e+06	0.90	y	1.04	48:14	1.001	0.995	1.005	49.9667
	PCB-201	1.12e+07	0.92	y	1.10	48:43	1.011	1.006	1.016	56.2264
	PCB-204	9.72e+06	0.89	y	0.99	48:52	1.014	1.009	1.019	54.2488
	PCB-197	1.10e+07	0.92	y	1.07	49:10	1.020	1.015	1.025	56.6928
	PCB-200	9.96e+06	0.94	y	1.02	50:04	1.039	1.032	1.044	54.2916
	PCB-198	6.49e+06	0.93	y	0.74	51:25	1.067	1.058	1.068	48.4107
	PCB-199	7.02e+06	0.93	y	0.73	51:32	1.069	1.060	1.070	53.4286
-	PCB-196/203	1.45e+07	0.95	y	0.77	51:48	1.075	1.066	1.076	104.235
-	PCB-195	1.49e+07	0.93	y	1.20	52:59	0.984	0.979	0.989	53.0160
	PCB-194	1.65e+07	0.94	y	1.25	53:51	1.000	0.995	1.005	56.5016
	PCB-205	1.94e+07	0.91	y	1.41	54:08	1.005	1.001	1.011	58.8393
	PCB-208	1.29e+07	1.37	y	0.96	53:08	1.000	0.995	1.005	52.7988
	PCB-207	1.28e+07	1.38	y	0.92	53:27	1.006	1.001	1.011	54.7925
	PCB-206	9.18e+06	1.34	y	1.03	55:29	1.000	0.995	1.005	54.0628
	PCB-209	1.10e+07	1.23	y	1.18	56:51	1.000	0.995	1.005	52.5435

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.20e+08	3.04	y	16:07	1.22	150.378	
Total Di-PCB	9.47e+08	1.66	y	20:05	1.21	1403.43	
Total Tri-PCB	1.92e+08	1.11	y	24:12	1.16	421.959	
Total Tri-PCB	4.69e+08	1.06	y	27:53	1.35	934.370	Sum:1356.33
Total Tetra-PCB	7.94e+08	0.80	y	27:57	1.17	2116.12	
Total Penta-PCB	5.37e+08	1.66	y	32:37	1.21	2295.37	
Total Penta-PCB	1.15e+08	1.63	y	42:09	1.26	297.146	Sum:2592.52
Total Hexa-PCB	1.26e+08	1.28	y	37:01	0.92	738.569	
Total Hexa-PCB	4.33e+08	1.27	y	42:05	1.08	1455.12	Sum:2193.69
Total Hepta-PCB	3.00e+08	1.10	y	42:49	1.27	1365.13	
Total Octa-PCB	7.92e+07	0.90	y	48:14	0.92	477.500	
Total Octa-PCB	5.35e+07	0.93	y	52:59	1.29	177.291	Sum:654.791
Total Nona-PCB	3.55e+07	1.37	y	53:08	0.96	164.283	
Total Deca-PCB	1.10e+07	1.23	y	56:51	1.18	52.5435	

Total PCB Conc:11903.5818460

RL: MONO, TRI - DECA: ——

Integrations by Analyst: DMS

Date: 12/29/14

Client ID: PCB CS3 14L2401 Filename: 141226E3 S:1 Acq:27-DEC-14 13:35:34 ConCal: ST141226E3-1
Lab ID: ST141226E3-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.60e+07	3.38 y	0.89	16:06	0.622	0.622	0.628	118	118
13C-PCB-3	6.55e+07	3.42 y	0.93	18:42	0.722	0.721	0.729	112	112
13C-PCB-4	3.77e+07	1.61 y	0.55	20:03	0.774	0.772	0.780	109	109
13C-PCB-9	5.53e+07	1.64 y	0.83	21:50	0.843	0.840	0.848	106	106
13C-PCB-11	5.99e+07	1.61 y	0.94	25:12	0.973	0.968	0.978	101	101
13C-PCB-19	2.94e+07	1.11 y	0.53	24:11	0.934	0.929	0.939	87.7	87.7
13C-PCB-28	3.79e+07	1.08 y	0.89	29:03	1.003	0.999	1.009	93.1	93.1
13C-PCB-32	4.39e+07	1.13 y	0.81	27:06	1.046	1.041	1.051	85.7	85.7
13C-PCB-37	3.64e+07	1.10 y	0.83	32:55	1.137	1.131	1.143	95.5	95.5
13C-PCB-47	2.80e+07	0.84 y	0.74	31:57	0.871	0.867	0.875	91.2	91.2
13C-PCB-52	2.73e+07	0.77 y	0.71	31:28	0.857	0.853	0.861	93.6	93.6
13C-PCB-54	3.56e+07	0.82 y	0.85	27:55	0.761	0.758	0.766	102	102
13C-PCB-70	3.78e+07	0.80 y	0.94	35:28	0.966	0.961	0.971	97.0	97.0
13C-PCB-77	3.56e+07	0.81 y	0.89	39:35	1.078	1.073	1.083	96.6	96.6
13C-PCB-80	3.93e+07	0.82 y	0.96	35:53	0.978	0.972	0.982	99.0	99.0
13C-PCB-81	3.23e+07	0.80 y	0.84	38:59	1.062	1.057	1.067	93.3	93.3
13C-PCB-95	1.73e+07	1.63 y	0.74	35:46	0.913	0.908	0.918	98.3	98.3
13C-PCB-97	1.61e+07	1.57 y	0.69	38:45	0.989	0.984	0.994	98.9	98.9
13C-PCB-101	1.85e+07	1.62 y	0.79	37:27	0.956	0.951	0.961	100.0	100.0
13C-PCB-104	2.29e+07	1.56 y	1.00	32:37	0.832	0.829	0.837	97.6	97.6
13C-PCB-105	3.13e+07	1.68 y	1.24	43:00	0.929	0.924	0.934	107	107
13C-PCB-114	2.99e+07	1.68 y	1.21	42:09	0.910	0.905	0.915	105	105
13C-PCB-118	2.25e+07	1.62 y	0.98	41:29	1.059	1.054	1.064	96.8	96.8
13C-PCB-123	2.21e+07	1.64 y	0.95	41:19	1.054	1.049	1.059	98.6	98.6
13C-PCB-126	2.86e+07	1.66 y	1.16	45:14	0.977	0.972	0.982	104	104
13C-PCB-127	3.38e+07	1.69 y	1.34	43:21	0.936	0.931	0.941	107	107
13C-PCB-138	2.53e+07	1.29 y	1.04	44:44	0.966	0.961	0.971	103	103
13C-PCB-141	2.58e+07	1.29 y	1.07	43:54	0.948	0.943	0.953	102	102
13C-PCB-153	2.69e+07	1.28 y	1.11	43:10	0.932	0.927	0.937	102	102
13C-PCB-155	1.87e+07	1.32 y	0.83	36:60	0.944	0.939	0.949	95.2	95.2
13C-PCB-156	2.85e+07	1.33 y	1.24	47:59	1.037	1.032	1.042	96.9	96.9
13C-PCB-157	3.10e+07	1.30 y	1.31	48:15	1.042	1.037	1.047	100	100
13C-PCB-159	2.94e+07	1.30 y	1.20	46:01	0.994	0.989	0.999	104	104
13C-PCB-167	3.18e+07	1.33 y	1.32	46:42	1.009	1.004	1.014	102	102
13C-PCB-169	2.83e+07	1.34 y	1.22	50:26	1.089	1.082	1.092	98.8	98.8
13C-PCB-170	1.14e+07	0.48 y	0.54	50:48	1.097	1.089	1.101	90.2	90.2
13C-PCB-180	1.50e+07	0.47 y	0.67	49:17	1.065	1.059	1.069	94.2	94.2
13C-PCB-188	2.02e+07	0.46 y	0.94	42:48	0.924	0.919	0.929	91.4	91.4
13C-PCB-189	1.56e+07	0.48 y	0.72	52:19	1.130	1.120	1.132	92.1	92.1
13C-PCB-194	2.34e+07	0.95 y	0.81	53:51	0.995	0.990	1.000	97.3	97.3
13C-PCB-202	1.80e+07	0.91 y	0.83	48:12	1.041	1.036	1.046	91.7	91.7
13C-PCB-206	1.65e+07	0.81 y	0.66	55:28	1.025	1.021	1.031	84.6	84.6
13C-PCB-208	2.55e+07	0.78 y	1.12	53:07	0.982	0.976	0.986	76.4	76.4
13C-PCB-209	1.79e+07	1.23 y	0.61	56:50	1.050	1.044	1.054	98.1	98.1

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.37e+07	0.82 y	1.01	37:46	1.029	1.023	1.033	105	105
13C-PCB-178	1.49e+07	0.48 y	0.63	45:35	0.985	0.979	0.989	100	100

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	4.37e+07	0.82 y	1.20	37:46	0.969	0.963	0.973	113	113
13C-PCB-178	1.49e+07	0.48 y	0.94	45:35	0.925	0.920	0.930	106	106

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	6.30e+07	1.60	y	1.00	25:54	100
13C-PCB-31	4.58e+07	1.09	y	1.00	28:57	100
13C-PCB-60	4.12e+07	0.80	y	1.00	36:43	100
13C-PCB-111	2.36e+07	1.57	y	1.00	39:11	100
13C-PCB-128	2.36e+07	1.28	y	1.00	46:18	100
13C-PCB-205	2.97e+07	0.94	y	1.00	54:07	100

Analyst: DMS

Date: 12/29/14

Vista Analytical Laboratory - Injection Log Run file: 141226E3 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141226E3	1	ST141226E3-1	DMS	27-DEC-14	13:35:34	ST141226E3-1	NA
141226E3	2	SOLVENT BLANK	DMS	27-DEC-14	14:40:02	ST141226E3-1	NA
141226E3	3	1400949-03	DMS	27-DEC-14	15:44:31	ST141226E3-1	NA
141226E3	4	1400949-04	DMS	27-DEC-14	16:49:01	ST141226E3-1	NA
141226E3	5	1400949-05	DMS	27-DEC-14	17:53:30	ST141226E3-1	NA
141226E3	6	1400958-01	DMS	27-DEC-14	18:57:59	ST141226E3-1	NA
141226E3	7	1400958-02	DMS	27-DEC-14	20:02:28	ST141226E3-1	NA
141226E3	8	1400902-21	DMS	27-DEC-14	21:06:57	ST141226E3-1	NA
141226E3	9	SOLVENT BLANK	DMS	27-DEC-14	22:11:25	ST141226E3-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST141226E3-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	NA	
Retention Times within criteria?	DmD 12/29/14	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000, CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: CJS 12/29/14
Initials & Date

** Ending standard criteria applicable to 8290 only.*

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 140620E1 Analyte: Cal: PCBVG8-6-20-14 Inst. ID. VG-8

Data filename: 140620E1

			Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
			0.25	1.0	2.5	50	400	750
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
PCB-1	1.25	8.70 %	1.37	1.26	1.26	1.31	1.05	1.27
PCB-2	1.18	8.61 %	1.27	1.26	1.14	1.24	1.00	1.18
PCB-3	1.22	8.48 %	1.31	1.29	1.23	1.26	1.02	1.20
PCB-4/10	1.55	8.01 %	1.67	1.64	1.55	1.61	1.32	1.54
PCB-7/9	1.27	8.90 %	1.43	1.30	1.26	1.30	1.08	1.25
PCB-6	1.26	11.24 %	1.49	1.29	1.26	1.26	1.06	1.20
PCB-5/8	1.23	6.34 %	1.29	1.29	1.23	1.28	1.08	1.23
PCB-14	1.23	11.07 %	1.45	1.24	1.21	1.27	1.03	1.20
PCB-11	1.16	9.82 %	1.33	1.19	1.16	1.18	0.97	1.13
PCB-12/13	1.10	7.82 %	1.20	1.12	1.10	1.14	0.94	1.09
PCB-15	1.21	10.03 %	1.40	1.19	1.22	1.24	1.02	1.18
PCB-19	1.30	14.66 %	1.63	1.31	1.26	1.28	1.05	1.23
PCB-30	1.83	9.12 %	2.06	1.88	1.82	1.87	1.54	1.82
PCB-18	0.86	12.65 %	1.03	0.90	0.85	0.87	0.70	0.81
PCB-17	0.90	11.34 %	1.04	0.96	0.89	0.92	0.74	0.86
PCB-24/27	1.18	9.77 %	1.33	1.20	1.18	1.22	0.98	1.15
PCB-16/32	1.03	12.28 %	1.23	1.08	1.02	1.03	0.84	0.98
PCB-34	1.26	11.67 %	1.47	1.39	1.25	1.23	1.07	1.16
PCB-23	1.31	14.20 %	1.54	1.27	1.41	1.44	1.02	1.19
PCB-29	1.33	17.31 %	1.74	1.32	1.32	1.36	1.06	1.18
PCB-26	1.29	15.40 %	1.62	1.31	1.32	1.31	1.03	1.16
PCB-25	1.34	13.58 %	1.63	1.37	1.36	1.38	1.09	1.21
PCB-31	1.42	18.76 %	1.87	1.40	1.46	1.41	1.05	1.32
PCB-28	1.38	11.74 %	1.60	1.43	1.41	1.45	1.18	1.20
PCB-20/21/33	1.31	12.96 %	1.59	1.33	1.32	1.34	1.08	1.21
PCB-22	1.32	10.73 %	1.50	1.38	1.35	1.39	1.09	1.23
PCB-36	1.38	8.85 %	1.47	1.49	1.38	1.43	1.16	1.32
PCB-39	1.42	9.22 %	1.58	1.49	1.41	1.46	1.19	1.39
PCB-38	1.35	7.47 %	1.39	1.45	1.36	1.41	1.16	1.35
PCB-35	1.38	8.01 %	1.52	1.38	1.35	1.44	1.19	1.38
PCB-37	1.39	9.07 %	1.58	1.40	1.39	1.41	1.18	1.39
PCB-54	1.20	8.53 %	1.29	1.28	1.18	1.24	1.01	1.18
PCB-50	0.97	9.30 %	1.08	1.01	0.96	0.99	0.81	0.95
PCB-53	1.19	11.55 %	1.42	1.24	1.14	1.19	1.00	1.14
PCB-51	1.15	7.40 %	1.21	1.18	1.17	1.23	0.99	1.14
PCB-45	0.97	8.59 %	1.04	0.99	1.00	1.02	0.81	0.93
PCB-46	0.95	15.50 %	1.21	0.98	0.90	0.95	0.77	0.88
PCB-52/69	1.28	8.47 %	1.35	1.33	1.33	1.35	1.07	1.23
PCB-73	1.37	6.52 %	1.42	1.39	1.31	1.43	1.22	1.45
PCB-43/49	1.11	10.59 %	1.30	1.13	1.10	1.13	0.94	1.08
PCB-47	1.13	11.84 %	1.34	1.18	1.04	1.20	0.96	1.07

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PCB-48/75	1.30	10.70 %	1.52	1.28	1.33	1.31	1.08	1.30
PCB-65	1.33	13.12 %	1.67	1.30	1.28	1.32	1.15	1.30
PCB-62	1.29	10.74 %	1.39	1.40	1.30	1.38	1.03	1.25
PCB-44	0.94	10.79 %	1.08	0.90	0.98	0.98	0.78	0.92
PCB-42/59	1.22	9.45 %	1.36	1.25	1.21	1.26	1.01	1.21
PCB-41/64/71/72	1.31	8.83 %	1.48	1.32	1.28	1.35	1.12	1.33
PCB-68	1.49	9.40 %	1.63	1.59	1.48	1.51	1.23	1.46
PCB-40	0.82	12.75 %	0.99	0.83	0.82	0.83	0.67	0.78
PCB-57	1.11	10.20 %	1.26	1.18	1.11	1.15	0.92	1.07
PCB-67	1.07	9.89 %	1.05	1.20	1.12	1.15	0.90	1.03
PCB-58	1.10	11.05 %	1.29	1.13	1.12	1.09	0.91	1.07

PCB-63	1.12	7.49 %	1.17	1.17	1.14	1.16	0.95	1.12
PCB-74	1.20	8.89 %	1.31	1.27	1.22	1.25	1.00	1.18
PCB-61/70	1.08	8.22 %	1.18	1.13	1.08	1.10	0.92	1.06
PCB-76/66	1.14	10.54 %	1.31	1.18	1.12	1.17	0.94	1.10
PCB-80	1.28	9.96 %	1.46	1.33	1.28	1.28	1.07	1.24
PCB-55	1.11	7.19 %	1.16	1.17	1.10	1.14	0.96	1.12
PCB-56/60	1.09	10.58 %	1.26	1.12	1.07	1.09	0.91	1.07
PCB-79	1.12	8.90 %	1.26	1.11	1.12	1.15	0.95	1.13
PCB-78	1.24	11.08 %	1.43	1.32	1.20	1.27	1.02	1.18
PCB-81	1.38	9.94 %	1.51	1.50	1.41	1.41	1.14	1.31
PCB-77	1.21	8.98 %	1.33	1.26	1.22	1.25	1.02	1.17
PCB-104	1.26	10.21 %	1.42	1.31	1.28	1.27	1.03	1.22
PCB-96	1.09	9.49 %	1.24	1.12	1.08	1.10	0.92	1.10
PCB-103	0.93	8.17 %	1.00	0.98	0.89	0.95	0.80	0.98
PCB-100	1.00	7.45 %	1.03	1.08	0.97	1.01	0.87	1.05
PCB-94	1.11	11.35 %	1.31	1.11	1.11	1.13	0.91	1.08
PCB-95/98/102	1.21	9.28 %	1.36	1.25	1.18	1.30	1.04	1.17
PCB-93	1.13	18.48 %	1.36	1.34	1.21	0.95	0.84	1.08
PCB-88/91	1.02	8.29 %	1.00	1.06	1.02	1.15	0.89	1.00
PCB-121	1.90	16.11 %	2.27	2.21	1.94	1.69	1.46	1.85
PCB-84/92	1.05	9.56 %	1.15	1.13	1.05	1.09	0.87	1.02
PCB-89	1.02	10.73 %	1.15	1.04	1.02	1.08	0.83	0.98
PCB-90/101	1.19	9.91 %	1.34	1.26	1.19	1.21	0.99	1.15
PCB-113	1.35	10.72 %	1.54	1.26	1.32	1.51	1.16	1.33
PCB-99	1.29	12.88 %	1.43	1.48	1.35	1.20	1.03	1.24
PCB-119	1.72	7.60 %	1.78	1.88	1.72	1.73	1.48	1.73
PCB-108/112	1.29	7.44 %	1.31	1.39	1.29	1.33	1.10	1.30
PCB-83	1.52	7.96 %	1.66	1.53	1.51	1.58	1.30	1.54
PCB-97	1.25	8.07 %	1.35	1.26	1.27	1.32	1.06	1.23
PCB-86	1.02	10.03 %	1.19	0.96	1.05	0.98	0.90	1.06
PCB-87/117/125	1.56	6.32 %	1.67	1.60	1.55	1.59	1.37	1.57
PCB-111/115	1.75	13.48 %	2.16	1.80	1.69	1.76	1.43	1.66
PCB-85/116	1.30	6.67 %	1.30	1.35	1.33	1.34	1.13	1.35
PCB-120	1.78	10.02 %	2.08	1.80	1.76	1.75	1.52	1.77
PCB-110	1.68	10.37 %	1.90	1.78	1.65	1.72	1.38	1.64
PCB-82	0.74	11.58 %	0.83	0.83	0.73	0.73	0.60	0.71
PCB-124	1.32	11.30 %	1.54	1.34	1.33	1.32	1.07	1.33
PCB-107/109	1.22	8.01 %	1.35	1.31	1.18	1.24	1.08	1.17
PCB-123	1.22	9.00 %	1.30	1.30	1.23	1.28	1.01	1.20
PCB-106/118	1.22	9.57 %	1.37	1.27	1.25	1.26	1.01	1.19
PCB-114	1.36	10.69 %	1.57	1.37	1.36	1.37	1.11	1.35
PCB-122	1.24	10.69 %	1.41	1.32	1.20	1.25	1.02	1.22
PCB-105	1.28	7.83 %	1.36	1.29	1.33	1.34	1.09	1.28
PCB-127	1.14	11.20 %	1.33	1.18	1.14	1.16	0.94	1.09
PCB-126	1.28	9.08 %	1.46	1.28	1.28	1.32	1.10	1.27
PCB-155	1.14	7.40 %	1.11	1.20	1.18	1.20	0.98	1.15
PCB-150	1.06	7.11 %	1.15	1.04	1.05	1.11	0.94	1.10
PCB-152	1.10	11.78 %	1.32	1.08	1.06	1.12	0.92	1.09
PCB-145	1.09	12.69 %	1.35	1.06	1.05	1.11	0.92	1.08
PCB-136	1.08	11.65 %	1.25	1.02	1.08	1.14	0.88	1.14

PCB-148	0.74	7.71 %	0.84	0.75	0.68	0.75	0.70	0.72
PCB-154	0.88	8.65 %	0.96	0.88	0.88	0.93	0.74	0.91
PCB-151	0.81	9.63 %	0.91	0.82	0.78	0.86	0.68	0.81
PCB-135	0.78	6.32 %	0.83	0.75	0.76	0.81	0.70	0.82
PCB-144	0.82	10.98 %	0.93	0.81	0.78	0.90	0.68	0.82
PCB 147	0.83	12.38 %	1.00	0.76	0.78	0.88	0.70	0.85
PCB-139/149	0.84	7.77 %	0.91	0.82	0.83	0.91	0.73	0.86
PCB-140	0.79	11.18 %	0.91	0.73	0.76	0.86	0.66	0.80
PCB-134/143	0.93	12.49 %	1.13	0.94	0.90	0.94	0.78	0.87
PCB-133/142	0.95	11.69 %	1.12	0.98	0.91	0.96	0.79	0.90
PCB-131	0.91	13.39 %	1.11	0.96	0.90	0.90	0.74	0.87

PCB-146/165	1.16	9.91 %	1.33	1.19	1.14	1.16	0.97	1.13
PCB-132/161	1.11	10.87 %	1.31	1.14	1.09	1.13	0.93	1.07
PCB-153	1.18	8.19 %	1.21	1.24	1.26	1.18	0.99	1.18
PCB-168	1.37	10.18 %	1.56	1.44	1.37	1.37	1.14	1.35
PCB-141	0.97	8.49 %	1.08	1.00	0.97	0.99	0.83	0.99
PCB-137	1.07	6.76 %	1.12	1.16	1.05	1.03	0.96	1.11
PCB-130	0.85	9.16 %	0.85	0.83	0.87	0.94	0.71	0.89
PCB-138/163/164	1.23	7.23 %	1.30	1.28	1.22	1.26	1.05	1.24
PCB-158/160	1.29	7.06 %	1.37	1.33	1.29	1.34	1.11	1.29
PCB-129	0.92	10.90 %	1.06	0.98	0.93	0.93	0.76	0.88
PCB-166	1.12	8.09 %	1.17	1.21	1.11	1.13	0.94	1.13
PCB-159	1.16	9.05 %	1.24	1.24	1.18	1.17	0.96	1.20
PCB-128/162	1.02	8.78 %	1.10	1.03	1.04	1.07	0.85	1.03
PCB-167	1.06	9.67 %	1.20	1.04	1.10	1.09	0.88	1.05
PCB-156	1.18	12.60 %	1.44	1.20	1.18	1.17	0.98	1.12
PCB-157	1.08	8.46 %	1.17	1.12	1.13	1.11	0.91	1.06
PCB-169	1.11	8.78 %	1.24	1.15	1.12	1.11	0.94	1.09
PCB-188	1.40	9.77 %	1.59	1.44	1.43	1.43	1.17	1.37
PCB-184	1.24	9.34 %	1.35	1.30	1.25	1.28	1.02	1.23
PCB-179	1.30	11.40 %	1.50	1.37	1.32	1.31	1.05	1.28
PCB-176	1.36	12.01 %	1.55	1.47	1.35	1.38	1.07	1.34
PCB-186	1.28	10.58 %	1.46	1.30	1.25	1.31	1.05	1.29
PCB-178	0.94	10.89 %	0.99	1.05	0.96	0.96	0.75	0.92
PCB-175	0.97	9.63 %	1.03	1.01	0.98	1.02	0.78	0.99
PCB-182/187	1.01	8.25 %	1.07	1.03	1.01	1.06	0.85	1.07
PCB-183	1.08	11.32 %	1.18	1.17	1.08	1.10	0.85	1.12
PCB-185	1.34	11.43 %	1.58	1.37	1.30	1.36	1.10	1.35
PCB-174	1.34	6.35 %	1.41	1.36	1.36	1.32	1.18	1.40
PCB-181	1.36	12.64 %	1.56	1.48	1.28	1.43	1.08	1.33
PCB-177	1.24	12.38 %	1.50	1.23	1.20	1.28	1.03	1.21
PCB-171	1.31	10.27 %	1.52	1.33	1.34	1.31	1.10	1.28
PCB-173	1.16	12.99 %	1.43	1.13	1.15	1.17	0.97	1.11
PCB-172	1.22	11.23 %	1.47	1.18	1.22	1.24	1.05	1.18
PCB-192	1.53	7.91 %	1.69	1.58	1.49	1.56	1.33	1.51
PCB-180	1.43	12.38 %	1.72	1.48	1.44	1.42	1.18	1.34
PCB-193	1.65	9.91 %	1.90	1.71	1.65	1.68	1.40	1.59
PCB-191	1.67	12.03 %	2.04	1.63	1.65	1.68	1.43	1.61
PCB-170	1.50	10.78 %	1.66	1.67	1.51	1.50	1.23	1.44
PCB-190	2.02	10.04 %	2.33	2.09	1.97	2.04	1.70	1.98
PCB-189	1.54	8.43 %	1.70	1.58	1.55	1.59	1.30	1.54
PCB-202	1.04	12.36 %	1.24	1.11	1.01	1.04	0.85	0.99
PCB-201	1.10	11.84 %	1.33	1.11	1.06	1.11	0.92	1.09
PCB-204	0.99	8.55 %	1.10	0.99	0.99	1.04	0.84	1.00
PCB-197	1.07	11.41 %	1.28	1.04	1.04	1.12	0.90	1.06
PCB-200	1.02	8.06 %	1.11	1.02	1.02	1.07	0.87	1.02
PCB-198	0.74	13.95 %	0.90	0.81	0.69	0.77	0.60	0.70
PCB-199	0.73	6.67 %	0.75	0.75	0.73	0.77	0.63	0.74
PCB-196/203	0.77	7.49 %	0.82	0.80	0.75	0.81	0.67	0.79
PCB-195	1.20	7.95 %	1.32	1.23	1.17	1.25	1.04	1.19
PCB-194	1.25	15.62 %	1.61	1.21	1.22	1.24	1.02	1.17

PCB-205	1.41	12.03 %	1.70	1.44	1.41	1.41	1.17	1.36
PCB-208	0.96	16.01 %	1.25	0.95	0.93	0.95	0.78	0.91
PCB-207	0.92	8.32 %	0.99	0.97	0.91	0.93	0.78	0.91
PCB-206	1.03	12.39 %	1.24	1.05	1.03	1.02	0.84	0.98
PCB-209	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
Total Mono-PCB	1.22	8.44 %	1.32	1.27	1.21	1.27	1.02	1.22
Total Di-PCB	1.21	8.72 %	1.35	1.24	1.21	1.25	1.03	1.19
Total Tri-PCB	1.16	11.17 %	1.36	1.20	1.15	1.18	0.96	1.12

Total Tri-PCB	1.35	11.56 %	1.58	1.38	1.36	1.39	1.11	1.26
Total Tetra-PCB	1.17	9.20 %	1.32	1.21	1.17	1.21	0.99	1.15
Total Penta-PCB	1.21	8.50 %	1.33	1.27	1.21	1.24	1.03	1.21
Total Penta-PCB	1.26	9.64 %	1.42	1.29	1.26	1.29	1.05	1.24
Total Hexa-PCB	0.92	8.86 %	1.03	0.90	0.89	0.96	0.78	0.93
Total Hexa-PCB	1.08	8.82 %	1.20	1.12	1.08	1.10	0.91	1.07
Total Hepta-PCB	1.27	10.02 %	1.44	1.31	1.27	1.30	1.05	1.26
Total Octa-PCB	0.92	9.46 %	1.04	0.94	0.89	0.95	0.77	0.91
Total Octa-PCB	1.29	11.68 %	1.54	1.29	1.26	1.30	1.08	1.24
Total Nona-PCB	0.96	11.85 %	1.15	0.98	0.94	0.96	0.79	0.93
Total Deca-PCB	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
13C-PCB-1	0.89	8.16 %	0.97	0.94	0.91	0.88	0.88	0.76
13C-PCB-3	0.93	4.27 %	0.98	0.94	0.94	0.93	0.91	0.86
13C-PCB-4	0.55	3.55 %	0.56	0.57	0.56	0.55	0.53	0.52
13C-PCB-9	0.83	2.91 %	0.84	0.85	0.84	0.82	0.80	0.79
13C-PCB-11	0.94	1.99 %	0.94	0.96	0.96	0.92	0.93	0.91
13C-PCB-19	0.53	4.01 %	0.55	0.55	0.55	0.53	0.52	0.50
13C-PCB-32	0.81	1.81 %	0.83	0.82	0.83	0.81	0.81	0.79
13C-PCB-28	0.89	8.44 %	0.79	0.91	0.83	0.85	0.96	0.98
13C-PCB-37	0.83	4.85 %	0.80	0.83	0.80	0.80	0.87	0.89
13C-PCB-54	0.85	5.64 %	0.86	0.89	0.91	0.84	0.83	0.77
13C-PCB-52	0.71	4.89 %	0.72	0.74	0.75	0.70	0.68	0.66
13C-PCB-47	0.74	4.31 %	0.74	0.78	0.78	0.73	0.73	0.70
13C-PCB-70	0.94	2.25 %	0.96	0.97	0.96	0.93	0.94	0.91
13C-PCB-80	0.96	2.89 %	0.96	1.00	0.99	0.95	0.95	0.92
13C-PCB-81	0.84	2.20 %	0.83	0.82	0.84	0.82	0.86	0.86
13C-PCB-77	0.89	1.89 %	0.88	0.87	0.90	0.88	0.91	0.91
13C-PCB-104	1.00	6.42 %	0.99	1.06	1.07	0.98	0.96	0.90
13C-PCB-95	0.74	2.70 %	0.74	0.78	0.75	0.73	0.74	0.72
13C-PCB-101	0.79	2.14 %	0.79	0.81	0.79	0.77	0.78	0.77
13C-PCB-97	0.69	1.41 %	0.70	0.69	0.70	0.69	0.69	0.67
13C-PCB-123	0.95	4.62 %	0.88	0.92	0.98	1.00	0.95	0.97
13C-PCB-118	0.98	3.93 %	0.92	0.95	0.99	1.03	1.01	0.99
13C-PCB-114	1.21	3.28 %	1.26	1.20	1.21	1.18	1.25	1.15
13C-PCB-105	1.24	3.05 %	1.26	1.24	1.25	1.20	1.29	1.19
13C-PCB-127	1.34	2.73 %	1.37	1.34	1.38	1.29	1.36	1.30
13C-PCB-126	1.16	2.72 %	1.16	1.17	1.20	1.12	1.19	1.14
13C-PCB-155	0.83	3.93 %	0.86	0.87	0.84	0.83	0.81	0.78
13C-PCB-153	1.11	2.81 %	1.14	1.11	1.13	1.10	1.15	1.06
13C-PCB-141	1.07	3.72 %	1.13	1.09	1.09	1.06	1.06	1.01
13C-PCB-138	1.04	2.24 %	1.06	1.05	1.06	1.02	1.06	1.01
13C-PCB-159	1.20	1.72 %	1.21	1.19	1.22	1.17	1.22	1.19
13C-PCB-167	1.32	1.88 %	1.32	1.33	1.36	1.29	1.32	1.31
13C-PCB-156	1.24	1.98 %	1.23	1.25	1.28	1.21	1.26	1.24
13C-PCB-157	1.31	1.61 %	1.31	1.31	1.34	1.28	1.33	1.29
13C-PCB-169	1.22	1.81 %	1.22	1.21	1.25	1.19	1.22	1.20
13C-PCB-188	0.94	3.81 %	0.97	0.93	0.93	0.93	0.98	0.88
13C-PCB-180	0.67	2.62 %	0.71	0.67	0.67	0.67	0.67	0.65
13C-PCB-170	0.54	1.49 %	0.55	0.54	0.54	0.53	0.54	0.52
13C-PCB-189	0.72	1.73 %	0.72	0.70	0.73	0.73	0.71	0.70
13C-PCB-202	0.83	2.31 %	0.86	0.83	0.83	0.84	0.84	0.80

13C-PCB-194	0.81	1.33 %	0.82	0.82	0.82	0.80	0.81	0.79
13C-PCB-208	1.12	2.11 %	1.10	1.14	1.13	1.14	1.14	1.09
13C-PCB-206	0.66	3.31 %	0.63	0.65	0.66	0.70	0.65	0.65
13C-PCB-209	0.61	2.62 %	0.59	0.60	0.62	0.64	0.61	0.62
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.01	4.78 %	0.97	0.97	0.99	1.09	0.99	1.02
13C-PCB-178	0.63	4.30 %	0.62	0.61	0.62	0.69	0.62	0.62
13C-PCB-79	1.20	5.38 %	1.18	1.18	1.17	1.33	1.15	1.19
13C-PCB-178	0.94	5.01 %	0.88	0.91	0.92	1.02	0.93	0.96

Filename: 140620E1 S: 1 Acquired: 20-JUN-14 09:31:44
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-1 PCB CS0 13H1202

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	4.35e+05	2.82 y	16:14	-	1.37
2	Mono	PCB-2	0.25	4.10e+05	3.17 y	18:35	-	1.27
3	Mono	PCB-3	0.25	4.22e+05	2.92 y	18:49	-	1.31
4	Di	PCB-4/10	1.00	1.23e+06	1.61 y	20:10	-	1.67
5	Di	PCB-7/9	1.00	1.58e+06	1.70 y	21:56	-	1.43
6	Di	PCB-6	0.50	8.23e+05	1.36 y	22:35	-	1.49
7	Di	PCB-5/8	1.00	1.42e+06	1.76 y	23:00	-	1.29
8	Di	PCB-14	0.50	8.96e+05	1.59 y	24:05	-	1.45
9	Di	PCB-11	0.50	8.18e+05	1.39 y	25:16	-	1.33
10	Di	PCB-12/13	1.00	1.48e+06	1.71 y	25:40	-	1.20
11	Di	PCB-15	0.50	8.65e+05	1.43 y	25:58	-	1.40
12	Tri	PCB-19	0.25	2.94e+05	1.11 y	24:16	-	1.63
13	Tri	PCB-30	0.25	3.70e+05	0.89 y	25:09	-	2.06
14	Tri	PCB-18	0.25	2.78e+05	1.19 y	25:54	-	1.03
15	Tri	PCB-17	0.25	2.82e+05	0.94 y	26:04	-	1.04
16	Tri	PCB-24/27	0.50	7.21e+05	1.01 y	26:38	-	1.33
17	Tri	PCB-16/32	0.50	6.64e+05	1.06 y	27:09	-	1.23
18	Tri	PCB-34	0.25	3.70e+05	1.06 y	27:56	-	1.47
19	Tri	PCB-23	0.25	3.85e+05	1.19 y	28:02	-	1.54
20	Tri	PCB-29	0.25	4.36e+05	1.18 y	28:17	-	1.74
21	Tri	PCB-26	0.25	4.07e+05	0.97 y	28:29	-	1.62
22	Tri	PCB-25	0.25	4.10e+05	1.07 y	28:39	-	1.63
23	Tri	PCB-31	0.25	4.70e+05	1.15 y	29:00	-	1.87
24	Tri	PCB-28	0.25	4.03e+05	1.12 y	29:07	-	1.60
25	Tri	PCB-20/21/33	0.75	1.20e+06	1.11 y	29:43	-	1.59
26	Tri	PCB-22	0.25	3.76e+05	1.05 y	30:10	-	1.50
27	Tri	PCB-36	0.25	3.74e+05	1.12 y	30:47	-	1.47
28	Tri	PCB-39	0.25	3.99e+05	1.02 y	31:14	-	1.58
29	Tri	PCB-38	0.25	3.51e+05	1.20 y	32:00	-	1.39
30	Tri	PCB-35	0.25	3.85e+05	1.07 y	32:32	-	1.52
31	Tri	PCB-37	0.25	4.00e+05	0.99 y	32:58	-	1.58
32	Tetra	PCB-54	0.25	3.02e+05	0.84 y	27:59	-	1.29
33	Tetra	PCB-50	0.25	2.51e+05	0.85 y	29:09	-	1.08
34	Tetra	PCB-53	0.25	2.75e+05	0.70 y	29:47	-	1.42
35	Tetra	PCB-51	0.25	2.35e+05	0.68 y	30:08	-	1.21
36	Tetra	PCB-45	0.25	2.02e+05	0.82 y	30:34	-	1.04
37	Tetra	PCB-46	0.25	2.36e+05	0.75 y	31:04	-	1.21
38	Tetra	PCB-52/69	0.50	5.24e+05	0.82 y	31:32	-	1.35
39	Tetra	PCB-73	0.25	2.76e+05	0.88 y	31:39	-	1.42
40	Tetra	PCB-43/49	0.50	5.07e+05	0.72 y	31:49	-	1.30

41	Tetra	PCB-47	0.25	2.69e+05	0.78 y	32:00	-	1.34
42	Tetra	PCB-48/75	0.50	6.11e+05	0.75 y	32:07	-	1.52
43	Tetra	PCB-65	0.25	3.35e+05	0.81 y	32:23	-	1.67
44	Tetra	PCB-62	0.25	2.78e+05	0.66 y	32:30	-	1.39
45	Tetra	PCB-44	0.25	2.18e+05	0.67 y	32:48	-	1.08
46	Tetra	PCB-42/59	0.50	5.48e+05	0.72 y	33:02	-	1.36
47	Tetra	PCB-41/64/71/72	1.00	1.19e+06	0.71 y	33:37	-	1.48
48	Tetra	PCB-68	0.25	3.28e+05	0.80 y	33:52	-	1.63
49	Tetra	PCB-40	0.25	1.99e+05	0.82 y	34:05	-	0.99
50	Tetra	PCB-57	0.25	3.26e+05	0.66 y	34:27	-	1.26
51	Tetra	PCB-67	0.25	2.73e+05	0.74 y	34:45	-	1.05

52	Tetra	PCB-58	0.25	3.35e+05	0.79	y	34:52	-	1.29
53	Tetra	PCB-63	0.25	3.04e+05	0.78	y	35:01	-	1.17
54	Tetra	PCB-74	0.25	3.39e+05	0.76	y	35:18	-	1.31
55	Tetra	PCB-61/70	0.50	6.13e+05	0.75	y	35:29	-	1.18
56	Tetra	PCB-76/66	0.50	6.79e+05	0.81	y	35:42	-	1.31
57	Tetra	PCB-80	0.25	3.81e+05	0.73	y	35:56	-	1.46
58	Tetra	PCB-55	0.25	3.04e+05	0.81	y	36:16	-	1.16
59	Tetra	PCB-56/60	0.50	6.61e+05	0.75	y	36:46	-	1.26
60	Tetra	PCB-79	0.25	3.31e+05	0.86	y	37:48	-	1.26
61	Tetra	PCB-78	0.25	3.20e+05	0.80	y	38:30	-	1.43
62	Tetra	PCB-81	0.25	3.39e+05	0.75	y	39:02	-	1.51
63	Tetra	PCB-77	0.25	3.19e+05	0.68	y	39:38	-	1.33
64	Penta	PCB-104	0.25	2.39e+05	1.52	y	32:40	-	1.42
65	Penta	PCB-96	0.25	2.08e+05	1.62	y	33:56	-	1.24
66	Penta	PCB-103	0.25	1.68e+05	1.38	y	34:27	-	1.00
67	Penta	PCB-100	0.25	1.73e+05	1.61	y	34:49	-	1.03
68	Penta	PCB-94	0.25	1.64e+05	1.42	y	35:17	-	1.31
69	Penta	PCB-95/98/102	0.75	5.11e+05	1.73	y	35:45	-	1.36
70	Penta	PCB-93	0.25	1.71e+05	1.64	y	35:54	-	1.36
71	Penta	PCB-88/91	0.50	2.51e+05	1.76	y	36:10	-	1.00
72	Penta	PCB-121	0.25	2.86e+05	1.39	y	36:17	-	2.27
73	Penta	PCB-84/92	0.50	3.08e+05	1.45	y	37:07	-	1.15
74	Penta	PCB-89	0.25	1.54e+05	1.32	y	37:19	-	1.15
75	Penta	PCB-90/101	0.50	3.59e+05	1.43	y	37:29	-	1.34
76	Penta	PCB-113	0.25	2.06e+05	1.63	y	37:44	-	1.54
77	Penta	PCB-99	0.25	1.92e+05	1.34	y	37:49	-	1.43
78	Penta	PCB-119	0.25	2.11e+05	1.49	y	38:18	-	1.78
79	Penta	PCB-108/112	0.50	3.11e+05	1.68	y	38:27	-	1.31
80	Penta	PCB-83	0.25	1.96e+05	1.33	y	38:37	-	1.66
81	Penta	PCB-97	0.25	1.60e+05	1.69	y	38:48	-	1.35
82	Penta	PCB-86	0.25	1.41e+05	1.52	y	38:56	-	1.19
83	Penta	PCB-87/117/125	0.75	5.92e+05	1.55	y	39:04	-	1.67
84	Penta	PCB-111/115	0.50	5.11e+05	1.55	y	39:14	-	2.16
85	Penta	PCB-85/116	0.50	3.09e+05	1.69	y	39:22	-	1.30
86	Penta	PCB-120	0.25	2.47e+05	1.58	y	39:35	-	2.08
87	Penta	PCB-110	0.25	2.26e+05	1.34	y	39:44	-	1.90
88	Penta	PCB-82	0.25	1.23e+05	1.66	y	40:23	-	0.83
89	Penta	PCB-124	0.25	2.30e+05	1.74	y	41:02	-	1.54
90	Penta	PCB-107/109	0.50	4.02e+05	1.57	y	41:12	-	1.35
91	Penta	PCB-123	0.25	1.93e+05	1.66	y	41:22	-	1.30
92	Penta	PCB-106/118	0.50	4.29e+05	1.45	y	41:33	-	1.37
93	Penta	PCB-114	0.25	2.76e+05	1.56	y	42:12	-	1.57
94	Penta	PCB-122	0.25	2.48e+05	1.55	y	42:20	-	1.41
95	Penta	PCB-105	0.25	2.42e+05	1.73	y	43:04	-	1.36
96	Penta	PCB-127	0.25	2.56e+05	1.65	y	43:24	-	1.33
97	Penta	PCB-126	0.25	2.38e+05	1.59	y	45:17	-	1.46
98	Hexa	PCB-155	0.25	1.62e+05	1.06	y	37:03	-	1.11
99	Hexa	PCB-150	0.25	1.67e+05	1.15	y	38:19	-	1.15
100	Hexa	PCB-152	0.25	1.92e+05	1.35	y	38:47	-	1.32
101	Hexa	PCB-145	0.25	1.95e+05	1.19	y	39:13	-	1.35

102	Hexa	PCB-136	0.25	1.82e+05	1.10	y	39:34	-	1.25
103	Hexa	PCB-148	0.25	1.22e+05	1.18	y	39:39	-	0.84
104	Hexa	PCB-154	0.25	1.40e+05	1.29	y	40:09	-	0.96
105	Hexa	PCB-151	0.25	1.32e+05	1.38	y	40:47	-	0.91
106	Hexa	PCB-135	0.25	1.21e+05	1.08	y	40:59	-	0.83
107	Hexa	PCB-144	0.25	1.35e+05	1.36	y	41:07	-	0.93
108	Hexa	PCB-147	0.25	1.45e+05	1.24	y	41:14	-	1.00
109	Hexa	PCB-139/149	0.50	2.63e+05	1.42	y	41:30	-	0.91
110	Hexa	PCB-140	0.25	1.32e+05	1.26	y	41:41	-	0.91
111	Hexa	PCB-134/143	0.50	3.60e+05	1.29	y	42:07	-	1.13
112	Hexa	PCB-133/142	0.50	3.59e+05	1.27	y	42:25	-	1.12

113	Hexa	PCB-131	0.25	1.78e-05	1.22 y	42:35	-	1.11
114	Hexa	PCB-146/165	0.50	4.25e+05	1.38 y	42:48	-	1.33
115	Hexa	PCB-132/161	0.50	4.18e+05	1.33 y	43:03	-	1.31
116	Hexa	PCB-153	0.25	1.94e+05	1.33 y	43:13	-	1.21
117	Hexa	PCB-168	0.25	2.50e+05	1.10 y	43:25	-	1.56
118	Hexa	PCB-141	0.25	1.70e+05	1.16 y	43:57	-	1.08
119	Hexa	PCB-137	0.25	1.76e+05	1.34 y	44:20	-	1.12
120	Hexa	PCB-130	0.25	1.34e+05	1.41 y	44:26	-	0.85
121	Hexa	PCB-138/163/164	0.75	5.80e+05	1.22 y	44:49	-	1.30
122	Hexa	PCB-158/160	0.50	4.07e+05	1.26 y	45:04	-	1.37
123	Hexa	PCB-129	0.25	1.58e+05	1.11 y	45:18	-	1.06
124	Hexa	PCB-166	0.25	1.98e+05	1.26 y	45:46	-	1.17
125	Hexa	PCB-159	0.25	2.11e+05	1.18 y	46:04	-	1.24
126	Hexa	PCB-128/162	0.50	3.74e+05	1.26 y	46:22	-	1.10
127	Hexa	PCB-167	0.25	2.22e+05	1.41 y	46:46	-	1.20
128	Hexa	PCB-156	0.25	2.47e+05	1.24 y	48:03	-	1.44
129	Hexa	PCB-157	0.25	2.16e+05	1.36 y	48:20	-	1.17
130	Hexa	PCB-169	0.25	2.12e+05	1.07 y	50:23	-	1.24
131	Hepta	PCB-188	0.25	2.17e+05	1.02 y	42:51	-	1.59
132	Hepta	PCB-184	0.25	1.84e+05	0.94 y	43:18	-	1.35
133	Hepta	PCB-179	0.25	2.05e+05	1.05 y	44:04	-	1.50
134	Hepta	PCB-176	0.25	2.12e+05	1.04 y	44:32	-	1.55
135	Hepta	PCB-186	0.25	2.00e+05	0.97 y	45:09	-	1.46
136	Hepta	PCB-178	0.25	1.35e+05	0.98 y	45:38	-	0.99
137	Hepta	PCB-175	0.25	1.41e+05	1.08 y	45:58	-	1.03
138	Hepta	PCB-182/187	0.50	2.91e+05	0.90 y	46:09	-	1.07
139	Hepta	PCB-183	0.25	1.61e+05	0.95 y	46:29	-	1.18
140	Hepta	PCB-185	0.25	1.56e+05	0.97 y	47:08	-	1.58
141	Hepta	PCB-174	0.25	1.40e+05	1.03 y	47:30	-	1.41
142	Hepta	PCB-181	0.25	1.55e+05	1.17 y	47:37	-	1.56
143	Hepta	PCB-177	0.25	1.49e+05	1.09 y	47:46	-	1.50
144	Hepta	PCB-171	0.25	1.51e+05	0.93 y	48:05	-	1.52
145	Hepta	PCB-173	0.25	1.42e+05	0.96 y	48:30	-	1.43
146	Hepta	PCB-172	0.25	1.45e+05	1.13 y	48:55	-	1.47
147	Hepta	PCB-192	0.25	1.68e+05	0.90 y	49:08	-	1.69
148	Hepta	PCB-180	0.25	1.70e+05	0.97 y	49:20	-	1.72
149	Hepta	PCB-193	0.25	1.88e+05	1.13 y	49:31	-	1.90
150	Hepta	PCB-191	0.25	2.02e+05	1.05 y	49:45	-	2.04
151	Hepta	PCB-170	0.25	1.27e+05	1.19 y	50:44	-	1.66
152	Hepta	PCB-190	0.25	1.78e+05	0.91 y	50:55	-	2.33
153	Hepta	PCB-189	0.25	1.70e+05	1.20 y	52:11	-	1.70
154	Octa	PCB-202	0.25	1.49e+05	0.98 y	48:16	-	1.24
155	Octa	PCB-201	0.25	1.60e+05	1.02 y	48:45	-	1.33
156	Octa	PCB-204	0.25	1.33e+05	0.77 y	48:54	-	1.10
157	Octa	PCB-197	0.25	1.54e+05	0.92 y	49:13	-	1.28
158	Octa	PCB-200	0.25	1.34e+05	1.01 y	50:02	-	1.11
159	Octa	PCB-198	0.25	1.08e+05	0.88 y	51:19	-	0.90
160	Octa	PCB-199	0.25	9.08e+04	0.94 y	51:25	-	0.75
161	Octa	PCB-196/203	0.50	1.98e+05	0.81 y	51:40	-	0.82
162	Octa	PCB-195	0.25	1.39e+05	0.81 y	52:48	-	1.32

163	Octa		PCB-194	0.25	1.70e+05	0.85	y	53:40	- 1.61
164	Octa		PCB-205	0.25	1.79e+05	0.98	y	53:57	- 1.70
165	Nona		PCB-208	0.25	1.78e+05	1.17	y	52:57	- 1.25
166	Nona		PCB-207	0.25	1.41e+05	1.37	y	53:14	- 0.99
167	Nona		PCB-206	0.25	1.02e+05	1.41	y	55:20	- 1.24
168	Deca		PCB-209	0.25	9.69e+04	1.15	y	56:37	- 1.27
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.32
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.35

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.36
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.58
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.32
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.33
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.42
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.03
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.20
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.44
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.04
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.54
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.15
182	Tot ╗	Total Deca-PCB	0.25	9.69e+04	1.15	y	56:37	-	1.27
183	Mono╗	13C-PCB-1	100.00	1.27e+08	3.28	y	16:13	-	0.97
184	Mono╗	13C-PCB-3	100.00	1.29e+08	3.32	y	18:48	-	0.98
185	Di-IS	13C-PCB-4	100.00	7.37e+07	1.59	y	20:07	-	0.56
186	Di-IS	13C-PCB-9	100.00	1.10e+08	1.57	y	21:53	-	0.84
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.57	y	25:15	-	0.94
188	Tri-╗	13C-PCB-19	100.00	7.18e+07	1.06	y	24:15	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.08e+08	1.08	y	27:09	-	0.83
190	Tri-╗	13C-PCB-28	100.00	1.00e+08	1.05	y	29:05	-	0.79
191	Tri-╗	13C-PCB-37	100.00	1.01e+08	1.07	y	32:57	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.33e+07	0.80	y	27:59	-	0.86
193	Tetr╗	13C-PCB-52	100.00	7.77e+07	0.81	y	31:30	-	0.72
194	Tetr╗	13C-PCB-47	100.00	8.03e+07	0.78	y	32:00	-	0.74
195	Tetr╗	13C-PCB-70	100.00	1.04e+08	0.80	y	35:31	-	0.96
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:55	-	0.96
197	Tetr╗	13C-PCB-81	100.00	8.95e+07	0.80	y	39:02	-	0.83
198	Tetr╗	13C-PCB-77	100.00	9.58e+07	0.80	y	39:37	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.72e+07	1.63	y	32:39	-	0.99
200	Pent╗	13C-PCB-95	100.00	5.03e+07	1.61	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	5.37e+07	1.61	y	37:29	-	0.79
202	Pent╗	13C-PCB-97	100.00	4.74e+07	1.63	y	38:47	-	0.70
203	Pent╗	13C-PCB-123	100.00	5.97e+07	1.63	y	41:21	-	0.88
204	Pent╗	13C-PCB-118	100.00	6.28e+07	1.61	y	41:32	-	0.92
205	Pent╗	13C-PCB-114	100.00	7.04e+07	1.59	y	42:11	-	1.26
206	Pent╗	13C-PCB-105	100.00	7.09e+07	1.60	y	43:03	-	1.26
207	Pent╗	13C-PCB-127	100.00	7.69e+07	1.57	y	43:22	-	1.37
208	Pent╗	13C-PCB-126	100.00	6.51e+07	1.55	y	45:17	-	1.16
209	Hexa╗	13C-PCB-155	100.00	5.81e+07	1.27	y	37:02	-	0.86
210	Hexa╗	13C-PCB-153	100.00	6.40e+07	1.30	y	43:12	-	1.14
211	Hexa╗	13C-PCB-141	100.00	6.31e+07	1.28	y	43:56	-	1.13
212	Hexa	13C-PCB-138	100.00	5.96e+07	1.29	y	44:47	-	1.06
213	Hexa╗	13C-PCB-159	100.00	6.79e+07	1.28	y	46:04	-	1.21
214	Hexa╗	13C-PCB-167	100.00	7.42e+07	1.28	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	6.87e+07	1.28	y	48:02	-	1.23
216	Hexa╗	13C-PCB-157	100.00	7.37e+07	1.28	y	48:18	-	1.31
217	Hexa╗	13C-PCB-169	100.00	6.83e+07	1.27	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	5.45e+07	0.46	y	42:50	-	0.97
219	Hept╗	13C-PCB-180	100.00	3.96e+07	0.47	y	49:19	-	0.71
220	Hept╗	13C-PCB-170	100.00	3.06e+07	0.46	y	50:44	-	0.55
221	Hept╗	13C-PCB-189	100.00	4.02e+07	0.46	y	52:11	-	0.72

222	Octa¶	13C-PCB-202	100.00	4.83e+07	0.91 y	48:15	-	0.86
223	Octa¶	13C-PCB-194	100.00	4.22e+07	0.90 y	53:39	-	0.82
224	Nona¶	13C-PCB-208	100.00	5.69e+07	0.78 y	52:56	-	1.10
225	Nona¶	13C-PCB-206	100.00	3.28e+07	0.79 y	55:19	-	0.63
226	Deca¶	13C-PCB-209	100.00	3.05e+07	1.17 y	56:36	-	0.59
227	DI-RS	13C-PCB-15	100.00	1.31e+08	1.57 y	25:58	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.27e+08	1.06 y	28:59	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.09e+08	0.78 y	36:45	-	1.00
230	Penta	13C-PCB-111	100.00	6.79e+07	1.58 y	39:12	-	1.00
231	Hexa¶	13C-PCB-128	100.00	5.60e+07	1.28 y	46:20	-	1.00

232	Octa╗	13C-PCB-205	100.00	5.17e+07	0.93	y	53:56	-	1.00
233	CRS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	0.97
234	CRS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.62
235	PS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	1.18
236	PS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.88

Filename: 140620E1 S: 2 Acquired: 20-JUN-14 10:35:42
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-2 PCB CS1 13H1204

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	1.98e+06	3.08 y	16:16	-	1.26
2	Mono	PCB-2	1.00	1.97e+06	2.92 y	18:37	-	1.26
3	Mono	PCB-3	1.00	2.01e+06	3.12 y	18:51	-	1.29
4	Di	PCB-4/10	4.00	6.16e+06	1.55 y	20:12	-	1.64
5	Di	PCB-7/9	4.00	7.32e+06	1.64 y	21:57	-	1.30
6	Di	PCB-6	2.00	3.65e+06	1.60 y	22:37	-	1.29
7	Di	PCB-5/8	4.00	7.27e+06	1.61 y	23:01	-	1.29
8	Di	PCB-14	2.00	3.94e+06	1.66 y	24:06	-	1.24
9	Di	PCB-11	2.00	3.77e+06	1.68 y	25:17	-	1.19
10	Di	PCB-12/13	4.00	7.13e+06	1.61 y	25:41	-	1.12
11	Di	PCB-15	2.00	3.79e+06	1.72 y	26:00	-	1.19
12	Tri	PCB-19	1.00	1.20e+06	1.12 y	24:17	-	1.31
13	Tri	PCB-30	1.00	1.72e+06	1.12 y	25:10	-	1.88
14	Tri	PCB-18	1.00	1.24e+06	1.05 y	25:55	-	0.90
15	Tri	PCB-17	1.00	1.31e+06	1.07 y	26:05	-	0.96
16	Tri	PCB-24/27	2.00	3.29e+06	1.07 y	26:40	-	1.20
17	Tri	PCB-16/32	2.00	2.95e+06	1.04 y	27:10	-	1.08
18	Tri	PCB-34	1.00	1.94e+06	1.06 y	27:58	-	1.39
19	Tri	PCB-23	1.00	1.78e+06	1.00 y	28:04	-	1.27
20	Tri	PCB-29	1.00	1.84e+06	1.07 y	28:18	-	1.32
21	Tri	PCB-26	1.00	1.83e+06	1.06 y	28:31	-	1.31
22	Tri	PCB-25	1.00	1.92e+06	1.07 y	28:40	-	1.37
23	Tri	PCB-31	1.00	1.96e+06	1.10 y	29:02	-	1.40
24	Tri	PCB-28	1.00	2.00e+06	1.03 y	29:07	-	1.43
25	Tri	PCB-20/21/33	3.00	5.56e+06	1.09 y	29:45	-	1.33
26	Tri	PCB-22	1.00	1.93e+06	1.07 y	30:11	-	1.38
27	Tri	PCB-36	1.00	1.90e+06	1.15 y	30:47	-	1.49
28	Tri	PCB-39	1.00	1.91e+06	1.10 y	31:16	-	1.49
29	Tri	PCB-38	1.00	1.86e+06	1.05 y	32:02	-	1.45
30	Tri	PCB-35	1.00	1.77e+06	1.19 y	32:33	-	1.38
31	Tri	PCB-37	1.00	1.80e+06	1.09 y	32:59	-	1.40
32	Tetra	PCB-54	1.00	1.51e+06	0.77 y	28:01	-	1.28
33	Tetra	PCB-50	1.00	1.19e+06	0.86 y	29:11	-	1.01
34	Tetra	PCB-53	1.00	1.21e+06	0.82 y	29:49	-	1.24
35	Tetra	PCB-51	1.00	1.15e+06	0.86 y	30:10	-	1.18
36	Tetra	PCB-45	1.00	9.70e+05	0.76 y	30:36	-	0.99
37	Tetra	PCB-46	1.00	9.57e+05	0.75 y	31:05	-	0.98
38	Tetra	PCB-52/69	2.00	2.60e+06	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	1.00	1.36e+06	0.84 y	31:40	-	1.39
40	Tetra	PCB-43/49	2.00	2.21e+06	0.81 y	31:50	-	1.13
41	Tetra	PCB-47	1.00	1.22e+06	0.72 y	32:02	-	1.18

42	Tetra	PCB-48/75	2.00	2.64e+06	0.76	y	32:09	-	1.28
43	Tetra	PCB-65	1.00	1.34e+06	0.76	y	32:25	-	1.30
44	Tetra	PCB-62	1.00	1.44e+06	0.77	y	32:32	-	1.40
45	Tetra	PCB-44	1.00	9.24e+05	0.78	y	32:50	-	0.90
46	Tetra	PCB-42/59	2.00	2.58e+06	0.75	y	33:04	-	1.25
47	Tetra	PCB-41/64/71/72	4.00	5.45e+06	0.78	y	33:39	-	1.32
48	Tetra	PCB-68	1.00	1.64e+06	0.79	y	33:54	-	1.59
49	Tetra	PCB-40	1.00	8.54e+05	0.76	y	34:07	-	0.83
50	Tetra	PCB-57	1.00	1.51e+06	0.73	y	34:29	-	1.18
51	Tetra	PCB-67	1.00	1.53e+06	0.78	y	34:47	-	1.20
52	Tetra	PCB-58	1.00	1.45e+06	0.75	y	34:54	-	1.13

53	Tetra	PCB-63	1.00	1.51e+06	0.75 y	35:03	-	1.17
54	Tetra	PCB-74	1.00	1.62e+06	0.77 y	35:20	-	1.27
55	Tetra	PCB-61/70	2.00	2.91e+06	0.80 y	35:31	-	1.13
56	Tetra	PCB-76/66	2.00	3.02e+06	0.75 y	35:44	-	1.18
57	Tetra	PCB-80	1.00	1.75e+06	0.82 y	35:57	-	1.33
58	Tetra	PCB-55	1.00	1.55e+06	0.78 y	36:17	-	1.17
59	Tetra	PCB-56/60	2.00	2.96e+06	0.79 y	36:47	-	1.12
60	Tetra	PCB-79	1.00	1.47e+06	0.75 y	37:50	-	1.11
61	Tetra	PCB-78	1.00	1.43e+06	0.78 y	38:32	-	1.32
62	Tetra	PCB-81	1.00	1.62e+06	0.82 y	39:04	-	1.50
63	Tetra	PCB-77	1.00	1.46e+06	0.80 y	39:40	-	1.26
64	Penta	PCB-104	1.00	1.12e+06	1.57 y	32:42	-	1.31
65	Penta	PCB-96	1.00	9.56e+05	1.70 y	33:57	-	1.12
66	Penta	PCB-103	1.00	8.44e+05	1.51 y	34:29	-	0.98
67	Penta	PCB-100	1.00	9.21e+05	1.69 y	34:50	-	1.08
68	Penta	PCB-94	1.00	6.94e+05	1.57 y	35:18	-	1.11
69	Penta	PCB-95/98/102	3.00	2.34e+06	1.61 y	35:47	-	1.25
70	Penta	PCB-93	1.00	8.35e+05	1.78 y	35:55	-	1.34
71	Penta	PCB-88/91	2.00	1.32e+06	1.53 y	36:12	-	1.06
72	Penta	PCB-121	1.00	1.38e+06	1.59 y	36:18	-	2.21
73	Penta	PCB-84/92	2.00	1.48e+06	1.69 y	37:09	-	1.13
74	Penta	PCB-89	1.00	6.78e+05	1.51 y	37:20	-	1.04
75	Penta	PCB-90/101	2.00	1.64e+06	1.61 y	37:31	-	1.26
76	Penta	PCB-113	1.00	8.19e+05	1.58 y	37:44	-	1.26
77	Penta	PCB-99	1.00	9.67e+05	1.59 y	37:50	-	1.48
78	Penta	PCB-119	1.00	1.04e+06	1.76 y	38:18	-	1.88
79	Penta	PCB-108/112	2.00	1.54e+06	1.59 y	38:27	-	1.39
80	Penta	PCB-83	1.00	8.48e+05	1.61 y	38:38	-	1.53
81	Penta	PCB-97	1.00	7.01e+05	1.71 y	38:49	-	1.26
82	Penta	PCB-86	1.00	5.31e+05	1.42 y	38:58	-	0.96
83	Penta	PCB-87/117/125	3.00	2.66e+06	1.67 y	39:05	-	1.60
84	Penta	PCB-111/115	2.00	2.00e+06	1.53 y	39:15	-	1.80
85	Penta	PCB-85/116	2.00	1.50e+06	1.61 y	39:23	-	1.35
86	Penta	PCB-120	1.00	1.00e+06	1.51 y	39:37	-	1.80
87	Penta	PCB-110	1.00	9.88e+05	1.74 y	39:46	-	1.78
88	Penta	PCB-82	1.00	6.18e+05	1.61 y	40:23	-	0.83
89	Penta	PCB-124	1.00	9.98e+05	1.74 y	41:03	-	1.34
90	Penta	PCB-107/109	2.00	1.94e+06	1.58 y	41:12	-	1.31
91	Penta	PCB-123	1.00	9.67e+05	1.61 y	41:22	-	1.30
92	Penta	PCB-106/118	2.00	1.95e+06	1.71 y	41:35	-	1.27
93	Penta	PCB-114	1.00	1.19e+06	1.64 y	42:13	-	1.37
94	Penta	PCB-122	1.00	1.14e+06	1.68 y	42:21	-	1.32
95	Penta	PCB-105	1.00	1.16e+06	1.68 y	43:05	-	1.29
96	Penta	PCB-127	1.00	1.14e+06	1.58 y	43:24	-	1.18
97	Penta	PCB-126	1.00	1.08e+06	1.48 y	45:19	-	1.28
98	Hexa	PCB-155	1.00	8.43e+05	1.23 y	37:03	-	1.20
99	Hexa	PCB-150	1.00	7.33e+05	1.34 y	38:20	-	1.04
100	Hexa	PCB-152	1.00	7.58e+05	1.20 y	38:48	-	1.08
101	Hexa	PCB-145	1.00	7.48e+05	1.15 y	39:15	-	1.06
102	Hexa	PCB-136	1.00	7.19e+05	1.34 y	39:33	-	1.02

103	Hexa	PCB-148	1.00	5.31e-05	1.18 y	39:40	-	0.75
104	Hexa	PCB-154	1.00	6.17e+05	1.37 y	40:10	-	0.88
105	Hexa	PCB-151	1.00	5.78e+05	1.33 y	40:48	-	0.82
106	Hexa	PCB-135	1.00	5.29e+05	1.36 y	41:01	-	0.75
107	Hexa	PCB-144	1.00	5.73e+05	1.29 y	41:08	-	0.81
108	Hexa	PCB-147	1.00	5.38e+05	1.32 y	41:16	-	0.76
109	Hexa	PCB-139/149	2.00	1.16e+06	1.33 y	41:30	-	0.82
110	Hexa	PCB-140	1.00	5.12e+05	1.26 y	41:42	-	0.73
111	Hexa	PCB-134/143	2.00	1.51e+06	1.24 y	42:09	-	0.94
112	Hexa	PCB-133/142	2.00	1.57e+06	1.37 y	42:26	-	0.98
113	Hexa	PCB-131	1.00	7.67e+05	1.32 y	42:36	-	0.96

114	Hexa	PCB-146/165	2.00	1.91e+06	1.21 y	42:48	-	1.19
115	Hexa	PCB-132/161	2.00	1.82e+06	1.22 y	43:03	-	1.14
116	Hexa	PCB-153	1.00	9.94e+05	1.17 y	43:14	-	1.24
117	Hexa	PCB-168	1.00	1.15e+06	1.10 y	43:27	-	1.44
118	Hexa	PCB-141	1.00	7.87e+05	1.28 y	43:58	-	1.00
119	Hexa	PCB-137	1.00	9.10e+05	1.29 y	44:21	-	1.16
120	Hexa	PCB-130	1.00	6.47e+05	1.23 y	44:28	-	0.83
121	Hexa	PCB-138/163/164	3.00	2.92e+06	1.18 y	44:50	-	1.28
122	Hexa	PCB-158/160	2.00	2.01e+06	1.38 y	45:05	-	1.33
123	Hexa	PCB-129	1.00	7.44e+05	1.17 y	45:19	-	0.98
124	Hexa	PCB-166	1.00	1.04e+06	1.28 y	45:46	-	1.21
125	Hexa	PCB-159	1.00	1.07e+06	1.23 y	46:05	-	1.24
126	Hexa	PCB-128/162	2.00	1.76e+06	1.16 y	46:22	-	1.03
127	Hexa	PCB-167	1.00	1.00e+06	1.19 y	46:47	-	1.04
128	Hexa	PCB-156	1.00	1.09e+06	1.12 y	48:04	-	1.20
129	Hexa	PCB-157	1.00	1.06e+06	1.22 y	48:20	-	1.12
130	Hexa	PCB-169	1.00	1.01e+06	1.16 y	50:24	-	1.15
131	Hepta	PCB-188	1.00	9.64e+05	1.15 y	42:52	-	1.44
132	Hepta	PCB-184	1.00	8.74e+05	0.93 y	43:18	-	1.30
133	Hepta	PCB-179	1.00	9.19e+05	1.16 y	44:06	-	1.37
134	Hepta	PCB-176	1.00	9.89e+05	1.02 y	44:34	-	1.47
135	Hepta	PCB-186	1.00	8.74e+05	1.12 y	45:09	-	1.30
136	Hepta	PCB-178	1.00	7.05e+05	1.02 y	45:38	-	1.05
137	Hepta	PCB-175	1.00	6.78e+05	0.95 y	45:59	-	1.01
138	Hepta	PCB-182/187	2.00	1.38e+06	0.98 y	46:11	-	1.03
139	Hepta	PCB-183	1.00	7.83e+05	1.07 y	46:29	-	1.17
140	Hepta	PCB-185	1.00	6.66e+05	0.96 y	47:09	-	1.37
141	Hepta	PCB-174	1.00	6.57e+05	1.07 y	47:31	-	1.36
142	Hepta	PCB-181	1.00	7.19e+05	0.90 y	47:36	-	1.48
143	Hepta	PCB-177	1.00	5.95e+05	0.98 y	47:47	-	1.23
144	Hepta	PCB-171	1.00	6.43e+05	1.06 y	48:04	-	1.33
145	Hepta	PCB-173	1.00	5.49e+05	1.09 y	48:31	-	1.13
146	Hepta	PCB-172	1.00	5.72e+05	1.17 y	48:57	-	1.18
147	Hepta	PCB-192	1.00	7.66e+05	1.07 y	49:09	-	1.58
148	Hepta	PCB-180	1.00	7.16e+05	1.13 y	49:20	-	1.48
149	Hepta	PCB-193	1.00	8.30e+05	1.09 y	49:32	-	1.71
150	Hepta	PCB-191	1.00	7.89e+05	1.14 y	49:46	-	1.63
151	Hepta	PCB-170	1.00	6.49e+05	1.09 y	50:45	-	1.67
152	Hepta	PCB-190	1.00	8.09e+05	1.12 y	50:55	-	2.09
153	Hepta	PCB-189	1.00	8.02e+05	1.19 y	52:12	-	1.58
154	Octa	PCB-202	1.00	6.64e+05	0.98 y	48:17	-	1.11
155	Octa	PCB-201	1.00	6.64e+05	0.96 y	48:46	-	1.11
156	Octa	PCB-204	1.00	5.92e+05	0.96 y	48:55	-	0.99
157	Octa	PCB-197	1.00	6.20e+05	0.87 y	49:13	-	1.04
158	Octa	PCB-200	1.00	6.09e+05	0.92 y	50:03	-	1.02
159	Octa	PCB-198	1.00	4.81e+05	0.77 y	51:20	-	0.81
160	Octa	PCB-199	1.00	4.49e+05	0.78 y	51:25	-	0.75
161	Octa	PCB-196/203	2.00	9.60e+05	0.87 y	51:40	-	0.80
162	Octa	PCB-195	1.00	6.50e+05	0.91 y	52:49	-	1.23
163	Octa	PCB-194	1.00	6.42e+05	1.01 y	53:40	-	1.21

164	Octa	PCB-205	1.00	7.63e+05	0.88	y	53:57	-	1.44
165	Nona	PCB-208	1.00	7.07e+05	1.32	y	52:57	-	0.95
166	Nona	PCB-207	1.00	7.22e+05	1.40	y	53:16	-	0.97
167	Nona	PCB-206	1.00	4.47e+05	1.26	y	55:21	-	1.05
168	Deca	PCB-209	1.00	4.65e+05	1.13	y	56:37	-	1.19
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.24
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.20

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.38
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.27
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.12
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.31
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.94
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.29
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.98
182	Tot ╗	Total Deca-PCB	1.00	4.65e+05	1.13	y	56:37	-	1.19
183	Mono╗	13C-PCB-1	100.00	1.56e+08	3.23	y	16:15	-	0.94
184	Mono╗	13C-PCB-3	100.00	1.56e+08	3.29	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	9.40e+07	1.58	y	20:09	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.41e+08	1.60	y	21:55	-	0.85
187	Di-IS	13C-PCB-11	100.00	1.59e+08	1.57	y	25:17	-	0.96
188	Tri-╗	13C-PCB-19	100.00	9.18e+07	1.06	y	24:16	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.37e+08	1.08	y	27:10	-	0.82
190	Tri-╗	13C-PCB-28	100.00	1.40e+08	1.05	y	29:07	-	0.91
191	Tri-╗	13C-PCB-37	100.00	1.28e+08	1.06	y	32:59	-	0.83
192	Tetr╗	13C-PCB-54	100.00	1.18e+08	0.81	y	28:00	-	0.89
193	Tetr╗	13C-PCB-52	100.00	9.78e+07	0.79	y	31:30	-	0.74
194	Tetr╗	13C-PCB-47	100.00	1.03e+08	0.79	y	32:01	-	0.78
195	Tetr╗	13C-PCB-70	100.00	1.28e+08	0.80	y	35:31	-	0.97
196	Tetr╗	13C-PCB-80	100.00	1.32e+08	0.81	y	35:56	-	1.00
197	Tetr╗	13C-PCB-81	100.00	1.09e+08	0.81	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	1.16e+08	0.80	y	39:38	-	0.87
199	Pent╗	13C-PCB-104	100.00	8.57e+07	1.62	y	32:41	-	1.06
200	Pent╗	13C-PCB-95	100.00	6.25e+07	1.56	y	35:50	-	0.78
201	Pent╗	13C-PCB-101	100.00	6.52e+07	1.58	y	37:30	-	0.81
202	Pent╗	13C-PCB-97	100.00	5.55e+07	1.65	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.42e+07	1.57	y	41:21	-	0.92
204	Pent╗	13C-PCB-118	100.00	7.69e+07	1.66	y	41:33	-	0.95
205	Pent╗	13C-PCB-114	100.00	8.65e+07	1.61	y	42:12	-	1.20
206	Pent╗	13C-PCB-105	100.00	8.97e+07	1.59	y	43:03	-	1.24
207	Pent╗	13C-PCB-127	100.00	9.70e+07	1.57	y	43:23	-	1.34
208	Pent╗	13C-PCB-126	100.00	8.43e+07	1.60	y	45:18	-	1.17
209	Hexa╗	13C-PCB-155	100.00	7.04e+07	1.28	y	37:03	-	0.87
210	Hexa╗	13C-PCB-153	100.00	8.00e+07	1.28	y	43:13	-	1.11
211	Hexa╗	13C-PCB-141	100.00	7.84e+07	1.29	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	7.60e+07	1.27	y	44:48	-	1.05
213	Hexa╗	13C-PCB-159	100.00	8.60e+07	1.28	y	46:05	-	1.19
214	Hexa╗	13C-PCB-167	100.00	9.61e+07	1.31	y	46:45	-	1.33
215	Hexa╗	13C-PCB-156	100.00	9.01e+07	1.28	y	48:03	-	1.25
216	Hexa╗	13C-PCB-157	100.00	9.47e+07	1.27	y	48:19	-	1.31
217	Hexa╗	13C-PCB-169	100.00	8.76e+07	1.27	y	50:24	-	1.21
218	Hept╗	13C-PCB-188	100.00	6.71e+07	0.47	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.84e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.88e+07	0.48	y	50:45	-	0.54
221	Hept╗	13C-PCB-189	100.00	5.08e+07	0.46	y	52:10	-	0.70
222	Octa╗	13C-PCB-202	100.00	5.96e+07	0.91	y	48:16	-	0.83

223	Octa¶	13C-PCB-194	100.00	5.30e+07	0.91	y	53:40	-	0.82
224	Nona¶	13C-PCB-208	100.00	7.41e+07	0.77	y	52:56	-	1.14
225	Nona¶	13C-PCB-206	100.00	4.24e+07	0.79	y	55:20	-	0.65
226	Deca¶	13C-PCB-209	100.00	3.91e+07	1.19	y	56:37	-	0.60
227	DI-RS	13C-PCB-15	100.00	1.66e+08	1.58	y	25:59	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.54e+08	1.06	y	29:00	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.33e+08	0.79	y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	8.06e+07	1.63	y	39:14	-	1.00
231	Hexa¶	13C-PCB-128	100.00	7.22e+07	1.30	y	46:21	-	1.00
232	Octa¶	13C-PCB-205	100.00	6.47e+07	0.91	y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 0.97
234	CRS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.61
235	PS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 1.18
236	PS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.91

Filename: 140620E1 S: 3 Acquired: 20-JUN-14 11:39:47
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-3 PCB CS2 13H1205

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	2.50	1.09e+07	2.94 y	16:15	-	1.26
2	Mono	PCB-2	2.50	1.01e+07	3.00 y	18:37	-	1.14
3	Mono	PCB-3	2.50	1.09e+07	3.06 y	18:51	-	1.23
4	Di	PCB-4/10	10.00	3.30e+07	1.63 y	20:12	-	1.55
5	Di	PCB-7/9	10.00	4.03e+07	1.63 y	21:58	-	1.26
6	Di	PCB-6	5.00	2.02e+07	1.66 y	22:36	-	1.26
7	Di	PCB-5/8	10.00	3.95e+07	1.65 y	23:01	-	1.23
8	Di	PCB-14	5.00	2.20e+07	1.65 y	24:06	-	1.21
9	Di	PCB-11	5.00	2.10e+07	1.68 y	25:18	-	1.16
10	Di	PCB-12/13	10.00	3.98e+07	1.61 y	25:41	-	1.10
11	Di	PCB-15	5.00	2.21e+07	1.67 y	25:59	-	1.22
12	Tri	PCB-19	2.50	6.55e+06	1.07 y	24:18	-	1.26
13	Tri	PCB-30	2.50	9.41e+06	1.06 y	25:11	-	1.82
14	Tri	PCB-18	2.50	6.63e+06	1.06 y	25:55	-	0.85
15	Tri	PCB-17	2.50	6.98e+06	1.08 y	26:06	-	0.89
16	Tri	PCB-24/27	5.00	1.85e+07	1.06 y	26:40	-	1.18
17	Tri	PCB-16/32	5.00	1.59e+07	1.07 y	27:10	-	1.02
18	Tri	PCB-34	2.50	9.58e+06	1.09 y	27:57	-	1.25
19	Tri	PCB-23	2.50	1.08e+07	1.09 y	28:03	-	1.41
20	Tri	PCB-29	2.50	1.02e+07	1.10 y	28:18	-	1.32
21	Tri	PCB-26	2.50	1.02e+07	1.06 y	28:30	-	1.32
22	Tri	PCB-25	2.50	1.04e+07	1.14 y	28:40	-	1.36
23	Tri	PCB-31	2.50	1.12e+07	1.09 y	29:02	-	1.46
24	Tri	PCB-28	2.50	1.08e+07	1.11 y	29:08	-	1.41
25	Tri	PCB-20/21/33	7.50	3.04e+07	1.09 y	29:45	-	1.32
26	Tri	PCB-22	2.50	1.03e+07	1.06 y	30:11	-	1.35
27	Tri	PCB-36	2.50	1.02e+07	1.08 y	30:48	-	1.38
28	Tri	PCB-39	2.50	1.04e+07	1.08 y	31:16	-	1.41
29	Tri	PCB-38	2.50	1.00e+07	1.09 y	32:03	-	1.36
30	Tri	PCB-35	2.50	9.94e+06	1.07 y	32:33	-	1.35
31	Tri	PCB-37	2.50	1.02e+07	1.12 y	32:59	-	1.39
32	Tetra	PCB-54	2.50	7.98e+06	0.79 y	28:02	-	1.18
33	Tetra	PCB-50	2.50	6.47e+06	0.77 y	29:11	-	0.96
34	Tetra	PCB-53	2.50	6.40e+06	0.77 y	29:50	-	1.14
35	Tetra	PCB-51	2.50	6.58e+06	0.81 y	30:10	-	1.17
36	Tetra	PCB-45	2.50	5.60e+06	0.78 y	30:36	-	1.00
37	Tetra	PCB-46	2.50	5.09e+06	0.75 y	31:05	-	0.90
38	Tetra	PCB-52/69	5.00	1.50e+07	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	2.50	7.36e+06	0.75 y	31:40	-	1.31
40	Tetra	PCB-43/49	5.00	1.23e+07	0.78 y	31:50	-	1.10
41	Tetra	PCB-47	2.50	6.07e+06	0.76 y	32:02	-	1.04

42	Tetra	PCB-48/75	5.00	1.55e+07	0.77 y	32:09	-	1.33
43	Tetra	PCB-65	2.50	7.45e+06	0.79 y	32:25	-	1.28
44	Tetra	PCB-62	2.50	7.60e+06	0.79 y	32:32	-	1.30
45	Tetra	PCB-44	2.50	5.73e+06	0.74 y	32:50	-	0.98
46	Tetra	PCB-42/59	5.00	1.41e+07	0.77 y	33:04	-	1.21
47	Tetra	PCB-41/64/71/72	10.00	2.98e+07	0.78 y	33:39	-	1.28
48	Tetra	PCB-68	2.50	8.64e+06	0.79 y	33:54	-	1.48
49	Tetra	PCB-40	2.50	4.77e+06	0.77 y	34:07	-	0.82
50	Tetra	PCB-57	2.50	7.93e+06	0.79 y	34:28	-	1.11
51	Tetra	PCB-67	2.50	8.04e+06	0.68 y	34:46	-	1.12
52	Tetra	PCB-58	2.50	8.03e+06	0.88 y	34:53	-	1.12

53	Tetra	PCB-63	2.50	8.15e+06	0.80 y	35:03	-	1.14
54	Tetra	PCB-74	2.50	8.76e+06	0.78 y	35:20	-	1.22
55	Tetra	PCB-61/70	5.00	1.56e+07	0.76 y	35:31	-	1.08
56	Tetra	PCB-76/66	5.00	1.60e+07	0.79 y	35:44	-	1.12
57	Tetra	PCB-80	2.50	9.48e+06	0.78 y	35:58	-	1.28
58	Tetra	PCB-55	2.50	8.11e+06	0.77 y	36:17	-	1.10
59	Tetra	PCB-56/60	5.00	1.58e+07	0.77 y	36:47	-	1.07
60	Tetra	PCB-79	2.50	8.31e+06	0.75 y	37:50	-	1.12
61	Tetra	PCB-78	2.50	7.55e+06	0.77 y	38:32	-	1.20
62	Tetra	PCB-81	2.50	8.89e+06	0.79 y	39:04	-	1.41
63	Tetra	PCB-77	2.50	8.13e+06	0.82 y	39:39	-	1.22
64	Penta	PCB-104	2.50	6.23e+06	1.51 y	32:41	-	1.28
65	Penta	PCB-96	2.50	5.23e+06	1.55 y	33:57	-	1.08
66	Penta	PCB-103	2.50	4.30e+06	1.55 y	34:29	-	0.89
67	Penta	PCB-100	2.50	4.69e+06	1.55 y	34:50	-	0.97
68	Penta	PCB-94	2.50	3.79e+06	1.67 y	35:18	-	1.11
69	Penta	PCB-95/98/102	7.50	1.21e+07	1.60 y	35:48	-	1.18
70	Penta	PCB-93	2.50	4.14e+06	1.71 y	35:56	-	1.21
71	Penta	PCB-88/91	5.00	6.98e+06	1.52 y	36:13	-	1.02
72	Penta	PCB-121	2.50	6.62e+06	1.66 y	36:18	-	1.94
73	Penta	PCB-84/92	5.00	7.58e+06	1.59 y	37:08	-	1.05
74	Penta	PCB-89	2.50	3.69e+06	1.55 y	37:20	-	1.02
75	Penta	PCB-90/101	5.00	8.58e+06	1.58 y	37:30	-	1.19
76	Penta	PCB-113	2.50	4.74e+06	1.59 y	37:45	-	1.32
77	Penta	PCB-99	2.50	4.85e+06	1.65 y	37:50	-	1.35
78	Penta	PCB-119	2.50	5.47e+06	1.52 y	38:19	-	1.72
79	Penta	PCB-108/112	5.00	8.21e+06	1.65 y	38:28	-	1.29
80	Penta	PCB-83	2.50	4.81e+06	1.57 y	38:38	-	1.51
81	Penta	PCB-97	2.50	4.05e+06	1.59 y	38:49	-	1.27
82	Penta	PCB-86	2.50	3.35e+06	1.53 y	38:57	-	1.05
83	Penta	PCB-87/117/125	7.50	1.48e+07	1.59 y	39:05	-	1.55
84	Penta	PCB-111/115	5.00	1.08e+07	1.58 y	39:14	-	1.69
85	Penta	PCB-85/116	5.00	8.48e+06	1.60 y	39:22	-	1.33
86	Penta	PCB-120	2.50	5.59e+06	1.63 y	39:37	-	1.76
87	Penta	PCB-110	2.50	5.26e+06	1.59 y	39:45	-	1.65
88	Penta	PCB-82	2.50	3.23e+06	1.69 y	40:24	-	0.73
89	Penta	PCB-124	2.50	5.89e+06	1.57 y	41:04	-	1.33
90	Penta	PCB-107/109	5.00	1.04e+07	1.65 y	41:13	-	1.18
91	Penta	PCB-123	2.50	5.43e+06	1.52 y	41:23	-	1.23
92	Penta	PCB-106/118	5.00	1.13e+07	1.59 y	41:34	-	1.25
93	Penta	PCB-114	2.50	6.81e+06	1.68 y	42:13	-	1.36
94	Penta	PCB-122	2.50	6.01e+06	1.59 y	42:21	-	1.20
95	Penta	PCB-105	2.50	6.91e+06	1.69 y	43:05	-	1.33
96	Penta	PCB-127	2.50	6.53e+06	1.64 y	43:25	-	1.14
97	Penta	PCB-126	2.50	6.39e+06	1.68 y	45:18	-	1.28
98	Hexa	PCB-155	2.50	4.51e+06	1.22 y	37:04	-	1.18
99	Hexa	PCB-150	2.50	4.00e+06	1.22 y	38:20	-	1.05
100	Hexa	PCB-152	2.50	4.04e+06	1.22 y	38:48	-	1.06
101	Hexa	PCB-145	2.50	4.00e+06	1.28 y	39:14	-	1.05
102	Hexa	PCB-136	2.50	4.13e+06	1.32 y	39:34	-	1.08

103	Hexa	PCB-148	2.50	2.58e-06	1.36 y	39:41	-	0.68
104	Hexa	PCB-154	2.50	3.37e+06	1.28 y	40:09	-	0.88
105	Hexa	PCB-151	2.50	2.97e+06	1.35 y	40:48	-	0.78
106	Hexa	PCB-135	2.50	2.92e+06	1.29 y	41:00	-	0.76
107	Hexa	PCB-144	2.50	2.97e+06	1.28 y	41:07	-	0.78
108	Hexa	PCB-147	2.50	2.99e+06	1.23 y	41:15	-	0.78
109	Hexa	PCB-139/149	5.00	6.36e+06	1.23 y	41:31	-	0.83
110	Hexa	PCB-140	2.50	2.90e+06	1.28 y	41:42	-	0.76
111	Hexa	PCB-134/143	5.00	8.39e+06	1.23 y	42:08	-	0.90
112	Hexa	PCB-133/142	5.00	8.52e+06	1.22 y	42:26	-	0.91
113	Hexa	PCB-131	2.50	4.20e+06	1.24 y	42:36	-	0.90

114	Hexa	PCB-146/165	5.00	1.07e+07	1.23 y	42:49	-	1.14
115	Hexa	PCB-132/161	5.00	1.02e+07	1.22 y	43:04	-	1.09
116	Hexa	PCB-153	2.50	5.91e+06	1.25 y	43:13	-	1.26
117	Hexa	PCB-168	2.50	6.38e+06	1.17 y	43:26	-	1.37
118	Hexa	PCB-141	2.50	4.37e+06	1.21 y	43:58	-	0.97
119	Hexa	PCB-137	2.50	4.74e+06	1.24 y	44:21	-	1.05
120	Hexa	PCB-130	2.50	3.95e+06	1.26 y	44:27	-	0.87
121	Hexa	PCB-138/163/164	7.50	1.61e+07	1.23 y	44:50	-	1.22
122	Hexa	PCB-158/160	5.00	1.14e+07	1.26 y	45:04	-	1.29
123	Hexa	PCB-129	2.50	4.07e+06	1.27 y	45:19	-	0.93
124	Hexa	PCB-166	2.50	5.65e+06	1.19 y	45:46	-	1.11
125	Hexa	PCB-159	2.50	5.99e+06	1.25 y	46:05	-	1.18
126	Hexa	PCB-128/162	5.00	1.06e+07	1.20 y	46:23	-	1.04
127	Hexa	PCB-167	2.50	6.20e+06	1.24 y	46:46	-	1.10
128	Hexa	PCB-156	2.50	6.26e+06	1.23 y	48:04	-	1.18
129	Hexa	PCB-157	2.50	6.28e+06	1.27 y	48:20	-	1.13
130	Hexa	PCB-169	2.50	5.82e+06	1.20 y	50:24	-	1.12
131	Hepta	PCB-188	2.50	5.50e+06	1.08 y	42:52	-	1.43
132	Hepta	PCB-184	2.50	4.81e+06	1.08 y	43:19	-	1.25
133	Hepta	PCB-179	2.50	5.06e+06	1.03 y	44:06	-	1.32
134	Hepta	PCB-176	2.50	5.19e+06	1.06 y	44:34	-	1.35
135	Hepta	PCB-186	2.50	4.80e+06	1.01 y	45:11	-	1.25
136	Hepta	PCB-178	2.50	3.68e+06	1.04 y	45:40	-	0.96
137	Hepta	PCB-175	2.50	3.76e+06	1.07 y	46:00	-	0.98
138	Hepta	PCB-182/187	5.00	7.80e+06	1.03 y	46:11	-	1.01
139	Hepta	PCB-183	2.50	4.14e+06	1.08 y	46:30	-	1.08
140	Hepta	PCB-185	2.50	3.61e+06	1.06 y	47:09	-	1.30
141	Hepta	PCB-174	2.50	3.80e+06	1.05 y	47:31	-	1.36
142	Hepta	PCB-181	2.50	3.56e+06	1.02 y	47:38	-	1.28
143	Hepta	PCB-177	2.50	3.33e+06	1.02 y	47:47	-	1.20
144	Hepta	PCB-171	2.50	3.72e+06	1.05 y	48:04	-	1.34
145	Hepta	PCB-173	2.50	3.21e+06	1.03 y	48:31	-	1.15
146	Hepta	PCB-172	2.50	3.40e+06	1.05 y	48:57	-	1.22
147	Hepta	PCB-192	2.50	4.16e+06	1.05 y	49:09	-	1.49
148	Hepta	PCB-180	2.50	4.01e+06	1.10 y	49:21	-	1.44
149	Hepta	PCB-193	2.50	4.60e+06	1.04 y	49:32	-	1.65
150	Hepta	PCB-191	2.50	4.58e+06	1.05 y	49:46	-	1.65
151	Hepta	PCB-170	2.50	3.36e+06	1.02 y	50:45	-	1.51
152	Hepta	PCB-190	2.50	4.37e+06	1.06 y	50:55	-	1.97
153	Hepta	PCB-189	2.50	4.66e+06	1.06 y	52:12	-	1.55
154	Octa	PCB-202	2.50	3.48e+06	0.98 y	48:17	-	1.01
155	Octa	PCB-201	2.50	3.65e+06	0.94 y	48:46	-	1.06
156	Octa	PCB-204	2.50	3.41e+06	0.91 y	48:55	-	0.99
157	Octa	PCB-197	2.50	3.58e+06	0.96 y	49:14	-	1.04
158	Octa	PCB-200	2.50	3.52e+06	0.95 y	50:03	-	1.02
159	Octa	PCB-198	2.50	2.39e+06	0.96 y	51:19	-	0.69
160	Octa	PCB-199	2.50	2.50e+06	0.94 y	51:25	-	0.73
161	Octa	PCB-196/203	5.00	5.16e+06	0.89 y	51:41	-	0.75
162	Octa	PCB-195	2.50	3.62e+06	0.88 y	52:48	-	1.17
163	Octa	PCB-194	2.50	3.77e+06	0.94 y	53:40	-	1.22

164	Octa	PCB-205	2.50	4.34e+06	0.90	y	53:57	-	1.41
165	Nona	PCB-208	2.50	3.94e+06	1.36	y	52:56	-	0.93
166	Nona	PCB-207	2.50	3.87e+06	1.29	y	53:15	-	0.91
167	Nona	PCB-206	2.50	2.57e+06	1.40	y	55:20	-	1.03
168	Deca	PCB-209	2.50	2.82e+06	1.17	y	56:37	-	1.21
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.21
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.21
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.15

172	Tot ╕	Total Tri-PCB	0.00	-	-	n	-	-	1.36
173	Tot ╕	Total Tetra-PCB	0.00	-	-	n	-	-	1.17
174	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.26
176	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	0.89
177	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	1.08
178	Tot ╕	Total Hepta-PCB	0.00	-	-	n	-	-	1.27
179	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	0.89
180	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	1.26
181	Tot ╕	Total Nona-PCB	0.00	-	-	n	-	-	0.94
182	Tot ╕	Total Deca-PCB	2.50	2.82e+06	1.17	y	56:37	-	1.21
183	Mono╕	13C-PCB-1	100.00	3.46e+08	3.25	y	16:14	-	0.91
184	Mono╕	13C-PCB-3	100.00	3.56e+08	3.24	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	2.13e+08	1.57	y	20:09	-	0.56
186	Di-IS	13C-PCB-9	100.00	3.20e+08	1.57	y	21:55	-	0.84
187	Di-IS	13C-PCB-11	100.00	3.64e+08	1.57	y	25:16	-	0.96
188	Tri-╕	13C-PCB-19	100.00	2.07e+08	1.06	y	24:16	-	0.55
189	Tri-╕	13C-PCB-32	100.00	3.14e+08	1.08	y	27:10	-	0.83
190	Tri-╕	13C-PCB-28	100.00	3.07e+08	1.06	y	29:07	-	0.83
191	Tri-╕	13C-PCB-37	100.00	2.95e+08	1.07	y	32:58	-	0.80
192	Tetr╕	13C-PCB-54	100.00	2.71e+08	0.81	y	28:00	-	0.91
193	Tetr╕	13C-PCB-52	100.00	2.25e+08	0.80	y	31:31	-	0.75
194	Tetr╕	13C-PCB-47	100.00	2.33e+08	0.79	y	32:01	-	0.78
195	Tetr╕	13C-PCB-70	100.00	2.87e+08	0.80	y	35:32	-	0.96
196	Tetr╕	13C-PCB-80	100.00	2.96e+08	0.81	y	35:56	-	0.99
197	Tetr╕	13C-PCB-81	100.00	2.52e+08	0.80	y	39:03	-	0.84
198	Tetr╕	13C-PCB-77	100.00	2.67e+08	0.80	y	39:38	-	0.90
199	Pent╕	13C-PCB-104	100.00	1.94e+08	1.60	y	32:40	-	1.07
200	Pent╕	13C-PCB-95	100.00	1.37e+08	1.60	y	35:50	-	0.75
201	Pent╕	13C-PCB-101	100.00	1.44e+08	1.61	y	37:30	-	0.79
202	Pent╕	13C-PCB-97	100.00	1.27e+08	1.61	y	38:48	-	0.70
203	Pent╕	13C-PCB-123	100.00	1.77e+08	1.58	y	41:22	-	0.98
204	Pent╕	13C-PCB-118	100.00	1.80e+08	1.61	y	41:33	-	0.99
205	Pent╕	13C-PCB-114	100.00	2.01e+08	1.59	y	42:12	-	1.21
206	Pent╕	13C-PCB-105	100.00	2.08e+08	1.59	y	43:04	-	1.25
207	Pent╕	13C-PCB-127	100.00	2.30e+08	1.60	y	43:23	-	1.38
208	Pent╕	13C-PCB-126	100.00	2.00e+08	1.58	y	45:18	-	1.20
209	Hexa╕	13C-PCB-155	100.00	1.53e+08	1.28	y	37:03	-	0.84
210	Hexa╕	13C-PCB-153	100.00	1.87e+08	1.28	y	43:13	-	1.13
211	Hexa╕	13C-PCB-141	100.00	1.81e+08	1.27	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	1.75e+08	1.26	y	44:48	-	1.06
213	Hexa╕	13C-PCB-159	100.00	2.03e+08	1.26	y	46:04	-	1.22
214	Hexa╕	13C-PCB-167	100.00	2.26e+08	1.29	y	46:46	-	1.36
215	Hexa╕	13C-PCB-156	100.00	2.13e+08	1.27	y	48:03	-	1.28
216	Hexa╕	13C-PCB-157	100.00	2.22e+08	1.29	y	48:20	-	1.34
217	Hexa╕	13C-PCB-169	100.00	2.08e+08	1.29	y	50:23	-	1.25
218	Hept╕	13C-PCB-188	100.00	1.54e+08	0.47	y	42:51	-	0.93
219	Hept╕	13C-PCB-180	100.00	1.11e+08	0.47	y	49:20	-	0.67
220	Hept╕	13C-PCB-170	100.00	8.90e+07	0.47	y	50:44	-	0.54
221	Hept╕	13C-PCB-189	100.00	1.21e+08	0.46	y	52:11	-	0.73
222	Octa╕	13C-PCB-202	100.00	1.38e+08	0.91	y	48:16	-	0.83

223	Octa╗	13C-PCB-194	100.00	1.24e+08	0.92 y	53:39	-	0.82
224	Nona╗	13C-PCB-208	100.00	1.70e+08	0.78 y	52:56	-	1.13
225	Nona╗	13C-PCB-206	100.00	1.00e+08	0.81 y	55:19	-	0.66
226	Deca╗	13C-PCB-209	100.00	9.32e+07	1.21 y	56:36	-	0.62
227	DI-RS	13C-PCB-15	100.00	3.79e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	3.70e+08	1.06 y	29:01	-	1.00
229	Tetr╗	13C-PCB-60	100.00	2.98e+08	0.79 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.81e+08	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.66e+08	1.28 y	46:22	-	1.00
232	Octa╗	13C-PCB-205	100.00	1.51e+08	0.90 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 0.99
234	CRS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.62
235	PS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 1.17
236	PS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.92

Filename: 140620E1 S: 4 Acquired: 20-JUN-14 12:43:46
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-4 PCB CS3 14F1901

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	7.81e+07	2.96 y	16:15	-	1.31
2	Mono	PCB-2	50.00	7.76e+07	2.98 y	18:36	-	1.24
3	Mono	PCB-3	50.00	7.92e+07	2.99 y	18:50	-	1.26
4	Di	PCB-4/10	200.00	2.38e+08	1.63 y	20:12	-	1.61
5	Di	PCB-7/9	200.00	2.89e+08	1.64 y	21:57	-	1.30
6	Di	PCB-6	100.00	1.40e+08	1.64 y	22:36	-	1.26
7	Di	PCB-5/8	200.00	2.85e+08	1.64 y	23:01	-	1.28
8	Di	PCB-14	100.00	1.58e+08	1.64 y	24:06	-	1.27
9	Di	PCB-11	100.00	1.47e+08	1.66 y	25:17	-	1.18
10	Di	PCB-12/13	200.00	2.83e+08	1.65 y	25:41	-	1.14
11	Di	PCB-15	100.00	1.54e+08	1.67 y	26:00	-	1.24
12	Tri	PCB-19	50.00	4.61e+07	1.05 y	24:17	-	1.28
13	Tri	PCB-30	50.00	6.74e+07	1.06 y	25:10	-	1.87
14	Tri	PCB-18	50.00	4.73e+07	1.06 y	25:55	-	0.87
15	Tri	PCB-17	50.00	4.99e+07	1.05 y	26:05	-	0.92
16	Tri	PCB-24/27	100.00	1.33e+08	1.06 y	26:40	-	1.22
17	Tri	PCB-16/32	100.00	1.13e+08	1.05 y	27:10	-	1.03
18	Tri	PCB-34	50.00	6.57e+07	1.09 y	27:57	-	1.23
19	Tri	PCB-23	50.00	7.68e+07	1.09 y	28:02	-	1.44
20	Tri	PCB-29	50.00	7.27e+07	1.09 y	28:18	-	1.36
21	Tri	PCB-26	50.00	7.01e+07	1.08 y	28:30	-	1.31
22	Tri	PCB-25	50.00	7.40e+07	1.09 y	28:40	-	1.38
23	Tri	PCB-31	50.00	7.56e+07	1.08 y	29:02	-	1.41
24	Tri	PCB-28	50.00	7.73e+07	1.11 y	29:07	-	1.45
25	Tri	PCB-20/21/33	150.00	2.14e+08	1.09 y	29:45	-	1.34
26	Tri	PCB-22	50.00	7.44e+07	1.09 y	30:11	-	1.39
27	Tri	PCB-36	50.00	7.19e+07	1.09 y	30:47	-	1.43
28	Tri	PCB-39	50.00	7.33e+07	1.08 y	31:16	-	1.46
29	Tri	PCB-38	50.00	7.08e+07	1.08 y	32:02	-	1.41
30	Tri	PCB-35	50.00	7.21e+07	1.11 y	32:33	-	1.44
31	Tri	PCB-37	50.00	7.05e+07	1.09 y	32:59	-	1.41
32	Tetra	PCB-54	50.00	5.75e+07	0.77 y	28:01	-	1.24
33	Tetra	PCB-50	50.00	4.62e+07	0.77 y	29:11	-	0.99
34	Tetra	PCB-53	50.00	4.60e+07	0.78 y	29:49	-	1.19
35	Tetra	PCB-51	50.00	4.72e+07	0.78 y	30:10	-	1.23
36	Tetra	PCB-45	50.00	3.93e+07	0.78 y	30:36	-	1.02
37	Tetra	PCB-46	50.00	3.68e+07	0.76 y	31:04	-	0.95
38	Tetra	PCB-52/69	100.00	1.04e+08	0.77 y	31:33	-	1.35
39	Tetra	PCB-73	50.00	5.52e+07	0.77 y	31:39	-	1.43
40	Tetra	PCB-43/49	100.00	8.70e+07	0.78 y	31:50	-	1.13
41	Tetra	PCB-47	50.00	4.87e+07	0.76 y	32:02	-	1.20

42	Tetra	PCB-48/75	100.00	1.06e-08	0.78 y	32:09	-	1.31
43	Tetra	PCB-65	50.00	5.35e-07	0.77 y	32:25	-	1.32
44	Tetra	PCB-62	50.00	5.60e+07	0.77 y	32:32	-	1.38
45	Tetra	PCB-44	50.00	3.98e+07	0.78 y	32:49	-	0.98
46	Tetra	PCB-42/59	100.00	1.02e+08	0.77 y	33:02	-	1.26
47	Tetra	PCB-41/64/71/72	200.00	2.19e+08	0.78 y	33:38	-	1.35
48	Tetra	PCB-68	50.00	6.14e+07	0.78 y	33:54	-	1.51
49	Tetra	PCB-40	50.00	3.36e+07	0.77 y	34:06	-	0.83
50	Tetra	PCB-57	50.00	5.91e+07	0.77 y	34:28	-	1.15
51	Tetra	PCB-67	50.00	5.87e+07	0.78 y	34:46	-	1.15
52	Tetra	PCB-58	50.00	5.57e+07	0.78 y	34:53	-	1.09

53	Tetra	PCB-63	50.00	5.92e+07	0.76 y	35:03	-	1.16
54	Tetra	PCB-74	50.00	6.39e+07	0.77 y	35:20	-	1.25
55	Tetra	PCB-61/70	100.00	1.13e+08	0.78 y	35:30	-	1.10
56	Tetra	PCB-76/66	100.00	1.20e+08	0.77 y	35:43	-	1.17
57	Tetra	PCB-80	50.00	6.75e+07	0.78 y	35:56	-	1.28
58	Tetra	PCB-55	50.00	6.01e+07	0.77 y	36:17	-	1.14
59	Tetra	PCB-56/60	100.00	1.15e+08	0.77 y	36:46	-	1.09
60	Tetra	PCB-79	50.00	6.07e+07	0.78 y	37:50	-	1.15
61	Tetra	PCB-78	50.00	5.78e+07	0.78 y	38:32	-	1.27
62	Tetra	PCB-81	50.00	6.42e+07	0.78 y	39:03	-	1.41
63	Tetra	PCB-77	50.00	6.12e+07	0.79 y	39:39	-	1.25
64	Penta	PCB-104	50.00	4.42e+07	1.62 y	32:41	-	1.27
65	Penta	PCB-96	50.00	3.85e+07	1.59 y	33:57	-	1.10
66	Penta	PCB-103	50.00	3.30e+07	1.58 y	34:29	-	0.95
67	Penta	PCB-100	50.00	3.53e+07	1.61 y	34:49	-	1.01
68	Penta	PCB-94	50.00	2.93e+07	1.58 y	35:18	-	1.13
69	Penta	PCB-95/98/102	150.00	1.01e+08	1.60 y	35:47	-	1.30
70	Penta	PCB-93	50.00	2.46e+07	1.63 y	35:56	-	0.95
71	Penta	PCB-88/91	100.00	5.97e+07	1.61 y	36:12	-	1.15
72	Penta	PCB-121	50.00	4.37e+07	1.56 y	36:19	-	1.69
73	Penta	PCB-84/92	100.00	5.90e+07	1.59 y	37:08	-	1.09
74	Penta	PCB-89	50.00	2.93e+07	1.61 y	37:19	-	1.08
75	Penta	PCB-90/101	100.00	6.59e+07	1.60 y	37:31	-	1.21
76	Penta	PCB-113	50.00	4.09e+07	1.59 y	37:45	-	1.51
77	Penta	PCB-99	50.00	3.25e+07	1.60 y	37:51	-	1.20
78	Penta	PCB-119	50.00	4.22e+07	1.61 y	38:18	-	1.73
79	Penta	PCB-108/112	100.00	6.46e+07	1.63 y	38:27	-	1.33
80	Penta	PCB-83	50.00	3.86e+07	1.62 y	38:38	-	1.58
81	Penta	PCB-97	50.00	3.20e+07	1.59 y	38:49	-	1.32
82	Penta	PCB-86	50.00	2.38e+07	1.53 y	38:58	-	0.98
83	Penta	PCB-87/117/125	150.00	1.16e+08	1.58 y	39:05	-	1.59
84	Penta	PCB-111/115	100.00	8.59e+07	1.72 y	39:15	-	1.76
85	Penta	PCB-85/116	100.00	6.54e+07	1.46 y	39:23	-	1.34
86	Penta	PCB-120	50.00	4.27e+07	1.57 y	39:37	-	1.75
87	Penta	PCB-110	50.00	4.19e+07	1.60 y	39:46	-	1.72
88	Penta	PCB-82	50.00	2.58e+07	1.60 y	40:23	-	0.73
89	Penta	PCB-124	50.00	4.68e+07	1.60 y	41:03	-	1.32
90	Penta	PCB-107/109	100.00	8.79e+07	1.59 y	41:12	-	1.24
91	Penta	PCB-123	50.00	4.52e+07	1.59 y	41:22	-	1.28
92	Penta	PCB-106/118	100.00	9.20e+07	1.60 y	41:35	-	1.26
93	Penta	PCB-114	50.00	5.39e+07	1.62 y	42:13	-	1.37
94	Penta	PCB-122	50.00	4.95e+07	1.62 y	42:21	-	1.25
95	Penta	PCB-105	50.00	5.39e+07	1.63 y	43:05	-	1.34
96	Penta	PCB-127	50.00	5.03e+07	1.65 y	43:24	-	1.16
97	Penta	PCB-126	50.00	4.94e+07	1.62 y	45:19	-	1.32
98	Hexa	PCB-155	50.00	3.50e+07	1.27 y	37:03	-	1.20
99	Hexa	PCB-150	50.00	3.24e+07	1.28 y	38:20	-	1.11
100	Hexa	PCB-152	50.00	3.29e+07	1.26 y	38:48	-	1.12
101	Hexa	PCB-145	50.00	3.24e+07	1.26 y	39:15	-	1.11
102	Hexa	PCB-136	50.00	3.34e+07	1.27 y	39:35	-	1.14

103	Hexa	PCB-148	50.00	2.20e-07	1.30 y	39:40	-	0.75
104	Hexa	PCB-154	50.00	2.71e+07	1.26 y	40:10	-	0.93
105	Hexa	PCB-151	50.00	2.51e+07	1.30 y	40:47	-	0.86
106	Hexa	PCB-135	50.00	2.36e+07	1.28 y	41:01	-	0.81
107	Hexa	PCB-144	50.00	2.64e+07	1.36 y	41:08	-	0.90
108	Hexa	PCB-147	50.00	2.56e+07	1.18 y	41:16	-	0.88
109	Hexa	PCB-139/149	100.00	5.31e+07	1.27 y	41:30	-	0.91
110	Hexa	PCB-140	50.00	2.51e+07	1.27 y	41:42	-	0.86
111	Hexa	PCB-134/143	100.00	6.92e+07	1.24 y	42:08	-	0.94
112	Hexa	PCB-133/142	100.00	7.07e+07	1.23 y	42:26	-	0.96
113	Hexa	PCB-131	50.00	3.31e+07	1.22 y	42:36	-	0.90

114	Hexa	PCB-146/165	100.00	8.55e+07	1.24	y	42:48	- 1.16
115	Hexa	PCB-132/161	100.00	8.32e+07	1.22	y	43:03	- 1.13
116	Hexa	PCB-153	50.00	4.33e+07	1.22	y	43:14	- 1.18
117	Hexa	PCB-168	50.00	5.02e+07	1.21	y	43:27	- 1.37
118	Hexa	PCB-141	50.00	3.51e+07	1.21	y	43:58	- 0.99
119	Hexa	PCB-137	50.00	3.65e+07	1.26	y	44:21	- 1.03
120	Hexa	PCB-130	50.00	3.32e+07	1.23	y	44:27	- 0.94
121	Hexa	PCB-138/163/164	150.00	1.29e+08	1.23	y	44:50	- 1.26
122	Hexa	PCB-158/160	100.00	9.17e+07	1.23	y	45:05	- 1.34
123	Hexa	PCB-129	50.00	3.18e+07	1.24	y	45:19	- 0.93
124	Hexa	PCB-166	50.00	4.43e+07	1.22	y	45:46	- 1.13
125	Hexa	PCB-159	50.00	4.56e+07	1.22	y	46:05	- 1.17
126	Hexa	PCB-128/162	100.00	8.34e+07	1.23	y	46:22	- 1.07
127	Hexa	PCB-167	50.00	4.70e+07	1.21	y	46:47	- 1.09
128	Hexa	PCB-156	50.00	4.75e+07	1.22	y	48:04	- 1.17
129	Hexa	PCB-157	50.00	4.75e+07	1.22	y	48:20	- 1.11
130	Hexa	PCB-169	50.00	4.39e+07	1.23	y	50:24	- 1.11
131	Hepta	PCB-188	50.00	4.42e+07	1.02	y	42:52	- 1.43
132	Hepta	PCB-184	50.00	3.95e+07	1.05	y	43:18	- 1.28
133	Hepta	PCB-179	50.00	4.06e+07	1.05	y	44:06	- 1.31
134	Hepta	PCB-176	50.00	4.27e+07	1.05	y	44:34	- 1.38
135	Hepta	PCB-186	50.00	4.05e+07	1.04	y	45:10	- 1.31
136	Hepta	PCB-178	50.00	2.95e+07	1.05	y	45:39	- 0.96
137	Hepta	PCB-175	50.00	3.17e+07	1.05	y	46:00	- 1.02
138	Hepta	PCB-182/187	100.00	6.54e+07	1.04	y	46:11	- 1.06
139	Hepta	PCB-183	50.00	3.41e+07	1.05	y	46:29	- 1.10
140	Hepta	PCB-185	50.00	3.05e+07	1.05	y	47:09	- 1.36
141	Hepta	PCB-174	50.00	2.96e+07	1.04	y	47:31	- 1.32
142	Hepta	PCB-181	50.00	3.21e+07	1.07	y	47:37	- 1.43
143	Hepta	PCB-177	50.00	2.87e+07	1.06	y	47:48	- 1.28
144	Hepta	PCB-171	50.00	2.95e+07	1.04	y	48:05	- 1.31
145	Hepta	PCB-173	50.00	2.63e+07	1.05	y	48:31	- 1.17
146	Hepta	PCB-172	50.00	2.77e+07	1.03	y	48:57	- 1.24
147	Hepta	PCB-192	50.00	3.49e+07	1.05	y	49:09	- 1.56
148	Hepta	PCB-180	50.00	3.18e+07	1.04	y	49:20	- 1.42
149	Hepta	PCB-193	50.00	3.77e+07	1.05	y	49:32	- 1.68
150	Hepta	PCB-191	50.00	3.78e+07	1.05	y	49:47	- 1.68
151	Hepta	PCB-170	50.00	2.67e+07	1.04	y	50:46	- 1.50
152	Hepta	PCB-190	50.00	3.64e+07	1.03	y	50:55	- 2.04
153	Hepta	PCB-189	50.00	3.89e+07	1.04	y	52:12	- 1.59
154	Octa	PCB-202	50.00	2.93e+07	0.91	y	48:17	- 1.04
155	Octa	PCB-201	50.00	3.13e+07	0.93	y	48:46	- 1.11
156	Octa	PCB-204	50.00	2.91e+07	0.88	y	48:56	- 1.04
157	Octa	PCB-197	50.00	3.14e+07	0.91	y	49:13	- 1.12
158	Octa	PCB-200	50.00	3.00e+07	0.91	y	50:03	- 1.07
159	Octa	PCB-198	50.00	2.15e+07	0.90	y	51:20	- 0.77
160	Octa	PCB-199	50.00	2.15e+07	0.89	y	51:25	- 0.77
161	Octa	PCB-196/203	100.00	4.56e+07	0.90	y	51:41	- 0.81
162	Octa	PCB-195	50.00	2.93e+07	0.91	y	52:49	- 1.25
163	Octa	PCB-194	50.00	2.92e+07	0.90	y	53:41	- 1.24

164	Octa	PCB-205	50.00	3.30e+07	0.92	y	53:58	-	1.41
165	Nona	PCB-208	50.00	3.17e+07	1.33	y	52:57	-	0.95
166	Nona	PCB-207	50.00	3.11e+07	1.32	y	53:16	-	0.93
167	Nona	PCB-206	50.00	2.08e+07	1.33	y	55:21	-	1.02
168	Deca	PCB-209	50.00	2.28e+07	1.19	y	56:38	-	1.23
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.25
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.18

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.39
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.10
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.30
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.95
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.30
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.96
182	Tot ╗	Total Deca-PCB	50.00	2.28e+07	1.19	y	56:38	-	1.23
183	Mono╗	13C-PCB-1	100.00	1.19e+08	3.24	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.26e+08	3.30	y	18:49	-	0.93
185	Di-IS	13C-PCB-4	100.00	7.38e+07	1.60	y	20:09	-	0.55
186	Di-IS	13C-PCB-9	100.00	1.12e+08	1.59	y	21:55	-	0.82
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.58	y	25:16	-	0.92
188	Tri-╗	13C-PCB-19	100.00	7.23e+07	1.06	y	24:16	-	0.53
189	Tri-╗	13C-PCB-32	100.00	1.09e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.07e+08	1.05	y	29:07	-	0.85
191	Tri-╗	13C-PCB-37	100.00	1.00e+08	1.07	y	32:59	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.29e+07	0.81	y	28:00	-	0.84
193	Tetr╗	13C-PCB-52	100.00	7.70e+07	0.79	y	31:30	-	0.70
194	Tetr╗	13C-PCB-47	100.00	8.12e+07	0.80	y	32:01	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.02e+08	0.79	y	35:31	-	0.93
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	9.11e+07	0.80	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	9.78e+07	0.81	y	39:38	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.97e+07	1.58	y	32:40	-	0.98
200	Pent╗	13C-PCB-95	100.00	5.18e+07	1.63	y	35:49	-	0.73
201	Pent╗	13C-PCB-101	100.00	5.42e+07	1.60	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	4.87e+07	1.60	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.09e+07	1.58	y	41:21	-	1.00
204	Pent╗	13C-PCB-118	100.00	7.31e+07	1.59	y	41:32	-	1.03
205	Pent╗	13C-PCB-114	100.00	7.90e+07	1.61	y	42:12	-	1.18
206	Pent╗	13C-PCB-105	100.00	8.02e+07	1.61	y	43:03	-	1.20
207	Pent╗	13C-PCB-127	100.00	8.65e+07	1.59	y	43:23	-	1.29
208	Pent╗	13C-PCB-126	100.00	7.48e+07	1.61	y	45:18	-	1.12
209	Hexa╗	13C-PCB-155	100.00	5.86e+07	1.27	y	37:02	-	0.83
210	Hexa╗	13C-PCB-153	100.00	7.35e+07	1.25	y	43:13	-	1.10
211	Hexa╗	13C-PCB-141	100.00	7.09e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	6.83e+07	1.26	y	44:48	-	1.02
213	Hexa╗	13C-PCB-159	100.00	7.82e+07	1.30	y	46:05	-	1.17
214	Hexa╗	13C-PCB-167	100.00	8.59e+07	1.26	y	46:45	-	1.29
215	Hexa╗	13C-PCB-156	100.00	8.11e+07	1.27	y	48:03	-	1.21
216	Hexa╗	13C-PCB-157	100.00	8.59e+07	1.29	y	48:19	-	1.28
217	Hexa╗	13C-PCB-169	100.00	7.93e+07	1.27	y	50:24	-	1.19
218	Hept╗	13C-PCB-188	100.00	6.19e+07	0.46	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.49e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.58e+07	0.45	y	50:45	-	0.53
221	Hept╗	13C-PCB-189	100.00	4.91e+07	0.46	y	52:11	-	0.73
222	Octa╗	13C-PCB-202	100.00	5.62e+07	0.92	y	48:16	-	0.84

223	Octa┐	13C-PCB-194	100.00	4.69e+07	0.91 y	53:40	-	0.80
224	Nona┐	13C-PCB-208	100.00	6.66e+07	0.78 y	52:56	-	1.14
225	Nona┐	13C-PCB-206	100.00	4.07e+07	0.77 y	55:20	-	0.70
226	Deca┐	13C-PCB-209	100.00	3.70e+07	1.21 y	56:37	-	0.64
227	DI-RS	13C-PCB-15	100.00	1.35e+08	1.56 y	25:58	-	1.00
228	Tri-┐	13C-PCB-31	100.00	1.25e+08	1.06 y	29:00	-	1.00
229	Tetr┐	13C-PCB-60	100.00	1.11e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	7.09e+07	1.59 y	39:14	-	1.00
231	Hexa┐	13C-PCB-128	100.00	6.69e+07	1.26 y	46:21	-	1.00
232	Octa┐	13C-PCB-205	100.00	5.82e+07	0.91 y	53:57	-	1.00

233	CRS	13C-PCB-79	100.00	1.21e+08	0.80	y	37:49	-	1.09
234	CRS	13C-PCB-178	100.00	4.58e+07	0.46	y	45:38	-	0.69
235	PS	13C-PCB-79	100.00	1.21e+08	0.80	y	37:49	-	1.33
236	PS	13C-PCB-178	100.00	4.58e+07	0.46	y	45:38	-	1.02

Filename: 140620E1 S: 5 Acquired: 20-JUN-14 13:47:50
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-5 PCB CS4 13H1206

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	6.95e+08	2.97 y	16:15	-	1.05
2	Mono	PCB-2	400.00	6.84e+08	2.99 y	18:36	-	1.00
3	Mono	PCB-3	400.00	7.00e+08	3.00 y	18:50	-	1.02
4	Di	PCB-4/10	1600.00	2.12e+09	1.63 y	20:12	-	1.32
5	Di	PCB-7/9	1600.00	2.61e+09	1.63 y	21:57	-	1.08
6	Di	PCB-6	800.00	1.28e+09	1.64 y	22:36	-	1.06
7	Di	PCB-5/8	1600.00	2.62e+09	1.64 y	23:01	-	1.08
8	Di	PCB-14	800.00	1.44e+09	1.64 y	24:06	-	1.03
9	Di	PCB-11	800.00	1.36e+09	1.65 y	25:17	-	0.97
10	Di	PCB-12/13	1600.00	2.65e+09	1.64 y	25:41	-	0.94
11	Di	PCB-15	800.00	1.43e+09	1.63 y	26:00	-	1.02
12	Tri	PCB-19	400.00	4.09e+08	1.05 y	24:17	-	1.05
13	Tri	PCB-30	400.00	5.99e+08	1.06 y	25:10	-	1.54
14	Tri	PCB-18	400.00	4.25e+08	1.06 y	25:55	-	0.70
15	Tri	PCB-17	400.00	4.49e+08	1.05 y	26:05	-	0.74
16	Tri	PCB-24/27	800.00	1.19e+09	1.05 y	26:39	-	0.98
17	Tri	PCB-16/32	800.00	1.02e+09	1.06 y	27:10	-	0.84
18	Tri	PCB-34	400.00	6.61e+08	1.09 y	27:57	-	1.07
19	Tri	PCB-23	400.00	6.32e+08	1.10 y	28:03	-	1.02
20	Tri	PCB-29	400.00	6.52e+08	1.09 y	28:18	-	1.06
21	Tri	PCB-26	400.00	6.34e+08	1.11 y	28:30	-	1.03
22	Tri	PCB-25	400.00	6.76e+08	1.08 y	28:39	-	1.09
23	Tri	PCB-31	400.00	6.48e+08	1.08 y	29:01	-	1.05
24	Tri	PCB-28	400.00	7.30e+08	1.09 y	29:08	-	1.18
25	Tri	PCB-20/21/33	1200.00	2.00e+09	1.09 y	29:44	-	1.08
26	Tri	PCB-22	400.00	6.74e+08	1.09 y	30:10	-	1.09
27	Tri	PCB-36	400.00	6.53e+08	1.09 y	30:47	-	1.16
28	Tri	PCB-39	400.00	6.69e+08	1.09 y	31:15	-	1.19
29	Tri	PCB-38	400.00	6.54e+08	1.09 y	32:02	-	1.16
30	Tri	PCB-35	400.00	6.68e+08	1.09 y	32:32	-	1.19
31	Tri	PCB-37	400.00	6.65e+08	1.09 y	33:00	-	1.18
32	Tetra	PCB-54	400.00	5.24e+08	0.78 y	28:01	-	1.01
33	Tetra	PCB-50	400.00	4.18e+08	0.77 y	29:10	-	0.81
34	Tetra	PCB-53	400.00	4.29e+08	0.78 y	29:49	-	1.00
35	Tetra	PCB-51	400.00	4.24e+08	0.77 y	30:09	-	0.99
36	Tetra	PCB-45	400.00	3.49e+08	0.77 y	30:35	-	0.81
37	Tetra	PCB-46	400.00	3.30e+08	0.78 y	31:05	-	0.77
38	Tetra	PCB-52/69	800.00	9.21e+08	0.77 y	31:32	-	1.07
39	Tetra	PCB-73	400.00	5.23e+08	0.78 y	31:39	-	1.22
40	Tetra	PCB-43/49	800.00	8.03e+08	0.77 y	31:49	-	0.94
41	Tetra	PCB-47	400.00	4.43e+08	0.77 y	32:02	-	0.96

42	Tetra	PCB-48/75	800.00	9.95e+08	0.78	y	32:08	- 1.08
43	Tetra	PCB-65	400.00	5.26e+08	0.77	y	32:24	- 1.15
44	Tetra	PCB-62	400.00	4.75e+08	0.78	y	32:31	- 1.03
45	Tetra	PCB-44	400.00	3.59e+08	0.78	y	32:49	- 0.78
46	Tetra	PCB-42/59	800.00	9.31e+08	0.78	y	33:03	- 1.01
47	Tetra	PCB-41/64/71/72	1600.00	2.06e+09	0.78	y	33:38	- 1.12
48	Tetra	PCB-68	400.00	5.66e+08	0.78	y	33:53	- 1.23
49	Tetra	PCB-40	400.00	3.06e+08	0.78	y	34:07	- 0.67
50	Tetra	PCB-57	400.00	5.45e+08	0.78	y	34:27	- 0.92
51	Tetra	PCB-67	400.00	5.29e+08	0.77	y	34:45	- 0.90
52	Tetra	PCB-58	400.00	5.39e+08	0.78	y	34:53	- 0.91

53	Tetra	PCB-63	400.00	5.63e+08	0.78 y	35:02	-	0.95
54	Tetra	PCB-74	400.00	5.92e-08	0.78 y	35:19	-	1.00
55	Tetra	PCB-61/70	800.00	1.09e+09	0.78 y	35:30	-	0.92
56	Tetra	PCB-76/66	800.00	1.11e+09	0.78 y	35:43	-	0.94
57	Tetra	PCB-80	400.00	6.36e+08	0.78 y	35:57	-	1.07
58	Tetra	PCB-55	400.00	5.70e+08	0.78 y	36:16	-	0.96
59	Tetra	PCB-56/60	800.00	1.08e+09	0.77 y	36:46	-	0.91
60	Tetra	PCB-79	400.00	5.68e+08	0.78 y	37:49	-	0.95
61	Tetra	PCB-78	400.00	5.53e+08	0.77 y	38:31	-	1.02
62	Tetra	PCB-81	400.00	6.17e+08	0.77 y	39:03	-	1.14
63	Tetra	PCB-77	400.00	5.82e+08	0.80 y	39:38	-	1.02
64	Penta	PCB-104	400.00	3.92e+08	1.60 y	32:41	-	1.03
65	Penta	PCB-96	400.00	3.47e+08	1.59 y	33:56	-	0.92
66	Penta	PCB-103	400.00	3.03e+08	1.60 y	34:28	-	0.80
67	Penta	PCB-100	400.00	3.29e+08	1.60 y	34:50	-	0.87
68	Penta	PCB-94	400.00	2.68e+08	1.60 y	35:18	-	0.91
69	Penta	PCB-95/98/102	1200.00	9.09e+08	1.60 y	35:47	-	1.04
70	Penta	PCB-93	400.00	2.47e+08	1.60 y	35:56	-	0.84
71	Penta	PCB-88/91	800.00	5.23e+08	1.56 y	36:12	-	0.89
72	Penta	PCB-121	400.00	4.29e+08	1.64 y	36:18	-	1.46
73	Penta	PCB-84/92	800.00	5.39e+08	1.60 y	37:08	-	0.87
74	Penta	PCB-89	400.00	2.55e+08	1.60 y	37:20	-	0.83
75	Penta	PCB-90/101	800.00	6.11e+08	1.59 y	37:30	-	0.99
76	Penta	PCB-113	400.00	3.59e+08	1.58 y	37:45	-	1.16
77	Penta	PCB-99	400.00	3.19e+08	1.61 y	37:50	-	1.03
78	Penta	PCB-119	400.00	4.01e+08	1.59 y	38:18	-	1.48
79	Penta	PCB-108/112	800.00	5.97e+08	1.60 y	38:28	-	1.10
80	Penta	PCB-83	400.00	3.51e+08	1.60 y	38:37	-	1.30
81	Penta	PCB-97	400.00	2.87e+08	1.60 y	38:48	-	1.06
82	Penta	PCB-86	400.00	2.42e+08	1.63 y	38:58	-	0.90
83	Penta	PCB-87/117/125	1200.00	1.11e+09	1.59 y	39:05	-	1.37
84	Penta	PCB-111/115	800.00	7.75e+08	1.58 y	39:15	-	1.43
85	Penta	PCB-85/116	800.00	6.10e+08	1.63 y	39:23	-	1.13
86	Penta	PCB-120	400.00	4.12e+08	1.59 y	39:36	-	1.52
87	Penta	PCB-110	400.00	3.74e+08	1.60 y	39:45	-	1.38
88	Penta	PCB-82	400.00	2.25e+08	1.60 y	40:23	-	0.60
89	Penta	PCB-124	400.00	4.01e+08	1.59 y	41:04	-	1.07
90	Penta	PCB-107/109	800.00	8.08e+08	1.60 y	41:12	-	1.08
91	Penta	PCB-123	400.00	3.78e+08	1.60 y	41:22	-	1.01
92	Penta	PCB-106/118	800.00	8.07e+08	1.60 y	41:34	-	1.01
93	Penta	PCB-114	400.00	4.81e+08	1.63 y	42:13	-	1.11
94	Penta	PCB-122	400.00	4.40e+08	1.59 y	42:21	-	1.02
95	Penta	PCB-105	400.00	4.86e+08	1.61 y	43:04	-	1.09
96	Penta	PCB-127	400.00	4.44e+08	1.65 y	43:24	-	0.94
97	Penta	PCB-126	400.00	4.53e+08	1.69 y	45:18	-	1.10
98	Hexa	PCB-155	400.00	3.12e+08	1.27 y	37:04	-	0.98
99	Hexa	PCB-150	400.00	2.99e+08	1.28 y	38:19	-	0.94
100	Hexa	PCB-152	400.00	2.95e+08	1.28 y	38:47	-	0.92
101	Hexa	PCB-145	400.00	2.95e+08	1.27 y	39:15	-	0.92
102	Hexa	PCB-136	400.00	2.81e+08	1.31 y	39:34	-	0.88

103	Hexa	PCB-148	400.00	2.24e+08	1.24 y	39:40	-	0.70
104	Hexa	PCB-154	400.00	2.37e+08	1.27 y	40:09	-	0.74
105	Hexa	PCB-151	400.00	2.17e+08	1.27 y	40:48	-	0.68
106	Hexa	PCB-135	400.00	2.24e+08	1.25 y	41:00	-	0.70
107	Hexa	PCB-144	400.00	2.17e+08	1.28 y	41:07	-	0.68
108	Hexa	PCB-147	400.00	2.25e+08	1.29 y	41:15	-	0.70
109	Hexa	PCB-139/149	800.00	4.68e+08	1.28 y	41:31	-	0.73
110	Hexa	PCB-140	400.00	2.12e+08	1.27 y	41:42	-	0.66
111	Hexa	PCB-134/143	800.00	6.17e+08	1.24 y	42:08	-	0.78
112	Hexa	PCB-133/142	800.00	6.26e+08	1.23 y	42:26	-	0.79
113	Hexa	PCB-131	400.00	2.95e+08	1.25 y	42:36	-	0.74

114	Hexa	PCB-146/165	800.00	7.73e+08	1.24 y	42:49	-	0.97
115	Hexa	PCB-132/161	800.00	7.41e+08	1.23 y	43:04	-	0.93
116	Hexa	PCB-153	400.00	3.95e+08	1.23 y	43:13	-	0.99
117	Hexa	PCB-168	400.00	4.52e+08	1.23 y	43:26	-	1.14
118	Hexa	PCB-141	400.00	3.03e+08	1.23 y	43:57	-	0.83
119	Hexa	PCB-137	400.00	3.53e+08	1.24 y	44:20	-	0.96
120	Hexa	PCB-130	400.00	2.61e+08	1.22 y	44:27	-	0.71
121	Hexa	PCB-138/163/164	1200.00	1.16e+09	1.23 y	44:49	-	1.05
122	Hexa	PCB-158/160	800.00	8.21e+08	1.23 y	45:04	-	1.11
123	Hexa	PCB-129	400.00	2.80e+08	1.23 y	45:18	-	0.76
124	Hexa	PCB-166	400.00	3.99e+08	1.23 y	45:46	-	0.94
125	Hexa	PCB-159	400.00	4.06e+08	1.26 y	46:06	-	0.96
126	Hexa	PCB-128/162	800.00	7.15e+08	1.23 y	46:23	-	0.85
127	Hexa	PCB-167	400.00	4.05e+08	1.22 y	46:46	-	0.88
128	Hexa	PCB-156	400.00	4.28e+08	1.23 y	48:03	-	0.98
129	Hexa	PCB-157	400.00	4.21e+08	1.24 y	48:20	-	0.91
130	Hexa	PCB-169	400.00	3.99e+08	1.23 y	50:23	-	0.94
131	Hepta	PCB-188	400.00	3.97e+08	1.04 y	42:51	-	1.17
132	Hepta	PCB-184	400.00	3.45e+08	1.05 y	43:18	-	1.02
133	Hepta	PCB-179	400.00	3.55e+08	1.05 y	44:05	-	1.05
134	Hepta	PCB-176	400.00	3.64e+08	1.05 y	44:33	-	1.07
135	Hepta	PCB-186	400.00	3.55e+08	1.05 y	45:10	-	1.05
136	Hepta	PCB-178	400.00	2.55e+08	1.05 y	45:39	-	0.75
137	Hepta	PCB-175	400.00	2.66e+08	1.05 y	46:00	-	0.78
138	Hepta	PCB-182/187	800.00	5.78e+08	1.06 y	46:10	-	0.85
139	Hepta	PCB-183	400.00	2.87e+08	1.05 y	46:29	-	0.85
140	Hepta	PCB-185	400.00	2.56e+08	1.05 y	47:09	-	1.10
141	Hepta	PCB-174	400.00	2.74e+08	1.04 y	47:30	-	1.18
142	Hepta	PCB-181	400.00	2.51e+08	1.05 y	47:37	-	1.08
143	Hepta	PCB-177	400.00	2.40e+08	1.05 y	47:47	-	1.03
144	Hepta	PCB-171	400.00	2.57e+08	1.05 y	48:05	-	1.10
145	Hepta	PCB-173	400.00	2.26e+08	1.05 y	48:30	-	0.97
146	Hepta	PCB-172	400.00	2.44e+08	1.05 y	48:57	-	1.05
147	Hepta	PCB-192	400.00	3.09e+08	1.05 y	49:08	-	1.33
148	Hepta	PCB-180	400.00	2.75e+08	1.05 y	49:20	-	1.18
149	Hepta	PCB-193	400.00	3.25e+08	1.06 y	49:31	-	1.40
150	Hepta	PCB-191	400.00	3.32e+08	1.05 y	49:46	-	1.43
151	Hepta	PCB-170	400.00	2.30e+08	1.05 y	50:45	-	1.23
152	Hepta	PCB-190	400.00	3.17e+08	1.05 y	50:55	-	1.70
153	Hepta	PCB-189	400.00	3.22e+08	1.05 y	52:11	-	1.30
154	Octa	PCB-202	400.00	2.47e+08	0.91 y	48:16	-	0.85
155	Octa	PCB-201	400.00	2.67e+08	0.90 y	48:45	-	0.92
156	Octa	PCB-204	400.00	2.45e+08	0.91 y	48:54	-	0.84
157	Octa	PCB-197	400.00	2.62e+08	0.91 y	49:13	-	0.90
158	Octa	PCB-200	400.00	2.51e+08	0.91 y	50:03	-	0.87
159	Octa	PCB-198	400.00	1.73e+08	0.90 y	51:19	-	0.60
160	Octa	PCB-199	400.00	1.84e+08	0.91 y	51:25	-	0.63
161	Octa	PCB-196/203	800.00	3.87e+08	0.90 y	51:41	-	0.67
162	Octa	PCB-195	400.00	2.55e+08	0.91 y	52:49	-	1.04
163	Octa	PCB-194	400.00	2.51e+08	0.92 y	53:40	-	1.02

164	Octa		PCB-205	400.00	2.86e+08	0.92	y	53:57	- 1.17
165	Nona		PCB-208	400.00	2.69e+08	1.32	y	52:57	- 0.78
166	Nona		PCB-207	400.00	2.66e+08	1.33	y	53:15	- 0.78
167	Nona		PCB-206	400.00	1.66e+08	1.33	y	55:21	- 0.84
168	Deca		PCB-209	400.00	1.83e+08	1.19	y	56:38	- 0.99
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.02
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.03
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 0.96

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.11
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	0.99
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.03
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.05
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.78
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.91
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.05
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.77
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.08
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.79
182	Tot ╗	Total Deca-PCB	400.00	1.83e+08	1.19	y	56:38	-	0.99
183	Mono╗	13C-PCB-1	100.00	1.66e+08	3.23	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.71e+08	3.33	y	18:49	-	0.91
185	Di-IS	13C-PCB-4	100.00	1.00e+08	1.57	y	20:08	-	0.53
186	Di-IS	13C-PCB-9	100.00	1.51e+08	1.58	y	21:55	-	0.80
187	Di-IS	13C-PCB-11	100.00	1.75e+08	1.57	y	25:16	-	0.93
188	Tri-╗	13C-PCB-19	100.00	9.71e+07	1.07	y	24:16	-	0.52
189	Tri-╗	13C-PCB-32	100.00	1.52e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.54e+08	1.06	y	29:06	-	0.96
191	Tri-╗	13C-PCB-37	100.00	1.41e+08	1.06	y	32:58	-	0.87
192	Tetr╗	13C-PCB-54	100.00	1.29e+08	0.81	y	27:60	-	0.83
193	Tetr╗	13C-PCB-52	100.00	1.07e+08	0.80	y	31:31	-	0.68
194	Tetr╗	13C-PCB-47	100.00	1.15e+08	0.80	y	32:00	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.48e+08	0.80	y	35:31	-	0.94
196	Tetr╗	13C-PCB-80	100.00	1.49e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	1.35e+08	0.82	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.43e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.47e+07	1.61	y	32:40	-	0.96
200	Pent╗	13C-PCB-95	100.00	7.32e+07	1.57	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	7.72e+07	1.62	y	37:30	-	0.78
202	Pent╗	13C-PCB-97	100.00	6.76e+07	1.59	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	9.35e+07	1.62	y	41:21	-	0.95
204	Pent╗	13C-PCB-118	100.00	9.95e+07	1.59	y	41:32	-	1.01
205	Pent╗	13C-PCB-114	100.00	1.08e+08	1.58	y	42:12	-	1.25
206	Pent╗	13C-PCB-105	100.00	1.12e+08	1.60	y	43:04	-	1.29
207	Pent╗	13C-PCB-127	100.00	1.18e+08	1.58	y	43:23	-	1.36
208	Pent╗	13C-PCB-126	100.00	1.03e+08	1.56	y	45:18	-	1.19
209	Hexa╗	13C-PCB-155	100.00	7.98e+07	1.30	y	37:03	-	0.81
210	Hexa╗	13C-PCB-153	100.00	9.94e+07	1.27	y	43:12	-	1.15
211	Hexa╗	13C-PCB-141	100.00	9.18e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	9.22e+07	1.27	y	44:48	-	1.06
213	Hexa╗	13C-PCB-159	100.00	1.06e+08	1.27	y	46:04	-	1.22
214	Hexa╗	13C-PCB-167	100.00	1.14e+08	1.27	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	1.09e+08	1.27	y	48:03	-	1.26
216	Hexa╗	13C-PCB-157	100.00	1.15e+08	1.31	y	48:19	-	1.33
217	Hexa╗	13C-PCB-169	100.00	1.06e+08	1.26	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	8.49e+07	0.47	y	42:50	-	0.98
219	Hept╗	13C-PCB-180	100.00	5.82e+07	0.47	y	49:20	-	0.67
220	Hept╗	13C-PCB-170	100.00	4.66e+07	0.46	y	50:44	-	0.54
221	Hept╗	13C-PCB-189	100.00	6.18e+07	0.46	y	52:11	-	0.71
222	Octa╗	13C-PCB-202	100.00	7.25e+07	0.90	y	48:16	-	0.84

223	Octa╗	13C-PCB-194	100.00	6.13e+07	0.91 y	53:40	-	0.81
224	Nona╗	13C-PCB-208	100.00	8.58e+07	0.78 y	52:56	-	1.14
225	Nona╗	13C-PCB-206	100.00	4.92e+07	0.81 y	55:20	-	0.65
226	Deca╗	13C-PCB-209	100.00	4.62e+07	1.22 y	56:37	-	0.61
227	DI-RS	13C-PCB-15	100.00	1.89e+08	1.58 y	25:58	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.61e+08	1.07 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.57e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	9.86e+07	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	8.68e+07	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	7.56e+07	0.92 y	53:57	-	1.00

233	CRS	13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	0.99
234	CRS	13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.62
235	PS	13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	1.15
236	PS	13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.93

Filename: 140620E1 S: 6 Acquired: 20-JUN-14 14:51:49
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-6 PCB CS5 13H1207

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	750.00	1.43e+09	2.96 y	16:15	-	1.27
2	Mono	PCB-2	750.00	1.51e+09	2.98 y	18:36	-	1.18
3	Mono	PCB-3	750.00	1.54e+09	2.98 y	18:50	-	1.20
4	Di	PCB-4/10	3000.00	4.71e+09	1.64 y	20:12	-	1.54
5	Di	PCB-7/9	3000.00	5.85e+09	1.64 y	21:57	-	1.25
6	Di	PCB-6	1500.00	2.81e+09	1.64 y	22:36	-	1.20
7	Di	PCB-5/8	3000.00	5.77e+09	1.64 y	23:01	-	1.23
8	Di	PCB-14	1500.00	3.24e+09	1.64 y	24:06	-	1.20
9	Di	PCB-11	1500.00	3.05e+09	1.65 y	25:17	-	1.13
10	Di	PCB-12/13	3000.00	5.91e+09	1.64 y	25:41	-	1.09
11	Di	PCB-15	1500.00	3.20e+09	1.64 y	26:00	-	1.18
12	Tri	PCB-19	750.00	9.08e+08	1.05 y	24:17	-	1.23
13	Tri	PCB-30	750.00	1.34e+09	1.06 y	25:10	-	1.82
14	Tri	PCB-18	750.00	9.50e+08	1.05 y	25:55	-	0.81
15	Tri	PCB-17	750.00	1.00e+09	1.05 y	26:05	-	0.86
16	Tri	PCB-24/27	1500.00	2.69e+09	1.05 y	26:40	-	1.15
17	Tri	PCB-16/32	1500.00	2.29e+09	1.06 y	27:10	-	0.98
18	Tri	PCB-34	750.00	1.45e+09	1.09 y	27:57	-	1.16
19	Tri	PCB-23	750.00	1.49e+09	1.09 y	28:03	-	1.19
20	Tri	PCB-29	750.00	1.47e+09	1.09 y	28:18	-	1.18
21	Tri	PCB-26	750.00	1.45e+09	1.10 y	28:30	-	1.16
22	Tri	PCB-25	750.00	1.51e+09	1.09 y	28:40	-	1.21
23	Tri	PCB-31	750.00	1.64e+09	1.06 y	29:01	-	1.32
24	Tri	PCB-28	750.00	1.49e+09	1.12 y	29:08	-	1.20
25	Tri	PCB-20/21/33	2250.00	4.54e+09	1.09 y	29:44	-	1.21
26	Tri	PCB-22	750.00	1.53e+09	1.09 y	30:11	-	1.23
27	Tri	PCB-36	750.00	1.49e+09	1.09 y	30:47	-	1.32
28	Tri	PCB-39	750.00	1.57e+09	1.09 y	31:15	-	1.39
29	Tri	PCB-38	750.00	1.52e+09	1.09 y	32:03	-	1.35
30	Tri	PCB-35	750.00	1.55e+09	1.09 y	32:33	-	1.38
31	Tri	PCB-37	750.00	1.56e+09	1.09 y	32:59	-	1.39
32	Tetra	PCB-54	750.00	1.18e+09	0.78 y	28:01	-	1.18
33	Tetra	PCB-50	750.00	9.47e+08	0.78 y	29:11	-	0.95
34	Tetra	PCB-53	750.00	9.66e+08	0.78 y	29:49	-	1.14
35	Tetra	PCB-51	750.00	9.67e+08	0.77 y	30:10	-	1.14
36	Tetra	PCB-45	750.00	7.90e+08	0.77 y	30:35	-	0.93
37	Tetra	PCB-46	750.00	7.50e+08	0.77 y	31:05	-	0.88
38	Tetra	PCB-52/69	1500.00	2.10e+09	0.77 y	31:33	-	1.23
39	Tetra	PCB-73	750.00	1.23e+09	0.78 y	31:40	-	1.45
40	Tetra	PCB-43/49	1500.00	1.83e+09	0.78 y	31:50	-	1.08
41	Tetra	PCB-47	750.00	9.58e+08	0.77 y	32:02	-	1.07

42	Tetra	PCB-48/75	1500.00	2.33e+09	0.78 y	32:09	-	1.30
43	Tetra	PCB-65	750.00	1.16e+09	0.77 y	32:25	-	1.30
44	Tetra	PCB-62	750.00	1.12e+09	0.78 y	32:32	-	1.25
45	Tetra	PCB-44	750.00	8.19e+08	0.78 y	32:49	-	0.92
46	Tetra	PCB-42/59	1500.00	2.16e+09	0.77 y	33:03	-	1.21
47	Tetra	PCB-41/64/71/72	3000.00	4.74e+09	0.78 y	33:38	-	1.33
48	Tetra	PCB-68	750.00	1.31e+09	0.78 y	33:54	-	1.46
49	Tetra	PCB-40	750.00	6.99e+08	0.78 y	34:07	-	0.78
50	Tetra	PCB-57	750.00	1.25e+09	0.77 y	34:28	-	1.07
51	Tetra	PCB-67	750.00	1.21e+09	0.77 y	34:46	-	1.03
52	Tetra	PCB-58	750.00	1.25e+09	0.78 y	34:53	-	1.07

53	Tetra	PCB-63	750.00	1.31e+09	0.77 y	35:03	-	1.12
54	Tetra	PCB-74	750.00	1.38e+09	0.81 y	35:20	-	1.18
55	Tetra	PCB-61/70	1500.00	2.48e+09	0.75 y	35:31	-	1.06
56	Tetra	PCB-76/66	1500.00	2.59e+09	0.78 y	35:44	-	1.10
57	Tetra	PCB-80	750.00	1.47e+09	0.78 y	35:57	-	1.24
58	Tetra	PCB-55	750.00	1.33e+09	0.78 y	36:17	-	1.12
59	Tetra	PCB-56/60	1500.00	2.53e+09	0.78 y	36:47	-	1.07
60	Tetra	PCB-79	750.00	1.34e+09	0.78 y	37:50	-	1.13
61	Tetra	PCB-78	750.00	1.30e+09	0.78 y	38:32	-	1.18
62	Tetra	PCB-81	750.00	1.44e+09	0.77 y	39:04	-	1.31
63	Tetra	PCB-77	750.00	1.37e+09	0.79 y	39:39	-	1.17
64	Penta	PCB-104	750.00	8.87e+08	1.60 y	32:41	-	1.22
65	Penta	PCB-96	750.00	7.97e+08	1.60 y	33:56	-	1.10
66	Penta	PCB-103	750.00	7.09e+08	1.60 y	34:28	-	0.98
67	Penta	PCB-100	750.00	7.64e+08	1.60 y	34:50	-	1.05
68	Penta	PCB-94	750.00	6.22e+08	1.59 y	35:18	-	1.08
69	Penta	PCB-95/98/102	2250.00	2.03e+09	1.58 y	35:47	-	1.17
70	Penta	PCB-93	750.00	6.23e+08	1.66 y	35:56	-	1.08
71	Penta	PCB-88/91	1500.00	1.15e+09	1.55 y	36:12	-	1.00
72	Penta	PCB-121	750.00	1.07e+09	1.65 y	36:18	-	1.85
73	Penta	PCB-84/92	1500.00	1.26e+09	1.59 y	37:08	-	1.02
74	Penta	PCB-89	750.00	6.06e+08	1.66 y	37:20	-	0.98
75	Penta	PCB-90/101	1500.00	1.42e+09	1.58 y	37:30	-	1.15
76	Penta	PCB-113	750.00	8.20e+08	1.61 y	37:45	-	1.33
77	Penta	PCB-99	750.00	7.64e+08	1.59 y	37:50	-	1.24
78	Penta	PCB-119	750.00	9.38e+08	1.60 y	38:18	-	1.73
79	Penta	PCB-108/112	1500.00	1.41e+09	1.59 y	38:28	-	1.30
80	Penta	PCB-83	750.00	8.35e+08	1.61 y	38:37	-	1.54
81	Penta	PCB-97	750.00	6.67e+08	1.59 y	38:49	-	1.23
82	Penta	PCB-86	750.00	5.75e+08	1.59 y	38:57	-	1.06
83	Penta	PCB-87/117/125	2250.00	2.55e+09	1.60 y	39:05	-	1.57
84	Penta	PCB-111/115	1500.00	1.80e+09	1.61 y	39:14	-	1.66
85	Penta	PCB-85/116	1500.00	1.47e+09	1.60 y	39:22	-	1.35
86	Penta	PCB-120	750.00	9.60e+08	1.60 y	39:36	-	1.77
87	Penta	PCB-110	750.00	8.91e+08	1.60 y	39:45	-	1.64
88	Penta	PCB-82	750.00	5.54e+08	1.60 y	40:23	-	0.71
89	Penta	PCB-124	750.00	1.04e+09	1.59 y	41:04	-	1.33
90	Penta	PCB-107/109	1500.00	1.83e+09	1.60 y	41:12	-	1.17
91	Penta	PCB-123	750.00	9.32e+08	1.60 y	41:23	-	1.20
92	Penta	PCB-106/118	1500.00	1.91e+09	1.60 y	41:34	-	1.19
93	Penta	PCB-114	750.00	1.21e+09	1.60 y	42:13	-	1.35
94	Penta	PCB-122	750.00	1.09e+09	1.62 y	42:22	-	1.22
95	Penta	PCB-105	750.00	1.17e+09	1.61 y	43:05	-	1.28
96	Penta	PCB-127	750.00	1.10e+09	1.63 y	43:25	-	1.09
97	Penta	PCB-126	750.00	1.11e+09	1.70 y	45:18	-	1.27
98	Hexa	PCB-155	750.00	7.23e+08	1.27 y	37:04	-	1.15
99	Hexa	PCB-150	750.00	6.95e+08	1.28 y	38:19	-	1.10
100	Hexa	PCB-152	750.00	6.85e+08	1.28 y	38:48	-	1.09
101	Hexa	PCB-145	750.00	6.77e+08	1.27 y	39:14	-	1.08
102	Hexa	PCB-136	750.00	7.15e+08	1.29 y	39:34	-	1.14

103	Hexa	PCB-148	750.00	4.56e+08	1.26 y	39:41	-	0.72
104	Hexa	PCB-154	750.00	5.75e+08	1.28 y	40:09	-	0.91
105	Hexa	PCB-151	750.00	5.08e+08	1.28 y	40:48	-	0.81
106	Hexa	PCB-135	750.00	5.16e+08	1.27 y	41:00	-	0.82
107	Hexa	PCB-144	750.00	5.14e+08	1.29 y	41:07	-	0.82
108	Hexa	PCB-147	750.00	5.36e+08	1.28 y	41:15	-	0.85
109	Hexa	PCB-139/149	1500.00	1.09e+09	1.28 y	41:31	-	0.86
110	Hexa	PCB-140	750.00	5.03e+08	1.28 y	41:42	-	0.80
111	Hexa	PCB-134/143	1500.00	1.43e+09	1.24 y	42:09	-	0.87
112	Hexa	PCB-133/142	1500.00	1.48e+09	1.23 y	42:26	-	0.90
113	Hexa	PCB-131	750.00	7.12e+08	1.24 y	42:36	-	0.87

114	Hexa	PCB-146/165	1500.00	1.86e+09	1.24 y	42:49	-	1.13
115	Hexa	PCB-132/161	1500.00	1.76e+09	1.23 y	43:04	-	1.07
116	Hexa	PCB-153	750.00	9.65e+08	1.23 y	43:14	-	1.18
117	Hexa	PCB-168	750.00	1.10e+09	1.23 y	43:27	-	1.35
118	Hexa	PCB-141	750.00	7.68e+08	1.23 y	43:58	-	0.99
119	Hexa	PCB-137	750.00	8.69e+08	1.22 y	44:21	-	1.11
120	Hexa	PCB-130	750.00	6.96e+08	1.25 y	44:28	-	0.89
121	Hexa	PCB-138/163/164	2250.00	2.89e+09	1.23 y	44:50	-	1.24
122	Hexa	PCB-158/160	1500.00	2.02e+09	1.23 y	45:05	-	1.29
123	Hexa	PCB-129	750.00	6.88e+08	1.23 y	45:19	-	0.88
124	Hexa	PCB-166	750.00	1.04e+09	1.22 y	45:46	-	1.13
125	Hexa	PCB-159	750.00	1.10e+09	1.22 y	46:05	-	1.20
126	Hexa	PCB-128/162	1500.00	1.89e+09	1.23 y	46:23	-	1.03
127	Hexa	PCB-167	750.00	1.07e+09	1.23 y	46:47	-	1.05
128	Hexa	PCB-156	750.00	1.08e+09	1.23 y	48:04	-	1.12
129	Hexa	PCB-157	750.00	1.06e+09	1.24 y	48:21	-	1.06
130	Hexa	PCB-169	750.00	1.01e+09	1.24 y	50:24	-	1.09
131	Hepta	PCB-188	750.00	9.34e+08	1.05 y	42:52	-	1.37
132	Hepta	PCB-184	750.00	8.40e+08	1.05 y	43:19	-	1.23
133	Hepta	PCB-179	750.00	8.75e+08	1.05 y	44:05	-	1.28
134	Hepta	PCB-176	750.00	9.17e+08	1.06 y	44:33	-	1.34
135	Hepta	PCB-186	750.00	8.77e+08	1.05 y	45:10	-	1.29
136	Hepta	PCB-178	750.00	6.27e+08	1.05 y	45:39	-	0.92
137	Hepta	PCB-175	750.00	6.73e+08	1.05 y	45:60	-	0.99
138	Hepta	PCB-182/187	1500.00	1.46e+09	1.05 y	46:10	-	1.07
139	Hepta	PCB-183	750.00	7.62e+08	1.05 y	46:29	-	1.12
140	Hepta	PCB-185	750.00	6.80e+08	1.05 y	47:09	-	1.35
141	Hepta	PCB-174	750.00	7.07e+08	1.04 y	47:31	-	1.40
142	Hepta	PCB-181	750.00	6.72e+08	1.06 y	47:38	-	1.33
143	Hepta	PCB-177	750.00	6.12e+08	1.05 y	47:47	-	1.21
144	Hepta	PCB-171	750.00	6.44e+08	1.05 y	48:05	-	1.28
145	Hepta	PCB-173	750.00	5.59e+08	1.05 y	48:31	-	1.11
146	Hepta	PCB-172	750.00	5.96e+08	1.04 y	48:57	-	1.18
147	Hepta	PCB-192	750.00	7.62e+08	1.05 y	49:09	-	1.51
148	Hepta	PCB-180	750.00	6.75e+08	1.05 y	49:21	-	1.34
149	Hepta	PCB-193	750.00	8.02e+08	1.05 y	49:32	-	1.59
150	Hepta	PCB-191	750.00	8.11e+08	1.05 y	49:46	-	1.61
151	Hepta	PCB-170	750.00	5.79e+08	1.05 y	50:45	-	1.44
152	Hepta	PCB-190	750.00	7.99e+08	1.05 y	50:55	-	1.98
153	Hepta	PCB-189	750.00	8.34e+08	1.05 y	52:11	-	1.54
154	Octa	PCB-202	750.00	6.16e+08	0.91 y	48:17	-	0.99
155	Octa	PCB-201	750.00	6.74e+08	0.90 y	48:46	-	1.09
156	Octa	PCB-204	750.00	6.20e+08	0.90 y	48:55	-	1.00
157	Octa	PCB-197	750.00	6.60e+08	0.90 y	49:13	-	1.06
158	Octa	PCB-200	750.00	6.36e+08	0.90 y	50:03	-	1.02
159	Octa	PCB-198	750.00	4.35e+08	0.90 y	51:19	-	0.70
160	Octa	PCB-199	750.00	4.62e+08	0.92 y	51:25	-	0.74
161	Octa	PCB-196/203	1500.00	9.78e+08	0.91 y	51:41	-	0.79
162	Octa	PCB-195	750.00	6.36e+08	0.92 y	52:48	-	1.19
163	Octa	PCB-194	750.00	6.26e+08	0.92 y	53:40	-	1.17

164	Octa		PCB-205	750.00	7.28e+08	0.91	y	53:57	- 1.36
165	Nona		PCB-208	750.00	6.70e+08	1.33	y	52:57	- 0.91
166	Nona		PCB-207	750.00	6.71e+08	1.33	y	53:15	- 0.91
167	Nona		PCB-206	750.00	4.30e+08	1.34	y	55:19	- 0.98
168	Deca		PCB-209	750.00	4.91e+08	1.19	y	56:35	- 1.16
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.22
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.19
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 1.12

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.26
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.15
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.93
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.07
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.26
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.91
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.24
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.93
182	Tot ╗	Total Deca-PCB	750.00	4.91e+08	1.19	y	56:35	-	1.16
183	Mono╗	13C-PCB-1	100.00	1.50e+08	3.31	y	16:14	-	0.76
184	Mono╗	13C-PCB-3	100.00	1.70e+08	3.29	y	18:49	-	0.86
185	Di-IS	13C-PCB-4	100.00	1.02e+08	1.58	y	20:08	-	0.52
186	Di-IS	13C-PCB-9	100.00	1.56e+08	1.60	y	21:55	-	0.79
187	Di-IS	13C-PCB-11	100.00	1.80e+08	1.58	y	25:16	-	0.91
188	Tri-╗	13C-PCB-19	100.00	9.83e+07	1.04	y	24:16	-	0.50
189	Tri-╗	13C-PCB-32	100.00	1.56e+08	1.07	y	27:10	-	0.79
190	Tri-╗	13C-PCB-28	100.00	1.66e+08	1.06	y	29:07	-	0.98
191	Tri-╗	13C-PCB-37	100.00	1.50e+08	1.08	y	32:58	-	0.89
192	Tetr╗	13C-PCB-54	100.00	1.33e+08	0.80	y	27:59	-	0.77
193	Tetr╗	13C-PCB-52	100.00	1.13e+08	0.80	y	31:31	-	0.66
194	Tetr╗	13C-PCB-47	100.00	1.19e+08	0.80	y	32:01	-	0.70
195	Tetr╗	13C-PCB-70	100.00	1.56e+08	0.81	y	35:31	-	0.91
196	Tetr╗	13C-PCB-80	100.00	1.58e+08	0.80	y	35:56	-	0.92
197	Tetr╗	13C-PCB-81	100.00	1.47e+08	0.81	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.56e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.67e+07	1.59	y	32:40	-	0.90
200	Pent╗	13C-PCB-95	100.00	7.69e+07	1.59	y	35:49	-	0.72
201	Pent╗	13C-PCB-101	100.00	8.24e+07	1.61	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	7.23e+07	1.63	y	38:48	-	0.67
203	Pent╗	13C-PCB-123	100.00	1.04e+08	1.60	y	41:22	-	0.97
204	Pent╗	13C-PCB-118	100.00	1.07e+08	1.61	y	41:33	-	0.99
205	Pent╗	13C-PCB-114	100.00	1.19e+08	1.61	y	42:12	-	1.15
206	Pent╗	13C-PCB-105	100.00	1.23e+08	1.59	y	43:04	-	1.19
207	Pent╗	13C-PCB-127	100.00	1.34e+08	1.58	y	43:23	-	1.30
208	Pent╗	13C-PCB-126	100.00	1.17e+08	1.57	y	45:18	-	1.14
209	Hexa╗	13C-PCB-155	100.00	8.39e+07	1.28	y	37:03	-	0.78
210	Hexa╗	13C-PCB-153	100.00	1.09e+08	1.28	y	43:13	-	1.06
211	Hexa╗	13C-PCB-141	100.00	1.04e+08	1.29	y	43:57	-	1.01
212	Hexa	13C-PCB-138	100.00	1.04e+08	1.28	y	44:48	-	1.01
213	Hexa╗	13C-PCB-159	100.00	1.22e+08	1.26	y	46:04	-	1.19
214	Hexa╗	13C-PCB-167	100.00	1.35e+08	1.27	y	46:45	-	1.31
215	Hexa╗	13C-PCB-156	100.00	1.28e+08	1.27	y	48:03	-	1.24
216	Hexa╗	13C-PCB-157	100.00	1.33e+08	1.28	y	48:19	-	1.29
217	Hexa╗	13C-PCB-169	100.00	1.24e+08	1.28	y	50:23	-	1.20
218	Hept╗	13C-PCB-188	100.00	9.09e+07	0.46	y	42:51	-	0.88
219	Hept╗	13C-PCB-180	100.00	6.73e+07	0.47	y	49:20	-	0.65
220	Hept╗	13C-PCB-170	100.00	5.38e+07	0.46	y	50:44	-	0.52
221	Hept╗	13C-PCB-189	100.00	7.24e+07	0.47	y	52:11	-	0.70
222	Octa╗	13C-PCB-202	100.00	8.28e+07	0.92	y	48:16	-	0.80

223	Octa╗	13C-PCB-194	100.00	7.14e+07	0.92 y	53:39	-	0.79
224	Nona╗	13C-PCB-208	100.00	9.82e+07	0.76 y	52:56	-	1.09
225	Nona╗	13C-PCB-206	100.00	5.84e+07	0.80 y	55:19	-	0.65
226	Deca╗	13C-PCB-209	100.00	5.63e+07	1.21 y	56:35	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.97e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.69e+08	1.06 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.71e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.07e+08	1.60 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.03e+08	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	9.02e+07	0.91 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.02
234	CRS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.62
235	PS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.19
236	PS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.96

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.96	2.66-3.60	y	52.3	37.5-62.5
PCB-2	2.98	2.66-3.60	y	52.3	37.5-62.5
PCB-3	2.98	2.66-3.60	y	51.7	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	206.7	150-250
PCB-7/9	1.64	1.33-1.79	y	204.6	150-250
PCB-6	1.64	1.33-1.79	y	99.9	75.0-125
PCB-5/8	1.64	1.33-1.79	y	206.9	150-250
PCB-14	1.65	1.33-1.79	y	102.3	75.0-125
PCB-11	1.66	1.33-1.79	y	101.6	75.0-125
PCB-12/13	1.63	1.33-1.79	y	205.7	150-250
PCB-15	1.66	1.33-1.79	y	101.1	75.0-125
PCB-19	1.05	0.88-1.20	y	49.4	37.5-62.5
PCB-30	1.06	0.88-1.20	y	51.2	37.5-62.5
PCB-18	1.05	0.88-1.20	y	50.4	37.5-62.5
PCB-17	1.05	0.88-1.20	y	51.0	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	103.5	75.0-125
PCB-16/32	1.05	0.88-1.20	y	100.5	75.0-125
PCB-34	1.08	0.88-1.20	y	57.4	37.5-62.5
PCB-23	1.11	0.88-1.20	y	46.4	37.5-62.5
PCB-29	1.09	0.88-1.20	y	51.1	37.5-62.5
PCB-26	1.08	0.88-1.20	y	50.7	37.5-62.5
PCB-25	1.09	0.88-1.20	y	51.5	37.5-62.5
PCB-31	1.08	0.88-1.20	y	49.7	37.5-62.5
PCB-28	1.11	0.88-1.20	y	52.5	37.5-62.5
PCB-20/21/33	1.09	0.88-1.20	y	152.7	112.5-225
PCB-22	1.08	0.88-1.20	y	52.6	37.5-62.5
PCB-36	1.09	0.88-1.20	y	52.3	37.5-62.5
PCB-39	1.08	0.88-1.20	y	51.7	37.5-62.5
PCB-38	1.10	0.88-1.20	y	52.4	37.5-62.5
PCB-35	1.11	0.88-1.20	y	52.7	37.5-62.5
PCB-37	1.09	0.88-1.20	y	51.2	37.5-62.5
PCB-54	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-50	0.77	0.65-0.89	y	51.4	37.5-62.5
PCB-53	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-51	0.78	0.65-0.89	y	53.2	37.5-62.5
PCB-45	0.78	0.65-0.89	y	52.8	37.5-62.5
PCB-46	0.76	0.65-0.89	y	50.1	37.5-62.5
PCB-52/69	0.77	0.65-0.89	y	105.4	75.0-125
PCB-73	0.77	0.65-0.89	y	52.2	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	101.6	75.0-125
PCB-47	0.76	0.65-0.89	y	53.7	37.5-62.5
PCB-48/75	0.77	0.65-0.89	y	99.8	75.0-125
PCB-65	0.77	0.65-0.89	y	49.4	37.5-62.5
PCB-62	0.77	0.65-0.89	y	53.4	37.5-62.5
PCB-44	0.78	0.65-0.89	y	51.3	37.5-62.5
PCB-42/59	0.77	0.65-0.89	y	103.4	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	205.8	150-250
PCB-68	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-40	0.77	0.65-0.89	y	50.7	37.5-62.5
PCB-57	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-67	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-58	0.78	0.65-0.89	y	49.3	37.5-62.5
PCB-63	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-74	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	101.8	75.0-125
PCB-76/66	0.77	0.65-0.89	y	103.1	75.0-125
PCB-80	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-55	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-56/60	0.77	0.65-0.89	y	100.3	75.0-125
PCB-79	0.78	0.65-0.89	y	51.2	37.5-62.5
PCB-78	0.78	0.65-0.89	y	51.1	37.5-62.5
PCB-81	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-77	0.79	0.65-0.89	y	52.0	37.5-62.5
PCB-104	1.61	1.32-1.78	y	50.4	37.5-62.5
PCB-96	1.59	1.32-1.78	y	50.5	37.5-62.5
PCB-103	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-100	1.61	1.32-1.78	y	50.5	37.5-62.5
PCB-94	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-95/98/102	1.60	1.32-1.78	y	160.1	112.5-225
PCB-93	1.63	1.32-1.78	y	42.1	37.5-62.5
PCB-88/91	1.59	1.32-1.78	y	114.0	75.0-125
PCB-121	1.59	1.32-1.78	y	43.7	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.59	1.32-1.78	y	103.4	75.0-125	PCB-140	1.28	1.05-1.43	y	54.6	37.5-62.5
PCB-89	1.61	1.32-1.78	y	53.1	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	102.9	75.0-125
PCB-90/101	1.60	1.32-1.78	y	102.1	75.0-125	PCB-133/142	1.23	1.05-1.43	y	102.0	75.0-125
PCB-113	1.58	1.32-1.78	y	56.1	37.5-62.5	PCB-131	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-99	1.64	1.32-1.78	y	46.1	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	100.9	75.0-125
PCB-119	1.61	1.32-1.78	y	50.3	37.5-62.5	PCB-132/161	1.22	1.05-1.43	y	102.0	75.0-125
PCB-108/112	1.63	1.32-1.78	y	103.0	75.0-125	PCB-153	1.22	1.05-1.43	y	50.2	37.5-62.5
PCB-83	1.62	1.32-1.78	y	52.1	37.5-62.5	PCB-168	1.21	1.05-1.43	y	50.2	37.5-62.5
PCB-97	1.60	1.32-1.78	y	52.6	37.5-62.5	PCB-141	1.21	1.05-1.43	y	50.4	37.5-62.5
PCB-86	1.58	1.32-1.78	y	48.0	37.5-62.5	PCB-137	1.24	1.05-1.43	y	48.3	37.5-62.5
PCB-87/117/125	1.60	1.32-1.78	y	154.2	112.5-225	PCB-130	1.26	1.05-1.43	y	54.3	37.5-62.5
PCB-111/115	1.68	1.32-1.78	y	102.0	75.0-125	PCB-138/163/164	1.23	1.05-1.43	y	154.4	112.5-225
PCB-85/116	1.48	1.32-1.78	y	101.9	75.0-125	PCB-158/160	1.23	1.05-1.43	y	104.2	75.0-125
PCB-120	1.57	1.32-1.78	y	49.2	37.5-62.5	PCB-129	1.25	1.05-1.43	y	50.6	37.5-62.5
PCB-110	1.61	1.32-1.78	y	51.1	37.5-62.5	PCB-166	1.22	1.05-1.43	y	51.1	37.5-62.5
PCB-82	1.59	1.32-1.78	y	49.3	37.5-62.5	PCB-159	1.23	1.05-1.43	y	52.7	37.5-62.5
PCB-124	1.60	1.32-1.78	y	49.9	37.5-62.5	PCB-128/162	1.22	1.05-1.43	y	104.6	75.0-125
PCB-107/109	1.59	1.32-1.78	y	101.7	75.0-125	PCB-167	1.21	1.05-1.43	y	51.6	37.5-62.5
PCB-123	1.59	1.32-1.78	y	52.4	37.5-62.5	PCB-156	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	104.7	75.0-125	PCB-157	1.22	1.05-1.43	y	51.2	37.5-62.5
PCB-114	1.64	1.32-1.78	y	50.7	37.5-62.5	PCB-169	1.22	1.05-1.43	y	49.9	37.5-62.5
PCB-122	1.64	1.32-1.78	y	51.0	37.5-62.5	PCB-188	1.02	0.89-1.21	y	50.8	37.5-62.5
PCB-105	1.62	1.32-1.78	y	51.4	37.5-62.5	PCB-184	1.04	0.89-1.21	y	51.3	37.5-62.5
PCB-127	1.64	1.32-1.78	y	51.1	37.5-62.5	PCB-179	1.04	0.89-1.21	y	50.2	37.5-62.5
PCB-126	1.62	1.32-1.78	y	51.1	37.5-62.5	PCB-176	1.04	0.89-1.21	y	50.5	37.5-62.5
PCB-155	1.27	1.05-1.43	y	52.7	37.5-62.5	PCB-186	1.04	0.89-1.21	y	51.2	37.5-62.5
PCB-150	1.28	1.05-1.43	y	51.9	37.5-62.5	PCB-178	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-152	1.27	1.05-1.43	y	51.1	37.5-62.5	PCB-175	1.04	0.89-1.21	y	52.7	37.5-62.5
PCB-145	1.26	1.05-1.43	y	50.6	37.5-62.5	PCB-182/187	1.04	0.89-1.21	y	104.2	75.0-125
PCB-136	1.27	1.05-1.43	y	52.1	37.5-62.5	PCB-183	1.04	0.89-1.21	y	50.9	37.5-62.5
PCB-148	1.30	1.05-1.43	y	51.3	37.5-62.5	PCB-185	1.04	0.89-1.21	y	50.3	37.5-62.5
PCB-154	1.25	1.05-1.43	y	52.4	37.5-62.5	PCB-174	1.03	0.89-1.21	y	49.1	37.5-62.5
PCB-151	1.30	1.05-1.43	y	52.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	52.4	37.5-62.5
PCB-135	1.28	1.05-1.43	y	51.8	37.5-62.5	PCB-177	1.05	0.89-1.21	y	51.2	37.5-62.5
PCB-144	1.36	1.05-1.43	y	55.0	37.5-62.5	PCB-171	1.04	0.89-1.21	y	49.7	37.5-62.5
PCB-147	1.18	1.05-1.43	y	52.9	37.5-62.5	PCB-173	1.05	0.89-1.21	y	49.7	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	107.6	75.0-125	PCB-172	1.02	0.89-1.21	y	49.8	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	50.5	37.5-62.5
PCB-180	1.04	0.89-1.21	y	49.1	37.5-62.5
PCB-193	1.05	0.89-1.21	y	50.4	37.5-62.5
PCB-191	1.06	0.89-1.21	y	50.0	37.5-62.5
PCB-170	1.03	0.89-1.21	y	49.6	37.5-62.5
PCB-190	1.02	0.89-1.21	y	50.5	37.5-62.5
PCB-189	1.04	0.89-1.21	y	51.7	37.5-62.5
PCB-202	0.91	0.76-1.02	y	50.0	37.5-62.5
PCB-201	0.93	0.76-1.02	y	50.4	37.5-62.5
PCB-204	0.88	0.76-1.02	y	52.0	37.5-62.5
PCB-197	0.91	0.76-1.02	y	52.0	37.5-62.5
PCB-200	0.91	0.76-1.02	y	52.4	37.5-62.5
PCB-198	0.90	0.76-1.02	y	51.5	37.5-62.5
PCB-199	0.89	0.76-1.02	y	52.5	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	104.9	75.0-125
PCB-195	0.90	0.76-1.02	y	51.9	37.5-62.5
PCB-194	0.90	0.76-1.02	y	49.9	37.5-62.5
PCB-205	0.91	0.76-1.02	y	49.6	37.5-62.5
PCB-208	1.33	1.14-1.54	y	49.5	37.5-62.5
PCB-207	1.32	1.14-1.54	y	50.8	37.5-62.5
PCB-206	1.33	1.14-1.54	y	49.7	37.5-62.5
PCB-209	1.19	0.99-1.33	y	52.5	37.5-62.5

Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	7.79e+07	2.96 y	1.25	16:15	1.001	0.996	1.006	52.3077
PCB-2	7.75e+07	2.98 y	1.18	18:36	0.988	0.983	0.993	52.2846
PCB-3	7.90e+07	2.98 y	1.22	18:50	1.001	0.996	1.006	51.6788
PCB-4/10	2.37e+08	1.64 y	1.55	20:12	1.003	0.998	1.008	206.748
PCB-7/9	2.89e+08	1.64 y	1.27	21:57	0.869	0.865	0.873	204.628
PCB-6	1.40e+08	1.64 y	1.26	22:36	0.894	0.890	0.899	99.9095
PCB-5/8	2.84e+08	1.64 y	1.23	23:01	0.911	0.906	0.916	206.862
PCB-14	1.57e+08	1.65 y	1.23	24:06	0.954	0.949	0.959	102.294
PCB-11	1.47e+08	1.66 y	1.16	25:17	1.000	0.996	1.006	101.627
PCB-12/13	2.82e+08	1.63 y	1.10	25:41	1.016	1.010	1.020	205.694
PCB-15	1.52e+08	1.66 y	1.21	26:00	1.029	1.024	1.034	101.148
PCB-19	4.60e+07	1.05 y	1.30	24:17	1.001	0.996	1.006	49.3886
PCB-30	6.73e+07	1.06 y	1.83	25:10	1.037	1.032	1.042	51.1589
PCB-18	4.72e+07	1.05 y	0.86	25:55	0.954	0.949	0.959	50.4475
PCB-17	5.00e+07	1.05 y	0.90	26:05	0.960	0.955	0.965	50.9703
PCB-24/27	1.33e+08	1.06 y	1.18	26:40	0.981	0.976	0.986	103.472
- PCB-16/32	1.13e+08	1.05 y	1.03	27:10	1.000	0.995	1.005	100.505
- PCB-34	7.74e+07	1.08 y	1.26	27:58	0.961	0.956	0.966	57.3995
PCB-23	6.51e+07	1.11 y	1.31	28:04	0.964	0.959	0.969	46.4036
PCB-29	7.26e+07	1.09 y	1.33	28:18	0.972	0.967	0.977	51.0903
PCB-26	7.01e+07	1.08 y	1.29	28:30	0.979	0.974	0.984	50.7150
PCB-25	7.40e+07	1.09 y	1.34	28:40	0.985	0.980	0.990	51.5314
PCB-31	7.55e+07	1.08 y	1.42	29:02	0.997	0.992	1.002	49.7377
PCB-28	7.73e+07	1.11 y	1.38	29:07	1.000	0.996	1.006	52.4521
PCB-20/21/33	2.14e+08	1.09 y	1.31	29:45	1.022	1.017	1.027	152.731
PCB-22	7.44e+07	1.08 y	1.32	30:11	1.037	1.032	1.042	52.6344
PCB-36	7.16e+07	1.09 y	1.38	30:47	0.933	0.929	0.939	52.3141
PCB-39	7.29e+07	1.08 y	1.42	31:16	0.948	0.943	0.953	51.6606
PCB-38	7.06e+07	1.10 y	1.35	32:02	0.971	0.967	0.976	52.4183
PCB-35	7.21e+07	1.11 y	1.38	32:33	0.987	0.982	0.992	52.6668
PCB-37	7.08e+07	1.09 y	1.39	32:59	1.000	0.996	1.006	51.1869
PCB-54	5.75e+07	0.76 y	1.20	28:01	1.001	0.996	1.006	51.7229
PCB-50	4.61e+07	0.77 y	0.97	29:11	1.042	1.037	1.047	51.4094
PCB-53	4.59e+07	0.78 y	1.19	29:49	0.946	0.941	0.951	50.2276
PCB-51	4.72e+07	0.78 y	1.15	30:10	0.957	0.952	0.962	53.1558
PCB-45	3.92e+07	0.78 y	0.97	30:35	0.971	0.966	0.976	52.7585
PCB-46	3.67e+07	0.76 y	0.95	31:04	0.986	0.982	0.992	50.0611

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.04e+08	0.77 y	1.28	31:33	1.001	0.996	1.006	105.426
PCB-73	5.51e+07	0.77 y	1.37	31:39	1.005	1.000	1.010	52.1810
PCB-43/49	8.70e+07	0.77 y	1.11	31:50	1.010	1.005	1.015	101.562
PCB-47	4.93e+07	0.76 y	1.13	32:02	1.000	0.996	1.006	53.6979
PCB-48/75	1.06e+08	0.77 y	1.30	32:09	1.004	0.999	1.009	99.7567
PCB-65	5.34e+07	0.77 y	1.33	32:25	1.012	1.007	1.017	49.3948
PCB-62	5.60e+07	0.77 y	1.29	32:32	1.016	1.011	1.021	53.4188
PCB-44	3.91e+07	0.78 y	0.94	32:50	1.025	1.020	1.030	51.2578
PCB-42/59	1.02e+08	0.77 y	1.22	33:02	1.032	1.028	1.038	103.394
PCB-41/64/71/72	2.19e+08	0.78 y	1.31	33:38	1.050	1.046	1.056	205.816
PCB-68	6.14e+07	0.78 y	1.49	33:54	1.059	1.054	1.064	50.9457
PCB-40	3.37e+07	0.77 y	0.82	34:06	1.065	1.061	1.071	50.7163
PCB-57	5.90e+07	0.77 y	1.11	34:28	0.970	0.965	0.975	51.7966
PCB-67	5.86e+07	0.77 y	1.07	34:46	0.979	0.974	0.984	53.3170
PCB-58	5.56e+07	0.78 y	1.10	34:53	0.982	0.977	0.987	49.2975
PCB-63	5.91e+07	0.76 y	1.12	35:03	0.987	0.982	0.992	51.7181
PCB-74	6.38e+07	0.77 y	1.20	35:20	0.995	0.990	1.000	51.8367
PCB-61/70	1.12e+08	0.78 y	1.08	35:30	0.999	0.994	1.004	101.842
PCB-76/66	1.20e+08	0.77 y	1.14	35:43	1.005	1.001	1.011	103.088
PCB-80	6.74e+07	0.78 y	1.28	35:56	1.000	0.996	1.006	50.2410
PCB-55	6.01e+07	0.77 y	1.11	36:17	1.010	1.005	1.015	51.5207
PCB-56/60	1.15e+08	0.77 y	1.09	36:46	1.023	1.018	1.028	100.313
PCB-79	6.04e+07	0.78 y	1.12	37:50	1.053	1.048	1.058	51.1728
PCB-78	5.76e+07	0.78 y	1.24	38:32	0.987	0.982	0.992	51.0794
PCB-81	6.41e+07	0.78 y	1.38	39:03	1.000	0.995	1.005	50.9258
PCB-77	6.12e+07	0.79 y	1.21	39:39	1.000	0.995	1.005	51.9669
PCB-104	4.41e+07	1.61 y	1.26	32:41	1.000	0.996	1.006	50.3835
PCB-96	3.84e+07	1.59 y	1.09	33:57	1.039	1.034	1.044	50.4976
PCB-103	3.30e+07	1.58 y	0.93	34:29	1.055	1.050	1.060	50.7622
PCB-100	3.52e+07	1.61 y	1.00	34:49	1.066	1.061	1.071	50.4670
PCB-94	2.91e+07	1.58 y	1.11	35:18	0.985	0.981	0.991	50.7908
PCB-95/98/102	1.01e+08	1.60 y	1.21	35:47	0.999	0.994	1.004	160.143
PCB-93	2.46e+07	1.63 y	1.13	35:56	1.003	0.998	1.008	42.0683
PCB-88/91	6.02e+07	1.59 y	1.02	36:12	1.010	1.006	1.016	114.032
PCB-121	4.31e+07	1.59 y	1.90	36:19	1.014	1.009	1.019	43.6820
PCB-84/92	5.90e+07	1.59 y	1.05	37:08	0.990	0.986	0.996	103.399
PCB-89	2.93e+07	1.61 y	1.02	37:19	0.995	0.991	1.001	53.0820

RL: MONO, TRI - DECA: ——

RL: DI : ——

Integrations by Analyst: DMS Date: 6/23/14

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	6.59e+07	1.60	y	1.19	37:31	1.001	0.996	1.006	102.056
	PCB-113	4.11e+07	1.58	y	1.35	37:45	1.007	1.002	1.012	56.0520
	PCB-99	3.22e+07	1.64	y	1.29	37:51	1.010	1.005	1.015	46.1415
	PCB-119	4.21e+07	1.61	y	1.72	38:18	0.987	0.982	0.992	50.2990
	PCB-108/112	6.45e+07	1.63	y	1.29	38:27	0.991	0.986	0.996	102.978
	PCB-83	3.85e+07	1.62	y	1.52	38:38	0.996	0.991	1.001	52.0737
	PCB-97	3.19e+07	1.60	y	1.25	38:49	1.000	0.996	1.006	52.5654
	PCB-86	2.39e+07	1.58	y	1.02	38:58	1.004	1.000	1.010	48.0340
	B-87/117/125	1.17e+08	1.60	y	1.56	39:05	1.007	1.002	1.012	154.194
	PCB-111/115	8.69e+07	1.68	y	1.75	39:15	1.012	1.007	1.017	101.981
	PCB-85/116	6.45e+07	1.48	y	1.30	39:23	1.015	1.010	1.020	101.910
	PCB-120	4.26e+07	1.57	y	1.78	39:37	1.021	1.016	1.026	49.1740
	PCB-110	4.18e+07	1.61	y	1.68	39:46	1.025	1.020	1.030	51.1450
	PCB-82	2.58e+07	1.59	y	0.74	40:23	0.976	0.972	0.982	49.2945
	PCB-124	4.68e+07	1.60	y	1.32	41:03	0.993	0.988	0.998	49.9220
	PCB-107/109	8.79e+07	1.59	y	1.22	41:12	0.996	0.991	1.001	101.669
	PCB-123	4.52e+07	1.59	y	1.22	41:22	1.000	0.995	1.005	52.4448
-	PCB-106/118	9.37e+07	1.62	y	1.22	41:35	1.001	0.996	1.006	104.679
-	PCB-114	5.41e+07	1.64	y	1.36	42:13	1.000	0.995	1.005	50.6622
	PCB-122	4.97e+07	1.64	y	1.24	42:21	1.004	0.999	1.009	50.9693
	PCB-105	5.28e+07	1.62	y	1.28	43:05	1.001	0.995	1.005	51.3611
	PCB-127	5.04e+07	1.64	y	1.14	43:24	1.000	0.995	1.005	51.1125
	PCB-126	4.91e+07	1.62	y	1.28	45:19	1.001	0.995	1.005	51.0683
	PCB-155	3.50e+07	1.27	y	1.14	37:04	1.001	0.966	1.006	52.6727
	PCB-150	3.23e+07	1.28	y	1.06	38:20	1.035	1.030	1.040	51.8920
	PCB-152	3.28e+07	1.27	y	1.10	38:49	1.048	1.043	1.053	51.0615
	PCB-145	3.24e+07	1.26	y	1.09	39:15	1.060	1.055	1.065	50.6281
	PCB-136	3.31e+07	1.27	y	1.08	39:35	1.069	1.064	1.074	52.0720
	PCB-148	2.22e+07	1.30	y	0.74	39:40	1.071	1.066	1.076	51.2670
	PCB-154	2.71e+07	1.25	y	0.88	40:10	1.084	1.079	1.089	52.4052
	PCB-151	2.51e+07	1.30	y	0.81	40:48	1.102	1.097	1.107	52.9183
	PCB-135	2.36e+07	1.28	y	0.78	41:01	1.107	1.101	1.113	51.8361
	PCB-144	2.64e+07	1.36	y	0.82	41:08	1.110	1.105	1.116	54.9912
	PCB-147	2.56e+07	1.18	y	0.83	41:16	1.114	1.011	1.120	52.8823
	PCB-139/149	5.32e+07	1.27	y	0.84	41:31	1.121	1.115	1.127	107.613
-	PCB-140	2.51e+07	1.28	y	0.79	41:43	1.126	1.120	1.132	54.6052
-	PCB-134/143	7.01e+07	1.24	y	0.93	42:08	0.975	0.970	0.980	102.949

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	7.08e+07	1.23	y	0.95	42:26	0.982	0.977	0.987	102.037
PCB-131	3.32e+07	1.22	y	0.91	42:36	0.986	0.981	0.991	49.4221
PCB-146/165	8.56e+07	1.24	y	1.16	42:48	0.991	0.986	0.996	100.884
PCB-132/161	8.34e+07	1.22	y	1.11	43:03	0.996	0.992	1.002	102.031
PCB-153	4.34e+07	1.22	y	1.18	43:14	1.001	0.995	1.005	50.1872
PCB-168	5.04e+07	1.21	y	1.37	43:27	1.006	1.000	1.010	50.1556
PCB-141	3.48e+07	1.21	y	0.97	43:58	1.001	0.996	1.005	50.4291
PCB-137	3.66e+07	1.24	y	1.07	44:21	1.009	1.004	1.014	48.2814
PCB-130	3.25e+07	1.26	y	0.85	44:27	1.012	1.007	1.017	54.2556
PCB-138/163/164	1.29e+08	1.23	y	1.23	44:50	1.001	0.996	1.006	154.435
PCB-158/160	9.17e+07	1.23	y	1.29	45:05	1.007	1.001	1.011	104.238
PCB-129	3.19e+07	1.25	y	0.92	45:19	1.012	1.007	1.017	50.5660
PCB-166	4.45e+07	1.22	y	1.12	45:46	0.993	0.988	0.998	51.1070
PCB-159	4.79e+07	1.23	y	1.16	46:05	1.000	0.995	1.005	52.6640
PCB-128/162	8.32e+07	1.22	y	1.02	46:22	1.006	1.002	1.012	104.591
PCB-167	4.69e+07	1.21	y	1.06	46:47	1.001	0.995	1.005	51.5594
PCB-156	4.73e+07	1.22	y	1.18	48:04	1.000	0.995	1.005	49.4312
PCB-157	4.74e+07	1.22	y	1.08	48:20	1.000	0.995	1.005	51.2216
PCB-169	4.38e+07	1.22	y	1.11	50:24	1.000	0.995	1.005	49.8867
PCB-188	4.41e+07	1.02	y	1.40	42:52	1.000	0.995	1.005	50.7803
PCB-184	3.92e+07	1.04	y	1.24	43:18	1.011	1.006	1.016	51.2869
PCB-179	4.05e+07	1.04	y	1.30	44:06	1.029	1.024	1.034	50.2126
PCB-176	4.26e+07	1.04	y	1.36	44:34	1.040	1.035	1.045	50.5434
PCB-186	4.04e+07	1.04	y	1.28	45:10	1.054	1.049	1.059	51.1676
PCB-178	2.94e+07	1.04	y	0.94	45:39	1.066	1.061	1.071	50.8281
PCB-175	3.16e+07	1.04	y	0.97	46:00	1.074	1.069	1.079	52.7165
PCB-182/187	6.54e+07	1.04	y	1.01	46:11	1.078	1.073	1.083	104.234
PCB-183	3.41e+07	1.04	y	1.08	46:29	1.085	1.080	1.090	50.9232
PCB-185	3.03e+07	1.04	y	1.34	47:09	0.956	0.951	0.961	50.2993
PCB-174	2.95e+07	1.03	y	1.34	47:31	0.963	0.958	0.968	49.0649
PCB-181	3.20e+07	1.06	y	1.36	47:37	0.966	0.961	0.971	52.3684
PCB-177	2.85e+07	1.05	y	1.24	47:48	0.969	0.964	0.974	51.2147
PCB-171	2.93e+07	1.04	y	1.31	48:05	0.975	0.970	0.980	49.7433
PCB-173	2.59e+07	1.05	y	1.16	48:31	0.984	0.979	0.989	49.7232
PCB-172	2.73e+07	1.02	y	1.22	48:57	0.993	0.988	0.998	49.7746
PCB-192	3.46e+07	1.05	y	1.53	49:09	0.996	0.991	1.001	50.4921
PCB-180	3.15e+07	1.04	y	1.43	49:20	1.000	0.995	1.005	49.0865

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4
Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.74e+07	1.05	y	1.65	49:32	1.004	0.999	1.009	50.3769
	PCB-191	3.75e+07	1.06	y	1.67	49:47	1.009	1.004	1.014	49.9945
	PCB-170	2.66e+07	1.03	y	1.50	50:46	1.000	0.995	1.005	49.6074
	PCB-190	3.64e+07	1.02	y	2.02	50:55	1.003	0.998	1.008	50.4804
	PCB-189	3.90e+07	1.04	y	1.54	52:12	1.000	0.995	1.005	51.6684
	PCB-202	2.92e+07	0.91	y	1.04	48:17	1.000	0.995	1.005	49.9695
	PCB-201	3.12e+07	0.93	y	1.10	48:46	1.011	1.006	1.016	50.3688
	PCB-204	2.91e+07	0.88	y	0.99	48:56	1.014	1.009	1.019	52.0459
	PCB-197	3.14e+07	0.91	y	1.07	49:13	1.020	1.015	1.025	51.9828
	PCB-200	3.00e+07	0.91	y	1.02	50:03	1.037	1.032	1.044	52.4432
	PCB-198	2.15e+07	0.90	y	0.74	51:20	1.063	1.058	1.068	51.5297
	PCB-199	2.15e+07	0.89	y	0.73	51:25	1.065	1.060	1.070	52.5143
-	PCB-196/203	4.56e+07	0.90	y	0.77	51:41	1.071	1.066	1.076	104.918
-	PCB-195	2.91e+07	0.90	y	1.20	52:49	0.984	0.979	0.989	51.8965
	PCB-194	2.91e+07	0.90	y	1.25	53:41	1.000	0.995	1.005	49.8808
	PCB-205	3.28e+07	0.91	y	1.41	53:58	1.006	1.001	1.011	49.5944
	PCB-208	3.18e+07	1.33	y	0.96	52:57	1.000	0.995	1.005	49.4830
	PCB-207	3.10e+07	1.32	y	0.92	53:16	1.006	1.001	1.011	50.7809
	PCB-206	2.07e+07	1.33	y	1.03	55:21	1.000	0.995	1.005	49.7349
	PCB-209	2.28e+07	1.19	y	1.18	56:38	1.000	0.995	1.005	52.4674

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.34e+08	2.96	y	16:15	1.22	156.271	
Total Di-PCB	1.69e+09	1.64	y	20:12	1.21	1228.91	
Total Tri-PCB	4.56e+08	1.05	y	24:17	1.16	405.942	
Total Tri-PCB	1.17e+09	1.08	y	27:58	1.35	834.371	Sum:1240.31
Total Tetra-PCB	2.26e+09	0.76	y	28:01	1.17	2169.09	
Total Penta-PCB	1.49e+09	1.61	y	32:41	1.21	2099.97	
Total Penta-PCB	2.69e+08	1.64	y	42:13	1.26	267.736	Sum:2367.71
Total Hexa-PCB	3.94e+08	1.27	y	37:04	0.92	736.844	
Total Hexa-PCB	1.17e+09	1.24	y	42:08	1.08	1448.04	Sum:2184.88
Total Hepta-PCB	8.19e+08	1.02	y	42:52	1.27	1225.74	
Total Octa-PCB	2.40e+08	0.91	y	48:17	0.92	465.773	
Total Octa-PCB	9.28e+07	0.90	y	52:49	1.29	154.410	Sum:620.183
Total Nona-PCB	8.35e+07	1.33	y	52:57	0.96	149.999	
Total Deca-PCB	2.28e+07	1.19	y	56:38	1.18	52.4674	

Total PCB Conc:11327.5526340

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.19e+08	3.24 y	0.89	16:14	0.625	0.622	0.628	98.9	98.9
13C-PCB-3	1.25e+08	3.32 y	0.93	18:49	0.725	0.721	0.729	100	100
13C-PCB-4	7.38e+07	1.60 y	0.55	20:09	0.776	0.772	0.780	99.9	99.9
13C-PCB-9	1.11e+08	1.59 y	0.83	21:55	0.844	0.840	0.848	100.0	100.0
13C-PCB-11	1.25e+08	1.58 y	0.94	25:16	0.973	0.968	0.978	98.6	98.6
13C-PCB-19	7.19e+07	1.04 y	0.53	24:16	0.934	0.929	0.939	100	100
13C-PCB-28	1.07e+08	1.05 y	0.89	29:07	1.004	0.999	1.009	96.1	96.1
13C-PCB-32	1.09e+08	1.07 y	0.81	27:10	1.046	1.041	1.051	99.3	99.3
13C-PCB-37	9.94e+07	1.06 y	0.83	32:59	1.137	1.131	1.143	95.3	95.3
13C-PCB-47	8.11e+07	0.81 y	0.74	32:01	0.871	0.867	0.875	98.7	98.7
13C-PCB-52	7.70e+07	0.79 y	0.71	31:30	0.857	0.853	0.861	98.5	98.5
13C-PCB-54	9.29e+07	0.81 y	0.85	28:00	0.762	0.758	0.766	99.0	99.0
13C-PCB-70	1.02e+08	0.79 y	0.94	35:31	0.966	0.961	0.971	98.1	98.1
13C-PCB-77	9.74e+07	0.81 y	0.89	39:38	1.078	1.073	1.083	98.7	98.7
13C-PCB-80	1.05e+08	0.80 y	0.96	35:56	0.977	0.972	0.982	99.0	99.0
13C-PCB-81	9.10e+07	0.80 y	0.84	39:03	1.062	1.057	1.067	98.4	98.4
13C-PCB-95	5.18e+07	1.63 y	0.74	35:49	0.913	0.908	0.918	98.4	98.4
13C-PCB-97	4.86e+07	1.60 y	0.69	38:48	0.989	0.984	0.994	99.7	99.7
13C-PCB-101	5.42e+07	1.60 y	0.79	37:30	0.956	0.951	0.961	97.6	97.6
13C-PCB-104	6.97e+07	1.58 y	1.00	32:40	0.833	0.829	0.837	99.0	99.0
13C-PCB-105	8.01e+07	1.61 y	1.24	43:03	0.929	0.924	0.934	96.7	96.7
13C-PCB-114	7.88e+07	1.61 y	1.21	42:12	0.910	0.905	0.915	97.6	97.6
13C-PCB-118	7.31e+07	1.59 y	0.98	41:32	1.059	1.054	1.064	105	105
13C-PCB-123	7.08e+07	1.58 y	0.95	41:21	1.054	1.049	1.059	105	105
13C-PCB-126	7.48e+07	1.61 y	1.16	45:18	0.977	0.972	0.982	96.2	96.2
13C-PCB-127	8.64e+07	1.59 y	1.34	43:23	0.936	0.931	0.941	96.3	96.3
13C-PCB-138	6.82e+07	1.26 y	1.04	44:48	0.966	0.961	0.971	97.7	97.7
13C-PCB-141	7.08e+07	1.28 y	1.07	43:57	0.948	0.943	0.953	98.8	98.8
13C-PCB-153	7.34e+07	1.25 y	1.11	43:13	0.932	0.927	0.937	98.6	98.6
13C-PCB-155	5.85e+07	1.27 y	0.83	37:02	0.944	0.939	0.949	99.4	99.4
13C-PCB-156	8.09e+07	1.27 y	1.24	48:03	1.037	1.032	1.042	97.2	97.2
13C-PCB-157	8.55e+07	1.28 y	1.31	48:19	1.042	1.037	1.047	97.5	97.5
13C-PCB-159	7.80e+07	1.30 y	1.20	46:05	0.994	0.989	0.999	97.3	97.3
13C-PCB-167	8.57e+07	1.25 y	1.32	46:45	1.009	1.004	1.014	97.0	97.0
13C-PCB-169	7.92e+07	1.27 y	1.22	50:24	1.087	1.082	1.092	97.5	97.5
13C-PCB-170	3.58e+07	0.46 y	0.54	50:45	1.095	1.089	1.101	99.9	99.9
13C-PCB-180	4.49e+07	0.47 y	0.67	49:19	1.064	1.059	1.069	99.6	99.6
13C-PCB-188	6.18e+07	0.46 y	0.94	42:51	0.924	0.919	0.929	98.8	98.8
13C-PCB-189	4.90e+07	0.46 y	0.72	52:11	1.126	1.120	1.132	102	102
13C-PCB-194	4.68e+07	0.91 y	0.81	53:40	0.995	0.990	1.000	99.2	99.2
13C-PCB-202	5.62e+07	0.92 y	0.83	48:16	1.041	1.036	1.046	101	101
13C-PCB-206	4.05e+07	0.78 y	0.66	55:20	1.026	1.021	1.031	106	106
13C-PCB-208	6.67e+07	0.78 y	1.12	52:56	0.981	0.976	0.986	102	102
13C-PCB-209	3.70e+07	1.21 y	0.61	56:37	1.049	1.044	1.054	103	103

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.01	37:49	1.028	1.023	1.033	109	109
13C-PCB-178	4.58e+07	0.46 y	0.63	45:38	0.984	0.979	0.989	109	109

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.20	37:49	0.968	0.963	0.973	110	110
13C-PCB-178	4.58e+07	0.46 y	0.94	45:38	0.925	0.920	0.930	109	109

RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	1.35e+08	1.56 y	1.00	25:58	100
13C-PCB-31	1.25e+08	1.07 y	1.00	29:00	100
13C-PCB-60	1.10e+08	0.80 y	1.00	36:46	100
13C-PCB-111	7.08e+07	1.59 y	1.00	39:14	100
13C-PCB-128	6.69e+07	1.27 y	1.00	46:21	100
13C-PCB-205	5.82e+07	0.91 y	1.00	53:57	100

Analyst: DMS

Date: 6/23/14

Vista Analytical Laboratory - Injection Log Run file: 140620E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
140620E1	1	ST140620E1-1	DMS	20-JUN-14	09:31:44	NA	NA
140620E1	2	ST140620E1-2	DMS	20-JUN-14	10:35:42	NA	NA
140620E1	3	ST140620E1-3	DMS	20-JUN-14	11:39:47	NA	NA
140620E1	4	ST140620E1-4	DMS	20-JUN-14	12:43:46	ST140620E1-4	ST140620E1-8
140620E1	5	ST140620E1-5	DMS	20-JUN-14	13:47:50	NA	NA
140620E1	6	ST140620E1-6	DMS	20-JUN-14	14:51:49	NA	NA
140620E1	8	ST140620E1-7	DMS	20-JUN-14	15:57:15	NA	NA
140620E1	9	B4F0047-BS1	DMS	20-JUN-14	17:01:12	ST140620E1-4	ST140620E1-8
140620E1	10	SOLVENT BLANK	DMS	20-JUN-14	18:05:10	NA	NA
140620E1	11	B4F0047-BLK1	DMS	20-JUN-14	19:09:06	ST140620E1-4	ST140620E1-8
140620E1	12	1400406-01	DMS	20-JUN-14	20:13:09	ST140620E1-4	ST140620E1-8
140620E1	13	1400434-01	DMS	20-JUN-14	21:17:10	ST140620E1-4	NA
140620E1	14	1400434-02	DMS	20-JUN-14	22:21:13	ST140620E1-4	NA
140620E1	15	1400434-03	DMS	20-JUN-14	23:25:09	ST140620E1-4	NA
140620E1	16	SOLVENT BLANK	DMS	21-JUN-14	00:29:07	ST140620E1-4	NA
140620E1	17	ST140620E1-8	DMS	21-JUN-14	01:33:10	ST140620E1-4	ST140620E1-8

March 28, 2015

Vista Project I.D.: 1400958

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the additional results for the sample set received at Vista Analytical Laboratory on December 16, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1400958
Case Narrative

Sample Condition on Receipt:

Two effluent samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report includes additional results: the Method 1613 analyses, originally placed on hold, were authorized for analysis on March 9, 2015.

Analytical Notes:

EPA Method 1613

The samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column.

Holding Times

These samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with each preparation batch. No analytes were detected above the sample quantitation limit in the Method Blanks. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400958-01	BD-MH-11.31-20141215-W	15-Dec-14 09:10	16-Dec-14 08:44	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400958-02	BD-MH-5.16-20141215-W	15-Dec-14 10:30	16-Dec-14 08:44	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L

Vista Project: 1400958

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0037
Date Extracted: 10-Mar-2015 8:22

Lab Sample: B5C0037-BLK1
Date Analyzed : 11-Mar-15 18:55 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	1.40		0.943	
1,2,3,7,8-PeCDD	ND	25.0	1.26		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	2.02		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	2.09		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	2.20		2.02	
1,2,3,4,6,7,8-HpCDD	ND	25.0	4.75		2.98	
OCDD	ND	50.0	2.97		3.57	
2,3,7,8-TCDF	ND	5.00	0.797		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.617		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.699		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	0.550		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	0.612		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.398		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	0.556		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	0.992		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.975		1.75	
OCDF	ND	50.0	3.47		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	65.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	66.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	63.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	62.2	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	62.5	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	57.7	23 - 140	
	13C-OCDD	44.6	17 - 157	
	13C-2,3,7,8-TCDF	70.0	24 - 169	
	13C-1,2,3,7,8-PeCDF	72.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	74.2	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	72.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	68.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	62.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	63.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	62.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	58.3	26 - 138	
	13C-OCDF	47.7	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	106	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	1.40
Total PeCDD	ND	1.26
Total HxCDD	ND	3.11
Total HpCDD	ND	4.75
Total TCDF	ND	0.797
Total PeCDF	ND	1.07
Total HxCDF	ND	0.694
Total HpCDF	ND	1.54

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0067
Date Extracted: 16-Mar-2015 8:30

Lab Sample: B5C0067-BLK1
Date Analyzed : 18-Mar-15 14:03 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	1.73		0.943	
1,2,3,7,8-PeCDD	ND	25.0	1.45		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	2.28		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	2.42		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	2.45		2.02	
1,2,3,4,6,7,8-HpCDD	ND	25.0	5.98		2.98	
OCDD	6.38	50.0			3.57	J
2,3,7,8-TCDF	ND	5.00	1.43		0.984	
1,2,3,7,8-PeCDF	ND	25.0	1.82		2.50	
2,3,4,7,8-PeCDF	ND	25.0	2.00		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	2.10		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	0.863		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	1.13		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	1.68		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	3.37		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	1.91		1.75	
OCDF	ND	50.0	4.52		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	58.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	48.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	48.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	49.0	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	47.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	48.3	23 - 140	
	13C-OCDD	41.2	17 - 157	
	13C-2,3,7,8-TCDF	55.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	60.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	57.9	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	60.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	61.7	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	50.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	49.6	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	53.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	46.2	26 - 138	
	13C-OCDF	44.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	96.9	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00191

TOTALS

Total TCDD	ND	1.73
Total PeCDD	ND	2.36
Total HxCDD	ND	3.80
Total HpCDD	ND	5.98
Total TCDF	ND	1.43
Total PeCDF	ND	3.22
Total HxCDF	ND	2.72
Total HpCDF	ND	3.47

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR **EPA Method 1613B**

Matrix:	Aqueous	QC Batch:	B5C0037	Lab Sample:	B5C0037-BS1
Sample Size:	1.00 L	Date Extracted:	10-Mar-2015 8:22	Date Analyzed:	11-Mar-15 17:17 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
2,3,7,8-TCDD	202	200	101	67 - 158
1,2,3,7,8-PeCDD	981	1000	98.1	70 - 142
1,2,3,4,7,8-HxCDD	1020	1000	102	70 - 164
1,2,3,6,7,8-HxCDD	989	1000	98.9	76 - 134
1,2,3,7,8,9-HxCDD	999	1000	99.9	64 - 162
1,2,3,4,6,7,8-HpCDD	996	1000	99.6	70 - 140
OCDD	1980	2000	98.9	78 - 144
2,3,7,8-TCDF	181	200	90.5	75 - 158
1,2,3,7,8-PeCDF	1060	1000	106	80 - 134
2,3,4,7,8-PeCDF	1060	1000	106	68 - 160
1,2,3,4,7,8-HxCDF	1000	1000	100	72 - 134
1,2,3,6,7,8-HxCDF	995	1000	99.5	84 - 130
2,3,4,6,7,8-HxCDF	998	1000	99.8	70 - 156
1,2,3,7,8,9-HxCDF	1010	1000	101	78 - 130
1,2,3,4,6,7,8-HpCDF	1000	1000	100	82 - 122
1,2,3,4,7,8,9-HpCDF	996	1000	99.6	78 - 138
OCDF	2040	2000	102	63 - 170

	Labeled Standard	%R	LCL-UCL
IS	13C-2,3,7,8-TCDD	69.5	20 - 175
	13C-1,2,3,7,8-PeCDD	69.8	21 - 227
	13C-1,2,3,4,7,8-HxCDD	62.4	21 - 193
	13C-1,2,3,6,7,8-HxCDD	64.3	25 - 163
	13C-1,2,3,7,8,9-HxCDD	62.5	21 - 193
	13C-1,2,3,4,6,7,8-HpCDD	57.0	26 - 166
	13C-OCDD	44.8	13 - 199
	13C-2,3,7,8-TCDF	75.2	22 - 152
	13C-1,2,3,7,8-PeCDF	74.7	21 - 192
	13C-2,3,4,7,8-PeCDF	76.8	13 - 328
	13C-1,2,3,4,7,8-HxCDF	71.9	19 - 202
	13C-1,2,3,6,7,8-HxCDF	69.4	21 - 159
	13C-2,3,4,6,7,8-HxCDF	65.9	22 - 176
	13C-1,2,3,7,8,9-HxCDF	62.3	17 - 205
	13C-1,2,3,4,6,7,8-HpCDF	55.7	21 - 158
	13C-1,2,3,4,7,8,9-HpCDF	56.3	20 - 186
	13C-OCDF	47.3	13 - 199
CRS	37Cl-2,3,7,8-TCDD	117	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR **EPA Method 1613B**

Matrix:	Aqueous	QC Batch:	B5C0067	Lab Sample:	B5C0067-BS1
Sample Size:	1.00 L	Date Extracted:	16-Mar-2015 8:30	Date Analyzed:	18-Mar-15 11:37 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	166	200	83.1	67 - 158	IS	13C-2,3,7,8-TCDD	50.0	20 - 175
1,2,3,7,8-PeCDD	937	1000	93.7	70 - 142		13C-1,2,3,7,8-PeCDD	42.1	21 - 227
1,2,3,4,7,8-HxCDD	887	1000	88.7	70 - 164		13C-1,2,3,4,7,8-HxCDD	34.4	21 - 193
1,2,3,6,7,8-HxCDD	928	1000	92.8	76 - 134		13C-1,2,3,6,7,8-HxCDD	31.9	25 - 163
1,2,3,7,8,9-HxCDD	905	1000	90.5	64 - 162		13C-1,2,3,7,8,9-HxCDD	31.8	21 - 193
1,2,3,4,6,7,8-HpCDD	930	1000	93.0	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	31.9	26 - 166
OCDD	1880	2000	93.9	78 - 144		13C-OCDD	26.0	13 - 199
2,3,7,8-TCDF	165	200	82.6	75 - 158		13C-2,3,7,8-TCDF	47.2	22 - 152
1,2,3,7,8-PeCDF	874	1000	87.4	80 - 134		13C-1,2,3,7,8-PeCDF	54.6	21 - 192
2,3,4,7,8-PeCDF	932	1000	93.2	68 - 160		13C-2,3,4,7,8-PeCDF	52.4	13 - 328
1,2,3,4,7,8-HxCDF	923	1000	92.3	72 - 134		13C-1,2,3,4,7,8-HxCDF	46.3	19 - 202
1,2,3,6,7,8-HxCDF	913	1000	91.3	84 - 130		13C-1,2,3,6,7,8-HxCDF	43.0	21 - 159
2,3,4,6,7,8-HxCDF	894	1000	89.4	70 - 156		13C-2,3,4,6,7,8-HxCDF	39.4	22 - 176
1,2,3,7,8,9-HxCDF	914	1000	91.4	78 - 130		13C-1,2,3,7,8,9-HxCDF	33.3	17 - 205
1,2,3,4,6,7,8-HpCDF	894	1000	89.4	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	29.3	21 - 158
1,2,3,4,7,8,9-HpCDF	876	1000	87.6	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	33.4	20 - 186
OCDF	1900	2000	95.1	63 - 170		13C-OCDF	28.8	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	101	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-MH-11.31-20141215-W

EPA Method 1613B

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 9:10

Sample Data
Matrix: Effluent
Sample Size: 1.00 L

Laboratory Data
Lab Sample: 1400958-01 Date Received: 16-Dec-2014 8:44
QC Batch: B5C0037 Date Extracted: 10-Mar-2015 8:22
Date Analyzed : 12-Mar-15 04:55 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.98	0.938		0.943	
1,2,3,7,8-PeCDD	ND	24.9	1.06		4.51	
1,2,3,4,7,8-HxCDD	ND	24.9	2.18		2.21	
1,2,3,6,7,8-HxCDD	ND	24.9	2.21		1.93	
1,2,3,7,8,9-HxCDD	ND	24.9	2.04		2.02	
1,2,3,4,6,7,8-HpCDD	11.5	24.9			2.98	J
OCDD	88.8	49.8			3.57	
2,3,7,8-TCDF	ND	4.98	0.776		0.984	
1,2,3,7,8-PeCDF	ND	24.9	0.829		2.50	
2,3,4,7,8-PeCDF	ND	24.9	0.506		1.73	
1,2,3,4,7,8-HxCDF	ND	24.9	0.588		1.36	
1,2,3,6,7,8-HxCDF	ND	24.9	0.671		1.56	
2,3,4,6,7,8-HxCDF	ND	24.9	0.760		2.05	
1,2,3,7,8,9-HxCDF	ND	24.9	1.13		1.34	
1,2,3,4,6,7,8-HpCDF	ND	24.9		2.07	1.46	
1,2,3,4,7,8,9-HpCDF	ND	24.9	0.717		1.75	
OCDF	5.49	49.8			2.98	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	71.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	69.7	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	68.3	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	66.8	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	67.3	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	66.4	23 - 140	
	13C-OCDD	54.8	17 - 157	
	13C-2,3,7,8-TCDF	76.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	81.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	82.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	77.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	73.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	67.5	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	66.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	65.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	56.6	26 - 138	
	13C-OCDF	56.5	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	111	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.143

TOTALS

Total TCDD	ND	0.939		
Total PeCDD	ND	1.84		
Total HxCDD	ND	4.32		
Total HpCDD	21.9			
Total TCDF	ND	1.34		
Total PeCDF	ND	0.858		
Total HxCDF	ND		0.900	
Total HpCDF	ND		4.86	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-MH-5.16-20141215-W

EPA Method 1613B

Client Data
Name: Leidos
Project:
Date Collected: 15-Dec-2014 10:30

Sample Data
Matrix: Effluent
Sample Size: 1.01 L

Laboratory Data
Lab Sample: 1400958-02 Date Received: 16-Dec-2014 8:44
QC Batch: B5C0067 Date Extracted: 16-Mar-2015 8:30
Date Analyzed : 20-Mar-15 13:45 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.96	1.66		0.943	
1,2,3,7,8-PeCDD	ND	24.8	1.53		4.51	
1,2,3,4,7,8-HxCDD	ND	24.8	5.11		2.21	
1,2,3,6,7,8-HxCDD	ND	24.8	4.77		1.93	
1,2,3,7,8,9-HxCDD	ND	24.8	5.08		2.02	
1,2,3,4,6,7,8-HpCDD	35.4	24.8			2.98	
OCDD	250	49.6			3.57	B
2,3,7,8-TCDF	ND	4.96	1.24		0.984	
1,2,3,7,8-PeCDF	ND	24.8	1.40		2.50	
2,3,4,7,8-PeCDF	ND	24.8	1.54		1.73	
1,2,3,4,7,8-HxCDF	ND	24.8	1.70		1.36	
1,2,3,6,7,8-HxCDF	ND	24.8	1.98		1.56	
2,3,4,6,7,8-HxCDF	ND	24.8	2.36		2.05	
1,2,3,7,8,9-HxCDF	ND	24.8	3.58		1.34	
1,2,3,4,6,7,8-HpCDF	18.8	24.8			1.46	J
1,2,3,4,7,8,9-HpCDF	ND	24.8	3.47		1.75	
OCDF	56.9	49.6			2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	67.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	69.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	60.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	62.1	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	62.7	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	63.7	23 - 140	
	13C-OCDD	51.4	17 - 157	
	13C-2,3,7,8-TCDF	63.2	24 - 169	
	13C-1,2,3,7,8-PeCDF	82.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	75.6	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	75.8	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	69.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	65.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	63.0	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	63.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	60.8	26 - 138	
	13C-OCDF	55.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	101	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.634

TOTALS

Total TCDD	ND	1.66		
Total PeCDD	ND	2.70		
Total HxCDD	ND		3.94	
Total HpCDD	35.4		61.3	
Total TCDF	ND	1.24		
Total PeCDF	1.74			
Total HxCDF	12.3		14.0	
Total HpCDF	45.4			

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

CHAIN OF CUSTODY

Vista

FOR LABORATORY USE ONLY

Laboratory Project ID: 1400958

Storage ID: WR-8

Storage Secured: Yes ☑ No ☐

Temp: 0.4 °C

TAT: (Check One):

Standard: ● 21 Days

Rush (surcharge may apply):

○ 14 days ○ 7 days Specify:

Project I.D.: _____ P.O.#: _____ Sampler: M. Ivancevich, C. Wilson (Name)

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N. Creek Pkwy, Ste 101 City: Bothell State: WA Zip: 98011 Ph#: (206) 300-2144 Fax#:

Relinquished by: (Signature and Printed Name) Melissa Ivancevich Date: 12/15/14 Time: 1455 Received by: (Signature and Printed Name) Barbara Benedict B. Benedict Date: 12/16/14 Time: 0855

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: Sample Control

Method of Shipment: FedEx

Tracking No.: 806459792404

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29
BD-MH-11.31-20141215-W	12/15/14	0910	BDC	4	A	EF	H									√2		√2				
BD-MH-5.16-20141215-W	12/15/14	1030	BDC	4	A	EF	H									√2		√2				

Special Instructions/Comments: Hold samples for Dioxins/Furans.

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____
Email: nancarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400958 **TAT** Std

Samples Arrival:	**Date/Time** 12/16/14 0844		**Initials:** JBAB		**Location:** WR-2 **Shelf/Rack:** NA		
Logged In:	**Date/Time** 12/16/14 1512		**Initials:** JBAB		**Location:** WR-2 **Shelf/Rack:** C4		
Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other	
Preservation:	(Ice)	Blue Ice	Dry Ice	None			
Temp °C: 0.4 (uncorrected) **Temp °C:** 0.4 (corrected)		**Time:** 0855		**Thermometer ID:** IR-1			

	YES	NO	NA
Adequate Sample Volume Received? A, B, C, D Containers	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill / Trk # 8064 5979 2404	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA	COC	Sample Container	None		
Shipping Container	(Vista)	Client	(Retain)	Return	Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400958

March 30

Prep Expiration: 12/15/2015
Client: Leidos

Workorder ~~Due: 06-Jan-15 00:00~~

TAT: 21

Method: **1613 Full List**
Matrix: **Aqueous**
Client Matrix: Effluent
Also run: **Percent Solids**

Prep Batch: ~~BS~~ BSC0037

Prep Data Entered: M.T 3/11/15
Date and Initials

Initial Sequence: SSC0023

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400958-01 "A"	☒	BD-MH-11.31-20141215-W	16-Dec-14 08:44	WR-2 C-4	
1400958-02 ↓	☒	BD-MH-5.16-20141215-W	16-Dec-14 08:44	WR-2 C-4	

Vista PM:Martha Maier

Vial Box ID: Heat

Sample Reconciled By: B. Smith 3/10/15

Percent Moisture/Percent Solids

D2216-90 BATCH ID B5C0036

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 3/10/15 1229 Date/Time OUT 3/11/15 11:55

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 3/10/15	MJT 3/11/15			BMS 3/10/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	~~1400958-01RE1~~		Sample									
	1400958-02RE1		Sample									
	1400984-01		Sample									
	1400984-02		Sample									
	1400984-03		Sample									
	1500227-01		Sample									
	1500227-02		Sample									
	1500228-01		Sample									
	1500229-01		Sample									
	1500230-01		Sample									
	~~1500234-01~~		~~Sample~~			MJT 3/11/15						
	1500234-01		Sample	1.34	14.52	1.3536			7	NA	NA	0
	1500234-02		Sample	1.34	13.97	1.35			7	L	L	0

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0036

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN:	Date/Time OUT
3/10/15 9:37	3/11/15 11:55

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 3/10/2015	MJT 3/11/15			BMS 3/10/2015			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400958-01RE1		Sample	1.3500	11.7300	1.3700	0.0200	0.19	7	NA	NA	0
	1400958-02RE1		Sample	1.2700	14.0400	1.2700	0.0000	0.00	7	NA	NA	0
	1400984-01		Sample	1.2900	13.0400	1.2900	0.0000	0.00	7	NA	NA	0
	1400984-02		Sample	1.2900	13.0100	1.3000	0.0100	0.09	7	NA	NA	0
	1400984-03		Sample	1.3500	12.5700	1.3400	-0.0100	-0.09	6	NA	NA	0
	1500227-01		Sample	1.2900	11.9900	1.2900	0.0000	0.00	7	NA	NA	0
	1500227-02		Sample	1.3100	17.5000	1.3200	0.0100	0.06	7	NA	NA	0
	1500228-01		Sample	1.2600	11.4200	1.2700	0.0100	0.10	8	NA	NA	0
	1500229-01		Sample	1.2800	12.3200	1.2900	0.0100	0.09	7	NA	NA	0
	1500230-01		Sample	1.3500	14.2600	1.3600	0.0100	0.08	7	NA	NA	0
	1500231-01		Sample	1.3000	15.4700	1.3300	0.0300	0.21	7	NA	NA	0
	1500234-01		Sample	1.3400	14.5200	1.3600	0.0200	0.15	7	NA	NA	0
	1500234-02		Sample	1.3400	13.8700	1.3500	0.0100	0.08	7	NA	NA	0

Matrix: Aqueous

Method: 1613 Full List

Method: 1613 TCDD Only

PREPARATION BENCH SHEET

B5C0037

Chemist: B.Smith

Prep Date/Time: 10-Mar-15 08:22

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
							NA	C5C0046	C5C0046	C5C0047	
☐	B5C0037-BLK1										
☐	~~B5C0037-BS1~~										
☐	1400958-01										
☐	1400958-02										
☐	1400984-01										
☐	1400984-02										
☐	1400984-03										
☐	1500227-01										
☐	1500227-02										
☐	1500228-01										
☐	1500229-01										
☐	1500230-01										
☐	~~1500231-01~~	[redacted]									
☐	1500234-01	1[redacted]	506.06	1.05614	BMS 3/10/15	M.T 3/11/15	NA	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15
☐	1500234-02	1529.[redacted]	506.09	1.02337	↓	↓	↓	↓	↓	↓	↓

IS Name (V7)	NS Name	CRS Name (V8)	RS Name (V4)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: BMS 3/10/15
PCDD/F 14H2704, 10mL	PCDD/F NA	PCDD/F 14H2705, 10mL	PCDD/F 14H2706, 10mL	Start Date/Time 3/10/15 1639	SOLV: Tol	Check In: Chemist/Date: empty ↓
PCB	PCB	PCB	PCB		Other SPE	
PAH	PAH	PAH	PAH	Stop Date/Time 3/11/15	Final Volume(s) 20uL C4	Balance ID: HCMS-4

Comments:

Matrix: Aqueous
Method: 1613 Full List
Method: 1613 TCDD Only

PREPARATION BENCH SHEET

B5C0037

Chemist: B. Smith

Prep Date/Time: 10-Mar-15 08:22

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
							NA	C5C0046	C5C0046	C5C0047	
☐	B5C0037-BLK1	MA	MA	(1.000)	BMS BR 3/10/15	M.T 3/11/15	NA	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15	M.T BR 3/11/15
☐	B5C0037-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	1400958-01	1506.02	502.49	1.00353							
☐	1400958-02	1508.42	502.23	1.00619							
☐	1400984-01	1499.77	499.05	1.00072							
☐	1400984-02	1512.30	504.66	1.00764							
☐	1400984-03	1506.59	506.14	1.00045							
☐	1500227-01	1511.42	504.87	1.00655							
☐	1500227-02	1518.64	504.18	1.01446							
☐	1500228-01	1523.63	502.38	1.02125							
☐	1500229-01	1517.57	499.35	1.01822							
☐	1500230-01	1520.60	504.20	1.0164							
☐	1500231-01	1519.16	502.16	1.017							

IS Name (V7)	NS Name (V12)	CRS Name (V8)	RS Name (V4)	Cycle Time	APP: SEFUN SOX (SDS)
PCDD/F 14H2704, 10µL	PCDD/F 13L1101, 10µL	PCDD/F 14H2705, 10µL	PCDD/F 14H2706, 10µL	Start Date/Time 3/10/15 1639	SOLV: TOL
PCB	PCB	PCB	PCB	Stop Date/Time 3/11/15 0840	Other SPE
PAH	PAH	PAH	PAH	Final Volume(s) 20µL C14	Check Out: Chemist/Date: BMS 3/10/15 I
					Check In: Chemist/Date: empty
					Balance ID: HRMS-4

Comments:

RK

Process Sheet

Workorder: 1400958

Prep Expiration: 12/15/2015
Client: Leidos

March 30
~~Workorder Due: 06-Jan-15 00:00~~

TAT: 21

Method: **1613 Full List**
Matrix: **Aqueous**
Client Matrix: Effluent
Also run: **Percent Solids**

Prep Batch: BSC0067

Prep Data Entered: CM 3/17/15
Date and Initials

Initial Sequence: SSC0044

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
~~1400958-01~~	☐	BD-MH-11.31-20141215-W	16-Dec-14 08:44	WR-2 C-4	
1400958-02 "C"	☒	BD-MH-5.16-20141215-W	16-Dec-14 08:44	WR-2 C-4	

100 extn rec.

Vista PM:Martha Maier

Vial Box ID: LATE

Sample Reconciled By: B. Smith 3/16/15

Page 1 of 2

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0066

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 3/16/15 9:45 Date/Time OUT 3/17/15 11:40

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	KB 3/16/15	MJT 3/17/15			BMS 3/16/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400958-02RE2		Sample	1.29	13.29	1.20			7	NA	NA	0
	1500235-01		Sample	1.29	11.11	MJT 3/17/15 ~~1.66~~ 1.29			7			
	1500237-11		Sample	1.26	13.93	J ~~1.37~~ 1.66			7			
	1500237-12		Sample	1.34	14.86	1.37			7			
	1500237-13		Sample	1.28	15.61	1.36			7			
	1500237-14		Sample	1.28	13.91	1.61			7			
	1500244-01		Sample	1.29	13.08	1.29			7			
	1500245-02		Sample	1.26	15.34	1.27			7			

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0066

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN:	Date/Time OUT
3/16/15 9:45	3/17/15 11:40

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	KB 3/16/2015	MJT 3/17/2015			BMS 3/16/2015			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400958-02RE2		Sample	1.2900	13.2900	1.3000	0.0100	0.08	7	NA	NA	0
	1500235-01		Sample	1.2900	11.1100	1.2900	0.0000	0.00	7	NA	NA	0
	1500237-11		Sample	1.2600	13.9300	1.6600	0.4000	3.16	7	NA	NA	0
	1500237-12		Sample	1.3400	14.8600	1.3700	0.0300	0.22	7	NA	NA	0
	1500237-13		Sample	1.2800	15.6100	1.3600	0.0800	0.56	7	NA	NA	0
	1500237-14		Sample	1.2800	13.9100	1.6100	0.3300	2.61	7	NA	NA	0
	1500244-01		Sample	1.2900	13.0800	1.2900	0.0000	0.00	7	NA	NA	0
	1500245-02		Sample	1.2600	15.3400	1.2700	0.0100	0.07	7	NA	NA	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1613 Full List
Method: 1613 TCDD Only
Method: 8290 Full List

B5C0067

Chemist: B. Smith

Prep Date/Time: 16-Mar-15 08:30

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE (NA)	ABSG CHEM/ DATE (C5C0073)	AA CHEM/ DATE (C5C0078)	Florisil CHEM/ DATE (C5C0074)	RS CHEM/WIT DATE
☐	B5C0067-BLK1	MA	MA	(1.000)	BMS KB 3/16/15	M.T 3/17/15	NA	M.T 3/17/15	M.T 3/17/15	M.T 3/17/15	M.T VG 3/17/15
☐	B5C0067-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	1400958-02RE1	1509.65	501.58	1.00807							
☐	1500235-01	1273.41	388.73	0.88468							
(A) ☐	1500237-11										
☐	1500237-12	1239.56	420.34	0.81922	BMS KB 3/16/15						M.T VG 3/17/15
(A) ☐	1500237-13										
(A) ☐	1500237-14										
☐	1500244-01	1518.49	502.11	1.01638	BMS KB 3/16/15						M.T VG 3/17/15
☐	1500245-02	1499.02	499.82	0.9992	↓	↓	↓	↓	↓	↓	↓

(A) Samples appear to have greater than 1% solid. Will HPF BMS 3/16/15

IS Name (V7)	NS Name (V7)	CRS Name (V7)	RS Name (V7)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date:
PCDD/F 14H2704, 10µL	PCDD/F 13L1104, 10µL	PCDD/F 14H2705, 10mL	PCDD/F 14H2706, 10mL	Start Date/Time 3/16/15 1625	SOLV: Tol	BMS 3/16/15
PCB	PCB	PCB	PCB		Other SPE	Check In: Chemist/Date: empty
PAH	PAH	PAH	PAH	Stop Date/Time 3/17/15 0825	Final Volume(s) 20µL C4	Balance ID: MEMS-4

Comments:

SAMPLE DATA

EPA Method 1613

Client ID: Method Blank Filename: 150311D1 S:11 Acq:11-MAR-15 18:55:07 ConCal: ST150311D1-1
Lab ID: B5C0037-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotFnd	*	*		627	2.5	1.40
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotFnd	*	*		697	2.5	1.26
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotFnd	*	*		640	2.5	2.02
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotFnd	*	*		640	2.5	2.09
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotFnd	*	*		640	2.5	2.20
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.10	NotFnd	*	*		1360	2.5	4.75
	OCDD	*	*	n	0.95	NotFnd	*	*		601	2.5	2.97
	2,3,7,8-TCDF	*	*	n	1.07	NotFnd	*	*		515	2.5	0.797
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotFnd	*	*		407	2.5	0.617
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotFnd	*	*		407	2.5	0.699
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotFnd	*	*		549	2.5	0.550
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotFnd	*	*		549	2.5	0.612
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotFnd	*	*		306	2.5	0.398
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotFnd	*	*		306	2.5	0.556
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.61	NotFnd	*	*		567	2.5	0.992
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotFnd	*	*		567	2.5	0.975
	OCDF	*	*	n	1.10	NotFnd	*	*		985	2.5	3.47

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		627	1.40
Total Penta-Dioxins	*	*		697	1.26
Total Hexa-Dioxins	*	*		946	3.11
Total Hepta-Dioxins	*	*		1360	4.75
Total Tetra-Furans	*	*		515	0.797
Total Penta-Furans	0.0000	0.0000		665	1.07
Total Hexa-Furans	*	*		549	0.694
Total Hepta-Furans	*	*		888	1.54

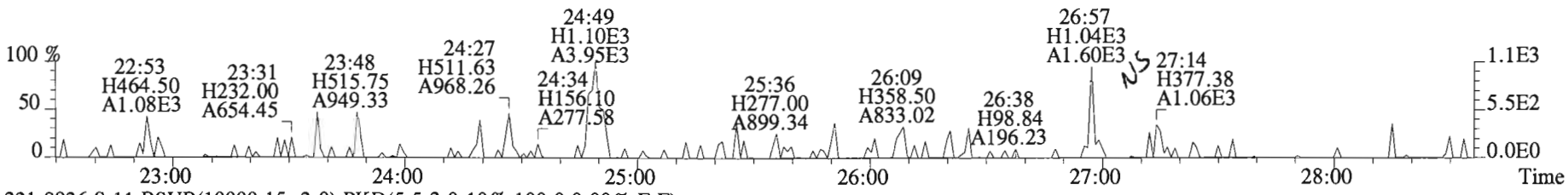
									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.33e+07	0.76	y	1.06	26:57	1.022	1308.2	65.4	
IS	13C-1,2,3,7,8-PeCDD	1.49e+07	0.63	y	1.18	31:38	1.200	1326.0	66.3	
IS	13C-1,2,3,4,7,8-HxCDD	1.11e+07	1.25	y	0.72	34:58	1.014	1274.0	63.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.11e+07	1.23	y	0.74	35:04	1.017	1243.9	62.2	
IS	13C-1,2,3,7,8,9-HxCDD	1.30e+07	1.29	y	0.85	35:22	1.025	1249.4	62.5	
IS	13C-1,2,3,4,6,7,8-HpCDD	9.15e+06	1.07	y	0.65	38:53	1.127	1153.2	57.7	
IS	13C-OCDD	1.66e+07	0.90	y	0.76	42:09	1.222	1784.1	44.6	
IS	13C-2,3,7,8-TCDF	2.17e+07	0.77	y	0.92	26:08	0.991	1399.2	70.0	
IS	13C-1,2,3,7,8-PeCDF	2.27e+07	1.59	y	0.92	30:25	1.154	1458.5	72.9	
IS	13C-2,3,4,7,8-PeCDF	2.34e+07	1.61	y	0.93	31:20	1.189	1483.6	74.2	
IS	13C-1,2,3,4,7,8-HxCDF	1.73e+07	0.51	y	0.98	34:04	0.988	1451.0	72.6	
IS	13C-1,2,3,6,7,8-HxCDF	1.81e+07	0.53	y	1.08	34:12	0.992	1378.6	68.9	
IS	13C-2,3,4,6,7,8-HxCDF	1.57e+07	0.51	y	1.03	34:47	1.009	1256.5	62.8	
IS	13C-1,2,3,7,8,9-HxCDF	1.33e+07	0.53	y	0.86	35:44	1.036	1269.4	63.5	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.09e+07	0.44	y	0.72	37:34	1.089	1239.9	62.0	
IS	13C-1,2,3,4,7,8,9-HpCDF	9.87e+06	0.46	y	0.70	39:25	1.143	1165.5	58.3	
IS	13C-OCDF	1.97e+07	0.89	y	0.85	42:22	1.229	1908.1	47.7	
C/Up	37Cl-2,3,7,8-TCDD	9.07e+06			1.12	26:58	1.023	848.55	106	
RS/RT	13C-1,2,3,4-TCDD	1.91e+07	0.81	y	1.00	26:22	*	2000.0		
RS	13C-1,2,3,4-TCDF	3.39e+07	0.76	y	1.00	24:50	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.43e+07	0.52	y	1.00	34:29	*	2000.0		

Integrations by Analyst: MJ Date: 3/12/15

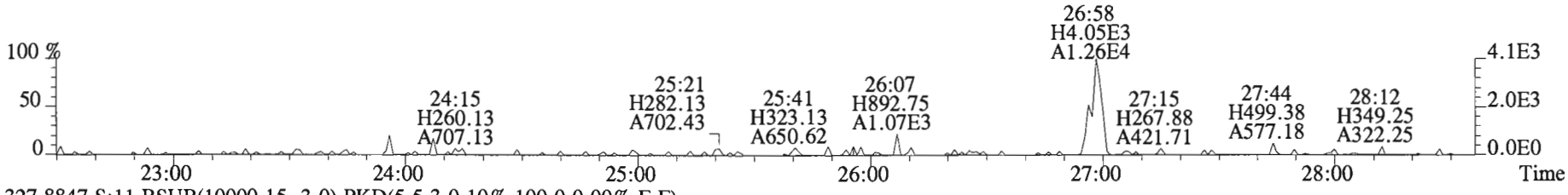
Reviewed by Analyst: [illegible] Date: 3/18/15

File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5

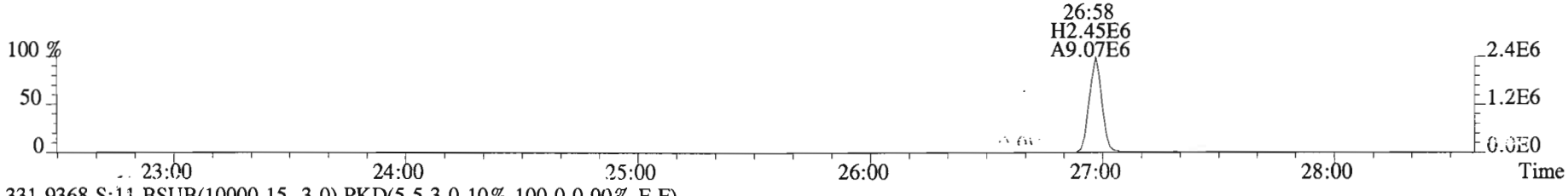
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



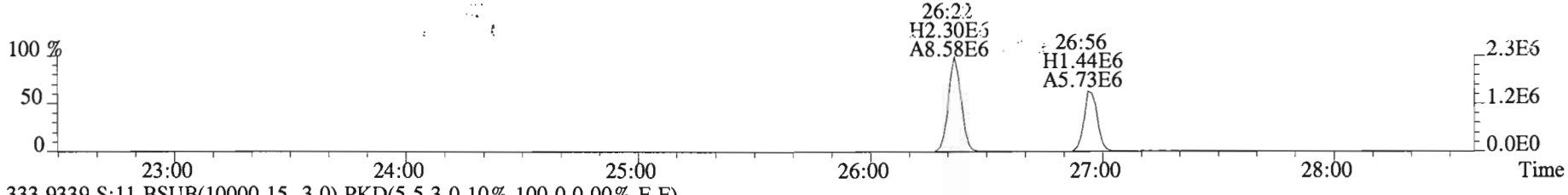
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



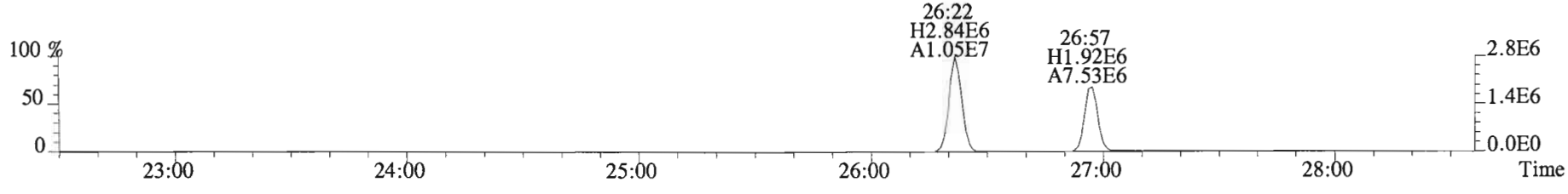
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



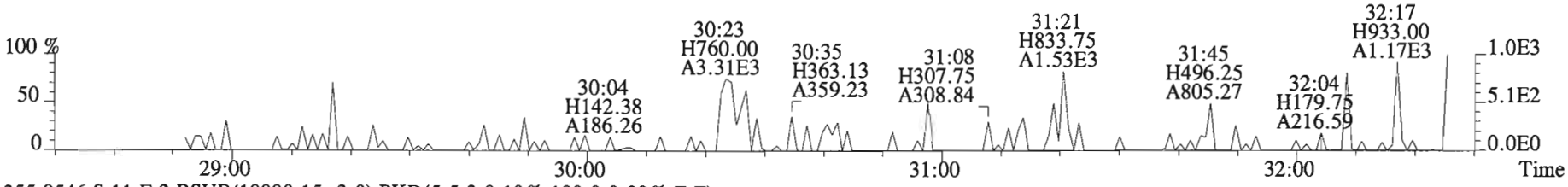
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



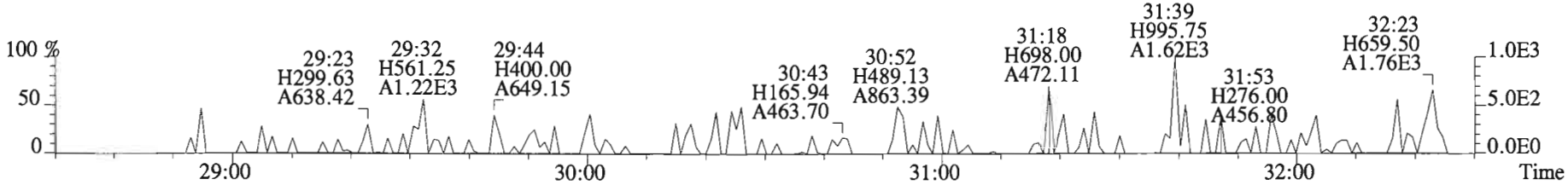
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



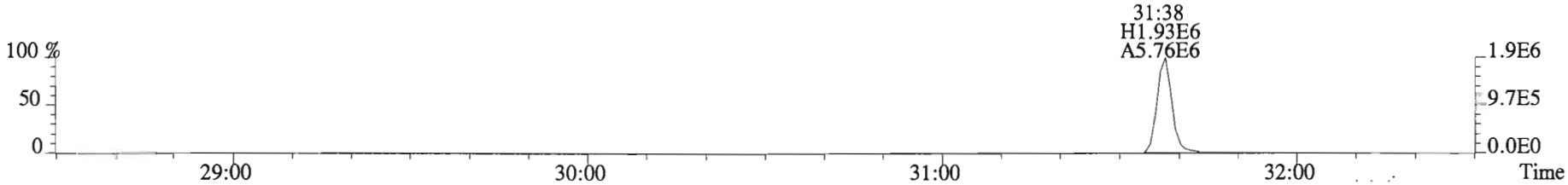
File:150311D1 #1-251 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



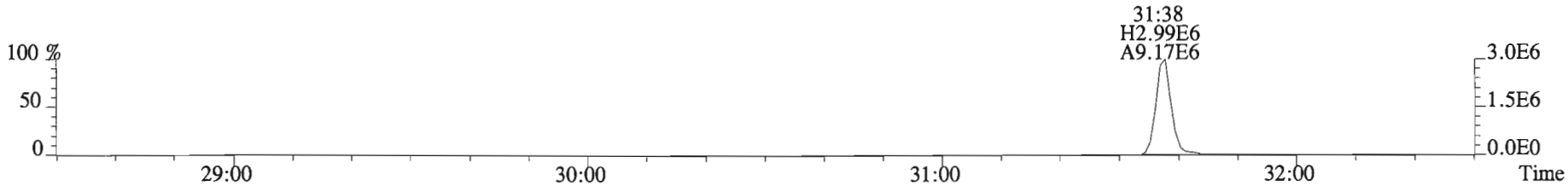
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



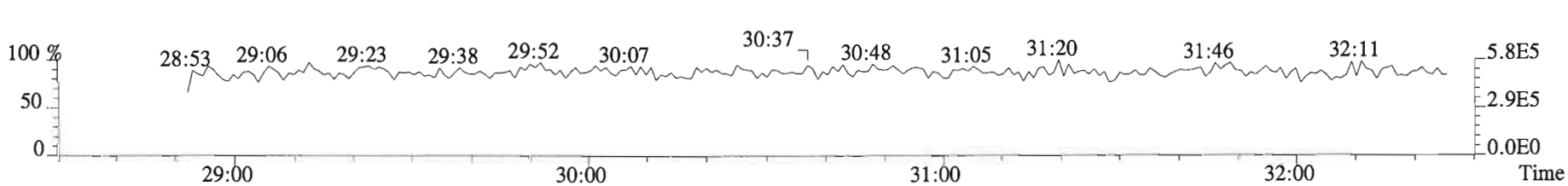
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



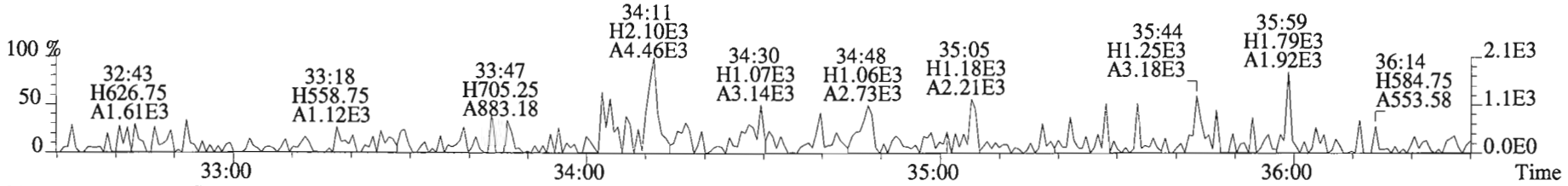
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



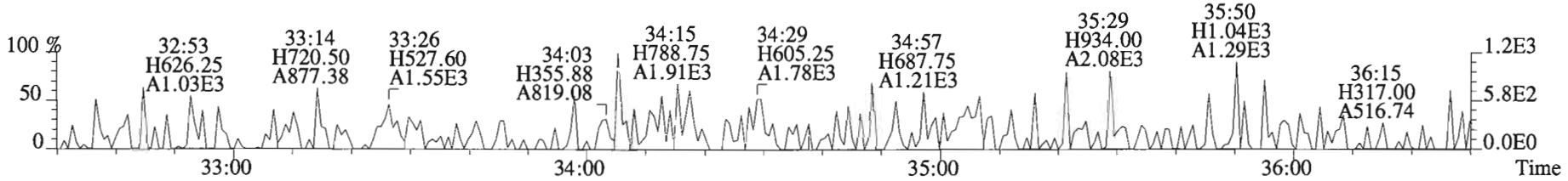
366.9792 S:11 F:2



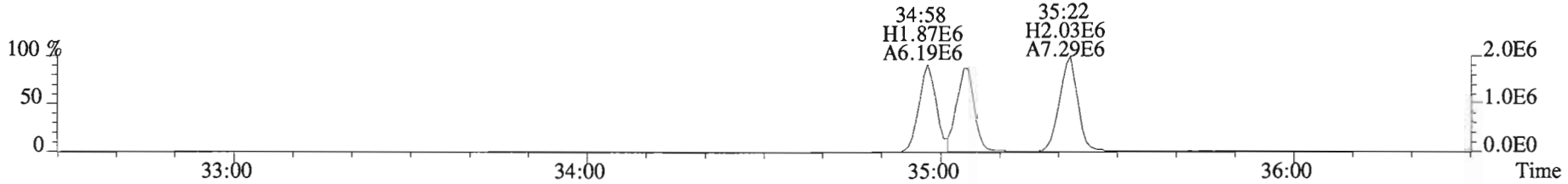
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



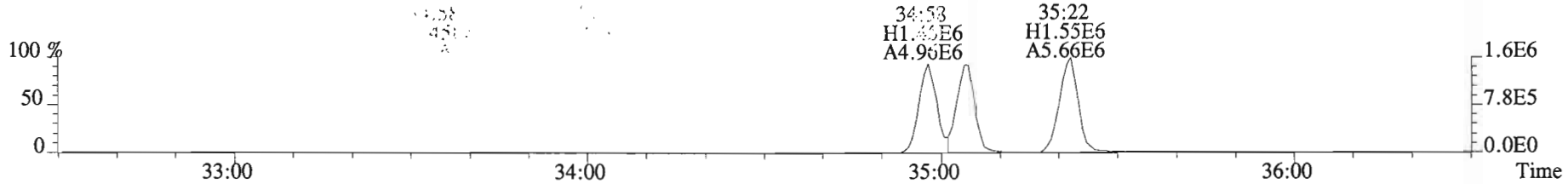
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



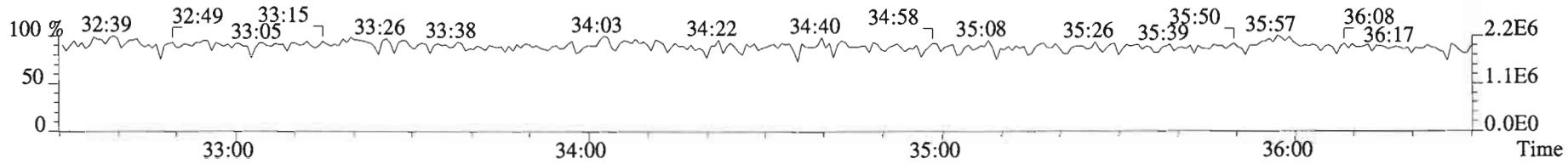
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



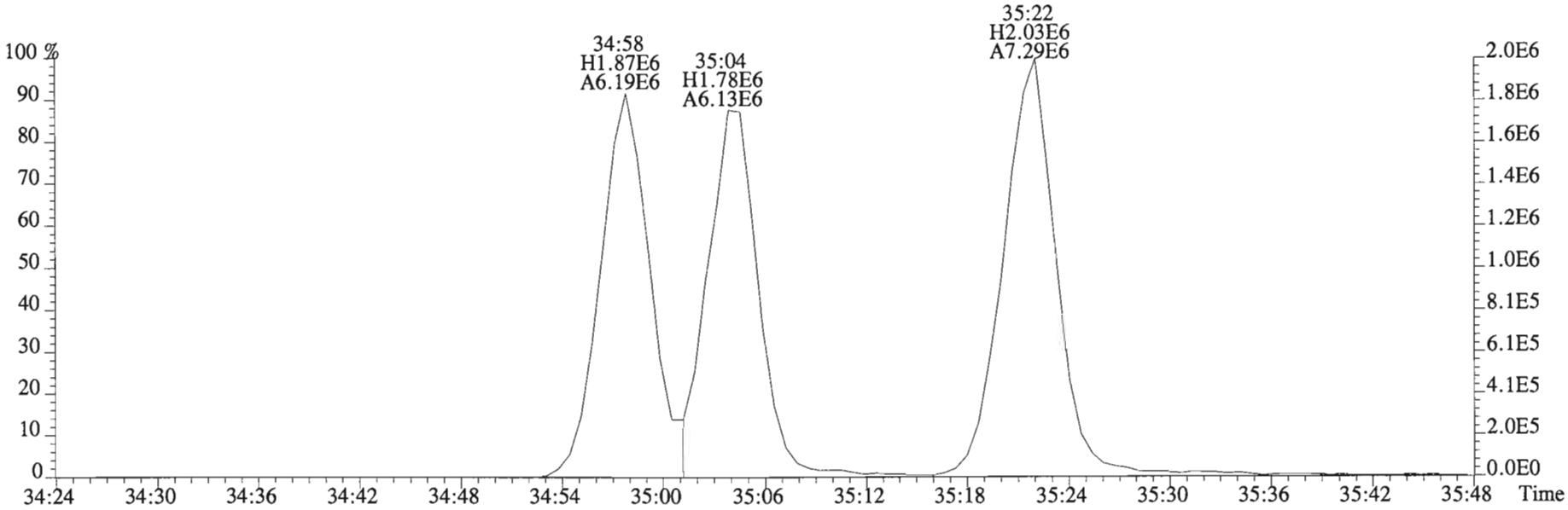
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



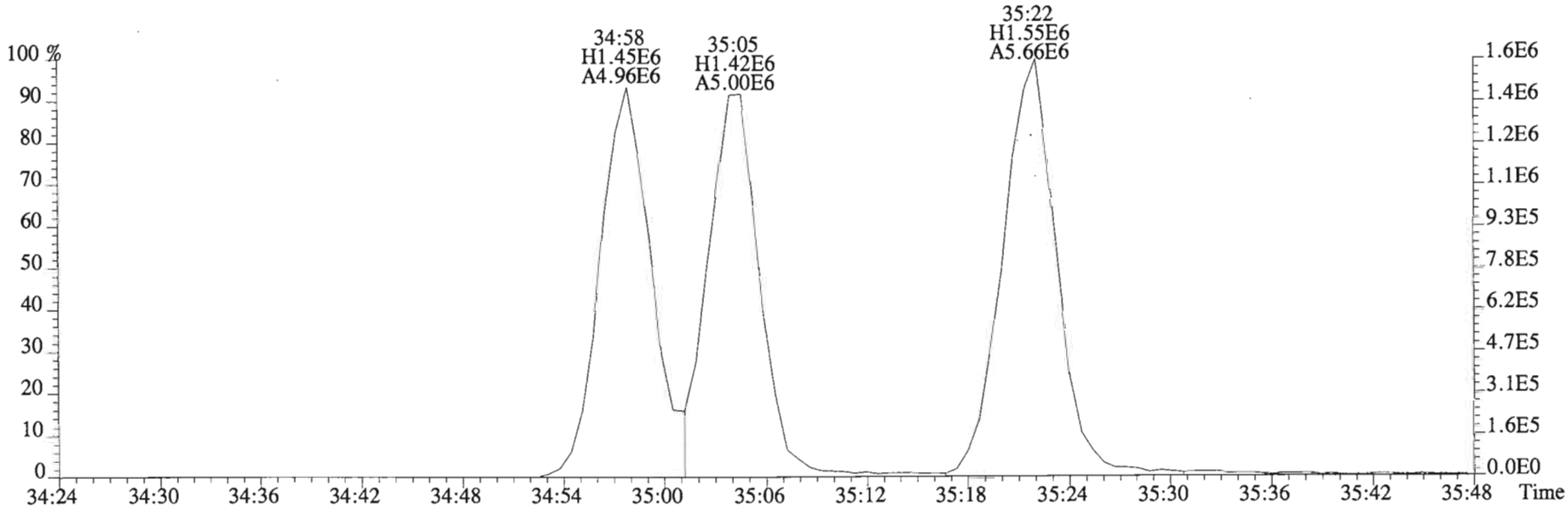
380.9760 S:11 F:3



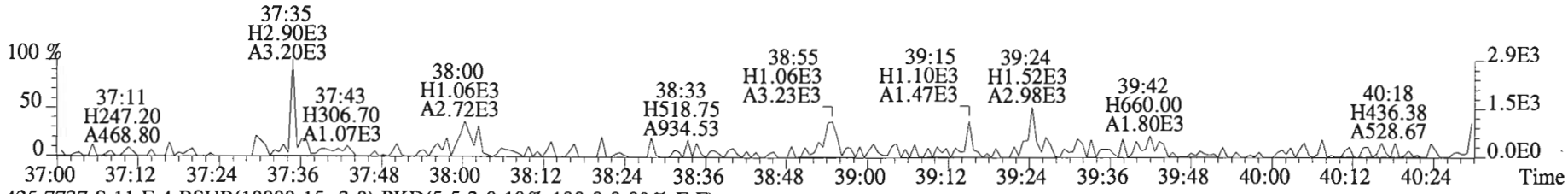
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



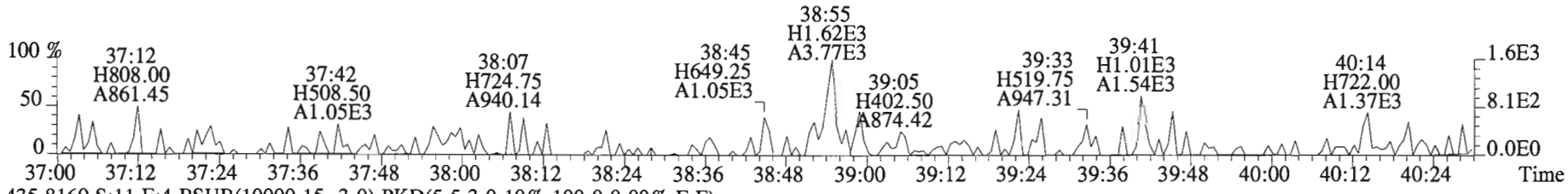
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



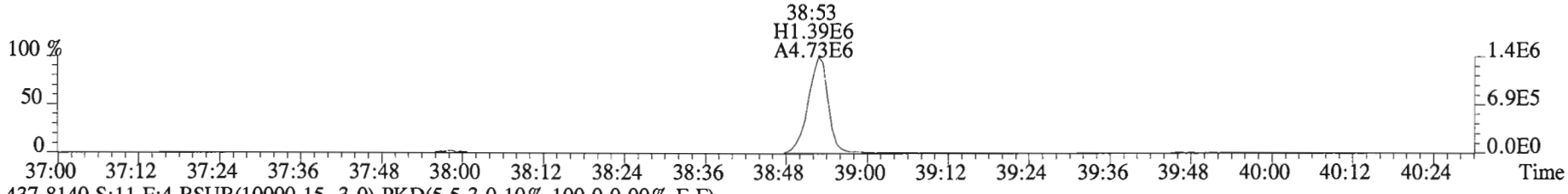
File:150311D1 #1-326 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



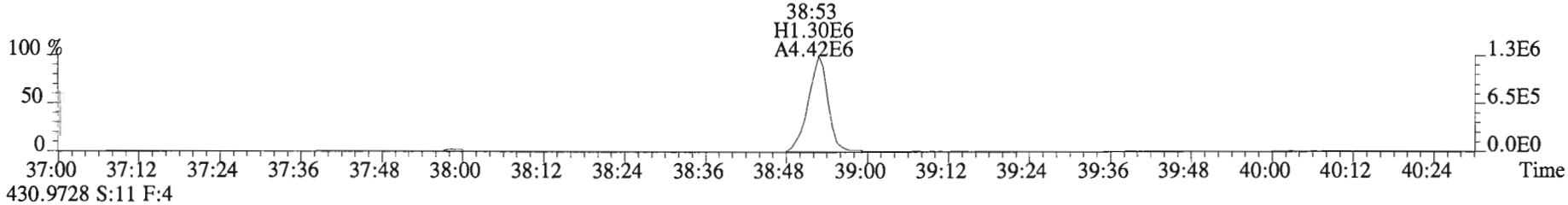
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



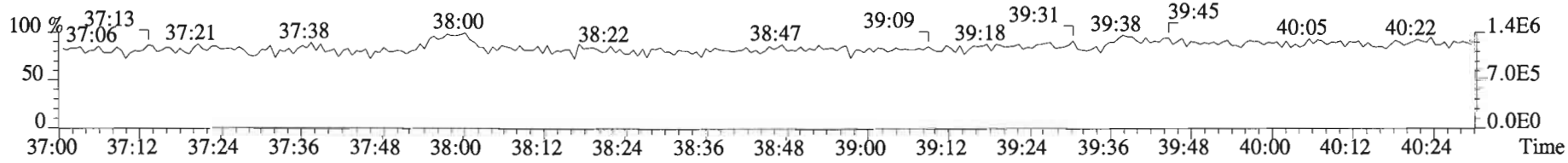
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



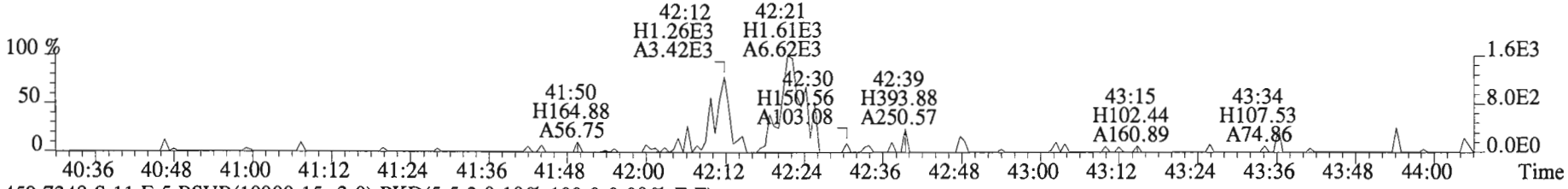
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



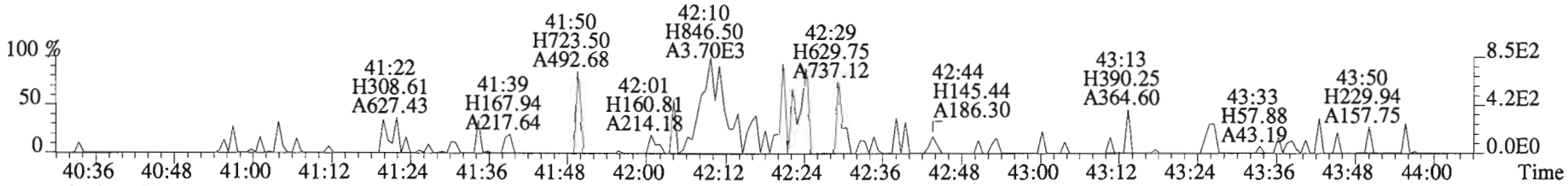
430.9728 S:11 F:4



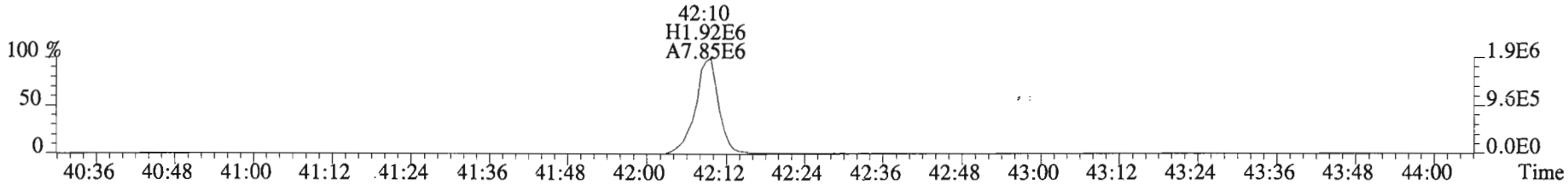
File:150311D1 #1-388 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



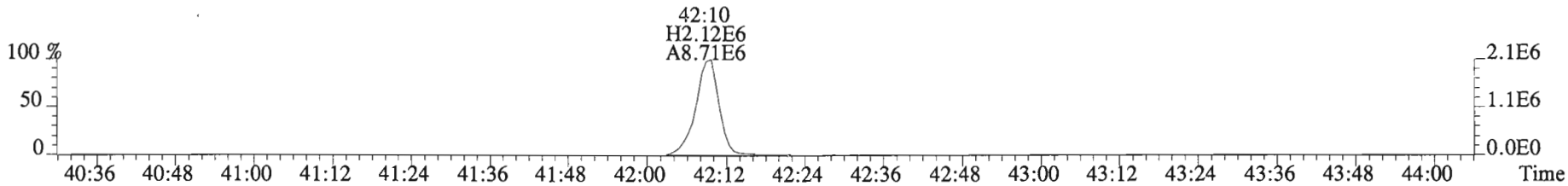
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



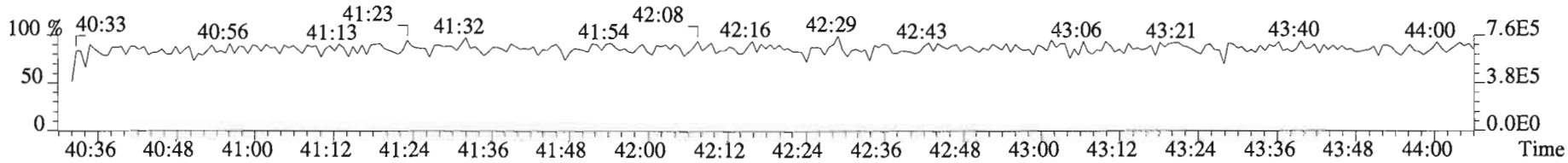
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



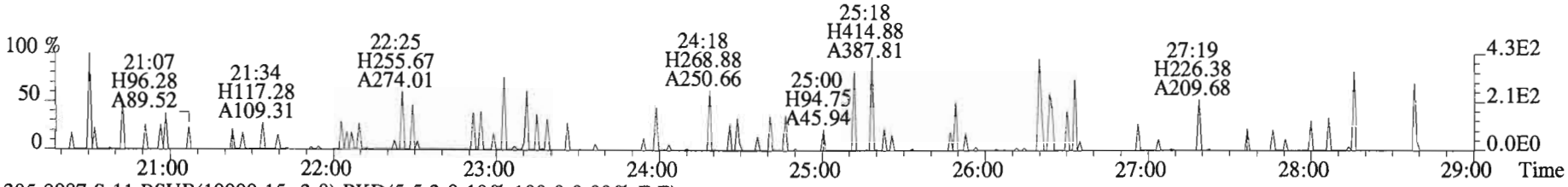
471.7750 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



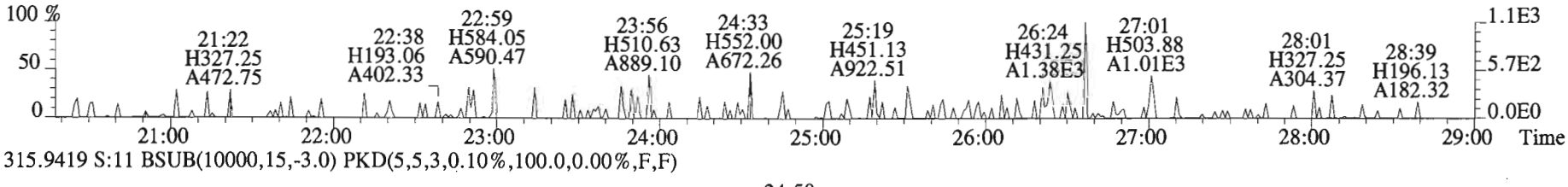
454.9728 S:11 F:5



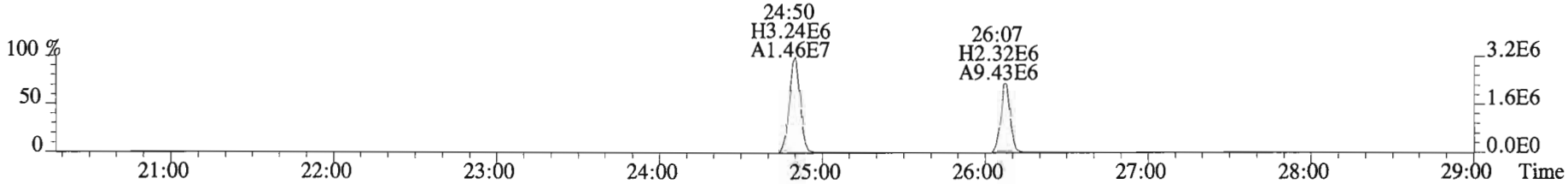
File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



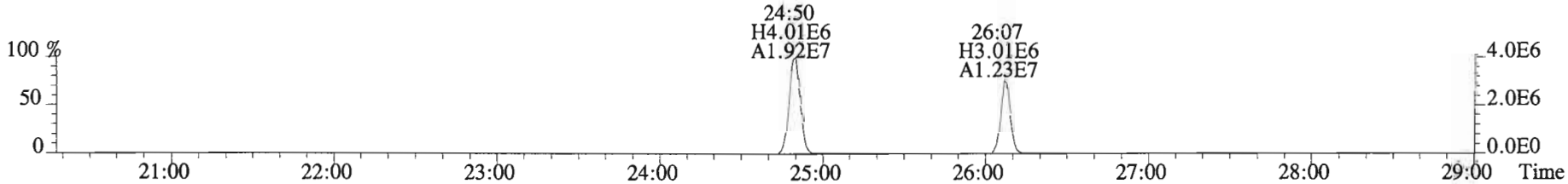
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



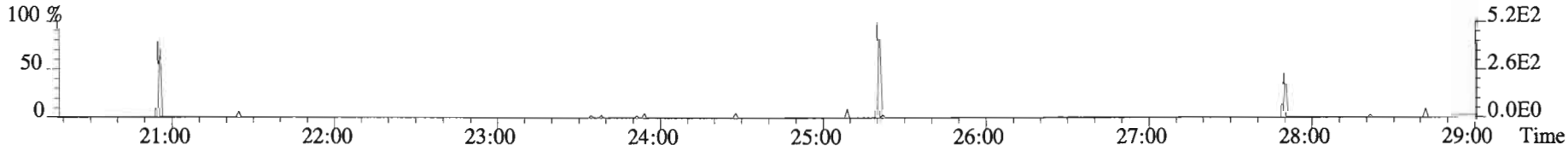
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



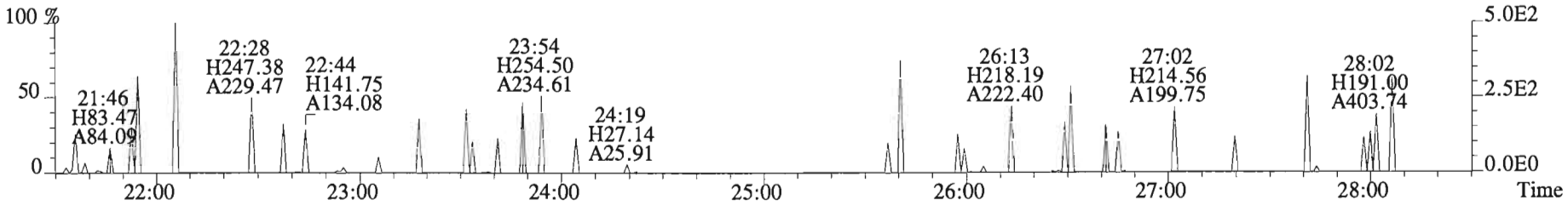
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



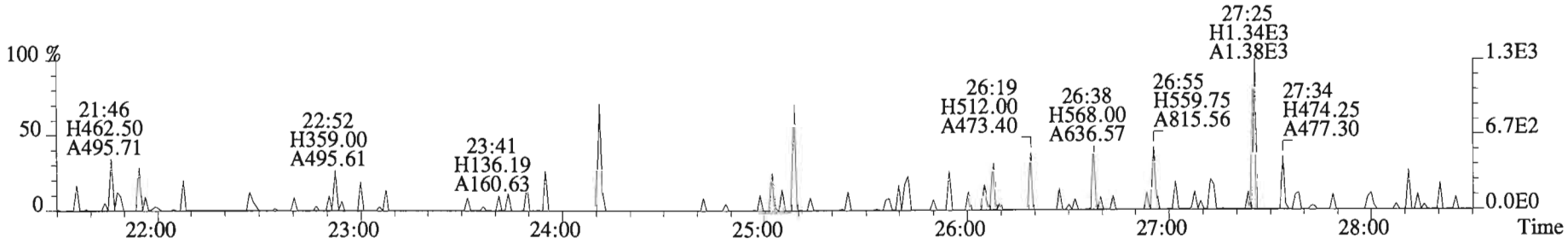
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



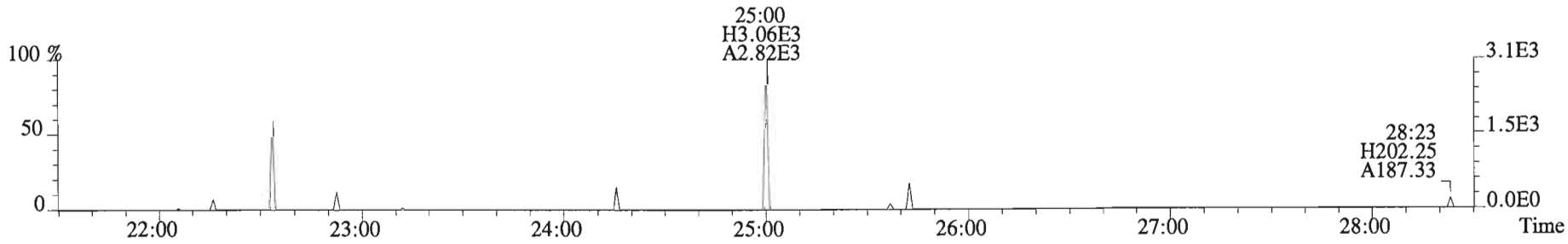
File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



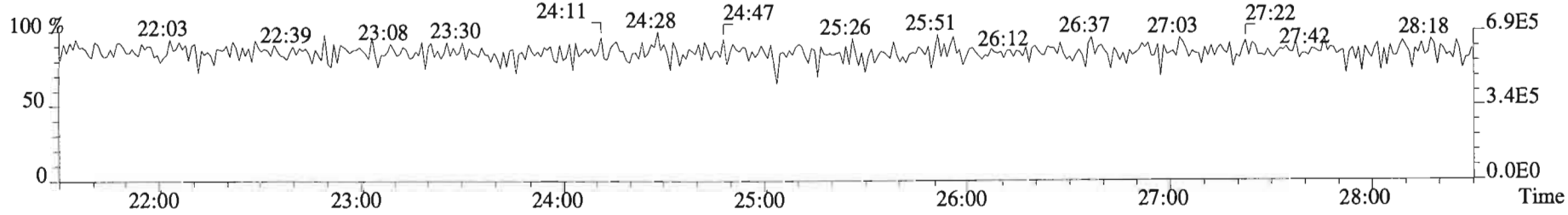
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



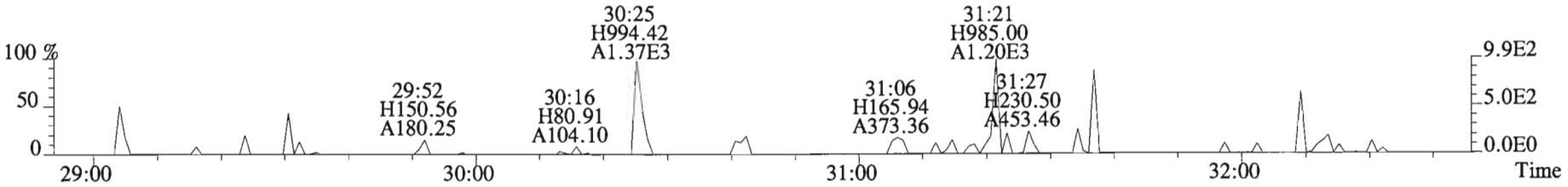
409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



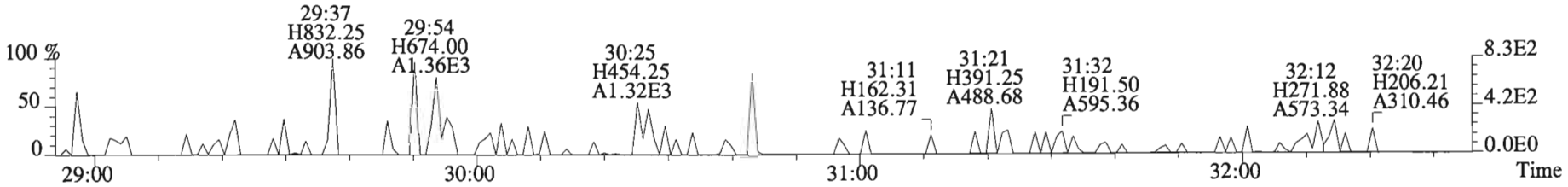
316.9824 S:11



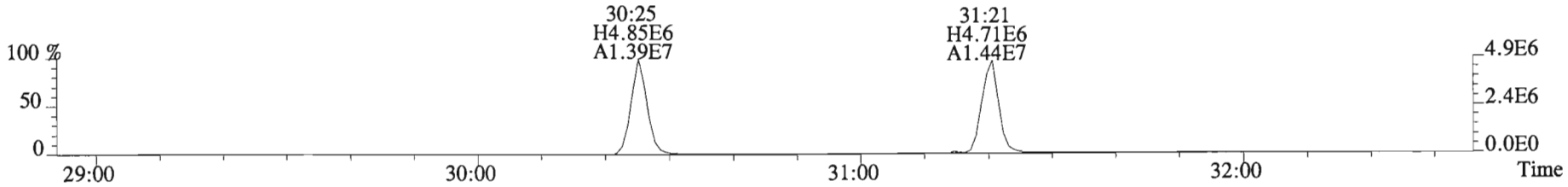
File:150311D1 #1-251 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



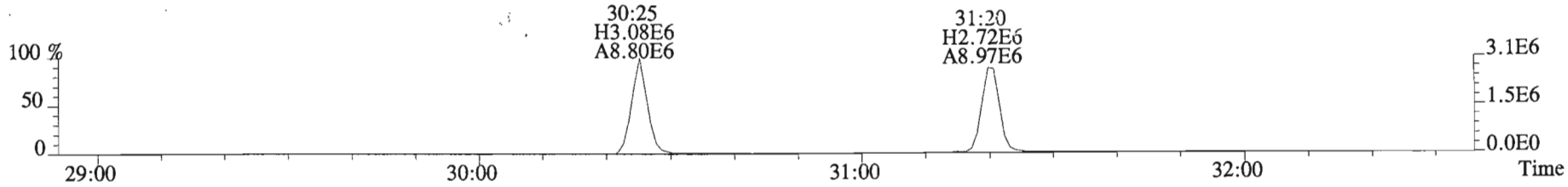
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



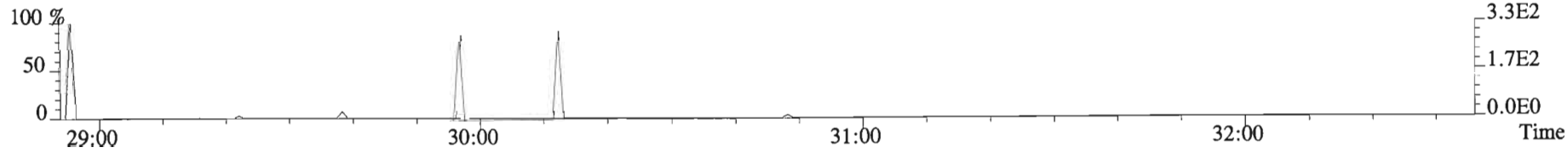
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

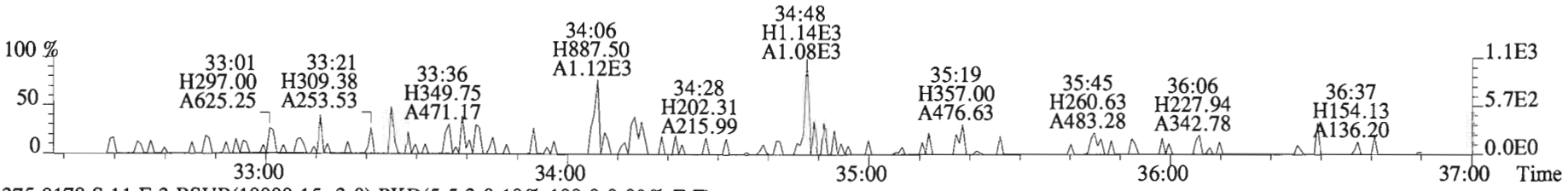


409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

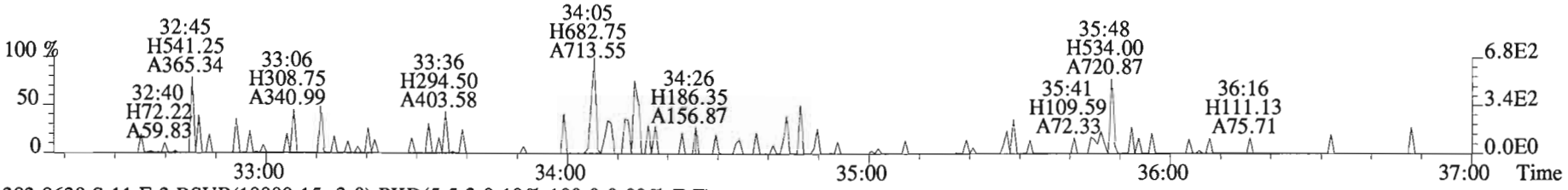


File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5

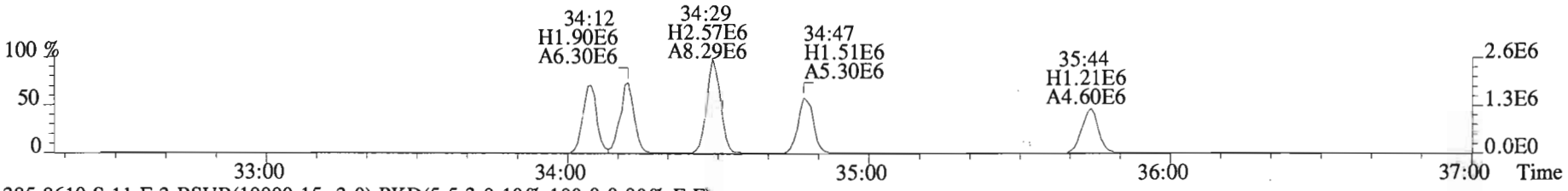
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



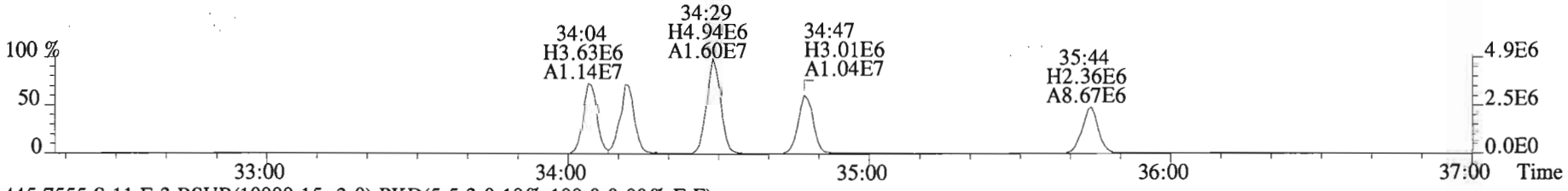
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



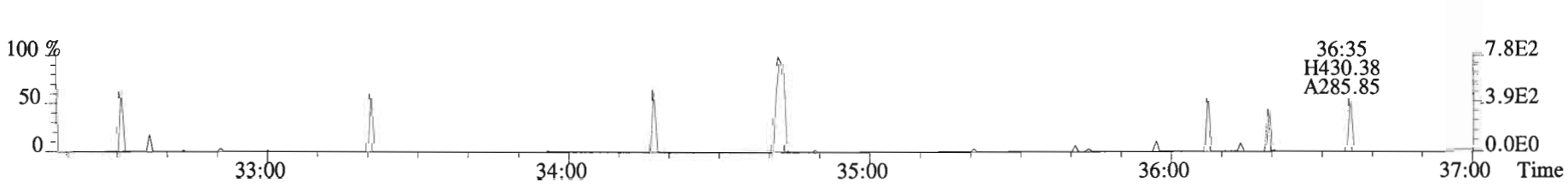
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



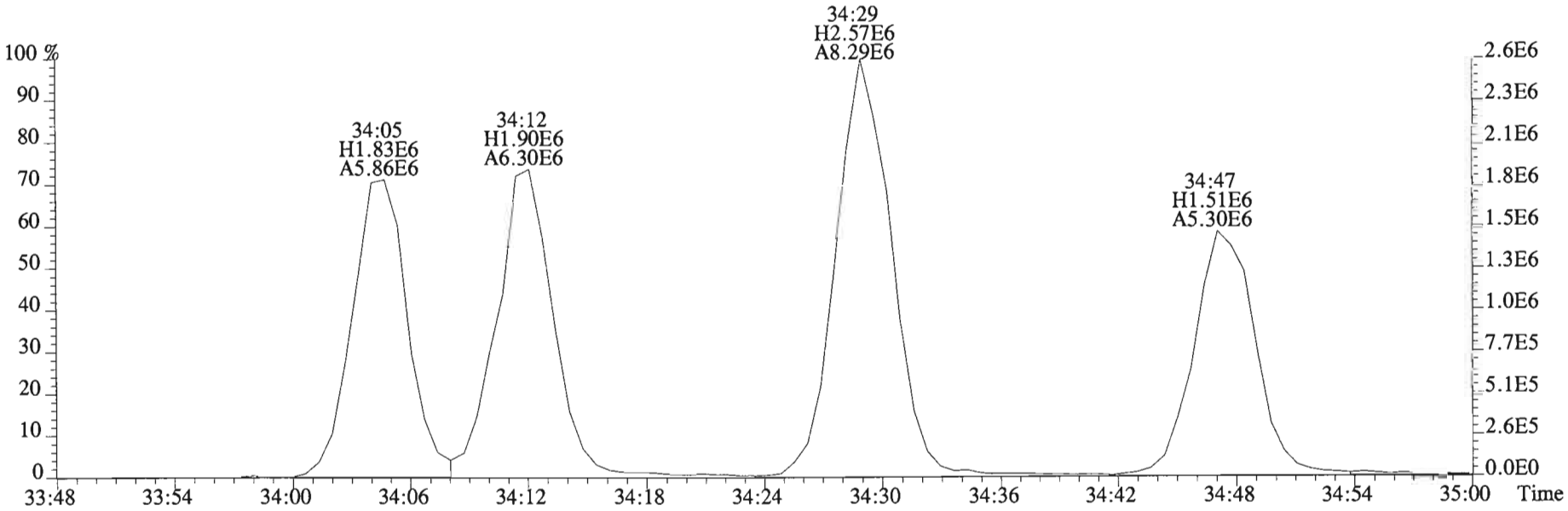
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



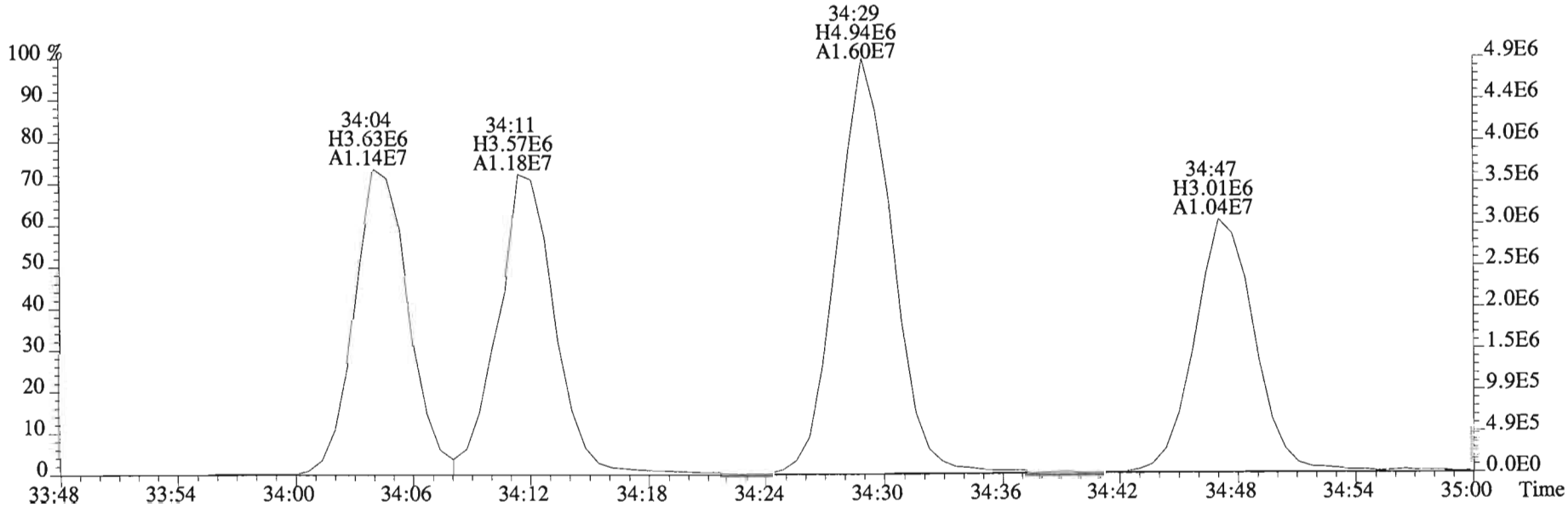
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



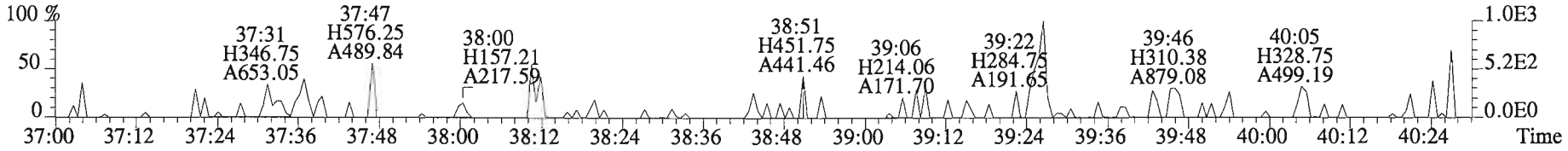
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



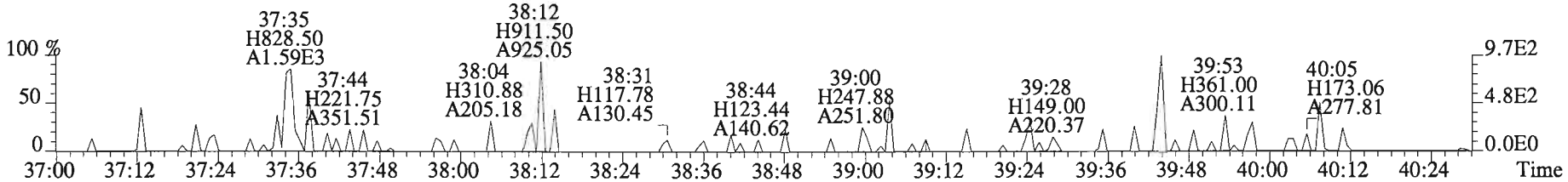
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



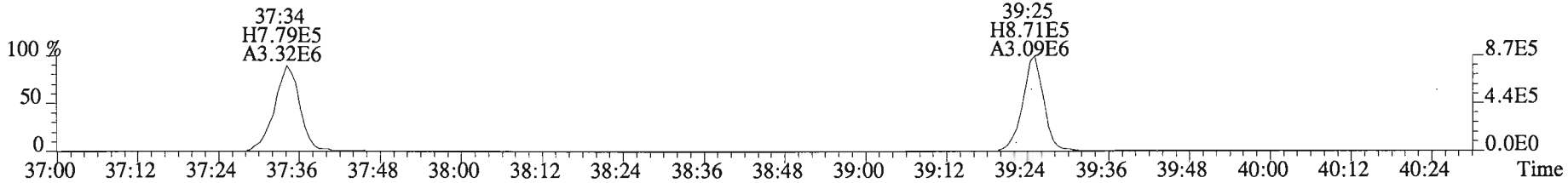
File:150311D1 #1-326 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



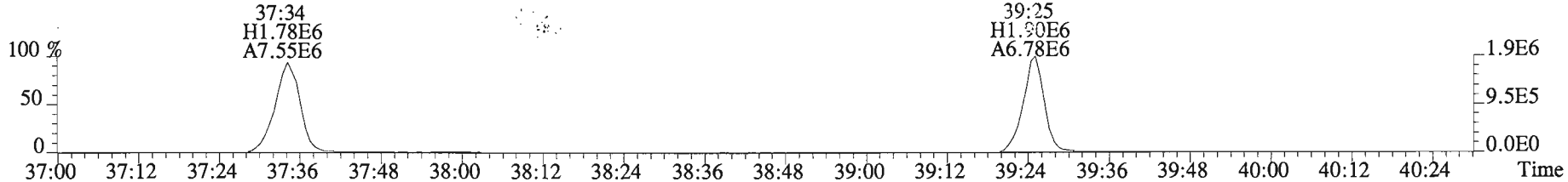
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



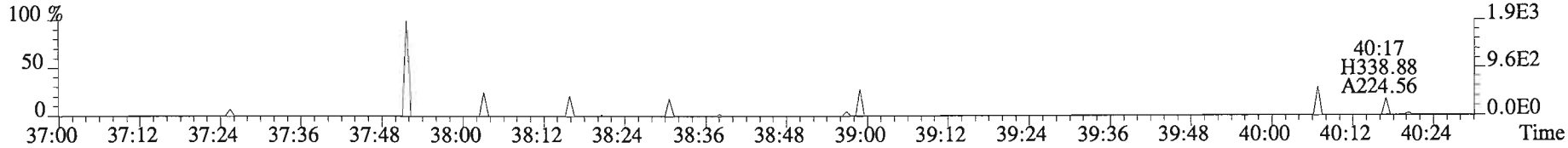
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



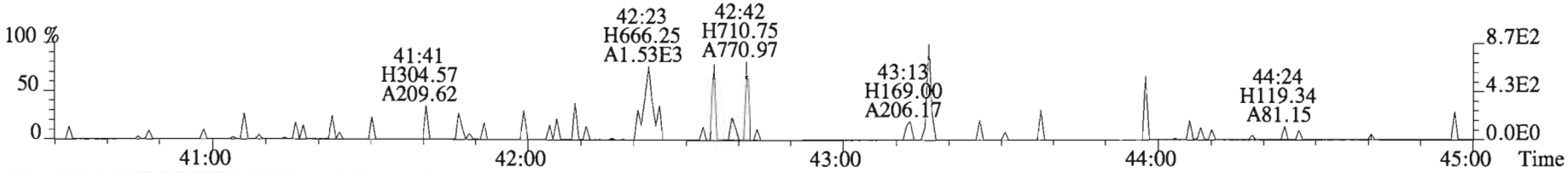
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



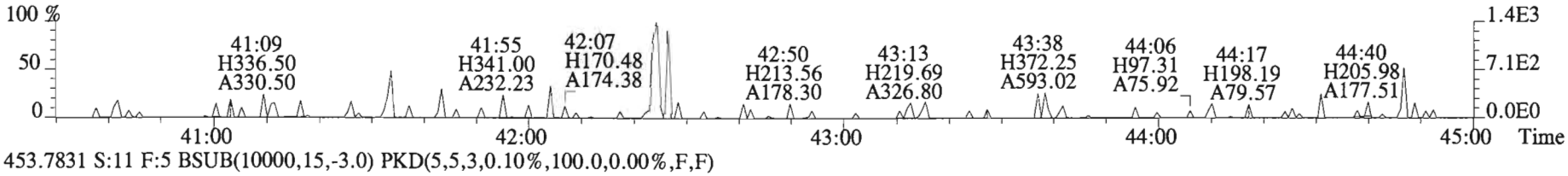
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



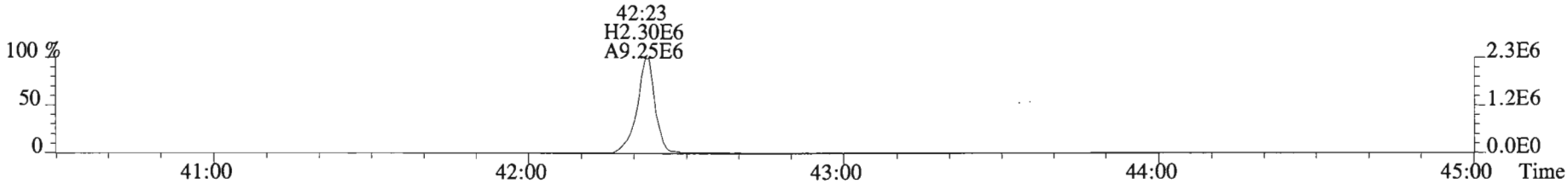
File:150311D1 #1-388 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



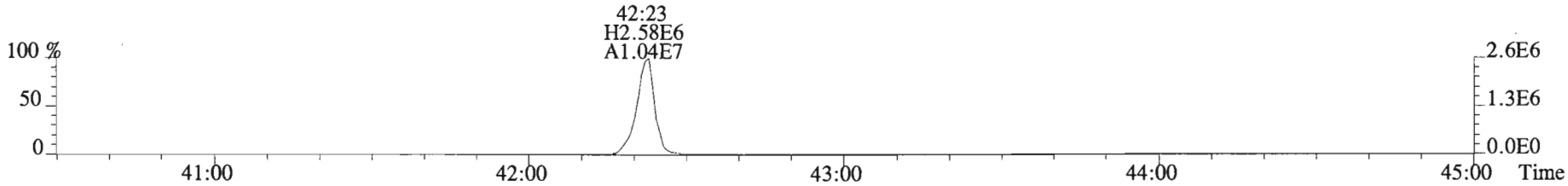
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



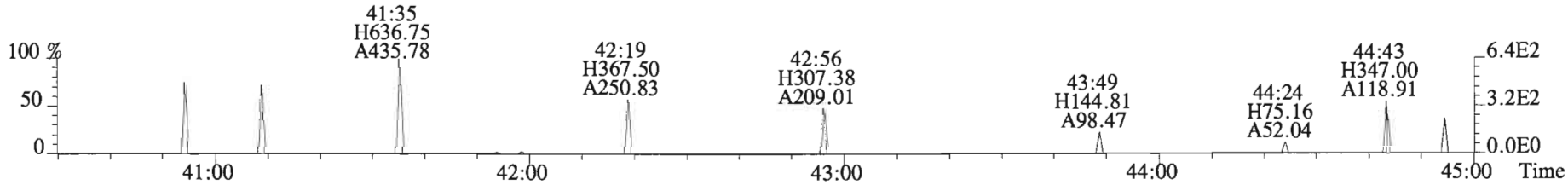
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0037-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150311D1-9

Ext. Date: 3-10-15 Shift: Day Analysis Date: 11-MAR-15 Time: 17:17:25

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	10.1	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	49.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	51.0	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	49.5	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.9	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.8	35.0 - 70.0
OCDD	100	98.9	78.0 - 144.0
2,3,7,8-TCDF	10	9.05	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	53.1	40.0 - 67.0
2,3,4,7,8-PeCDF	50	53.2	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	50.1	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	49.8	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.9	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.3	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	50.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	49.8	39.0 - 69.0
OCDF	100	102	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MJ

Date: 3/12/15

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0037-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150311D1-9

Ext. Date: 3-10-15 Shift: Day Analysis Date: 11-MAR-15 Time: 17:17:25

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	69.5	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	69.8	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	62.4	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	64.3	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	62.5	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	57.0	26.0 - 166.0
13C-OCDD	200	89.5	26.0 - 397.0
13C-2,3,7,8-TCDF	100	75.2	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	74.7	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	76.8	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	71.9	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	69.4	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	65.9	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	62.3	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	55.7	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	56.3	20.0 - 186.0
13C-OCDF	200	94.6	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	47.0	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: [signature]

Date: 3/12/15

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.72e+06	0.75 y	1.17	26:59	1.001	10.115		*	2.5	*
	1,2,3,7,8-PeCDD	7.20e+06	0.60 y	0.91	31:39	1.000	49.032		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.44e+06	1.25 y	1.08	34:59	1.000	51.044		*	2.5	*
	1,2,3,6,7,8-HxCDD	6.49e+06	1.28 y	1.06	35:06	1.000	49.457		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.46e+06	1.26 y	0.93	35:23	1.000	49.929		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	5.34e+06	1.04 y	1.10	38:54	1.000	49.805		*	2.5	*
	OCDD	8.36e+06	0.88 y	0.95	42:11	1.000	98.918		*	2.5	*
	2,3,7,8-TCDF	2.36e+06	0.81 y	1.07	26:09	1.001	9.0476		*	2.5	*
	1,2,3,7,8-PeCDF	1.38e+07	1.61 y	1.07	30:27	1.000	53.088		*	2.5	*
	2,3,4,7,8-PeCDF	1.39e+07	1.60 y	1.03	31:22	1.001	53.236		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.27e+07	1.27 y	1.38	34:06	1.000	50.111		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.23e+07	1.28 y	1.26	34:13	1.000	49.757		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.13e+07	1.30 y	1.29	34:49	1.000	49.884		*	2.5	*
	1,2,3,7,8,9-HxCDF	8.33e+06	1.31 y	1.19	35:46	1.001	50.330		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.44e+06	1.09 y	1.61	37:36	1.000	50.003		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	7.77e+06	1.06 y	1.53	39:26	1.000	49.823		*	2.5	*
	OCDF	1.17e+07	0.94 y	1.10	42:24	1.000	102.04		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.45e+07	0.81 y	1.06	26:58	1.022	69.494				
IS	13C-1,2,3,7,8-PeCDD	1.62e+07	0.64 y	1.18	31:38	1.200	69.772				
IS	13C-1,2,3,4,7,8-HxCDD	1.17e+07	1.27 y	0.72	34:58	1.014	62.373				
IS	13C-1,2,3,6,7,8-HxCDD	1.23e+07	1.26 y	0.74	35:05	1.017	64.293				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.26 y	0.85	35:23	1.026	62.836				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.70e+06	1.03 y	0.65	38:53	1.128	56.975				
IS	13C-OCDD	1.78e+07	0.86 y	0.76	42:10	1.222	89.532				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.74 y	0.92	26:08	0.991	75.184				
IS	13C-1,2,3,7,8-PeCDF	2.43e+07	1.60 y	0.92	30:26	1.154	74.692				
IS	13C-2,3,4,7,8-PeCDF	2.52e+07	1.58 y	0.93	31:21	1.188	76.751				
IS	13C-1,2,3,4,7,8-HxCDF	1.84e+07	0.52 y	0.98	34:05	0.988	71.911				
IS	13C-1,2,3,6,7,8-HxCDF	1.96e+07	0.52 y	1.08	34:13	0.992	69.446				
IS	13C-2,3,4,6,7,8-HxCDF	1.76e+07	0.52 y	1.03	34:48	1.009	65.901				
IS	13C-1,2,3,7,8,9-HxCDF	1.40e+07	0.52 y	0.86	35:45	1.036	62.266				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.05e+07	0.44 y	0.72	37:35	1.090	55.717				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.02e+07	0.45 y	0.70	39:26	1.143	56.263				
IS	13C-OCDF	2.09e+07	0.91 y	0.85	42:23	1.229	94.574				
C/Up	37Cl-2,3,7,8-TCDD	1.03e+07		1.12	26:59	1.023	46.989				
RS/RT	13C-1,2,3,4-TCDD	1.97e+07	0.79 y	1.00	26:23	*	100.00				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.75 y	1.00	24:51	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.61e+07	0.51 y	1.00	34:30	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.4	10.5		*	*
Total Penta-Dioxins	49.3	49.4		*	*
Total Hexa-Dioxins	150	151		*	*
Total Hepta-Dioxins	49.9	51.3		*	*
Total Tetra-Furans	9.06	9.24		*	*
Total Penta-Furans	107.36	107.86		*	*
Total Hexa-Furans	200	201		*	*
Total Hepta-Furans	101	102		*	*

		Rec	Qual
IS	13C-2,3,7,8-TCDD	69.5	
IS	13C-1,2,3,7,8-PeCDD	69.8	
IS	13C-1,2,3,4,7,8-HxCDD	62.4	
IS	13C-1,2,3,6,7,8-HxCDD	64.3	
IS	13C-1,2,3,7,8,9-HxCDD	62.5	
IS	13C-1,2,3,4,6,7,8-HpCDD	57.0	
IS	13C-OCDD	44.8	
IS	13C-2,3,7,8-TCDF	75.2	
IS	13C-1,2,3,7,8-PeCDF	74.7	
IS	13C-2,3,4,7,8-PeCDF	76.8	
IS	13C-1,2,3,4,7,8-HxCDF	71.9	
IS	13C-1,2,3,6,7,8-HxCDF	69.4	
IS	13C-2,3,4,6,7,8-HxCDF	65.9	
IS	13C-1,2,3,7,8,9-HxCDF	62.3	
IS	13C-1,2,3,4,6,7,8-HpCDF	55.7	
IS	13C-1,2,3,4,7,8,9-HpCDF	56.3	
IS	13C-OCDF	47.3	
C/Up	37Cl-2,3,7,8-TCDD	117	

Integrations by Analyst:_____ Reviewed by Analyst:_____

Date:_____ Date:_____

Client ID: OPR Filename: 150311D1 S:9 Acq:11-MAR-15 17:17:25 ConCal: ST150311D1-1
Lab ID: B5C0037-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.72e+06	0.75 y	1.17	26:59	1.001	202.31		*	2.5	*
	1,2,3,7,8-PeCDD	7.20e+06	0.60 y	0.91	31:39	1.000	980.64		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.44e+06	1.25 y	1.08	34:59	1.000	1020.9		*	2.5	*
	1,2,3,6,7,8-HxCDD	6.49e+06	1.28 y	1.06	35:06	1.000	989.14		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.46e+06	1.26 y	0.93	35:23	1.000	998.59		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	5.34e+06	1.04 y	1.10	38:54	1.000	996.11		*	2.5	*
	OCDD	8.36e+06	0.88 y	0.95	42:11	1.000	1978.4		*	2.5	*
	2,3,7,8-TCDF	2.36e+06	0.81 y	1.07	26:09	1.001	180.95		*	2.5	*
	1,2,3,7,8-PeCDF	1.38e+07	1.61 y	1.07	30:27	1.000	1061.8		*	2.5	*
	2,3,4,7,8-PeCDF	1.39e+07	1.60 y	1.03	31:22	1.001	1064.7		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.27e+07	1.27 y	1.38	34:06	1.000	1002.2		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.23e+07	1.28 y	1.26	34:13	1.000	995.14		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.13e+07	1.30 y	1.29	34:49	1.000	997.67		*	2.5	*
	1,2,3,7,8,9-HxCDF	8.33e+06	1.31 y	1.19	35:46	1.001	1006.6		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.44e+06	1.09 y	1.61	37:36	1.000	1000.1		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	7.77e+06	1.06 y	1.53	39:26	1.000	996.47		*	2.5	*
	OCDF	1.17e+07	0.94 y	1.10	42:24	1.000	2040.8		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.45e+07	0.81 y	1.06	26:58	1.022	1389.9				
IS	13C-1,2,3,7,8-PeCDD	1.62e+07	0.64 y	1.18	31:38	1.200	1395.4				
IS	13C-1,2,3,4,7,8-HxCDD	1.17e+07	1.27 y	0.72	34:58	1.014	1247.5				
IS	13C-1,2,3,6,7,8-HxCDD	1.23e+07	1.26 y	0.74	35:05	1.017	1285.9				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.26 y	0.85	35:23	1.026	1250.7				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.70e+06	1.03 y	0.65	38:53	1.128	1139.5				
IS	13C-OCDD	1.78e+07	0.86 y	0.76	42:10	1.222	1790.6				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.74 y	0.92	26:08	0.991	1503.7				
IS	13C-1,2,3,7,8-PeCDF	2.43e+07	1.60 y	0.92	30:26	1.154	1493.8				
IS	13C-2,3,4,7,8-PeCDF	2.52e+07	1.58 y	0.93	31:21	1.188	1535.0				
IS	13C-1,2,3,4,7,8-HxCDF	1.84e+07	0.52 y	0.98	34:05	0.988	1438.2				
IS	13C-1,2,3,6,7,8-HxCDF	1.96e+07	0.52 y	1.08	34:13	0.992	1388.9				
IS	13C-2,3,4,6,7,8-HxCDF	1.76e+07	0.52 y	1.03	34:48	1.009	1318.0				
IS	13C-1,2,3,7,8,9-HxCDF	1.40e+07	0.52 y	0.86	35:45	1.036	1245.3				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.05e+07	0.44 y	0.72	37:35	1.090	1114.3				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.02e+07	0.45 y	0.70	39:26	1.143	1125.3				
IS	13C-OCDF	2.09e+07	0.91 y	0.85	42:23	1.229	1891.5				
C/Up	37Cl-2,3,7,8-TCDD	1.03e+07		1.12	26:59	1.023	939.77				
RS/RT	13C-1,2,3,4-TCDD	1.97e+07	0.79 y	1.00	26:23	*	2000.0				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.75 y	1.00	24:51	*	2000.0				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.61e+07	0.51 y	1.00	34:30	*	2000.0				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	208	211		*	*
Total Penta-Dioxins	986	987		*	*
Total Hexa-Dioxins	3010	3020		*	*
Total Hepta-Dioxins	998	1030		*	*
Total Tetra-Furans	181	185		*	*
Total Penta-Furans	2147.1	2157.2		*	*
Total Hexa-Furans	4010	4030		*	*
Total Hepta-Furans	2010	2030		*	*

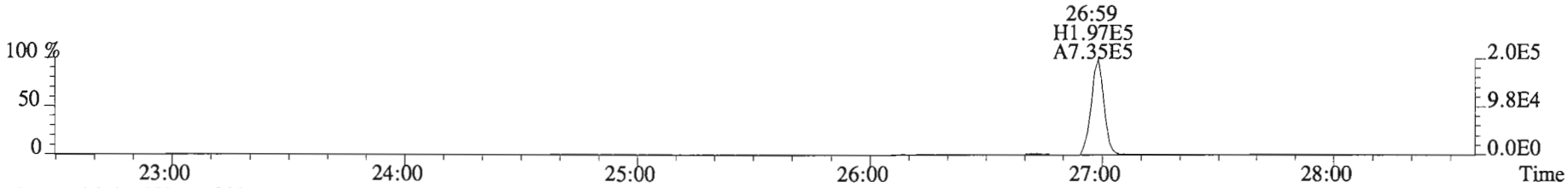
	Rec	Qual
IS	69.5	
IS	69.8	
IS	62.4	
IS	64.3	
IS	62.5	
IS	57.0	
IS	44.8	
IS	75.2	
IS	74.7	
IS	76.8	
IS	71.9	
IS	69.4	
IS	65.9	
IS	62.3	
IS	55.7	
IS	56.3	
IS	47.3	
C/Up	117	

Integrations by Analyst: M1 Date: 3/12/15

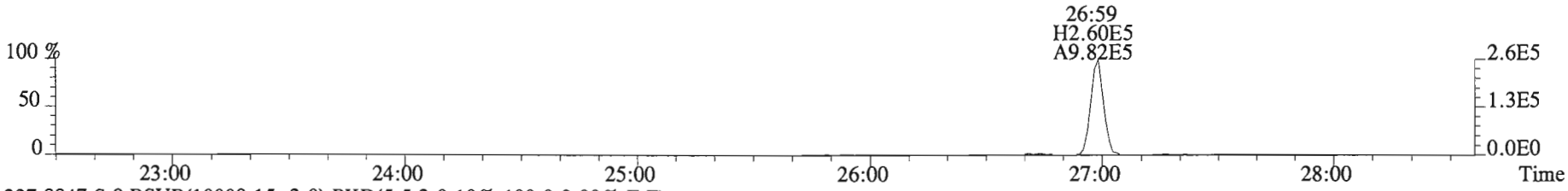
Reviewed by Analyst: [signature] Date: 3/12/15

File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5

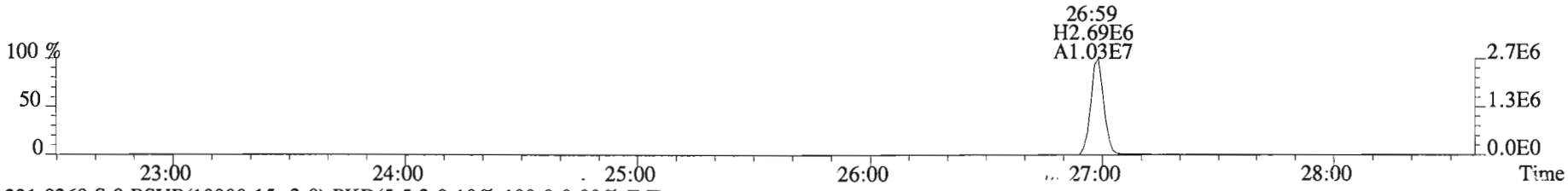
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



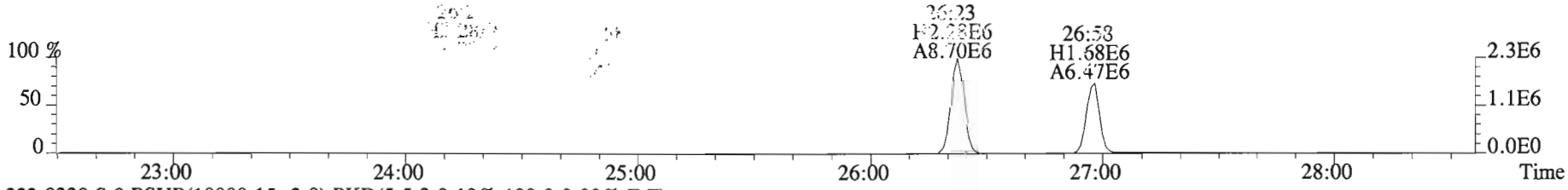
321.8936 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



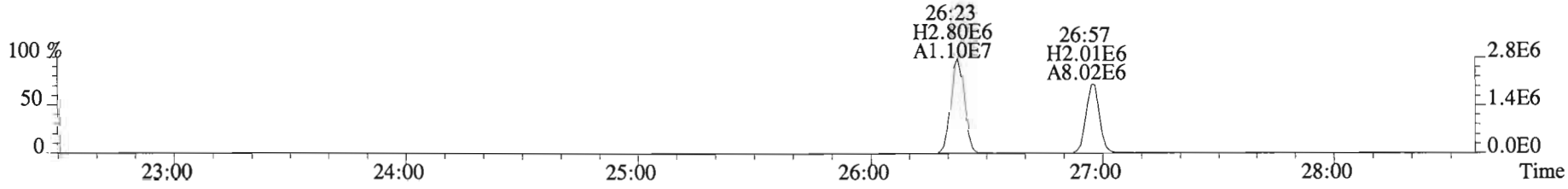
327.8847 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



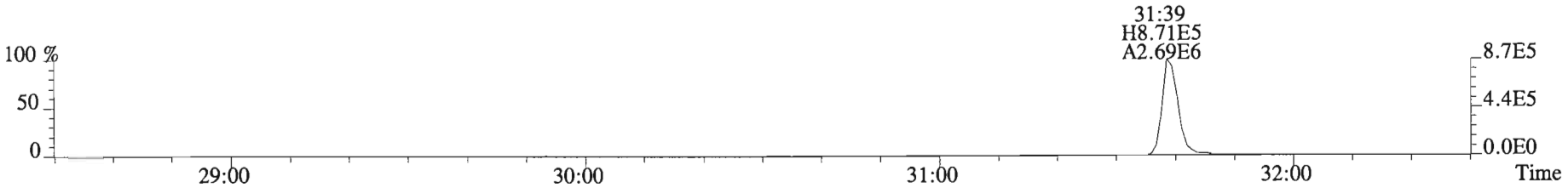
331.9368 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



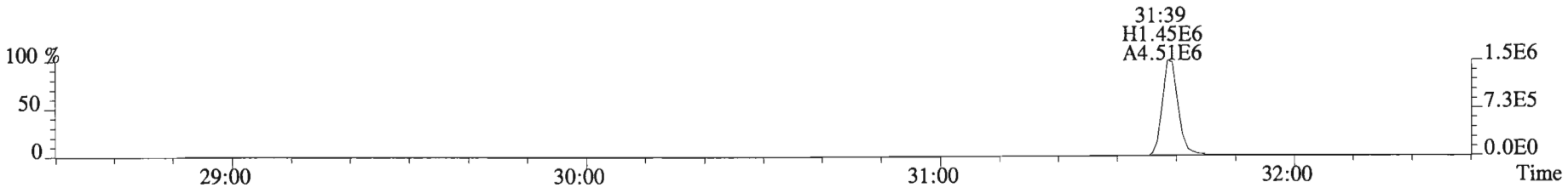
333.9339 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



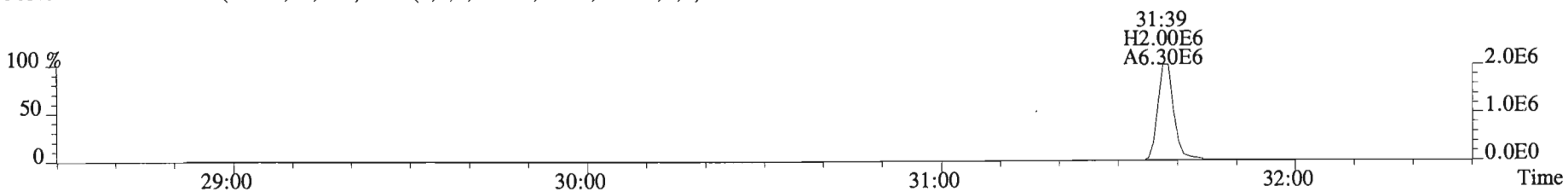
File:150311D1 #1-251 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



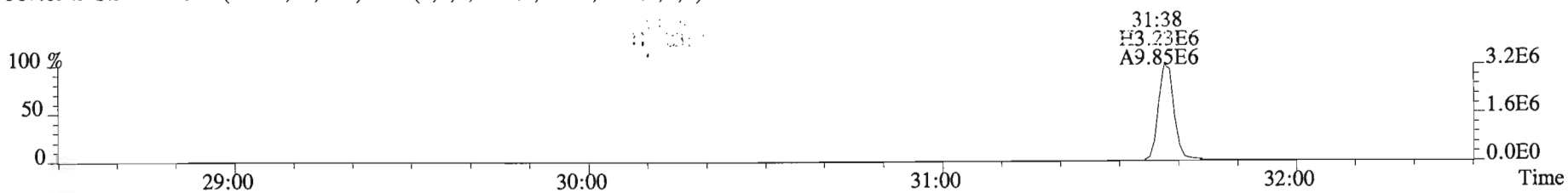
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



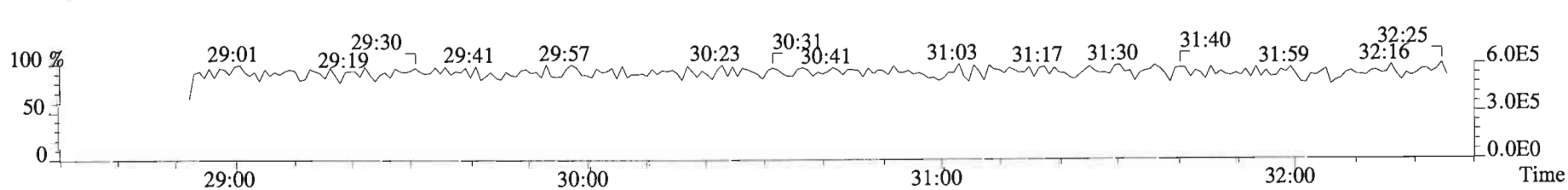
365.8978 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



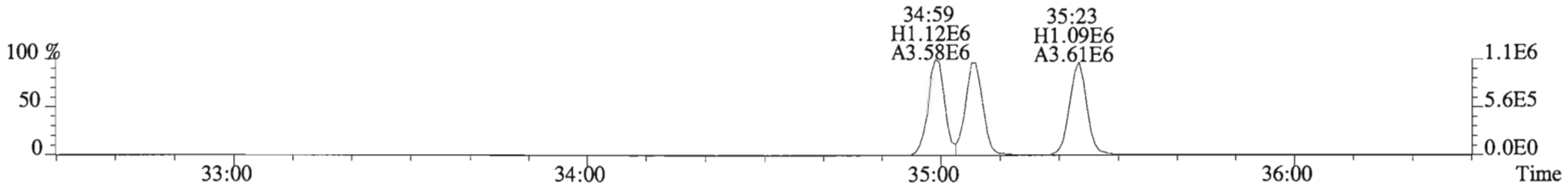
367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



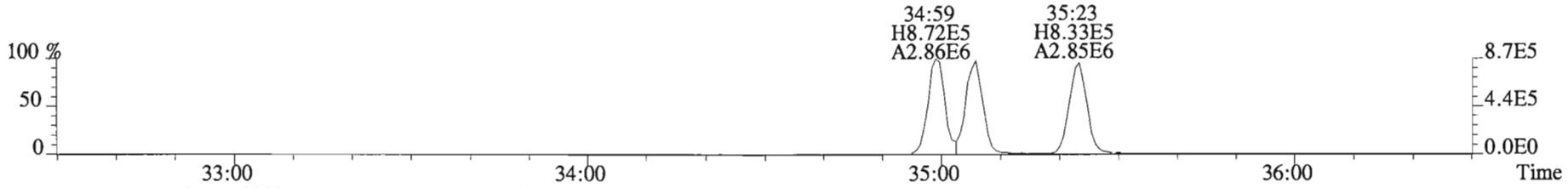
366.9792 S:9 F:2



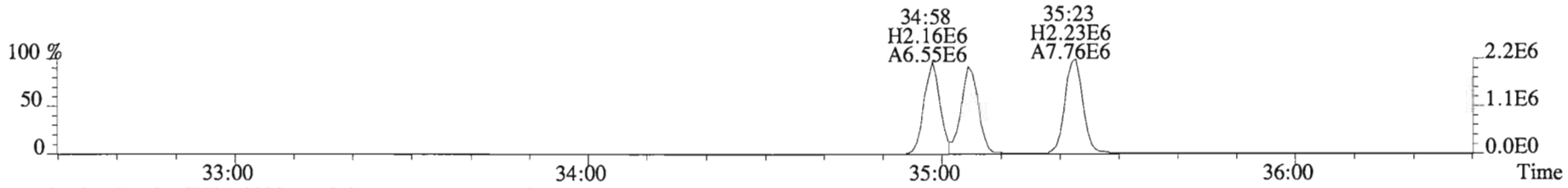
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



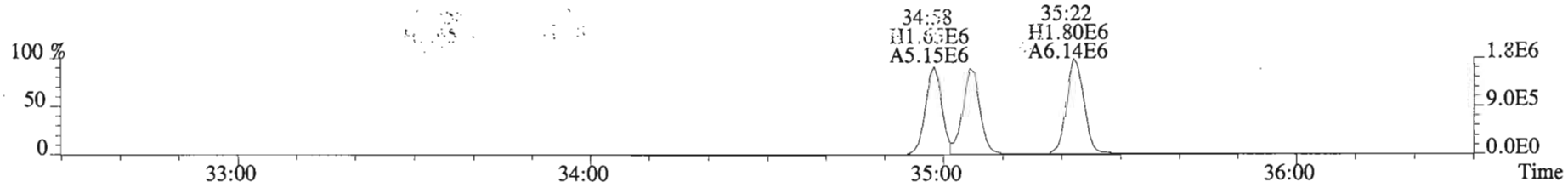
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



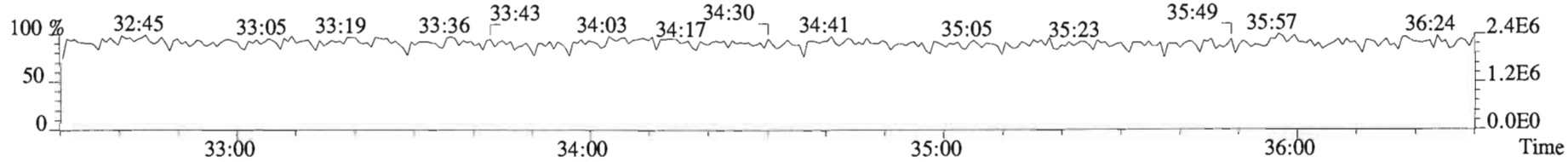
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



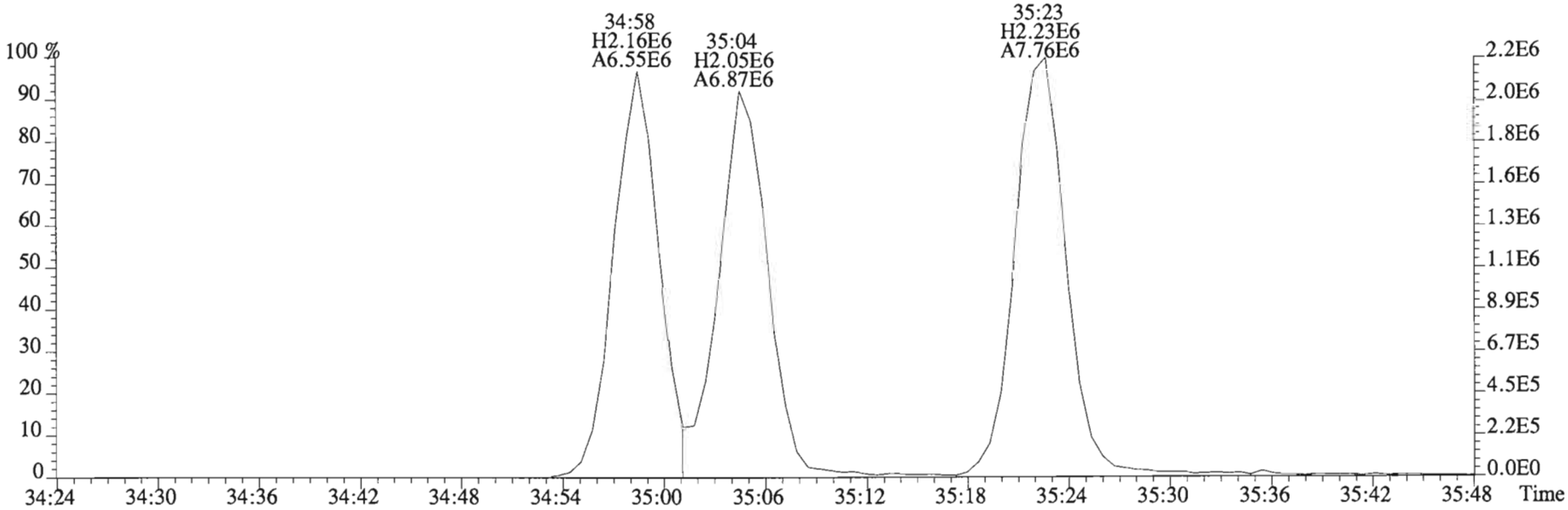
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



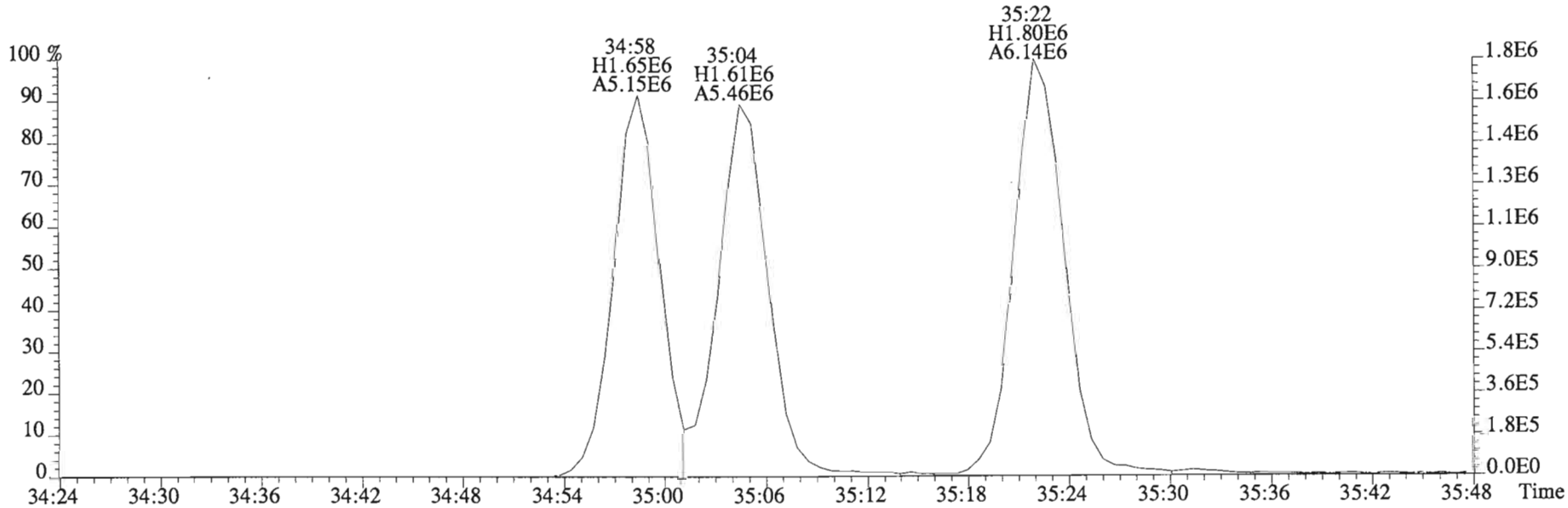
380.9760 S:9 F:3



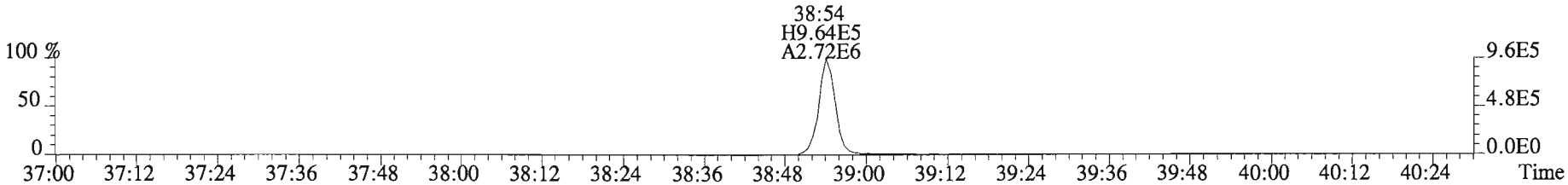
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



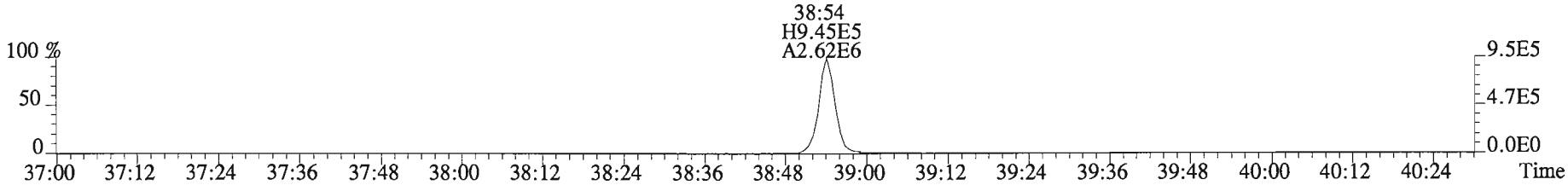
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



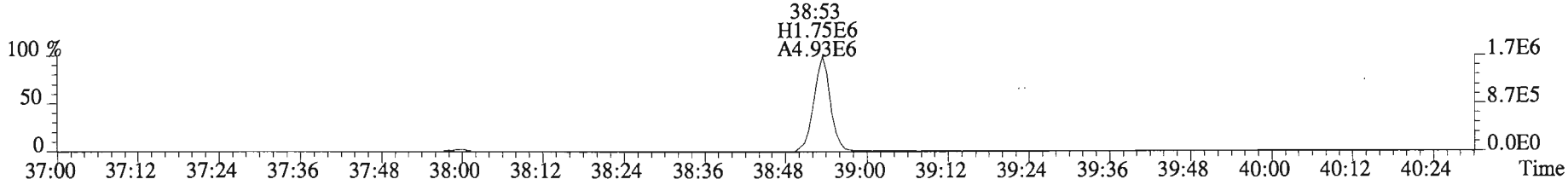
File:150311D1 #1-326 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



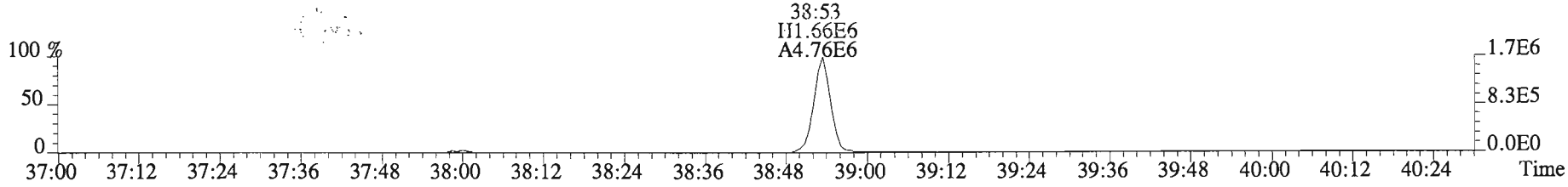
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



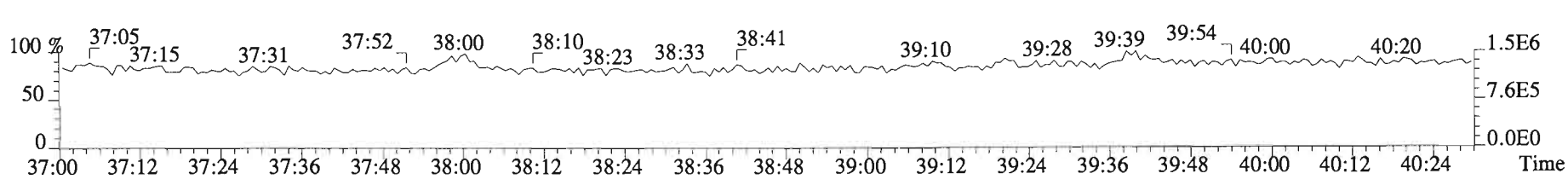
435.8169 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



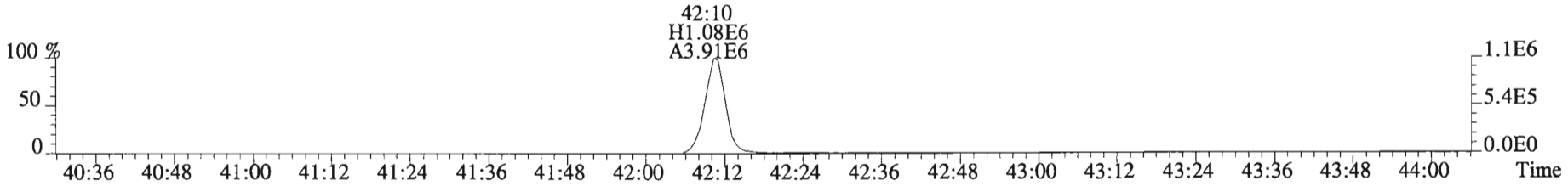
437.8140 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



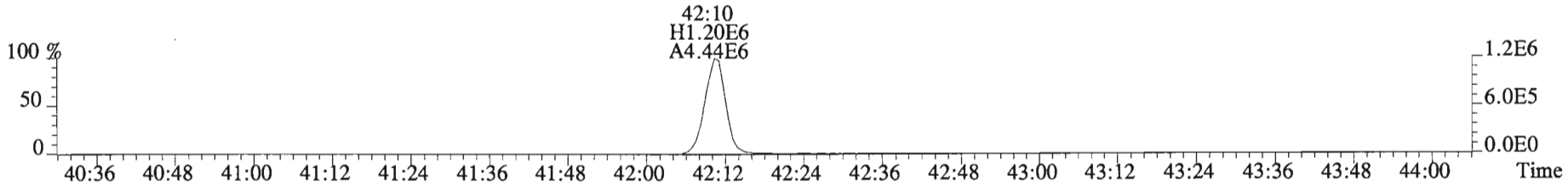
430.9728 S:9 F:4



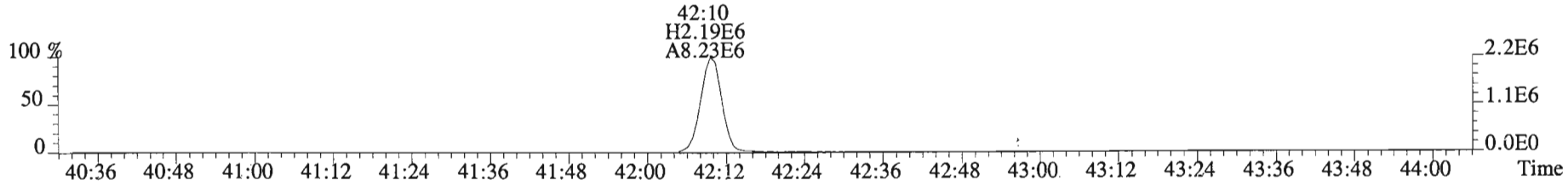
File:150311D1 #1-389 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



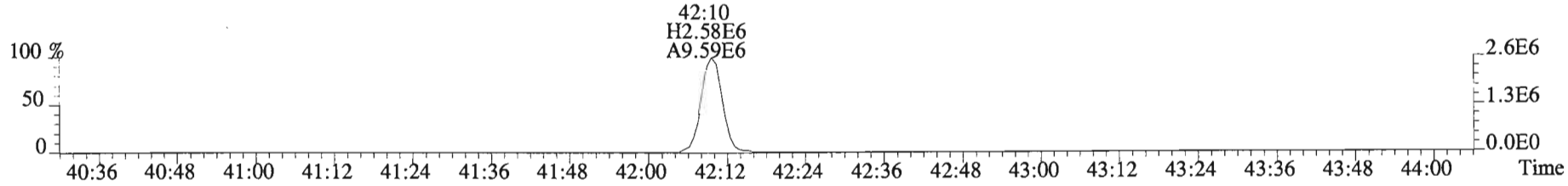
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



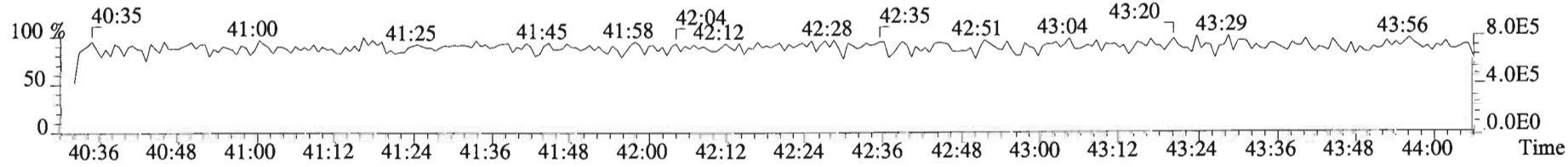
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



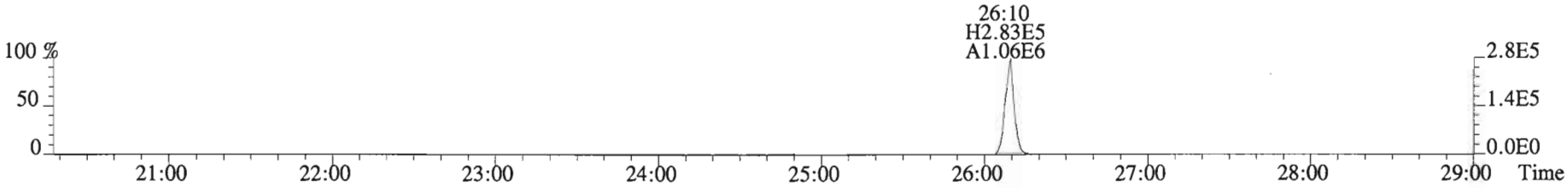
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



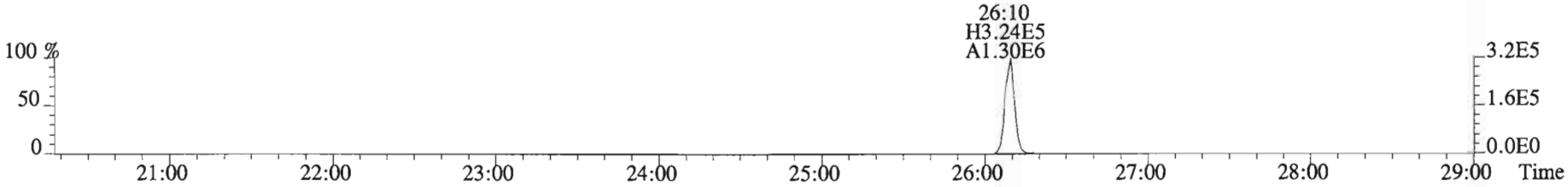
454.9728 S:9 F:5



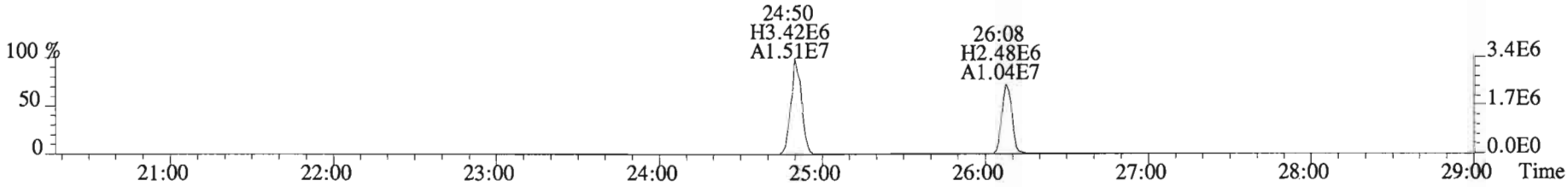
File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



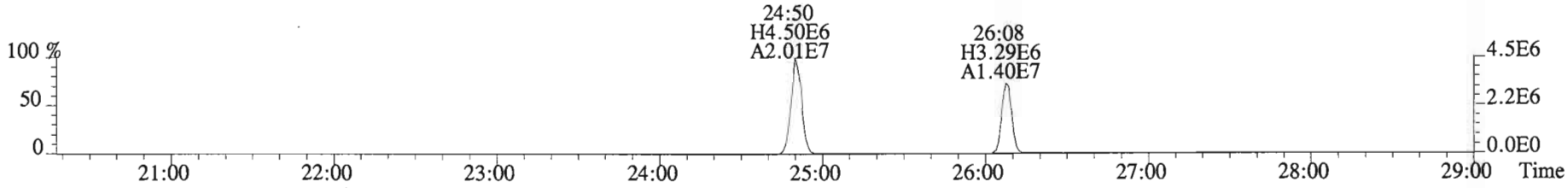
305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



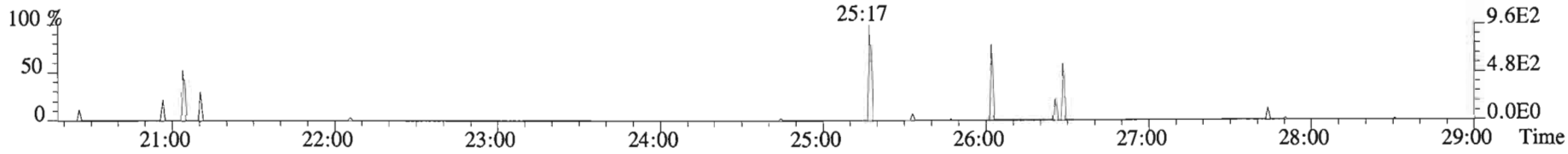
315.9419 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



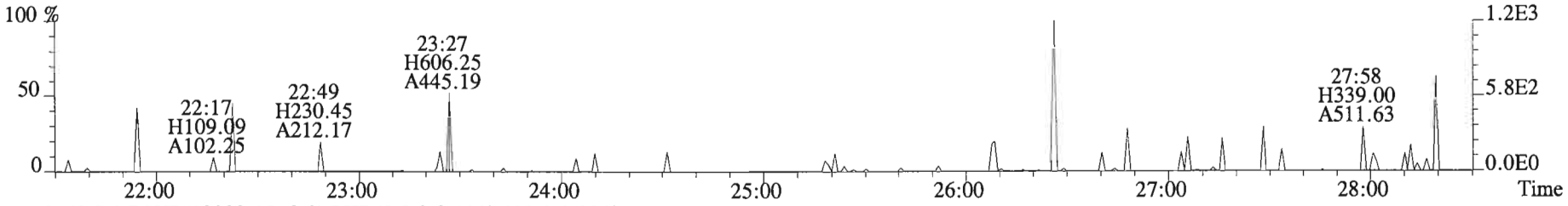
317.9389 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



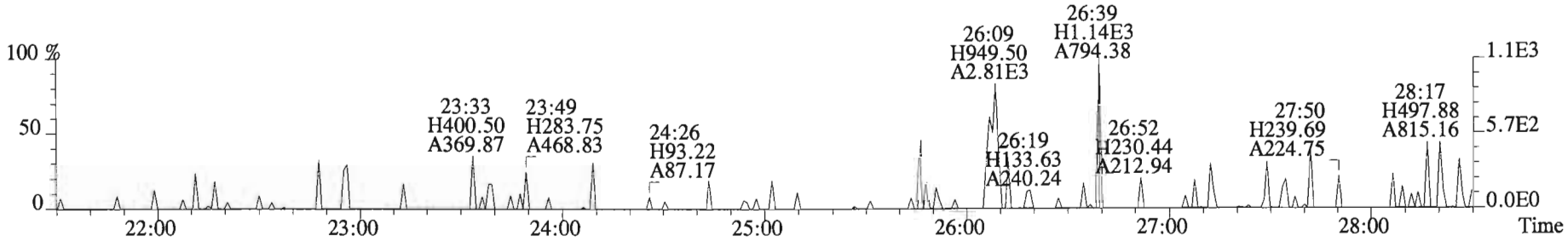
375.8364 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



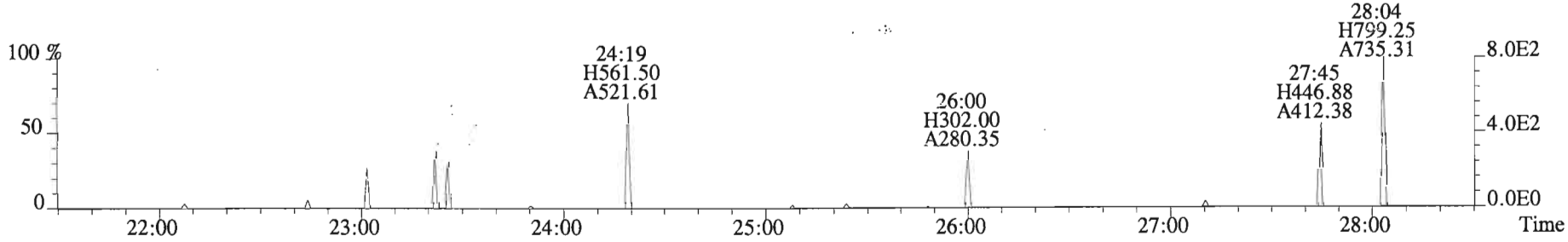
File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



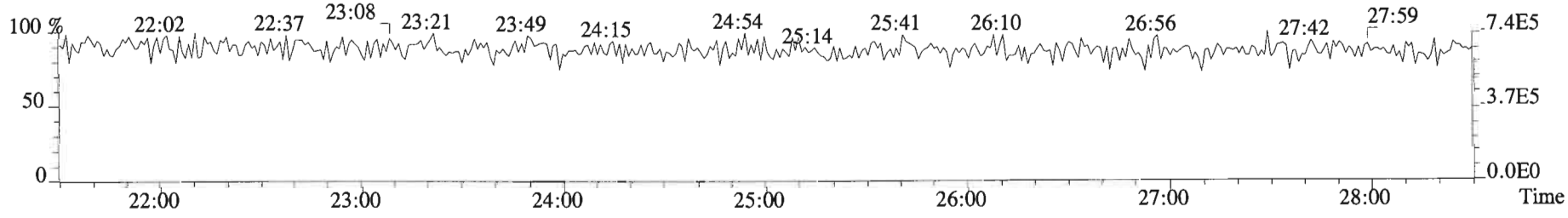
341.8568 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



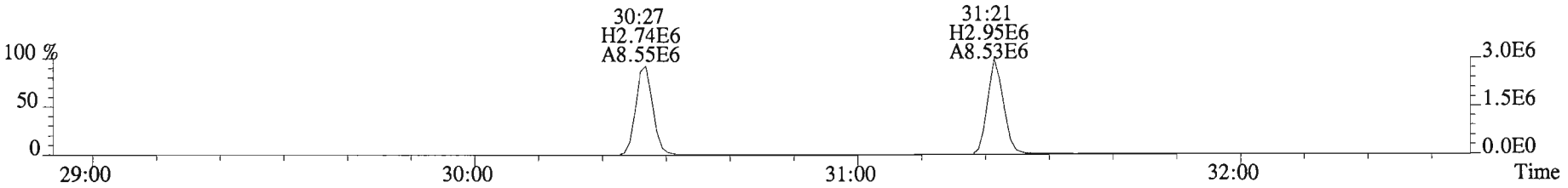
409.7974 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



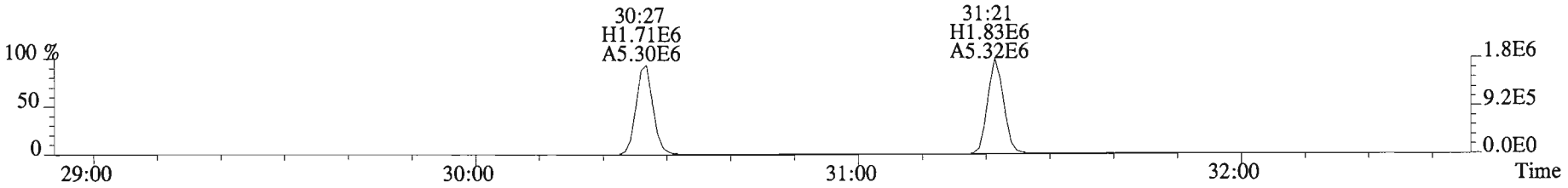
316.9824 S:9



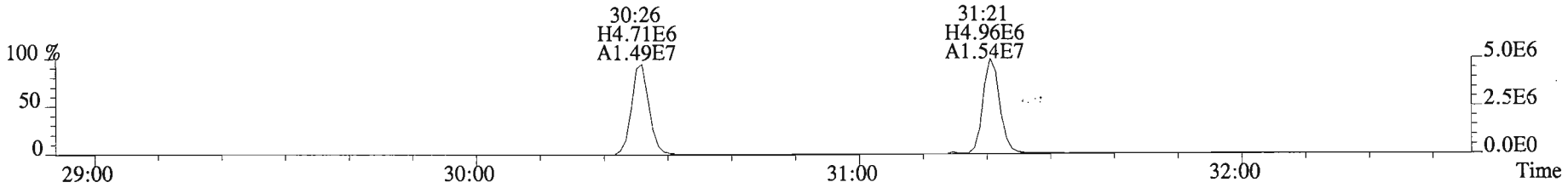
File:150311D1 #1-251 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



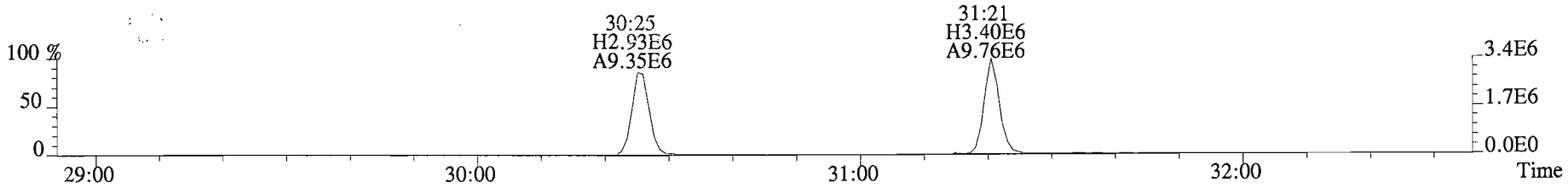
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



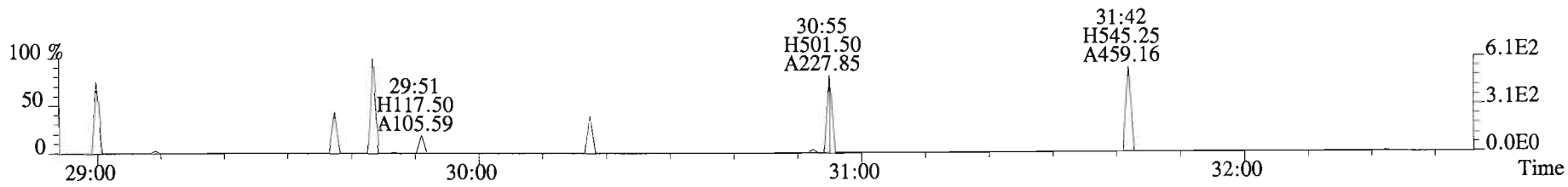
351.9000 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

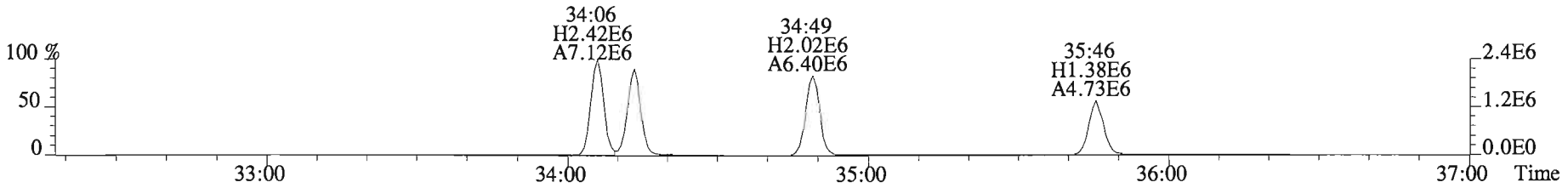


409.7974 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

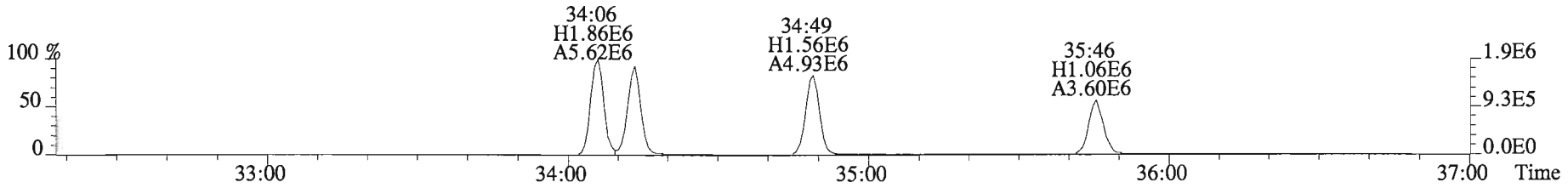


File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5

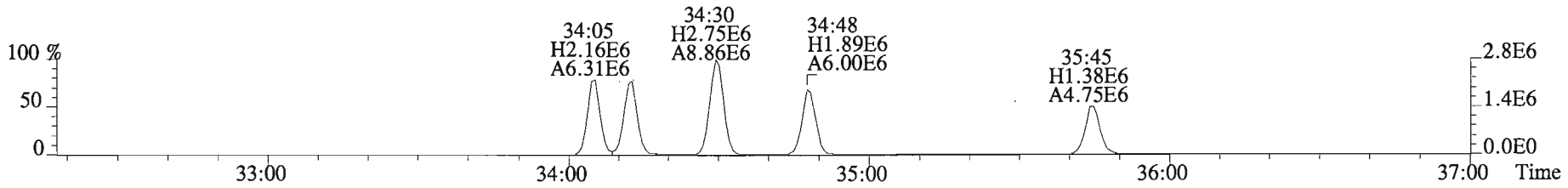
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



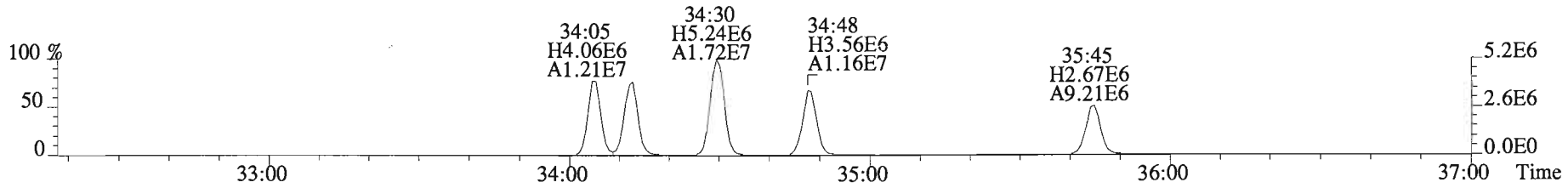
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



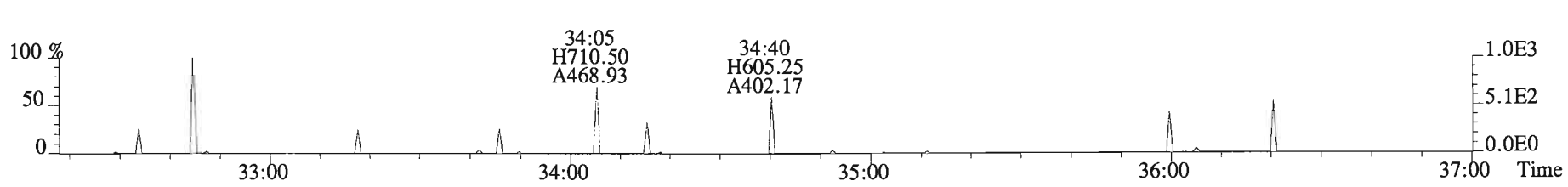
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



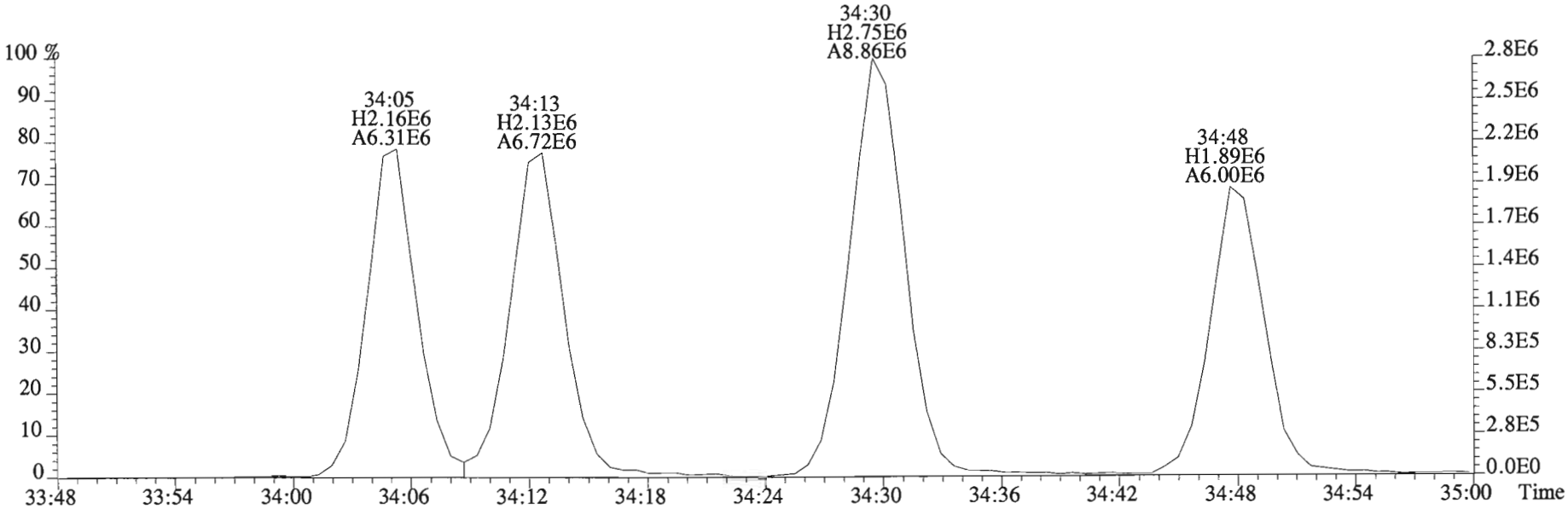
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



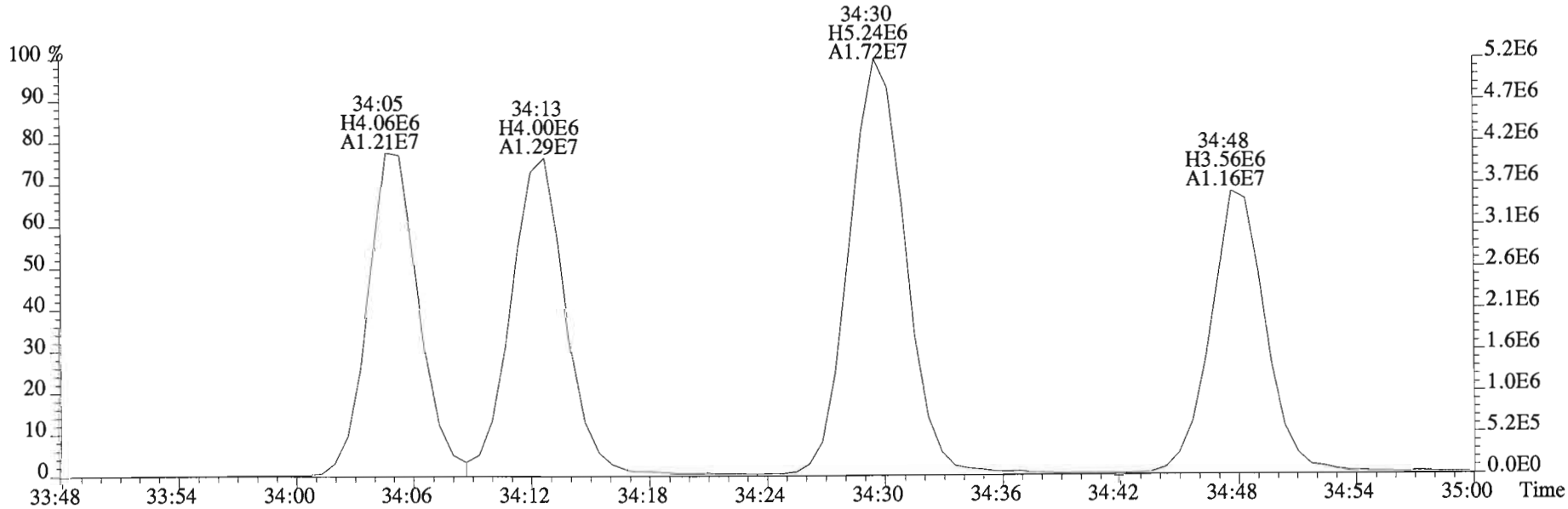
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



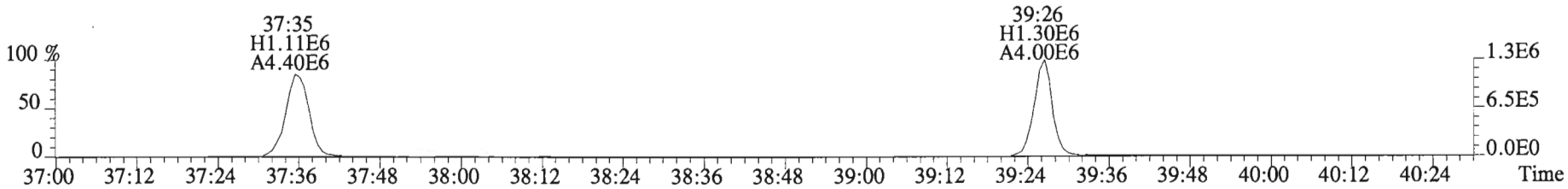
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



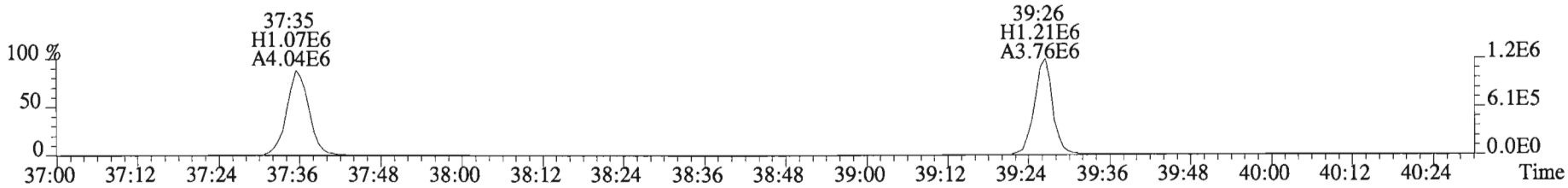
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



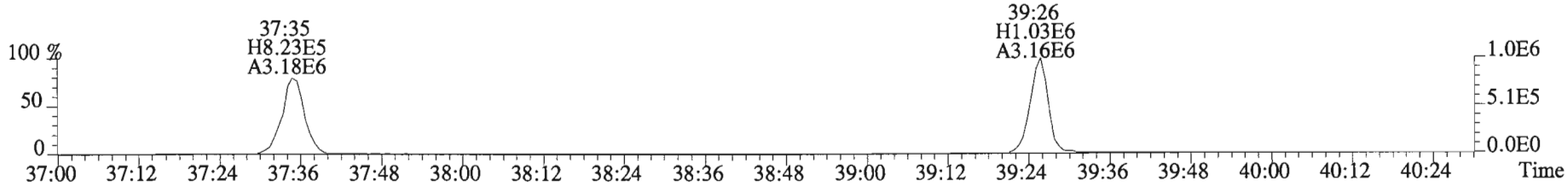
File:150311D1 #1-326 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



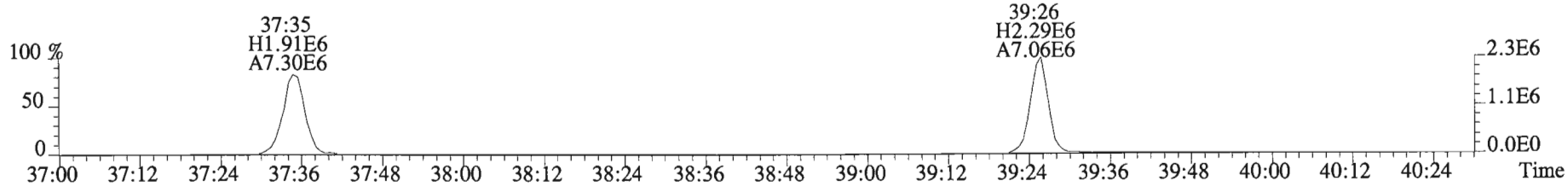
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



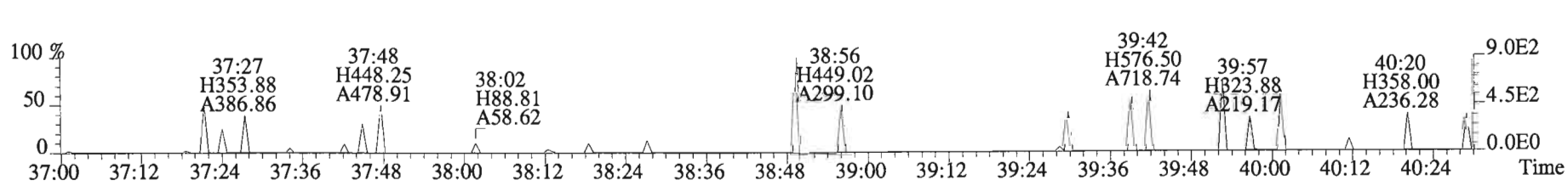
417.8253 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



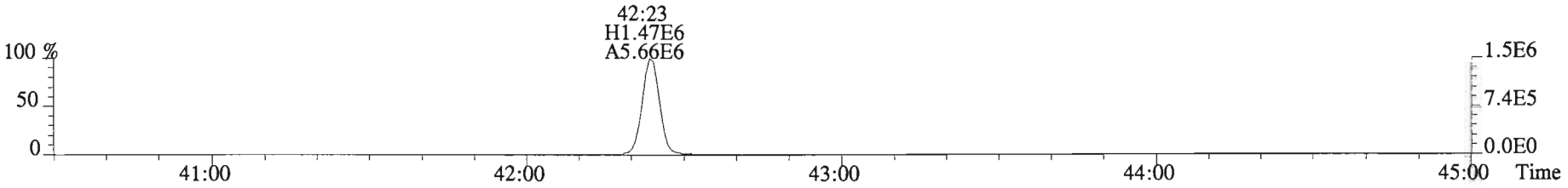
419.8220 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



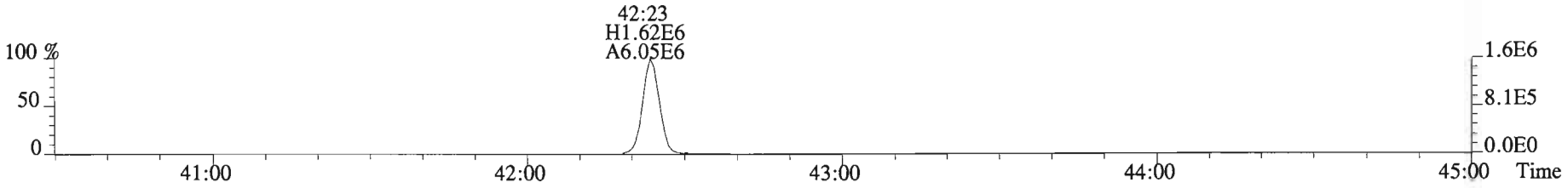
479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



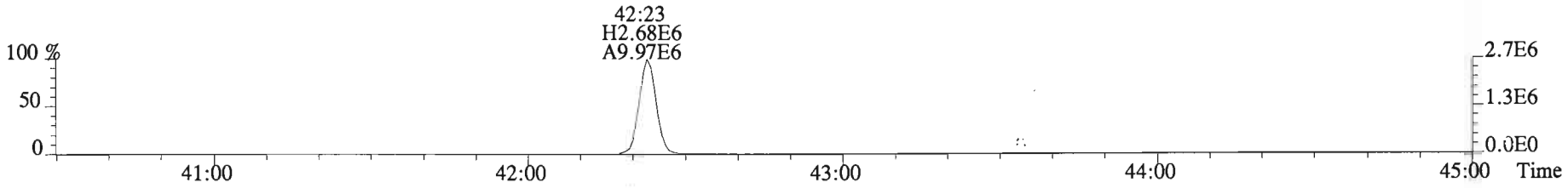
File:150311D1 #1-389 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



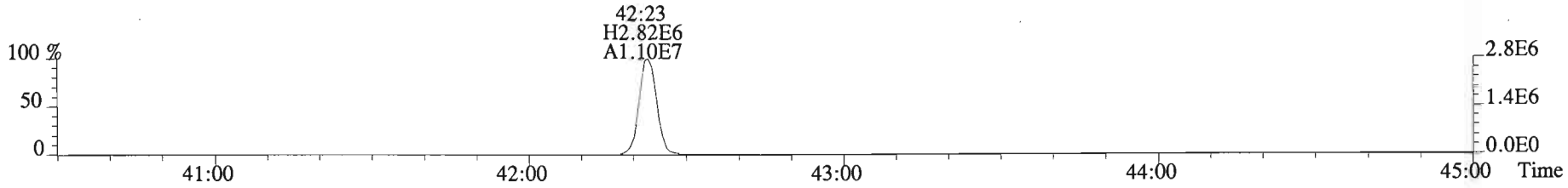
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



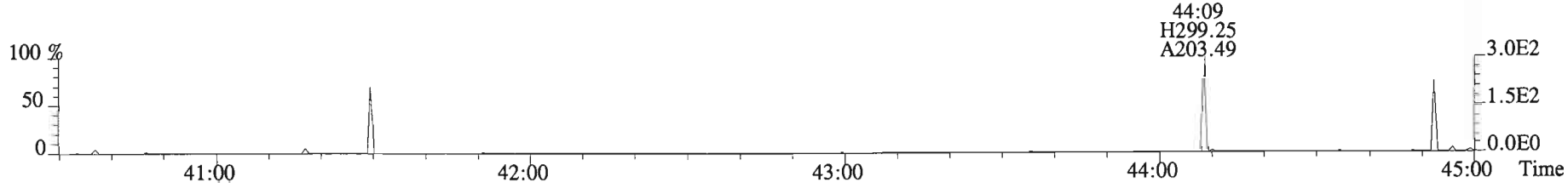
453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Method Blank Filename: 150318D1 S:5 Acq:18-MAR-15 14:03:58 ConCal: ST150318D1-1

Lab ID: B5C0067-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: ST150318D1-2

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotF	*	*		471	2.5	1.73
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotF	*	*		366	2.5	1.45
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF	*	*		340	2.5	2.28
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF	*	*		340	2.5	2.42
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		340	2.5	2.45
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.10	NotF	*	*		858	2.5	5.98
	OCDD	1.51e+04	0.89	y	0.95	42:10	1.000	6.3799		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotF	*	*		532	2.5	1.43
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotF	*	*		615	2.5	1.82
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotF	*	*		615	2.5	2.00
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF	*	*		1170	2.5	2.10
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		459	2.5	0.863
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF	*	*		459	2.5	1.13
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		459	2.5	1.68
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.61	NotF	*	*		956	2.5	3.37
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		511	2.5	1.91
	OCDF	*	*	n	1.10	NotF	*	*		684	2.5	4.52
IS	13C-2,3,7,8-TCDD	7.75e+06	0.78	y	1.06	26:57	1.022	1168.5				
IS	13C-1,2,3,7,8-PeCDD	7.12e+06	0.66	y	1.18	31:38	1.200	966.53				
IS	13C-1,2,3,4,7,8-HxCDD	5.53e+06	1.27	y	0.72	34:57	1.014	967.46				
IS	13C-1,2,3,6,7,8-HxCDD	5.73e+06	1.25	y	0.74	35:04	1.017	980.31				
IS	13C-1,2,3,7,8,9-HxCDD	6.37e+06	1.26	y	0.85	35:22	1.025	939.48				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.01e+06	1.08	y	0.65	38:53	1.128	965.83				
IS	13C-OCDD	1.00e+07	0.88	y	0.76	42:09	1.222	1649.8				
IS	13C-2,3,7,8-TCDF	1.16e+07	0.74	y	0.92	26:07	0.991	1115.4				
IS	13C-1,2,3,7,8-PeCDF	1.26e+07	1.53	y	0.92	30:25	1.154	1203.5				
IS	13C-2,3,4,7,8-PeCDF	1.23e+07	1.61	y	0.93	31:20	1.189	1157.5				
IS	13C-1,2,3,4,7,8-HxCDF	9.49e+06	0.51	y	0.98	34:04	0.988	1218.3				
IS	13C-1,2,3,6,7,8-HxCDF	1.06e+07	0.52	y	1.08	34:12	0.992	1233.8				
IS	13C-2,3,4,6,7,8-HxCDF	8.16e+06	0.50	y	1.03	34:47	1.009	1001.8				
IS	13C-1,2,3,7,8,9-HxCDF	6.79e+06	0.50	y	0.86	35:44	1.036	992.77				
IS	13C-1,2,3,4,6,7,8-HpCDF	6.17e+06	0.44	y	0.72	37:34	1.089	1076.4				
IS	13C-1,2,3,4,7,8,9-HpCDF	5.11e+06	0.42	y	0.70	39:25	1.143	923.52				
IS	13C-OCDF	1.20e+07	0.89	y	0.85	42:22	1.229	1784.0				
C/Up	37Cl-2,3,7,8-TCDD	5.42e+06			1.12	26:58	1.023	775.51				
RS/RT	13C-1,2,3,4-TCDD	1.25e+07	0.79	y	1.00	26:21	*	2000.0				
RS	13C-1,2,3,4-TCDF	2.27e+07	0.75	y	1.00	24:50	*	2000.0				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.59e+07	0.51	y	1.00	34:29	*	2000.0				

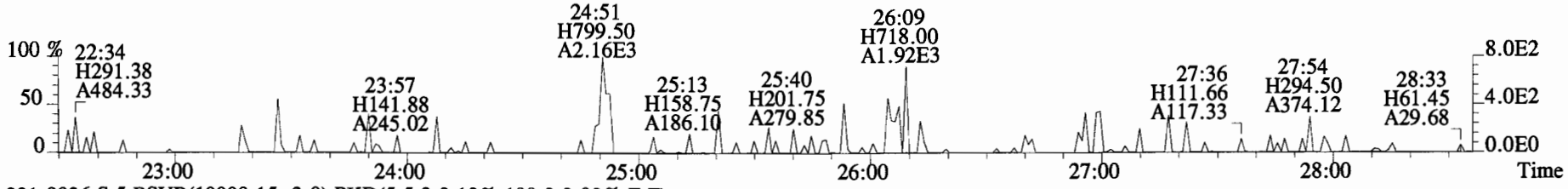
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		471	1.73
Total Penta-Dioxins	*	*		596	2.36
Total Hexa-Dioxins	*	*		541	3.80
Total Hepta-Dioxins	*	*		858	5.98
Total Tetra-Furans	*	*		532	1.43
Total Penta-Furans	0.0000	0.0000		1040	3.22
Total Hexa-Furans	*	*		1170	2.72
Total Hepta-Furans	*	*		956	3.47

	Rec	Qual
IS	58.4	
IS	48.3	
IS	48.4	
IS	49.0	
IS	47.0	
IS	48.3	
IS	41.2	
IS	55.8	
IS	60.2	
IS	57.9	
IS	60.9	
IS	61.7	
IS	50.1	
IS	49.6	
IS	53.8	
IS	46.2	
IS	44.6	
C/Up	96.9	

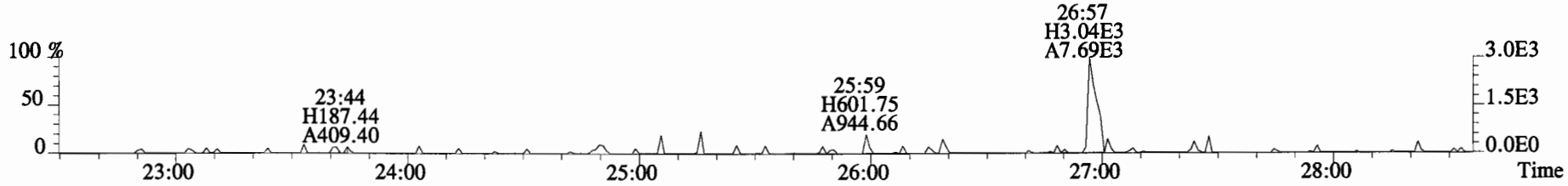
Integrations by Analyst: [signature] Date: 3/19/15

Reviewed by Analyst: [signature] Date: 3/20/15

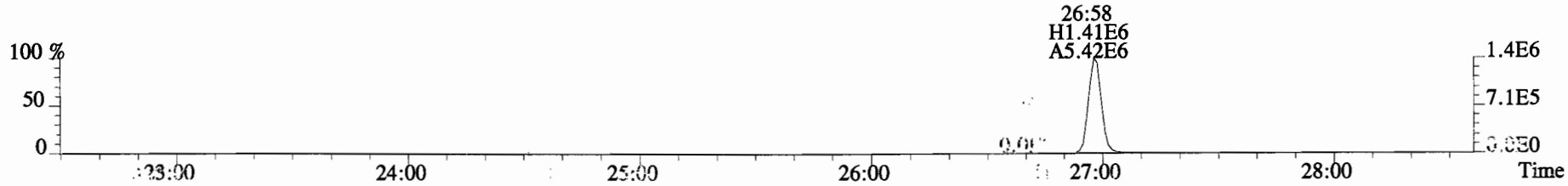
File:150318D1 #1-552 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



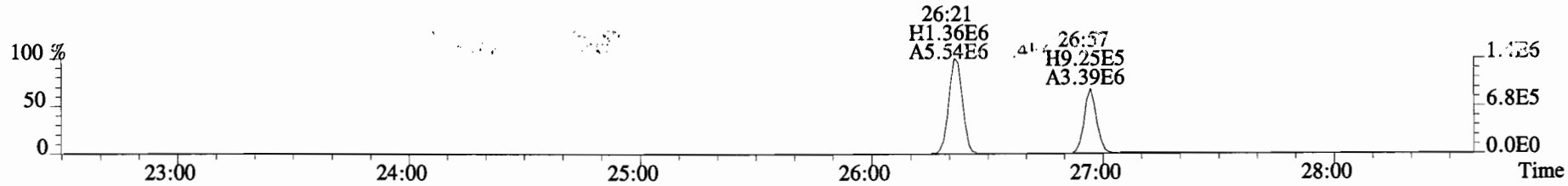
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



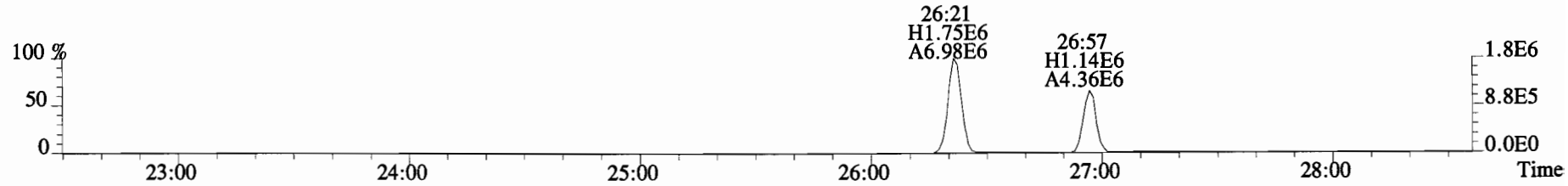
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



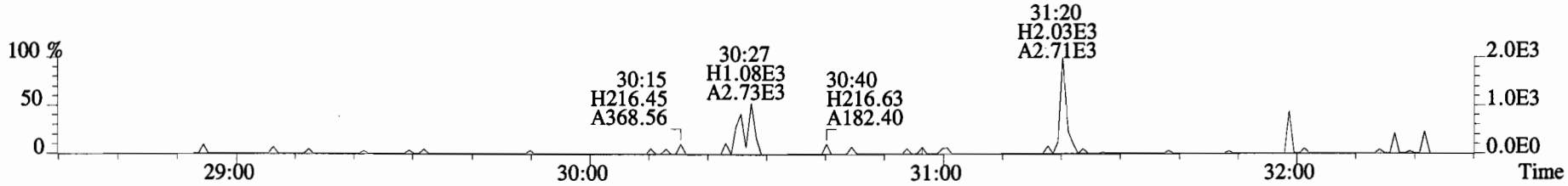
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



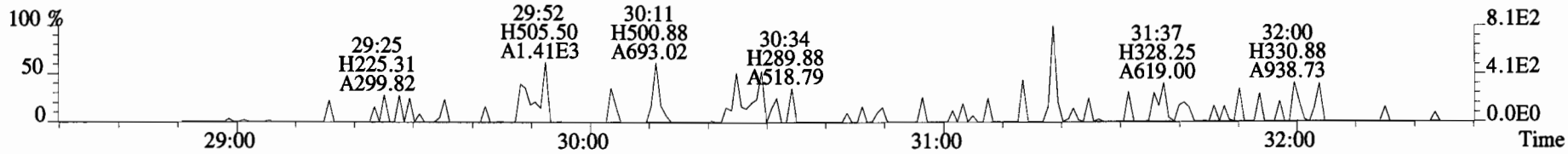
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



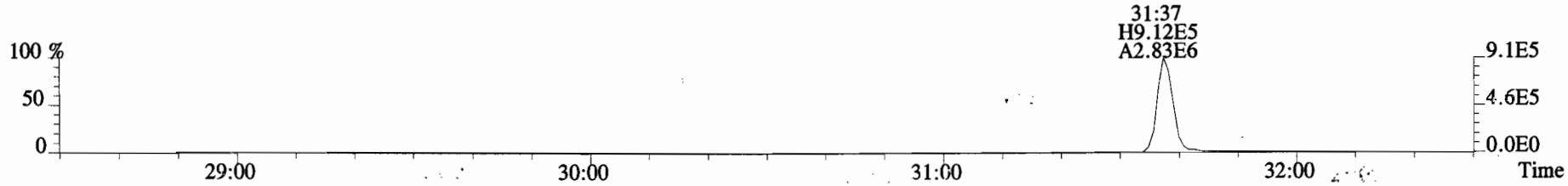
File:150318D1 #1-250 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



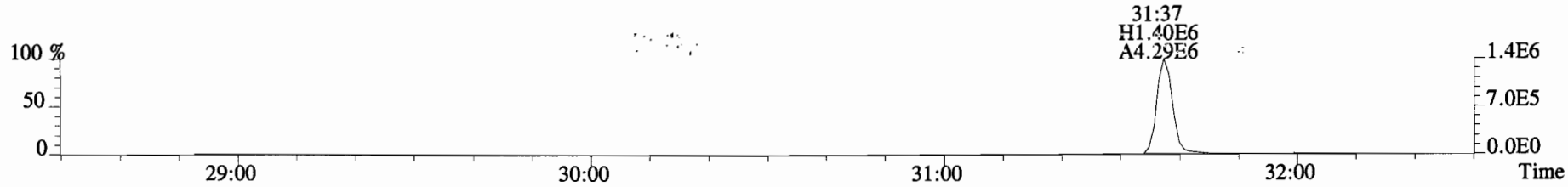
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



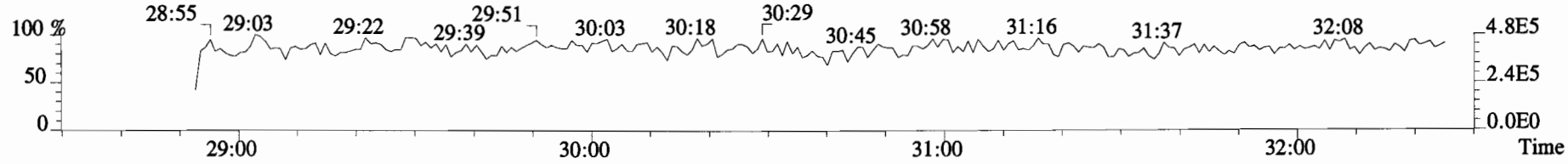
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

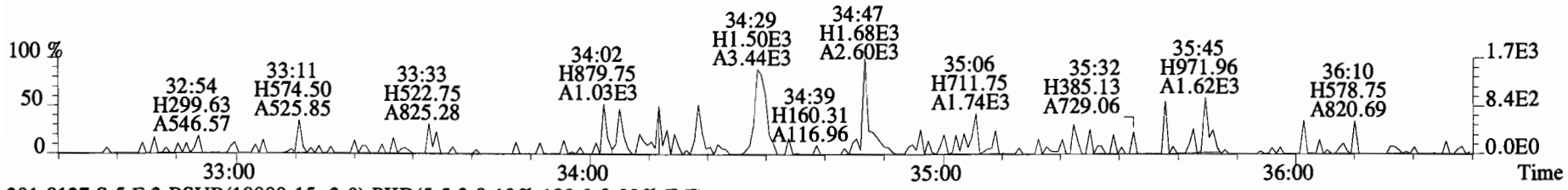


366.9792 S:5 F:2

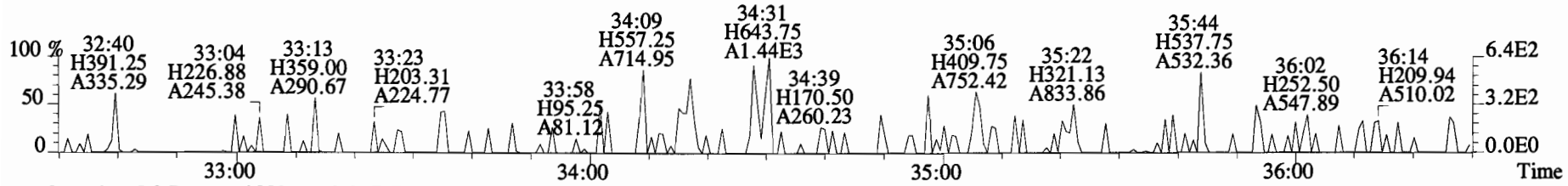


File:150318D1 #1-393 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5

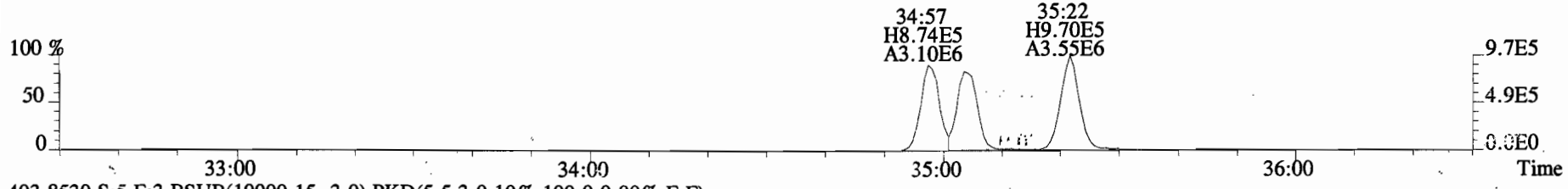
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



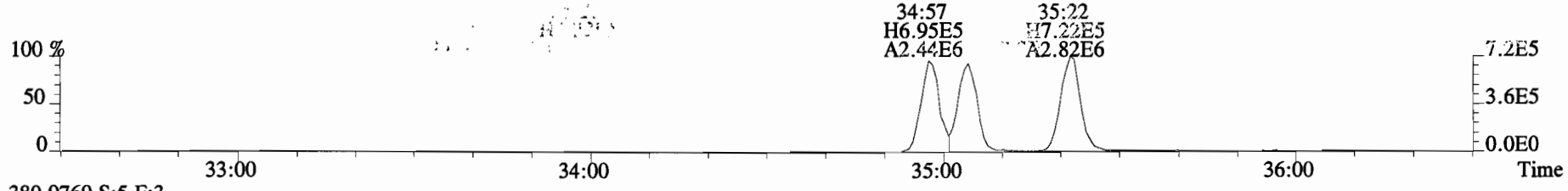
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



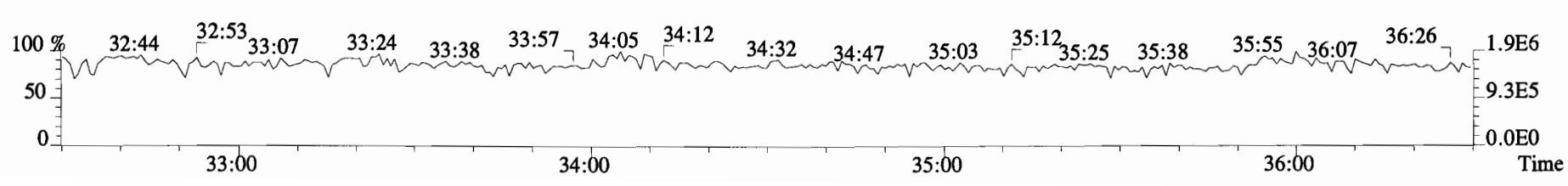
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



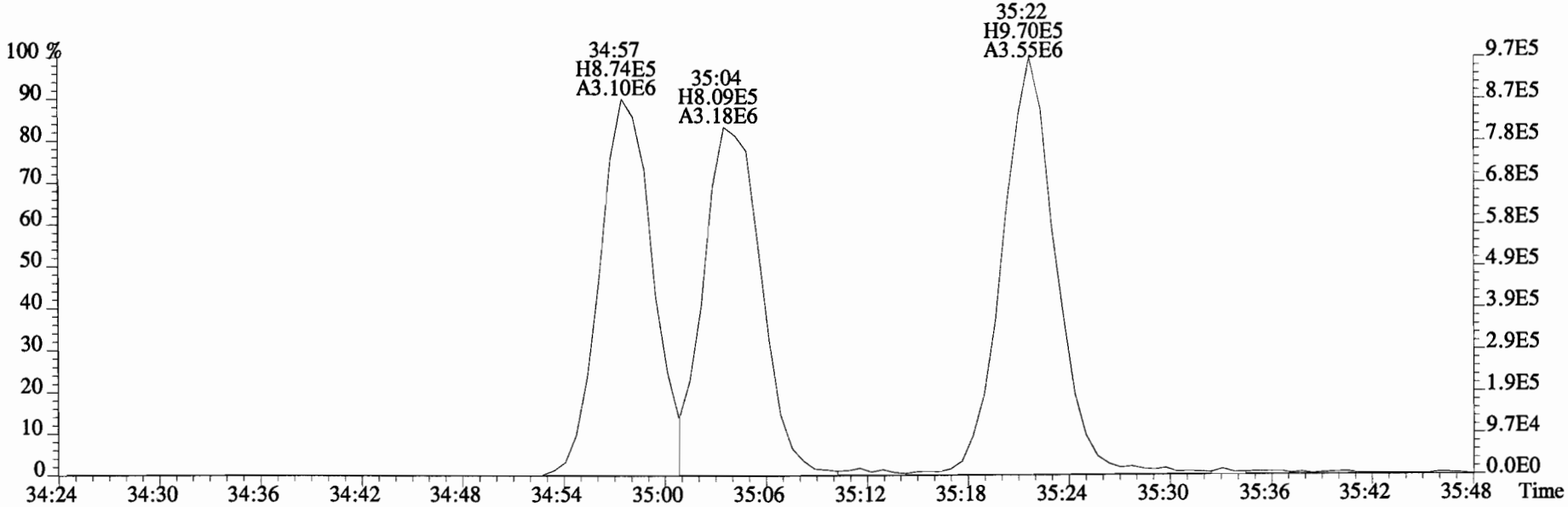
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



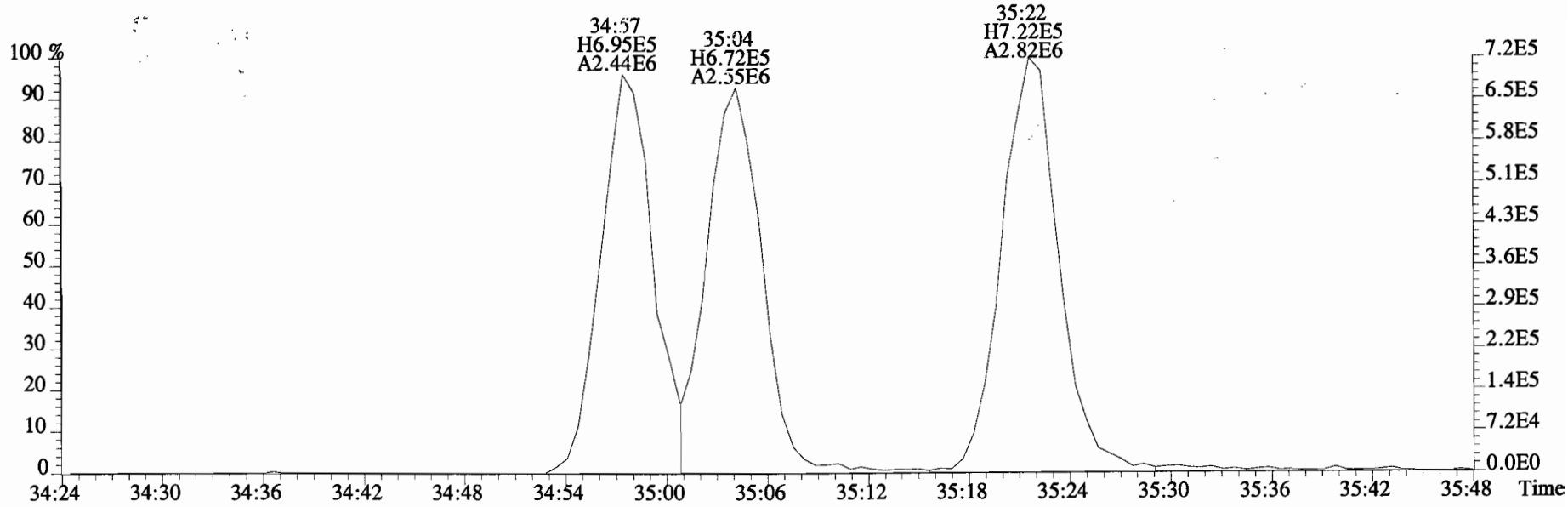
380.9760 S:5 F:3



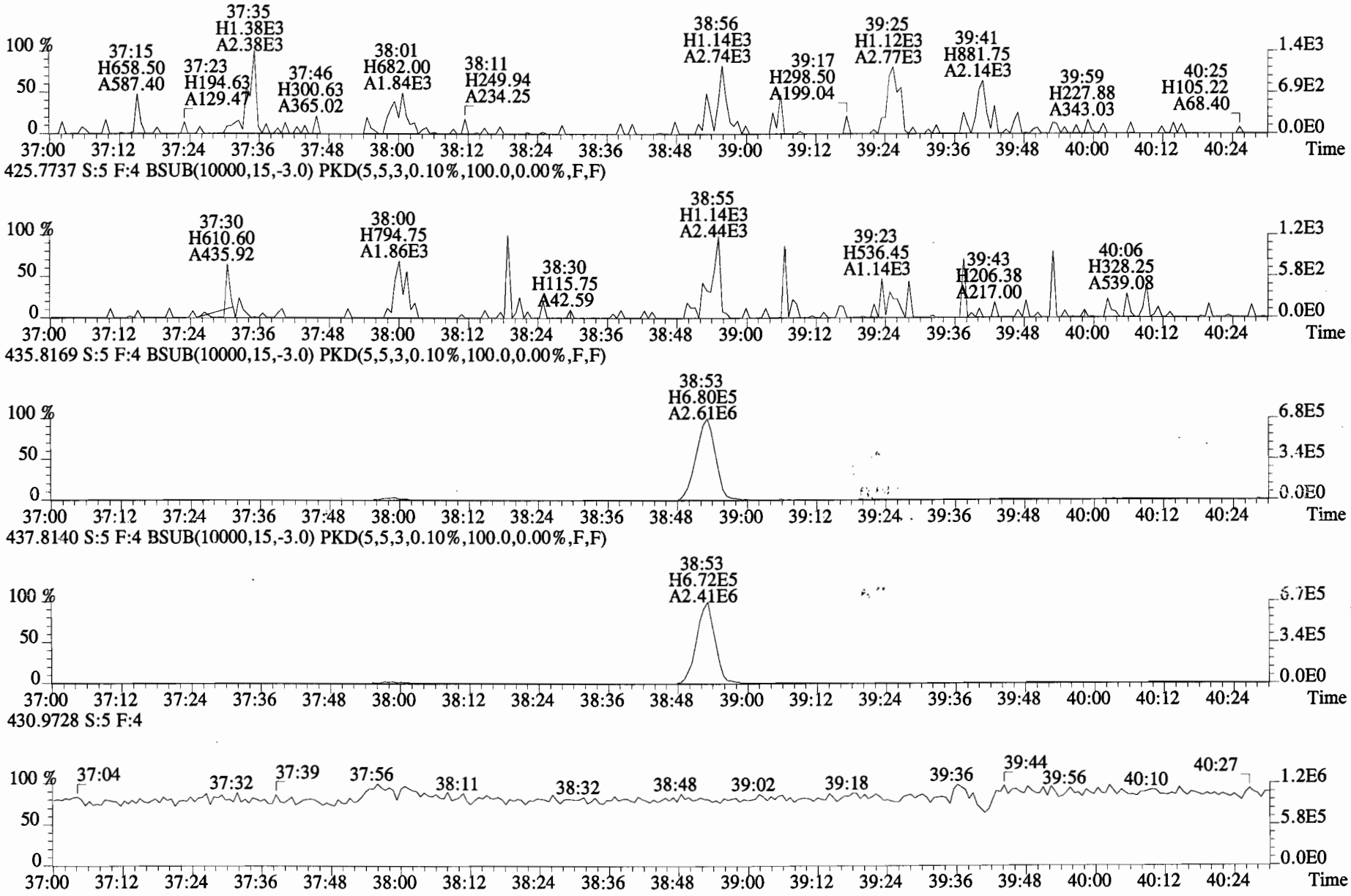
File:150318D1 #1-393 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

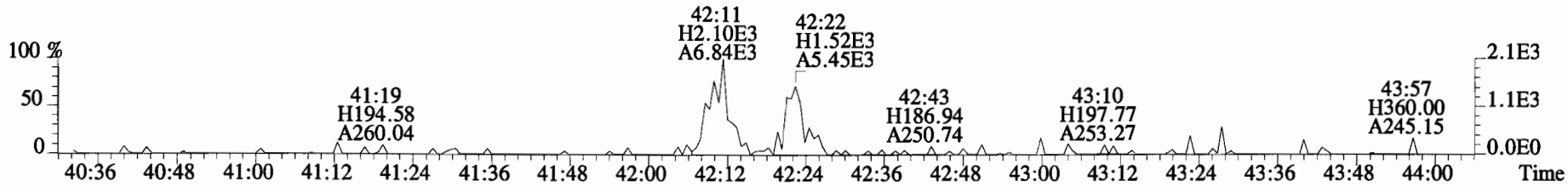


File:150318D1 #1-326 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5

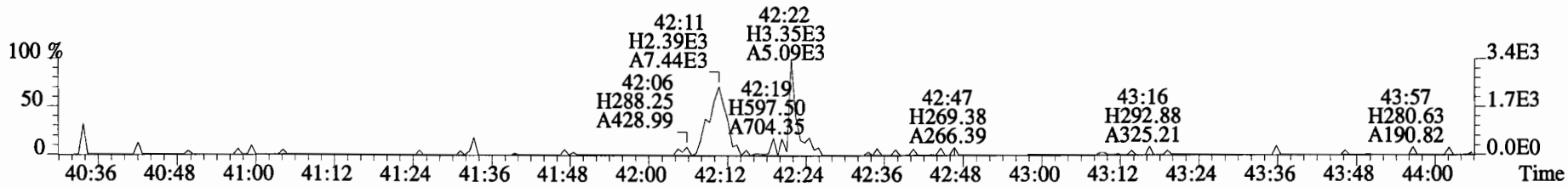


File:150318D1 #1-388 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5

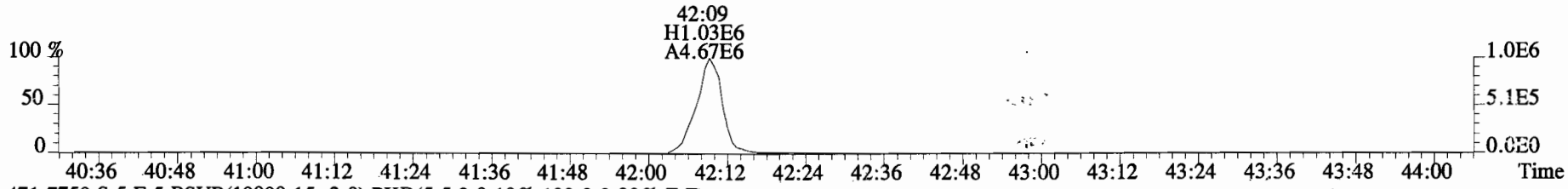
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



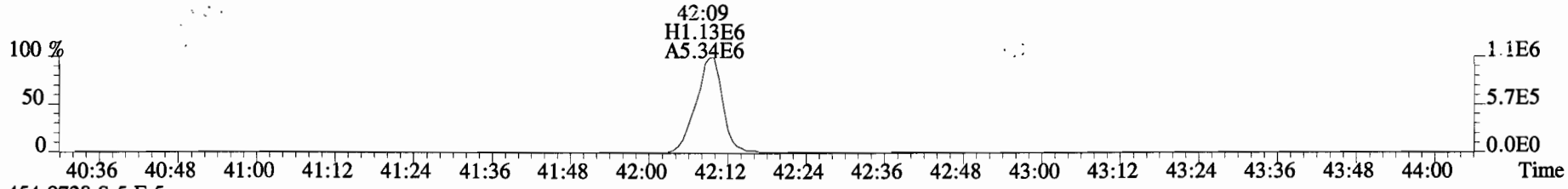
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



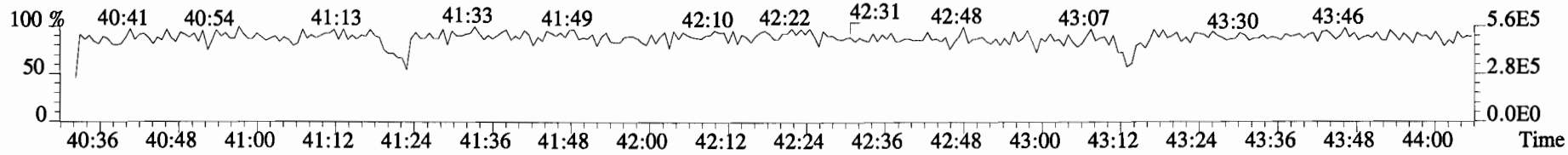
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



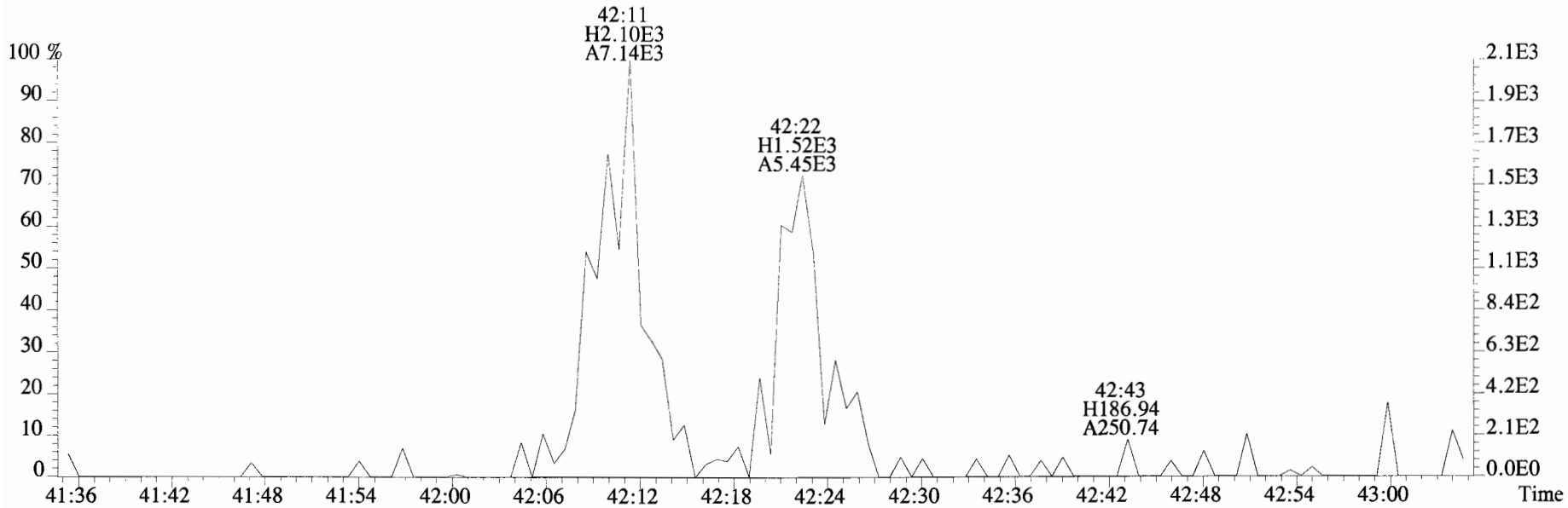
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



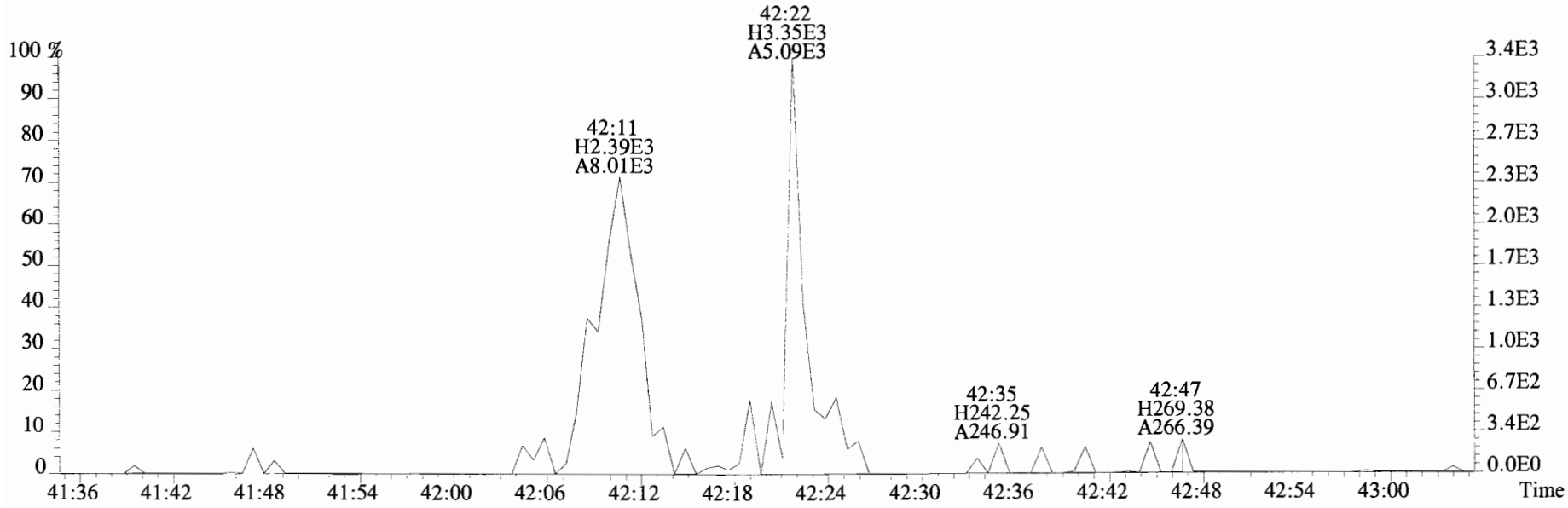
454.9728 S:5 F:5



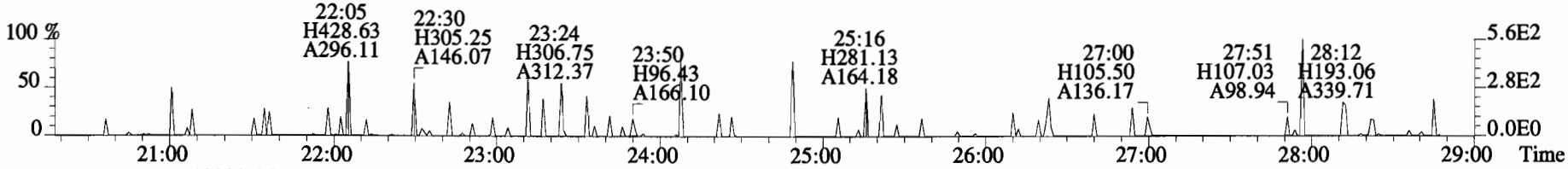
File:150318D1 #1-388 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



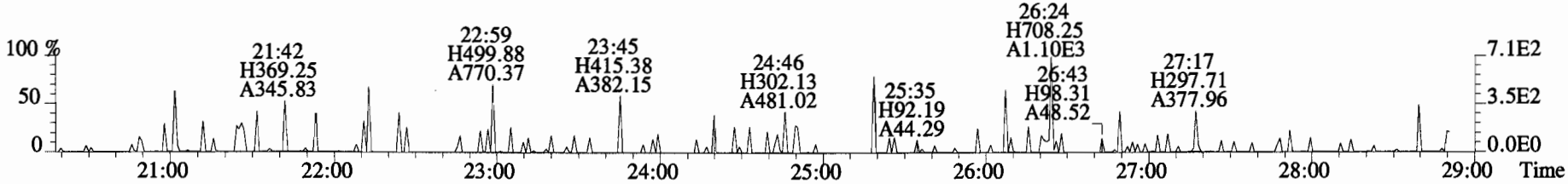
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



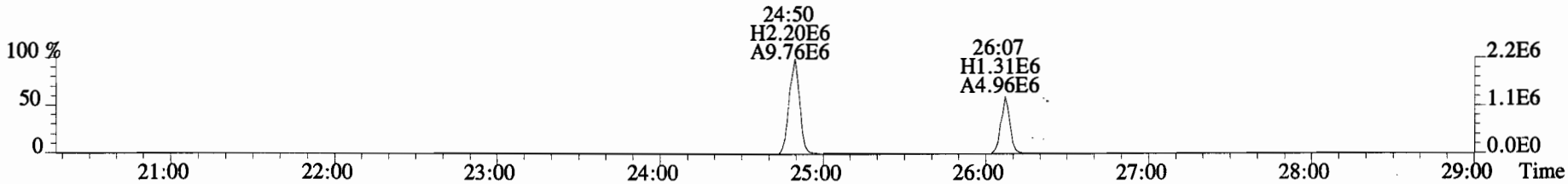
File:150318D1 #1-552 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



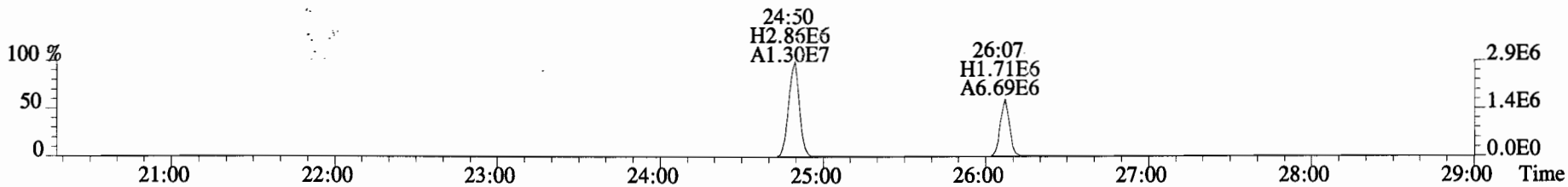
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



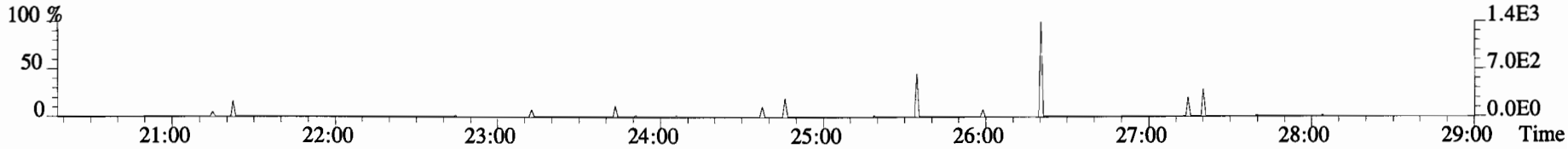
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



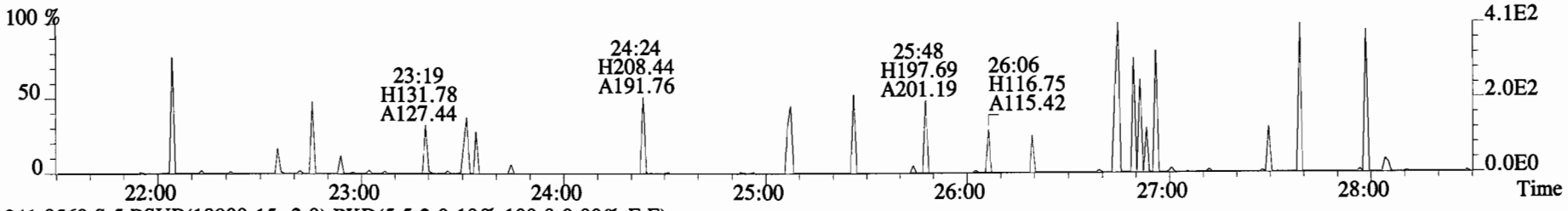
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



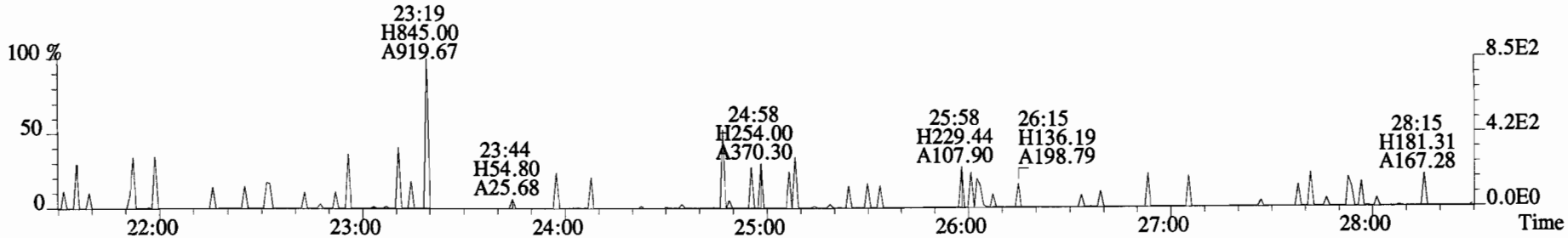
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



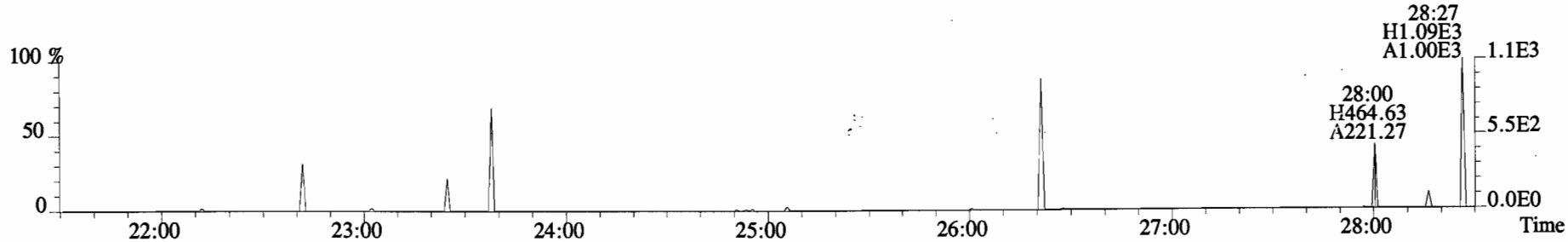
File:150318D1 #1-552 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



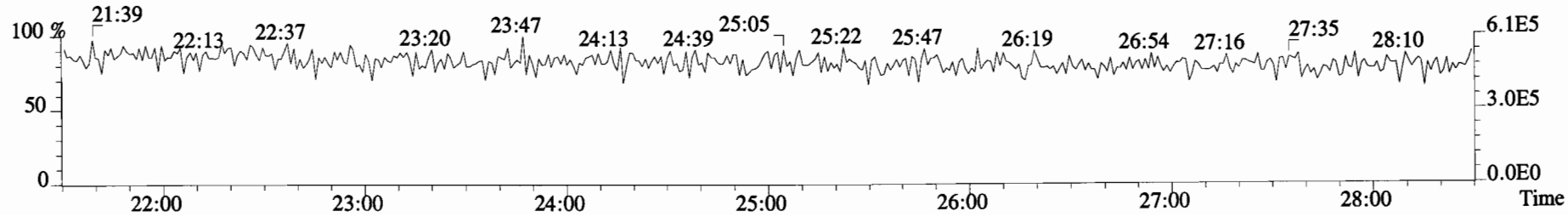
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



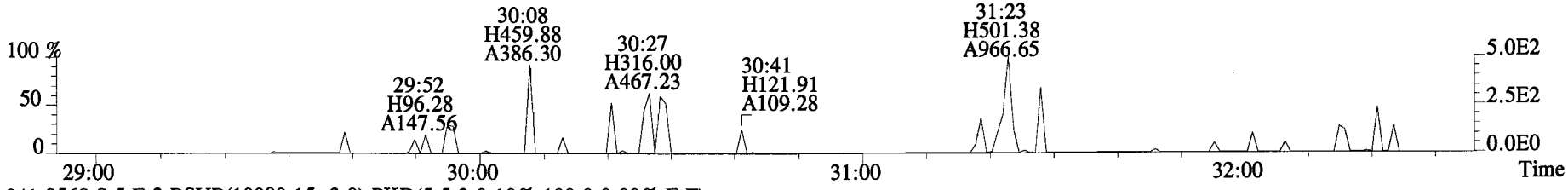
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



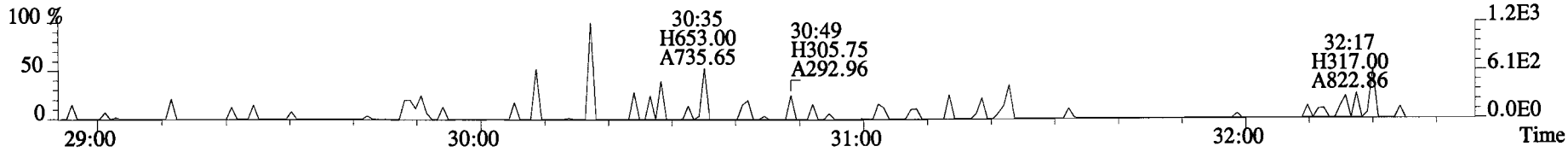
316.9824 S:5



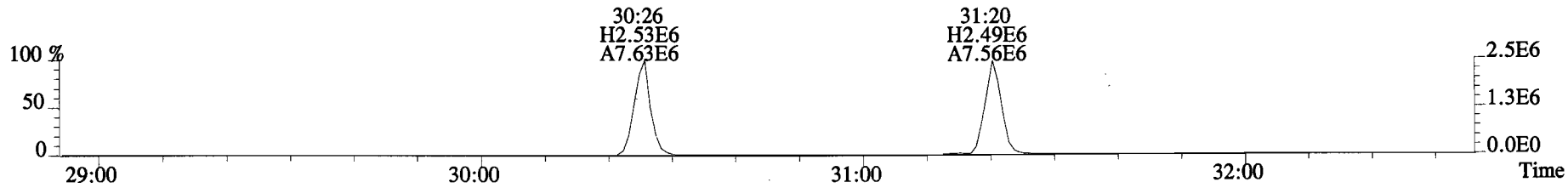
File:150318D1 #1-250 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



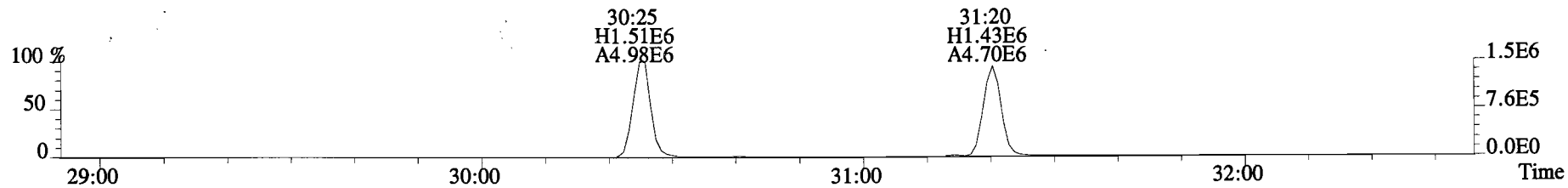
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



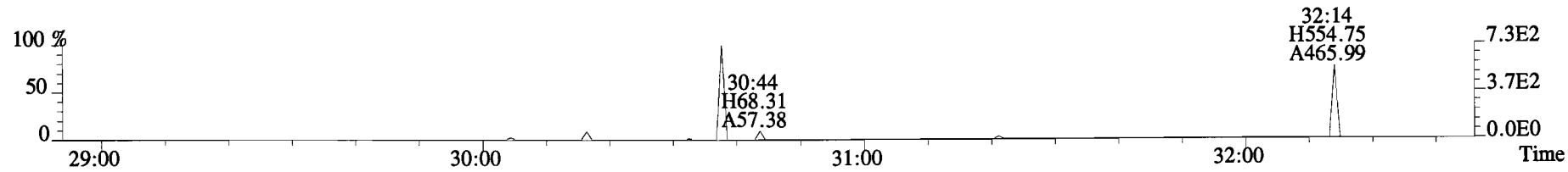
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



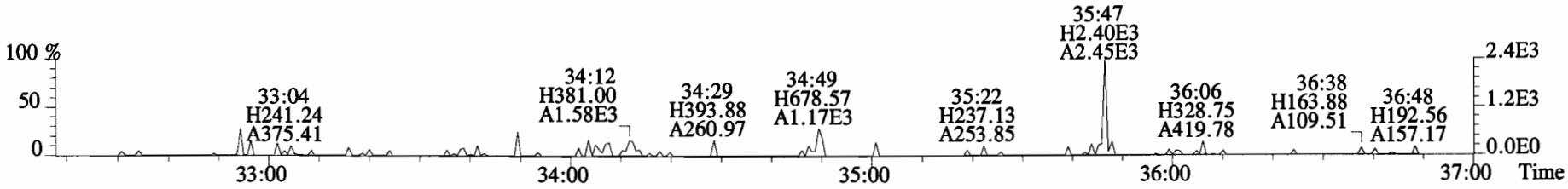
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



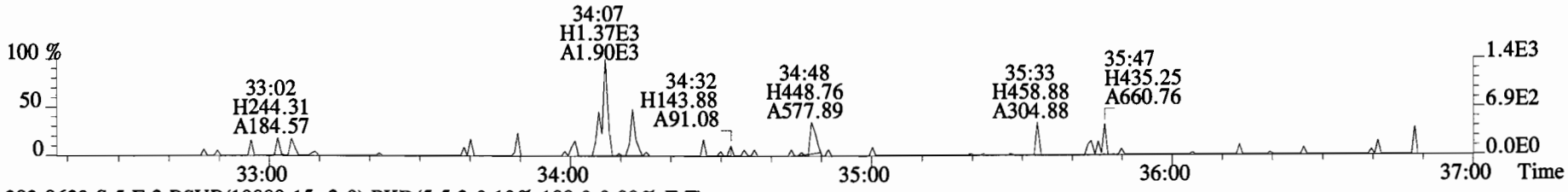
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



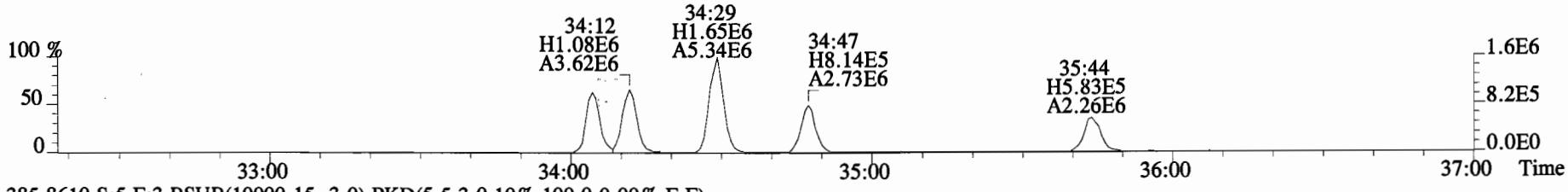
File:150318D1 #1-393 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



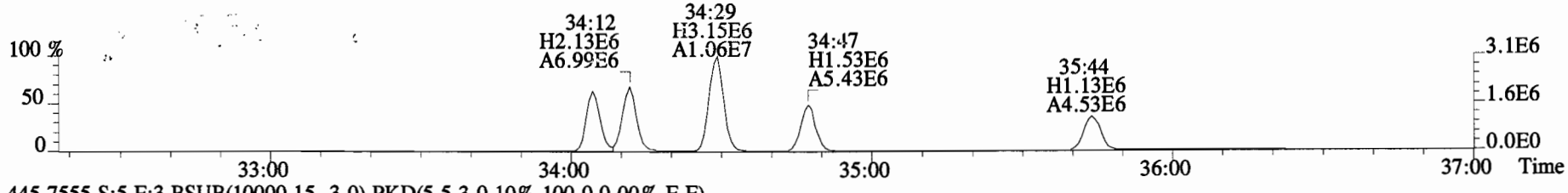
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



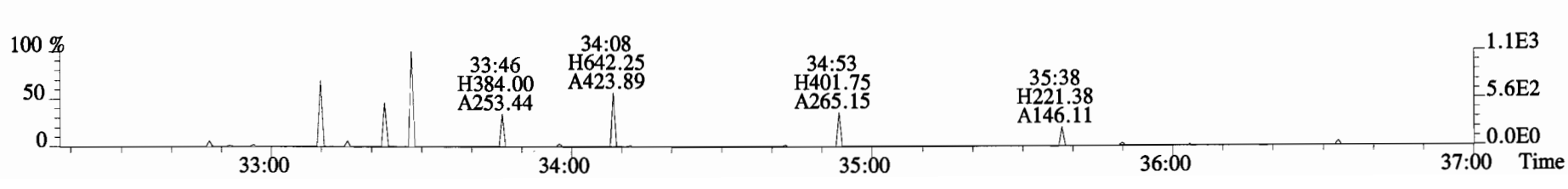
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



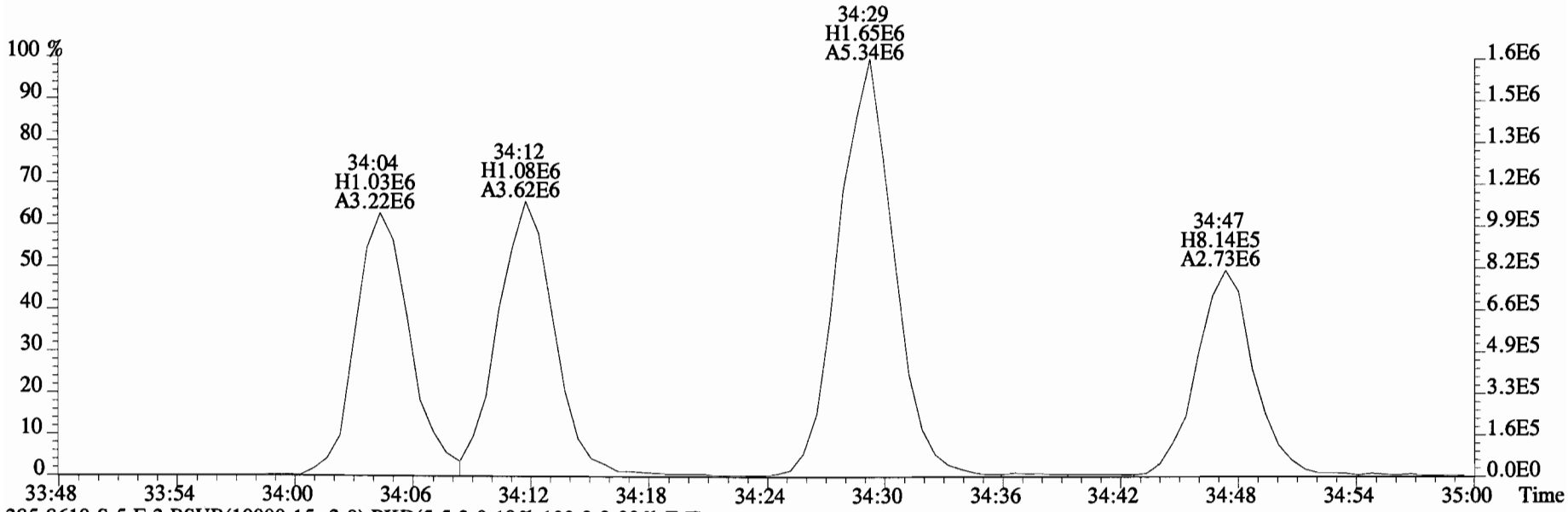
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



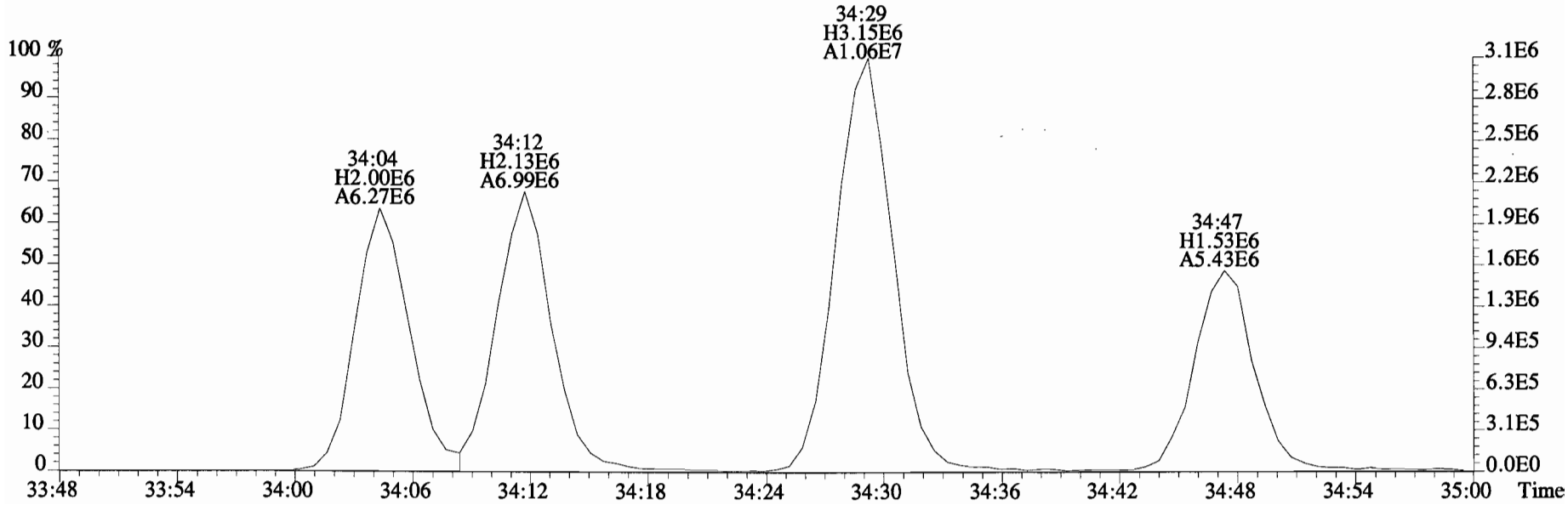
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



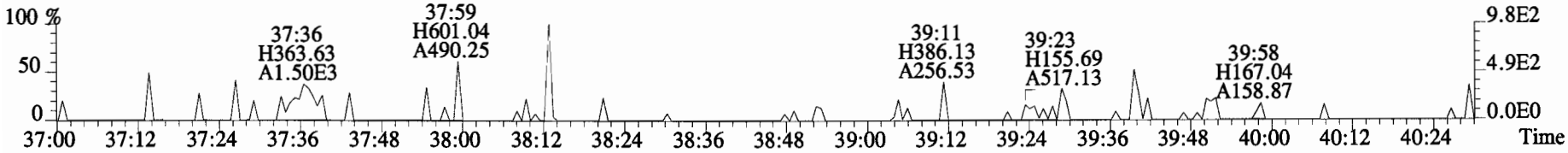
File:150318D1 #1-393 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



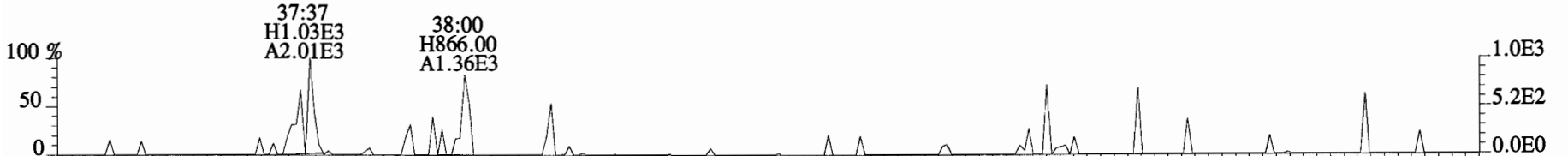
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



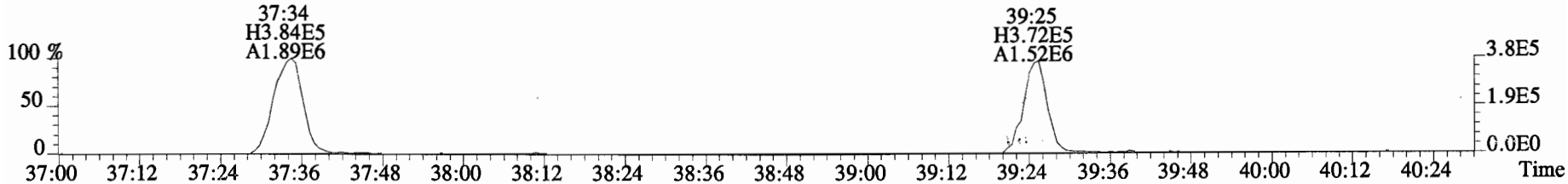
File:150318D1 #1-326 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



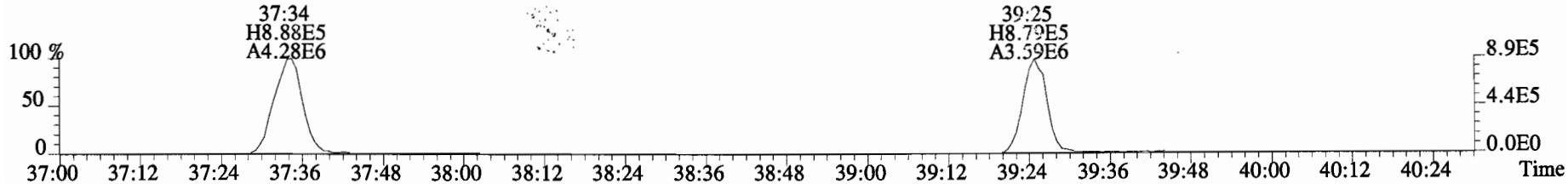
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



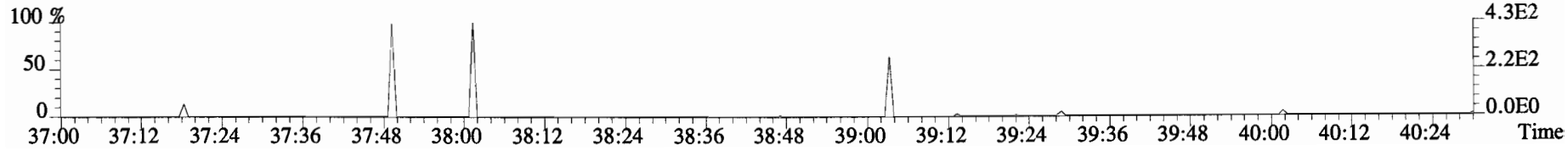
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



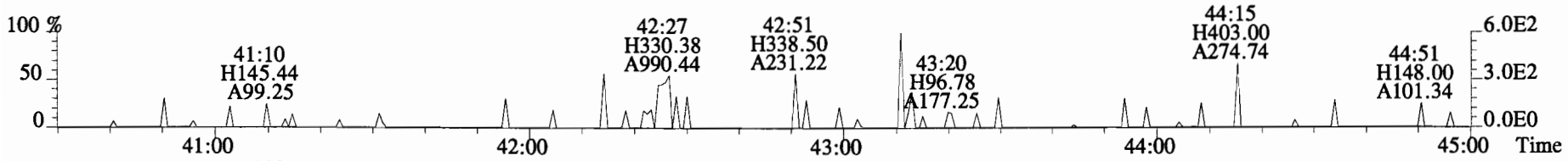
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



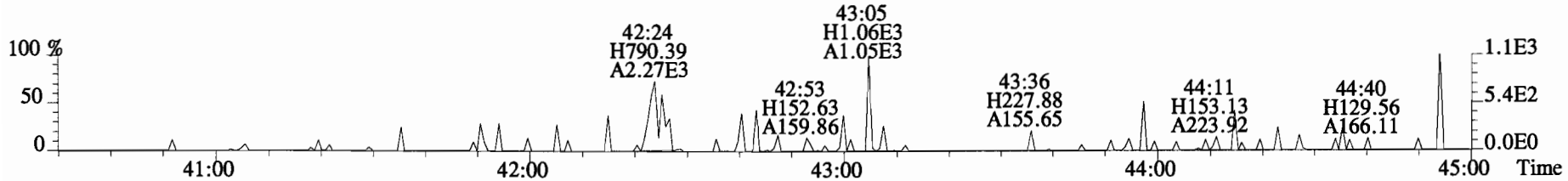
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



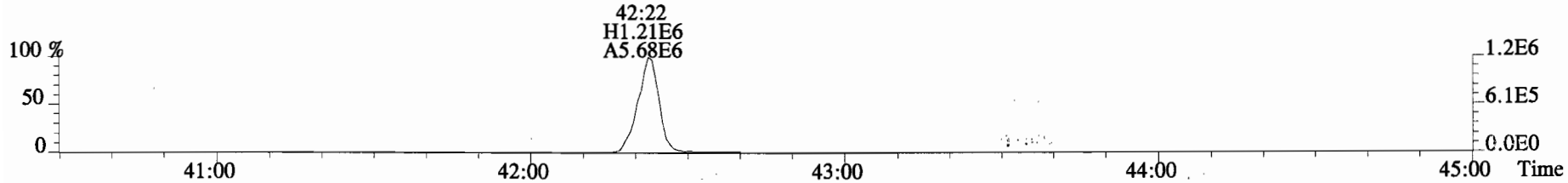
File:150318D1 #1-388 Acq:18-MAR-2015 14:03:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



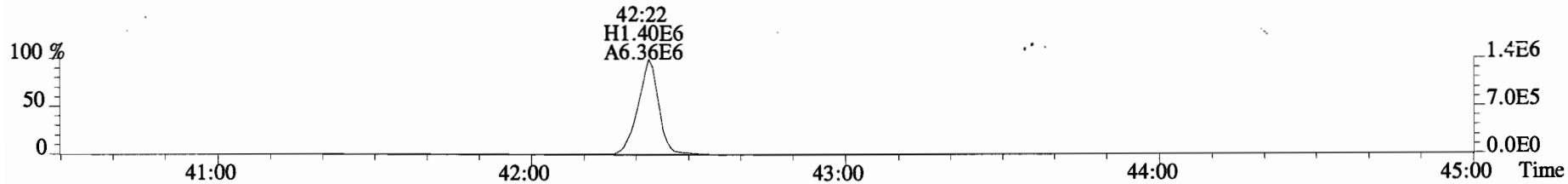
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



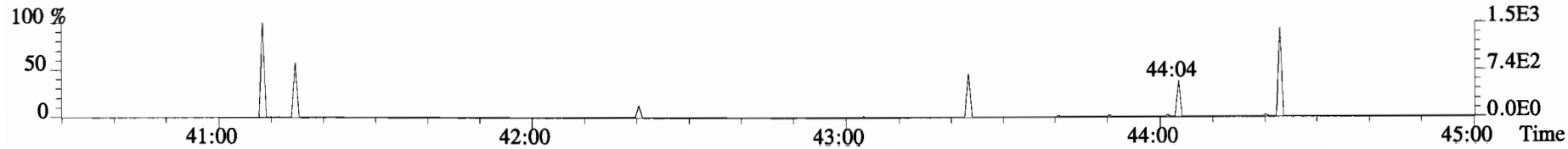
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Method QC Limits	Vista Historical Limits Aqueous Limits	Solid Limits
2,3,7,8-TCDD	4.34e+05	0.69 y	1.17	26:59	8.31	7.0 - 13	7.73 - 12.4	7.53 - 12.5
1,2,3,7,8-PeCDD	1.77e+06	0.60 y	0.91	31:40	46.9	35 - 65	37.8 - 57.5	40.4 - 65.1
1,2,3,4,7,8-HxCDD	1.40e+06	1.28 y	1.08	34:59	44.3	35 - 65	38.3 - 58.0	41.2 - 63.2
1,2,3,6,7,8-HxCDD	1.37e+06	1.30 y	1.06	35:05	46.4	35 - 65	38.7 - 57.0	40.8 - 65.2
1,2,3,7,8,9-HxCDD	1.35e+06	1.27 y	0.93	35:23	45.2	35 - 65	37.0 - 57.5	41.7 - 65.4
1,2,3,4,6,7,8-HpCDD	1.26e+06	1.04 y	1.10	38:54	46.5	35 - 65	39.0 - 58.5	21.3 - 87.7
OCDD	2.08e+06	0.89 y	0.95	42:11	93.9	70 - 130	83.2 - 126	0 - 400
2,3,7,8-TCDF	6.16e+05	0.85 y	1.07	26:09	8.26	7.0 - 13	7.65 - 12.4	7.82 - 12.0
1,2,3,7,8-PeCDF	3.80e+06	1.60 y	1.07	30:27	43.7	35 - 65	41.4 - 64.9	39.6 - 65.6
2,3,4,7,8-PeCDF	3.78e+06	1.60 y	1.03	31:22	46.6	35 - 65	36.9 - 56.0	40.2 - 66.5
1,2,3,4,7,8-HxCDF	3.42e+06	1.29 y	1.38	34:06	46.2	35 - 65	33.4 - 59.4	39.4 - 63.9
1,2,3,6,7,8-HxCDF	3.15e+06	1.26 y	1.26	34:13	45.7	35 - 65	38.7 - 59.0	41.1 - 62.9
2,3,4,6,7,8-HxCDF	2.75e+06	1.28 y	1.29	34:49	44.7	35 - 65	39.3 - 58.0	40.9 - 63.3
1,2,3,7,8,9-HxCDF	1.83e+06	1.31 y	1.19	35:46	45.7	35 - 65	38.8 - 58.0	39.5 - 64.9
1,2,3,4,6,7,8-HpCDF	1.80e+06	1.11 y	1.61	37:36	44.7	35 - 65	40.2 - 63.1	31.9 - 74.7
1,2,3,4,7,8,9-HpCDF	1.84e+06	1.11 y	1.53	39:26	43.8	35 - 65	40.5 - 62.2	39.8 - 63.8
OCDF	3.01e+06	0.93 y	1.10	42:24	95.1	70 - 130	80.0 - 120	69.8 - 136
						% Rec	Method QC Limits	Aqueous Limits	Solid Limits
13C-2,3,7,8-TCDD	4.45e+06	0.78 y	1.06	26:57	50.0	50.0	40 - 135	48.8 - 105	53.0 - 115
13C-1,2,3,7,8-PeCDD	4.16e+06	0.62 y	1.18	31:38	42.1	42.1	40 - 135	49.8 - 109	61.4 - 117
13C-1,2,3,4,7,8-HxCDD	2.92e+06	1.32 y	0.72	34:58	34.4	34.4	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,6,7,8-HxCDD	2.77e+06	1.23 y	0.74	35:05	31.9	31.9	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,7,8,9-HxCDD	3.20e+06	1.23 y	0.85	35:22	31.8	31.8	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,4,6,7,8-HpCDD	2.46e+06	1.01 y	0.65	38:53	31.9	31.9	40 - 135	51.2 - 106	67.6 - 117
13C-OCDD	4.68e+06	0.87 y	0.76	42:10	52.0	26.0	40 - 135	30.8 - 113	14.0 - 147
13C-2,3,7,8-TCDF	6.96e+06	0.75 y	0.92	26:07	47.2	47.2	40 - 135	50.3 - 103	56.0 - 112
13C-1,2,3,7,8-PeCDF	8.10e+06	1.56 y	0.92	30:26	54.6	54.6	40 - 135	49.3 - 105	58.6 - 116
13C-2,3,4,7,8-PeCDF	7.85e+06	1.58 y	0.93	31:21	52.4	52.4	40 - 135	53.3 - 109	62.9 - 118
13C-1,2,3,4,7,8-HxCDF	5.35e+06	0.49 y	0.98	34:05	46.3	46.3	40 - 135	44.5 - 110	55.9 - 118
13C-1,2,3,6,7,8-HxCDF	5.48e+06	0.52 y	1.08	34:12	43.0	43.0	40 - 135	45.8 - 111	58.6 - 118
13C-2,3,4,6,7,8-HxCDF	4.77e+06	0.51 y	1.03	34:48	39.4	39.4	40 - 135	50.8 - 110	63.7 - 115
13C-1,2,3,7,8,9-HxCDF	3.38e+06	0.52 y	0.86	35:44	33.3	33.3	40 - 135	48.6 - 108	63.3 - 112
13C-1,2,3,4,6,7,8-HpCDF	2.50e+06	0.44 y	0.72	37:34	29.3	29.3	40 - 135	45.9 - 104	55.0 - 117
13C-1,2,3,4,7,8,9-HpCDF	2.75e+06	0.42 y	0.70	39:25	33.4	33.4	40 - 135	41.1 - 114	53.2 - 122
13C-OCDF	5.76e+06	0.92 y	0.85	42:23	57.6	28.8	40 - 135	36.8 - 109	48.3 - 109
37Cl-2,3,7,8-TCDD	3.78e+06		1.12	26:59	40.3	101	40 - 135	51.1 - 117	49.6 - 106
13C-1,2,3,4-TCDD	8.40e+06	0.79 y	1.00	26:22	100				
13C-1,2,3,4-TCDF	1.61e+07	0.76 y	1.00	24:50	100				
13C-1,2,3,4,6,9-HxCDF	1.18e+07	0.50 y	1.00	34:30	100				

Analyst: M

Date: 3/19/15

FORM 8A

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0067-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150318D1-2

Ext. Date: 3-16-15 Shift: Day Analysis Date: 18-MAR-15 Time: 11:37:16

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	8.31	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	46.9	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	44.3	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	46.4	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	45.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	46.5	35.0 - 70.0
OCDD	100	93.9	78.0 - 144.0
2,3,7,8-TCDF	10	8.26	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	43.7	40.0 - 67.0
2,3,4,7,8-PeCDF	50	46.6	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	46.2	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	45.7	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	44.7	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	45.7	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	44.7	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	43.8	39.0 - 69.0
OCDF	100	95.1	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MJ

Date: 3/19/15

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0067-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150318D1-2

Ext. Date: 3-16-15 Shift: Day Analysis Date: 18-MAR-15 Time: 11:37:16

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	50.0	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	42.1	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	34.4	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	31.9	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	31.8	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	31.9	26.0 - 166.0
13C-OCDD	200	52.0	26.0 - 397.0
13C-2,3,7,8-TCDF	100	47.2	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	54.6	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	52.4	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	46.3	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	43.0	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	39.4	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	33.3	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	29.3	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	33.4	20.0 - 186.0
13C-OCDF	200	57.6	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	40.3	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: M

Date: 3/19/15

Client ID: OPR Filename: 150318D1 S:2 Acq:18-MAR-15 11:37:16 ConCal: ST150318D1-1
Lab ID: B5C0067-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: ST150318D1-2

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	4.34e+05	0.69 y	1.17	26:59	1.001	8.3127		*	2.5	*
	1,2,3,7,8-PeCDD	1.77e+06	0.60 y	0.91	31:40	1.001	46.858		*	2.5	*
	1,2,3,4,7,8-HxCDD	1.40e+06	1.28 y	1.08	34:59	1.000	44.340		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.37e+06	1.30 y	1.06	35:05	1.000	46.393		*	2.5	*
	1,2,3,7,8,9-HxCDD	1.35e+06	1.27 y	0.93	35:23	1.001	45.235		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.26e+06	1.04 y	1.10	38:54	1.000	46.478		*	2.5	*
	OCDD	2.08e+06	0.89 y	0.95	42:11	1.000	93.860		*	2.5	*
	2,3,7,8-TCDF	6.16e+05	0.85 y	1.07	26:09	1.001	8.2628		*	2.5	*
	1,2,3,7,8-PeCDF	3.80e+06	1.60 y	1.07	30:27	1.001	43.718		*	2.5	*
	2,3,4,7,8-PeCDF	3.78e+06	1.60 y	1.03	31:22	1.000	46.580		*	2.5	*
	1,2,3,4,7,8-HxCDF	3.42e+06	1.29 y	1.38	34:06	1.001	46.161		*	2.5	*
	1,2,3,6,7,8-HxCDF	3.15e+06	1.26 y	1.26	34:13	1.001	45.656		*	2.5	*
	2,3,4,6,7,8-HxCDF	2.75e+06	1.28 y	1.29	34:49	1.000	44.688		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.83e+06	1.31 y	1.19	35:46	1.001	45.698		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.80e+06	1.11 y	1.61	37:36	1.001	44.676		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.84e+06	1.11 y	1.53	39:26	1.000	43.811		*	2.5	*
	OCDF	3.01e+06	0.93 y	1.10	42:24	1.000	95.102		*	2.5	*
IS	13C-2,3,7,8-TCDD	4.45e+06	0.78 y	1.06	26:57	1.022	50.037				
IS	13C-1,2,3,7,8-PeCDD	4.16e+06	0.62 y	1.18	31:38	1.200	42.076				
IS	13C-1,2,3,4,7,8-HxCDD	2.92e+06	1.32 y	0.72	34:58	1.014	34.446				
IS	13C-1,2,3,6,7,8-HxCDD	2.77e+06	1.23 y	0.74	35:05	1.017	31.940				
IS	13C-1,2,3,7,8,9-HxCDD	3.20e+06	1.23 y	0.85	35:22	1.025	31.790				
IS	13C-1,2,3,4,6,7,8-HpCDD	2.46e+06	1.01 y	0.65	38:53	1.127	31.939				
IS	13C-OCDD	4.68e+06	0.87 y	0.76	42:10	1.222	51.953				
IS	13C-2,3,7,8-TCDF	6.96e+06	0.75 y	0.92	26:07	0.991	47.179				
IS	13C-1,2,3,7,8-PeCDF	8.10e+06	1.56 y	0.92	30:26	1.154	54.648				
IS	13C-2,3,4,7,8-PeCDF	7.85e+06	1.58 y	0.93	31:21	1.189	52.426				
IS	13C-1,2,3,4,7,8-HxCDF	5.35e+06	0.49 y	0.98	34:05	0.988	46.307				
IS	13C-1,2,3,6,7,8-HxCDF	5.48e+06	0.52 y	1.08	34:12	0.992	42.954				
IS	13C-2,3,4,6,7,8-HxCDF	4.77e+06	0.51 y	1.03	34:48	1.009	39.411				
IS	13C-1,2,3,7,8,9-HxCDF	3.38e+06	0.52 y	0.86	35:44	1.036	33.336				
IS	13C-1,2,3,4,6,7,8-HpCDF	2.50e+06	0.44 y	0.72	37:34	1.089	29.331				
IS	13C-1,2,3,4,7,8,9-HpCDF	2.75e+06	0.42 y	0.70	39:25	1.143	33.402				
IS	13C-OCDF	5.76e+06	0.92 y	0.85	42:23	1.229	57.565				
C/Up	37Cl-2,3,7,8-TCDD	3.78e+06		1.12	26:59	1.023	40.301				
RS/RT	13C-1,2,3,4-TCDD	8.40e+06	0.79 y	1.00	26:22	*	100.00				
RS	13C-1,2,3,4-TCDF	1.61e+07	0.76 y	1.00	24:50	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.18e+07	0.50 y	1.00	34:30	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	8.31	8.71		*	*
Total Penta-Dioxins	47.1	47.7		*	*
Total Hexa-Dioxins	136	137		*	*
Total Hepta-Dioxins	47.6	48.8		*	*
Total Tetra-Furans	8.36	8.47		*	*
Total Penta-Furans	90.967	92.322		*	*
Total Hexa-Furans	182	185		*	*
Total Hepta-Furans	90.0	91.8		*	*

	Rec	Qual
IS	50.0	
IS	42.1	
IS	34.4	
IS	31.9	
IS	31.8	
IS	31.9	
IS	26.0	
IS	47.2	
IS	54.6	
IS	52.4	
IS	46.3	
IS	43.0	
IS	39.4	
IS	33.3	
IS	29.3	
IS	33.4	
IS	28.8	
C/Up	101	

Integrations by Analyst: MJ Date: 3/19/15

Reviewed by Analyst: [illegible] Date: 3/20/15

Client ID: OPR Filename: 150318D1 S:2 Acq:18-MAR-15 11:37:16 ConCal: ST150318D1-1
Lab ID: B5C0067-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: ST150318D1-2

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	4.34e+05	0.69 y	1.17	26:59	1.001	166.25		*	2.5	*
	1,2,3,7,8-PeCDD	1.77e+06	0.60 y	0.91	31:40	1.001	937.15		*	2.5	*
	1,2,3,4,7,8-HxCDD	1.40e+06	1.28 y	1.08	34:59	1.000	886.80		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.37e+06	1.30 y	1.06	35:05	1.000	927.85		*	2.5	*
	1,2,3,7,8,9-HxCDD	1.35e+06	1.27 y	0.93	35:23	1.001	904.69		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	1.26e+06	1.04 y	1.10	38:54	1.000	929.56		*	2.5	*
	OCDD	2.08e+06	0.89 y	0.95	42:11	1.000	1877.2		*	2.5	*
	2,3,7,8-TCDF	6.16e+05	0.85 y	1.07	26:09	1.001	165.26		*	2.5	*
	1,2,3,7,8-PeCDF	3.80e+06	1.60 y	1.07	30:27	1.001	874.37		*	2.5	*
	2,3,4,7,8-PeCDF	3.78e+06	1.60 y	1.03	31:22	1.000	931.59		*	2.5	*
	1,2,3,4,7,8-HxCDF	3.42e+06	1.29 y	1.38	34:06	1.001	923.22		*	2.5	*
	1,2,3,6,7,8-HxCDF	3.15e+06	1.26 y	1.26	34:13	1.001	913.13		*	2.5	*
	2,3,4,6,7,8-HxCDF	2.75e+06	1.28 y	1.29	34:49	1.000	893.75		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.83e+06	1.31 y	1.19	35:46	1.001	913.96		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.80e+06	1.11 y	1.61	37:36	1.001	893.52		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.84e+06	1.11 y	1.53	39:26	1.000	876.21		*	2.5	*
	OCDF	3.01e+06	0.93 y	1.10	42:24	1.000	1902.0		*	2.5	*

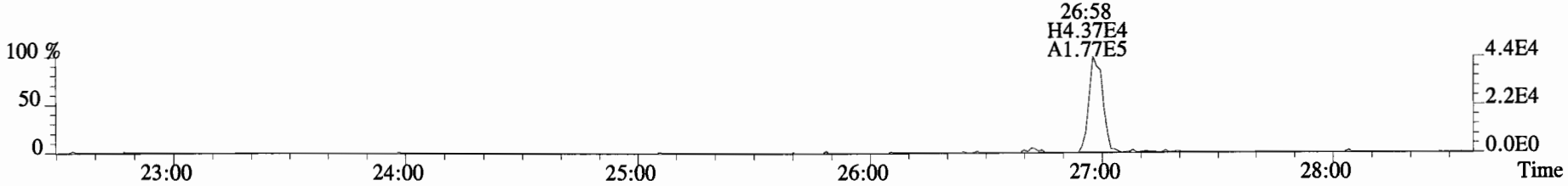
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	166	174		*	*
Total Penta-Dioxins	943	955		*	*
Total Hexa-Dioxins	2720	2740		*	*
Total Hepta-Dioxins	952	976		*	*
Total Tetra-Furans	167	169		*	*
Total Penta-Furans	1819.3	1846.4		*	*
Total Hexa-Furans	3650	3700		*	*
Total Hepta-Furans	1800	1840		*	*

	Name	Resp	RA	RRF	RT	RRT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	4.45e+06	0.78 y	1.06	26:57	1.022	1000.7	50.0	
IS	13C-1,2,3,7,8-PeCDD	4.16e+06	0.62 y	1.18	31:38	1.200	841.52	42.1	
IS	13C-1,2,3,4,7,8-HxCDD	2.92e+06	1.32 y	0.72	34:58	1.014	688.92	34.4	
IS	13C-1,2,3,6,7,8-HxCDD	2.77e+06	1.23 y	0.74	35:05	1.017	638.80	31.9	
IS	13C-1,2,3,7,8,9-HxCDD	3.20e+06	1.23 y	0.85	35:22	1.025	635.80	31.8	
IS	13C-1,2,3,4,6,7,8-HpCDD	2.46e+06	1.01 y	0.65	38:53	1.127	638.79	31.9	
IS	13C-OCDD	4.68e+06	0.87 y	0.76	42:10	1.222	1039.1	26.0	
IS	13C-2,3,7,8-TCDF	6.96e+06	0.75 y	0.92	26:07	0.991	943.57	47.2	
IS	13C-1,2,3,7,8-PeCDF	8.10e+06	1.56 y	0.92	30:26	1.154	1093.0	54.6	
IS	13C-2,3,4,7,8-PeCDF	7.85e+06	1.58 y	0.93	31:21	1.189	1048.5	52.4	
IS	13C-1,2,3,4,7,8-HxCDF	5.35e+06	0.49 y	0.98	34:05	0.988	926.14	46.3	
IS	13C-1,2,3,6,7,8-HxCDF	5.48e+06	0.52 y	1.08	34:12	0.992	859.09	43.0	
IS	13C-2,3,4,6,7,8-HxCDF	4.77e+06	0.51 y	1.03	34:48	1.009	788.21	39.4	
IS	13C-1,2,3,7,8,9-HxCDF	3.38e+06	0.52 y	0.86	35:44	1.036	666.73	33.3	
IS	13C-1,2,3,4,6,7,8-HpCDF	2.50e+06	0.44 y	0.72	37:34	1.089	586.62	29.3	
IS	13C-1,2,3,4,7,8,9-HpCDF	2.75e+06	0.42 y	0.70	39:25	1.143	668.05	33.4	
IS	13C-OCDF	5.76e+06	0.92 y	0.85	42:23	1.229	1151.3	28.8	
C/Up	37Cl-2,3,7,8-TCDD	3.78e+06		1.12	26:59	1.023	806.02	101	
RS/RT	13C-1,2,3,4-TCDD	8.40e+06	0.79 y	1.00	26:22	*	2000.0		
RS	13C-1,2,3,4-TCDF	1.61e+07	0.76 y	1.00	24:50	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.18e+07	0.50 y	1.00	34:30	*	2000.0		

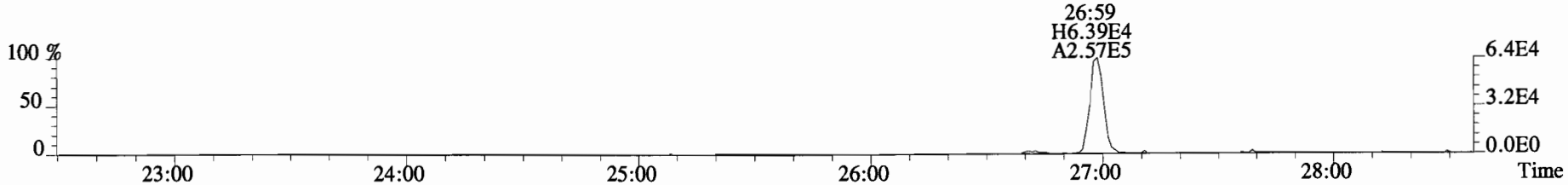
Integrations by Analyst: MJ Date: 3/19/15

Reviewed by Analyst: _____ Date: _____

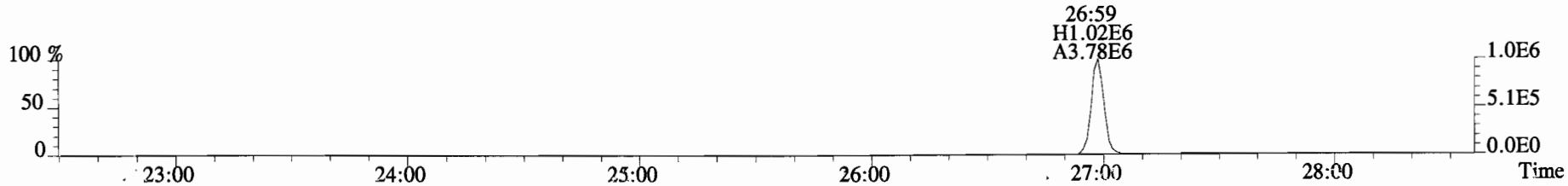
File:150318D1 #1-552 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



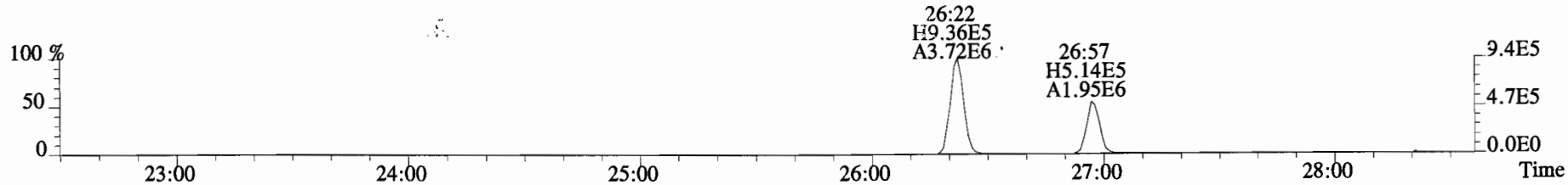
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



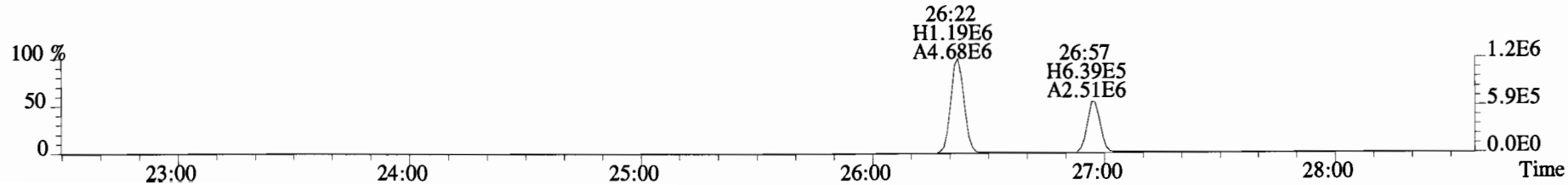
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



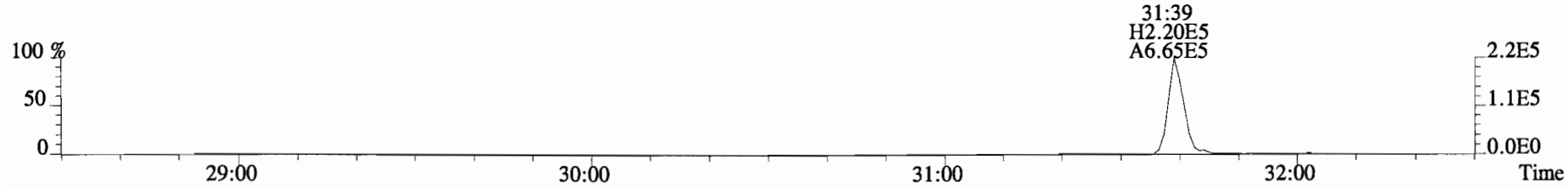
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



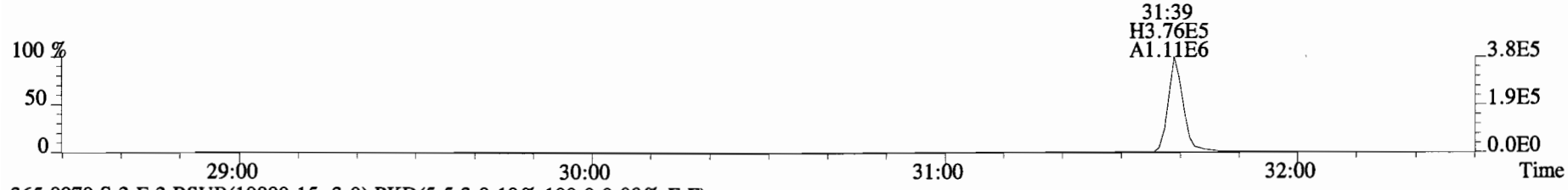
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



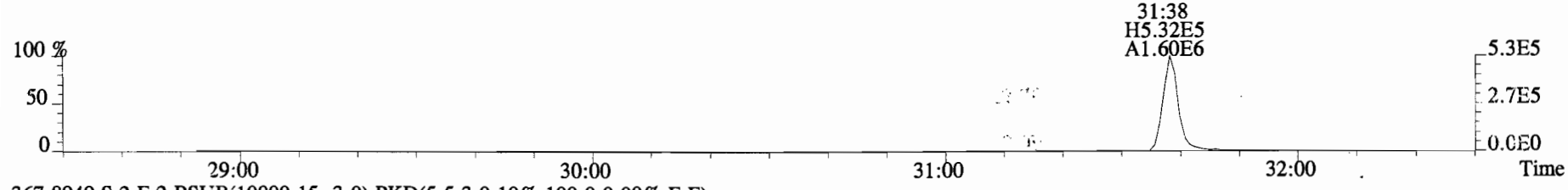
File:150318D1 #1-250 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



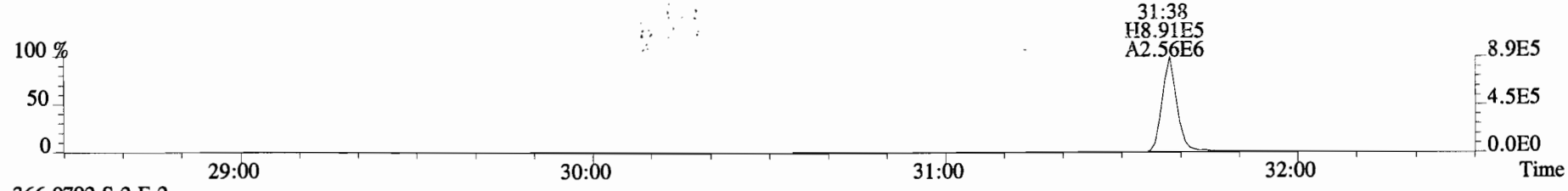
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



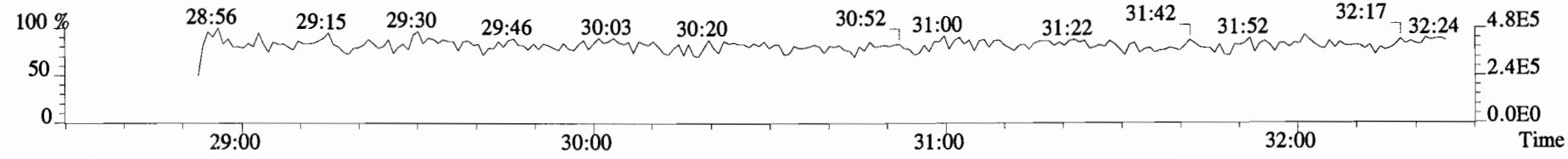
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



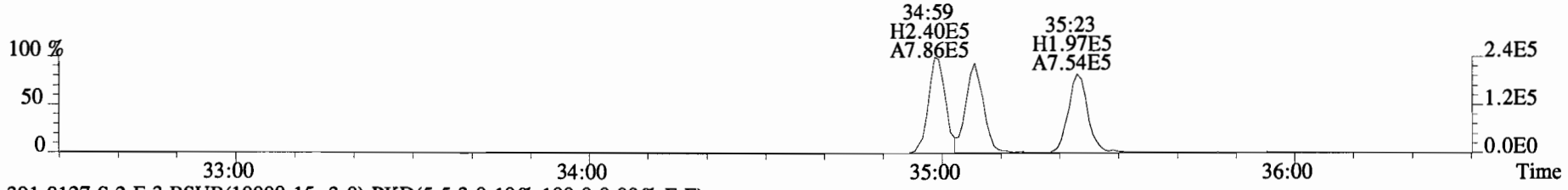
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



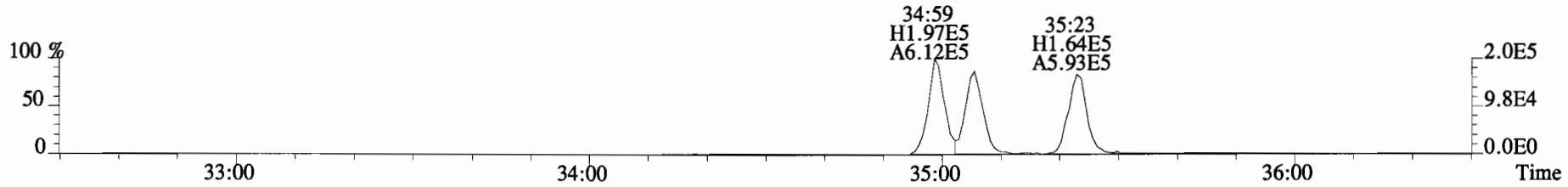
366.9792 S:2 F:2



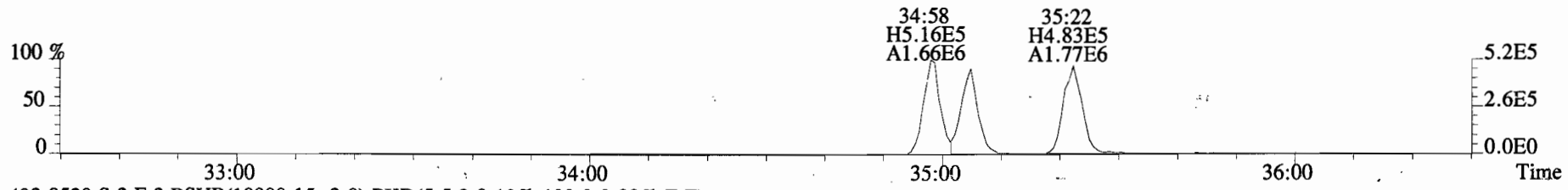
File:150318D1 #1-393 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



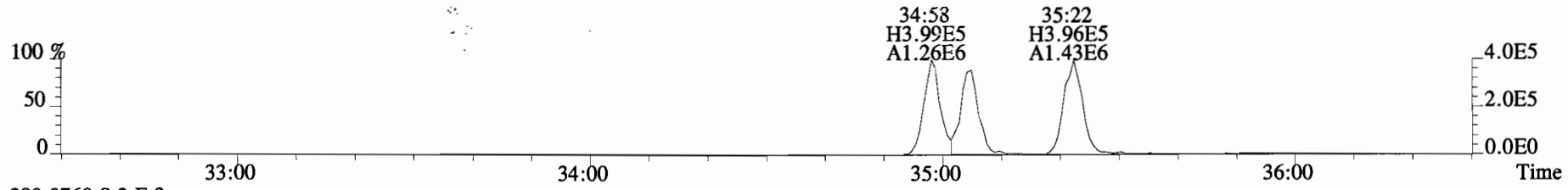
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



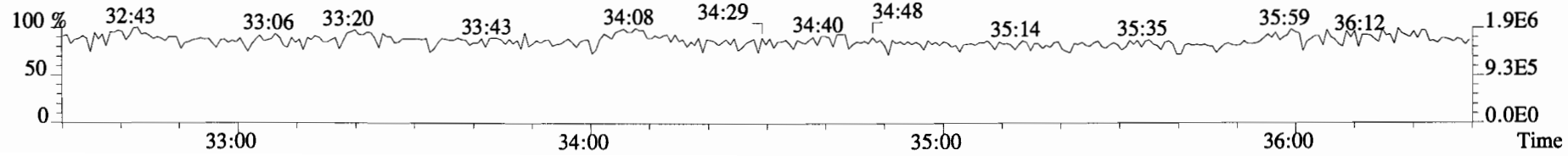
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



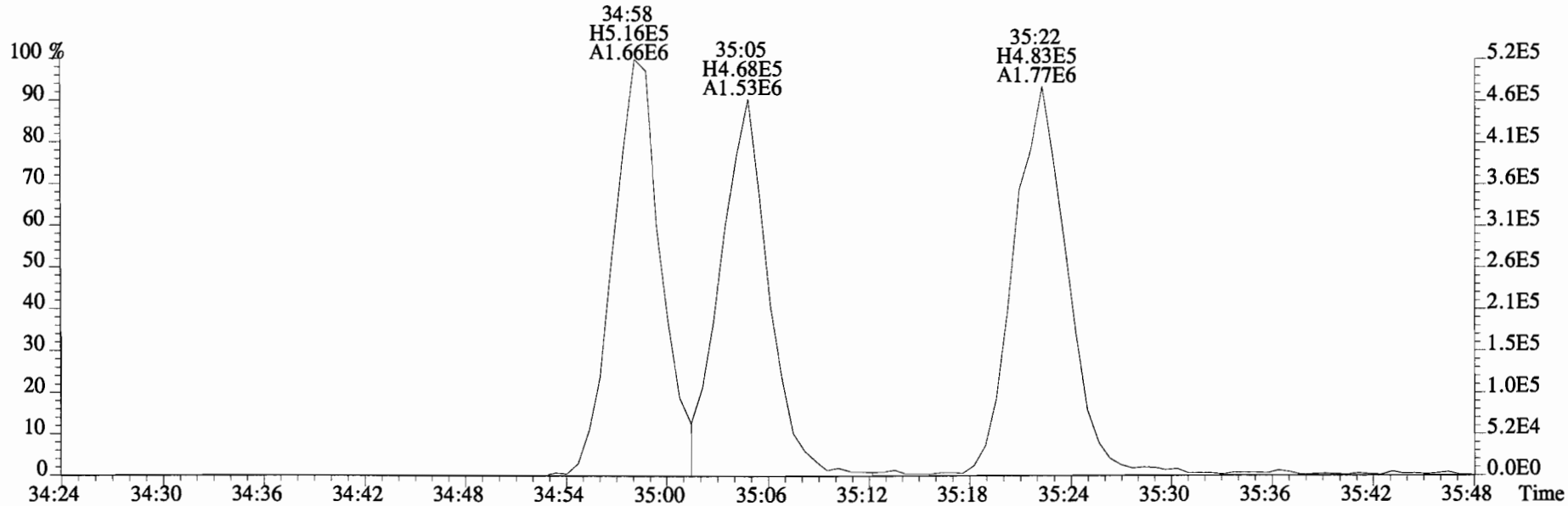
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



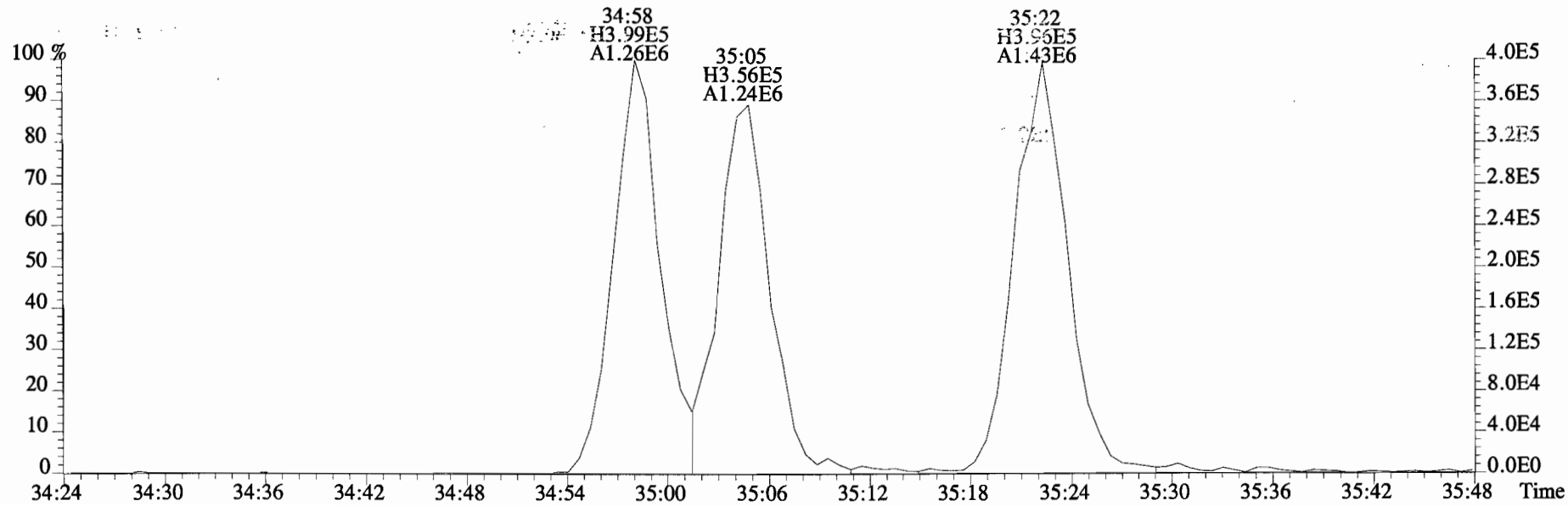
380.9760 S:2 F:3



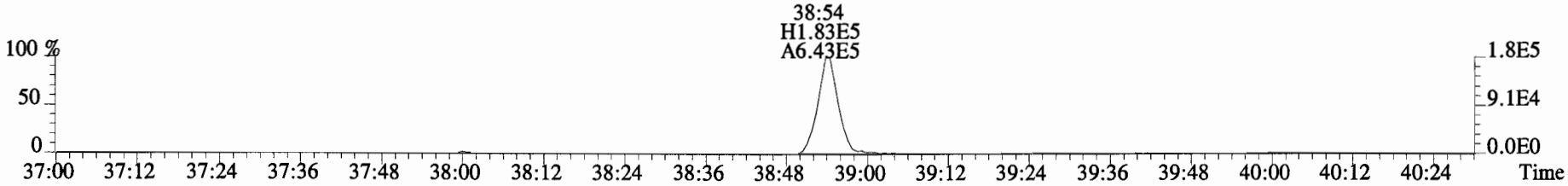
File:150318D1 #1-393 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



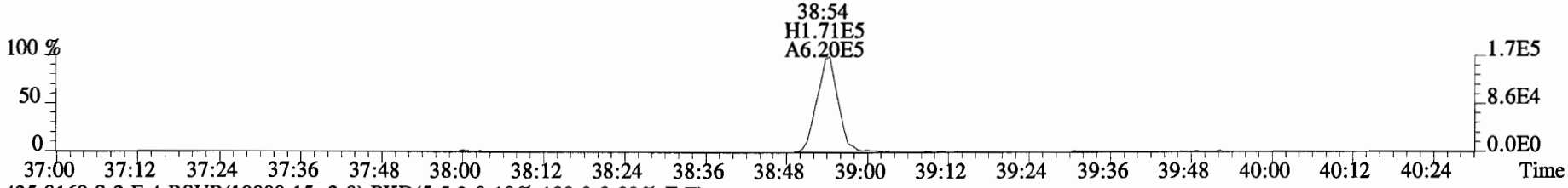
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



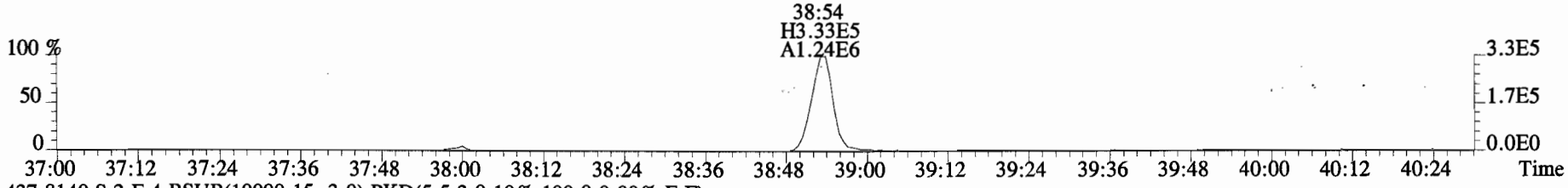
File:150318D1 #1-326 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



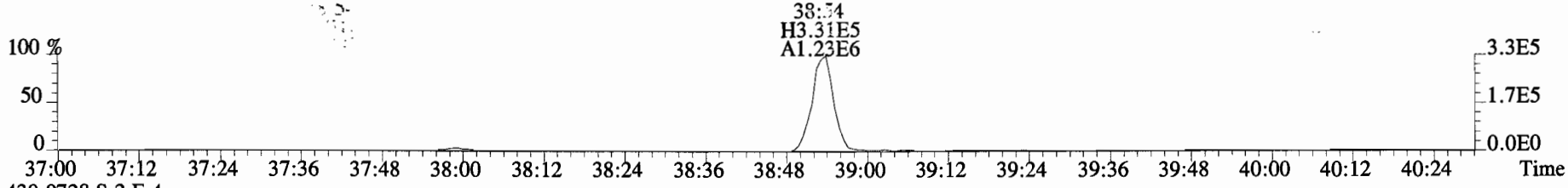
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



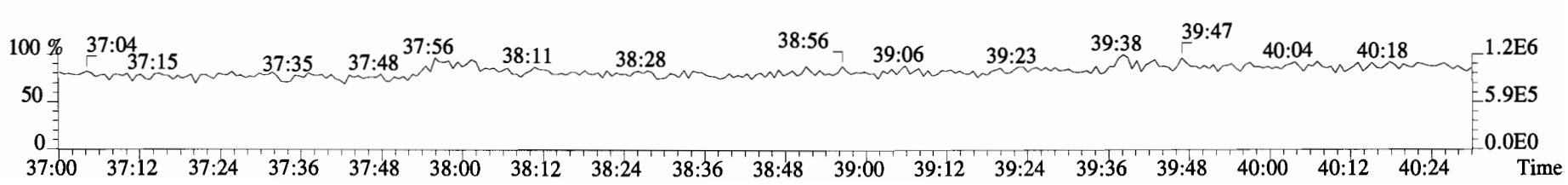
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



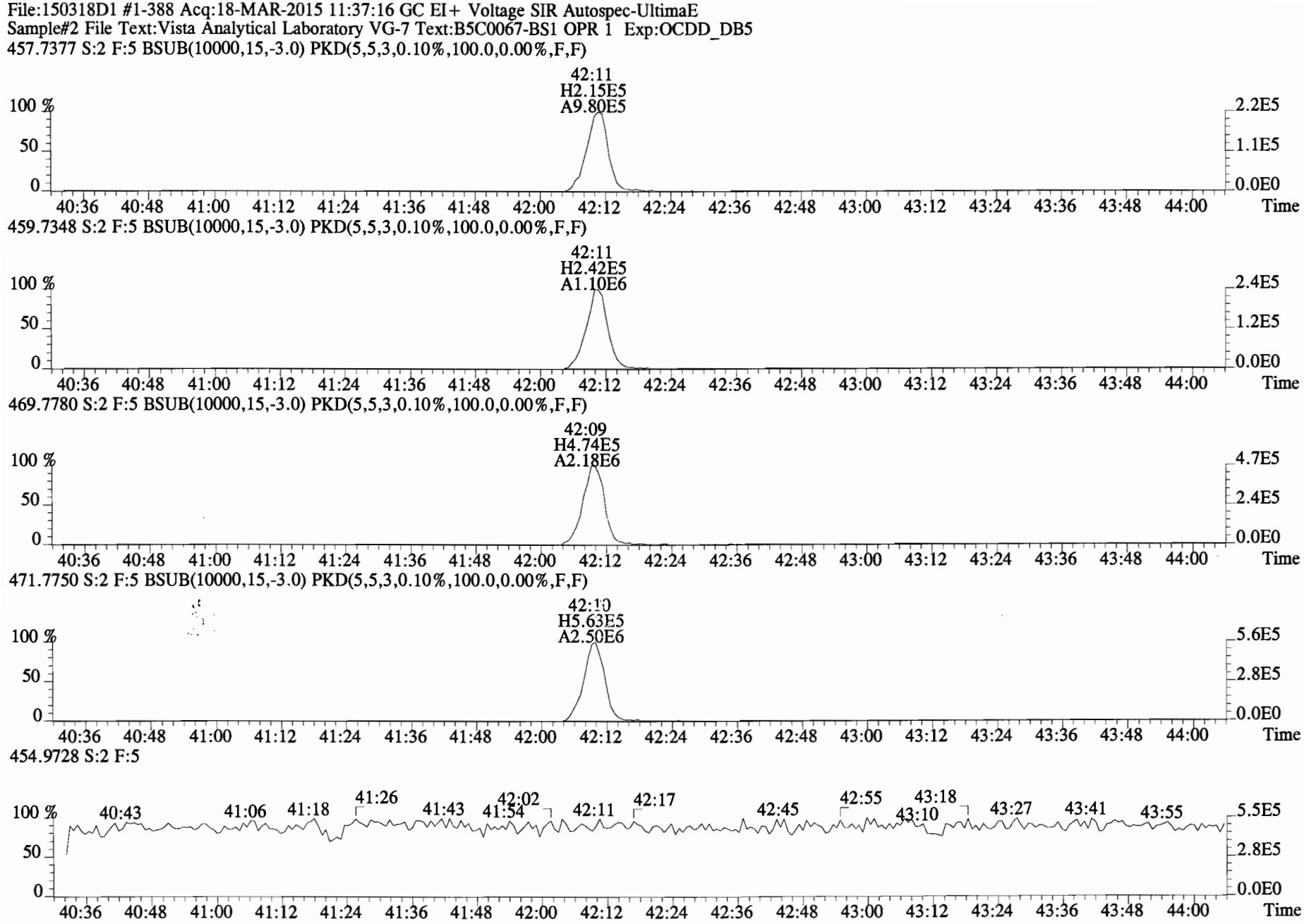
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



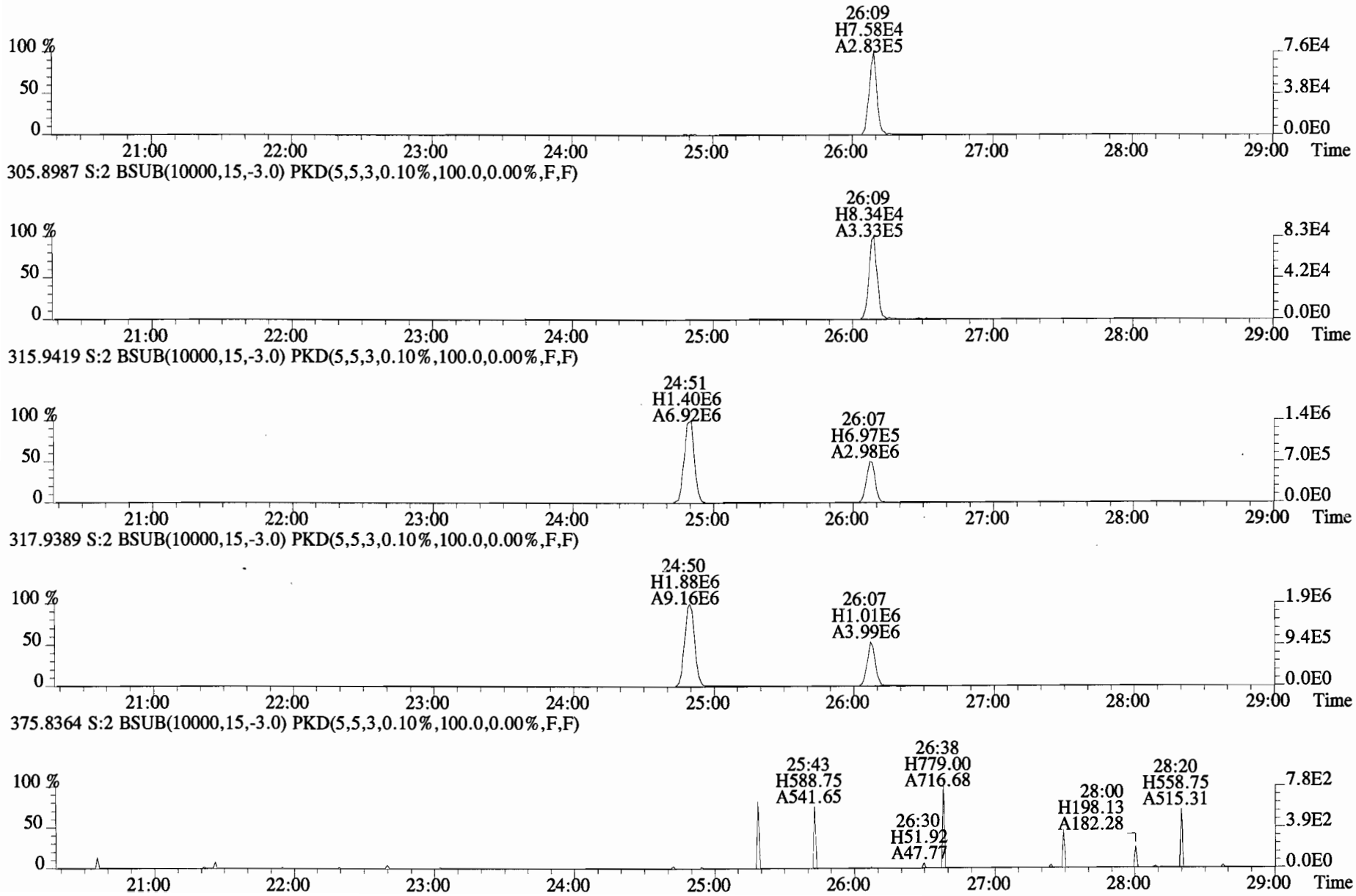
430.9728 S:2 F:4



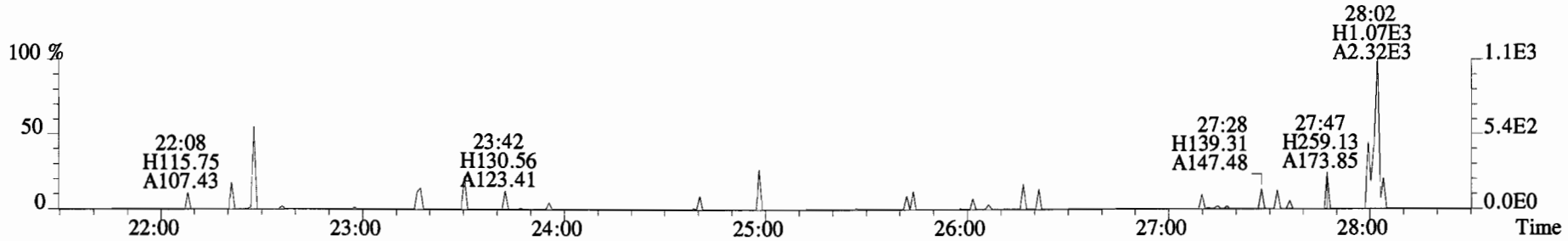
File:150318D1 #1-388 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5



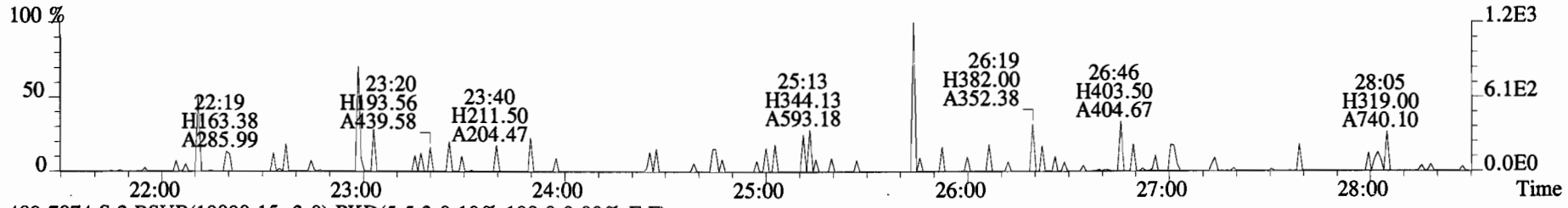
File:150318D1 #1-552 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5



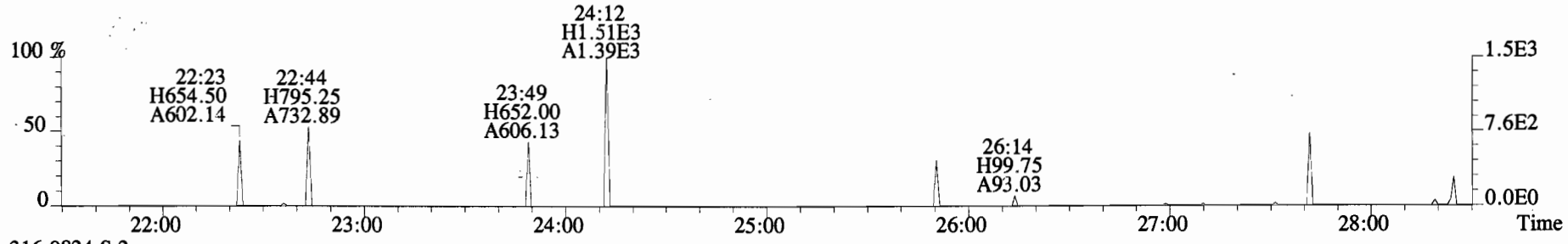
File:150318D1 #1-552 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



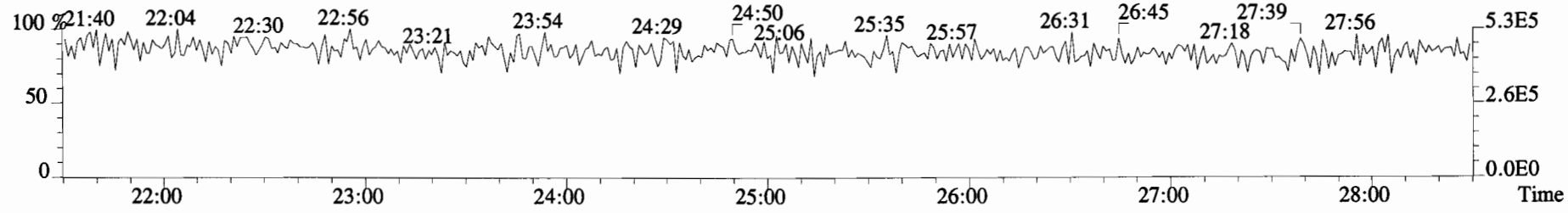
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

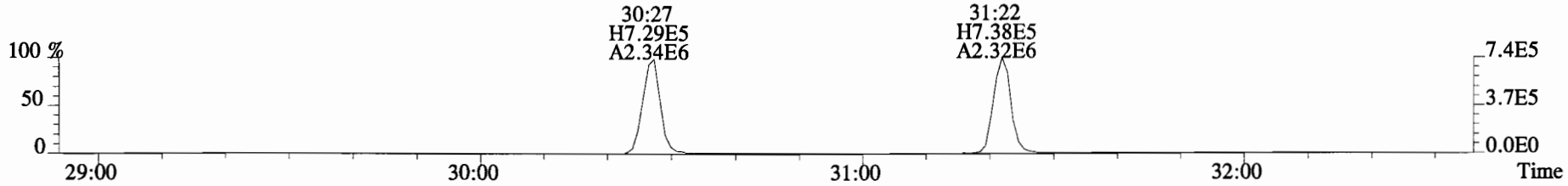


316.9824 S:2

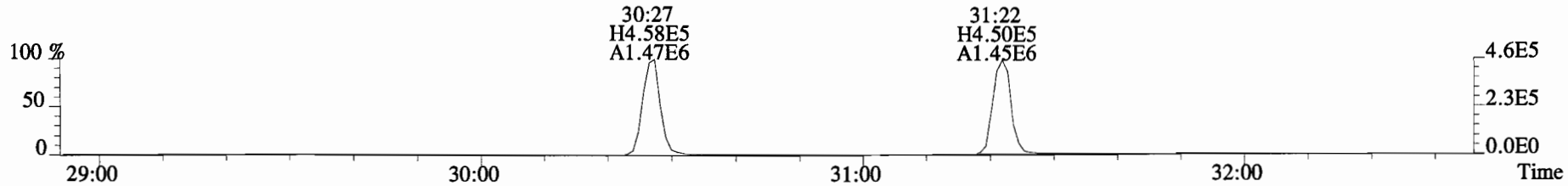


File:150318D1 #1-250 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5

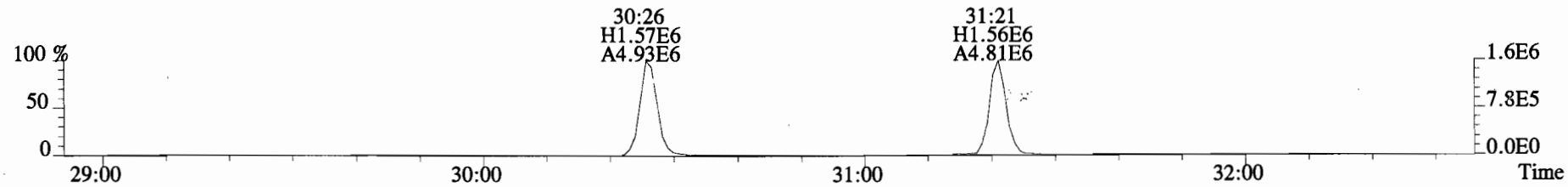
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



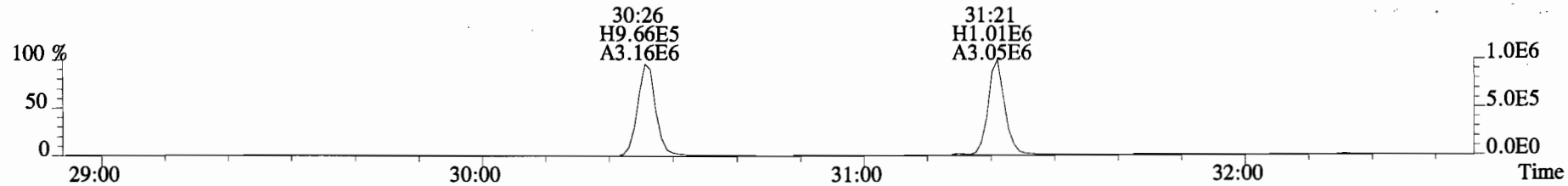
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



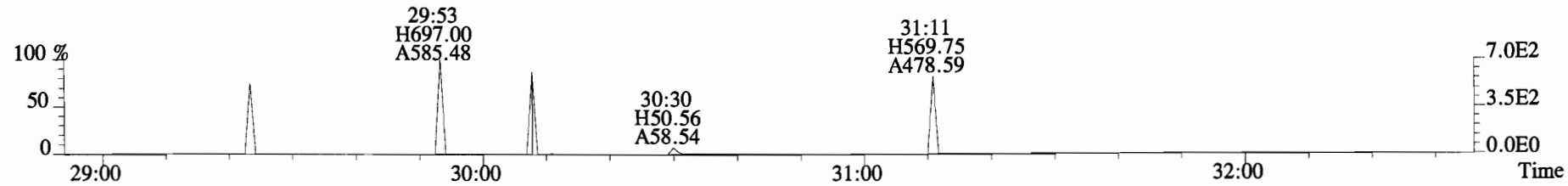
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

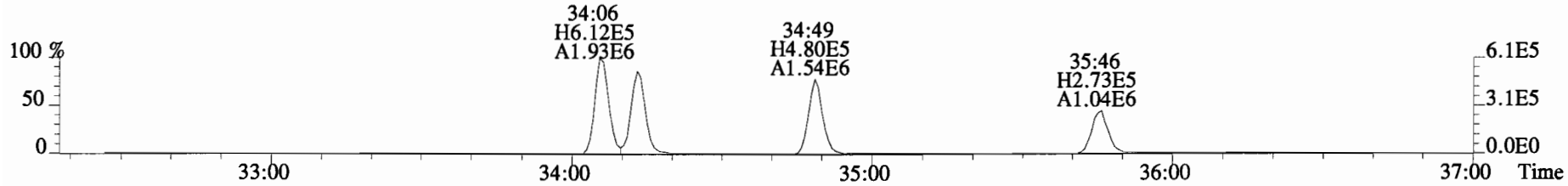


409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

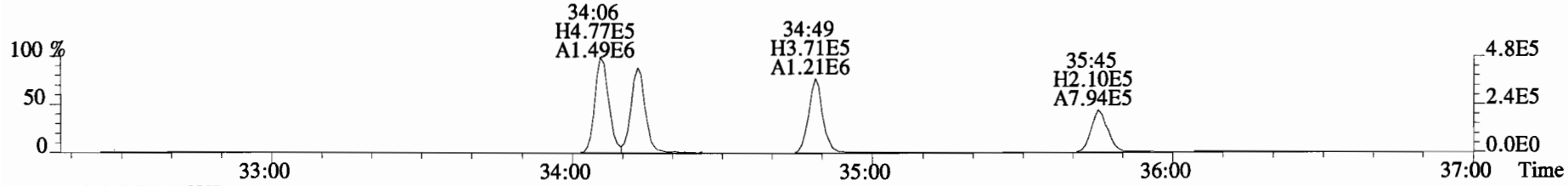


File:150318D1 #1-393 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5

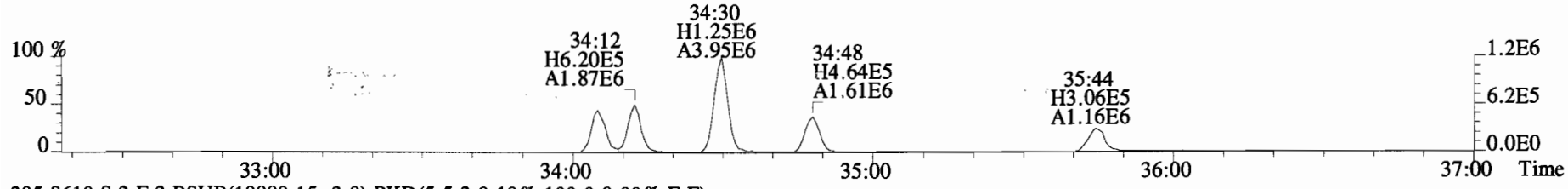
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



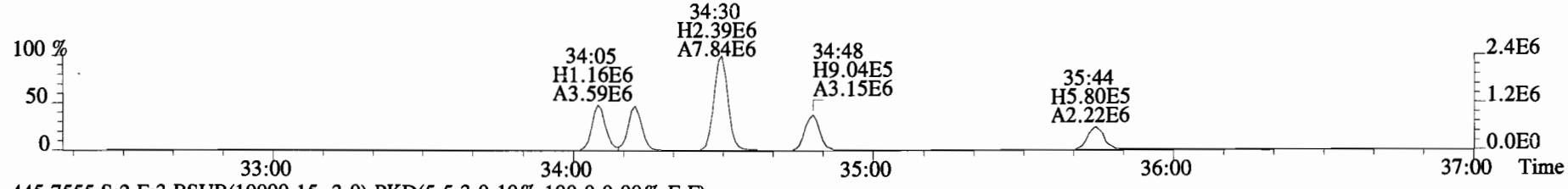
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



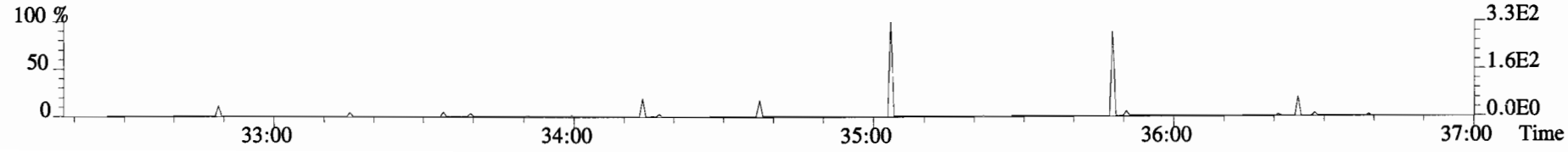
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

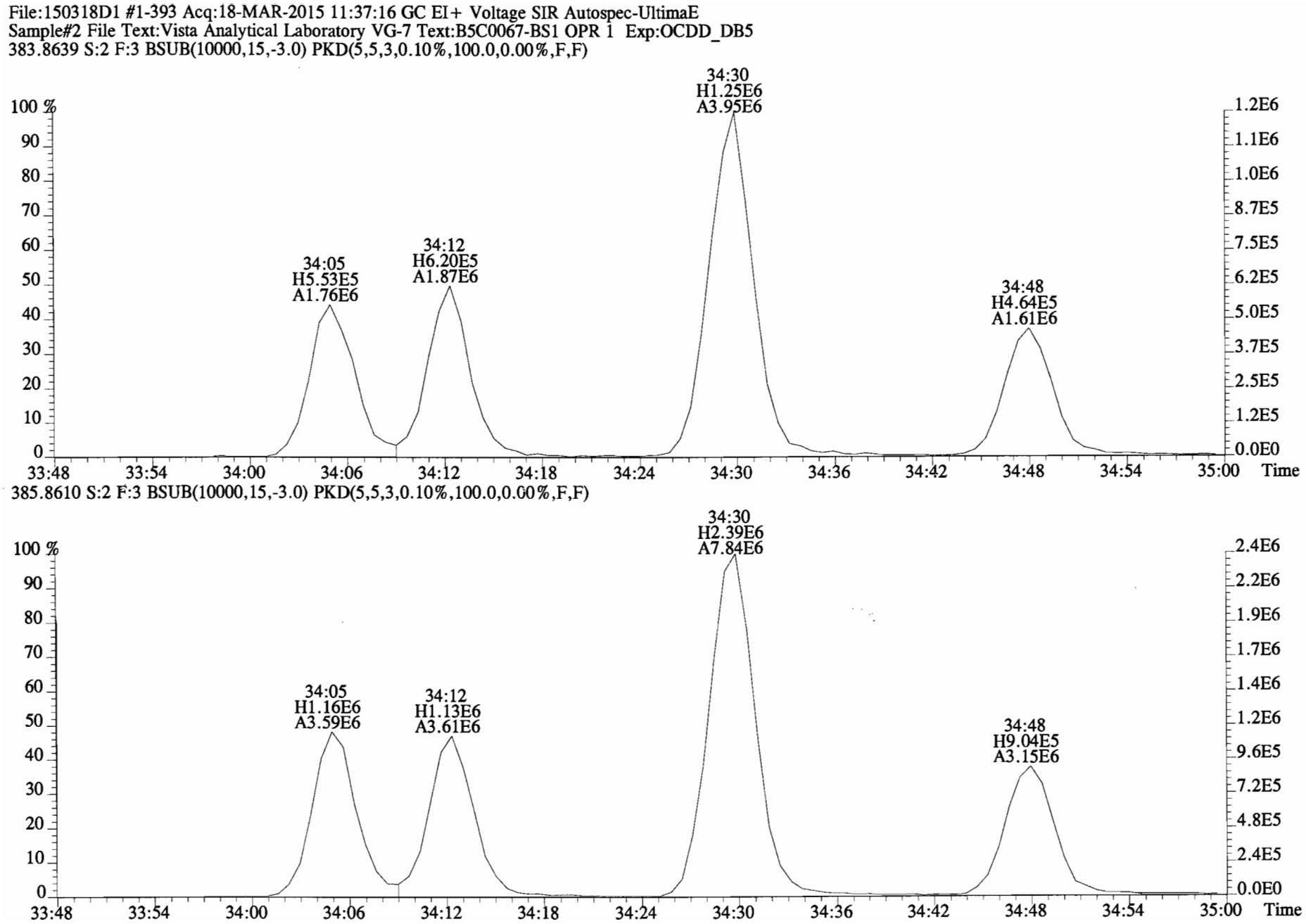


385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

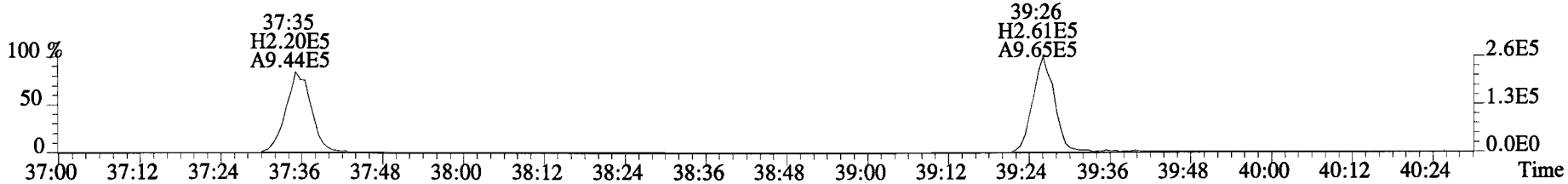


445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

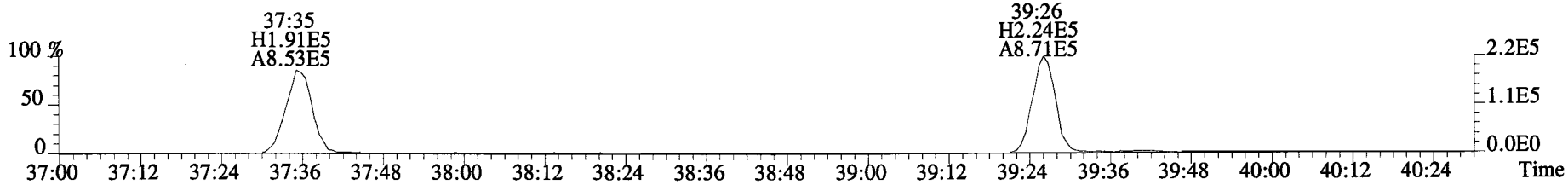



File:150318D1 #1-393 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:30
H1.25E6
A3.95E6
34:05
H5.53E5
A1.76E6
34:12
H6.20E5
A1.87E6
34:48
H4.64E5
A1.61E6
100 %
90
80
70
60
50
40
30
20
10
0
1.2E6
1.1E6
1.0E6
8.7E5
7.5E5
6.2E5
5.0E5
3.7E5
2.5E5
1.2E5
0.0E0
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
Time
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:30
H2.39E6
A7.84E6
34:05
H1.16E6
A3.59E6
34:12
H1.13E6
A3.61E6
34:48
H9.04E5
A3.15E6
100 %
90
80
70
60
50
40
30
20
10
0
2.4E6
2.2E6
1.9E6
1.7E6
1.4E6
1.2E6
9.6E5
7.2E5
4.8E5
2.4E5
0.0E0
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
Time

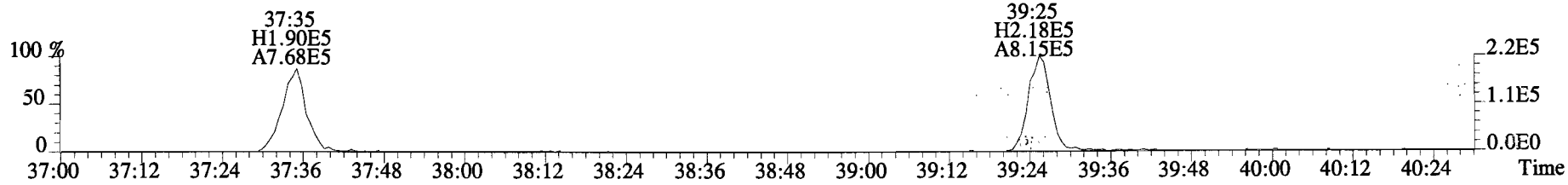
File:150318D1 #1-326 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



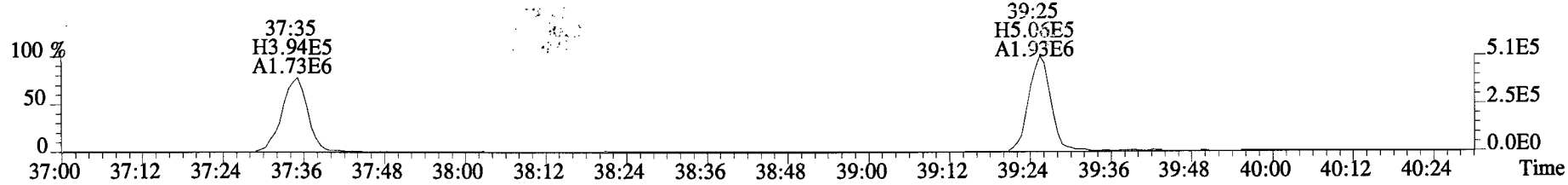
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



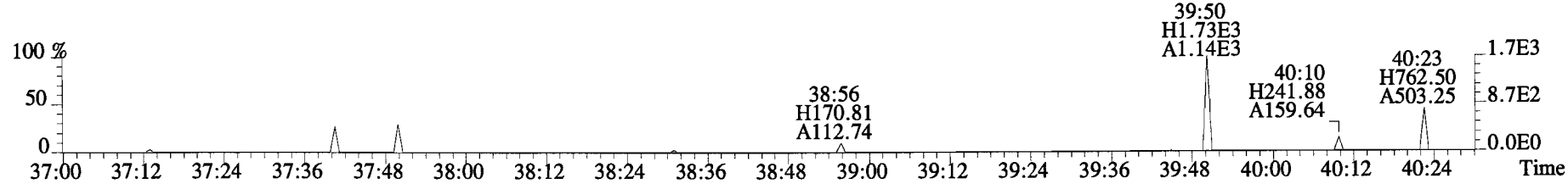
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

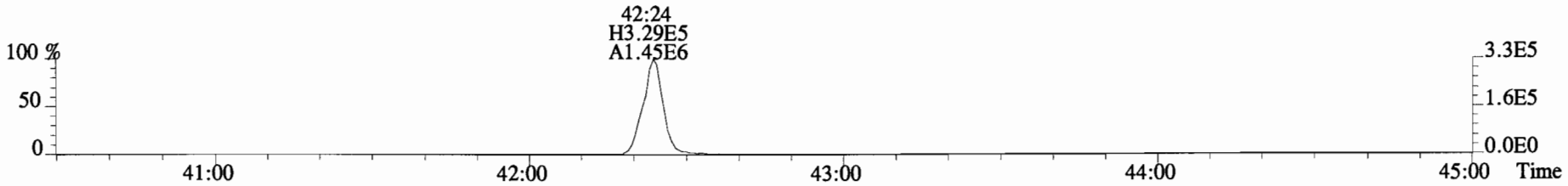


479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

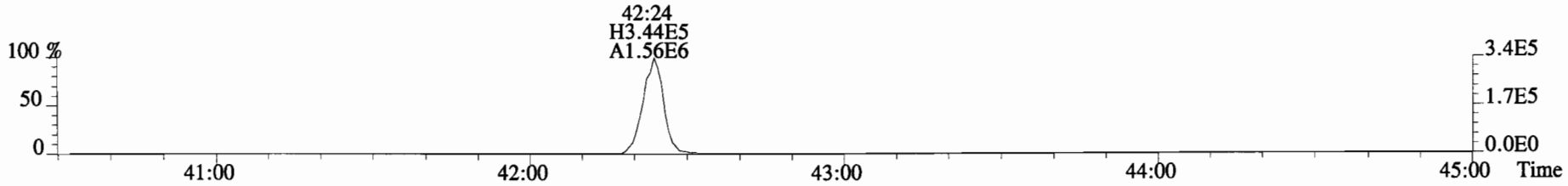


File:150318D1 #1-388 Acq:18-MAR-2015 11:37:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5C0067-BS1 OPR 1 Exp:OCDD_DB5

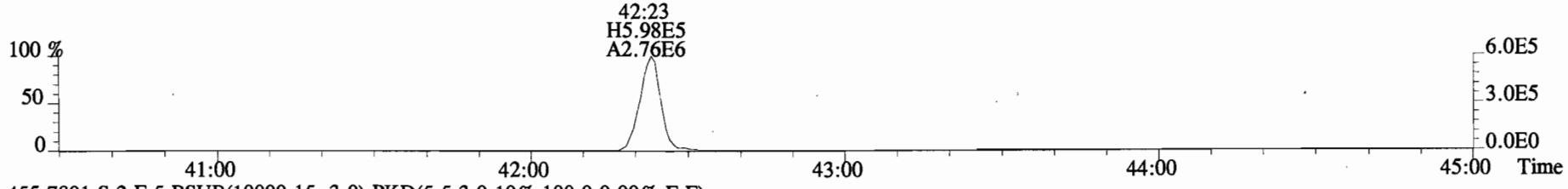
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



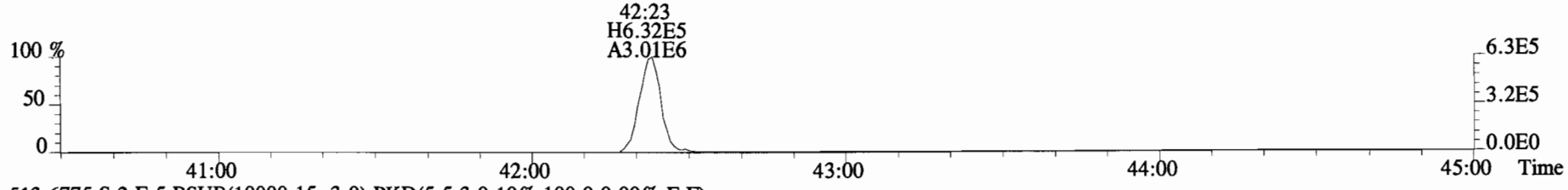
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



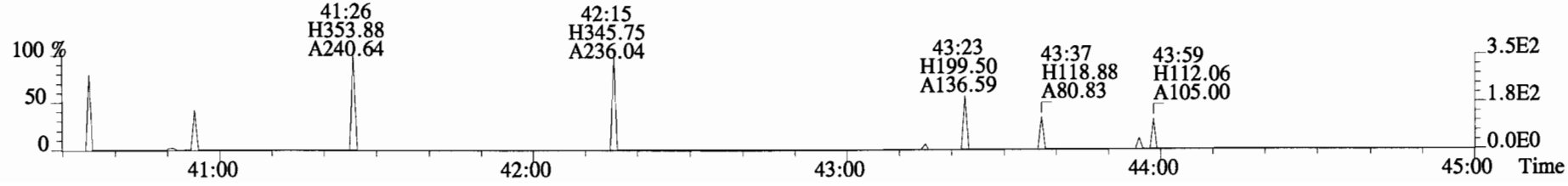
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotF	*	*		482	2.5	0.938
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotF	*	*		628	2.5	1.06
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF	*	*		780	2.5	2.18
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF	*	*		780	2.5	2.21
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		780	2.5	2.04
	1,2,3,4,6,7,8-HpCDD	6.99e+04	0.89	y	1.10	38:54	1.000	11.468		*	2.5	*
	OCDD	4.49e+05	0.84	y	0.95	42:10	1.000	88.810		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotF	*	*		512	2.5	0.776
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotF	*	*		569	2.5	0.829
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotF	*	*		324	2.5	0.506
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF	*	*		758	2.5	0.588
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		758	2.5	0.671
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF	*	*		758	2.5	0.760
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		758	2.5	1.13
	1,2,3,4,6,7,8-HpCDF	2.01e+04	0.86	(n)	1.61	37:36	1.000	2.0703		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		472	2.5	0.717
	OCDF	3.68e+04	0.84	y	1.10	42:24	1.000	5.4930		*	2.5	*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		482	0.939
Total Penta-Dioxins	*	*		1090	1.84
Total Hexa-Dioxins	*	*		1570	4.32
Total Hepta-Dioxins	21.9	21.9		*	*
Total Tetra-Furans	*	*		887	1.34
Total Penta-Furans	0.0000	0.0000		569	0.858
Total Hexa-Furans	*	0.900		*	*
Total Hepta-Furans	*	4.86		*	*

									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.43e+07	0.81	y	1.06	26:57	1.022	1422.8	71.4	
IS	13C-1,2,3,7,8-PeCDD	1.55e+07	0.63	y	1.18	31:38	1.200	1388.4	69.7	
IS	13C-1,2,3,4,7,8-HxCDD	1.25e+07	1.29	y	0.72	35:05	1.017	1361.9	68.3	
IS	13C-1,2,3,6,7,8-HxCDD	1.25e+07	1.29	y	0.74	35:05	1.017	1331.9	66.8	
IS	13C-1,2,3,7,8,9-HxCDD	1.46e+07	1.25	y	0.85	35:22	1.025	1341.2	67.3	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.10e+07	1.08	y	0.65	38:54	1.127	1322.6	66.4	
IS	13C-OCDD	2.12e+07	0.88	y	0.76	42:10	1.222	2185.7	54.8	
IS	13C-2,3,7,8-TCDF	2.25e+07	0.77	y	0.92	26:08	0.991	1517.4	76.1	
IS	13C-1,2,3,7,8-PeCDF	2.41e+07	1.60	y	0.92	30:25	1.154	1624.7	81.5	
IS	13C-2,3,4,7,8-PeCDF	2.45e+07	1.58	y	0.93	31:21	1.189	1633.5	82.0	
IS	13C-1,2,3,4,7,8-HxCDF	1.92e+07	0.51	y	0.98	34:05	0.988	1543.5	77.4	
IS	13C-1,2,3,6,7,8-HxCDF	2.03e+07	0.53	y	1.08	34:12	0.992	1472.8	73.9	
IS	13C-2,3,4,6,7,8-HxCDF	1.76e+07	0.53	y	1.03	34:48	1.009	1345.7	67.5	
IS	13C-1,2,3,7,8,9-HxCDF	1.44e+07	0.53	y	0.86	35:45	1.036	1318.2	66.1	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.20e+07	0.42	y	0.72	37:35	1.089	1310.1	65.7	
IS	13C-1,2,3,4,7,8,9-HpCDF	9.99e+06	0.44	y	0.70	39:25	1.143	1127.2	56.6	
IS	13C-OCDF	2.43e+07	0.91	y	0.85	42:23	1.229	2252.1	56.5	
C/Up	37Cl-2,3,7,8-TCDD	9.36e+06			1.12	26:58	1.023	882.35	111	
RS/RT	13C-1,2,3,4-TCDD	1.89e+07	0.78	y	1.00	26:22	*	1993.0		
RS	13C-1,2,3,4-TCDF	3.21e+07	0.77	y	1.00	24:50	*	1993.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.54e+07	0.53	y	1.00	34:30	*	1993.0		

Integrations by Analyst: MS Date: 3/12/15

Reviewed by Analyst: CT Date: 3/16/15

Totals class: HpCDD EMPC Entry #: 25

Run: 12 File: 150311D2 S: 7 I: 1 F: 4
Acquired: 12-MAR-15 04:55:08 Processed: 12-MAR-15 09:17:36

Total Concentration: 21.890 Unnamed Concentration: 10.422

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
38:00	3.071e+04	3.278e+04	0.94 y	6.349e+04	10.422	
38:54	3.293e+04	3.693e+04	0.89 y	6.986e+04	11.468	1,2,3,4,6,7,8-HpCDD

Totals class: HxCDF EMPC Entry #: 33

Run: 12 File: 150311D2 S: 7 I: 1 F: 3
Acquired: 12-MAR-15 04:55:08 Processed: 12-MAR-15 09:17:36

Total Concentration: 0.89975 Unnamed Concentration: 0.900

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
33:05	5.725e+03	6.031e+03	0.95	n	1.034e+04	0.89975	

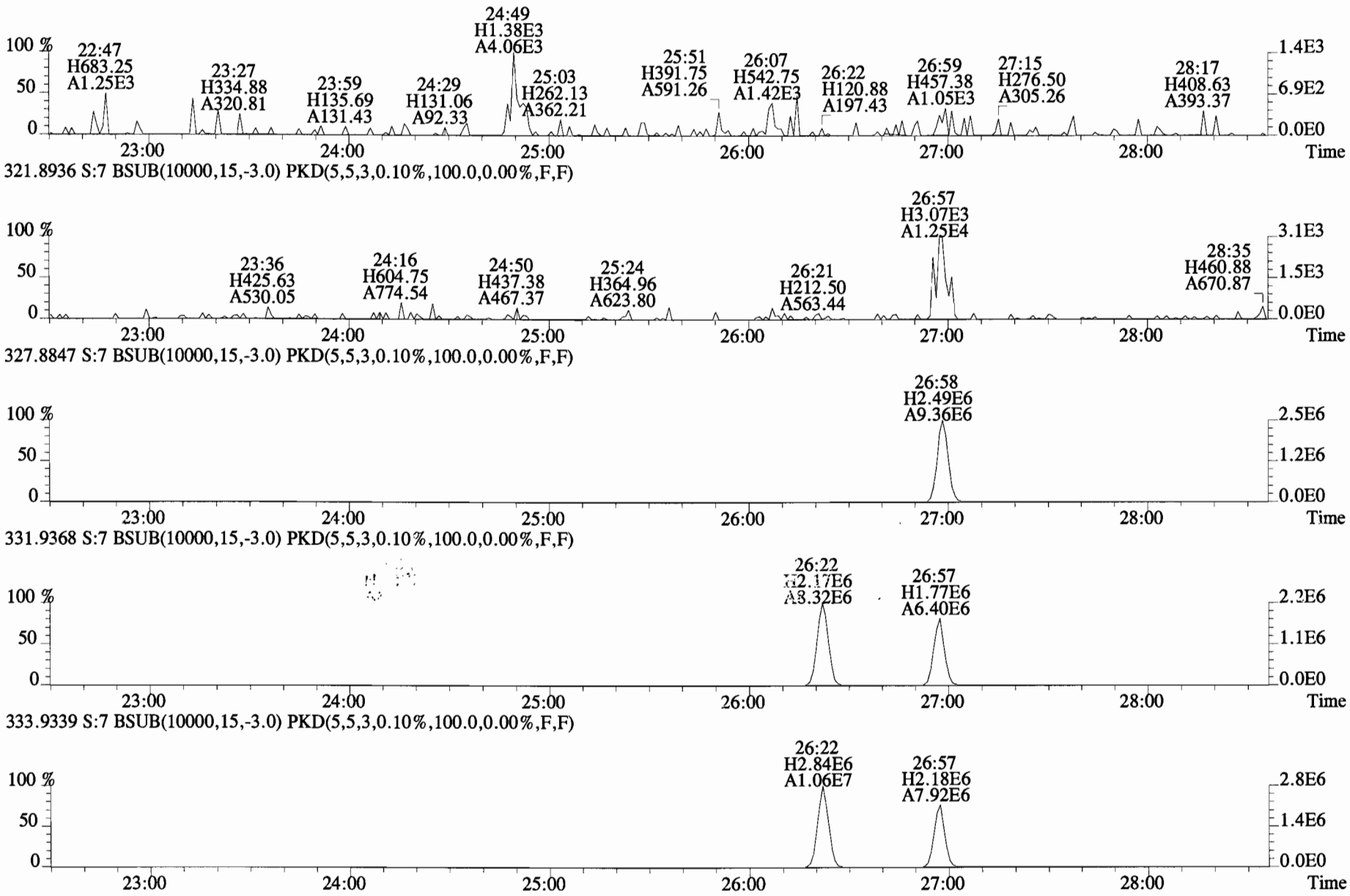
Totals class: HpCDF EMPC Entry #: 35

Run: 12 File: 150311D2 S: 7 I: 1 F: 4
Acquired: 12-MAR-15 04:55:08 Processed: 12-MAR-15 09:17:36

Total Concentration: 4.8552 Unnamed Concentration: 2.785

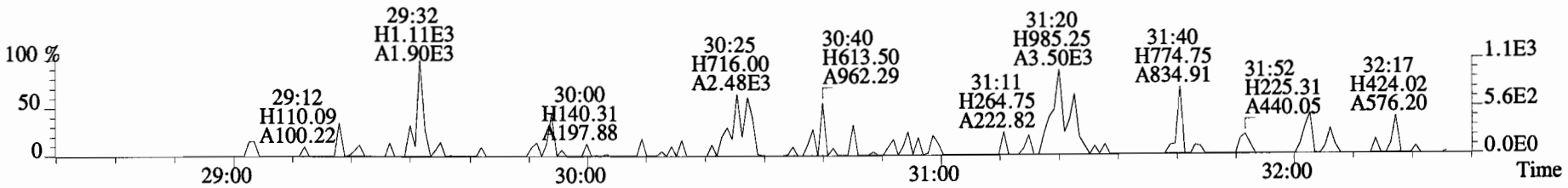
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:36	1.026e+04	1.193e+04	0.86 n	2.013e+04	2.0703	1,2,3,4,6,7,8-HpCDF
38:13	1.501e+04	1.183e+04	1.27 n	2.414e+04	2.7849	

File:150311D2 #1-551 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5

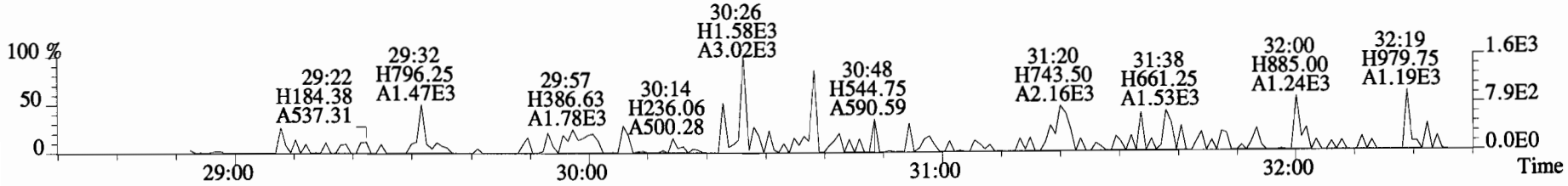


File:150311D2 #1-251 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5

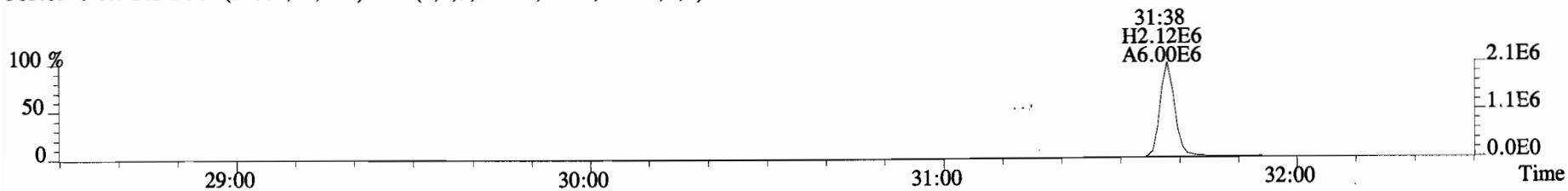
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



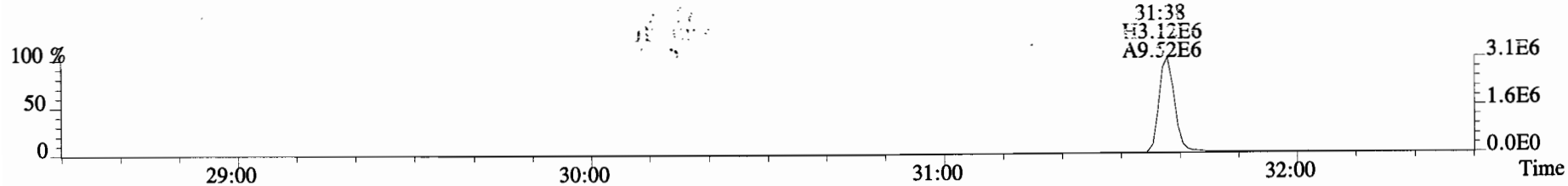
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



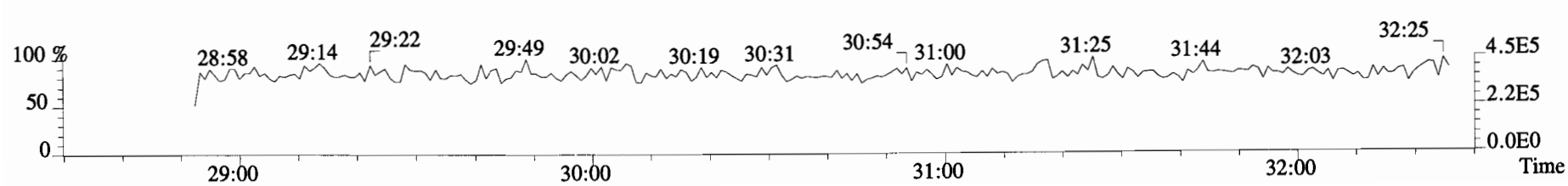
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

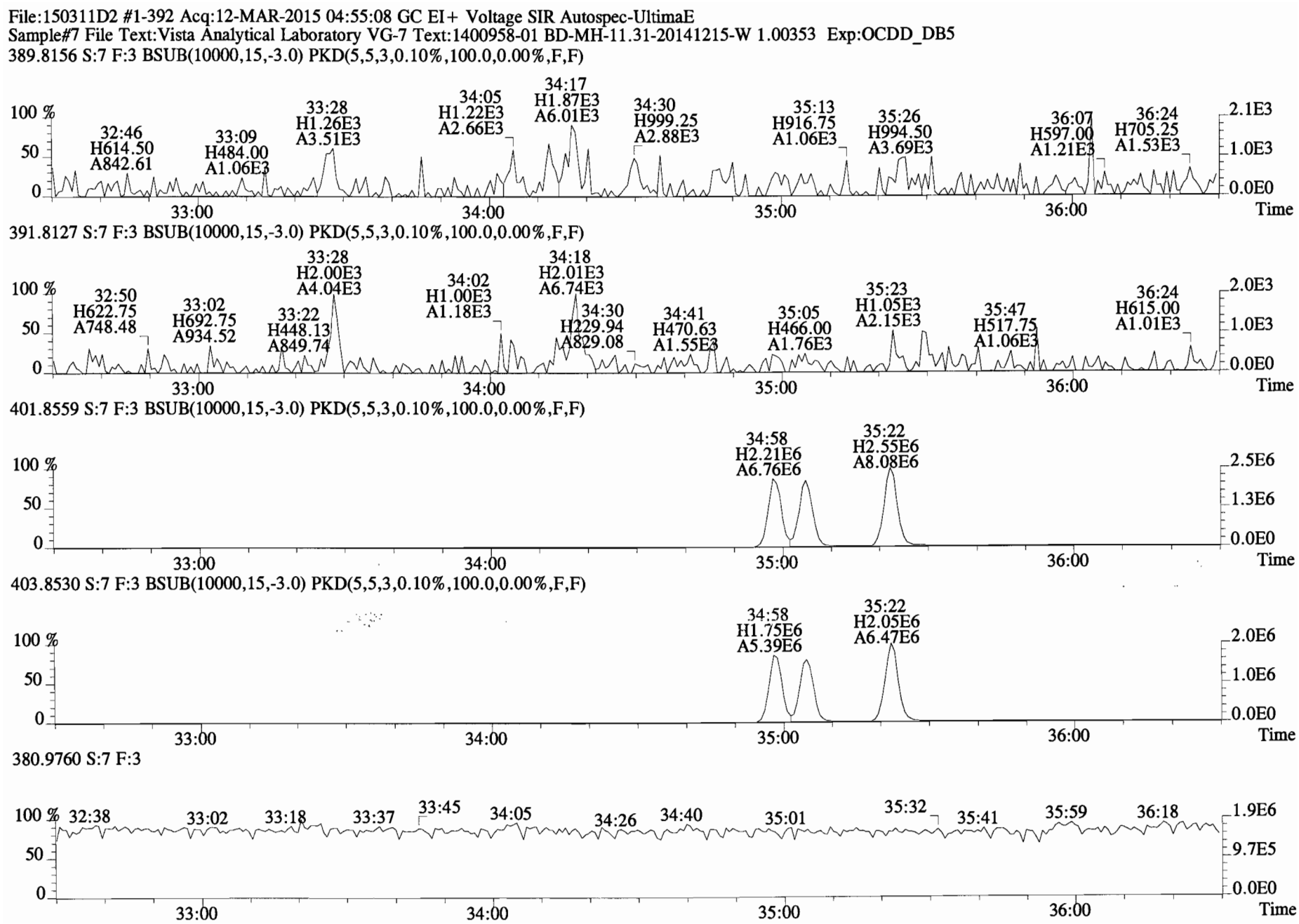


367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

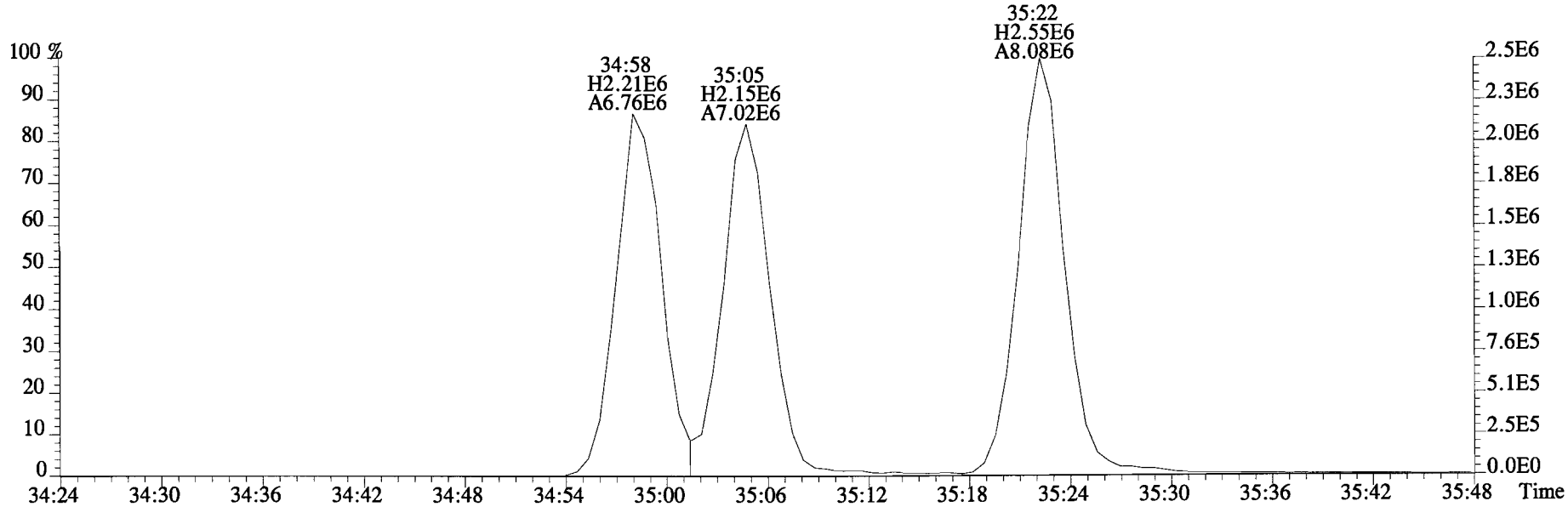


366.9792 S:7 F:2

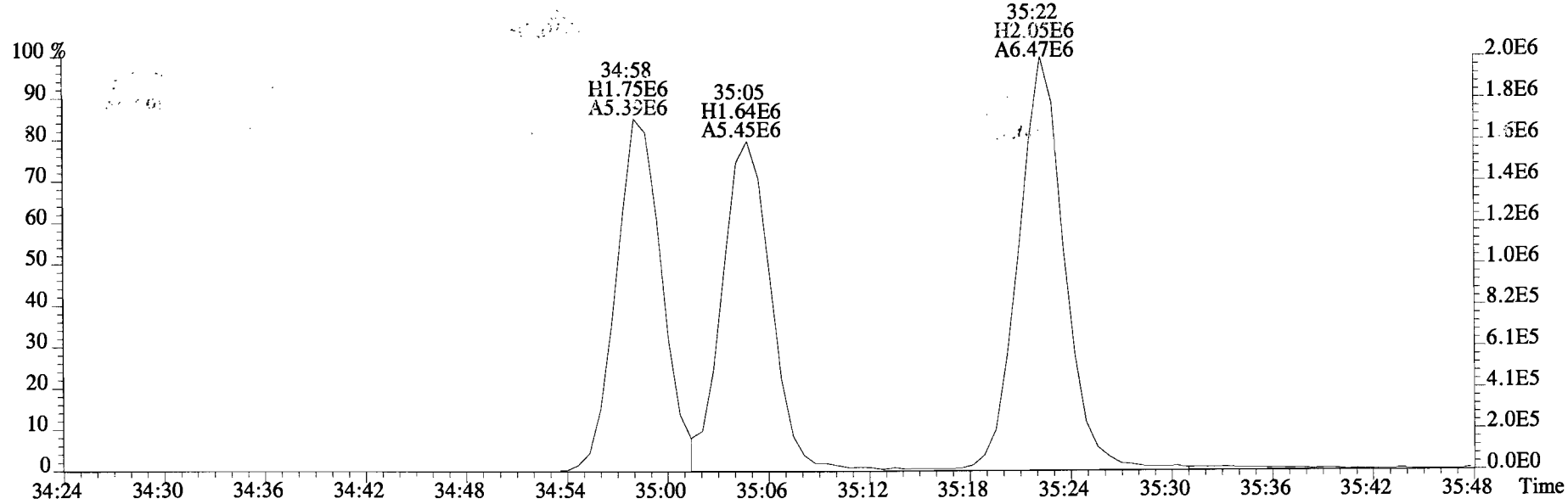



File:150311D2 #1-392 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:46 H614.50 A842.61
33:09 H484.00 A1.06E3
33:28 H1.26E3 A3.51E3
34:05 H1.22E3 A2.66E3
34:17 H1.87E3 A6.01E3
34:30 H999.25 A2.88E3
35:13 H916.75 A1.06E3
35:26 H994.50 A3.69E3
36:07 H597.00 A1.21E3
36:24 H705.25 A1.53E3
2.1E3
1.0E3
0.0E0
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:50 H622.75 A748.48
33:02 H692.75 A934.52
33:22 H448.13 A849.74
33:28 H2.00E3 A4.04E3
34:02 H1.00E3 A1.18E3
34:18 H2.01E3 A6.74E3
34:30 H229.94 A829.08
34:41 H470.63 A1.55E3
35:05 H466.00 A1.76E3
35:23 H1.05E3 A2.15E3
35:47 H517.75 A1.06E3
36:24 H615.00 A1.01E3
2.0E3
1.0E3
0.0E0
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:58 H2.21E6 A6.76E6
35:22 H2.55E6 A8.08E6
2.5E6
1.3E6
0.0E0
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:58 H1.75E6 A5.39E6
35:22 H2.05E6 A6.47E6
2.0E6
1.0E6
0.0E0
380.9760 S:7 F:3
32:38
33:02
33:18
33:37
33:45
34:05
34:26
34:40
35:01
35:32
35:41
35:59
36:18
1.9E6
9.7E5
0.0E0
100 %
50
0
33:00
34:00
35:00
36:00
Time

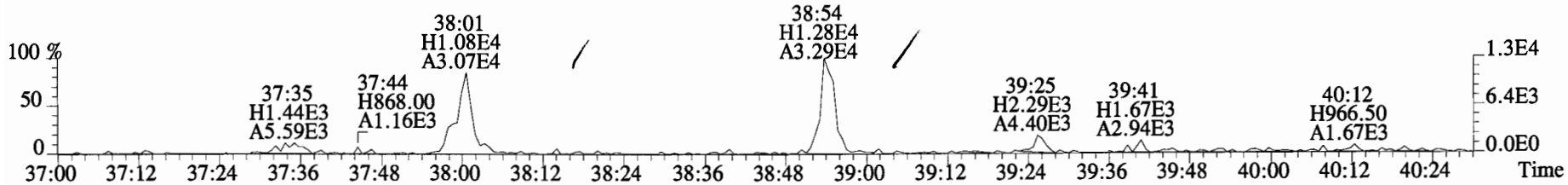
File:150311D2 #1-392 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



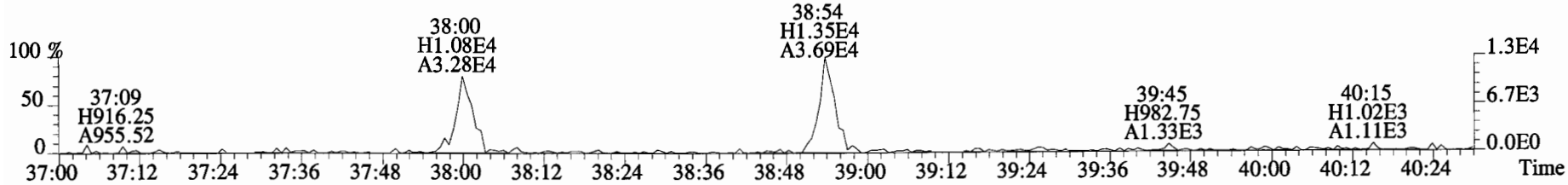
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



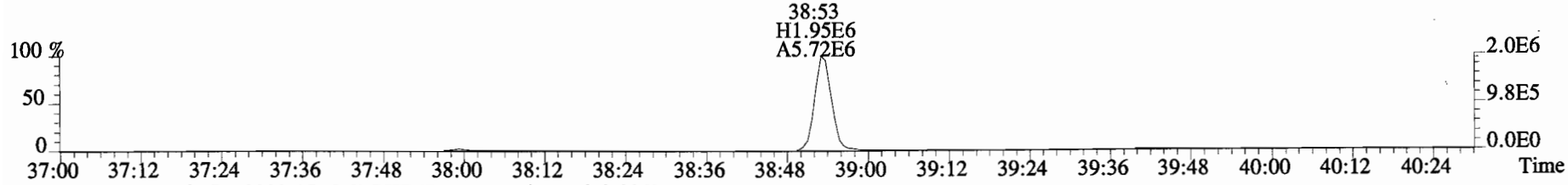
File:150311D2 #1-326 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



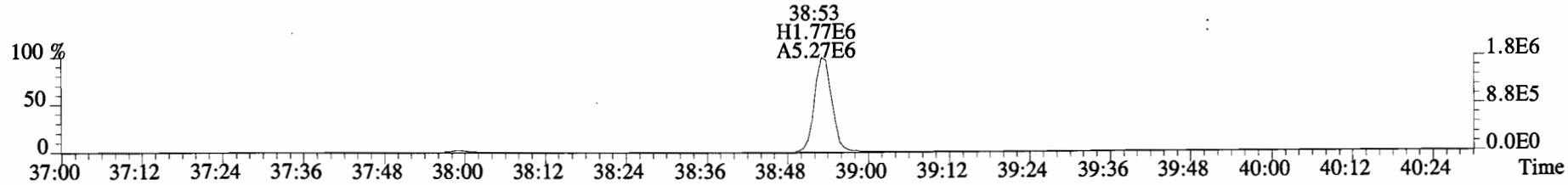
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



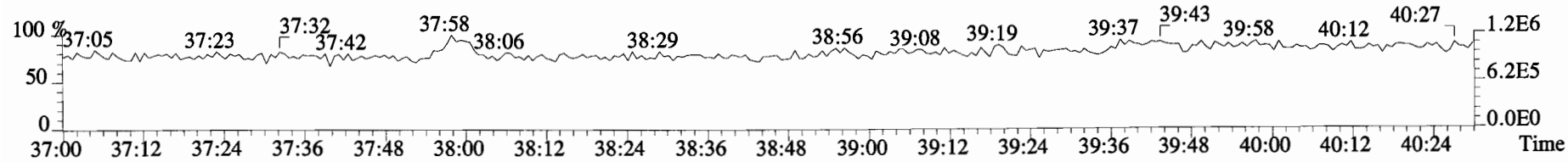
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



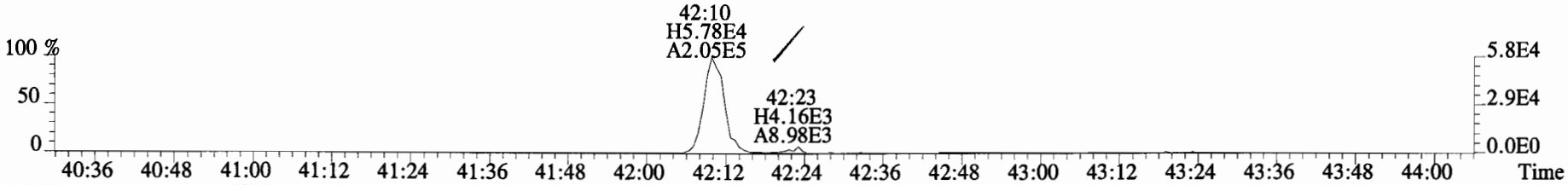
437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



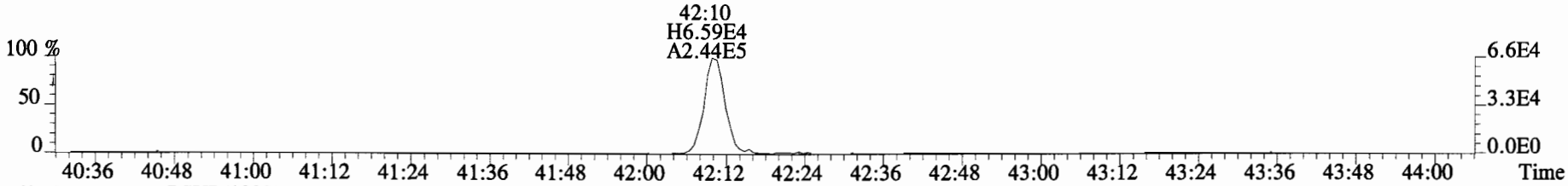
430.9728 S:7 F:4



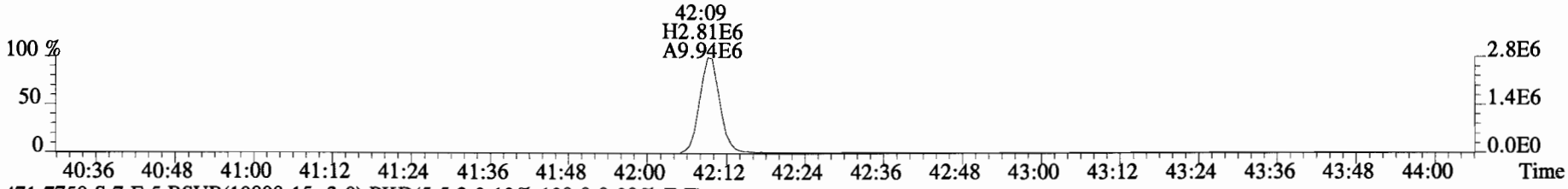
File:150311D2 #1-388 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



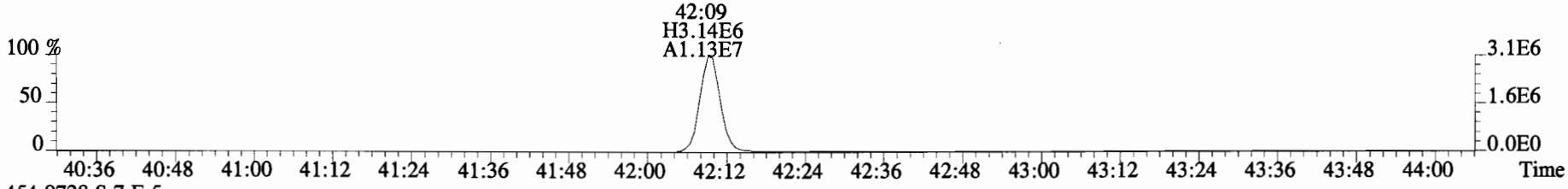
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



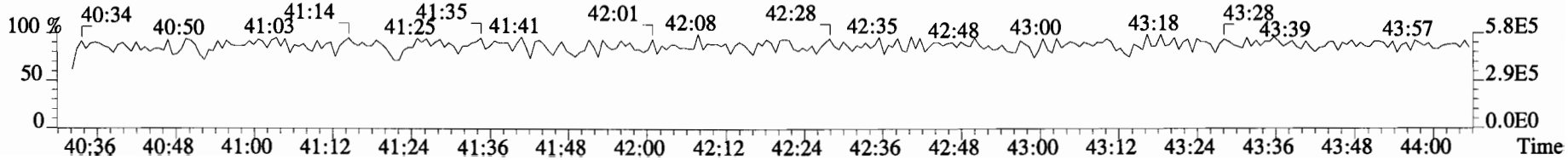
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

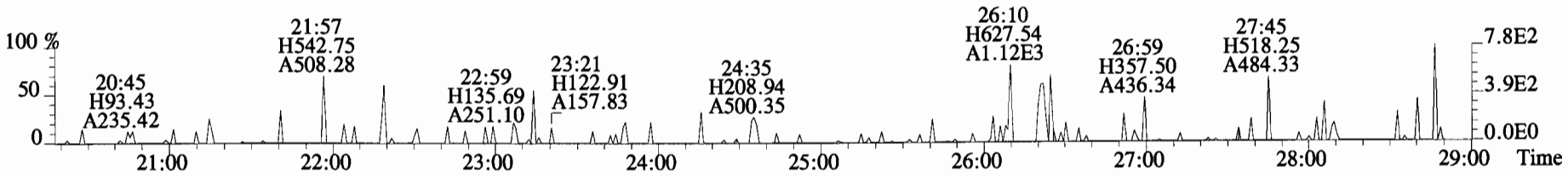


454.9728 S:7 F:5

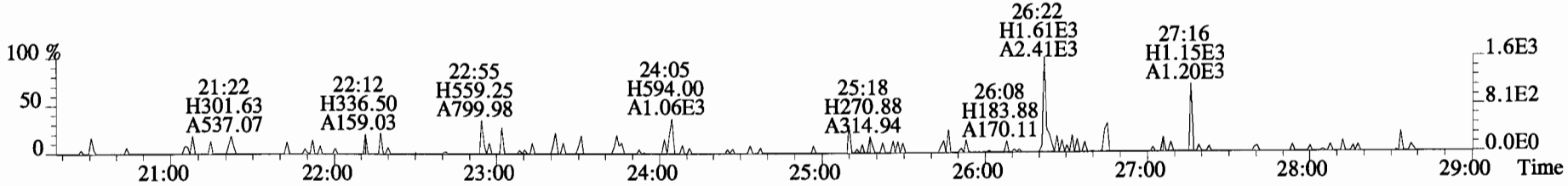


File:150311D2 #1-551 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5

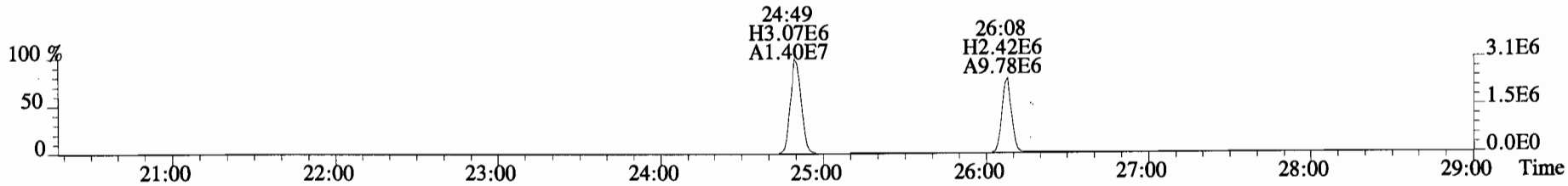
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



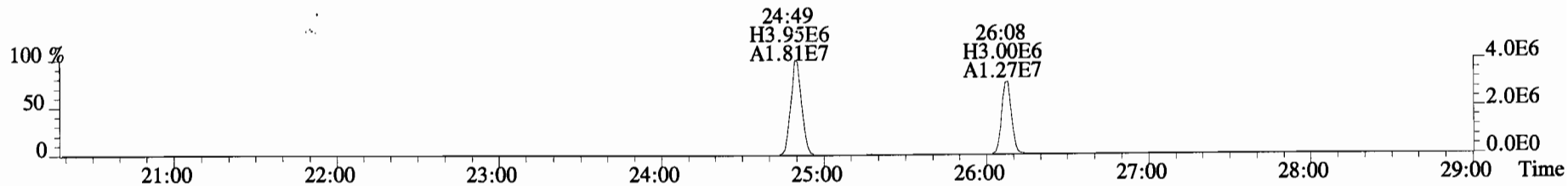
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



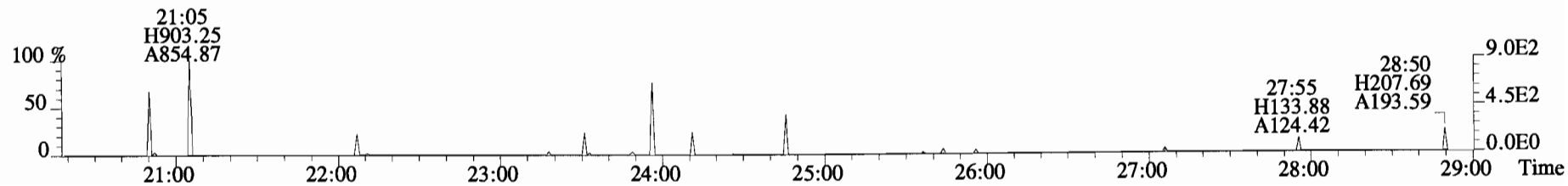
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



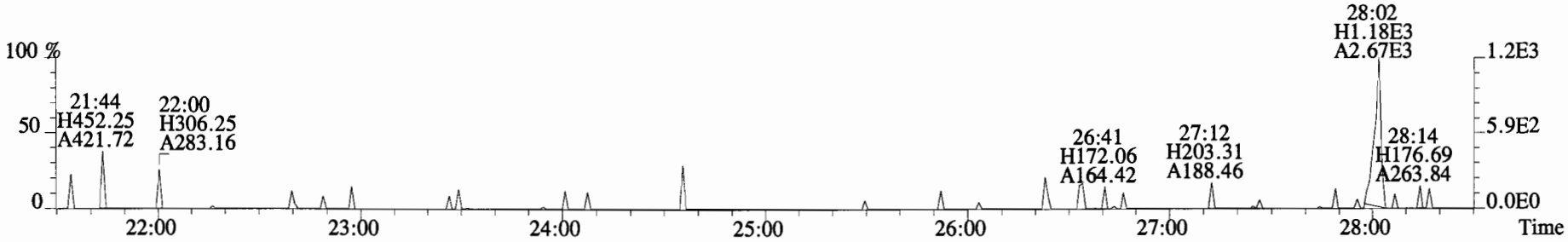
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



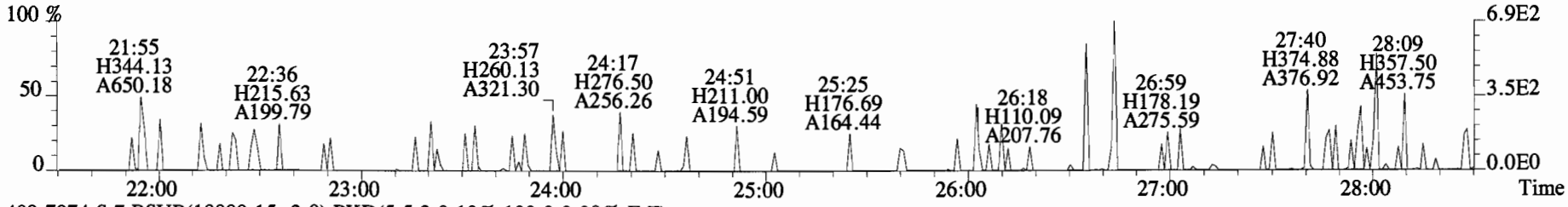
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



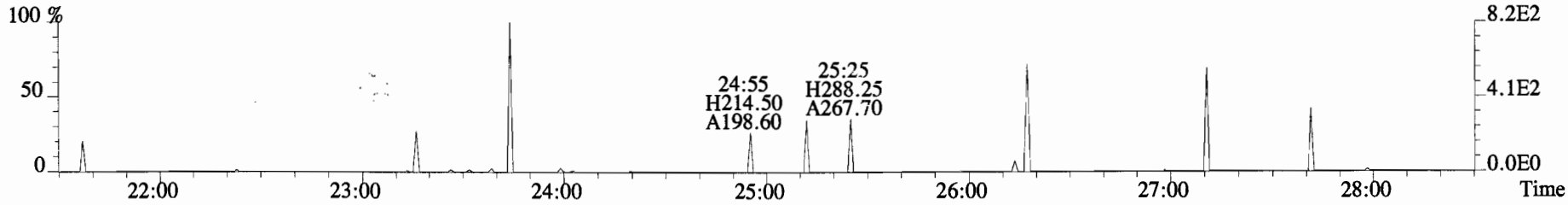
File:150311D2 #1-551 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



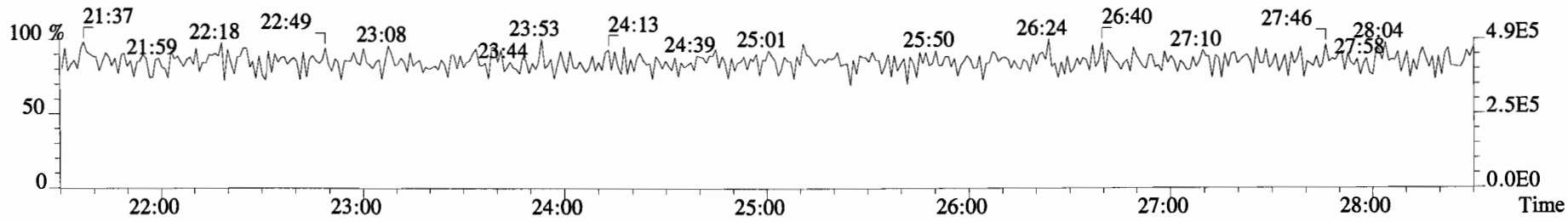
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



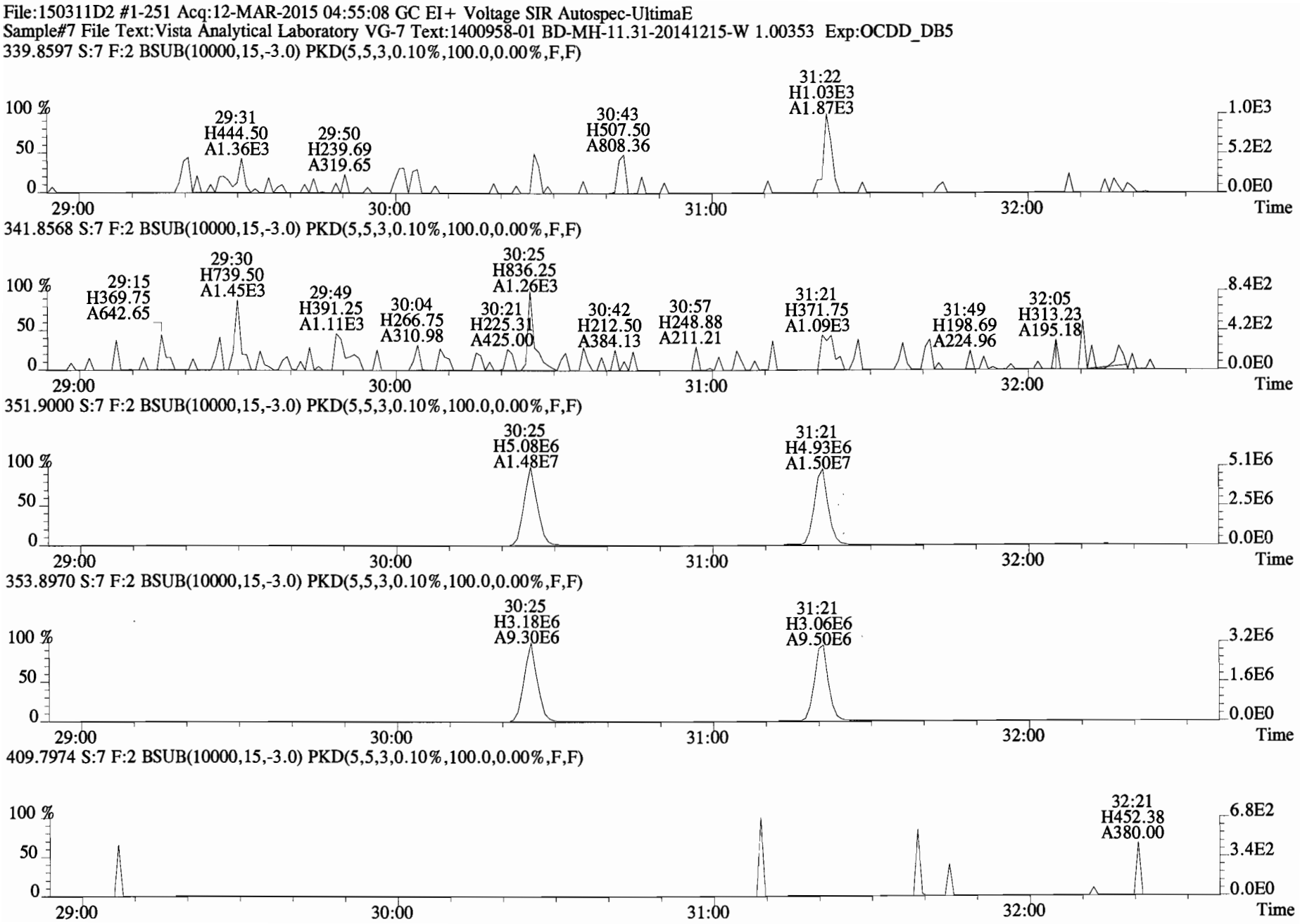
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



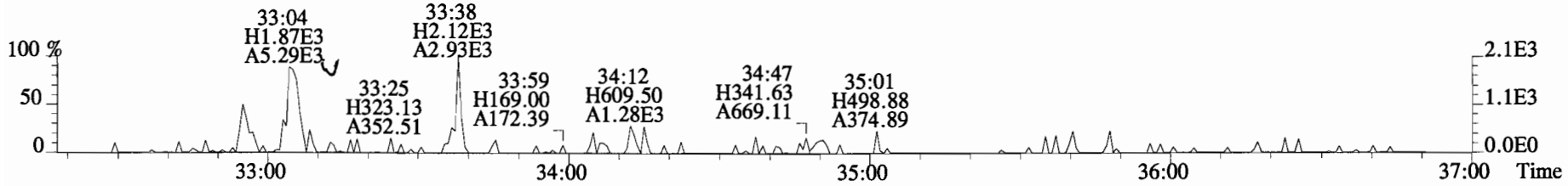
316.9824 S:7



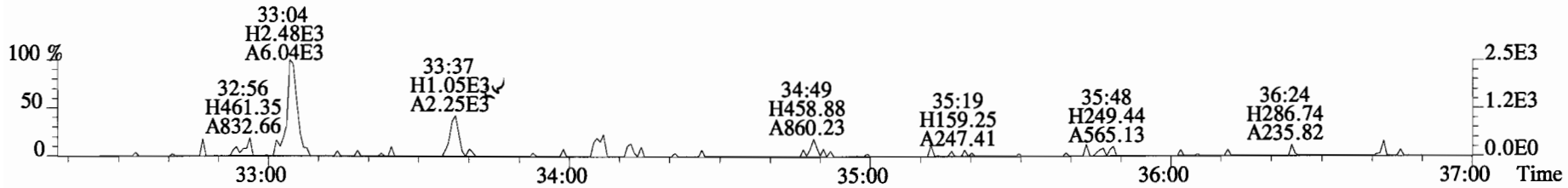
File:150311D2 #1-251 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5



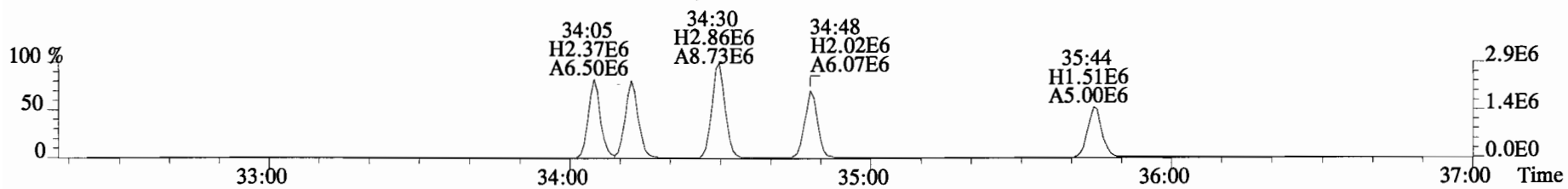
File:150311D2 #1-392 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



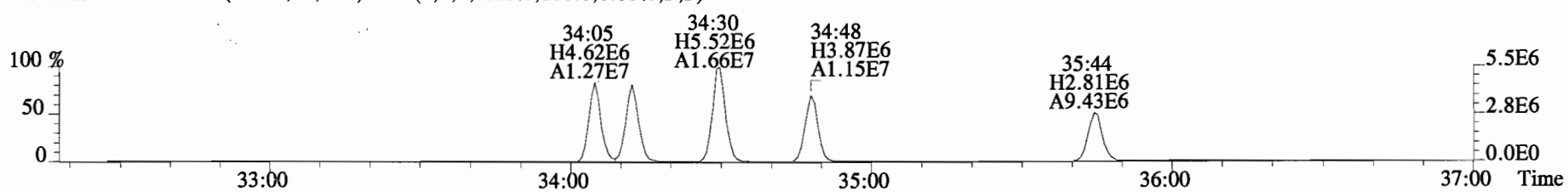
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



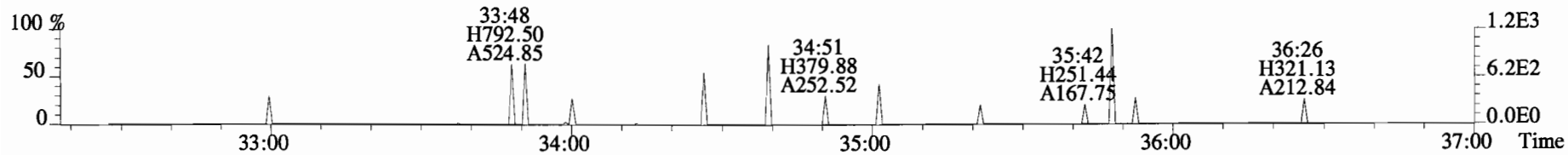
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



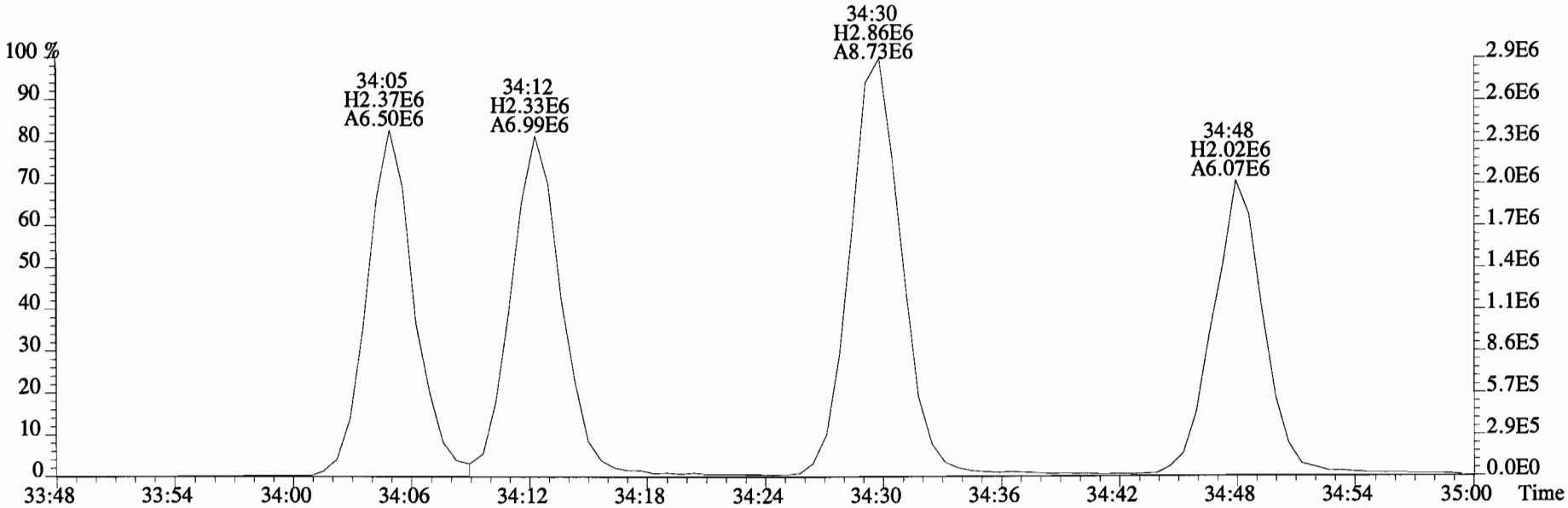
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



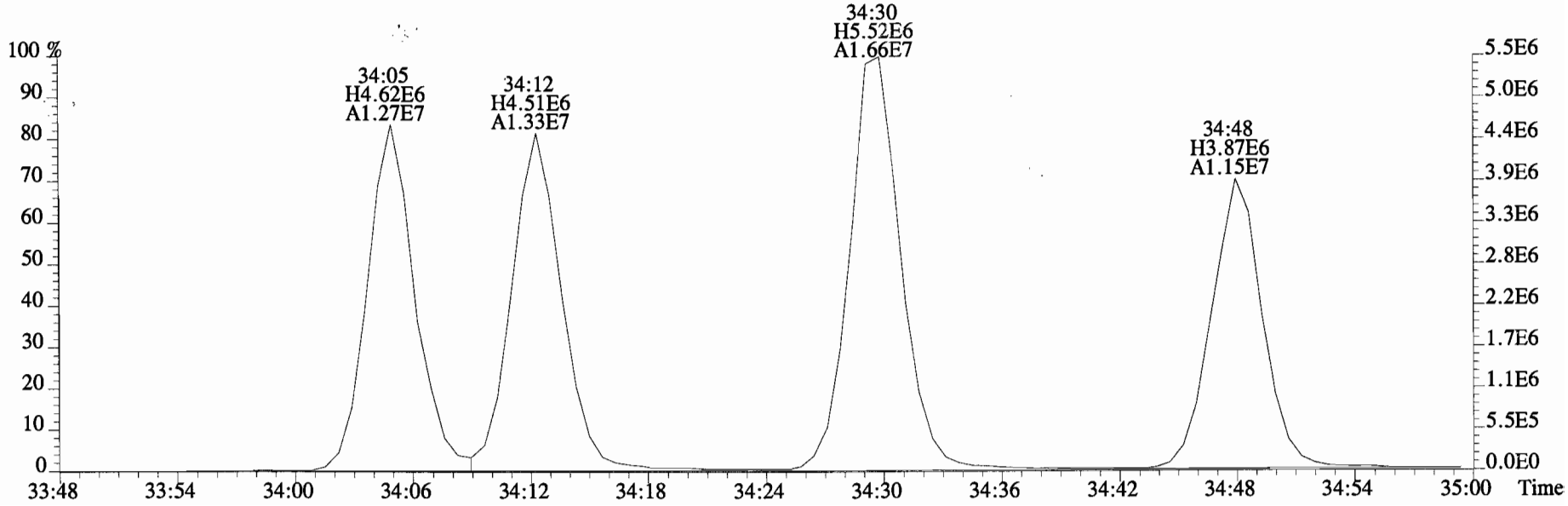
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



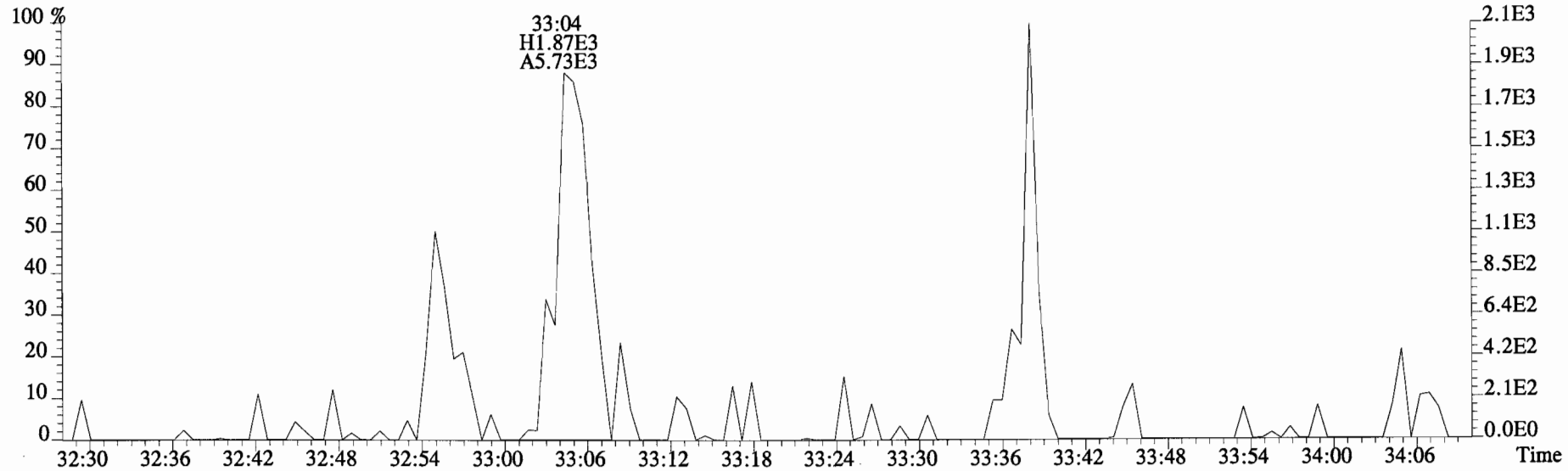
File:150311D2 #1-392 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



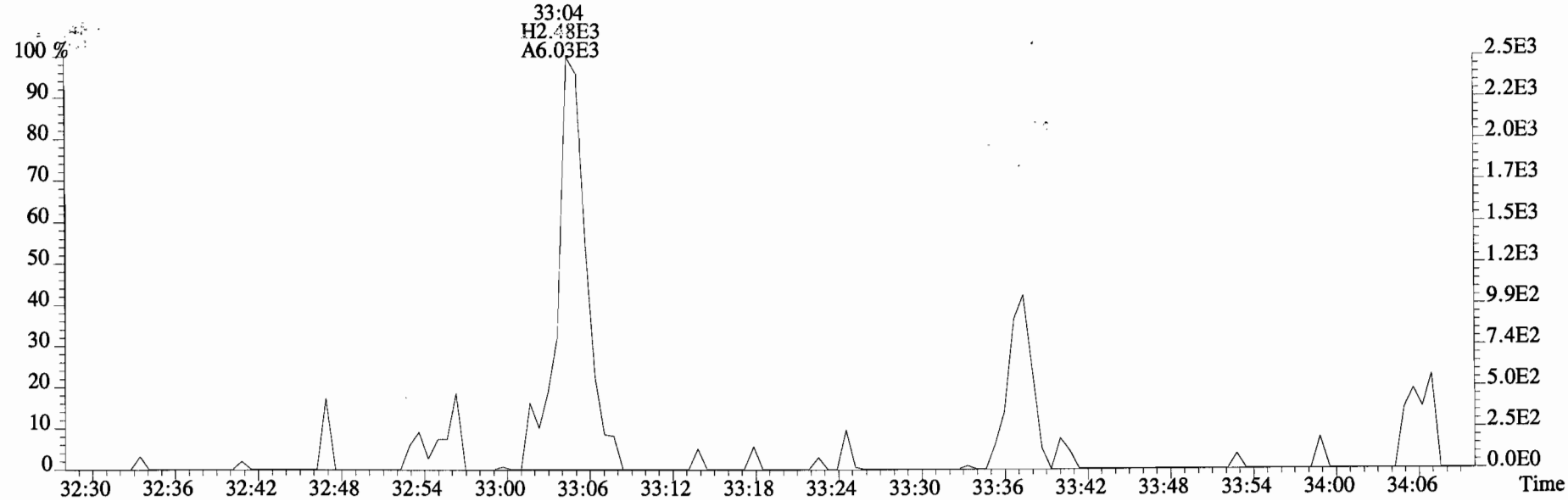
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



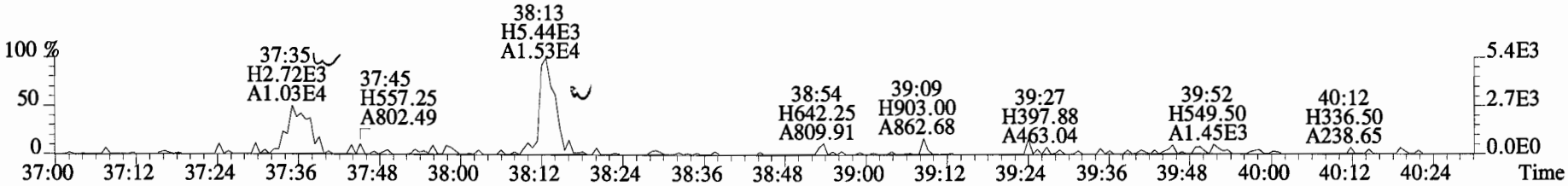
File:150311D2 #1-392 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



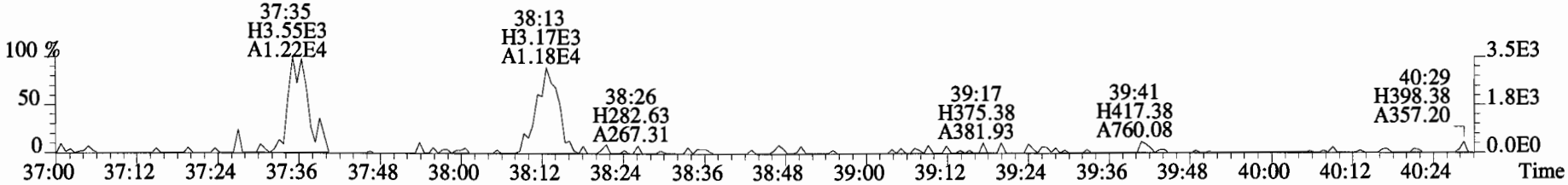
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



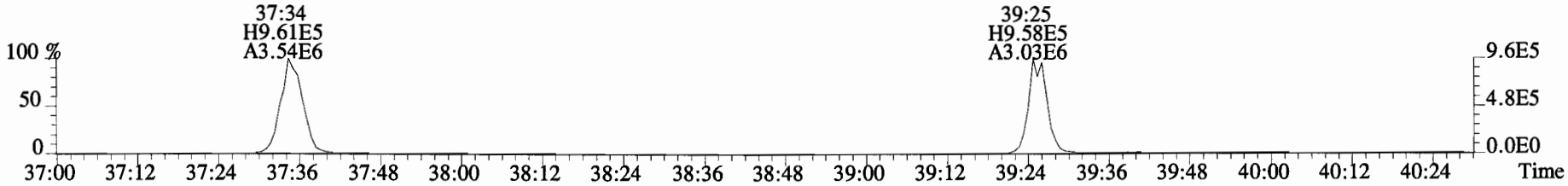
File:150311D2 #1-326 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



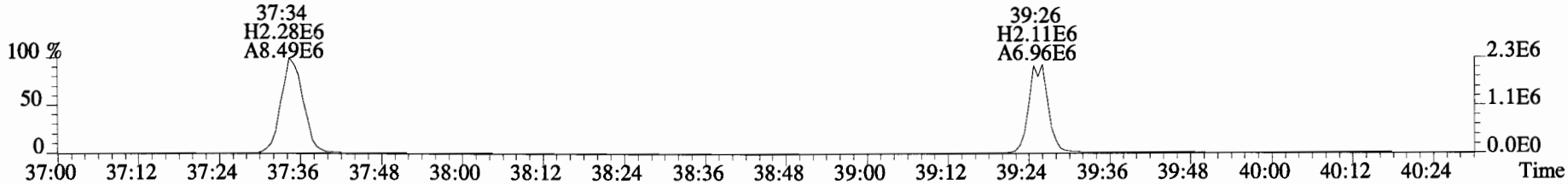
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



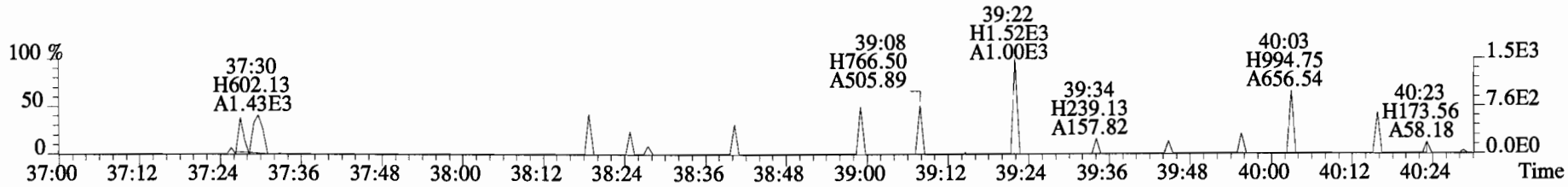
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



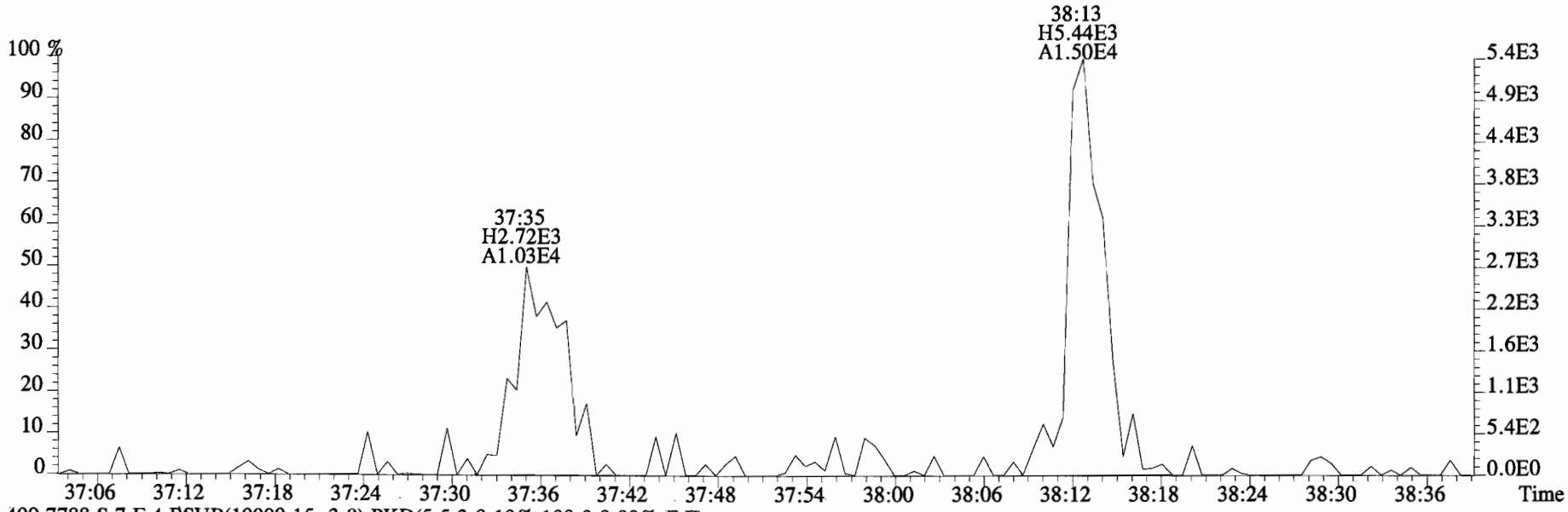
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



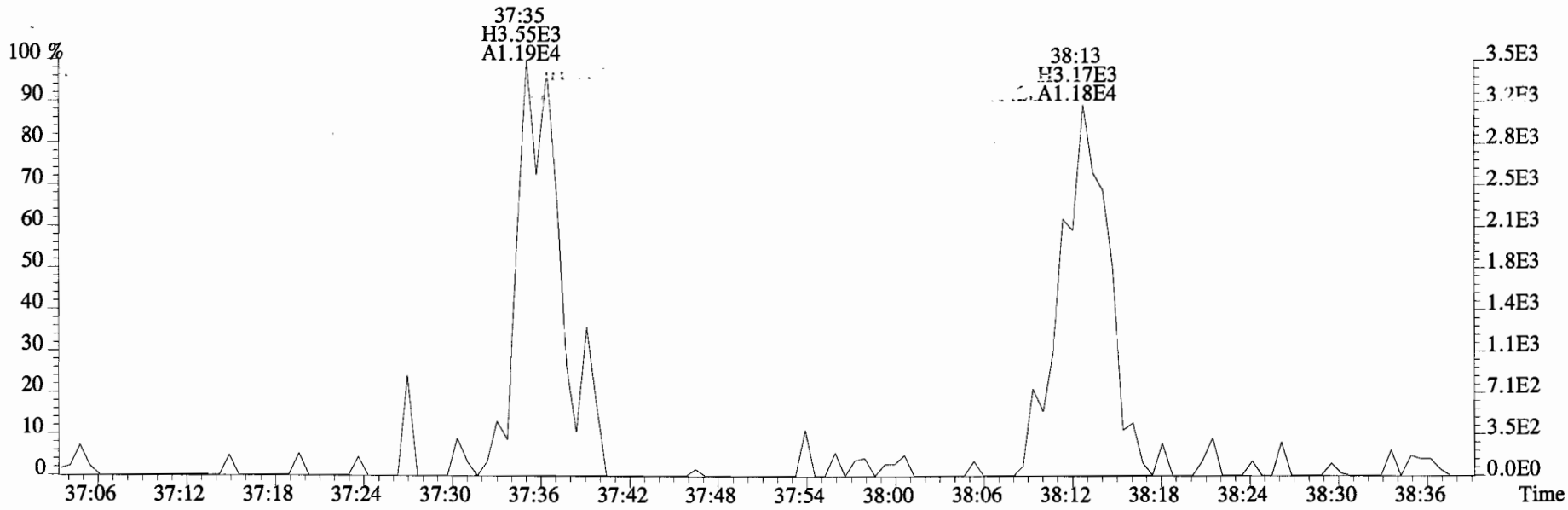
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



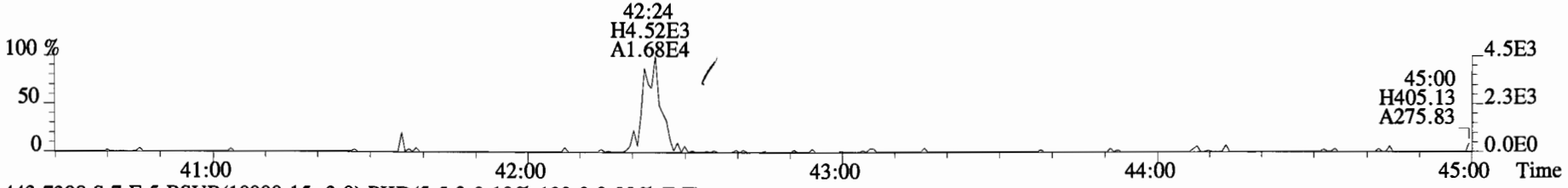
File:150311D2 #1-326 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



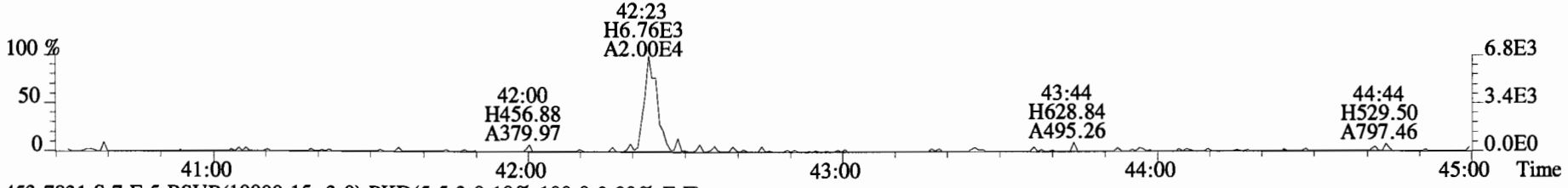
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



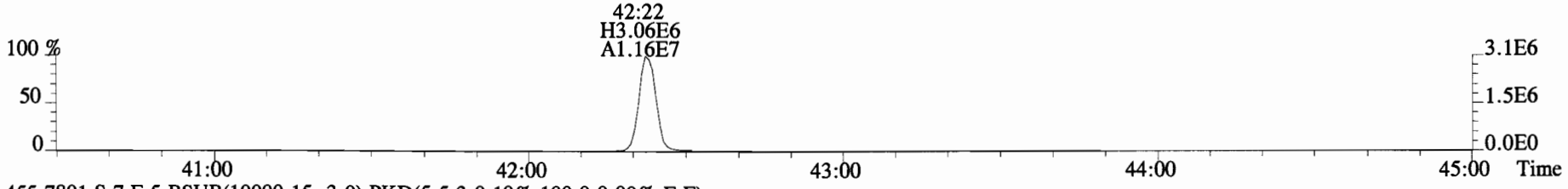
File:150311D2 #1-388 Acq:12-MAR-2015 04:55:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400958-01 BD-MH-11.31-20141215-W 1.00353 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



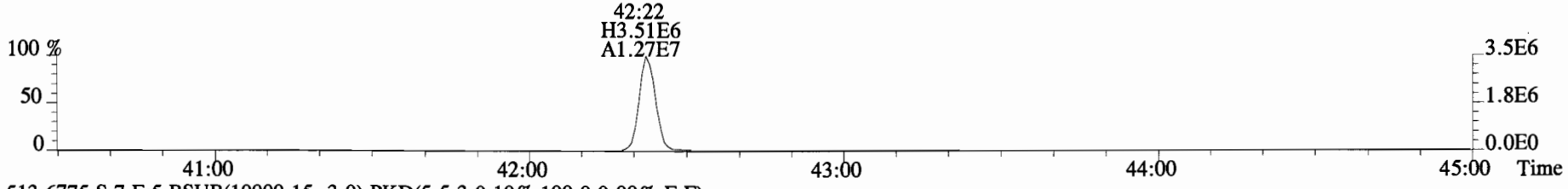
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



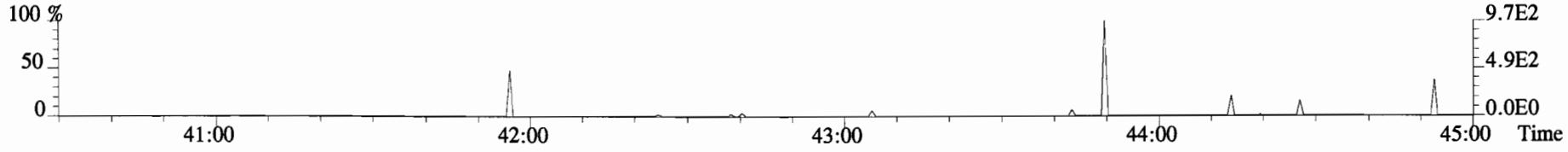
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-MH-5.16-20141215-3 Filename: 150320D1 S:5 Acq:20-MAR-15 13:45:46 ConCal: ST150320D1-1
Lab ID: 1400958-02RE1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.008 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotF	*	*		536	2.5	1.66
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotF	*	*		594	2.5	1.53
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF	*	*		1160	2.5	5.11
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF	*	*		1160	2.5	4.77
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		1160	2.5	5.08
	1,2,3,4,6,7,8-HpCDD	1.57e+05	1.02	y	1.10	38:55	1.000	35.364		*	2.5	*
	OCDD	8.99e+05	0.89	y	0.95	42:11	1.000	250.05		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotF	*	*		544	2.5	1.24
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotF	*	*		726	2.5	1.40
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotF	*	*		726	2.5	1.54
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF	*	*		1440	2.5	1.70
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		1440	2.5	1.98
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF	*	*		1440	2.5	2.36
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		1440	2.5	3.58
	1,2,3,4,6,7,8-HpCDF	1.35e+05	0.98	y	1.61	37:36	1.000	18.837		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		1450	2.5	3.47
	OCDF	2.82e+05	0.93	y	1.10	42:24	1.000	56.947		*	2.5	*
IS	13C-2,3,7,8-TCDD	9.52e+06	0.79	y	1.06	26:58	1.022	1334.2				
IS	13C-1,2,3,7,8-PeCDD	1.08e+07	0.64	y	1.18	31:40	1.200	1369.0				
IS	13C-1,2,3,4,7,8-HxCDD	8.39e+06	1.34	y	0.72	34:59	1.014	1205.1				
IS	13C-1,2,3,6,7,8-HxCDD	8.77e+06	1.21	y	0.74	35:06	1.017	1232.5				
IS	13C-1,2,3,7,8,9-HxCDD	1.03e+07	1.24	y	0.85	35:23	1.025	1243.2				
IS	13C-1,2,3,4,6,7,8-HpCDD	7.98e+06	1.05	y	0.65	38:54	1.127	1263.9				
IS	13C-OCDD	1.50e+07	0.88	y	0.76	42:11	1.222	2037.8				
IS	13C-2,3,7,8-TCDF	1.44e+07	0.78	y	0.92	26:08	0.991	1253.7				
IS	13C-1,2,3,7,8-PeCDF	1.88e+07	1.56	y	0.92	30:27	1.154	1635.2				
IS	13C-2,3,4,7,8-PeCDF	1.74e+07	1.59	y	0.93	31:22	1.189	1499.7				
IS	13C-1,2,3,4,7,8-HxCDF	1.43e+07	0.52	y	0.98	34:06	0.988	1504.5				
IS	13C-1,2,3,6,7,8-HxCDF	1.43e+07	0.52	y	1.08	34:14	0.992	1369.1				
IS	13C-2,3,4,6,7,8-HxCDF	1.28e+07	0.53	y	1.03	34:49	1.009	1291.1				
IS	13C-1,2,3,7,8,9-HxCDF	1.04e+07	0.52	y	0.86	35:46	1.036	1249.5				
IS	13C-1,2,3,4,6,7,8-HpCDF	8.80e+06	0.45	y	0.72	37:35	1.089	1261.3				
IS	13C-1,2,3,4,7,8,9-HpCDF	8.13e+06	0.43	y	0.70	39:27	1.143	1206.3				
IS	13C-OCDF	1.79e+07	0.89	y	0.85	42:24	1.228	2180.8				
C/Up	37Cl-2,3,7,8-TCDD	6.03e+06			1.12	26:59	1.023	801.50				
RS/RT	13C-1,2,3,4-TCDD	1.34e+07	0.79	y	1.00	26:23	*	1984.1				
RS	13C-1,2,3,4-TCDF	2.47e+07	0.77	y	1.00	24:50	*	1984.1				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.92e+07	0.51	y	1.00	34:31	*	1984.1				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		536	1.66
Total Penta-Dioxins	*	*		1050	2.70
Total Hexa-Dioxins	*	3.94		*	*
Total Hepta-Dioxins	35.4	61.3		*	*
Total Tetra-Furans	*	*		544	1.24
Total Penta-Furans	1.7408	1.7408		*	*
Total Hexa-Furans	12.3	14.0		*	*
Total Hepta-Furans	45.4	45.4		*	*

Rec	Qual
67.2	
69.0	
60.7	
62.1	
62.7	
63.7	
51.4	
63.2	
82.4	
75.6	
75.8	
69.0	
65.1	
63.0	
63.6	
60.8	
55.0	
101	

Integrations by Analyst: MJ Date: 3/23/15

Reviewed by Analyst: [signature] Date: 3/28/15

Totals class: HxCDD EMPC Entry #: 23

Run: 10 File: 150320D1 S: 5 I: 1 F: 3
Acquired: 20-MAR-15 13:45:46 Processed: 23-MAR-15 08:39:59

Total Concentration: 3.9428 Unnamed Concentration: 3.943

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
34:18	1.232e+04	8.261e+03	1.49	n	1.851e+04	3.9428	

Totals class: HpCDD EMPC Entry #: 25

Run: 10 File: 150320D1 S: 5 I: 1 F: 4
Acquired: 20-MAR-15 13:45:46 Processed: 23-MAR-15 08:39:59

Total Concentration: 61.292 Unnamed Concentration: 25.928

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
38:00	7.525e+04	5.647e+04	1.33	n	1.152e+05	25.928	
38:55	7.943e+04	7.770e+04	1.02	y	1.571e+05	35.364	1,2,3,4,6,7,8-HpCDD

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 10 File: 150320D1 S: 5 I: 1 F: 1
Acquired: 20-MAR-15 13:45:46 Processed: 23-MAR-15 08:39:59

Total Concentration: 1.7408 Unnamed Concentration: 1.741

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:02	1.024e+04	6.492e+03	1.58	y	1.673e+04	1.7408	

Totals class: HxCDF EMPC Entry #: 33

Run: 10 File: 150320D1 S: 5 I: 1 F: 3
Acquired: 20-MAR-15 13:45:46 Processed: 23-MAR-15 08:39:59

Total Concentration: 14.008 Unnamed Concentration: 14.008

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:56	9.810e+03	6.240e+03	1.57	n	1.398e+04	1.6722	
33:06	3.835e+04	2.762e+04	1.39	y	6.597e+04	7.8916	
33:39	2.059e+04	1.656e+04	1.24	y	3.715e+04	4.4440	

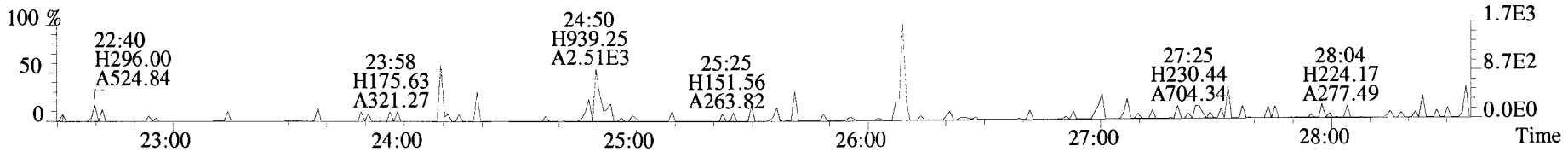
Totals class: HpCDF EMPC Entry #: 35

Run: 10 File: 150320D1 S: 5 I: 1 F: 4
Acquired: 20-MAR-15 13:45:46 Processed: 23-MAR-15 08:39:59

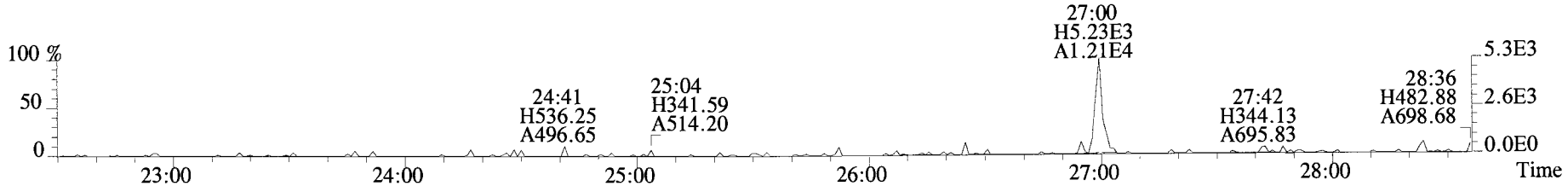
Total Concentration: 45.400 Unnamed Concentration: 26.562

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:36	6.658e+04	6.802e+04	0.98 y	1.346e+05	18.837	1,2,3,4,6,7,8-HpCDF
38:13	9.409e+04	8.365e+04	1.12 y	1.777e+05	26.562	

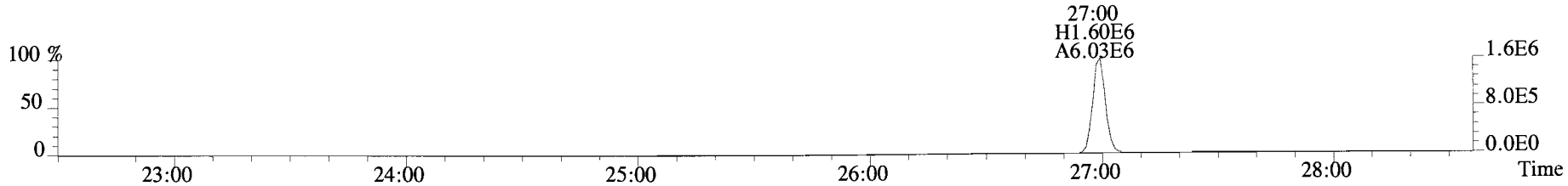
File:150320D1 #1-551 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



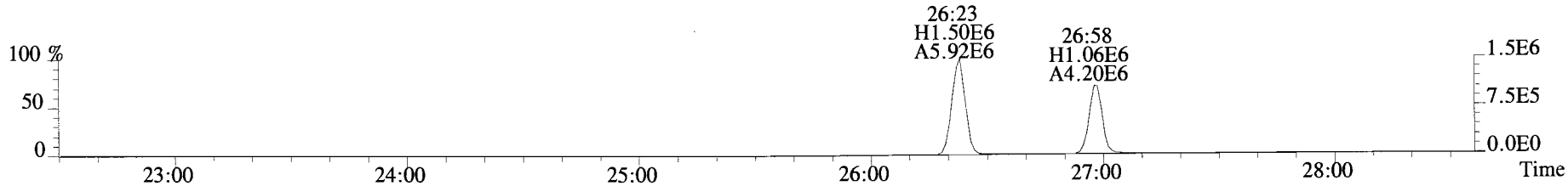
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



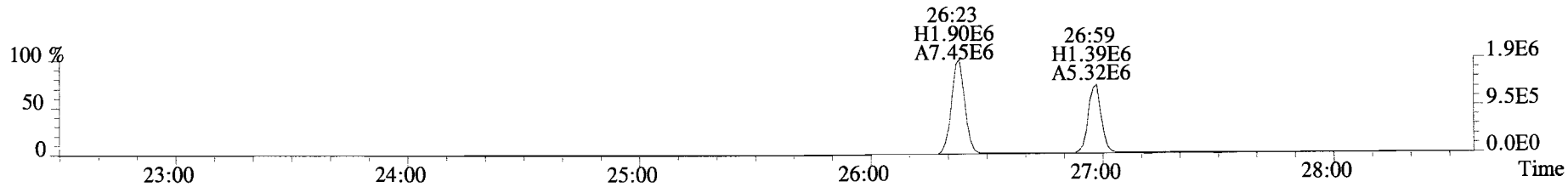
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

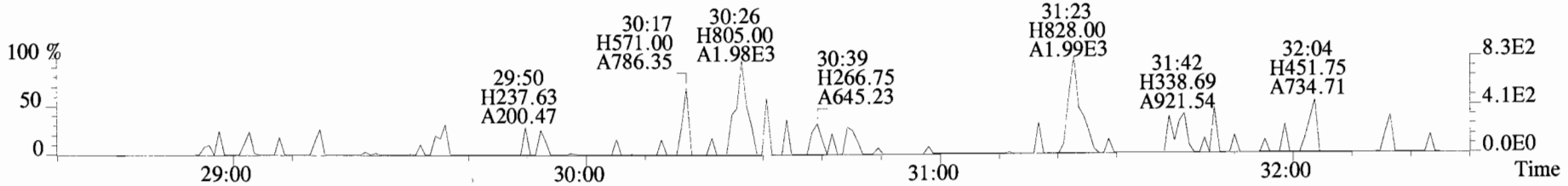


333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

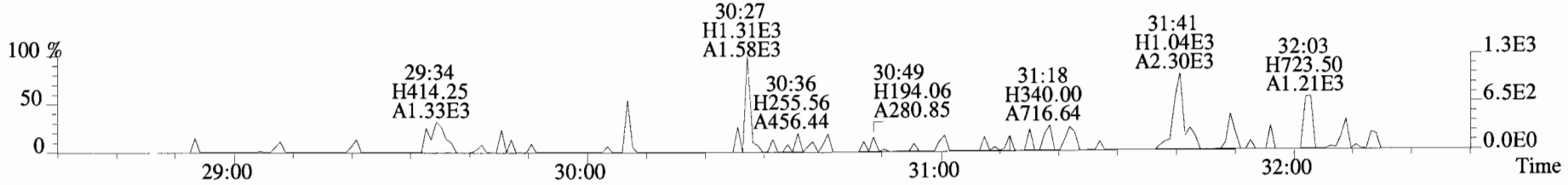


File:150320D1 #1-250 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5

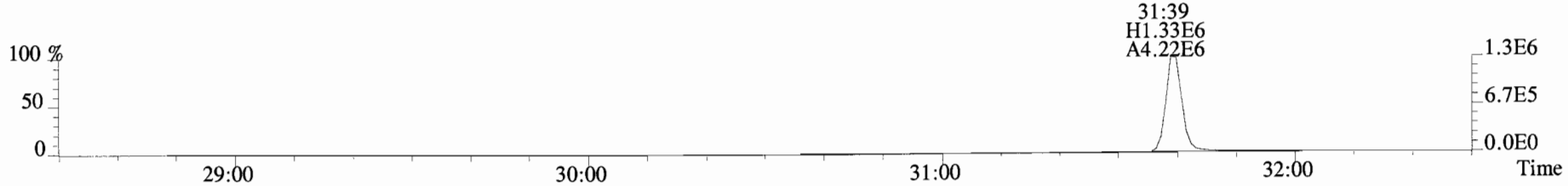
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



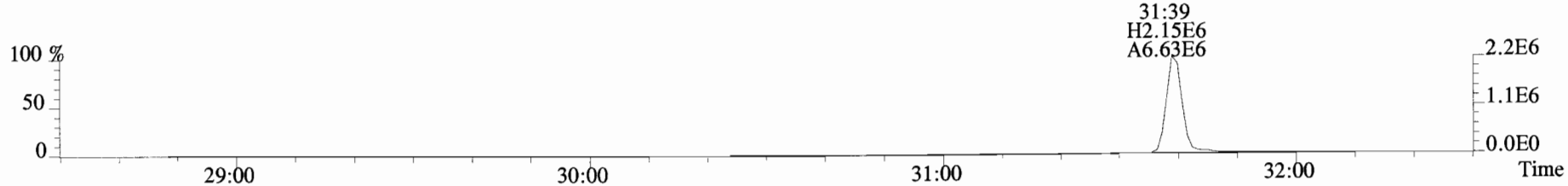
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



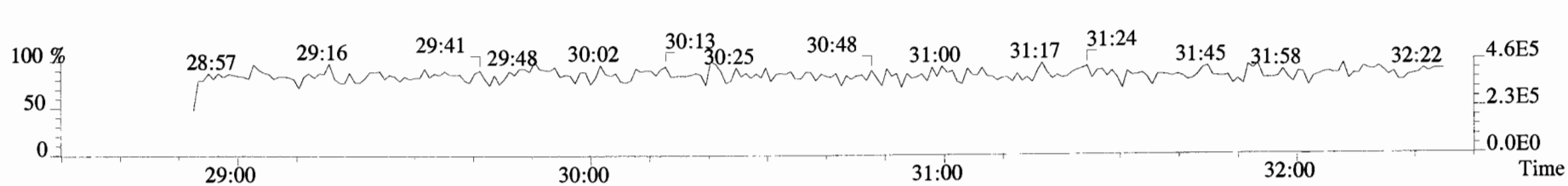
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

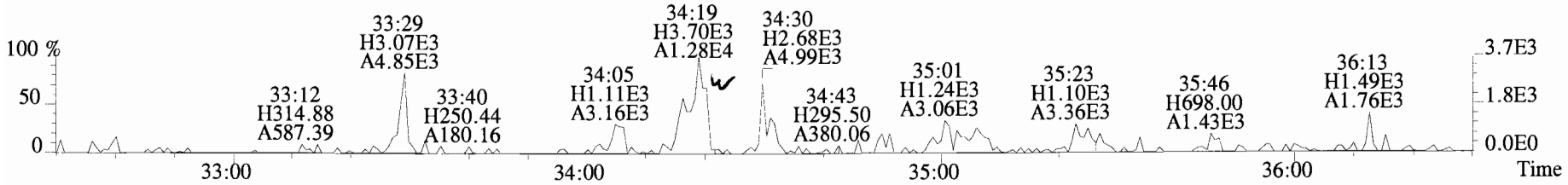


366.9792 S:5 F:2

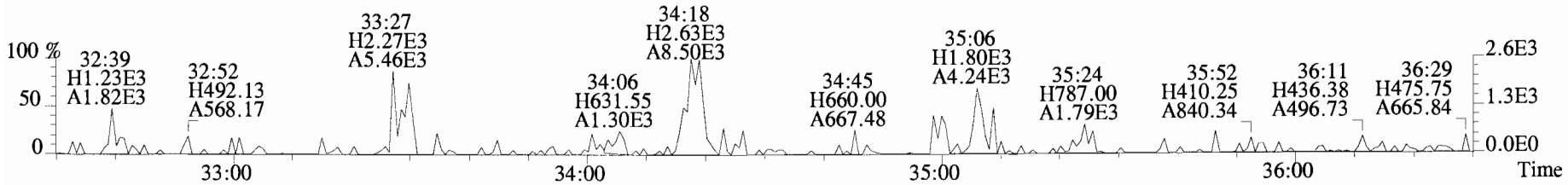


File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5

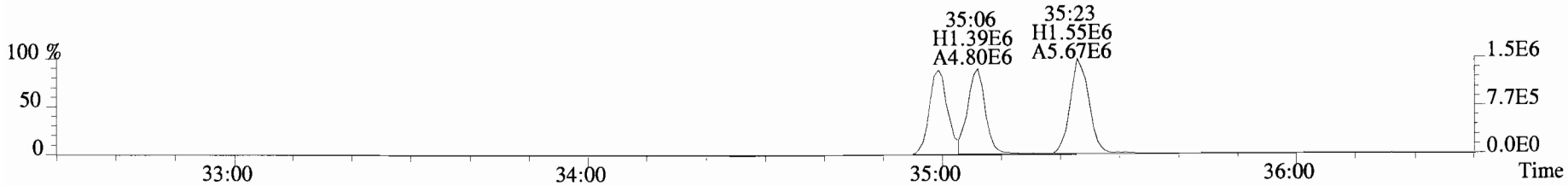
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



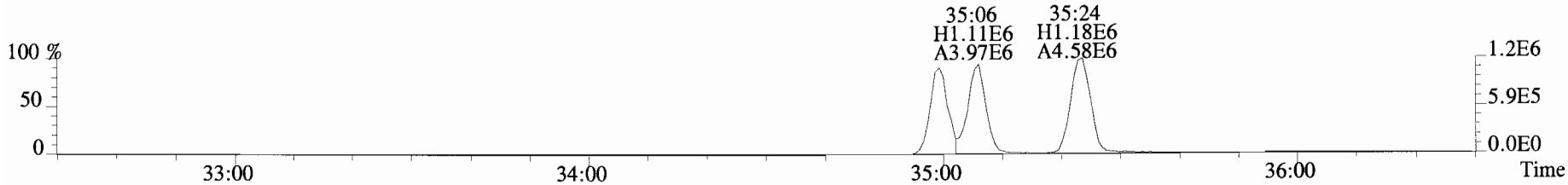
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



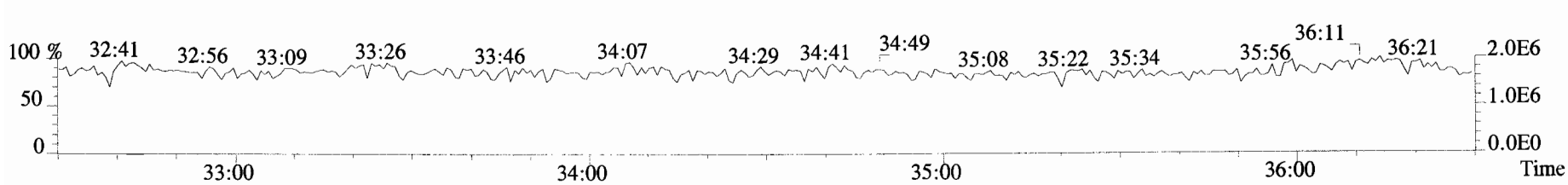
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



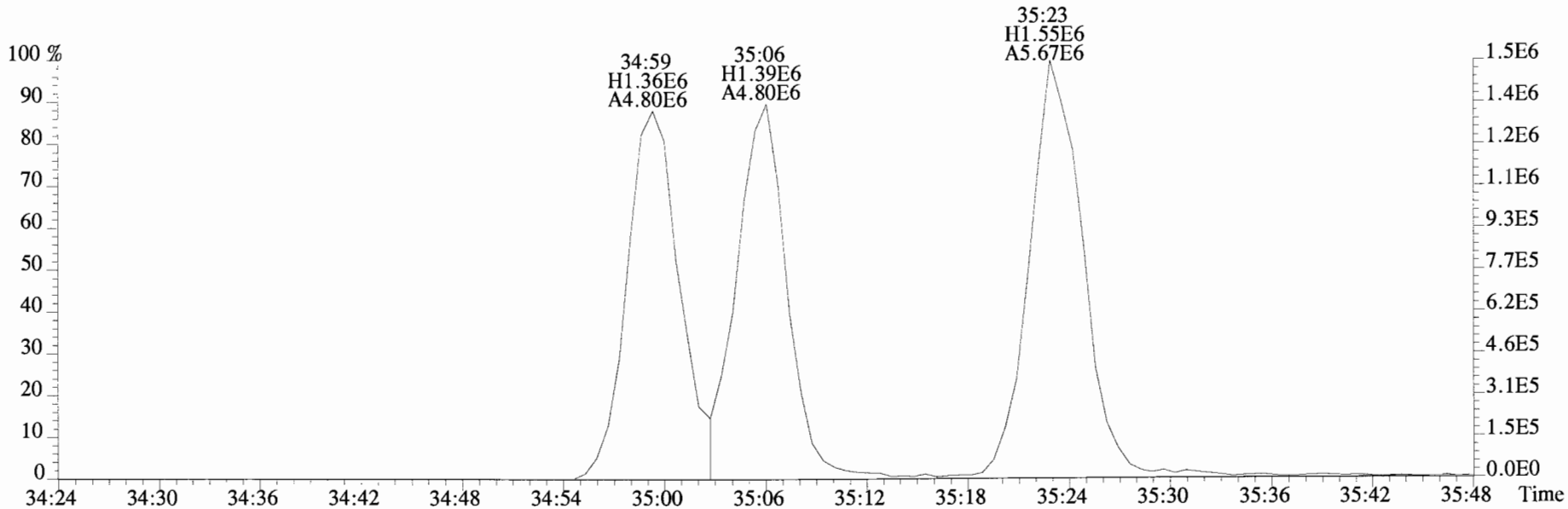
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



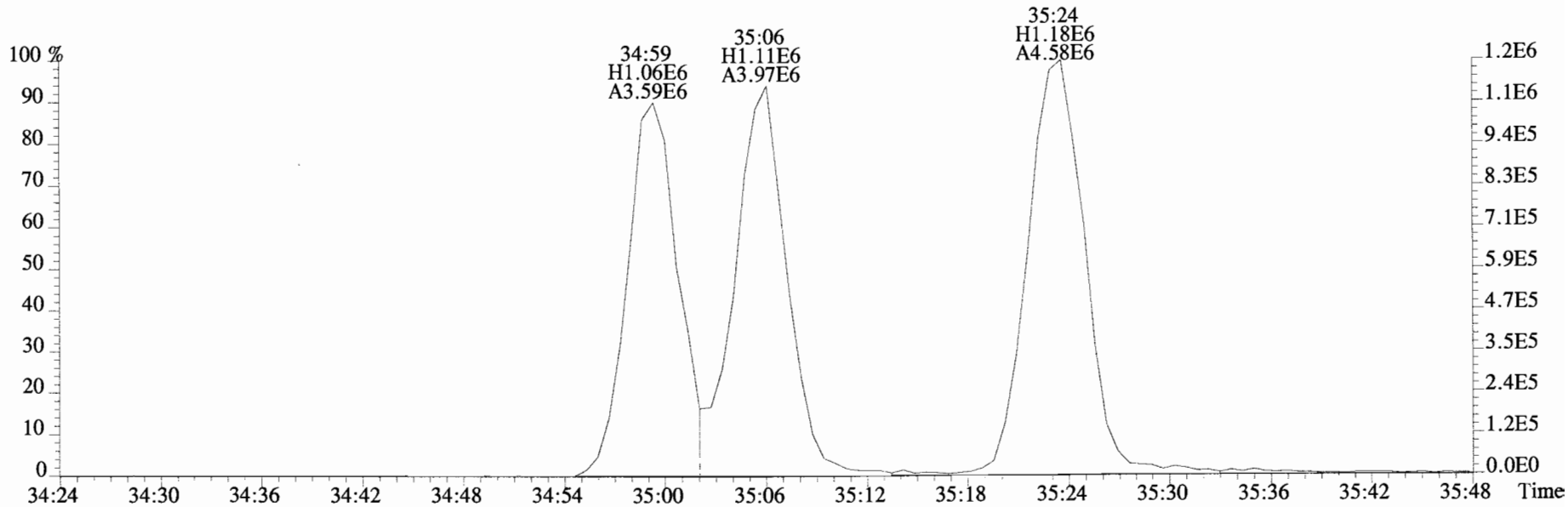
380.9760 S:5 F:3



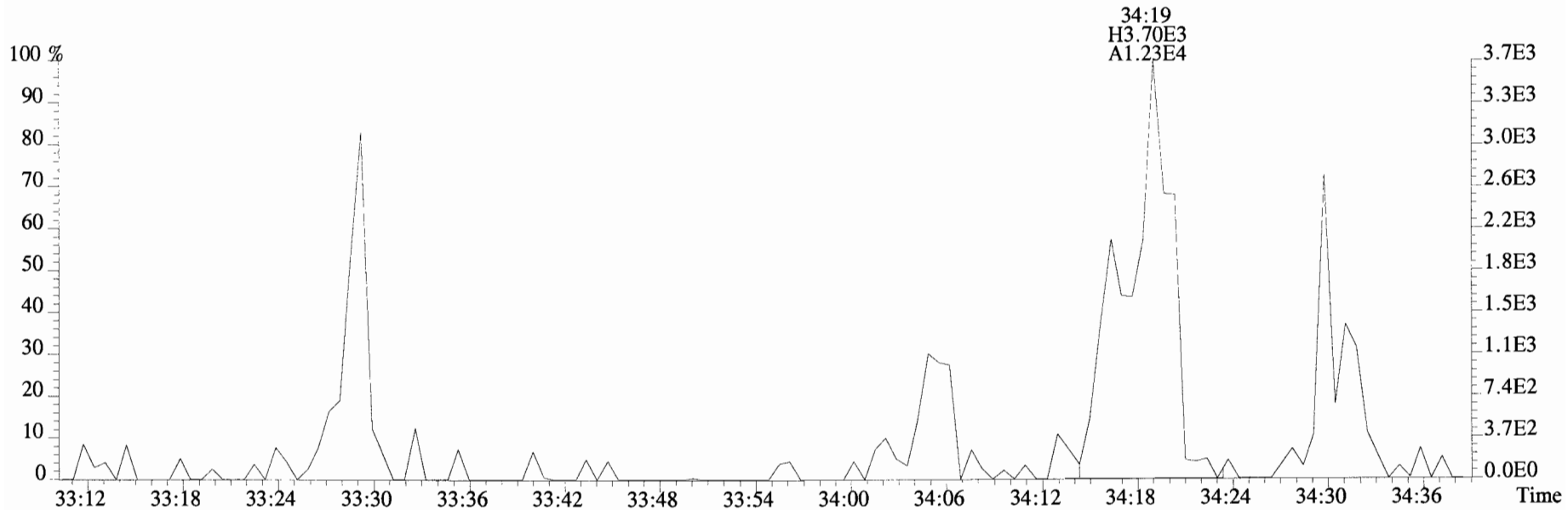
File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



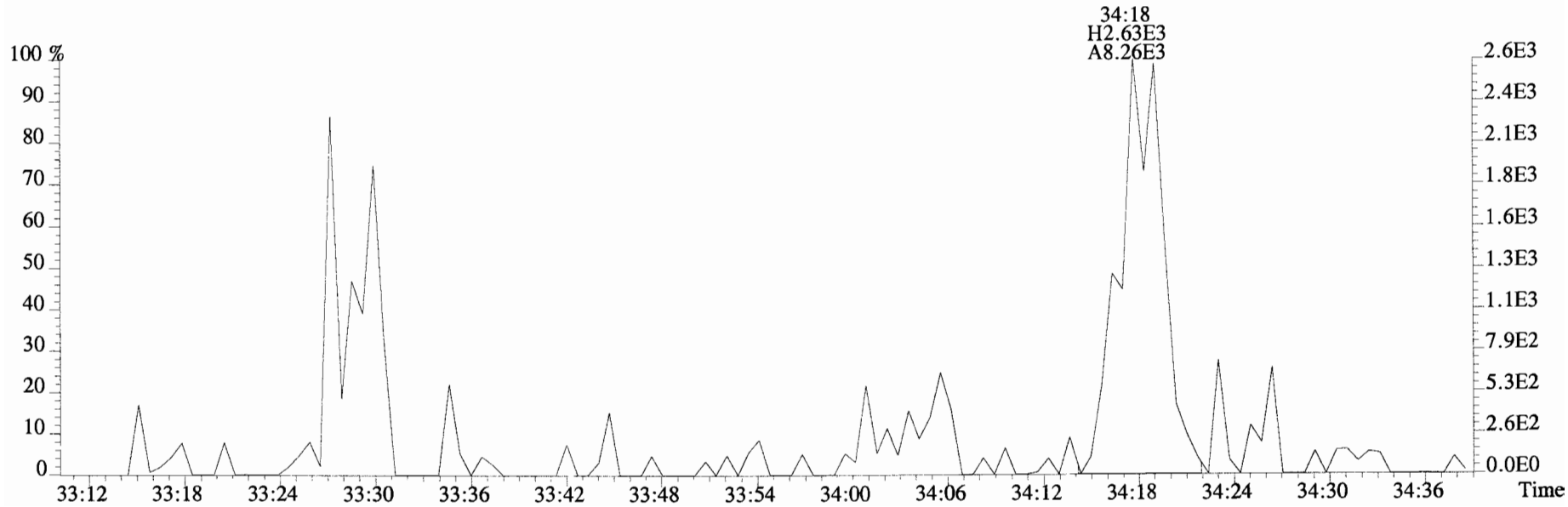
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

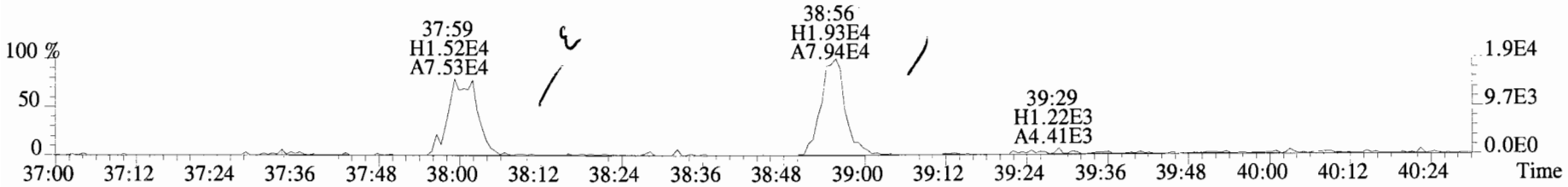


391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

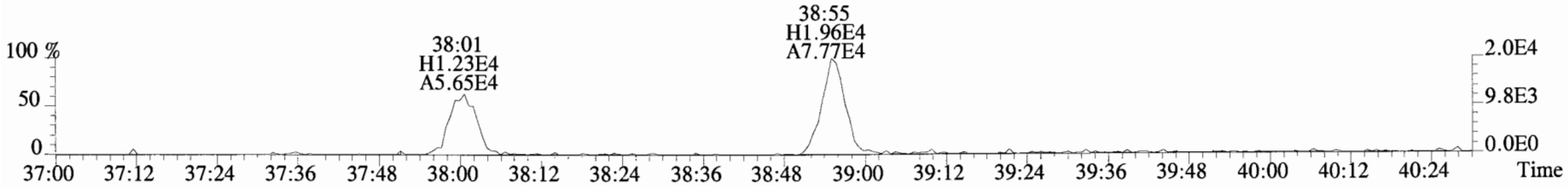


File:150320D1 #1-326 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5

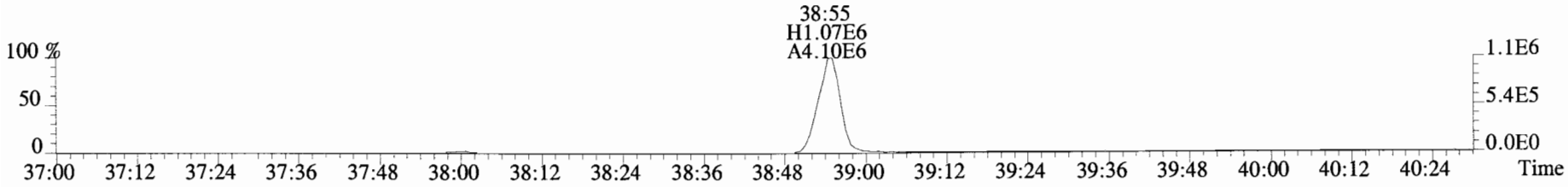
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



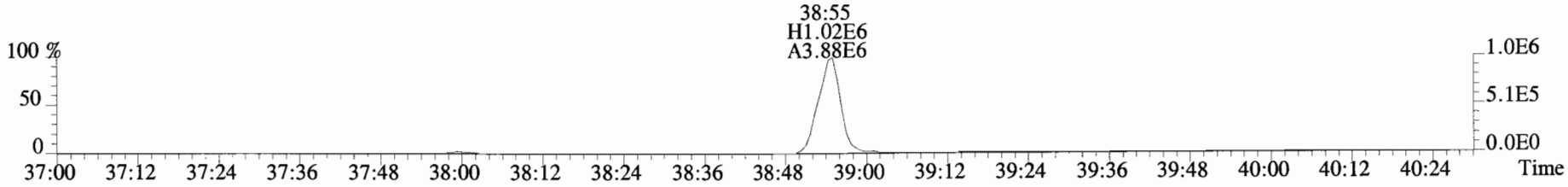
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



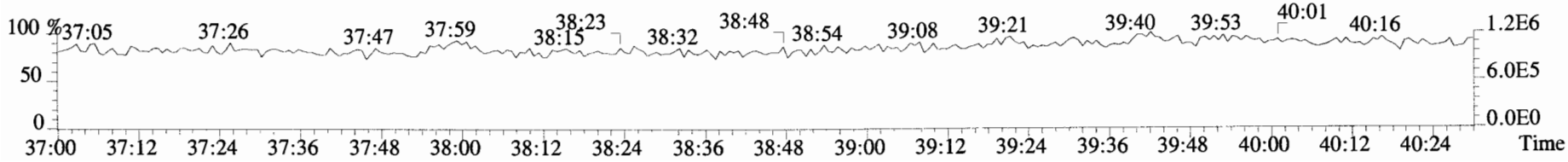
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

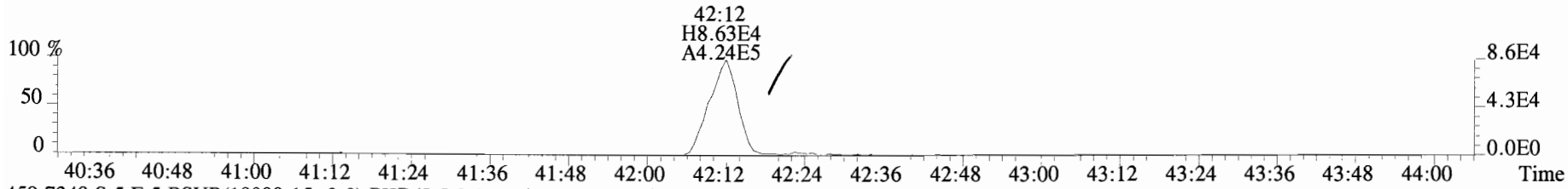


430.9728 S:5 F:4

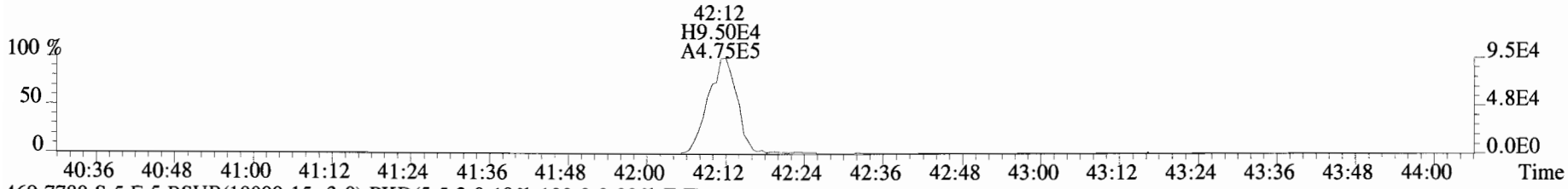


File:150320D1 #1-388 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5

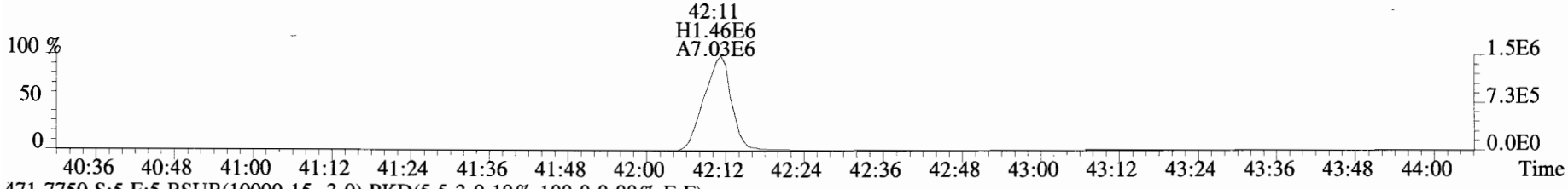
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



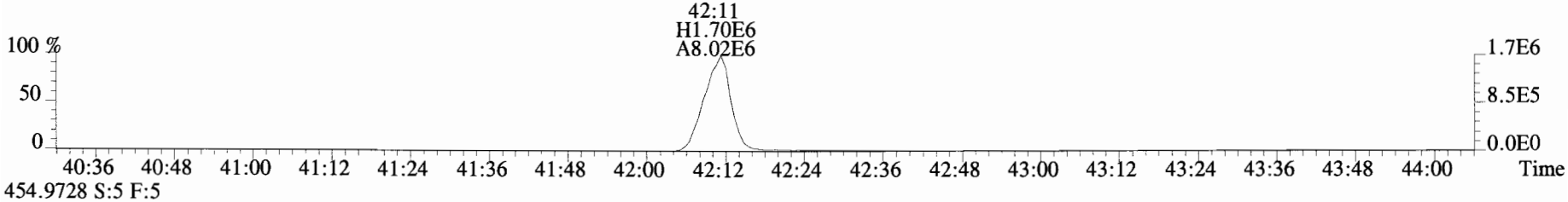
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



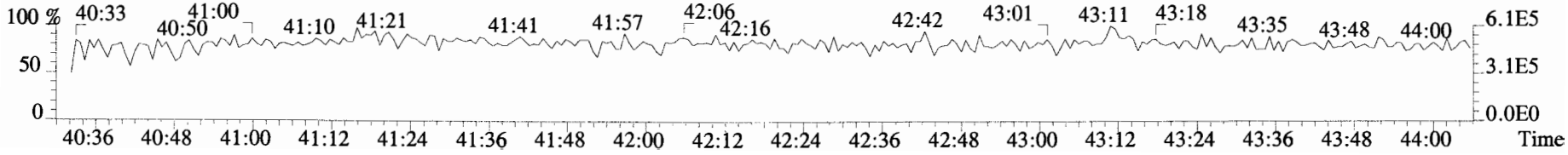
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



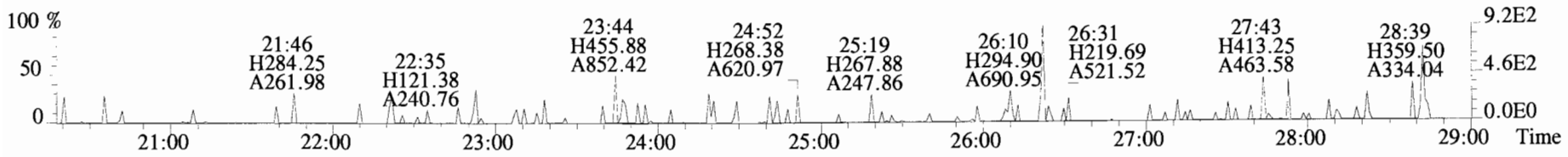
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



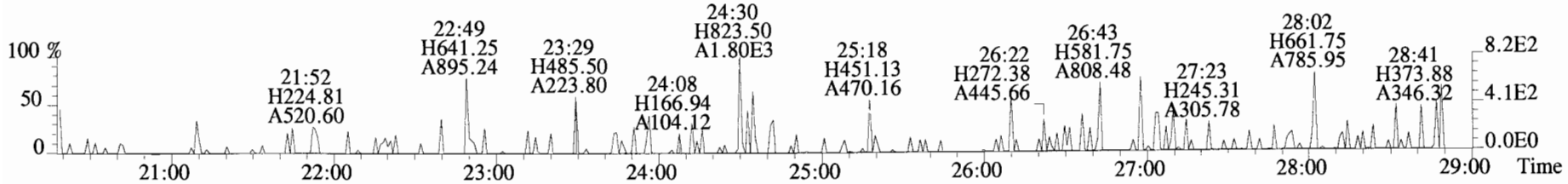
454.9728 S:5 F:5



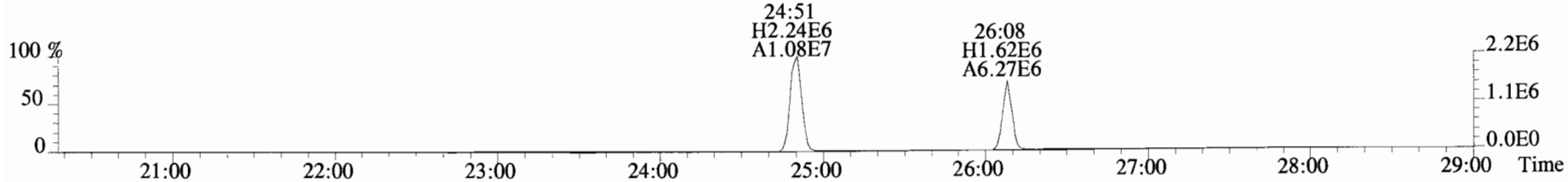
File:150320D1 #1-551 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



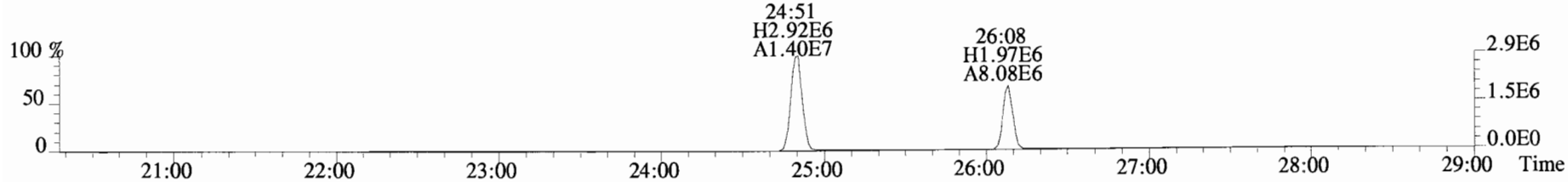
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



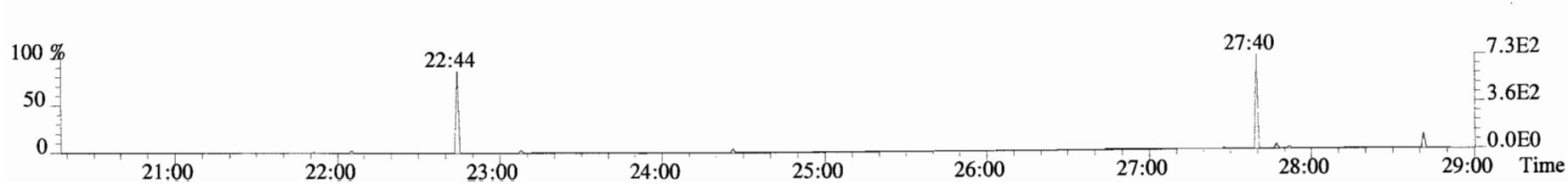
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



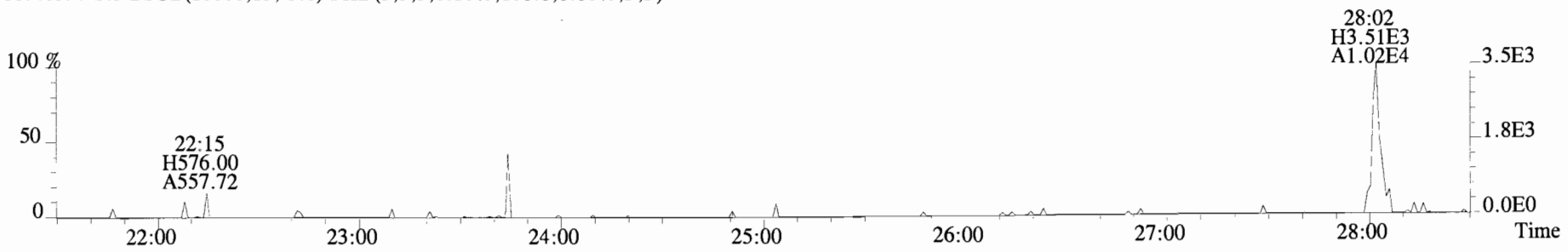
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



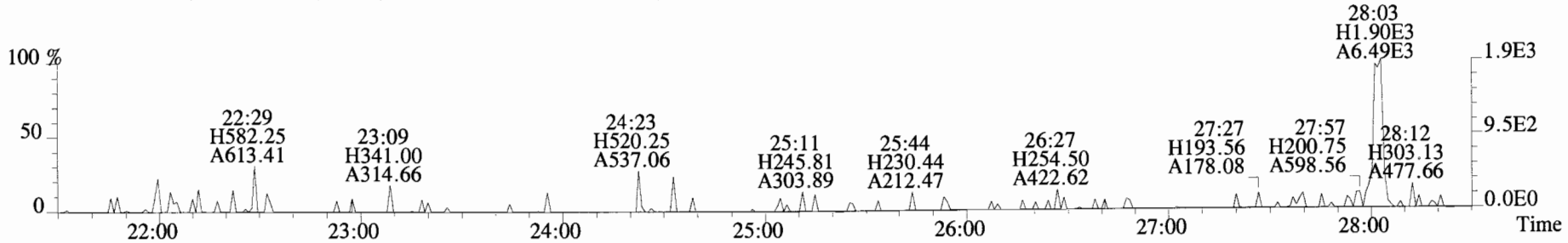
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



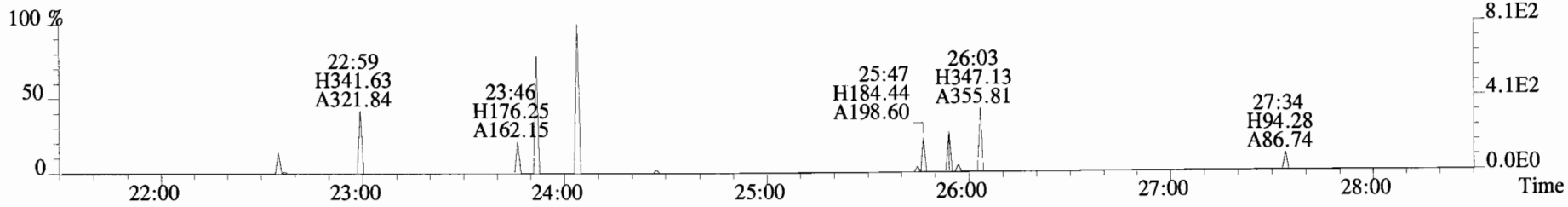
File:150320D1 #1-551 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



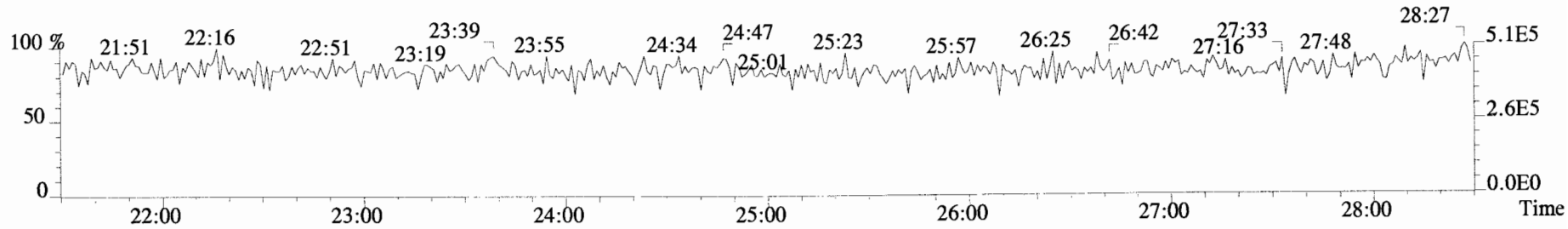
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



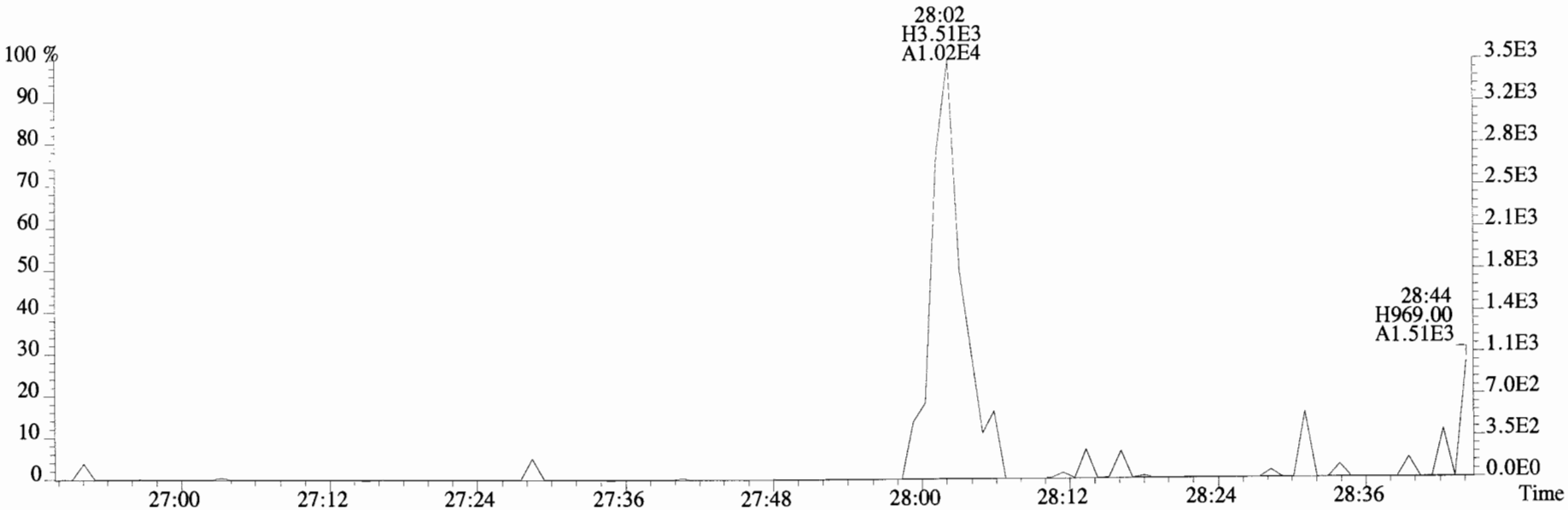
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



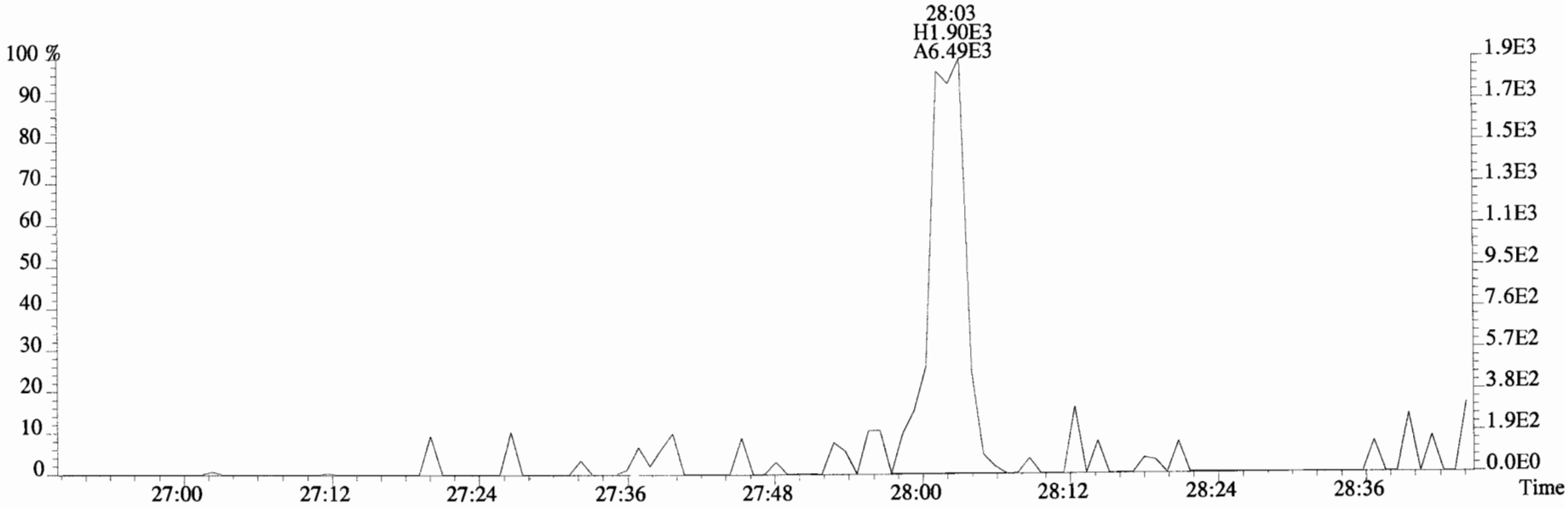
316.9824 S:5



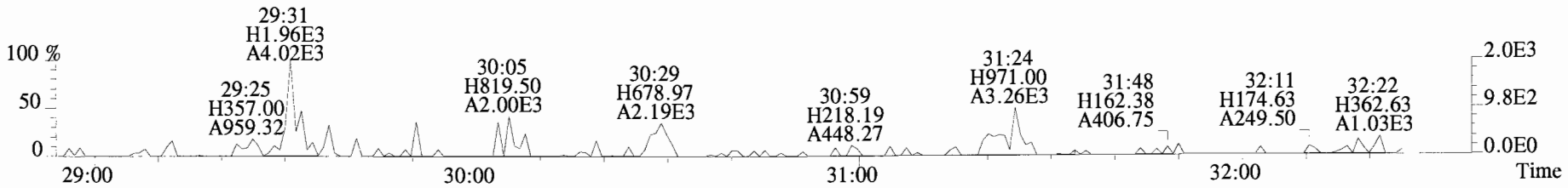
File:150320D1 #1-551 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



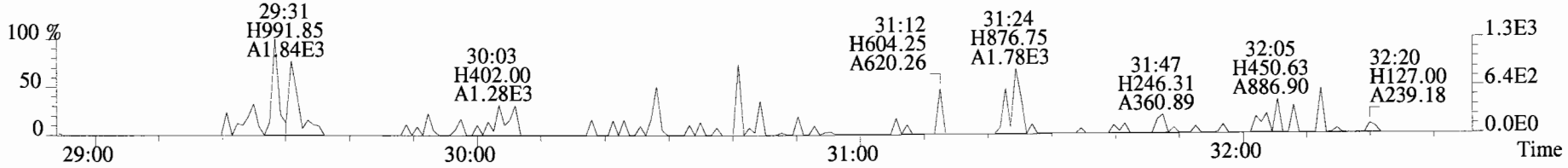
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



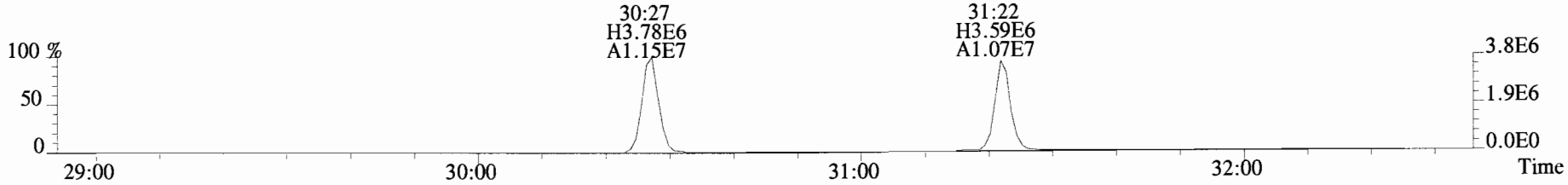
File:150320D1 #1-250 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



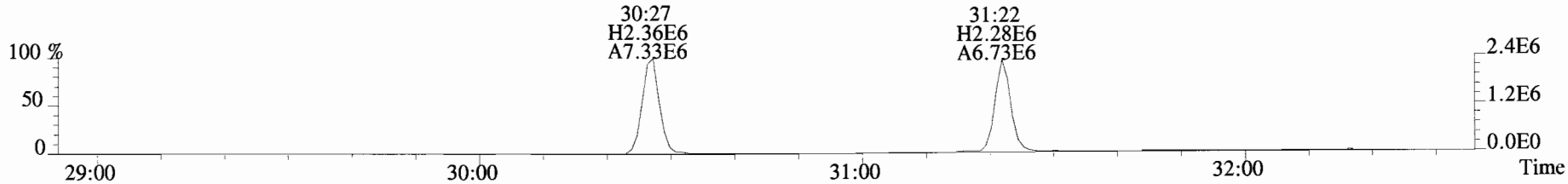
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



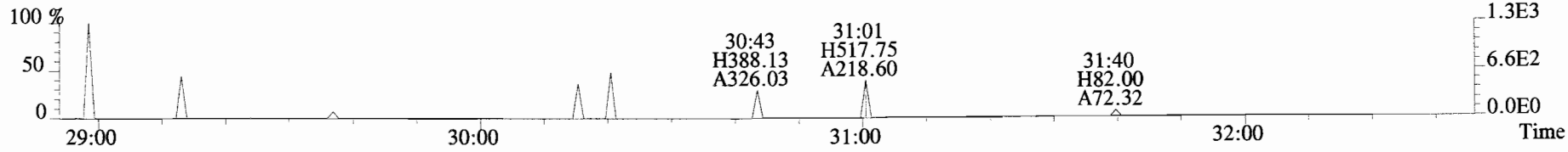
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



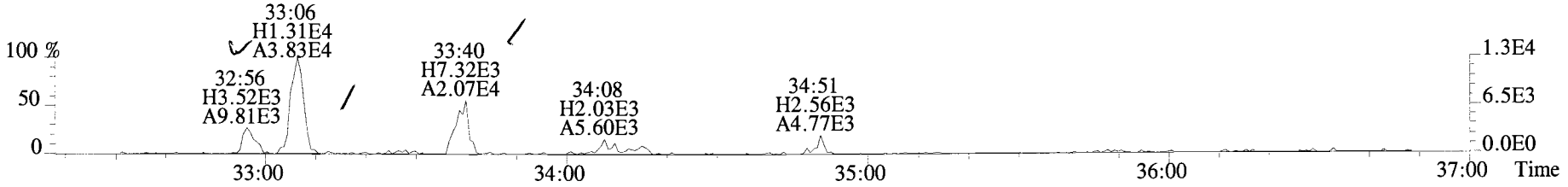
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



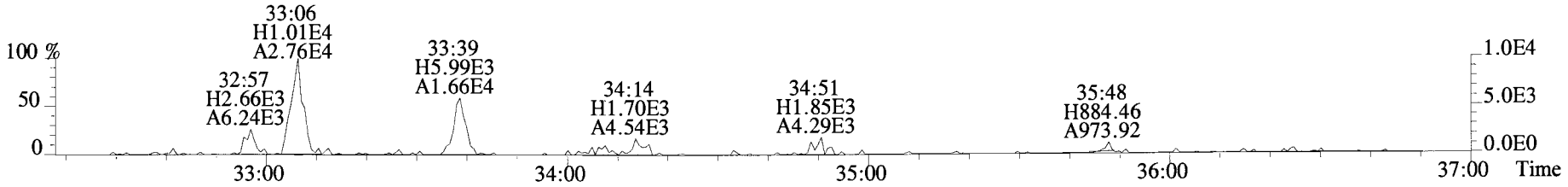
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



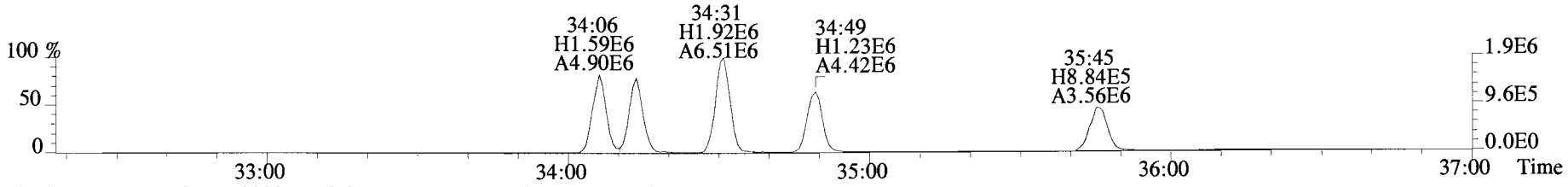
File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



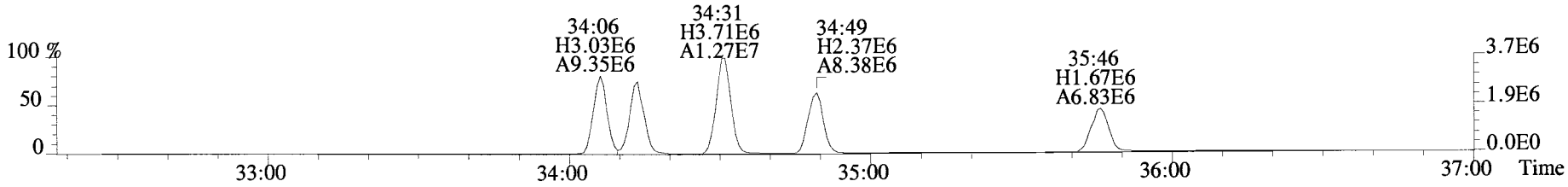
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



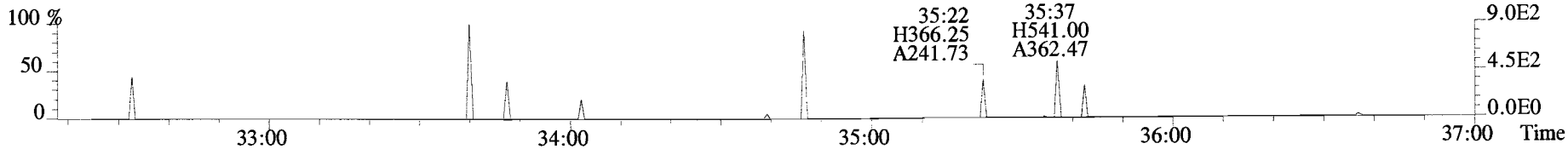
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



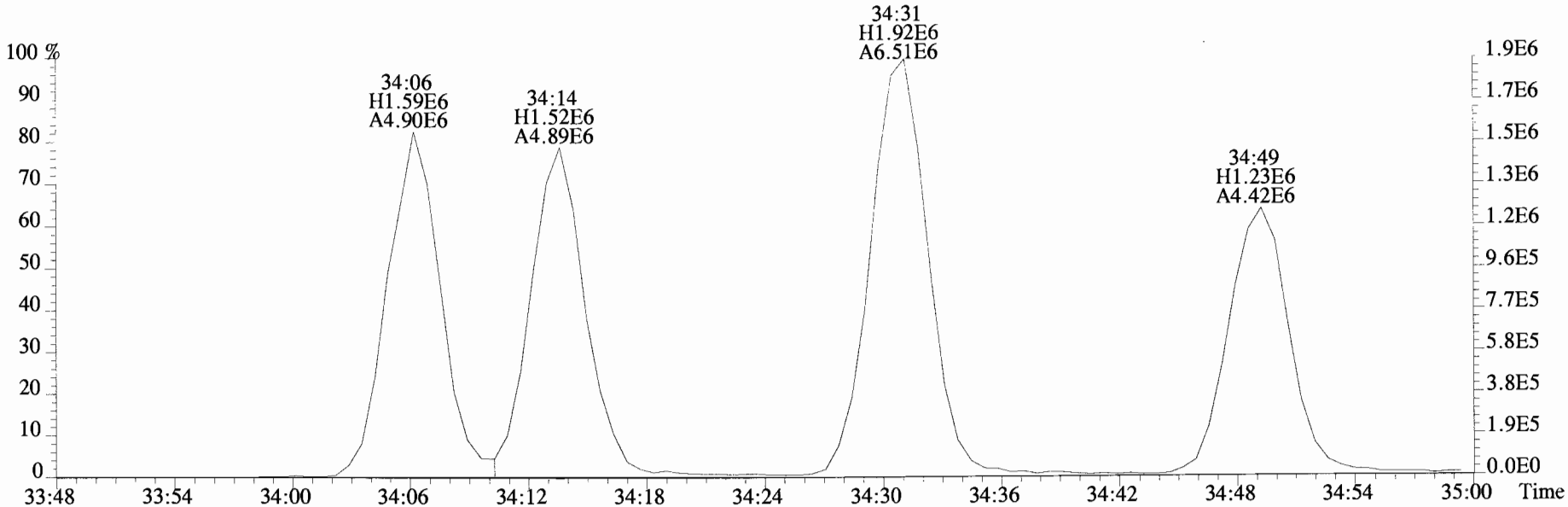
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



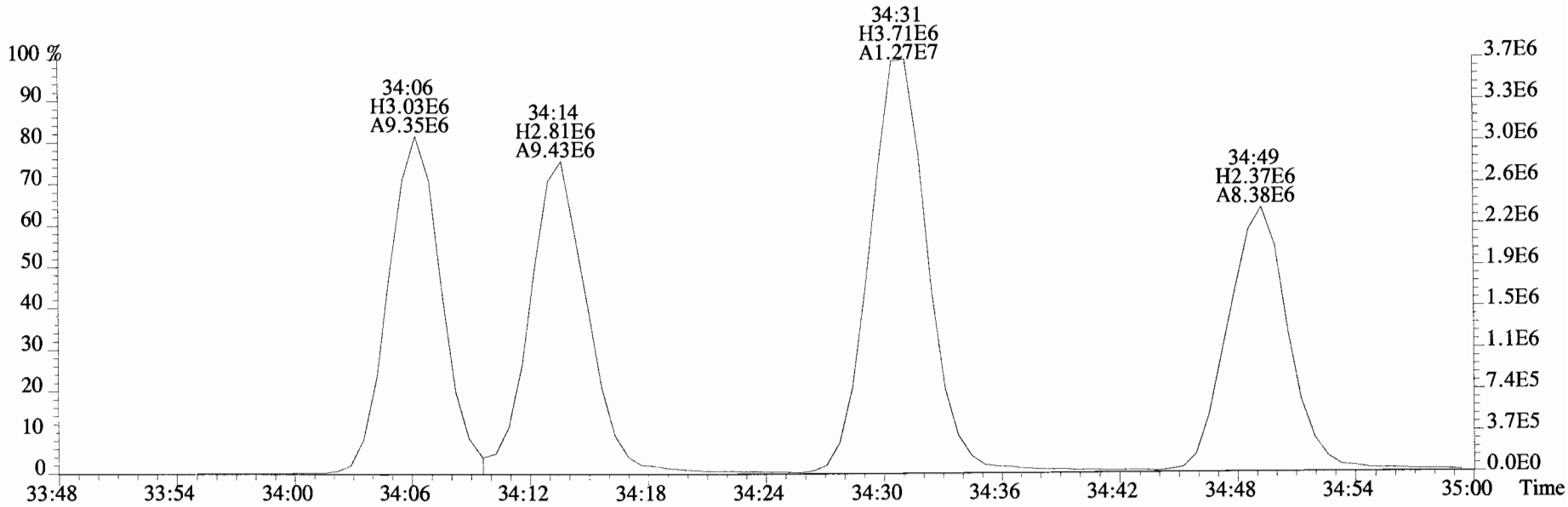
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



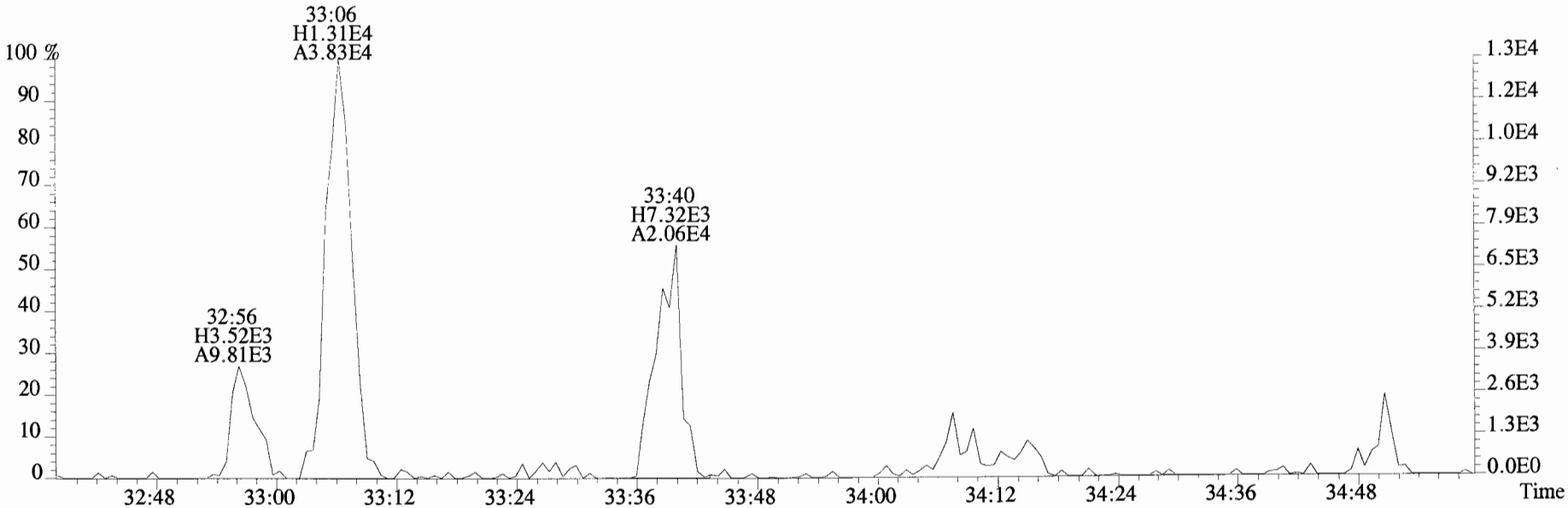
File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



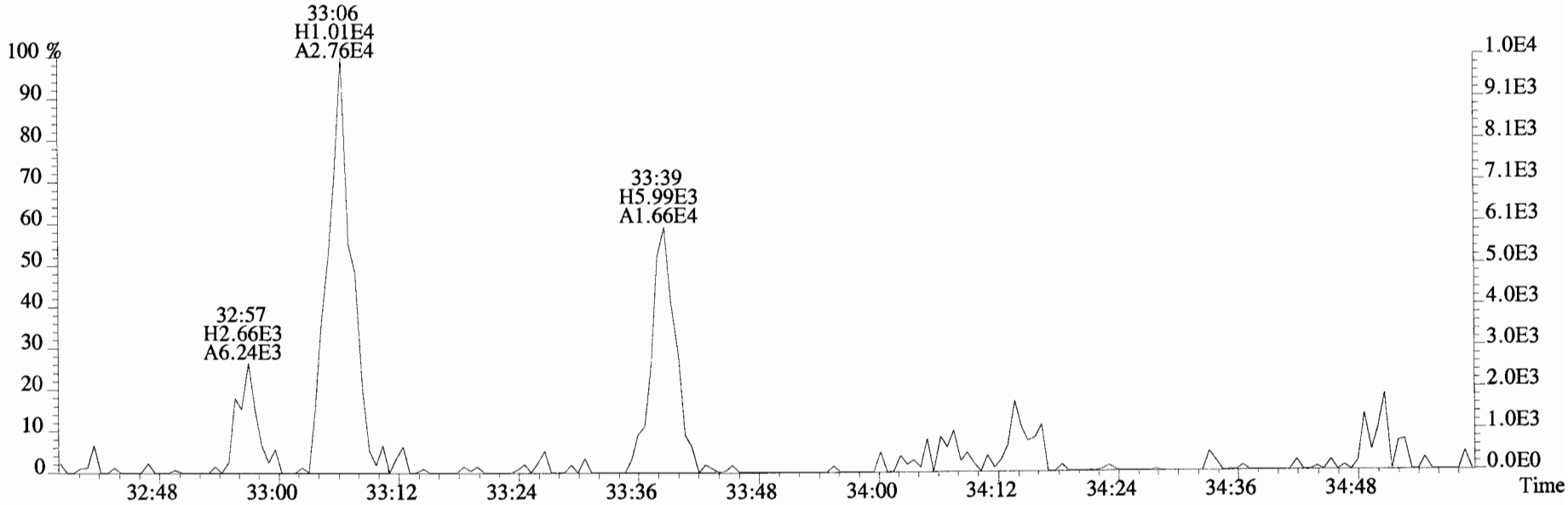
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



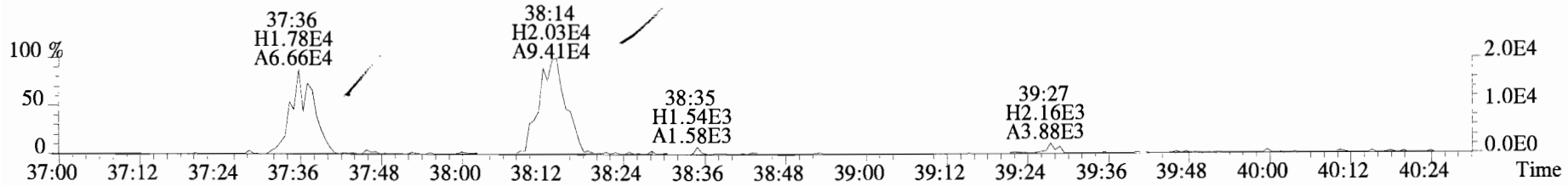
File:150320D1 #1-393 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



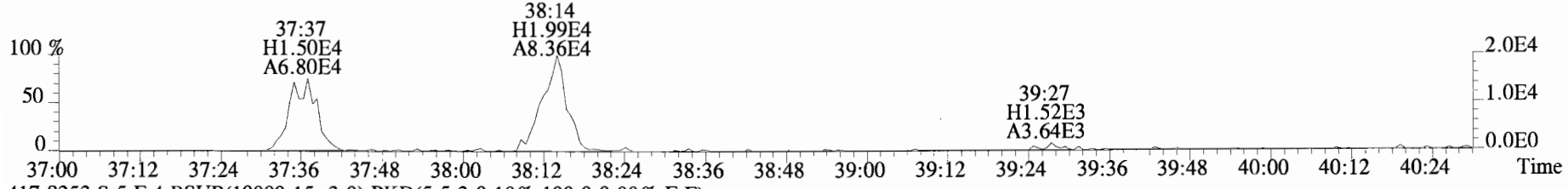
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



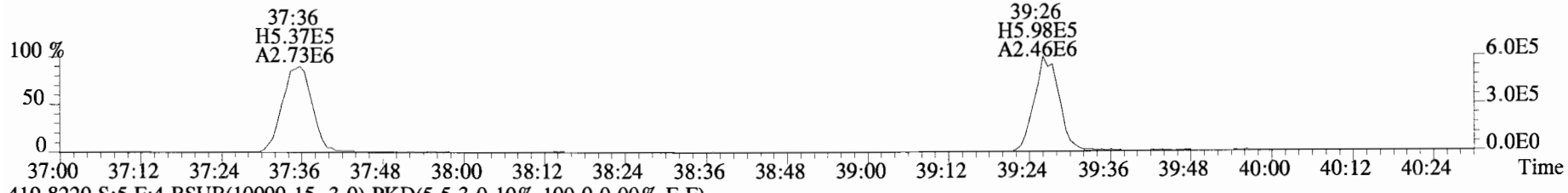
File:150320D1 #1-326 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



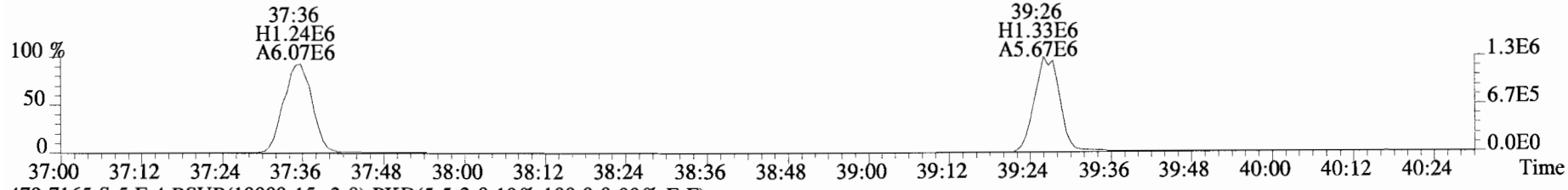
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



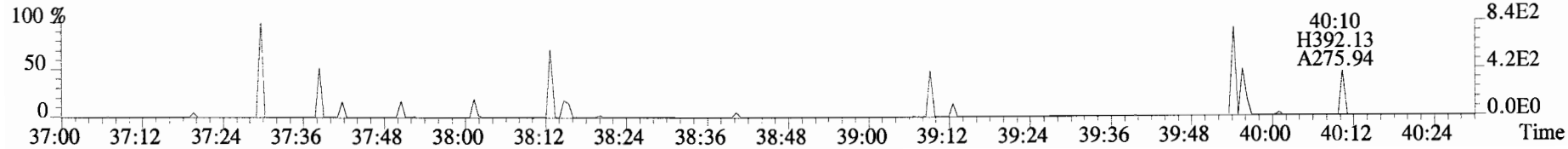
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



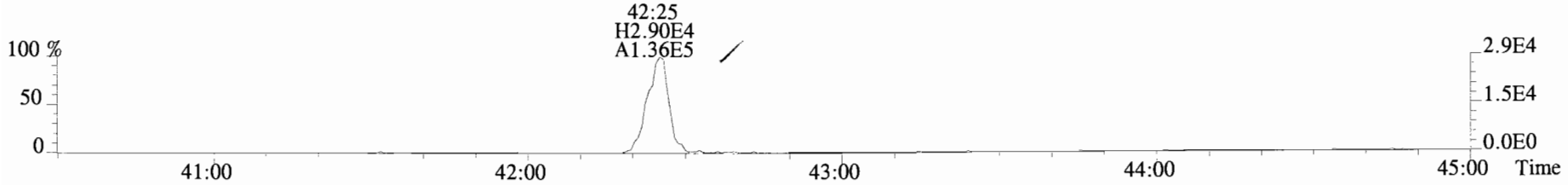
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



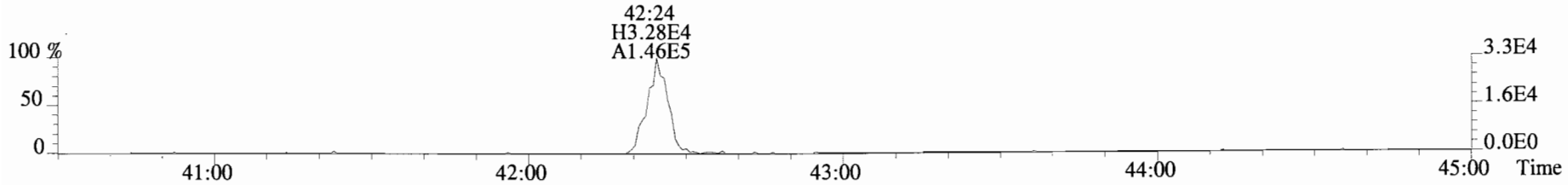
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



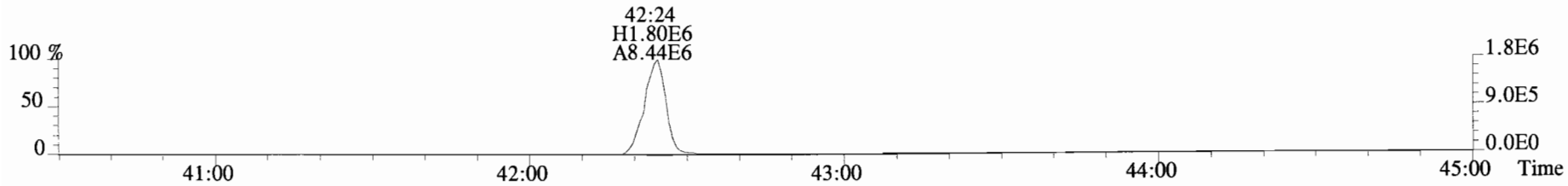
File:150320D1 #1-388 Acq:20-MAR-2015 13:45:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400958-02RE1 BD-MH-5.16-20141215-3 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



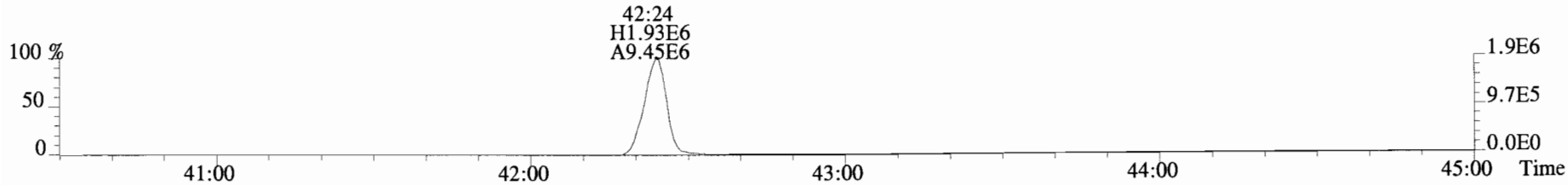
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



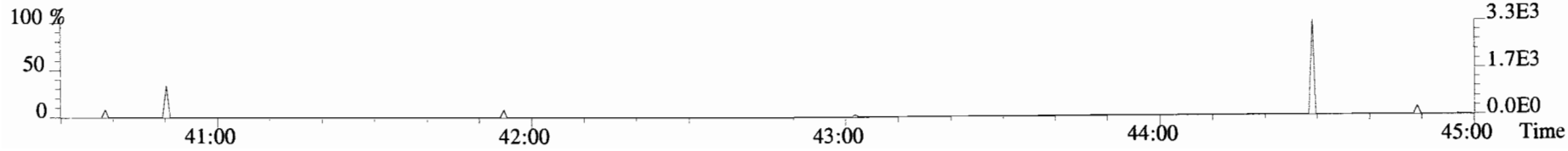
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



CONTINUING CALIBRATION

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150311D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.57	7.8 - 12.9
						8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	y	48.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	48.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	50.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	48.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	50.0	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.3	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.07	8.4 - 12.0
						8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	51.1	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	47.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.1	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	48.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	48.4	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	99.4	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MJ

Date: 3/11/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	100	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	88.1	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	100.0	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	99.9	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	101	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	94.0	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	175	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	98.5	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	102	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	95.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	110	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	111	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	95.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	101	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	96.2	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	94.9	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	180	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.6	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: [signature]

Date: 3/11/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

ZB-5MS IS Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:18	1,3,6,8-TCDF (F)	21:06
1,2,8,9-TCDD (L)	27:52	1,2,8,9-TCDF (L)	28:00
1,2,4,7,9-PeCDD (F)	29:32	1,3,4,6,8-PeCDF (F)	27:59
1,2,3,8,9-PeCDD (L)	32:00	1,2,3,8,9-PeCDF (L)	32:15
1,2,4,6,7,9-HxCDD (F)	33:27	1,2,3,4,6,8-HxCDF (F)	32:55
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:45
1,2,3,4,6,7,9-HpCDD (F)	37:59	1,2,3,4,6,7,8-HpCDF (F)	37:35
1,2,3,4,6,7,8-HpCDD (L)	38:54	1,2,3,4,7,8,9-HpCDF (L)	39:25

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 3/12/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.200	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: [signature]

Date: 3/11/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: [signature]

Date: 3/11/15

Client ID: 1613 CS3 15A0501 Filename: 150311D1 S:1 Acq:11-MAR-15 10:46:20 ConCal: ST150311D1-1
Lab ID: ST150311D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.45e+06	0.76 y	1.17	26:58	1.001	9.5675		*	2.5	*
	1,2,3,7,8-PeCDD	9.49e+06	0.60 y	0.91	31:38	1.000	48.928		*	2.5	*
	1,2,3,4,7,8-HxCDD	9.17e+06	1.27 y	1.08	34:58	1.000	48.680		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.57e+06	1.25 y	1.06	35:05	1.000	50.362		*	2.5	*
	1,2,3,7,8,9-HxCDD	9.47e+06	1.26 y	0.93	35:22	1.000	48.520		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	8.23e+06	1.06 y	1.10	38:54	1.000	49.994		*	2.5	*
	OCDD	1.52e+07	0.90 y	0.95	42:10	1.000	98.281		*	2.5	*
	2,3,7,8-TCDF	3.24e+06	0.80 y	1.07	26:07	1.001	9.0717		*	2.5	*
	1,2,3,7,8-PeCDF	1.90e+07	1.61 y	1.07	30:26	1.000	51.079		*	2.5	*
	2,3,4,7,8-PeCDF	1.73e+07	1.59 y	1.03	31:21	1.001	51.263		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.82e+07	1.27 y	1.38	34:05	1.000	50.050		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.75e+07	1.29 y	1.26	34:13	1.001	47.429		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.51e+07	1.27 y	1.29	34:48	1.000	48.970		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.22e+07	1.29 y	1.19	35:45	1.000	49.056		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.32e+07	1.08 y	1.61	37:35	1.001	48.545		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.19e+07	1.10 y	1.53	39:25	1.000	48.434		*	2.5	*
	OCDF	2.02e+07	0.92 y	1.10	42:23	1.000	99.439		*	2.5	*

	Name	Resp	RA	RRF	RT	RRT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	2.19e+07	0.78 y	1.06	26:56	1.022	100.36	100	
IS	13C-1,2,3,7,8-PeCDD	2.13e+07	0.64 y	1.18	31:37	1.200	88.136	88.1	
IS	13C-1,2,3,4,7,8-HxCDD	1.75e+07	1.26 y	0.72	34:58	1.014	99.978	100.0	
IS	13C-1,2,3,6,7,8-HxCDD	1.79e+07	1.23 y	0.74	35:04	1.017	99.870	99.9	
IS	13C-1,2,3,7,8,9-HxCDD	2.10e+07	1.27 y	0.85	35:22	1.025	101.21	101	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.49e+07	1.06 y	0.65	38:53	1.127	93.986	94.0	
IS	13C-OCDD	3.25e+07	0.87 y	0.76	42:09	1.222	175.33	87.7	
IS	13C-2,3,7,8-TCDF	3.33e+07	0.77 y	0.92	26:06	0.991	98.482	98.5	
IS	13C-1,2,3,7,8-PeCDF	3.46e+07	1.60 y	0.92	30:25	1.154	101.93	102	
IS	13C-2,3,4,7,8-PeCDF	3.27e+07	1.60 y	0.93	31:20	1.189	95.246	95.2	
IS	13C-1,2,3,4,7,8-HxCDF	2.62e+07	0.51 y	0.98	34:04	0.988	110.26	110	
IS	13C-1,2,3,6,7,8-HxCDF	2.93e+07	0.52 y	1.08	34:12	0.992	111.38	111	
IS	13C-2,3,4,6,7,8-HxCDF	2.39e+07	0.50 y	1.03	34:47	1.009	95.920	95.9	
IS	13C-1,2,3,7,8,9-HxCDF	2.10e+07	0.53 y	0.86	35:44	1.036	100.69	101	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.69e+07	0.44 y	0.72	37:34	1.089	96.171	96.2	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.61e+07	0.45 y	0.70	39:25	1.143	94.855	94.9	
IS	13C-OCDF	3.71e+07	0.89 y	0.85	42:22	1.229	179.81	89.9	
C/Up	37Cl-2,3,7,8-TCDD	2.44e+06		1.12	26:57	1.023	10.623	26.6	
RS/RT	13C-1,2,3,4-TCDD	2.06e+07	0.80 y	1.00	26:21	*	100.00		
RS	13C-1,2,3,4-TCDF	3.69e+07	0.76 y	1.00	24:48	*	100.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.43e+07	0.52 y	1.00	34:29	*	100.00		

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	53.9	54.2		*	*
Total Penta-Dioxins	178	179		*	*
Total Hexa-Dioxins	194	194		*	*
Total Hepta-Dioxins	135	136		*	*
Total Tetra-Furans	29.8	30.0		*	*
Total Penta-Furans	192.11	193.05		*	*
Total Hexa-Furans	242	243		*	*
Total Hepta-Furans	97.1	98.2		*	*

Integrations by Analyst: MN Date: 4/11/15

Reviewed by Analyst:_____ Date:_____

Vista Analytical Laboratory - Injection Log Run file: 150311D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150311D1	1	ST150311D1-1	MAS	11-MAR-15	10:46:20	ST150311D1-1	NA
150311D1	2	SOLVENT BLANK	MAS	11-MAR-15	11:35:10	ST150311D1-1	NA
150311D1	3	SOLVENT BLANK	MAS	11-MAR-15	12:24:06	ST150311D1-1	NA
150311D1	4	B5C0006-BLK1	MAS	11-MAR-15	13:13:01	ST150311D1-1	NA
150311D1	5	B5C0006-BS1	MAS	11-MAR-15	14:01:52	ST150311D1-1	NA
150311D1	6	B5C0033-BS1	MAS	11-MAR-15	14:50:48	ST150311D1-1	NA
150311D1	7	SOLVENT BLANK	MAS	11-MAR-15	15:39:44	ST150311D1-1	NA
150311D1	8	B5C0033-BLK	MAS	11-MAR-15	16:28:35	ST150311D1-1	NA
150311D1	9	B5C0037-BS1	MAS	11-MAR-15	17:17:25	ST150311D1-1	NA
150311D1	10	SOLVENT BLANK	MAS	11-MAR-15	18:06:16	ST150311D1-1	NA
150311D1	11	B5C0037-BLK1	MAS	11-MAR-15	18:55:07	ST150311D1-1	NA
150311D1	12	1500231-01	MAS	11-MAR-15	19:44:02	ST150311D1-1	NA
150311D1	13	1500230-01	MAS	11-MAR-15	20:32:51	ST150311D1-1	NA
150311D1	14	1500234-02	MAS	11-MAR-15	21:21:40	ST150311D1-1	NA
150311D1	15	1500234-01	MAS	11-MAR-15	22:10:30	ST150311D1-1	NA
150311D1	16	SOLVENT BLANK	MAS	11-MAR-15	22:59:20	ST150311D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150311D1-1

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	NA ☒ CB	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; ~~CARB~~ 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: CP 3/12/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150311D2-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.71	0.65-0.89	y	9.42	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	48.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	49.4	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	49.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	47.6	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	96.5	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	8.60	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	51.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	50.9	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	47.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	48.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	47.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	y	48.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	49.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	49.8	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	98.7	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MS

Date: 3/12/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	99.6	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	97.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	95.5	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	94.6	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	91.7	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	171	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.76	0.65-0.89	y	97.1	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	112	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	107	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	112	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	110	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.4	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	97.6	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.42	0.37-0.51	y	97.3	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.41	0.37-0.51	y	82.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	173	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.9	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: [signature]

Date: 3/12/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

ZB-5MS IS Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:17	1,3,6,8-TCDF (F)	21:05
1,2,8,9-TCDD (L)	27:51	1,2,8,9-TCDF (L)	27:59
1,2,4,7,9-PeCDD (F)	29:32	1,3,4,6,8-PeCDF (F)	27:58
1,2,3,8,9-PeCDD (L)	32:00	1,2,3,8,9-PeCDF (L)	32:14
1,2,4,6,7,9-HxCDD (F)	33:27	1,2,3,4,6,8-HxCDF (F)	32:54
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:45
1,2,3,4,6,7,9-HpCDD (F)	37:59	1,2,3,4,6,7,8-HpCDF (F)	37:35
1,2,3,4,6,7,8-HpCDD (L)	38:54	1,2,3,4,7,8,9-HpCDF (L)	39:25

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT BETWEEN COMPARED PEAKS (1)
<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: [signature]

Date: 3/12/15

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.201	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.990	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.155	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.525
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MV

Date: 3/12/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.090	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.128	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

Analyst: MD

Date: 3/12/15

Client ID: 1613 CS3 15A0501 Filename: 150311D2 S:1 Acq:12-MAR-15 00:02:00 ConCal: ST150311D2-1

Lab ID: ST150311D2-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.04e+06	0.71 y	1.17	26:57	1.001	9.4222		*	2.5	*
	1,2,3,7,8-PeCDD	8.80e+06	0.61 y	0.91	31:38	1.000	48.291		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.99e+06	1.21 y	1.08	35:05	1.001	49.413		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.99e+06	1.21 y	1.06	35:05	1.001	50.050		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.98e+06	1.26 y	0.93	35:22	1.000	49.835		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.56e+06	1.00 y	1.10	38:54	1.000	47.613		*	2.5	*
	OCDD	1.44e+07	0.89 y	0.95	42:09	1.000	96.589		*	2.5	*
	2,3,7,8-TCDF	2.62e+06	0.78 y	1.07	26:07	1.001	8.6013		*	2.5	*
	1,2,3,7,8-PeCDF	1.81e+07	1.60 y	1.07	30:25	1.000	51.028		*	2.5	*
	2,3,4,7,8-PeCDF	1.67e+07	1.60 y	1.03	31:20	1.000	50.915		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.71e+07	1.27 y	1.38	34:05	1.001	47.111		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.73e+07	1.27 y	1.26	34:12	1.000	48.246		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.43e+07	1.30 y	1.29	34:48	1.000	47.845		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.16e+07	1.30 y	1.19	35:45	1.000	48.625		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.33e+07	1.10 y	1.61	37:35	1.000	49.001		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.05e+07	1.10 y	1.53	39:25	1.000	49.833		*	2.5	*
	OCDF	1.91e+07	0.93 y	1.10	42:23	1.000	98.735		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.85e+07	0.79 y	1.06	26:56	1.022	102.07				
IS	13C-1,2,3,7,8-PeCDD	2.00e+07	0.63 y	1.18	31:37	1.201	99.566				
IS	13C-1,2,3,4,7,8-HxCDD	1.69e+07	1.25 y	0.72	35:04	1.017	97.655				
IS	13C-1,2,3,6,7,8-HxCDD	1.69e+07	1.25 y	0.74	35:04	1.017	95.500				
IS	13C-1,2,3,7,8,9-HxCDD	1.94e+07	1.25 y	0.85	35:21	1.026	94.554				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.44e+07	1.04 y	0.65	38:53	1.128	91.713				
IS	13C-OCDD	3.13e+07	0.88 y	0.76	42:09	1.222	170.94				
IS	13C-2,3,7,8-TCDF	2.85e+07	0.76 y	0.92	26:05	0.990	97.103				
IS	13C-1,2,3,7,8-PeCDF	3.31e+07	1.56 y	0.92	30:24	1.155	112.46				
IS	13C-2,3,4,7,8-PeCDF	3.18e+07	1.63 y	0.93	31:19	1.189	107.07				
IS	13C-1,2,3,4,7,8-HxCDF	2.63e+07	0.52 y	0.98	34:04	0.988	111.68				
IS	13C-1,2,3,6,7,8-HxCDF	2.86e+07	0.52 y	1.08	34:12	0.992	110.04				
IS	13C-2,3,4,6,7,8-HxCDF	2.32e+07	0.51 y	1.03	34:47	1.009	94.439				
IS	13C-1,2,3,7,8,9-HxCDF	2.01e+07	0.52 y	0.86	35:44	1.036	97.572				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.68e+07	0.42 y	0.72	37:34	1.090	97.296				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.38e+07	0.41 y	0.70	39:25	1.143	82.378				
IS	13C-OCDF	3.53e+07	0.91 y	0.85	42:22	1.229	173.29				
C/Up	37Cl-2,3,7,8-TCDD	2.07e+06		1.12	26:57	1.023	10.856				
RS/RT	13C-1,2,3,4-TCDD	1.71e+07	0.79 y	1.00	26:20	*	100.00				
RS	13C-1,2,3,4-TCDF	3.19e+07	0.74 y	1.00	24:47	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.40e+07	0.52 y	1.00	34:29	*	100.00				

	Rec	Qual
IS	102	
IS	99.6	
IS	97.7	
IS	95.5	
IS	94.6	
IS	91.7	
IS	85.5	
IS	97.1	
IS	112	
IS	107	
IS	112	
IS	110	
IS	94.4	
IS	97.6	
IS	97.3	
IS	82.4	
IS	86.6	
C/Up	27.1	

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	53.5	53.8		*	*
Total Penta-Dioxins	180	180		*	*
Total Hexa-Dioxins	195	197		*	*
Total Hepta-Dioxins	136	137		*	*
Total Tetra-Furans	28.3	28.7		*	*
Total Penta-Furans	185.48	186.98		*	*
Total Hexa-Furans	238	239		*	*
Total Hepta-Furans	98.8	99.6		*	*

Integrations by Analyst: [signature] Date: 3/12/15

Reviewed by Analyst: [signature] Date: 3/12/15

Vista Analytical Laboratory - Injection Log Run file: 150311D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150311D2	1	ST150311D2-1	MAS	12-MAR-15	00:02:00	ST150311D2-1	NA
150311D2	2	SOLVENT BLANK	MAS	12-MAR-15	00:50:50	ST150311D2-1	NA
150311D2	3	1400984-03	MAS	12-MAR-15	01:39:40	ST150311D2-1	NA
150311D2	4	1400984-02	MAS	12-MAR-15	02:28:29	ST150311D2-1	NA
150311D2	5	1400984-01	MAS	12-MAR-15	03:17:23	ST150311D2-1	NA
150311D2	6	1400958-02	MAS	12-MAR-15	04:06:15	ST150311D2-1	NA
150311D2	7	1400958-01	MAS	12-MAR-15	04:55:08	ST150311D2-1	NA
150311D2	8	1500227-01	MAS	12-MAR-15	05:44:02	ST150311D2-1	NA
150311D2	9	1500227-02	MAS	12-MAR-15	06:32:54	ST150311D2-1	NA
150311D2	10	1500228-01	MAS	12-MAR-15	07:21:47	ST150311D2-1	NA
150311D2	11	1500229-01	MAS	12-MAR-15	08:10:38	ST150311D2-1	NA
150311D2	12	SOLVENT BLANK	MAS	12-MAR-15	08:59:35	ST150311D2-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150311D2-1

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: CJ 3/12/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 12/2009 mh

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150318D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.01	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.59	0.54-0.72	y	47.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	46.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	48.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	46.9	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	49.1	43.0 - 58.0
OCDD	M+2/M+4	0.87	0.76-1.02	y	96.1	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	8.61	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	47.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	46.4	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	48.5	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	46.9	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.9	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.2	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	47.2	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	46.5	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	98.0	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MJ

Date: 3/19/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	105	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	87.3	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	90.0	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	90.1	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	90.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	85.1	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	174	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.76	0.65-0.89	y	94.9	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	106	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	99.0	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	113	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	112	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	95.1	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	88.6	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	86.8	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	90.2	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	179	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.2	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: MJ

Date: 3/19/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150318D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.01	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.59	0.54-0.72	y	47.9	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	46.9	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	48.1	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	46.9	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	49.1	40.0 - 60.0
OCDD	M+2/M+4	0.87	0.76-1.02	y	96.1	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	8.61	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	47.7	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	46.4	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	48.5	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	46.9	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.9	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.2	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	47.2	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	46.5	40.0 - 60.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	98.0	80.0 - 120

Analyst: MJ

Date: 3/19/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	105	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	87.3	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	90.0	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	90.1	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	90.3	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	85.1	70.0 - 130
13C-OCDD	M+2/M+4	0.87	0.76-1.02	y	174	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	94.9	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	106	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	99.0	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	113	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	112	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	95.1	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	88.6	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	86.8	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	90.2	70.0 - 130
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	179	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					10.2	7.00 - 13.0

Analyst: MJ

Date: 3/19/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

ZB-5MS IS Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:15	1,3,6,8-TCDF (F)	21:03
1,2,8,9-TCDD (L)	27:59	1,2,8,9-TCDF (L)	27:59
1,2,4,7,9-PeCDD (F)	29:31	1,3,4,6,8-PeCDF (F)	27:57
1,2,3,8,9-PeCDD (L)	31:60	1,2,3,8,9-PeCDF (L)	32:14
1,2,4,6,7,9-HxCDD (F)	33:36	1,2,3,4,6,8-HxCDF (F)	32:54
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:44
1,2,3,4,6,7,9-HpCDD (F)	37:58	1,2,3,4,6,7,8-HpCDF (F)	37:34
1,2,3,4,6,7,8-HpCDD (L)	38:33	1,2,3,4,7,8,9-HpCDF (L)	39:25

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 3/19/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.201	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.155	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.190	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MJ

Date: 3/19/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150318D1 S#1 Analysis Date: 18-MAR-15 Time: 10:48:21

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.128	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MJ

Date: 3/19/15

Client ID: 1613 CS3 15A0501 Filename: 150318D1 S:1 Acq:18-MAR-15 10:48:21 ConCal: ST150318D1-1

Lab ID: ST150318D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: ST150318D1-2

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.30e+06	0.76 y	1.17	26:56	1.001	9.0105		*	2.5	*
	1,2,3,7,8-PeCDD	4.97e+06	0.59 y	0.91	31:37	1.000	47.870		*	2.5	*
	1,2,3,4,7,8-HxCDD	4.54e+06	1.27 y	1.08	34:57	1.000	46.904		*	2.5	*
	1,2,3,6,7,8-HxCDD	4.70e+06	1.27 y	1.06	35:04	1.000	48.062		*	2.5	*
	1,2,3,7,8,9-HxCDD	4.65e+06	1.25 y	0.93	35:22	1.001	46.872		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	4.17e+06	1.06 y	1.10	38:53	1.000	49.063		*	2.5	*
	OCDD	8.39e+06	0.87 y	0.95	42:09	1.000	96.087		*	2.5	*
	2,3,7,8-TCDF	1.67e+06	0.80 y	1.07	26:06	1.001	8.6065		*	2.5	*
	1,2,3,7,8-PeCDF	1.04e+07	1.60 y	1.07	30:25	1.000	47.728		*	2.5	*
	2,3,4,7,8-PeCDF	9.19e+06	1.60 y	1.03	31:20	1.000	46.434		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.03e+07	1.29 y	1.38	34:04	1.001	48.544		*	2.5	*
	1,2,3,6,7,8-HxCDF	9.91e+06	1.30 y	1.26	34:12	1.001	46.868		*	2.5	*
	2,3,4,6,7,8-HxCDF	8.35e+06	1.23 y	1.29	34:47	1.001	47.943		*	2.5	*
	1,2,3,7,8,9-HxCDF	6.17e+06	1.29 y	1.19	35:44	1.001	49.237		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	6.60e+06	1.08 y	1.61	37:34	1.001	47.232		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	6.18e+06	1.10 y	1.53	39:25	1.000	46.546		*	2.5	*
	OCDF	1.13e+07	0.92 y	1.10	42:22	1.000	98.022		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.24e+07	0.79 y	1.06	26:55	1.022	104.91				
IS	13C-1,2,3,7,8-PeCDD	1.14e+07	0.63 y	1.18	31:37	1.201	87.251				
IS	13C-1,2,3,4,7,8-HxCDD	8.97e+06	1.26 y	0.72	34:57	1.014	90.006				
IS	13C-1,2,3,6,7,8-HxCDD	9.18e+06	1.21 y	0.74	35:03	1.017	90.076				
IS	13C-1,2,3,7,8,9-HxCDD	1.07e+07	1.24 y	0.85	35:20	1.025	90.279				
IS	13C-1,2,3,4,6,7,8-HpCDD	7.70e+06	1.02 y	0.65	38:52	1.128	85.123				
IS	13C-OCDD	1.84e+07	0.87 y	0.76	42:08	1.222	174.18				
IS	13C-2,3,7,8-TCDF	1.81e+07	0.76 y	0.92	26:05	0.991	94.927				
IS	13C-1,2,3,7,8-PeCDF	2.03e+07	1.57 y	0.92	30:24	1.155	106.15				
IS	13C-2,3,4,7,8-PeCDF	1.92e+07	1.56 y	0.93	31:19	1.190	98.999				
IS	13C-1,2,3,4,7,8-HxCDF	1.53e+07	0.51 y	0.98	34:03	0.988	112.80				
IS	13C-1,2,3,6,7,8-HxCDF	1.68e+07	0.52 y	1.08	34:11	0.992	112.18				
IS	13C-2,3,4,6,7,8-HxCDF	1.35e+07	0.52 y	1.03	34:46	1.009	95.106				
IS	13C-1,2,3,7,8,9-HxCDF	1.06e+07	0.51 y	0.86	35:43	1.036	88.648				
IS	13C-1,2,3,4,6,7,8-HpCDF	8.67e+06	0.43 y	0.72	37:33	1.089	86.761				
IS	13C-1,2,3,4,7,8,9-HpCDF	8.70e+06	0.43 y	0.70	39:24	1.143	90.188				
IS	13C-OCDF	2.10e+07	0.91 y	0.85	42:21	1.229	178.87				
C/Up	37Cl-2,3,7,8-TCDD	1.26e+06		1.12	26:56	1.023	10.185				
RS/RT	13C-1,2,3,4-TCDD	1.11e+07	0.80 y	1.00	26:19	*	100.00				
RS	13C-1,2,3,4-TCDF	2.08e+07	0.77 y	1.00	24:46	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.38e+07	0.52 y	1.00	34:28	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	51.1	51.4		*	*
Total Penta-Dioxins	192	192		*	*
Total Hexa-Dioxins	191	193		*	*
Total Hepta-Dioxins	165	166		*	*
Total Tetra-Furans	29.8	30.2		*	*
Total Penta-Furans	175.45	176.44		*	*
Total Hexa-Furans	237	238		*	*
Total Hepta-Furans	95.1	96.0		*	*

	Rec	Qual
IS	105	
IS	87.3	
IS	90.0	
IS	90.1	
IS	90.3	
IS	85.1	
IS	87.1	
IS	94.9	
IS	106	
IS	99.0	
IS	113	
IS	112	
IS	95.1	
IS	88.6	
IS	86.8	
IS	90.2	
IS	89.4	
C/Up	25.5	

Integrations by Analyst: MJ Date: 3/19/15

Reviewed by Analyst: [illegible] Date: 3/19/15

Vista Analytical Laboratory - Injection Log Run file: 150318D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150318D1	1	ST150318D1-1	MAS	18-MAR-15	10:48:21	ST150318D1-1	ST150318D1-2
150318D1	2	B5C0067-BS1	MAS	18-MAR-15	11:37:16	ST150318D1-1	ST150318D1-2
150318D1	3	B5C0069-BS1	MAS	18-MAR-15	12:26:07	ST150318D1-1	NA
150318D1	4	SOLVENT BLANK	MAS	18-MAR-15	13:15:02	NA	NA
150318D1	5	B5C0067-BLK1	MAS	18-MAR-15	14:03:58	ST150318D1-1	ST150318D1-2
150318D1	6	B5C0069-BLK1	MAS	18-MAR-15	14:52:54	ST150318D1-1	NA
150318D1	7	QC150318D1-1	MAS	18-MAR-15	15:41:50	ST150318D1-1	NA
150318D1	8	1500235-01	MAS	18-MAR-15	16:30:41	ST150318D1-1	NA
150318D1	9	1500245-02	MAS	18-MAR-15	17:19:31	ST150318D1-1	NA
150318D1	10	1500238-01	MAS	18-MAR-15	18:08:21	ST150318D1-1	NA
150318D1	11	1500238-02	MAS	18-MAR-15	18:57:15	ST150318D1-1	NA
150318D1	12	1400958-02RE1	MAS	18-MAR-15	19:46:05	ST150318D1-1	NA
150318D1	13	1500237-12	MAS	18-MAR-15	20:35:00	ST150318D1-1	ST150318D1-2
150318D1	14	1500240-01	MAS	18-MAR-15	21:23:54	ST150318D1-1	NA
150318D1	15	1500244-01	MAS	18-MAR-15	22:12:44	ST150318D1-1	NA
150318D1	16	SOLVENT BLANK	MAS	18-MAR-15	23:01:40	NA	NA
150318D1	17	ST150318D1-2	MAS	18-MAR-15	23:50:36	ST150318D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST15031801-1 End Calibration ID: ST15031801-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution ≥ 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NA
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: ✓ 3/19/11
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150320D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.55	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	48.5	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	49.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	52.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	49.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	48.9	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	99.0	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	8.81	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	51.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.6	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	47.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	47.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	48.4	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.0	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	48.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.7	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	97.6	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: M

Date: 3/20/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	101	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.65	0.54-0.72	y	87.8	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	97.1	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	98.1	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	102	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	101	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	197	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	100	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	97.0	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	97.1	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	103	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.7	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	104	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	98.6	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	197	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.6	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: M

Date: 3/20/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150320D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.55	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	48.5	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	49.2	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	52.1	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	49.8	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	48.9	40.0 - 60.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	99.0	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	8.81	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	51.9	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.6	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	47.9	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	47.4	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	48.4	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.0	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	48.0	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.7	40.0 - 60.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	97.6	80.0 - 120

Analyst: MM

Date: 3/20/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	101	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.65	0.54-0.72	y	87.8	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	97.1	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	98.1	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	102	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	101	70.0 - 130
13C-OCDD	M+2/M+4	0.87	0.76-1.02	y	197	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	100	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	97.0	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	97.1	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	103	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.7	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	y	104	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	98.6	70.0 - 130
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	197	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					10.6	7.00 - 13.0

Analyst: MI

Date: 3/20/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

ZB-5MS IS Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:15	1,3,6,8-TCDF (F)	21:03
1,2,8,9-TCDD (L)	27:51	1,2,8,9-TCDF (L)	27:59
1,2,4,7,9-PeCDD (F)	29:32	1,3,4,6,8-PeCDF (F)	27:58
1,2,3,8,9-PeCDD (L)	32:01	1,2,3,8,9-PeCDF (L)	32:15
1,2,4,6,7,9-HxCDD (F)	33:27	1,2,3,4,6,8-HxCDF (F)	32:55
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:45
1,2,3,4,6,7,9-HpCDD (F)	37:59	1,2,3,4,6,7,8-HpCDF (F)	37:35
1,2,3,4,6,7,8-HpCDD (L)	38:54	1,2,3,4,7,8,9-HpCDF (L)	39:26

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 3/20/15

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.201	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.155	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.190	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MM

Date: 3/20/15

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150320D1 S#1 Analysis Date: 20-MAR-15 Time: 10:30:07

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.128	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.228	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MJ

Date: 3/20/15

Client ID: 1613 CS3 15A0501 Filename: 150320D1 S:1 Acq:20-MAR-15 10:30:07 ConCal: ST150320D1-1

Lab ID: ST150320D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: ST150320D1-2

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.62e+06	0.76 y	1.17	26:57	1.001	9.5526		*	2.5	*
	1,2,3,7,8-PeCDD	6.13e+06	0.61 y	0.91	31:38	1.000	48.488		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.36e+06	1.26 y	1.08	34:58	1.000	49.215		*	2.5	*
	1,2,3,6,7,8-HxCDD	6.86e+06	1.30 y	1.06	35:05	1.000	52.114		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.93e+06	1.29 y	0.93	35:22	1.000	49.766		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	6.12e+06	1.03 y	1.10	38:54	1.000	48.850		*	2.5	*
	OCDD	1.21e+07	0.90 y	0.95	42:10	1.000	99.009		*	2.5	*
	2,3,7,8-TCDF	2.08e+06	0.76 y	1.07	26:06	1.001	8.8113		*	2.5	*
	1,2,3,7,8-PeCDF	1.19e+07	1.61 y	1.07	30:26	1.000	51.858		*	2.5	*
	2,3,4,7,8-PeCDF	1.13e+07	1.59 y	1.03	31:21	1.000	50.555		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.16e+07	1.29 y	1.38	34:05	1.000	47.892		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.13e+07	1.31 y	1.26	34:13	1.001	47.358		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.07e+07	1.28 y	1.29	34:48	1.000	48.441		*	2.5	*
	1,2,3,7,8,9-HxCDF	9.11e+06	1.32 y	1.19	35:45	1.001	48.955		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	9.96e+06	1.10 y	1.61	37:35	1.000	48.035		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	8.92e+06	1.08 y	1.53	39:26	1.000	49.701		*	2.5	*
	OCDF	1.54e+07	0.91 y	1.10	42:23	1.000	97.627		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.44e+07	0.79 y	1.06	26:55	1.022	101.29				
IS	13C-1,2,3,7,8-PeCDD	1.39e+07	0.65 y	1.18	31:37	1.201	87.834				
IS	13C-1,2,3,4,7,8-HxCDD	1.20e+07	1.28 y	0.72	34:58	1.014	97.133				
IS	13C-1,2,3,6,7,8-HxCDD	1.24e+07	1.24 y	0.74	35:04	1.017	98.125				
IS	13C-1,2,3,7,8,9-HxCDD	1.50e+07	1.25 y	0.85	35:22	1.025	102.32				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.13e+07	1.07 y	0.65	38:53	1.128	101.31				
IS	13C-OCDD	2.58e+07	0.87 y	0.76	42:09	1.222	197.45				
IS	13C-2,3,7,8-TCDF	2.20e+07	0.77 y	0.92	26:05	0.991	100.07				
IS	13C-1,2,3,7,8-PeCDF	2.14e+07	1.65 y	0.92	30:25	1.155	97.026				
IS	13C-2,3,4,7,8-PeCDF	2.17e+07	1.61 y	0.93	31:20	1.190	97.110				
IS	13C-1,2,3,4,7,8-HxCDF	1.75e+07	0.51 y	0.98	34:04	0.988	104.43				
IS	13C-1,2,3,6,7,8-HxCDF	1.90e+07	0.52 y	1.08	34:12	0.992	102.65				
IS	13C-2,3,4,6,7,8-HxCDF	1.72e+07	0.52 y	1.03	34:47	1.009	97.667				
IS	13C-1,2,3,7,8,9-HxCDF	1.57e+07	0.52 y	0.86	35:44	1.036	106.49				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.29e+07	0.44 y	0.72	37:34	1.089	104.03				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.18e+07	0.43 y	0.70	39:25	1.143	98.557				
IS	13C-OCDF	2.87e+07	0.90 y	0.85	42:22	1.228	197.50				
C/Up	37Cl-2,3,7,8-TCDD	1.59e+06		1.12	26:56	1.023	10.576				
RS/RT	13C-1,2,3,4-TCDD	1.35e+07	0.79 y	1.00	26:20	*	100.00				
RS	13C-1,2,3,4-TCDF	2.40e+07	0.76 y	1.00	24:46	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.71e+07	0.52 y	1.00	34:29	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	52.8	53.0		*	*
Total Penta-Dioxins	172	172		*	*
Total Hexa-Dioxins	197	199		*	*
Total Hepta-Dioxins	123	124		*	*
Total Tetra-Furans	28.4	28.7		*	*
Total Penta-Furans	199.95	200.36		*	*
Total Hexa-Furans	239	242		*	*
Total Hepta-Furans	97.9	99.4		*	*

	Rec	Qual
IS	101	
IS	87.8	
IS	97.1	
IS	98.1	
IS	102	
IS	101	
IS	98.7	
IS	100	
IS	97.0	
IS	97.1	
IS	104	
IS	103	
IS	97.7	
IS	106	
IS	104	
IS	98.6	
IS	98.7	
C/Up	26.4	

Integrations by Analyst: MJ Date: 3/20/15

Reviewed by Analyst: CB Date: 3/23/15

Vista Analytical Laboratory - Injection Log Run file: 150320D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150320D1	1	ST150320D1-1	MAS	20-MAR-15	10:30:07	ST150320D1-1	ST150320D1-2
150320D1	2	SOLVENT BLANK	MAS	20-MAR-15	11:19:01	NA	NA
150320D1	3	QC150320D1-2	MAS	20-MAR-15	12:07:56	NA	NA
150320D1	4	QC150320D1-1	MAS	20-MAR-15	12:56:51	ST150320D1-1	NA
150320D1	5	1400958-02RE1	MAS	20-MAR-15	13:45:46	ST150320D1-1	NA
150320D1	6	SOLVENT BLANK	MAS	20-MAR-15	14:34:40	NA	NA
150320D1	7	B5C0072-BS1	MAS	20-MAR-15	15:23:41	ST150320D1-1	ST150320D1-2
150320D1	8	B5C0077-BS1	MAS	20-MAR-15	16:12:36	ST150320D1-1	ST150320D1-2
150320D1	9	B5C0076-BS1	MAS	20-MAR-15	17:01:30	ST150320D1-1	ST150320D1-2
150320D1	10	B5C0083-BS1	MAS	20-MAR-15	17:50:26	ST150320D1-1	NA
150320D1	11	SOLVENT BLANK	MAS	20-MAR-15	18:39:20	NA	NA
150320D1	12	B5C0072-BLK1	MAS	20-MAR-15	19:28:15	ST150320D1-1	ST150320D1-2
150320D1	13	B5C0077-BLK1	MAS	20-MAR-15	20:17:09	ST150320D1-1	ST150320D1-2
150320D1	14	B5C0076-BLK1	MAS	20-MAR-15	21:06:02	ST150320D1-1	ST150320D1-2
150320D1	15	B5C0083-BLK1	MAS	20-MAR-15	21:54:57	ST150320D1-1	NA
150320D1	16	SOLVENT BLANK	MAS	20-MAR-15	22:43:51	NA	NA
150320D1	17	ST150320D1-2	MAS	20-MAR-15	23:32:47	ST150320D1-1	ST150320D1-2

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150320D1-1

End Calibration ID: ST150320D1-7

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		N/A
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: CJ 3/23/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 12/2009 rmh

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1

			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
			10	0.25	0.50	2.0	40	300
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
1,2,3,7,8-PeCDD	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
1,2,3,4,7,8-HxCDD	1.08	5.35 %	1.08	1.18	1.07	1.00	1.08	1.07
1,2,3,6,7,8-HxCDD	1.06	5.61 %	1.06	1.06	1.06	0.96	1.13	1.12
1,2,3,7,8,9-HxCDD	0.93	4.13 %	0.92	0.98	0.95	0.86	0.93	0.95
1,2,3,4,6,7,8-HpCDD	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
OCDD	0.95	4.86 %	0.97	0.96	0.97	0.85	0.97	0.97
2,3,7,8-TCDF	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1,2,3,7,8-PeCDF	1.07	4.51 %	1.10	1.13	1.05	1.00	1.11	1.06
2,3,4,7,8-PeCDF	1.03	3.55 %	1.05	1.04	1.06	0.96	1.07	1.02
1,2,3,4,7,8-HxCDF	1.38	3.14 %	1.40	1.42	1.37	1.31	1.42	1.39
1,2,3,6,7,8-HxCDF	1.26	5.25 %	1.26	1.34	1.29	1.14	1.26	1.27
2,3,4,6,7,8-HxCDF	1.29	3.82 %	1.28	1.30	1.33	1.20	1.34	1.29
1,2,3,7,8,9-HxCDF	1.19	3.32 %	1.16	1.25	1.18	1.13	1.20	1.19
1,2,3,4,6,7,8-HpCDF	1.61	4.02 %	1.59	1.67	1.66	1.49	1.64	1.61
1,2,3,4,7,8,9-HpCDF	1.53	4.55 %	1.54	1.58	1.55	1.39	1.53	1.57
OCDF	1.10	3.96 %	1.11	1.09	1.13	1.01	1.13	1.11
13C-2,3,7,8-TCDD	1.06	3.81 %	1.05	1.00	1.07	1.04	1.10	1.10
13C-1,2,3,7,8-PeCDD	1.18	9.13 %	1.06	1.09	1.23	1.23	1.34	1.11
13C-1,2,3,4,7,8-HxCDD	0.72	5.98 %	0.70	0.69	0.70	0.70	0.73	0.80
13C-1,2,3,6,7,8-HxCDD	0.74	6.30 %	0.72	0.71	0.71	0.71	0.73	0.83
13C-1,2,3,7,8,9-HxCDD	0.85	6.05 %	0.83	0.81	0.83	0.83	0.86	0.95
13C-1,2,3,4,6,7,8-HpCDD	0.65	10.75 %	0.63	0.61	0.61	0.62	0.66	0.79
13C-OCDD	0.76	5.80 %	0.70	0.73	0.76	0.77	0.79	0.82
13C-2,3,7,8-TCDF	0.92	2.26 %	0.93	0.89	0.91	0.91	0.94	0.93
13C-1,2,3,7,8-PeCDF	0.92	6.20 %	0.86	0.87	0.90	0.95	1.01	0.94
13C-2,3,4,7,8-PeCDF	0.93	5.50 %	0.89	0.89	0.91	0.96	1.02	0.92
13C-1,2,3,4,7,8-HxCDF	0.98	5.30 %	0.92	0.94	0.96	0.98	1.01	1.07
13C-1,2,3,6,7,8-HxCDF	1.08	5.13 %	1.07	1.00	1.05	1.09	1.12	1.16
13C-2,3,4,6,7,8-HxCDF	1.03	4.15 %	0.97	1.00	1.02	1.01	1.04	1.10
13C-1,2,3,7,8,9-HxCDF	0.86	7.80 %	0.84	0.82	0.82	0.83	0.87	0.99
13C-1,2,3,4,6,7,8-HpCDF	0.72	9.95 %	0.70	0.69	0.67	0.69	0.72	0.86
13C-1,2,3,4,7,8,9-HpCDF	0.70	6.18 %	0.65	0.69	0.67	0.67	0.74	0.76
13C-OCDF	0.85	5.23 %	0.82	0.80	0.83	0.85	0.88	0.92
37Cl-2,3,7,8-TCDD	1.12	13.99 %	1.22	1.08	1.03	1.24	1.27	0.86
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

ms 1/9/15

1/9/15

1/12/15

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	2.08e+06	0.73 y	26:60	-	1.11
2	Unk	1,2,3,7,8-PeCDD	50.00	8.78e+06	0.61 y	31:30	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	50.00	7.82e+06	1.26 y	34:50	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.94e+06	1.25 y	34:57	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	50.00	7.97e+06	1.24 y	35:15	-	0.92
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	7.29e+06	1.04 y	38:42	-	1.12
7	Unk	OCDD	100.00	1.40e+07	0.89 y	42:02	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.78e+06	0.80 y	26:13	-	1.00
9	Unk	1,2,3,7,8-PeCDF	50.00	1.40e+07	1.59 y	30:20	-	1.10
10	Unk	2,3,4,7,8-PeCDF	50.00	1.38e+07	1.59 y	31:14	-	1.05
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.34e+07	1.29 y	33:56	-	1.40
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.40e+07	1.29 y	34:04	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.29e+07	1.31 y	34:40	-	1.28
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.01e+07	1.27 y	35:39	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.16e+07	1.08 y	37:30	-	1.59
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.04e+07	1.07 y	39:16	-	1.54
17	Unk	OCDF	100.00	1.88e+07	0.91 y	42:16	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	1.87e+07	0.79 y	26:58	-	1.05
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.90e+07	0.63 y	31:29	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.44e+07	1.25 y	34:49	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.50e+07	1.25 y	34:56	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.72e+07	1.23 y	35:14	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.30e+07	1.07 y	38:42	-	0.63
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:02	-	0.70
43	IS	13C-2,3,7,8-TCDF	100.00	2.77e+07	0.74 y	26:12	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.54e+07	1.55 y	30:19	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.61 y	31:13	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.92e+07	0.51 y	33:55	-	0.92
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.23e+07	0.50 y	34:03	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	34:39	-	0.97
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.73e+07	0.51 y	35:38	-	0.84
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.46e+07	0.43 y	37:29	-	0.70
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.35e+07	0.45 y	39:15	-	0.65
52	IS	13C-OCDF	200.00	3.39e+07	0.92 y	42:15	-	0.82
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.18e+06		26:59	-	1.22
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.79e+07	0.80 y	26:24	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.97e+07	0.78 y	24:58	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.08e+07	0.51 y	34:21	-	1.00

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	5.01e+04	0.71 y	27:03	-	1.36
2	Unk	1,2,3,7,8-PeCDD	1.25	1.89e+05	0.58 y	31:32	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.80e+05	1.38 y	34:52	-	1.18
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.66e+05	1.38 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.76e+05	1.42 y	35:17	-	0.98
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.40e+05	0.92 y	38:44	-	1.04
7	Unk	OCDD	2.50	3.13e+05	0.92 y	42:04	-	0.96
8	Unk	2,3,7,8-TCDF	0.25	6.52e+04	0.82 y	26:17	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1.25	3.11e+05	1.49 y	30:22	-	1.13
10	Unk	2,3,4,7,8-PeCDF	1.25	2.91e+05	1.54 y	31:15	-	1.04
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.95e+05	1.36 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.95e+05	1.26 y	34:06	-	1.34
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.89e+05	1.31 y	34:43	-	1.30
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.25e+05	1.36 y	35:41	-	1.25
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.54e+05	1.14 y	37:32	-	1.67
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.39e+05	1.08 y	39:18	-	1.58
17	Unk	OCDF	2.50	3.84e+05	0.91 y	42:18	-	1.09
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.61e+07	0.64 y	31:32	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.24 y	34:51	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.31 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.44e+07	1.29 y	35:16	-	0.81
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.07e+07	1.03 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.60e+07	0.89 y	42:03	-	0.73
43	IS	13C-2,3,7,8-TCDF	100.00	2.24e+07	0.75 y	26:16	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.20e+07	1.59 y	30:21	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.24e+07	1.61 y	31:15	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.66e+07	0.52 y	33:57	-	0.94
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:05	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:42	-	1.00
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.45e+07	0.52 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.22e+07	0.44 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.21e+07	0.43 y	39:17	-	0.69
52	IS	13C-OCDF	200.00	2.81e+07	0.92 y	42:17	-	0.80
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	4.00e+04		27:03	-	1.08
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.48e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.52e+07	0.78 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.77e+07	0.53 y	34:23	-	1.00

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	9.47e+04	0.71 y	27:03	-	1.22
2	Unk	1,2,3,7,8-PeCDD	2.50	4.17e+05	0.58 y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.52e+05	1.23 y	34:52	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.56e+05	1.22 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.72e+05	1.18 y	35:17	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.28e+05	1.04 y	38:44	-	1.14
7	Unk	OCDD	5.00	7.00e+05	0.91 y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	0.50	1.35e+05	0.76 y	26:17	-	1.15
9	Unk	1,2,3,7,8-PeCDF	2.50	6.14e+05	1.75 y	30:22	-	1.05
10	Unk	2,3,4,7,8-PeCDF	2.50	6.26e+05	1.44 y	31:15	-	1.06
11	Unk	1,2,3,4,7,8-HxCDF	2.50	6.24e+05	1.23 y	33:58	-	1.37
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.42e+05	1.32 y	34:06	-	1.29
13	Unk	2,3,4,6,7,8-HxCDF	2.50	6.41e+05	1.24 y	34:42	-	1.33
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.56e+05	1.22 y	35:40	-	1.18
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.07 y	37:32	-	1.66
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.91e+05	1.14 y	39:17	-	1.55
17	Unk	OCDF	5.00	8.91e+05	0.93 y	42:17	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.56e+07	0.78 y	27:02	-	1.07
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.79e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.32e+07	1.27 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.35e+07	1.26 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.56e+07	1.27 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.05 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:03	-	0.76
43	IS	13C-2,3,7,8-TCDF	100.00	2.36e+07	0.78 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.34e+07	1.58 y	30:21	-	0.90
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.37e+07	1.54 y	31:14	-	0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.82e+07	0.52 y	33:57	-	0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.99e+07	0.52 y	34:05	-	1.05
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.93e+07	0.52 y	34:41	-	1.02
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.55e+07	0.53 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.26e+07	0.43 y	37:31	-	0.67
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.15e+07	0.89 y	42:17	-	0.83
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	7.54e+04		27:03	-	1.03
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.46e+07	0.79 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.60e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.89e+07	0.52 y	34:22	-	1.00

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.13e+05	0.82 y	27:03	-	1.06
2	Unk	1,2,3,7,8-PeCDD	10.00	1.47e+06	0.59 y	31:32	-	0.84
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.26e+06	1.28 y	34:52	-	1.00
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.24e+06	1.26 y	34:59	-	0.96
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.30e+06	1.28 y	35:17	-	0.86
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.04 y	38:44	-	1.07
7	Unk	OCDD	20.00	2.38e+06	0.87 y	42:03	-	0.85
8	Unk	2,3,7,8-TCDF	2.00	4.47e+05	0.78 y	26:17	-	0.99
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.55 y	30:22	-	1.00
10	Unk	2,3,4,7,8-PeCDF	10.00	2.32e+06	1.57 y	31:15	-	0.96
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.31e+06	1.29 y	33:58	-	1.31
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.24e+06	1.28 y	34:06	-	1.14
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.19e+06	1.30 y	34:42	-	1.20
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.69e+06	1.33 y	35:41	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.86e+06	1.10 y	37:32	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.69e+06	1.09 y	39:17	-	1.39
17	Unk	OCDF	20.00	3.11e+06	0.93 y	42:17	-	1.01
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.04
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.74e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.26e+07	1.28 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.29e+07	1.24 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.51e+07	1.23 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.13e+07	1.05 y	38:43	-	0.62
42	IS	13C-OCDD	200.00	2.79e+07	0.88 y	42:03	-	0.77
43	IS	13C-2,3,7,8-TCDF	100.00	2.26e+07	0.77 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.36e+07	1.54 y	30:21	-	0.95
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.40e+07	1.57 y	31:14	-	0.96
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.77e+07	0.50 y	33:57	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.97e+07	0.51 y	34:05	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52 y	34:41	-	1.01
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.50e+07	0.52 y	35:40	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.24e+07	0.43 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.22e+07	0.43 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.07e+07	0.90 y	42:17	-	0.85
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.51e+05		27:03	-	1.24
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.49e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.80e+07	0.52 y	34:22	-	1.00

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	6.36e+06	0.79	y	27:03	-	1.16
2	Unk	1,2,3,7,8-PeCDD	200.00	3.08e+07	0.61	y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	200.00	2.57e+07	1.25	y	34:52	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	200.00	2.66e+07	1.26	y	34:59	-	1.13
5	Unk	1,2,3,7,8,9-HxCDD	200.00	2.59e+07	1.24	y	35:17	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.46e+07	1.04	y	38:44	-	1.14
7	Unk	OCDD	400.00	5.00e+07	0.89	y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	40.00	8.92e+06	0.77	y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	200.00	4.90e+07	1.58	y	30:22	-	1.11
10	Unk	2,3,4,7,8-PeCDF	200.00	4.76e+07	1.60	y	31:15	-	1.07
11	Unk	1,2,3,4,7,8-HxCDF	200.00	4.66e+07	1.28	y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	200.00	4.56e+07	1.28	y	34:06	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	200.00	4.54e+07	1.26	y	34:42	-	1.34
14	Unk	1,2,3,7,8,9-HxCDF	200.00	3.40e+07	1.28	y	35:40	-	1.20
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.84e+07	1.09	y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.69e+07	1.08	y	39:17	-	1.53
17	Unk	OCDF	400.00	6.50e+07	0.92	y	42:18	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.37e+07	0.81	y	27:02	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.63	y	31:31	-	1.34
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.19e+07	1.25	y	34:51	-	0.73
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.18e+07	1.26	y	34:58	-	0.73
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.40e+07	1.24	y	35:16	-	0.86
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.08e+07	1.07	y	38:43	-	0.66
42	IS	13C-OCDD	200.00	2.58e+07	0.89	y	42:03	-	0.79
43	IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.77	y	26:16	-	0.94
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.21e+07	1.61	y	30:21	-	1.01
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.23e+07	1.57	y	31:14	-	1.02
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.64e+07	0.51	y	33:57	-	1.01
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.82e+07	0.50	y	34:05	-	1.12
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.69e+07	0.51	y	34:41	-	1.04
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.52	y	35:40	-	0.87
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.45	y	37:31	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.20e+07	0.44	y	39:16	-	0.74
52	IS	13C-OCDF	200.00	2.87e+07	0.89	y	42:17	-	0.88
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	6.31e+06			27:03	-	1.27
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.24e+07	0.82	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.19e+07	0.79	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.63e+07	0.51	y	34:22	-	1.00

Filename: 150107D1 S: 1 Acquired: 7-JAN-15 10:43:31
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:
Sample text: ST150107D1-1 1613 CS5 15A0502

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	300.00	9.22e+07	0.77 y	26:59	-	1.12
2	Unk	1,2,3,7,8-PeCDD	1500.00	3.69e+08	0.62 y	31:40	-	0.89
3	Unk	1,2,3,4,7,8-HxCDD	1500.00	3.48e+08	1.26 y	34:59	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	1500.00	3.80e+08	1.25 y	35:06	-	1.12
5	Unk	1,2,3,7,8,9-HxCDD	1500.00	3.67e+08	1.25 y	35:23	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	1500.00	3.56e+08	1.05 y	38:54	-	1.11
7	Unk	OCDD	3000.00	6.47e+08	0.90 y	42:09	-	0.97
8	Unk	2,3,7,8-TCDF	300.00	1.19e+08	0.78 y	26:09	-	1.04
9	Unk	1,2,3,7,8-PeCDF	1500.00	6.12e+08	1.59 y	30:27	-	1.06
10	Unk	2,3,4,7,8-PeCDF	1500.00	5.74e+08	1.56 y	31:23	-	1.02
11	Unk	1,2,3,4,7,8-HxCDF	1500.00	6.02e+08	1.28 y	34:06	-	1.39
12	Unk	1,2,3,6,7,8-HxCDF	1500.00	5.99e+08	1.28 y	34:14	-	1.27
13	Unk	2,3,4,6,7,8-HxCDF	1500.00	5.77e+08	1.29 y	34:50	-	1.29
14	Unk	1,2,3,7,8,9-HxCDF	1500.00	4.82e+08	1.30 y	35:46	-	1.19
15	Unk	1,2,3,4,6,7,8-HpCDF	1500.00	5.67e+08	1.07 y	37:34	-	1.61
16	Unk	1,2,3,4,7,8,9-HpCDF	1500.00	4.84e+08	1.07 y	39:27	-	1.57
17	Unk	OCDF	3000.00	8.27e+08	0.92 y	42:22	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	2.74e+07	0.80 y	26:57	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	2.75e+07	0.62 y	31:39	-	1.11
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.18e+07	1.22 y	34:58	-	0.80
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.25e+07	1.30 y	35:05	-	0.83
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	2.59e+07	1.25 y	35:22	-	0.95
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.15e+07	1.07 y	38:53	-	0.79
42	IS	13C-OCDD	200.00	4.45e+07	0.91 y	42:08	-	0.82
43	IS	13C-2,3,7,8-TCDF	100.00	3.80e+07	0.75 y	26:08	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	3.84e+07	1.58 y	30:27	-	0.94
45	IS	13C-2,3,4,7,8-PeCDF	100.00	3.74e+07	1.62 y	31:22	-	0.92
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.90e+07	0.52 y	34:05	-	1.07
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.15e+07	0.52 y	34:13	-	1.16
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.98e+07	0.51 y	34:49	-	1.10
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.69e+07	0.51 y	35:45	-	0.99
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.34e+07	0.44 y	37:34	-	0.86
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.06e+07	0.45 y	39:26	-	0.76
52	IS	13C-OCDF	200.00	4.97e+07	0.90 y	42:22	-	0.92
53	C/Up	37Cl-2,3,7,8-TCDD	300.00	6.41e+07		26:59	-	0.86
54	RS/RT	13C-1,2,3,4-TCDD	100.00	2.48e+07	0.80 y	26:21	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	4.08e+07	0.78 y	24:48	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.71e+07	0.51 y	34:30	-	1.00

Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
			10	0.25	0.50	2.0	40	300
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
TCDD EMPC	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
Total Penta-Dioxins	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
PeCDD EMPC	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
Total Hexa-Dioxins	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
HxCDD EMPC	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
Total Hepta-Dioxins	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
HpCDD EMPC	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
Total Tetra-Furans	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
TCDF EMPC	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1st Func. Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
1st Func. PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Hexa-Furans	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
HxCDF EMPC	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
Total Hepta-Furans	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59
HpCDF EMPC	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59

Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1

Name	RRT Limits Lower	Upper	Samp# 1 10 RRT#1	Samp# 3 0.25 RRT#2	Samp# 4 0.50 RRT#3	Samp# 5 2.0 RRT#4	Samp# 6 40 RRT#5	Samp# 1 300 RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.000	1.001
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.001	1.000	1.000	1.000	1.000
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.001	1.000	1.001	1.001	1.001	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.001	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.001	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.021	1.021	1.021	1.021	1.021	1.023
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.192	1.191	1.191	1.191	1.191	1.201
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.026	1.026	1.026	1.026	1.026	1.025
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.126	1.126	1.126	1.126	1.127
13C-OCDD	1.085	-1.365	1.224	1.223	1.223	1.223	1.223	1.222
13C-2,3,7,8-TCDF	0.923	-1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.148	1.147	1.147	1.147	1.147	1.155
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.182	1.181	1.180	1.180	1.180	1.190
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.037	1.037	1.038	1.038	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.091	1.091	1.091	1.091	1.091	1.089
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.143	1.142	1.143	1.143	1.143	1.143
13C-OCDF	1.091	-1.371	1.230	1.230	1.230	1.230	1.230	1.228
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.022	1.022	1.022	1.022	1.024
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: [signature]

Date: 1/8/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	182	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.74	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	97.2	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	93.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.9	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: MJ

Date: 1/8/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	40.0 - 60.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	40.0 - 60.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	80.0 - 120

Analyst: MJ

Date: 1/9/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	70.0 - 130
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	182	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	y	102	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	97.2	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	93.4	70.0 - 130
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					10.9	7.00 - 13.0

Analyst: MJ

Date: 1/9/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.192	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.148	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.182	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: VM

Date: 1/8/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.224	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

Analyst: (M)

Date: 1/9/15

Client ID: 1613 CS3 14I1102 Filename: 141016D1 S:1 Acq:16-OCT-14 11:05:57 ConCal: NA
Lab ID: ST141016D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.08e+06	0.73 y	1.17	26:60	1.001	9.4477		*	2.5	*
	1,2,3,7,8-PeCDD	8.78e+06	0.61 y	0.91	31:30	1.000	50.922		*	2.5	*
	1,2,3,4,7,8-HxCDD	7.82e+06	1.26 y	1.08	34:50	1.000	50.237		*	2.5	*
	1,2,3,6,7,8-HxCDD	7.94e+06	1.25 y	1.06	34:57	1.001	49.601		*	2.5	*
	1,2,3,7,8,9-HxCDD	7.97e+06	1.24 y	0.93	35:15	1.000	49.631		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.29e+06	1.04 y	1.10	38:42	1.000	50.805		*	2.5	*
	OCDD	1.40e+07	0.89 y	0.95	42:02	1.000	102.06		*	2.5	*
	2,3,7,8-TCDF	2.78e+06	0.80 y	1.07	26:13	1.001	9.3791		*	2.5	*
	1,2,3,7,8-PeCDF	1.40e+07	1.59 y	1.07	30:20	1.000	51.276		*	2.5	*
	2,3,4,7,8-PeCDF	1.38e+07	1.59 y	1.03	31:14	1.000	50.741		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.34e+07	1.29 y	1.38	33:56	1.000	50.629		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.40e+07	1.29 y	1.26	34:04	1.001	50.176		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.29e+07	1.31 y	1.29	34:40	1.001	49.592		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.01e+07	1.27 y	1.19	35:39	1.000	49.090		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.16e+07	1.08 y	1.61	37:30	1.000	49.399		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.04e+07	1.07 y	1.53	39:16	1.000	50.426		*	2.5	*
	OCDF	1.88e+07	0.91 y	1.10	42:16	1.000	100.89		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.87e+07	0.79 y	1.06	26:58	1.021	98.865				
IS	13C-1,2,3,7,8-PeCDD	1.90e+07	0.63 y	1.18	31:29	1.192	90.040				
IS	13C-1,2,3,4,7,8-HxCDD	1.44e+07	1.25 y	0.72	34:49	1.014	96.577				
IS	13C-1,2,3,6,7,8-HxCDD	1.50e+07	1.25 y	0.74	34:56	1.017	98.426				
IS	13C-1,2,3,7,8,9-HxCDD	1.72e+07	1.23 y	0.85	35:14	1.026	97.305				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.30e+07	1.07 y	0.65	38:42	1.127	95.724				
IS	13C-OCDD	2.89e+07	0.89 y	0.76	42:02	1.224	182.02				
IS	13C-2,3,7,8-TCDF	2.77e+07	0.74 y	0.92	26:12	0.992	101.61				
IS	13C-1,2,3,7,8-PeCDF	2.54e+07	1.55 y	0.92	30:19	1.148	92.843				
IS	13C-2,3,4,7,8-PeCDF	2.63e+07	1.61 y	0.93	31:13	1.182	95.246				
IS	13C-1,2,3,4,7,8-HxCDF	1.92e+07	0.51 y	0.98	33:55	0.988	94.089				
IS	13C-1,2,3,6,7,8-HxCDF	2.23e+07	0.50 y	1.08	34:03	0.991	99.047				
IS	13C-2,3,4,6,7,8-HxCDF	2.02e+07	0.52 y	1.03	34:39	1.009	94.921				
IS	13C-1,2,3,7,8,9-HxCDF	1.73e+07	0.51 y	0.86	35:38	1.037	97.069				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.46e+07	0.43 y	0.72	37:29	1.091	97.247				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.45 y	0.70	39:15	1.143	93.423				
IS	13C-OCDF	3.39e+07	0.92 y	0.85	42:15	1.230	192.38				
C/Up	37Cl-2,3,7,8-TCDD	2.18e+06		1.12	26:59	1.022	10.884				
RS/RT	13C-1,2,3,4-TCDD	1.79e+07	0.80 y	1.00	26:24	*	100.00				
RS	13C-1,2,3,4-TCDF	2.97e+07	0.78 y	1.00	24:58	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.08e+07	0.51 y	1.00	34:21	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	54.8	55.1		*	*
Total Penta-Dioxins	159	159		*	*
Total Hexa-Dioxins	194	195		*	*
Total Hepta-Dioxins	128	128		*	*
Total Tetra-Furans	30.0	30.3		*	*
Total Penta-Furans	209.92	210.51		*	*
Total Hexa-Furans	248	249		*	*
Total Hepta-Furans	102	102		*	*

	Rec	Qual
IS	98.9	
IS	90.0	
IS	96.6	
IS	98.4	
IS	97.3	
IS	95.7	
IS	91.0	
IS	102	
IS	92.8	
IS	95.2	
IS	94.1	
IS	99.0	
IS	94.9	
IS	97.1	
IS	97.2	
IS	93.4	
IS	96.2	
C/Up	2180	

Integrations by Analyst: MJ Date: 1/9/15

Reviewed by Analyst: CT Date: 1/12/15

Vista Analytical Laboratory - Injection Log Run file: 141016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141016D1	1	ST141016D1-1	MAS	16-OCT-14	11:05:57	ST141016D1-1	NA
141016D1	2	SOLVENT BLANK	MAS	16-OCT-14	11:54:17	ST141016D1-1	NA
141016D1	3	ST141016D1-2	MAS	16-OCT-14	12:42:43	ST141016D1-1	NA
141016D1	4	ST141016D1-3	MAS	16-OCT-14	13:31:08	ST141016D1-1	NA
141016D1	5	ST141016D1-4	MAS	16-OCT-14	14:19:34	ST141016D1-1	NA
141016D1	6	ST141016D1-5	MAS	16-OCT-14	15:08:00	ST141016D1-1	NA
141016D1	8	SOLVENT BLANK	MAS	16-OCT-14	16:44:52	ST141016D1-1	NA
141016D1	9	SS141016D1-1	MAS	16-OCT-14	17:33:17	ST141016D1-1	NA
150107D1	1	ST150107D1-1	MAS	7-JAN-15	10:43:31	ST141016D1-1	NA

January 13, 2015

Vista Project I.D.: 1400984

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 23, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '1400647'. The work was authorized under your Purchase Order No. PO10163569.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1400984
Case Narrative

Sample Condition on Receipt:

Four effluent samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested, the three "BD" samples were placed on hold.

Analytical Notes:

EPA Method 1613

Sample "QC-EB-02-20141222-W" was extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

EPA Method 1668C

Sample "QC-EB-02-20141222-W" was extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. PCB-11 was detected at 24.1 pg/L in the Method Blank, which is above the sample quantitation limit. No other analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400984-01	BD-OWS-14-20141222-W	22-Dec-14 08:40	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-02	BD-MH-12.56-20141222-W	22-Dec-14 10:10	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-03	BD-MH-1.32-20141222-W	22-Dec-14 11:40	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-04	QC-EB-02-20141222-W	22-Dec-14 14:50	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B4L0162
Date Extracted: 31-Dec-2014 8:13

Lab Sample: B4L0162-BLK1
Date Analyzed : 02-Jan-15 18:08 Column: ZB-5MS Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	0.627		0.943	
1,2,3,7,8-PeCDD	ND	25.0	0.618		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	1.68		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	1.67		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	1.90		2.02	
1,2,3,4,6,7,8-HpCDD	ND	25.0	1.55		2.98	
OCDD	ND	50.0	5.74		3.57	
2,3,7,8-TCDF	ND	5.00	0.540		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.693		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.643		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	0.583		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	0.634		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.809		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	1.31		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	1.00		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	1.03		1.75	
OCDF	ND	50.0	1.64		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	74.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	76.6	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	60.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	71.4	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	65.6	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	66.5	23 - 140	
	13C-OCDD	41.8	17 - 157	
	13C-2,3,7,8-TCDF	73.7	24 - 169	
	13C-1,2,3,7,8-PeCDF	70.1	24 - 185	
	13C-2,3,4,7,8-PeCDF	72.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	75.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	71.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	69.4	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	72.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	63.4	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	63.2	26 - 138	
	13C-OCDF	46.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	96.1	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	0.628
Total PeCDD	ND	0.617
Total HxCDD	ND	1.80
Total HpCDD	ND	1.55
Total TCDF	ND	0.540
Total PeCDF	ND	0.702
Total HxCDF	ND	0.821
Total HpCDF	ND	1.05

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR **EPA Method 1613B**

Matrix:	Aqueous	QC Batch:	B4L0162	Lab Sample:	B4L0162-BS1
Sample Size:	1.00 L	Date Extracted:	31-Dec-2014 8:13	Date Analyzed:	02-Jan-15 16:31 Column: ZB-5MS Analyst: WJL

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	177	200	88.7	67 - 158	IS	13C-2,3,7,8-TCDD	78.4	20 - 175
1,2,3,7,8-PeCDD	956	1000	95.6	70 - 142		13C-1,2,3,7,8-PeCDD	71.1	21 - 227
1,2,3,4,7,8-HxCDD	1010	1000	101	70 - 164		13C-1,2,3,4,7,8-HxCDD	62.3	21 - 193
1,2,3,6,7,8-HxCDD	982	1000	98.2	76 - 134		13C-1,2,3,6,7,8-HxCDD	68.2	25 - 163
1,2,3,7,8,9-HxCDD	994	1000	99.4	64 - 162		13C-1,2,3,7,8,9-HxCDD	62.7	21 - 193
1,2,3,4,6,7,8-HpCDD	958	1000	95.8	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	61.2	26 - 166
OCDD	1960	2000	98.1	78 - 144		13C-OCDD	38.8	13 - 199
2,3,7,8-TCDF	179	200	89.7	75 - 158		13C-2,3,7,8-TCDF	80.3	22 - 152
1,2,3,7,8-PeCDF	965	1000	96.5	80 - 134		13C-1,2,3,7,8-PeCDF	69.7	21 - 192
2,3,4,7,8-PeCDF	983	1000	98.3	68 - 160		13C-2,3,4,7,8-PeCDF	71.6	13 - 328
1,2,3,4,7,8-HxCDF	970	1000	97.0	72 - 134		13C-1,2,3,4,7,8-HxCDF	72.0	19 - 202
1,2,3,6,7,8-HxCDF	970	1000	97.0	84 - 130		13C-1,2,3,6,7,8-HxCDF	69.0	21 - 159
2,3,4,6,7,8-HxCDF	943	1000	94.3	70 - 156		13C-2,3,4,6,7,8-HxCDF	67.4	22 - 176
1,2,3,7,8,9-HxCDF	966	1000	96.6	78 - 130		13C-1,2,3,7,8,9-HxCDF	69.5	17 - 205
1,2,3,4,6,7,8-HpCDF	953	1000	95.3	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	60.0	21 - 158
1,2,3,4,7,8,9-HpCDF	957	1000	95.7	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	60.0	20 - 186
OCDF	1870	2000	93.5	63 - 170		13C-OCDF	44.1	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	96.8	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: QC-EB-02-20141222-W

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 14:50

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-04 Date Received: 23-Dec-2014 10:15
QC Batch: B4L0162 Date Extracted: 31-Dec-2014 8:13
Date Analyzed : 03-Jan-15 12:28 Column: ZB-5MS Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.87	1.71		0.943	
1,2,3,7,8-PeCDD	ND	24.3	0.919		4.51	
1,2,3,4,7,8-HxCDD	ND	24.3	2.32		2.21	
1,2,3,6,7,8-HxCDD	ND	24.3	2.10		1.93	
1,2,3,7,8,9-HxCDD	ND	24.3	2.65		2.02	
1,2,3,4,6,7,8-HpCDD	ND	24.3	5.35		2.98	
OCDD	ND	48.7		14.8	3.57	
2,3,7,8-TCDF	ND	4.87	0.982		0.984	
1,2,3,7,8-PeCDF	ND	24.3	0.869		2.50	
2,3,4,7,8-PeCDF	ND	24.3	0.839		1.73	
1,2,3,4,7,8-HxCDF	ND	24.3	0.919		1.36	
1,2,3,6,7,8-HxCDF	ND	24.3	1.05		1.56	
2,3,4,6,7,8-HxCDF	ND	24.3	1.19		2.05	
1,2,3,7,8,9-HxCDF	ND	24.3	1.87		1.34	
1,2,3,4,6,7,8-HpCDF	ND	24.3	2.64		1.46	
1,2,3,4,7,8,9-HpCDF	ND	24.3	2.56		1.75	
OCDF	ND	48.7	4.31		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	78.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	74.7	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	65.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	75.4	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	69.6	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	66.0	23 - 140	
	13C-OCDD	44.3	17 - 157	
	13C-2,3,7,8-TCDF	81.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	72.6	24 - 185	
	13C-2,3,4,7,8-PeCDF	75.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	67.2	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	70.1	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	68.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	69.3	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	60.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	59.7	26 - 138	
	13C-OCDF	43.7	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	84.4	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	1.72
Total PeCDD	ND	0.917
Total HxCDD	ND	2.42
Total HpCDD	ND	5.35
Total TCDF	ND	0.982
Total PeCDF	ND	1.34
Total HxCDF	ND	1.26
Total HpCDF	ND	2.66

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B5A0001
Date Extracted: 02-Jan-2015 8:01
Lab Sample: B5A0001-BLK2
Date Analyzed: 02-Jan-15 17:51 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	5.00	2.29		1.21	
PCB-2	ND	5.00	2.35		1.75	
PCB-3	ND	5.00	2.27		1.49	
PCB-4/10	ND	20.0	17.7		5.64	
PCB-5/8	ND	20.0	14.3		3.59	
PCB-6	ND	10.0	14.0		3.10	
PCB-7/9	ND	20.0	13.9		6.22	
PCB-11	24.1	10.0			3.86	
PCB-12/13	ND	20.0	14.0		5.01	
PCB-14	ND	10.0	12.5		3.98	
PCB-15	ND	10.0	12.8		2.53	
PCB-16/32	ND	10.0	1.24		2.87	
PCB-17	ND	5.00	1.42		1.37	
PCB-18	2.60	5.00			2.57	J
PCB-19	ND	5.00	1.52		2.38	
PCB-20/21/33	ND	15.0	1.10		10.3	
PCB-22	ND	5.00	1.09		3.17	
PCB-23	ND	5.00	1.10		1.35	
PCB-24/27	ND	10.0	1.08		3.16	
PCB-25	ND	5.00	1.08		3.34	
PCB-26	ND	5.00	1.12		2.19	
PCB-28	1.60	5.00			2.90	J
PCB-29	ND	5.00	1.09		1.60	
PCB-30	ND	5.00	1.07		2.09	
PCB-31	ND	5.00		1.40	4.29	
PCB-34	ND	5.00	1.15		2.34	
PCB-35	ND	5.00	1.12		1.65	
PCB-36	ND	5.00	1.12		2.69	
PCB-37	ND	5.00	1.11		1.92	
PCB-38	ND	5.00	1.14		1.56	
PCB-39	ND	5.00	1.09		2.60	
PCB-40	ND	5.00	2.34		3.08	
PCB-41/64/71/72	ND	20.0		2.34	5.57	
PCB-42/59	ND	10.0	1.58		2.84	
PCB-43/49	ND	10.0	1.71		3.38	
PCB-44	ND	5.00		2.88	2.48	
PCB-45	ND	5.00	1.97		1.96	
PCB-46	ND	5.00	2.00		2.49	
PCB-47	ND	5.00	1.69		4.42	
PCB-48/75	ND	10.0	1.47		2.09	
PCB-50	ND	5.00	1.71		1.40	
PCB-51	ND	5.00	1.65		1.42	
PCB-52/69	ND	10.0		2.58	3.64	
PCB-53	ND	5.00	1.60		1.12	
PCB-54	ND	5.00	1.38		1.51	
PCB-55	ND	5.00	1.58		1.19	
PCB-56/60	ND	10.0	1.62		2.19	
PCB-57	ND	5.00	1.44		0.857	
PCB-58	ND	5.00	1.46		1.81	
PCB-61/70	2.51	10.0			2.40	J
PCB-62	ND	5.00	1.48		1.46	
PCB-63	ND	5.00	1.43		0.696	
PCB-65	ND	5.00	1.44		0.953	
PCB-66/76	ND	10.0	1.41		2.82	
PCB-67	ND	5.00	1.49		1.22	
PCB-68	ND	5.00	1.29		1.24	
PCB-73	ND	5.00	1.39		1.56	
PCB-74	ND	5.00	1.33		1.53	
PCB-77	ND	5.00	1.73		1.34	
PCB-78	ND	5.00	1.64		0.990	
PCB-79	ND	5.00	1.56		1.60	
PCB-80	ND	5.00	1.38		1.98	
PCB-81	ND	5.00	1.47		2.34	
PCB-82	ND	5.00	5.34		1.69	
PCB-83	ND	5.00	3.35		1.32	
PCB-84/92	ND	10.0	4.18		3.38	
PCB-85/116	ND	10.0	3.92		2.83	
PCB-86	ND	5.00	4.99		2.34	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix:	Aqueous	QC Batch:	B5A0001	Lab Sample:	B5A0001-BLK2
Sample Size:	1.00 L	Date Extracted:	02-Jan-2015 8:01	Date Analyzed:	02-Jan-15 17:51 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	15.0	3.27		3.79	
PCB-88/91	ND	5.00	4.50		3.25	
PCB-89	ND	5.00	4.33		1.84	
PCB-90/101	ND	10.0	3.70		1.92	
PCB-93	ND	5.00	4.06		1.47	
PCB-94	ND	5.00	4.14		1.91	
PCB-95/98/102	ND	15.0	3.78		6.58	
PCB-96	ND	5.00	2.95		2.16	
PCB-97	ND	5.00	4.08		1.24	
PCB-99	ND	5.00	3.42		1.94	
PCB-100	ND	5.00	3.21		2.03	
PCB-103	ND	5.00	3.45		2.28	
PCB-104	ND	5.00	2.55		0.931	
PCB-105	ND	5.00	2.49		2.21	
PCB-106/118	ND	10.0	3.09		2.44	
PCB-107/109	ND	10.0	3.23		1.98	
PCB-108/112	ND	10.0	3.96		1.86	
PCB-110	ND	5.00	3.03		1.94	
PCB-111/115	ND	10.0	2.91		0.768	
PCB-113	ND	5.00	3.26		1.31	
PCB-114	ND	5.00	2.41		1.81	
PCB-119	ND	5.00	2.96		0.949	
PCB-120	ND	5.00	2.86		1.01	
PCB-121	ND	5.00	2.41		1.94	
PCB-122	ND	5.00	2.65		1.84	
PCB-123	ND	5.00	3.24		1.35	
PCB-124	ND	5.00	2.98		1.79	
PCB-126	ND	5.00	2.39		2.05	
PCB-127	ND	5.00	2.57		0.808	
PCB-128/162	ND	10.0	2.62		1.68	
PCB-129	ND	5.00	3.52		1.11	
PCB-130	ND	5.00	4.04		2.21	
PCB-131	ND	5.00	3.54		1.46	
PCB-132/161	ND	10.0	2.90		2.34	
PCB-133/142	ND	10.0	3.42		2.19	
PCB-134/143	ND	10.0	3.49		2.40	
PCB-135	ND	5.00	4.15		2.90	
PCB-136	ND	5.00	2.98		2.89	
PCB-137	ND	5.00	3.20		2.08	
PCB-138/163/164	ND	15.0	2.65		2.68	
PCB-139/149	ND	10.0	3.83		7.87	
PCB-140	ND	5.00	4.12		3.52	
PCB-141	ND	5.00	3.52		1.15	
PCB-144	ND	5.00	3.94		3.22	
PCB-145	ND	5.00	2.96		1.73	
PCB-146/165	ND	10.0	2.80		1.91	
PCB-147	ND	5.00	3.90		3.62	
PCB-148	ND	5.00	4.36		1.68	
PCB-150	ND	5.00	3.04		1.14	
PCB-151	ND	5.00	3.99		3.59	
PCB-152	ND	5.00	2.94		1.82	
PCB-153	ND	5.00	2.74		1.83	
PCB-154	ND	5.00	3.66		2.78	
PCB-155	ND	5.00	2.84		1.45	
PCB-156	ND	5.00	2.04		1.74	
PCB-157	ND	5.00	2.19		1.17	
PCB-158/160	ND	10.0	2.52		1.99	
PCB-159	ND	5.00	2.29		1.20	
PCB-166	ND	5.00	2.39		0.920	
PCB-167	ND	5.00	2.19		1.65	
PCB-168	ND	5.00	2.36		0.933	
PCB-169	ND	5.00	2.28		1.12	
PCB-170	ND	5.00	2.02		1.38	
PCB-171	ND	5.00	1.98		1.61	
PCB-172	ND	5.00	2.13		1.46	
PCB-173	ND	5.00	2.24		1.49	
PCB-174	ND	5.00	1.94		1.42	
PCB-175	ND	5.00	2.47		3.15	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: Method Blank — EPA Method 1668C

Matrix:	Aqueous	QC Batch:	B5A0001	Lab Sample:	B5A0001-BLK2
Sample Size:	1.00 L	Date Extracted:	02-Jan-2015 8:01	Date Analyzed:	02-Jan-15 17:51 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	5.00	1.76		2.17	
PCB-177	ND	5.00	2.10		1.34	
PCB-178	ND	5.00	2.56		2.25	
PCB-179	ND	5.00	1.84		1.57	
PCB-180	ND	5.00	1.82		0.610	
PCB-181	ND	5.00	1.91		1.01	
PCB-182/187	ND	10.0	2.36		6.20	
PCB-183	ND	5.00	2.21		3.29	
PCB-184	ND	5.00	1.94		1.25	
PCB-185	ND	5.00	1.94		1.47	
PCB-186	ND	5.00	1.88		2.43	
PCB-188	ND	5.00	1.71		1.08	
PCB-189	ND	5.00	1.47		1.49	
PCB-190	ND	5.00	1.50		1.70	
PCB-191	ND	5.00	1.56		1.96	
PCB-192	ND	5.00	1.70		1.69	
PCB-193	ND	5.00	1.57		1.46	
PCB-194	ND	5.00	1.31		1.71	
PCB-195	ND	5.00	1.36		1.47	
PCB-196/203	ND	10.0	4.52		6.35	
PCB-197	ND	5.00	3.25		1.80	
PCB-198	ND	5.00	4.70		3.78	
PCB-199	ND	5.00	4.79		4.05	
PCB-200	ND	5.00	3.43		1.75	
PCB-201	ND	5.00	3.17		1.02	
PCB-202	ND	5.00	3.35		1.55	
PCB-204	ND	5.00	3.51		1.48	
PCB-205	ND	5.00	1.15		1.53	
PCB-206	ND	5.00	1.82		1.32	
PCB-207	ND	5.00	1.07		1.51	
PCB-208	ND	5.00	1.01		1.34	
PCB-209	ND	5.00	2.08		1.86	
Total monoCB	ND	5.00	2.35			
Total diCB	24.1	10.0				
Total triCB	4.20	5.00		5.61		J
Total tetraCB	2.51	5.00		10.3		J
Total pentaCB	ND	5.00	5.34			
Total hexaCB	ND	5.00	4.36			
Total heptaCB	ND	5.00	2.56			
Total octaCB	ND	5.00	4.79			
Total nonaCB	ND	5.00	1.82			
DecaCB	ND	5.00	2.08			
Total PCB	30.8	10.0				

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: Method Blank

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5A0001
Date Extracted: 02-Jan-2015 8:01

Lab Sample: B5A0001-BLK2
Date Analyzed: 02-Jan-15 17:51 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	70.2	5 - 145	
	13C-PCB-3	75.9	5 - 145	
	13C-PCB-4	74.5	5 - 145	
	13C-PCB-11	86.9	5 - 145	
	13C-PCB-9	79.9	5 - 145	
	13C-PCB-19	68.6	5 - 145	
	13C-PCB-28	85.0	5 - 145	
	13C-PCB-32	73.1	5 - 145	
	13C-PCB-37	95.6	5 - 145	
	13C-PCB-47	97.3	5 - 145	
	13C-PCB-52	101	5 - 145	
	13C-PCB-54	92.9	5 - 145	
	13C-PCB-70	102	5 - 145	
	13C-PCB-77	88.2	10 - 145	
	13C-PCB-80	96.4	10 - 145	
	13C-PCB-81	91.9	10 - 145	
	13C-PCB-95	95.9	10 - 145	
	13C-PCB-97	98.1	10 - 145	
	13C-PCB-101	95.3	10 - 145	
	13C-PCB-104	96.6	10 - 145	
	13C-PCB-105	85.3	10 - 145	
	13C-PCB-114	83.5	10 - 145	
	13C-PCB-118	92.2	10 - 145	
	13C-PCB-123	87.5	10 - 145	
	13C-PCB-126	93.2	10 - 145	
	13C-PCB-127	86.1	10 - 145	
	13C-PCB-138	89.8	10 - 145	
	13C-PCB-141	84.4	10 - 145	
	13C-PCB-153	85.0	10 - 145	
	13C-PCB-155	89.3	10 - 145	
	13C-PCB-156	100	10 - 145	
	13C-PCB-157	100	10 - 145	
	13C-PCB-159	95.6	10 - 145	
	13C-PCB-167	97.4	10 - 145	
	13C-PCB-169	96.5	10 - 145	
	13C-PCB-170	91.1	10 - 145	
	13C-PCB-180	89.6	10 - 145	
	13C-PCB-188	74.0	10 - 145	
	13C-PCB-189	85.8	10 - 145	
	13C-PCB-194	96.6	10 - 145	
	13C-PCB-202	75.0	10 - 145	
	13C-PCB-206	93.4	10 - 145	
	13C-PCB-208	85.3	10 - 145	
	13C-PCB-209	93.3	10 - 145	
CRS	13C-PCB-79	103	10 - 145	
	13C-PCB-178	93.9	10 - 145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5A0001
Date Extracted: 02-Jan-2015 8:01

Lab Sample: B5A0001-BS1
Date Analyzed: 02-Jan-15 15:41 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
PCB-1	1040	1000	104	60 - 135
PCB-3	1020	1000	102	60 - 135
PCB-4/10	4720	4000	118	60 - 135
PCB-15	2380	2000	119	60 - 135
PCB-19	1120	1000	112	60 - 135
PCB-37	1030	1000	103	60 - 135
PCB-54	1100	1000	110	60 - 135
PCB-77	1160	1000	116	60 - 135
PCB-81	1130	1000	113	60 - 135
PCB-104	1100	1000	110	60 - 135
PCB-105	1190	1000	119	60 - 135
PCB-106/118	2300	2000	115	60 - 135
PCB-114	1200	1000	120	60 - 135
PCB-123	1180	1000	118	60 - 135
PCB-126	1200	1000	120	60 - 135
PCB-155	1190	1000	119	60 - 135
PCB-156	1140	1000	114	60 - 135
PCB-157	1150	1000	115	60 - 135
PCB-167	1140	1000	114	60 - 135
PCB-169	1190	1000	119	60 - 135
PCB-188	1120	1000	112	60 - 135
PCB-189	1250	1000	125	60 - 135
PCB-202	1120	1000	112	60 - 135
PCB-205	1260	1000	126	60 - 135
PCB-206	1150	1000	115	60 - 135
PCB-208	1120	1000	112	60 - 135
PCB-209	1220	1000	122	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	76.2	15 - 145
IS	13C-PCB-3	78.6	15 - 145
IS	13C-PCB-4	76.0	15 - 145
IS	13C-PCB-11	83.8	15 - 145
IS	13C-PCB-9	78.6	15 - 145
IS	13C-PCB-19	68.7	15 - 145
IS	13C-PCB-28	95.2	15 - 145
IS	13C-PCB-32	72.9	15 - 145
IS	13C-PCB-37	97.4	15 - 145
IS	13C-PCB-47	89.4	15 - 145
IS	13C-PCB-52	92.4	15 - 145
IS	13C-PCB-54	85.5	15 - 145
IS	13C-PCB-70	90.7	15 - 145
IS	13C-PCB-77	86.6	40 - 145
IS	13C-PCB-80	90.8	40 - 145
IS	13C-PCB-81	87.8	40 - 145
IS	13C-PCB-95	85.9	40 - 145
IS	13C-PCB-97	92.2	40 - 145
IS	13C-PCB-101	88.2	40 - 145
IS	13C-PCB-104	88.0	40 - 145
IS	13C-PCB-105	89.0	40 - 145
IS	13C-PCB-114	87.7	40 - 145
IS	13C-PCB-118	86.6	40 - 145
IS	13C-PCB-123	85.7	40 - 145
IS	13C-PCB-126	93.8	40 - 145
IS	13C-PCB-127	89.1	40 - 145
IS	13C-PCB-138	86.3	40 - 145
IS	13C-PCB-141	84.1	40 - 145
IS	13C-PCB-153	83.9	40 - 145
IS	13C-PCB-155	70.6	40 - 145
IS	13C-PCB-156	91.6	40 - 145
IS	13C-PCB-157	90.1	40 - 145
IS	13C-PCB-159	90.1	40 - 145
IS	13C-PCB-167	90.0	40 - 145
IS	13C-PCB-169	85.5	40 - 145
IS	13C-PCB-170	80.1	40 - 145
IS	13C-PCB-180	80.1	40 - 145
IS	13C-PCB-188	72.0	40 - 145
IS	13C-PCB-189	77.8	40 - 145
IS	13C-PCB-194	88.2	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5A0001
Date Extracted: 02-Jan-2015 8:01

Lab Sample: B5A0001-BS1
Date Analyzed: 02-Jan-15 15:41 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	67.2	40 - 145
IS	13C-PCB-206	83.7	40 - 145
IS	13C-PCB-208	77.7	40 - 145
IS	13C-PCB-209	83.3	40 - 145
CRS	13C-PCB-79	95.8	40 - 145
CRS	13C-PCB-178	83.8	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: QC-EB-02-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 14:50

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-04 Date Received: 23-Dec-2014 10:15
QC Batch: B5A0001 Date Extracted: 02-Jan-2015 8:01
Date Analyzed : 02-Jan-15 18:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	1.66	4.87			1.21	J
PCB-2	ND	4.87	2.68		1.75	
PCB-3	ND	4.87	2.60		1.49	
PCB-4/10	ND	19.5	9.71		5.64	
PCB-5/8	ND	19.5	7.52		3.59	
PCB-6	ND	9.74	7.36		3.10	
PCB-7/9	ND	19.5	7.31		6.22	
PCB-11	17.9	9.74			3.86	B
PCB-12/13	ND	19.5	7.15		5.01	
PCB-14	ND	9.74	6.38		3.98	
PCB-15	ND	9.74	6.50		2.53	
PCB-16/32	3.38	9.74			2.87	J
PCB-17	ND	4.87		1.38	1.37	
PCB-18	5.48	4.87			2.57	B
PCB-19	ND	4.87	1.28		2.38	
PCB-20/21/33	ND	14.6		2.58	10.3	
PCB-22	1.67	4.87			3.17	J
PCB-23	ND	4.87	0.886		1.35	
PCB-24/27	ND	9.74	0.888		3.16	
PCB-25	ND	4.87	0.865		3.34	
PCB-26	ND	4.87	0.899		2.19	
PCB-28	3.87	4.87			2.90	J, B
PCB-29	ND	4.87	0.874		1.60	
PCB-30	ND	4.87	0.906		2.09	
PCB-31	ND	4.87		3.19	4.29	
PCB-34	ND	4.87	0.921		2.34	
PCB-35	ND	4.87	0.957		1.65	
PCB-36	ND	4.87	0.957		2.69	
PCB-37	1.91	4.87			1.92	J
PCB-38	ND	4.87	0.973		1.56	
PCB-39	ND	4.87	0.928		2.60	
PCB-40	ND	4.87	1.93		3.08	
PCB-41/64/71/72	5.41	19.5			5.57	J
PCB-42/59	ND	9.74		1.84	2.84	
PCB-43/49	4.20	9.74			3.38	J

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-44	5.74	4.87			2.48	
PCB-45	ND	4.87	1.65		1.96	
PCB-46	ND	4.87	1.68		2.49	
PCB-47	ND	4.87		2.65	4.42	
PCB-48/75	ND	9.74	1.21		2.09	
PCB-50	ND	4.87	1.40		1.40	
PCB-51	ND	4.87	1.38		1.42	
PCB-52/69	7.87	9.74			3.64	J
PCB-53	ND	4.87		1.13	1.12	
PCB-54	ND	4.87	1.13		1.51	
PCB-55	ND	4.87	1.22		1.19	
PCB-56/60	3.89	9.74			2.19	J
PCB-57	ND	4.87	1.16		0.857	
PCB-58	ND	4.87	1.17		1.81	
PCB-61/70	7.80	9.74			2.40	J, B
PCB-62	ND	4.87	1.22		1.46	
PCB-63	ND	4.87	1.15		0.696	
PCB-65	ND	4.87	1.19		0.953	
PCB-66/76	6.54	9.74			2.82	J
PCB-67	ND	4.87	1.20		1.22	
PCB-68	ND	4.87	1.07		1.24	
PCB-73	ND	4.87	1.16		1.56	
PCB-74	2.42	4.87			1.53	J
PCB-77	ND	4.87	1.33		1.34	
PCB-78	ND	4.87	1.33		0.990	
PCB-79	ND	4.87	1.21		1.60	
PCB-80	ND	4.87	1.06		1.98	
PCB-81	ND	4.87	1.19		2.34	
PCB-82	ND	4.87	4.27		1.69	
PCB-83	ND	4.87	2.61		1.32	
PCB-84/92	6.92	9.74			3.38	J
PCB-85/116	ND	9.74	3.05		2.83	
PCB-86	ND	4.87	3.88		2.34	
PCB-87/117/125	5.52	14.6			3.79	J
PCB-88/91	ND	4.87	3.56		3.25	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: QC-EB-02-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 14:50

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-04 Date Received: 23-Dec-2014 10:15
QC Batch: B5A0001 Date Extracted: 02-Jan-2015 8:01
Date Analyzed : 02-Jan-15 18:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	4.87	3.55		1.84	
PCB-90/101	15.5	9.74			1.92	
PCB-93	ND	4.87	3.21		1.47	
PCB-94	ND	4.87	3.28		1.91	
PCB-95/98/102	10.5	14.6			6.58	J
PCB-96	ND	4.87	2.40		2.16	
PCB-97	ND	4.87		4.61	1.24	
PCB-99	ND	4.87		4.69	1.94	
PCB-100	ND	4.87	2.62		2.03	
PCB-103	ND	4.87	2.81		2.28	
PCB-104	ND	4.87	2.08		0.931	
PCB-105	6.64	4.87			2.21	
PCB-106/118	13.4	9.74			2.44	
PCB-107/109	ND	9.74	2.58		1.98	
PCB-108/112	ND	9.74	3.08		1.86	
PCB-110	15.7	4.87			1.94	
PCB-111/115	ND	9.74	2.26		0.768	
PCB-113	ND	4.87	2.67		1.31	
PCB-114	ND	4.87	2.21		1.81	
PCB-119	ND	4.87	2.31		0.949	
PCB-120	ND	4.87	2.23		1.01	
PCB-121	ND	4.87	1.91		1.94	
PCB-122	ND	4.87	2.42		1.84	
PCB-123	ND	4.87	2.59		1.35	
PCB-124	ND	4.87	2.38		1.79	
PCB-126	ND	4.87	2.09		2.05	
PCB-127	ND	4.87	2.20		0.808	
PCB-128/162	3.65	9.74			1.68	J
PCB-129	ND	4.87	3.53		1.11	
PCB-130	ND	4.87	3.88		2.21	
PCB-131	ND	4.87	3.45		1.46	
PCB-132/161	7.12	9.74			2.34	J
PCB-133/142	ND	9.74	3.33		2.19	
PCB-134/143	ND	9.74	3.40		2.40	
PCB-135	ND	4.87	4.50		2.90	

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-136	ND	4.87	3.23		2.89	
PCB-137	ND	4.87	3.07		2.08	
PCB-138/163/164	22.7	14.6			2.68	
PCB-139/149	19.4	9.74			7.87	
PCB-140	ND	4.87	4.47		3.52	
PCB-141	5.49	4.87			1.15	
PCB-144	ND	4.87	4.28		3.22	
PCB-145	ND	4.87	3.21		1.73	
PCB-146/165	3.59	9.74			1.91	J
PCB-147	ND	4.87	4.23		3.62	
PCB-148	ND	4.87	4.73		1.68	
PCB-150	ND	4.87	3.30		1.14	
PCB-151	5.23	4.87			3.59	
PCB-152	ND	4.87	3.19		1.82	
PCB-153	18.2	4.87			1.83	
PCB-154	ND	4.87	3.97		2.78	
PCB-155	ND	4.87	3.09		1.45	
PCB-156	2.19	4.87			1.74	J
PCB-157	ND	4.87	2.14		1.17	
PCB-158/160	3.02	9.74			1.99	J
PCB-159	ND	4.87	2.22		1.20	
PCB-166	ND	4.87	2.32		0.920	
PCB-167	ND	4.87	2.23		1.65	
PCB-168	ND	4.87	2.30		0.933	
PCB-169	ND	4.87	2.35		1.12	
PCB-170	7.15	4.87			1.38	
PCB-171	ND	4.87	2.02		1.61	
PCB-172	ND	4.87	2.17		1.46	
PCB-173	ND	4.87	2.29		1.49	
PCB-174	7.85	4.87			1.42	
PCB-175	ND	4.87	2.30		3.15	
PCB-176	ND	4.87	1.64		2.17	
PCB-177	4.22	4.87			1.34	J
PCB-178	ND	4.87	2.38		2.25	
PCB-179	2.60	4.87			1.57	J

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: QC-EB-02-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 14:50

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-04 Date Received: 23-Dec-2014 10:15
QC Batch: B5A0001 Date Extracted: 02-Jan-2015 8:01
Date Analyzed : 02-Jan-15 18:56 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	14.5	4.87			0.610	
PCB-181	ND	4.87	1.95		1.01	
PCB-182/187	10.2	9.74			6.20	
PCB-183	4.28	4.87			3.29	J
PCB-184	ND	4.87	1.80		1.25	
PCB-185	ND	4.87	1.98		1.47	
PCB-186	ND	4.87	1.75		2.43	
PCB-188	ND	4.87	1.59		1.08	
PCB-189	ND	4.87	1.50		1.49	
PCB-190	ND	4.87	1.57		1.70	
PCB-191	ND	4.87	1.59		1.96	
PCB-192	ND	4.87	1.74		1.69	
PCB-193	ND	4.87	1.61		1.46	
PCB-194	3.56	4.87			1.71	J
PCB-195	ND	4.87		0.927	1.47	
PCB-196/203	ND	9.74		3.71	6.35	
PCB-197	ND	4.87	2.98		1.80	
PCB-198	ND	4.87	4.30		3.78	
PCB-199	6.76	4.87			4.05	
PCB-200	ND	4.87	3.14		1.75	
PCB-201	ND	4.87	2.90		1.02	
PCB-202	ND	4.87	3.07		1.55	
PCB-204	ND	4.87	3.22		1.48	
PCB-205	ND	4.87	1.08		1.53	
PCB-206	ND	4.87		1.57	1.32	
PCB-207	ND	4.87	0.913		1.51	
PCB-208	ND	4.87		0.809	1.34	
PCB-209	ND	4.87	1.43		1.86	
Total monoCB	1.66	4.87				J
Total diCB	17.9	9.74				B
Total triCB	16.3	4.87		23.5		B
Total tetraCB	43.9	4.87		49.5		B
Total pentaCB	74.0	4.87		83.3		
Total hexaCB	90.6	4.87				
Total heptaCB	50.8	4.87				
Total octaCB	10.3	4.87		15.0		
Total nonaCB	ND	4.87		2.38		J
DecaCB	ND	4.87	1.43			
Total PCB	306	9.74				B

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: QC-EB-02-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 14:50

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-04 Date Received: 23-Dec-2014 10:15
QC Batch: B5A0001 Date Extracted: 02-Jan-2015 8:01
Date Analyzed : 02-Jan-15 18:56 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	58.3	5 -145	
	13C-PCB-3	66.3	5 -145	
	13C-PCB-4	69.6	5 -145	
	13C-PCB-11	84.7	5 -145	
	13C-PCB-9	76.6	5 -145	
	13C-PCB-19	64.1	5 -145	
	13C-PCB-28	83.1	5 -145	
	13C-PCB-32	69.9	5 -145	
	13C-PCB-37	88.7	5 -145	
	13C-PCB-47	91.6	5 -145	
	13C-PCB-52	94.1	5 -145	
	13C-PCB-54	87.7	5 -145	
	13C-PCB-70	96.4	5 -145	
	13C-PCB-77	83.5	10 -145	
	13C-PCB-80	93.9	10 -145	
	13C-PCB-81	88.6	10 -145	
	13C-PCB-95	92.7	10 -145	
	13C-PCB-97	94.7	10 -145	
	13C-PCB-101	92.2	10 -145	
	13C-PCB-104	91.7	10 -145	
	13C-PCB-105	83.9	10 -145	
	13C-PCB-114	85.8	10 -145	
	13C-PCB-118	89.1	10 -145	
	13C-PCB-123	88.4	10 -145	
	13C-PCB-126	94.8	10 -145	
	13C-PCB-127	86.3	10 -145	
	13C-PCB-138	86.6	10 -145	
	13C-PCB-141	84.9	10 -145	
	13C-PCB-153	85.1	10 -145	
	13C-PCB-155	78.3	10 -145	
	13C-PCB-156	95.2	10 -145	
	13C-PCB-157	97.4	10 -145	
	13C-PCB-159	93.0	10 -145	
	13C-PCB-167	93.1	10 -145	
	13C-PCB-169	89.0	10 -145	
	13C-PCB-170	84.6	10 -145	
	13C-PCB-180	84.6	10 -145	
	13C-PCB-188	74.2	10 -145	
	13C-PCB-189	80.9	10 -145	
	13C-PCB-194	90.5	10 -145	
	13C-PCB-202	70.6	10 -145	
	13C-PCB-206	89.7	10 -145	
	13C-PCB-208	83.0	10 -145	
	13C-PCB-209	96.6	10 -145	
CRS	13C-PCB-79	95.9	10 -145	
	13C-PCB-178	89.2	10 -145	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

CHAIN OF CUSTODY

Vista

FOR LABORATORY USE ONLY
Laboratory Project ID: 1400984
Storage ID: WR-2
Storage Secured: Yes ☑ No ☐
Temp 2.0/2.2 °C

TAT: (Check One):
Standard: ● 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.: 1400647 P.O.# P010163569 Sampler: M. Ivancevich, C. Wilson (Name)

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N. Creek Pkwy Ste 101 City: Bothell State: WA Zip: 98011 Ph#: (206)300-2144 Fax#:

Relinquished by: (Signature and Printed Name) Melissa Ivancevich / Melissa Smith Date: 12/22/14 Time: 1532 Received by: (Signature and Printed Name) Beth B. Benedict / B. Benedict Date: 12/23/14 Time: 1022

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN:_____

Method of Shipment: FedEX

Tracking No.:_____

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29
BD-OWS-14-20141222-W	12/22/14	0840	BDC	4	A	EF		H								✓		✓			
BD-MH-12.56-20141222-W	12/22/14	1010	BDC	4	A	EF		H								✓		✓			
BD-MH-1.32-20141222-W	12/22/14	1140	BDC	4	A	EF		H								✓		✓			
QC-EB-02-20141222-W	12/22/14	1450	Field office	4	A	EF		✓								✓		✓			

Special Instructions/Comments: H = hold for analysis

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company:_____
Address:_____
City:_____ State:_____ Zip:_____
Phone:_____ Fax:_____
Email: nancarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400984 **TAT** Std.

Samples Arrival:	**Date/Time** 12/23/14 1015	**Initials:** JBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/23/14 1245	**Initials:** JBB	**Location:** WR-2 **Shelf/Rack:** BA / A1

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 2.0 (uncorrected)	**Time:** 1022	**Thermometer ID:** IR-1	
Temp °C: 2.0 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill 1 of 2 Trk # 8070 5247 7142	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA	COC	Sample Container	None		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

Label ID: ~~EB~~ JBB QC-EB-02-20141222-W A, B, CD Containers

BD-MH-1.32-20141222-W ↓

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400984 **TAT** Std.

Samples Arrival:	**Date/Time** 12/23/14 1015	**Initials:** BLB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/23/14 1245	**Initials:** BLB	**Location:** WR-2 **Shelf/Rack:** B4/A1

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 2.2 (uncorrected)	**Time:** 1025	**Thermometer ID:** IR-1	
Temp °C: 2.2 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill 2 of 2 Trk # 7801 6370 6527	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA	COC	Sample Container	None	
Shipping Container	(Vista)	Client	(Retain)	Return	Dispose

Comments:

Label ID: BD-MH-12.5φ-20141222-W
BD-OWS-14-20141222-W

A, B, C, D Containers ↓

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400984

Prep Expiration: 12/22/2015
Client: Leidos

Workorder Due: 13-Jan-15 00:00

TAT: 21

Method: **1613 Full List**
Matrix: **Aqueous**
Client Matrix: Aqueous
Also run: **Percent Solids**

Prep Batch: BLC0162

Prep Data Entered: 1/2/15 BMS
Date and Initials

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400984-04 "C"	☒	QC-EB-02-20141222-W	23-Dec-14 10:15	WR-2 B-4	

Vista PM:Martha Maier

Vial Box ID: _____

Sample Reconciled By: R Smith 1/31/14

D2216-90 BATCH ID B4L0161

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 12/31/14 0920 Date/Time OUT 1/2/15 1608

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 12/31/14	BMS 1/2/15			BMS 12/31/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400962-01		Sample	1.33	15.01	1.34			7	NA	NA	0
	1400964-01		Sample	1.31	17.07	1.33			7			
	1400965-01		Sample	1.33	16.61	1.33			7			
	1400972-01		Sample	1.32	26.85	1.34			7			
	1400973-01		Sample	1.32	18.24	1.33			7			
	1400984-04		Sample	1.31	14.66	1.31			6			
	1400989-01		Sample	1.31	18.47	1.33			8			
	1400990-01		Sample	1.28	16.02	1.29			7			
	1400991-01		Sample	1.33	18.35	1.34			7			
	1400992-01		Sample	1.30	19.29	1.30			7			
	1400972-01MS			1.30	19.74	1.31			7	NA	NA	0
	1400972-01MSD			1.29	18.38	1.30			7			0

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B4L0161

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: **Units:** %

Dried at 110°C+/-5°C

HRMS-4

Date/Time IN:	Date/Time OUT
12/31/14 0920	1/2/15 1608

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 12/31/14	BMS 1/2/15			BMS 12/31/14			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400962-01		Sample	1.3300	15.0100	1.3400	0.0100	0.07	7	N/A	N/A	0
	1400964-01		Sample	1.3100	17.0700	1.3300	0.0200	0.13	7	N/A	N/A	0
	1400965-01		Sample	1.3300	16.6100	1.3300	0.0000	0.00	7	N/A	N/A	0
	1400972-01		Sample	1.3200	26.8500	1.3400	0.0200	0.08	7	N/A	N/A	0
	1400973-01		Sample	1.3200	18.2400	1.3300	0.0100	0.06	7	N/A	N/A	0
	1400984-04		Sample	1.3100	14.6600	1.3100	0.0000	0.00	6	N/A	N/A	0
	1400989-01		Sample	1.3100	18.4700	1.3300	0.0200	0.12	8	N/A	N/A	0
	1400990-01		Sample	1.2800	16.0200	1.2900	0.0100	0.07	7	N/A	N/A	0
	1400991-01		Sample	1.3300	18.3500	1.3400	0.0100	0.06	7	N/A	N/A	0
	1400992-01		Sample	1.3000	19.2900	1.3000	0.0000	0.00	7	N/A	N/A	0
	1400972-01MS		Sample	1.3000	19.7400	1.3100	0.0100	0.05	7	N/A	N/A	0
	1400972-01MSD		Sample	1.2900	18.3800	1.3000	0.0100	0.06	7	N/A	N/A	0

PREPARATION BENCH SHEET

Matrix: Aqueous
Method: 1613 Full List

B4L0162

Chemist: B Smith
Prep Date/Time: 31-Dec-14 08:13

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
							NA	C5A0003	C5A0003	C5A0004	
☐	B4L0162-BLK1	NA	NA	1.000	BMS BR 12/31/14	BMS BR 1/2/15	NA	BMS 1/2/15	BMS 1/2/15	BMS 1/2/15	BMS BR 1/2/15
☐	B4L0162-BS1										
☐	B4L0162-MS1 1400972-01	1341.32	417.60	0.92372							
☐	B4L0162-MSD1 1400972-01	1363.92	419.54	0.94438							
☐	1400962-01	1542.25	504.63	1.03762							
☐	1400964-01	1532.81	500.80	1.03201							
☐	1400965-01	1538.98	502.26	1.03672							
☐	1400972-01	1357.81	418.51	0.93930							
☐	1400973-01	1372.34	418.39	0.95395							
☐	1400984-04	1531.32	504.28	1.02704							
☐	1400989-01	1352.69	416.22	0.93647							
☐	1400990-01	1374.54	419.45	0.95509							
☐	1400991-01	1355.18	419.37	0.93581							
☐	1400992-01	1322.48	387.83	0.93465							

IS Name (V1)	NS Name (V13)	CRS Name (V1)	RS Name (V1)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out:
PCDD/F 1441704, 10µL	PCDD/F 134101, 10µL	PCDD/F 1441705, 10µL	PCDD/F 1441706, 10µL	Start Date/Time 12/31/14 1521	SOLV: To	Chemist/Date: BMS 12/31/14
PCB	PCB	PCB	PCB		Other SPE	Check In: empty L
PAH	PAH	PAH	PAH	Stop Date/Time V1/15 0755	Final Volume(s) 20µL C11	Balance ID: HRMS-4

Comments:

Process Sheet

Workorder: 1400984

Prep Expiration: 12/22/2015
Client: Leidos

Workorder Due: 13-Jan-15 00:00

TAT: 21

Method: **1668C Full List**
Matrix: **Aqueous**
Client Matrix: Aqueous
Also run: **Percent Solids**

Prep Batch: BSA0001

Prep Data Entered: 1/2/15 SR
Date and Initials

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400984-04 "A"	☒	QC-EB-02-20141222-W	23-Dec-14 10:15	WR-2 B-4	

Vista PM:Martha Maier

Vial Box ID: Grade

Sample Reconciled By: S. Roughton 1/2/2015

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5A0002

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN:	Date/Time OUT
1/2/15 0845	1/5/15 1315

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 1/2/15	SR 1/5/15			SR 1/2/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400934-02RE2		Sample	1.3000	17.4000	1.3100	0.0100	0.06	6	2	10	0
	1400984-04RE1		Sample	1.3000	19.2600	1.3000	0.0000	0.00	5	2	10	0
	B5A0001 MB1								5	2	10	0
	B5A0001 OPR								5	2	10	0
	B5A0001 MB2								5	2	10	0

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5A0002

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN: 1/2/15 0845 Date/Time OUT 1/5/15 0 1315 SR 1/5/15

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 1/2/15	SR 1/5/15			SR 1/2/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400934-02RE2		Sample	1.30	17.40	1.31			6	2	10	0
	1400984-04RE1		Sample	1.30	19.26	1.30			5	2	10	0
	B5A0001 MB1								5	2	10	0
	B5A0001 OPR								5	2	10	0
	B5A0001 MB2								5	2	10	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668A Full List
Method: 1668C Full List

B5A0001

Chemist: S. Roughton

Prep Date/Time: 02-Jan-15 08:01

Prepared using: HRMS - Separatory Funnel

							N/A	C5A0005	N/A	N/A	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B5A0001-BLK1 (B)(A)	N/A	N/A	(1.00)	SR SR 1/2/15	SR 1/2/15	N/A		N/A	N/A	SR 1/2/15
☐	B5A0001-BS1	"	"	"		SR 1/2/15	"	SR 1/2/15	"	"	SR 1/2/15
☐	1400934-02RE1	788.67	284.18	0.50449							SR BMS 1/2/15
☐	1400984-04	1531.40	504.88	1.02652							SR BMS 1/2/15

(A) Samples centrifuged, to reduce emulsion on 934-2RE1 SR 1/2/15
(B) Blank - B5A0001 BLK1 lost in centrifuge, B5A0001 BLK2 extracted immediately. SR 1/2/15

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: (SEFUN) SOX SDS	Check Out: Chemist/Date: SR 1/2/15
PCDD/F ____ (V1)	PCDD/F ____ (V4)	PCDD/F ____ (V3)	PCDD/F ____ (V2)	Start Date/Time	SOLV: DCM	Check In: Chemist/Date: Empty
PCB 14A3001, 10ml	PCB 13F2503, 10ml	PCB 14A3002, 10ml	PCB 14A3003, 10ml	N/A	Other N/A	Balance ID: HRMS-4
PAH ____	PAH ____	PAH ____	PAH ____	Stop Date/Time	Final Volume(s) 20ml	
____	____	____	____	N/A	Cq	

Comments:

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668A Full List
Method: 1668C Full List

B5A0001

Chemist: S. Roughton

Prep Date/Time: 02-Jan-15 08:01

Prepared using: HRMS - Separatory Funnel

							N/A	C5A0005	N/A	N/A	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B5A0001-BLK1										
☐	B5A0001-BLK2 Ⓐ	N/A	N/A	(1.00)	SR BLK 2/1/15	SR MT 2/1/15	N/A	SR 1/2/15	N/A	N/A	MT SR 1/2/15
☐	B5A0001-BS1										
☐	1400934-02RE1										
☐	1400984-04										

Ⓐ Sample Blank B5A0001 BLK1 lost in centrifuge, B5A0001 BLK2 extracted immediately SR 1/2/15

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date: N/A
PCDD/F (V1)	PCDD/F N/A	PCDD/F (V2)	PCDD/F (V2)	Start Date/Time	SOLV: DCM	Check In: Chemist/Date:
PCB 14A3001, 10uL	PCB	PCB 14A3002, 10uL	PCB 14A3003, 10uL	N/A	Other N/A	Balance ID:
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) 20uL	
				N/A	Cq	

Comments:

SAMPLE DATA

EPA Method 1613

Client ID: Method Blank Filename: 150102D1 S:7 Acq: 2-JAN-15 18:08:58 ConCal: ST150102D1-1

Lab ID: B4L0162-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

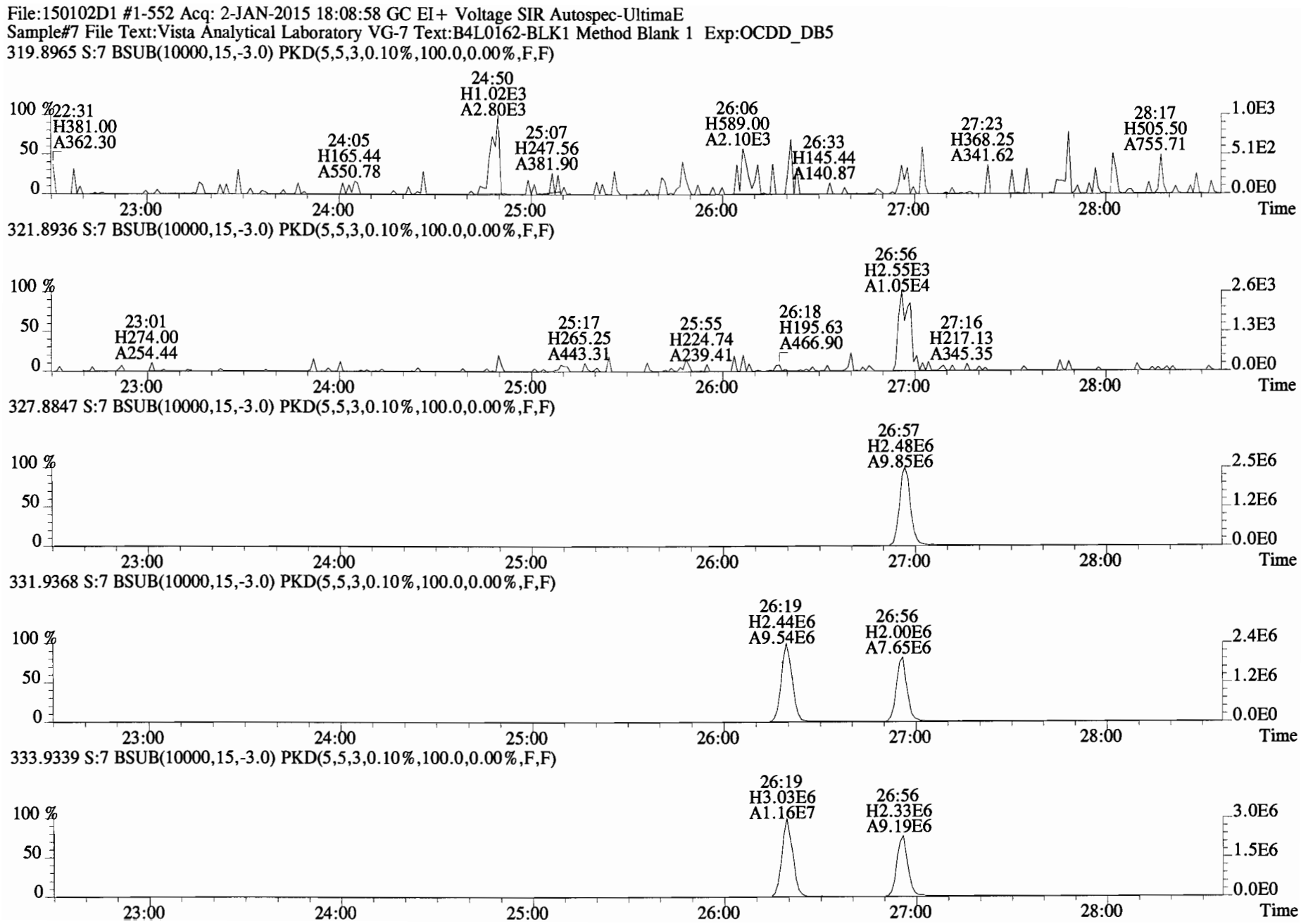
Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	1.18	NotF¶	*	*		352	2.5	0.627
1,2,3,7,8-PeCDD	*	*	n	0.92	NotF¶	*	*		411	2.5	0.618
1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotF¶	*	*		457	2.5	1.68
1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotF¶	*	*		457	2.5	1.67
1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF¶	*	*		457	2.5	1.90
1,2,3,4,6,7,8-HpCDD	*	*	n	1.12	NotF¶	*	*		379	2.5	1.55
OCDD	*	*	n	0.95	NotF¶	*	*		859	2.5	5.74
2,3,7,8-TCDF	*	*	n	1.08	NotF¶	*	*		405	2.5	0.540
1,2,3,7,8-PeCDF	*	*	n	1.09	NotF¶	*	*		422	2.5	0.693
2,3,4,7,8-PeCDF	*	*	n	1.04	NotF¶	*	*		422	2.5	0.643
1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotF¶	*	*		565	2.5	0.583
1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF¶	*	*		565	2.5	0.634
2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotF¶	*	*		565	2.5	0.809
1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF¶	*	*		565	2.5	1.31
1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotF¶	*	*		455	2.5	1.00
1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF¶	*	*		455	2.5	1.03
OCDF	*	*	n	1.10	NotF¶	*	*		343	2.5	1.64

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		352	0.628
Total Penta-Dioxins	*	*		411	0.617
Total Hexa-Dioxins	*	*		472	1.80
Total Hepta-Dioxins	*	*		379	1.55
Total Tetra-Furans	*	*		405	0.540
Total Penta-Furans	0.0000	0.0000		443	0.702
Total Hexa-Furans	*	*		580	0.821
Total Hepta-Furans	*	*		472	1.05

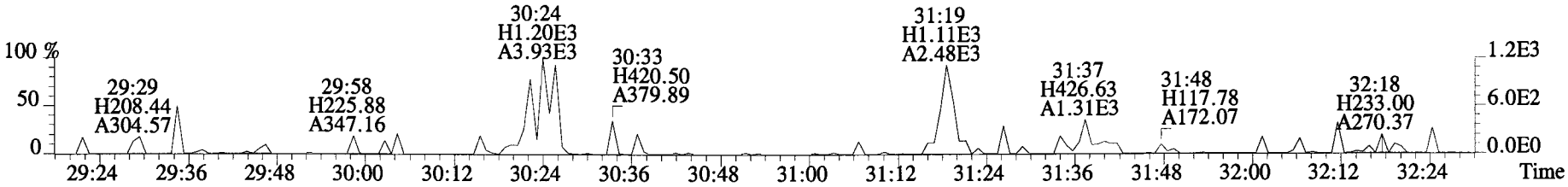
									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.68e+07	0.83	y	1.07	26:56	1.023	1483.8	74.2	
IS	13C-1,2,3,7,8-PeCDD	2.01e+07	0.62	y	1.24	31:37	1.201	1532.0	76.6	
IS	13C-1,2,3,4,7,8-HxCDD	1.15e+07	1.26	y	0.72	34:55	1.014	1201.8	60.1	
IS	13C-1,2,3,6,7,8-HxCDD	1.39e+07	1.26	y	0.74	35:02	1.017	1427.2	71.4	
IS	13C-1,2,3,7,8,9-HxCDD	1.48e+07	1.24	y	0.86	35:19	1.025	1312.6	65.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.13e+07	1.07	y	0.64	38:50	1.127	1330.8	66.5	
IS	13C-OCDD	1.73e+07	0.89	y	0.78	42:06	1.222	1672.9	41.8	
IS	13C-2,3,7,8-TCDF	2.60e+07	0.77	y	0.92	26:07	0.992	1473.6	73.7	
IS	13C-1,2,3,7,8-PeCDF	2.55e+07	1.59	y	0.95	30:24	1.155	1401.9	70.1	
IS	13C-2,3,4,7,8-PeCDF	2.70e+07	1.62	y	0.97	31:19	1.190	1456.3	72.8	
IS	13C-1,2,3,4,7,8-HxCDF	1.98e+07	0.52	y	0.99	34:02	0.988	1513.6	75.7	
IS	13C-1,2,3,6,7,8-HxCDF	2.08e+07	0.51	y	1.10	34:09	0.992	1435.3	71.8	
IS	13C-2,3,4,6,7,8-HxCDF	1.89e+07	0.52	y	1.03	34:46	1.009	1387.3	69.4	
IS	13C-1,2,3,7,8,9-HxCDF	1.64e+07	0.52	y	0.86	35:43	1.037	1450.5	72.5	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.19e+07	0.44	y	0.71	37:31	1.089	1267.9	63.4	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.18e+07	0.44	y	0.71	39:23	1.143	1264.0	63.2	
IS	13C-OCDF	2.14e+07	0.89	y	0.87	42:19	1.229	1852.7	46.3	
C/Up	37Cl-2,3,7,8-TCDD	9.85e+06			1.21	26:57	1.024	768.85	96.1	
RS/RT	13C-1,2,3,4-TCDD	2.11e+07	0.82	y	1.00	26:19	*	2000.0		
RS	13C-1,2,3,4-TCDF	3.82e+07	0.78	y	1.00	24:48	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.64e+07	0.52	y	1.00	34:27	*	2000.0		

Integrations by Analyst: [signature] Date: 1/3/15

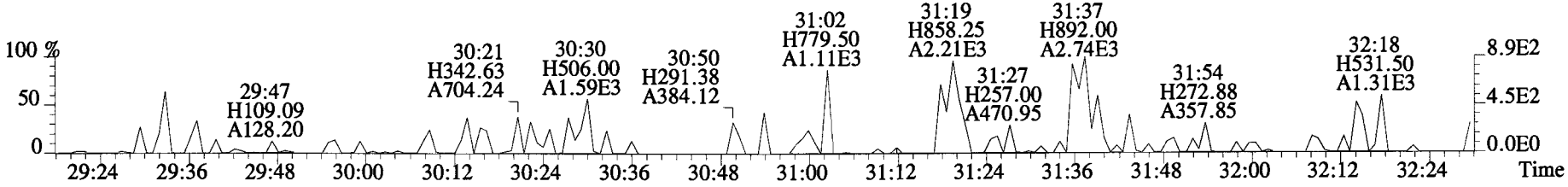
Reviewed by Analyst: CT Date: 1/5/15


File:150102D1 #1-552 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:31 H381.00 A362.30
24:05 H165.44 A550.78
24:50 H1.02E3 A2.80E3
25:07 H247.56 A381.90
26:06 H589.00 A2.10E3
26:33 H145.44 A140.87
27:23 H368.25 A341.62
28:17 H505.50 A755.71
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:01 H274.00 A254.44
25:17 H265.25 A443.31
25:55 H224.74 A239.41
26:18 H195.63 A466.90
26:56 H2.55E3 A1.05E4
27:16 H217.13 A345.35
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:57 H2.48E6 A9.85E6
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:19 H2.44E6 A9.54E6
26:56 H2.00E6 A7.65E6
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:19 H3.03E6 A1.16E7
26:56 H2.33E6 A9.19E6
100 %
50
0
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.0E3
5.1E2
0.0E0
2.6E3
1.3E3
2.5E6
1.2E6
2.4E6
3.0E6
1.5E6

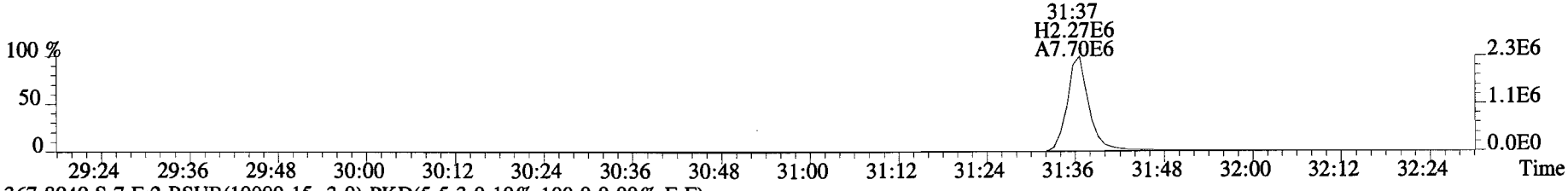
File:150102D1 #1-256 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



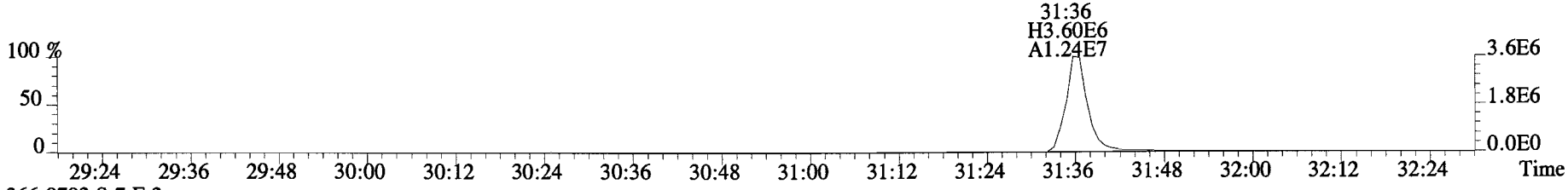
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



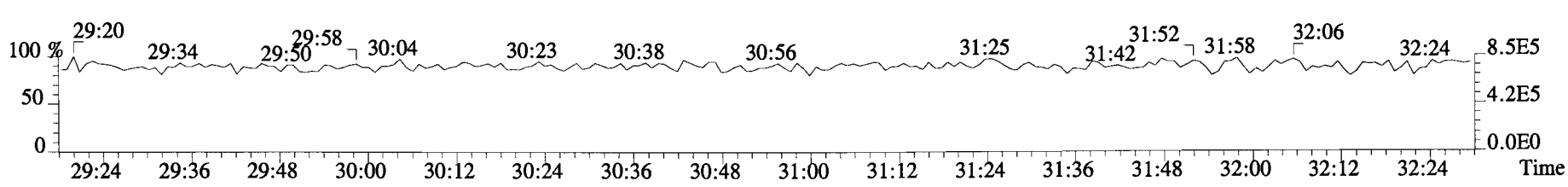
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



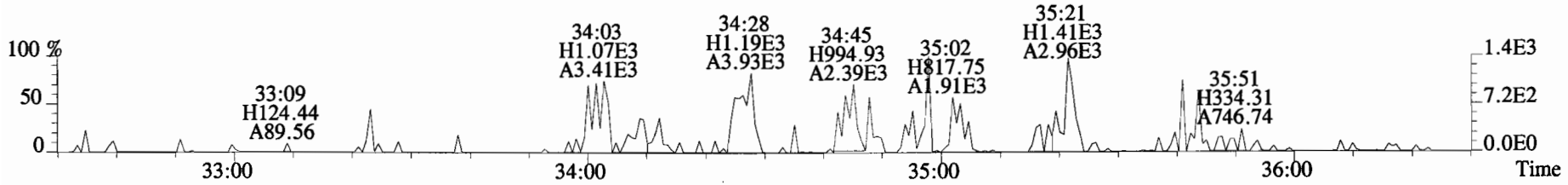
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



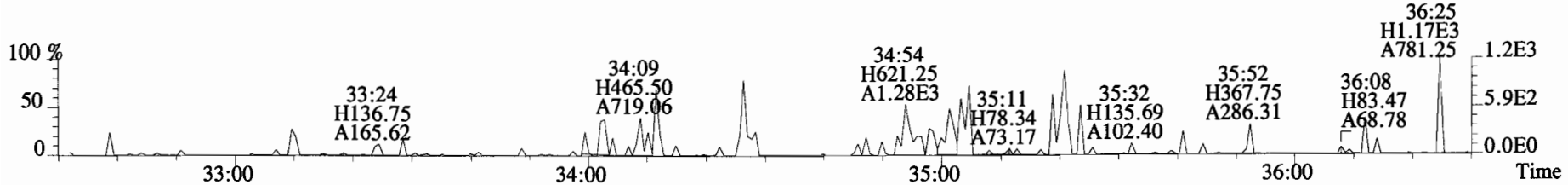
366.9792 S:7 F:2



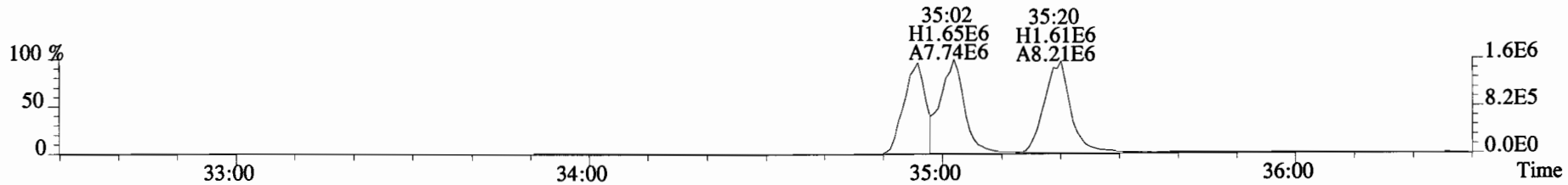
File:150102D1 #1-385 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



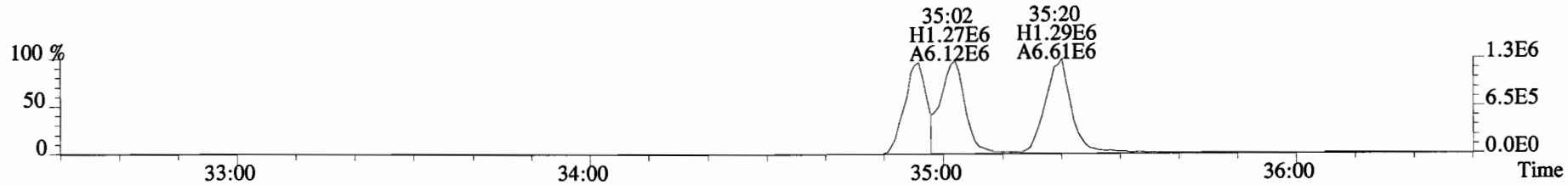
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



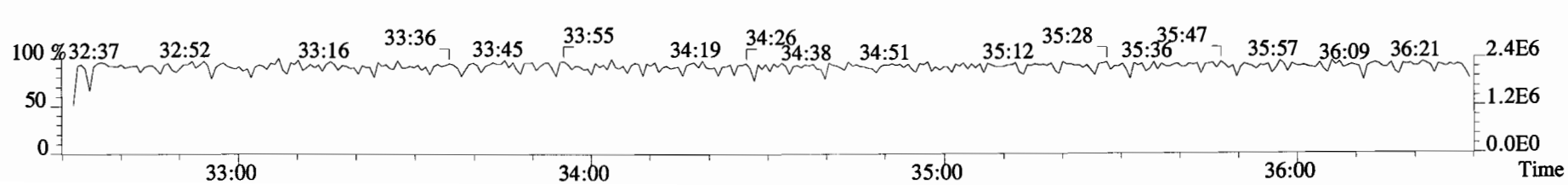
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



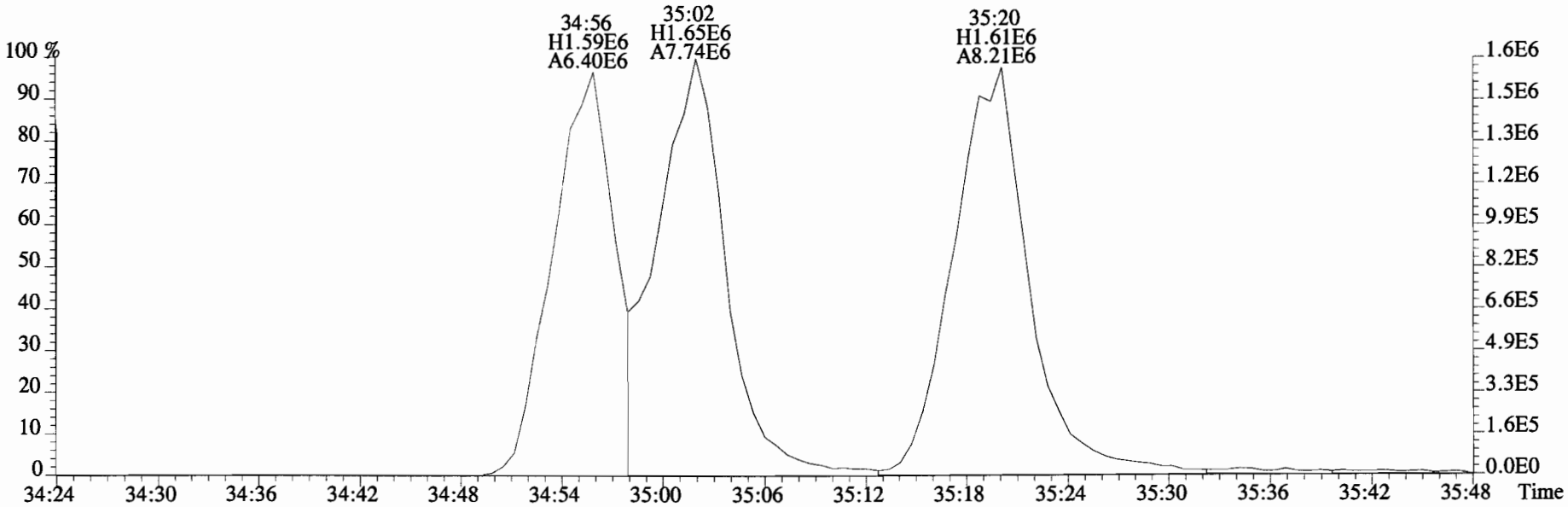
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



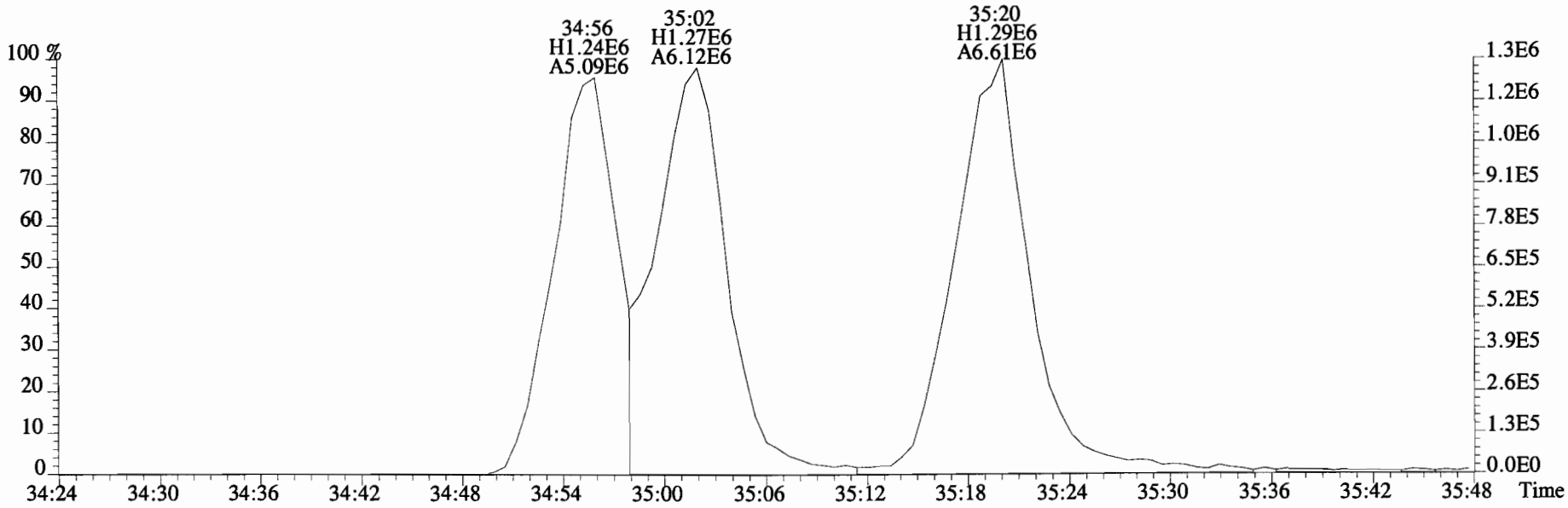
380.9760 S:7 F:3



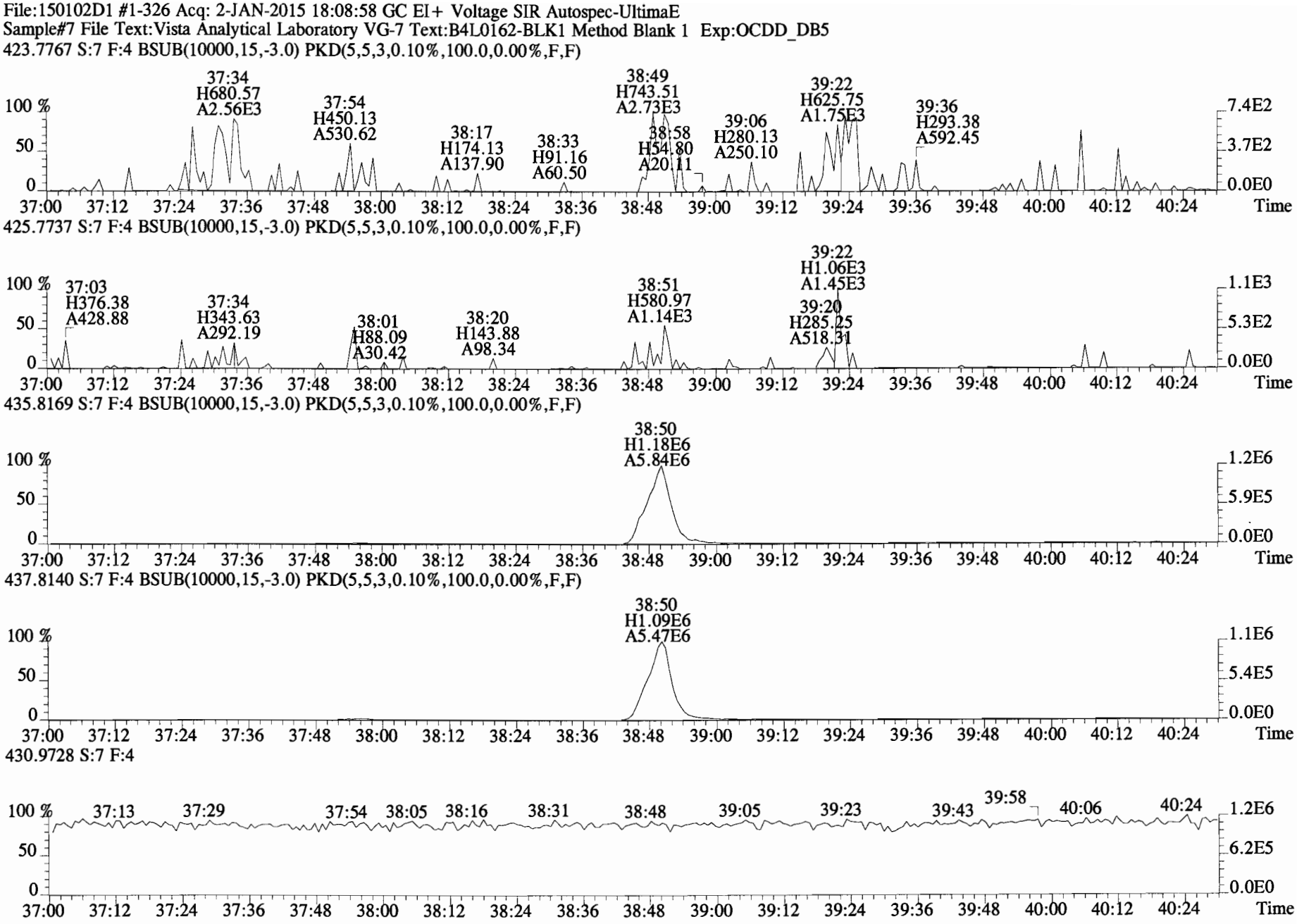
File:150102D1 #1-385 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



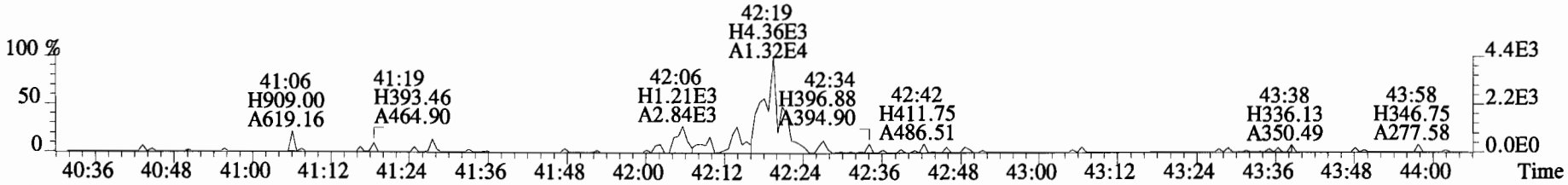
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



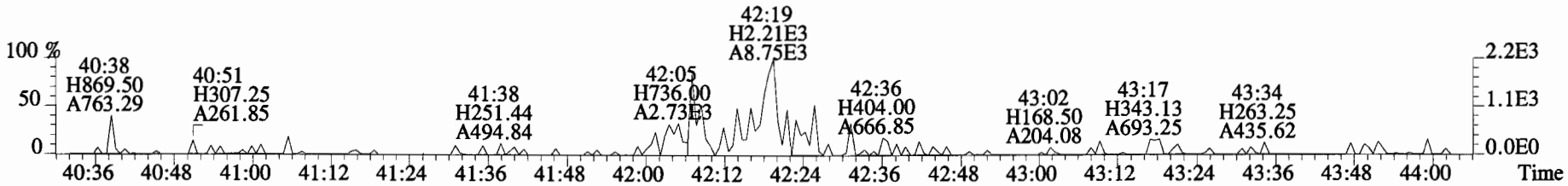
File:150102D1 #1-326 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5



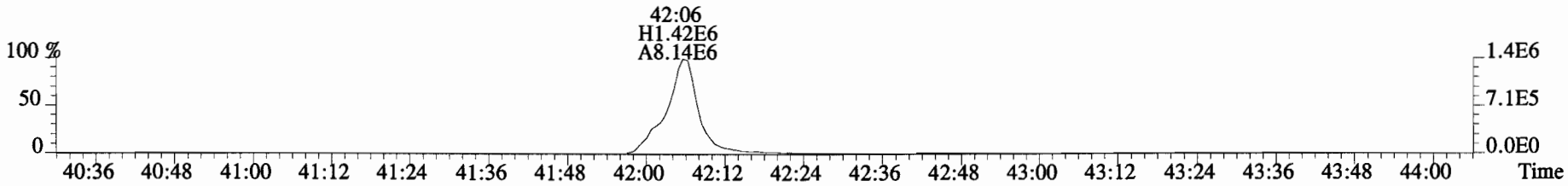
File:150102D1 #1-388 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



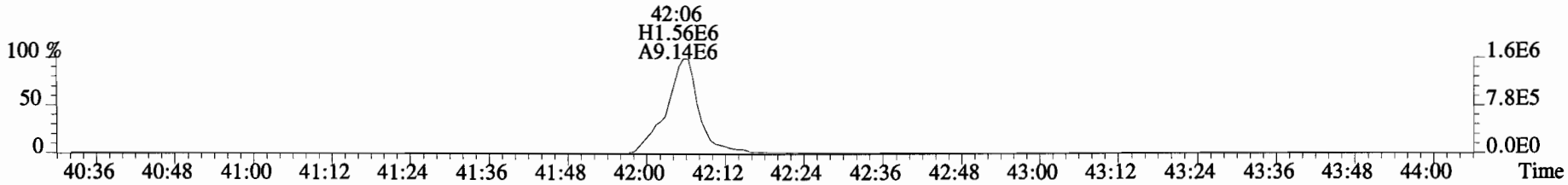
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



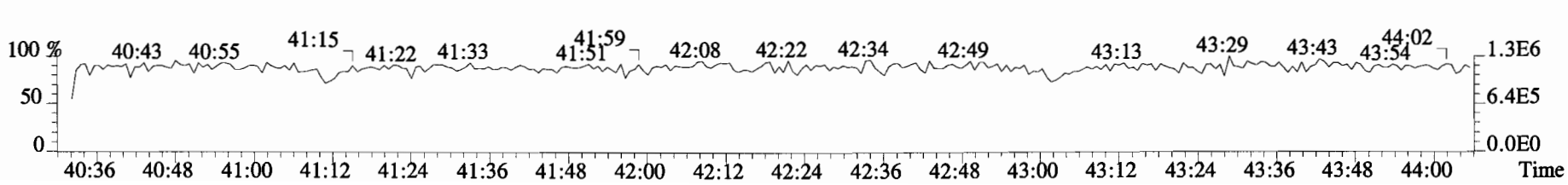
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



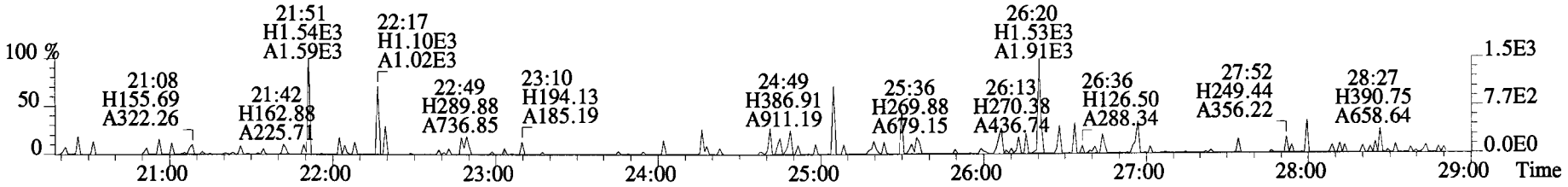
471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



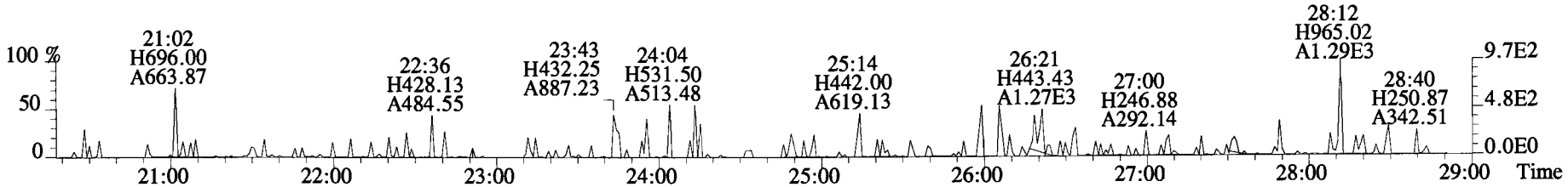
454.9728 S:7 F:5



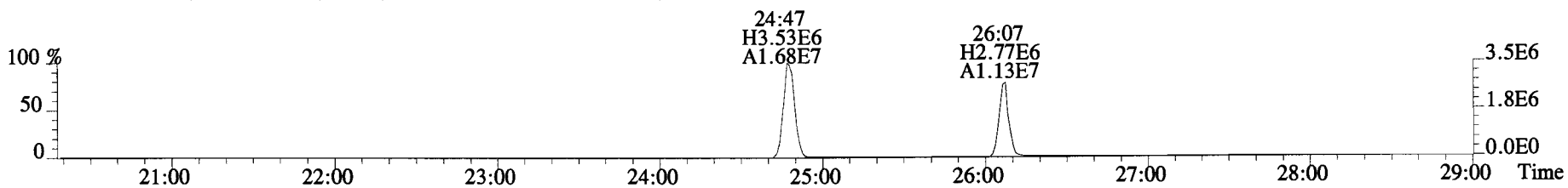
File:150102D1 #1-552 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



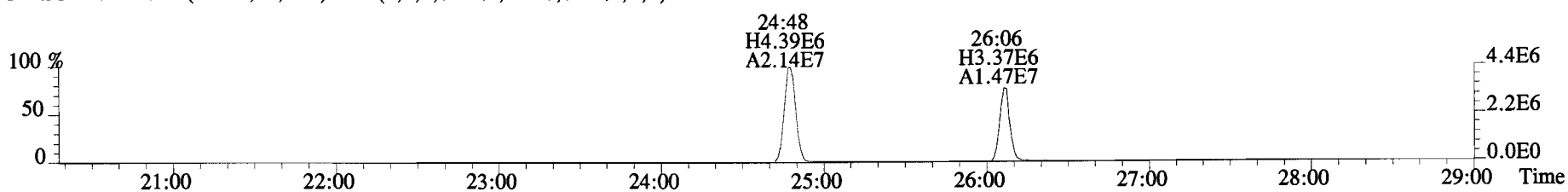
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



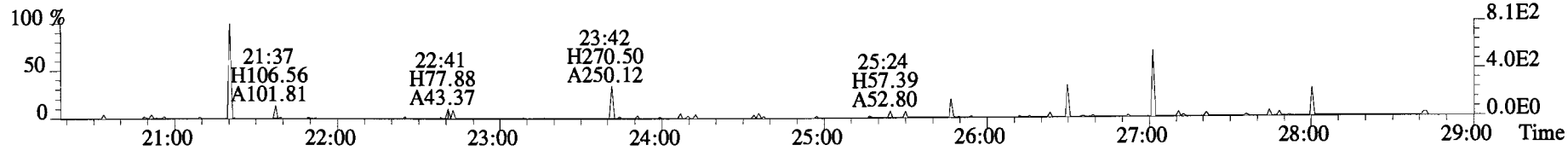
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



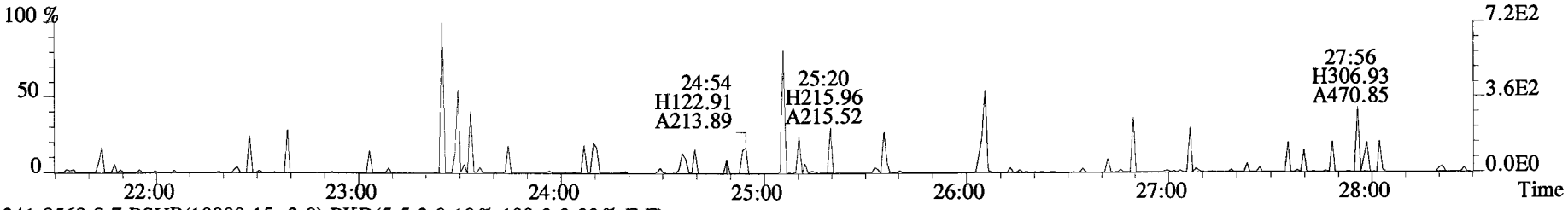
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



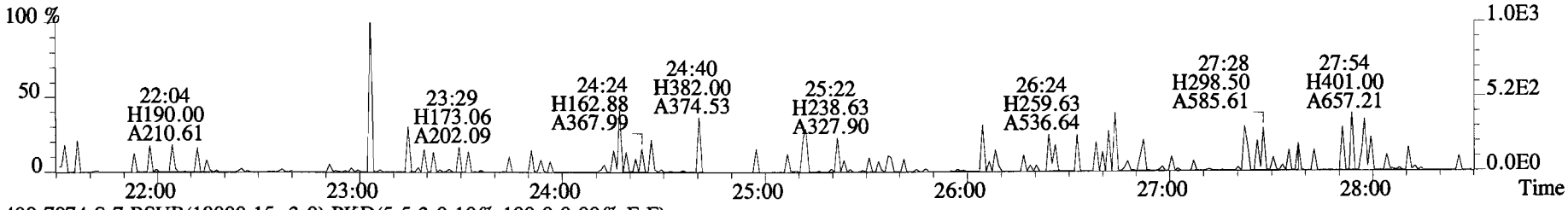
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



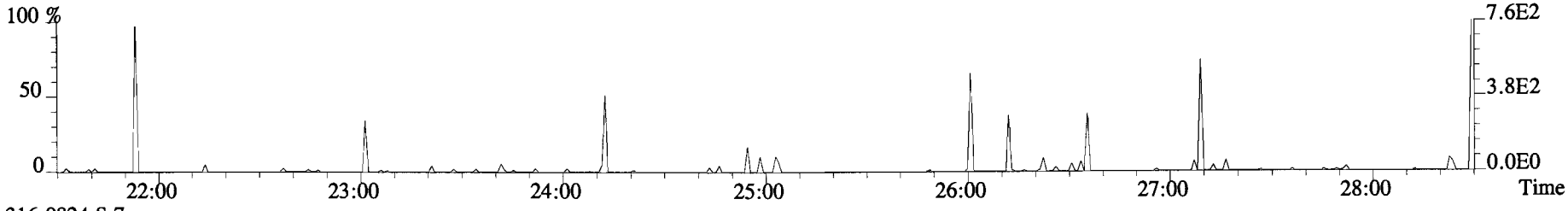
File:150102D1 #1-552 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



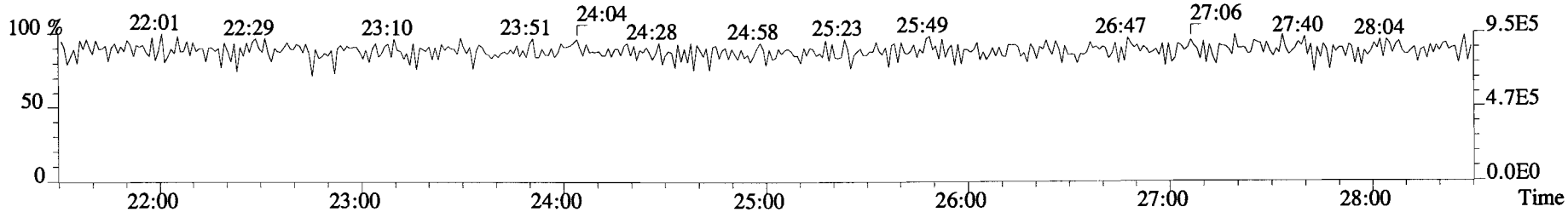
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



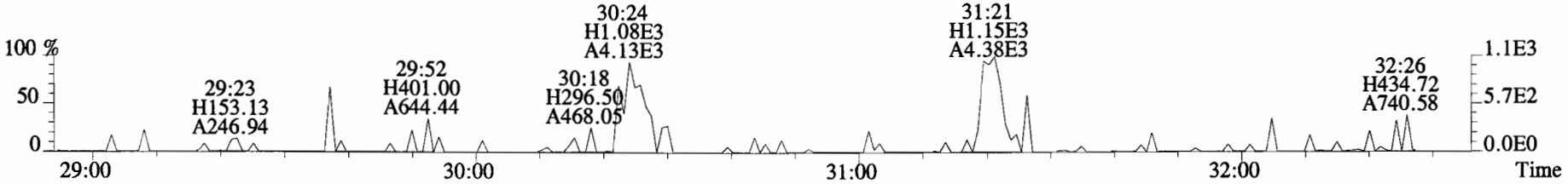
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



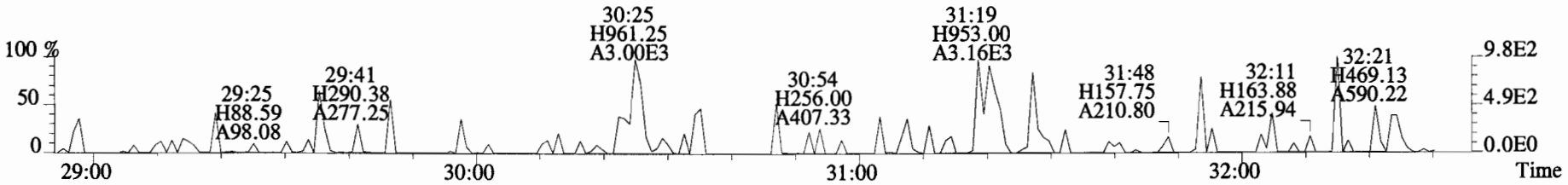
316.9824 S:7



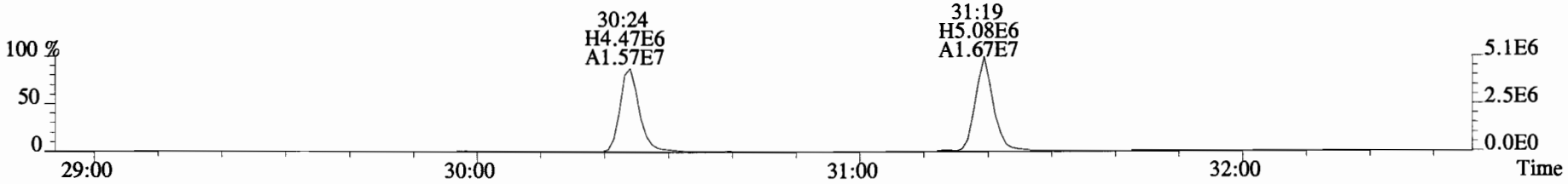
File:150102D1 #1-256 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



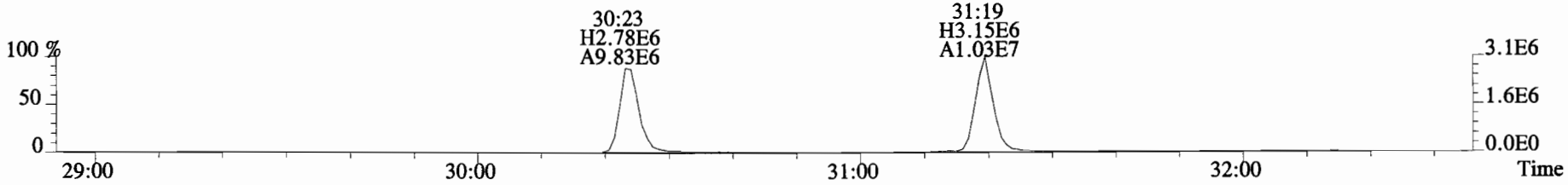
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



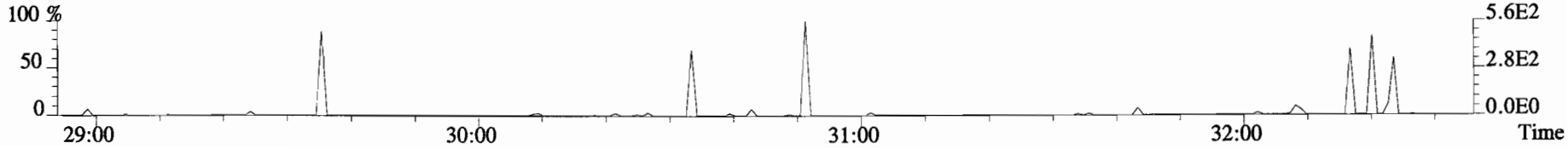
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

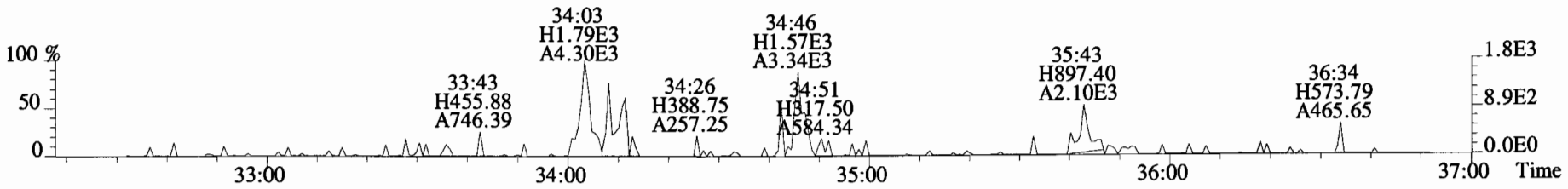


409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

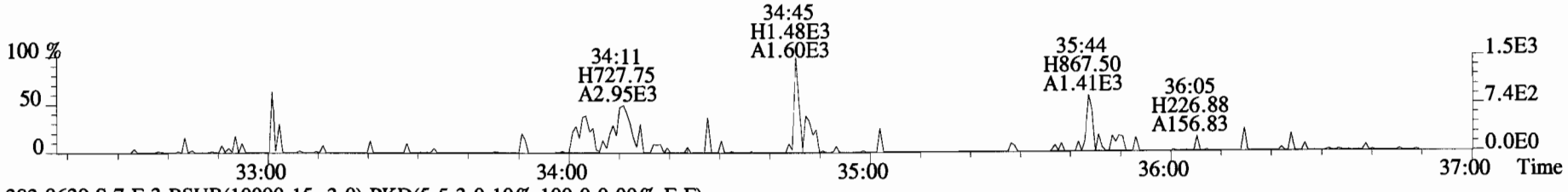


File:150102D1 #1-385 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5

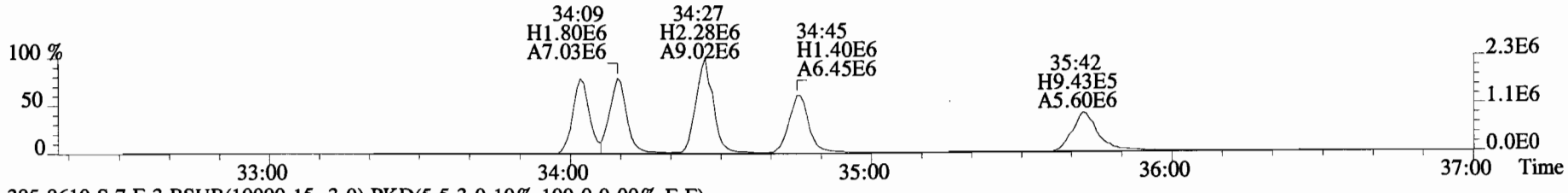
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



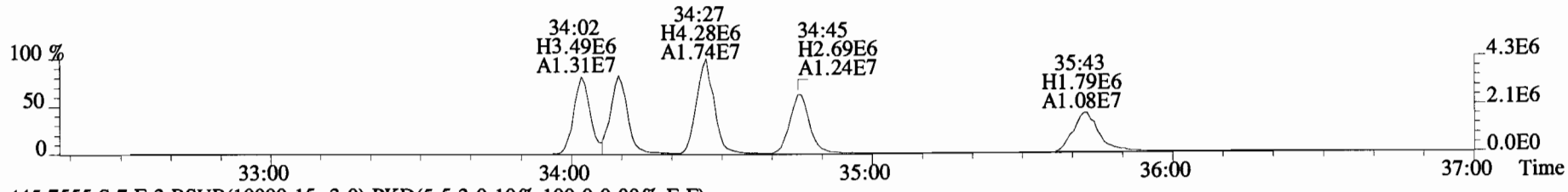
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



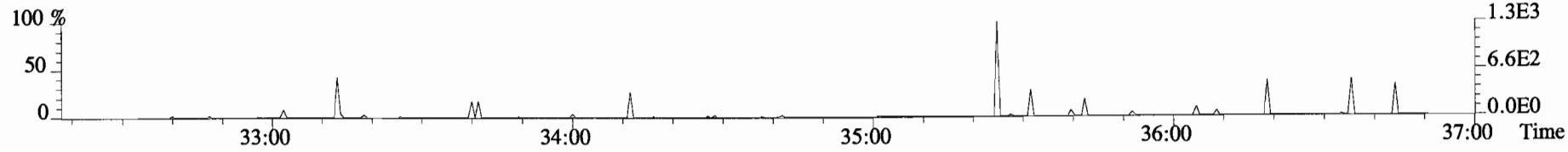
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



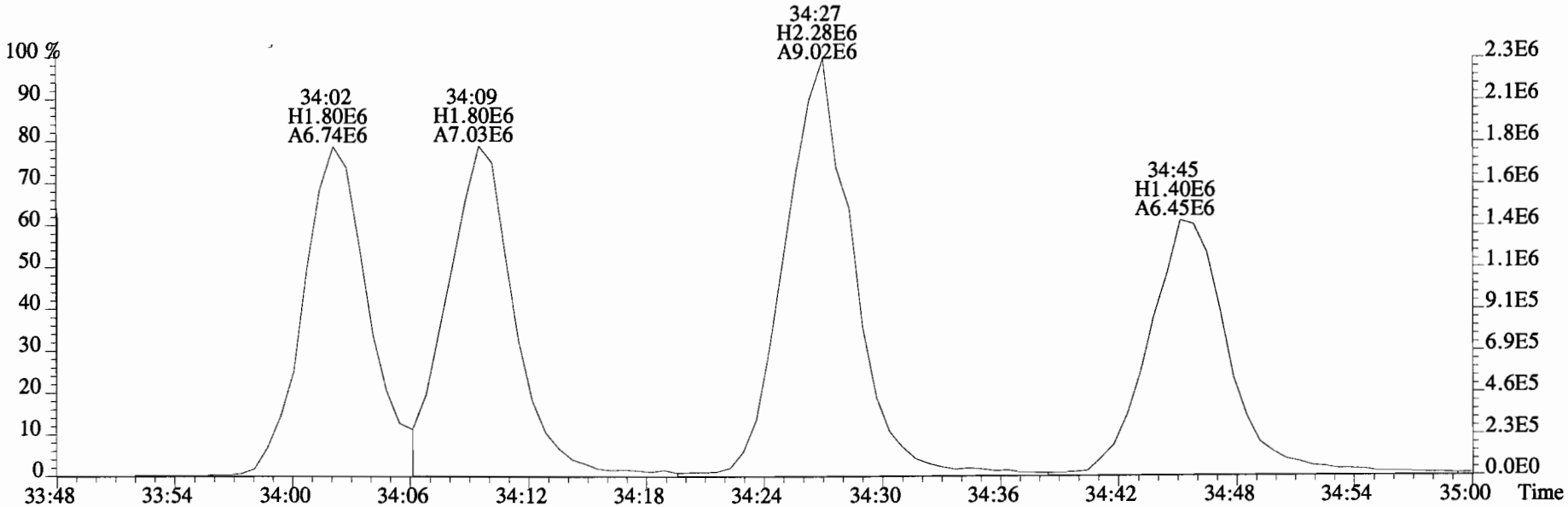
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



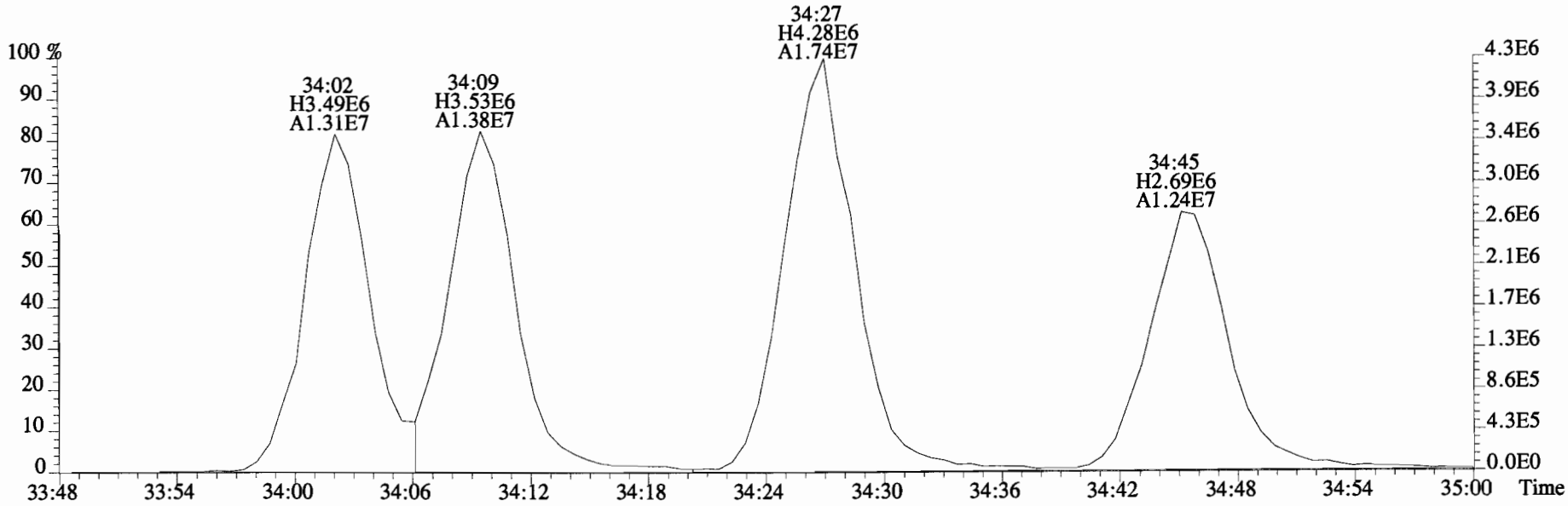
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150102D1 #1-385 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

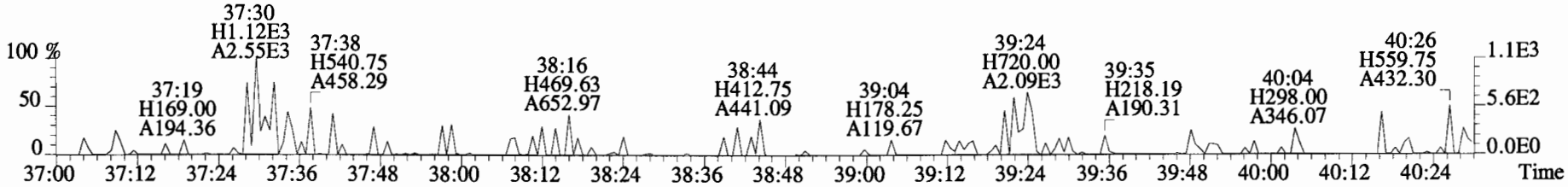


385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

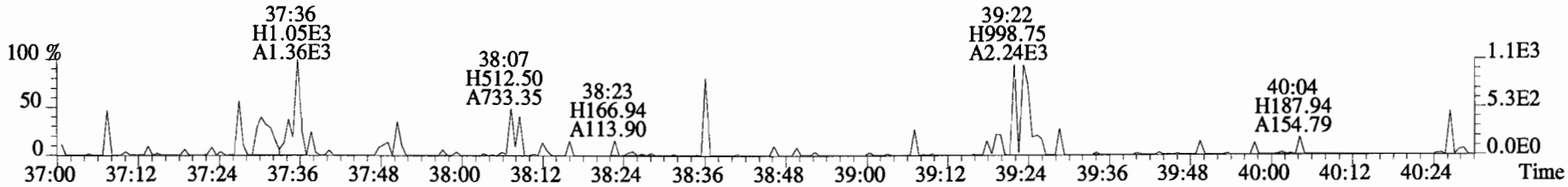


File:150102D1 #1-326 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5

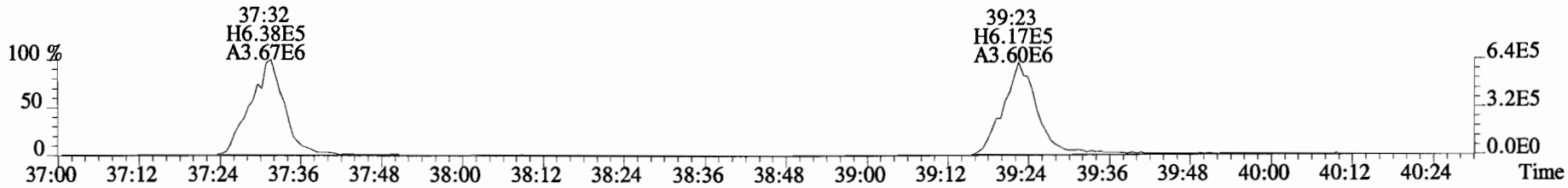
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



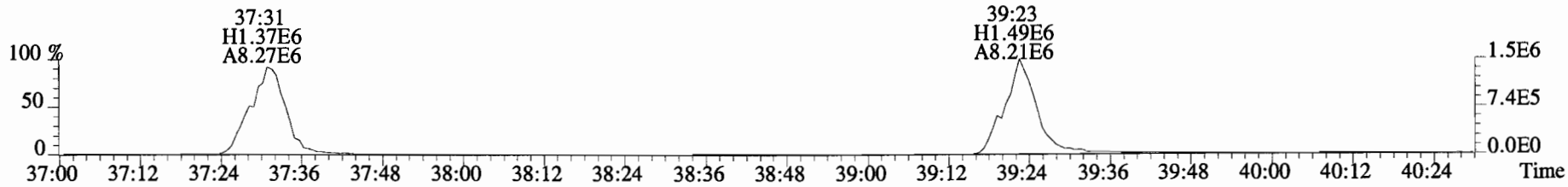
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



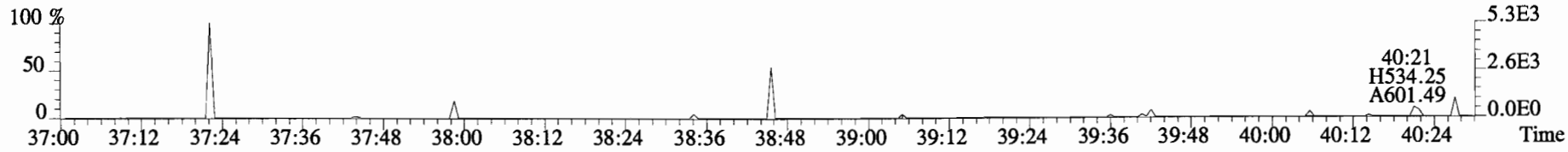
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

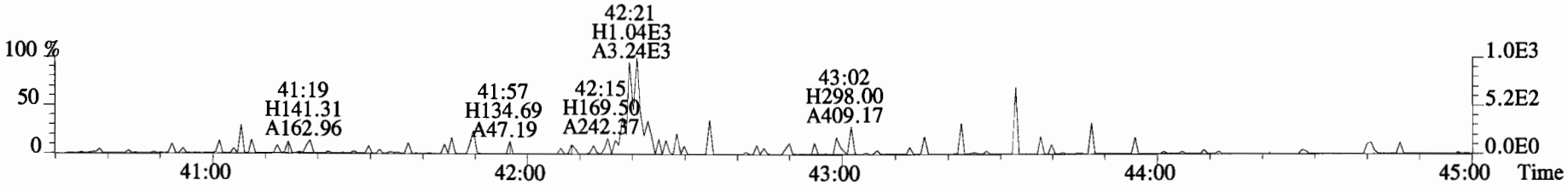


479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

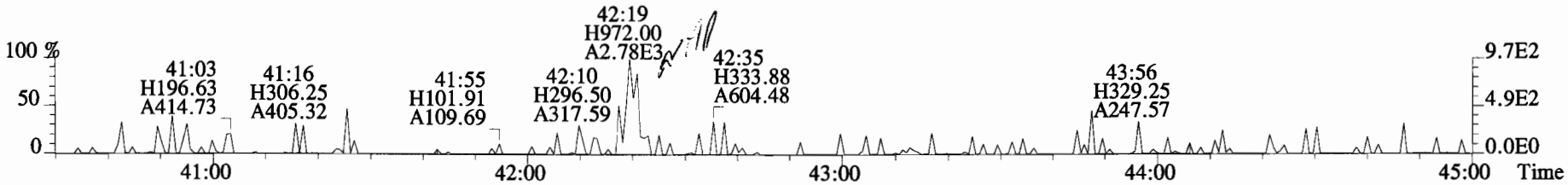


File:150102D1 #1-388 Acq: 2-JAN-2015 18:08:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BLK1 Method Blank 1 Exp:OCDD_DB5

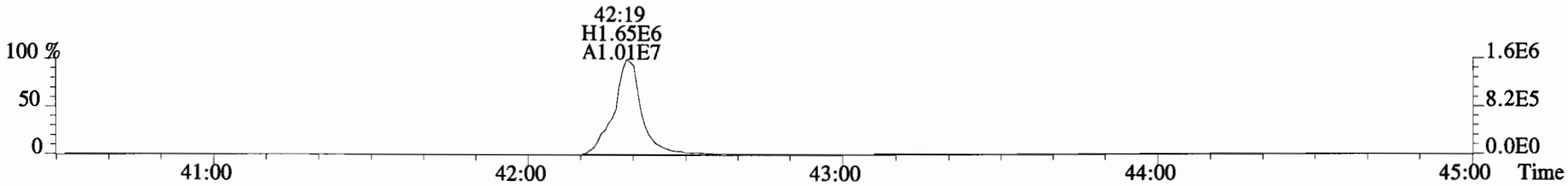
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



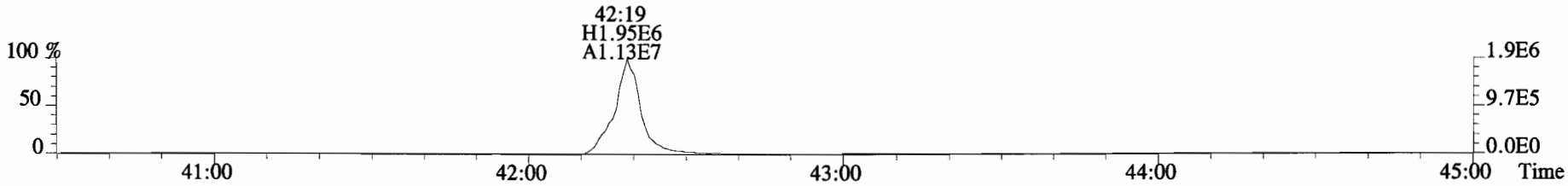
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



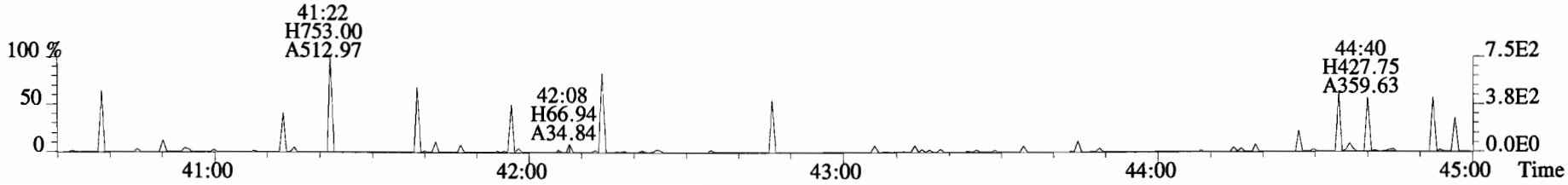
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0162-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150102D1-5

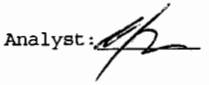
Ext. Date: 12-31-14 Shift: Day Analysis Date: 2-JAN-15 Time: 16:31:20

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	8.87	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	47.8	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.6	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	49.1	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.7	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	47.9	35.0 - 70.0
OCDD	100	98.1	78.0 - 144.0
2,3,7,8-TCDF	10	8.97	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	48.3	40.0 - 67.0
2,3,4,7,8-PeCDF	50	49.1	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.5	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.5	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	47.2	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	48.3	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	47.6	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	47.8	39.0 - 69.0
OCDF	100	93.5	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: 

Date: 1/3/15

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B4L0162-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150102D1-5

Ext. Date: 12-31-14 Shift: Day Analysis Date: 2-JAN-15 Time: 16:31:20

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	78.4	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	71.1	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	62.3	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	68.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	62.7	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	61.2	26.0 - 166.0
13C-OCDD	200	77.5	26.0 - 397.0
13C-2,3,7,8-TCDF	100	80.3	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	69.7	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	71.6	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	72.0	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	69.0	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	67.4	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	69.5	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	60.0	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	60.0	20.0 - 186.0
13C-OCDF	200	88.3	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	38.7	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: [signature]

Date: 1/3/15

Client ID: OPR Filename: 150102D1 S:5 Acq: 2-JAN-15 16:31:20 ConCal: ST150102D1-1
Lab ID: B4L0162-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.93e+06	0.77 y	1.18	26:57	1.001	8.8716		*	2.5	*
	1,2,3,7,8-PeCDD	8.44e+06	0.62 y	0.92	31:38	1.001	47.804		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.62e+06	1.33 y	1.09	34:56	1.001	50.649		*	2.5	*
	1,2,3,6,7,8-HxCDD	7.00e+06	1.20 y	1.07	35:03	1.001	49.086		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.61e+06	1.23 y	0.93	35:20	1.000	49.706		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	5.61e+06	1.04 y	1.12	38:51	1.000	47.890		*	2.5	*
	OCDD	7.54e+06	0.90 y	0.95	42:06	1.000	98.125		*	2.5	*
	2,3,7,8-TCDF	2.72e+06	0.77 y	1.08	26:08	1.001	8.9661		*	2.5	*
	1,2,3,7,8-PeCDF	1.32e+07	1.58 y	1.09	30:25	1.000	48.267		*	2.5	*
	2,3,4,7,8-PeCDF	1.35e+07	1.57 y	1.04	31:21	1.000	49.139		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.28e+07	1.33 y	1.39	34:03	1.001	48.502		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.24e+07	1.27 y	1.26	34:11	1.001	48.518		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.14e+07	1.30 y	1.30	34:47	1.001	47.172		*	2.5	*
	1,2,3,7,8,9-HxCDF	9.14e+06	1.30 y	1.19	35:44	1.000	48.293		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.78e+06	1.10 y	1.62	37:32	1.000	47.633		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	8.26e+06	1.07 y	1.53	39:24	1.000	47.838		*	2.5	*
	OCDF	1.06e+07	0.90 y	1.10	42:20	1.000	93.503		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.83e+07	0.79 y	1.07	26:56	1.023	78.380				
IS	13C-1,2,3,7,8-PeCDD	1.92e+07	0.62 y	1.24	31:37	1.201	71.140				
IS	13C-1,2,3,4,7,8-HxCDD	1.20e+07	1.26 y	0.72	34:55	1.013	62.270				
IS	13C-1,2,3,6,7,8-HxCDD	1.34e+07	1.25 y	0.74	35:02	1.017	68.206				
IS	13C-1,2,3,7,8,9-HxCDD	1.43e+07	1.24 y	0.86	35:20	1.025	62.677				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.05e+07	1.08 y	0.64	38:50	1.127	61.231				
IS	13C-OCDD	1.62e+07	0.90 y	0.78	42:05	1.222	77.541				
IS	13C-2,3,7,8-TCDF	2.82e+07	0.76 y	0.92	26:07	0.992	80.298				
IS	13C-1,2,3,7,8-PeCDF	2.52e+07	1.63 y	0.95	30:24	1.155	69.684				
IS	13C-2,3,4,7,8-PeCDF	2.64e+07	1.58 y	0.97	31:20	1.190	71.554				
IS	13C-1,2,3,4,7,8-HxCDF	1.90e+07	0.52 y	0.99	34:02	0.988	71.975				
IS	13C-1,2,3,6,7,8-HxCDF	2.02e+07	0.51 y	1.10	34:09	0.991	68.978				
IS	13C-2,3,4,6,7,8-HxCDF	1.85e+07	0.51 y	1.03	34:45	1.009	67.442				
IS	13C-1,2,3,7,8,9-HxCDF	1.59e+07	0.51 y	0.86	35:43	1.037	69.522				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.14e+07	0.46 y	0.71	37:31	1.089	60.017				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.13e+07	0.44 y	0.71	39:23	1.143	59.997				
IS	13C-OCDF	2.05e+07	0.89 y	0.87	42:19	1.228	88.262				
C/Up	37Cl-2,3,7,8-TCDD	1.02e+07		1.21	26:57	1.024	38.729				
RS/RT	13C-1,2,3,4-TCDD	2.18e+07	0.80 y	1.00	26:20	*	100.00				
RS	13C-1,2,3,4-TCDF	3.80e+07	0.77 y	1.00	24:48	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.66e+07	0.50 y	1.00	34:27	*	100.00				

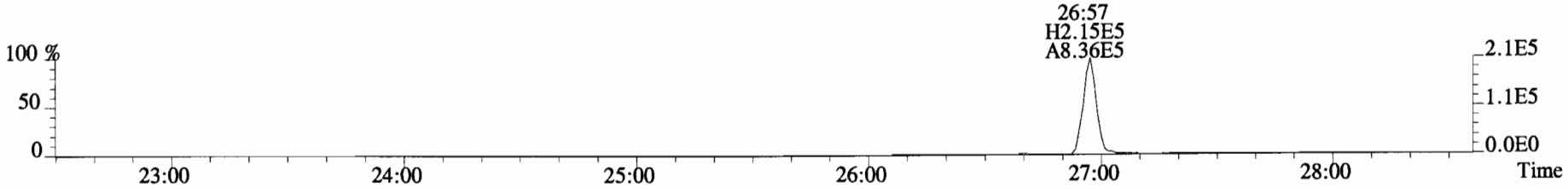
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	8.87	9.16		*	*
Total Penta-Dioxins	47.8	48.2		*	*
Total Hexa-Dioxins	149	151		*	*
Total Hepta-Dioxins	48.0	49.3		*	*
Total Tetra-Furans	9.16	9.36		*	*
Total Penta-Furans	97.599	99.570		*	*
Total Hexa-Furans	193	194		*	*
Total Hepta-Furans	96.3	96.6		*	*

	Rec	Qual
IS	78.4	
IS	71.1	
IS	62.3	
IS	68.2	
IS	62.7	
IS	61.2	
IS	38.8	
IS	80.3	
IS	69.7	
IS	71.6	
IS	72.0	
IS	69.0	
IS	67.4	
IS	69.5	
IS	60.0	
IS	60.0	
IS	44.1	
C/Up	96.8	

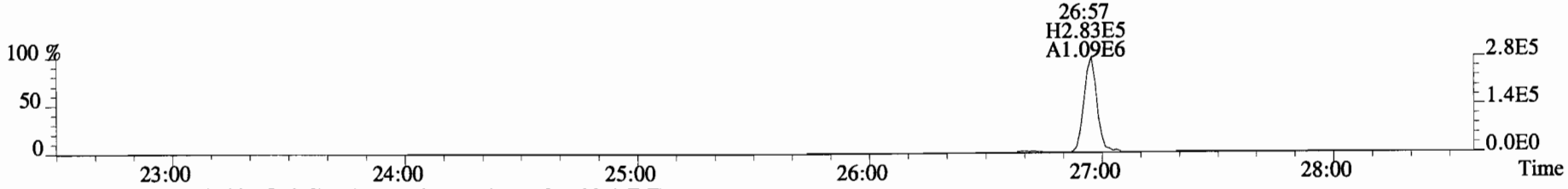
Integrations by Analyst: [signature] Date: 1/3/15

Reviewed by Analyst: CT Date: 1/5/15

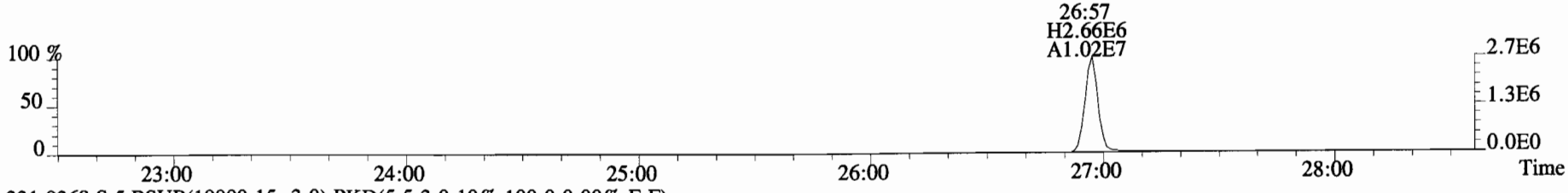
File:150102D1 #1-551 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



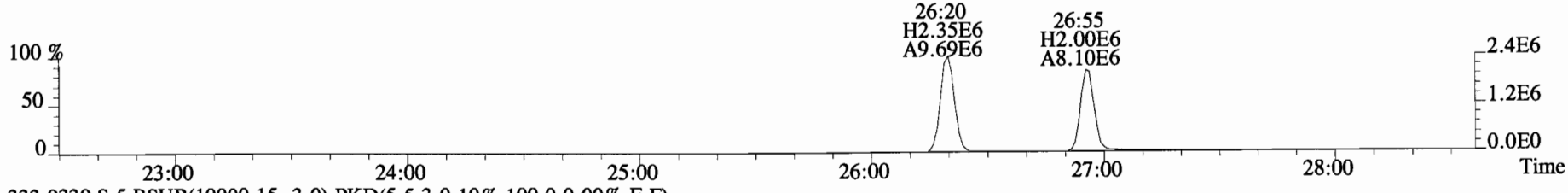
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



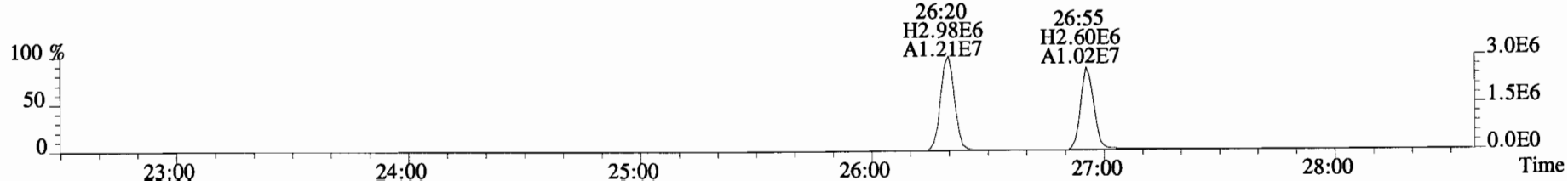
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



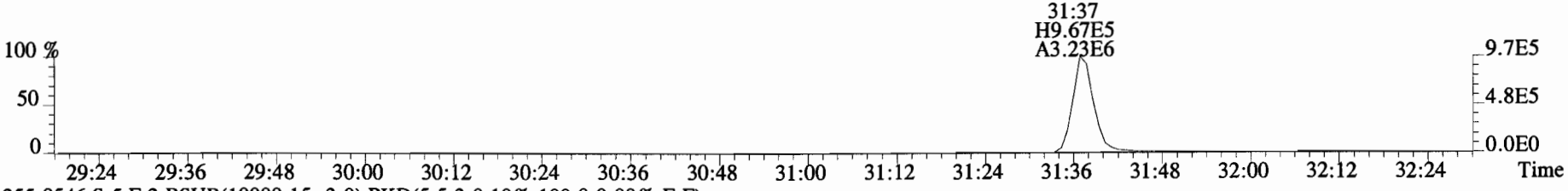
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



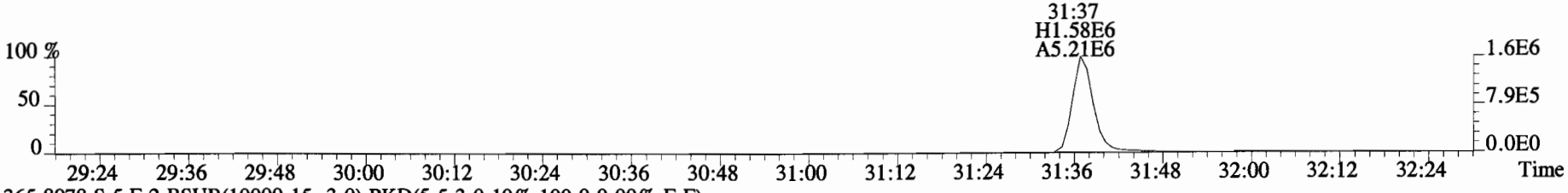
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



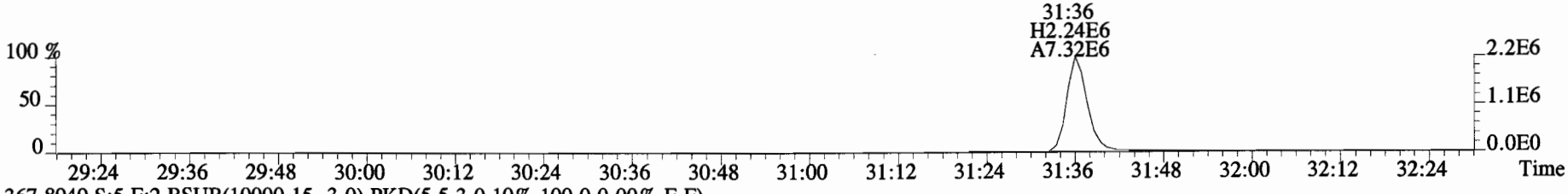
File:150102D1 #1-257 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



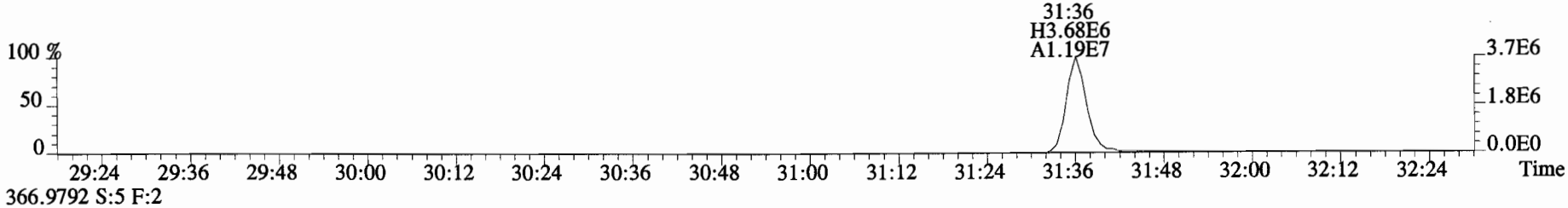
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



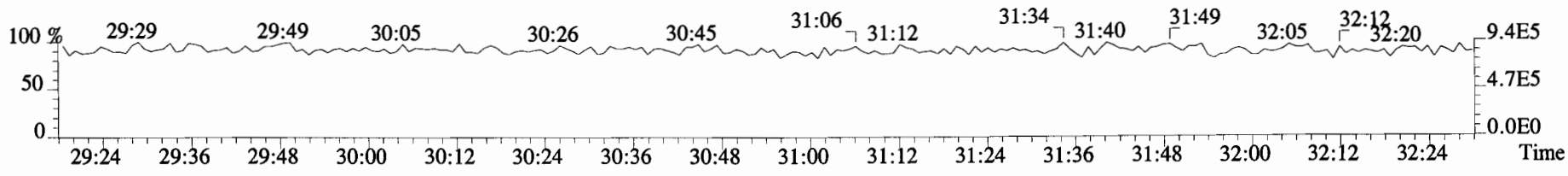
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



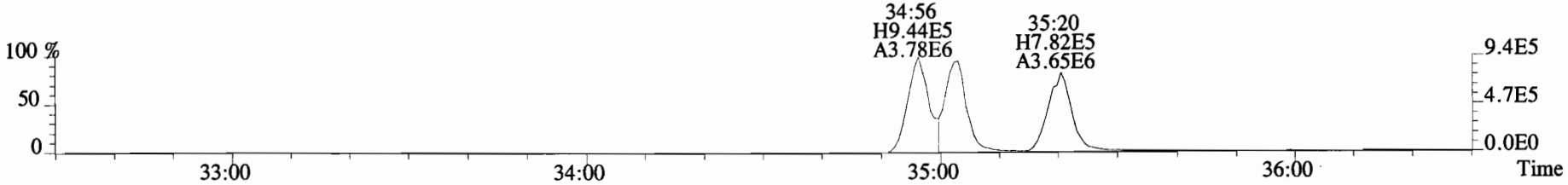
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



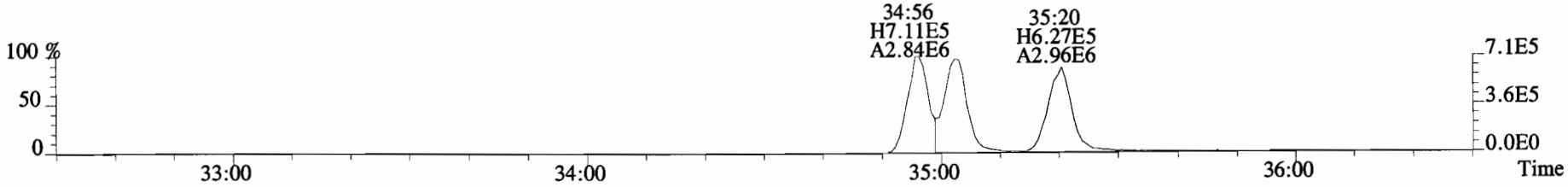
366.9792 S:5 F:2



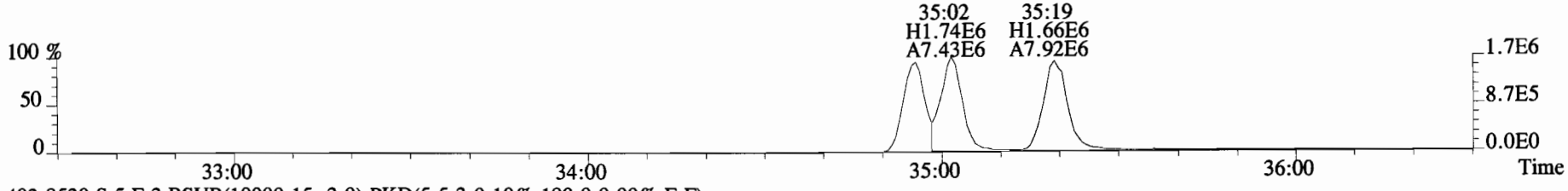
File:150102D1 #1-385 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



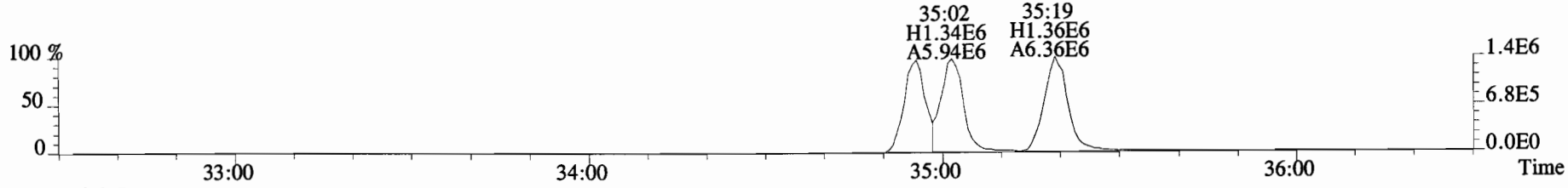
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



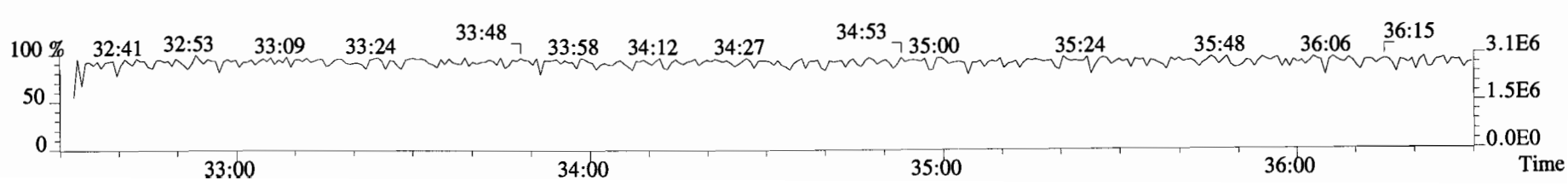
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



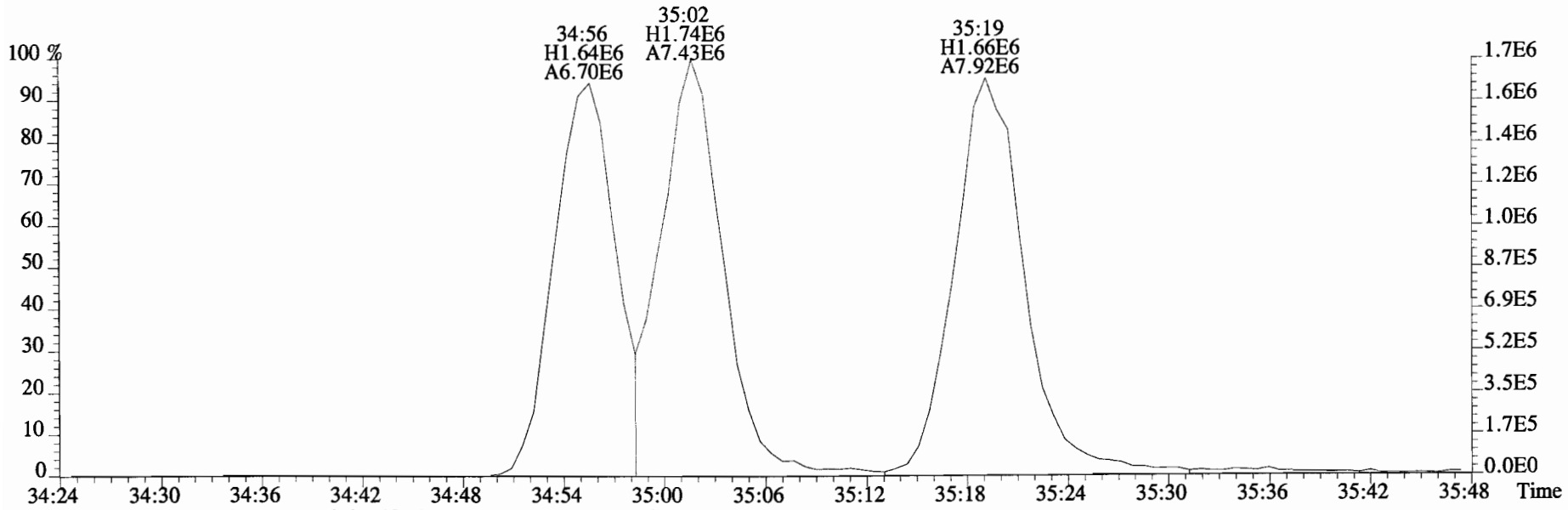
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



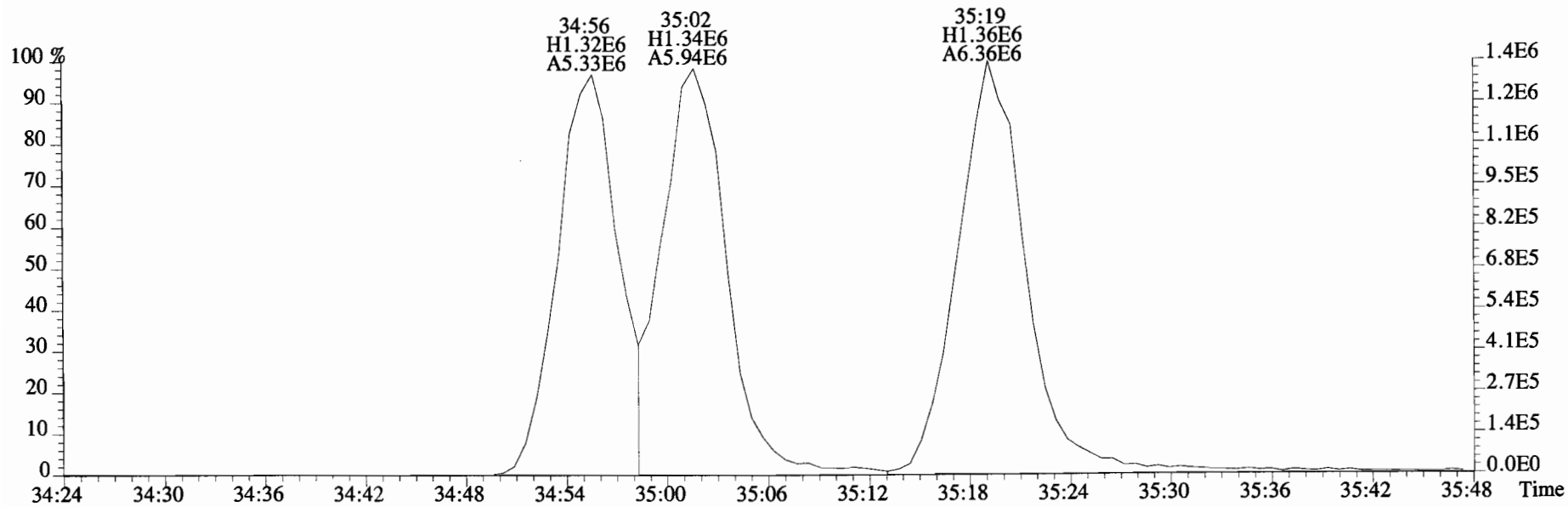
380.9760 S:5 F:3



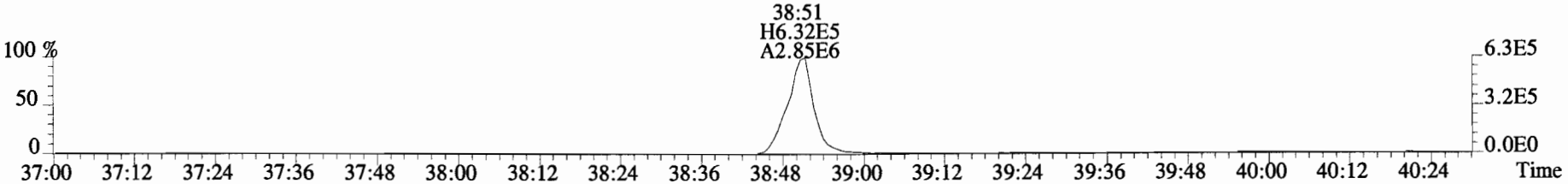
File:150102D1 #1-385 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



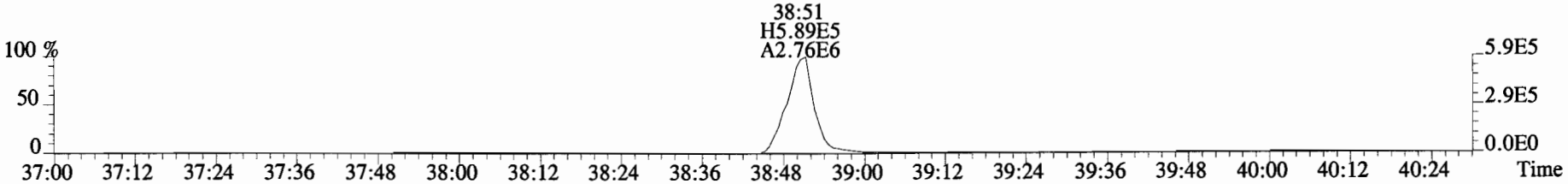
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



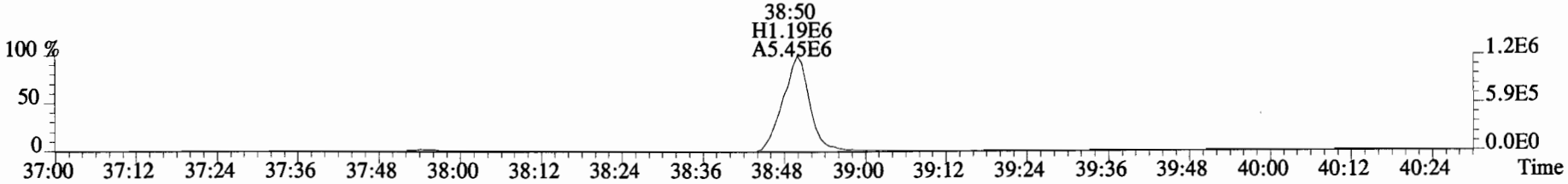
File:150102D1 #1-325 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



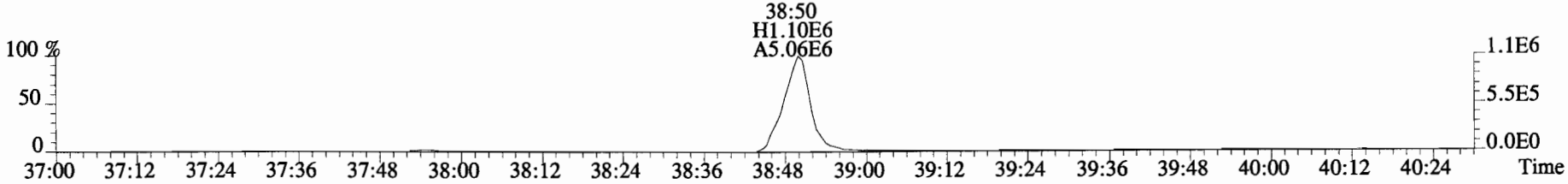
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



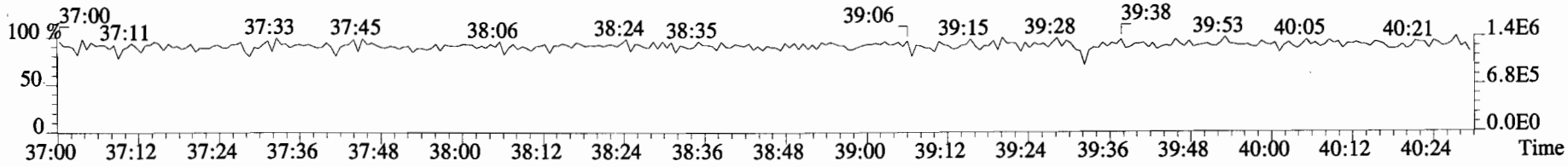
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



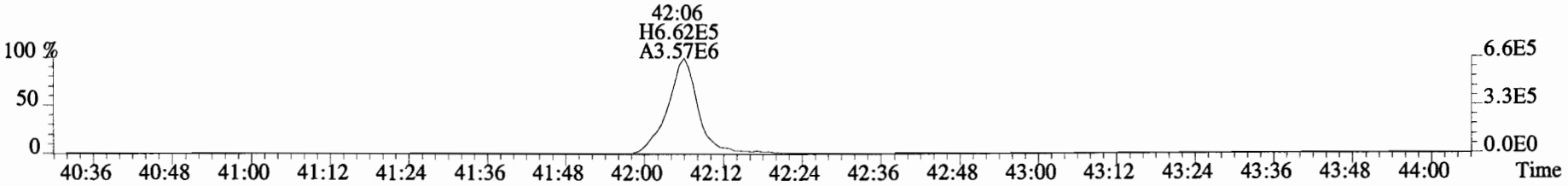
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



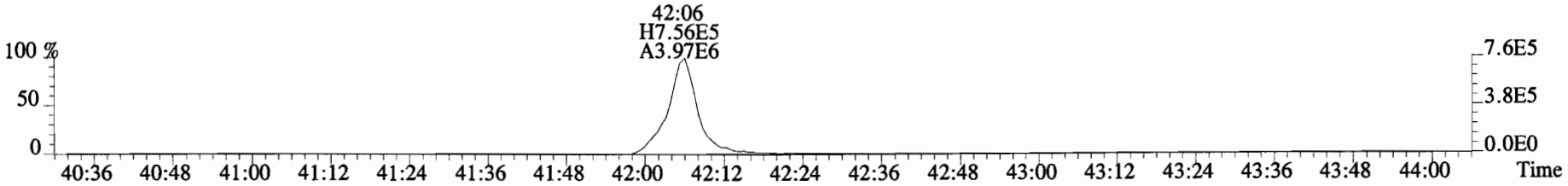
430.9728 S:5 F:4



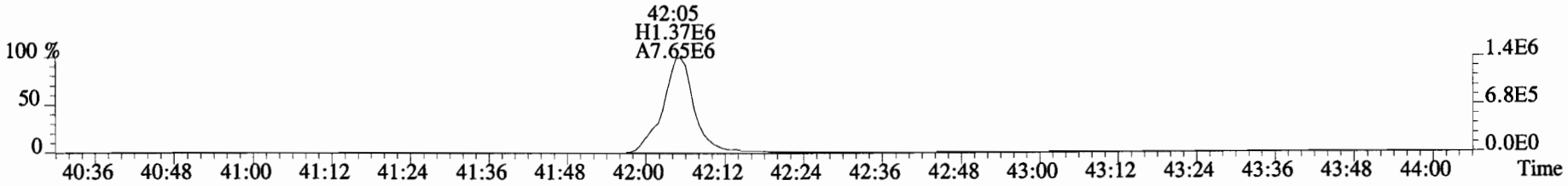
File:150102D1 #1-389 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



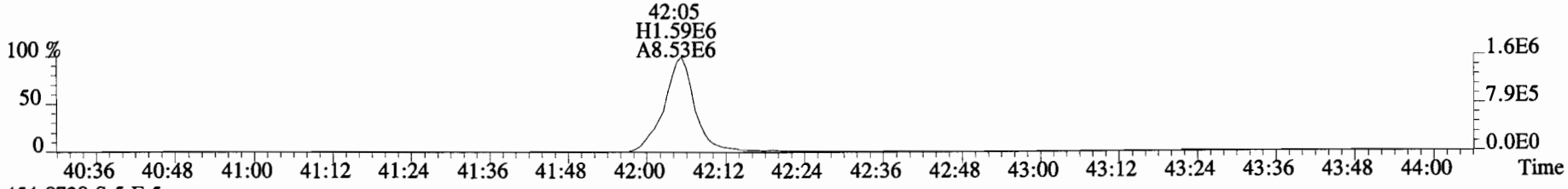
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



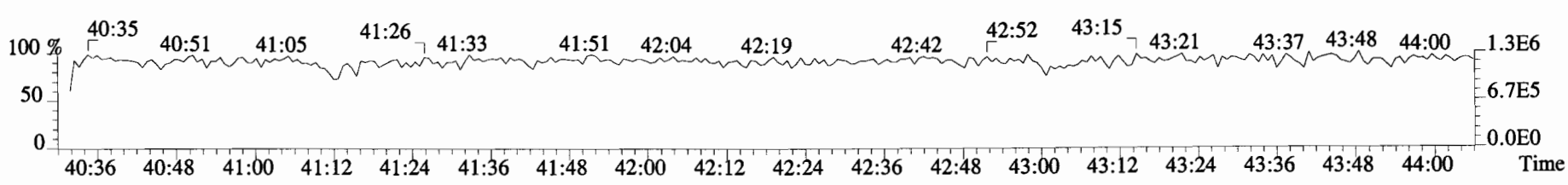
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



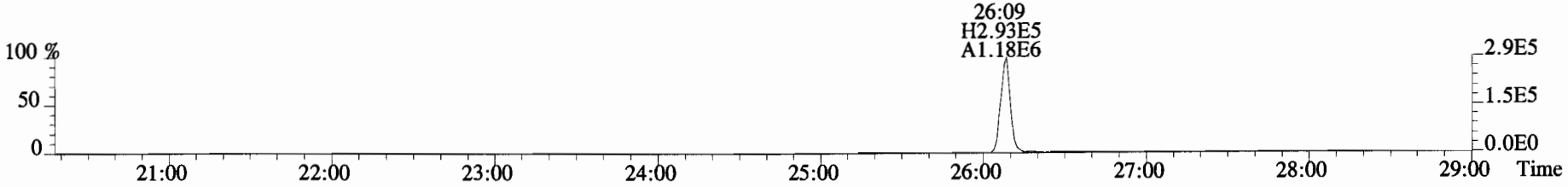
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



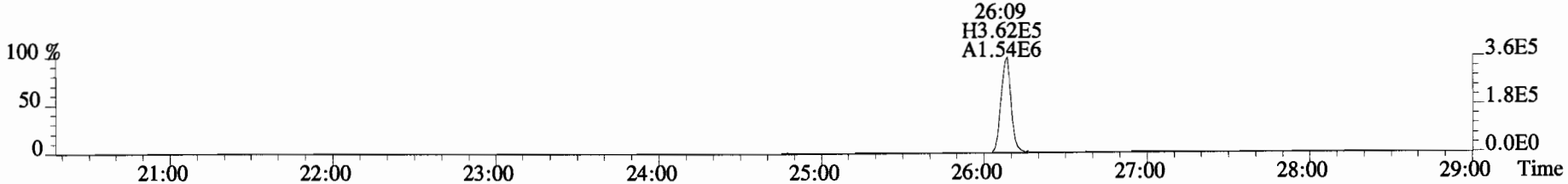
454.9728 S:5 F:5



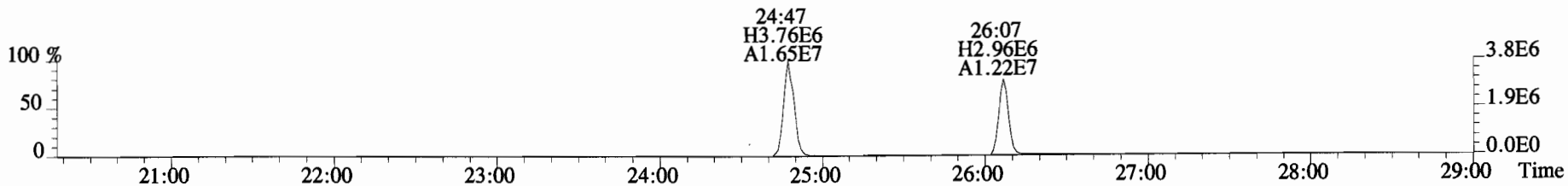
File:150102D1 #1-551 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



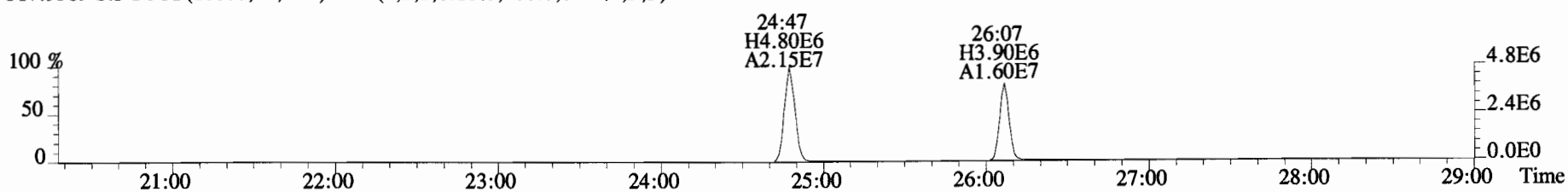
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



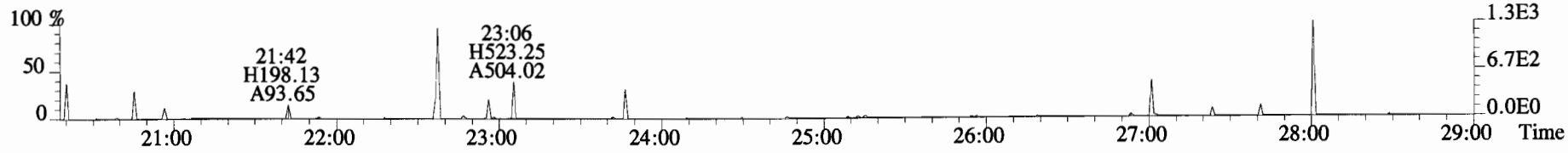
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



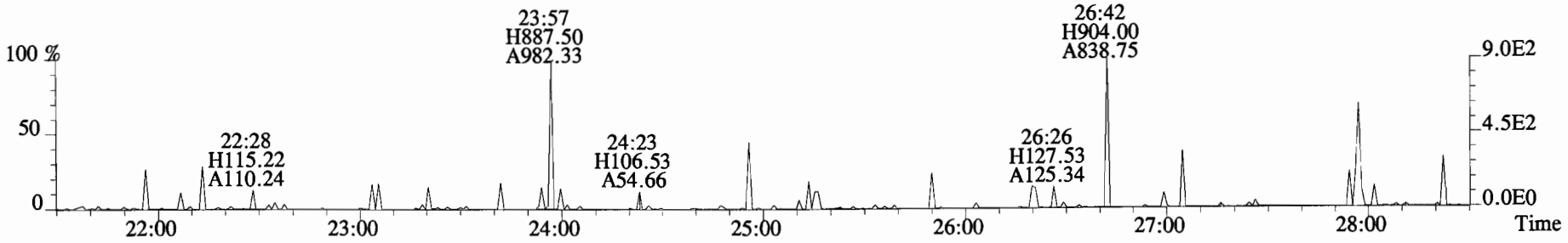
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



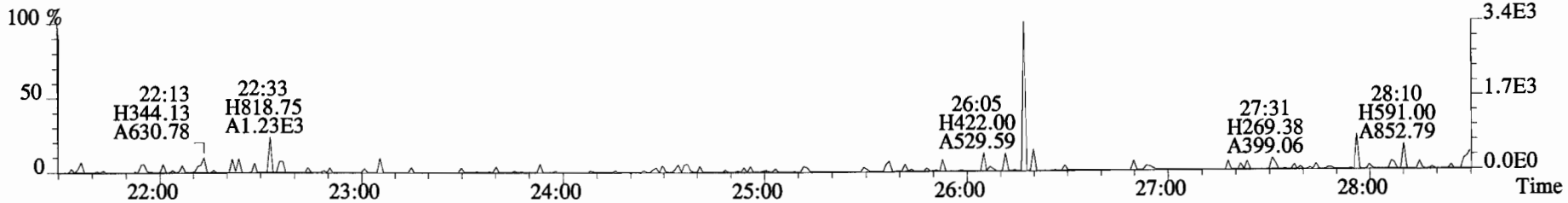
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



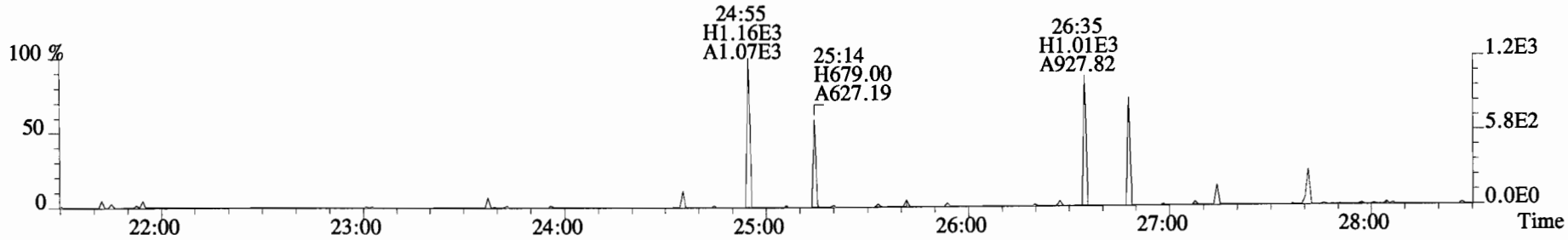
File:150102D1 #1-551 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



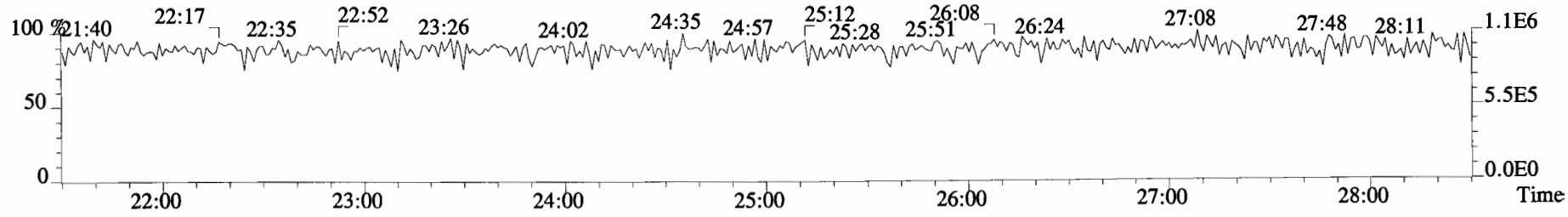
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



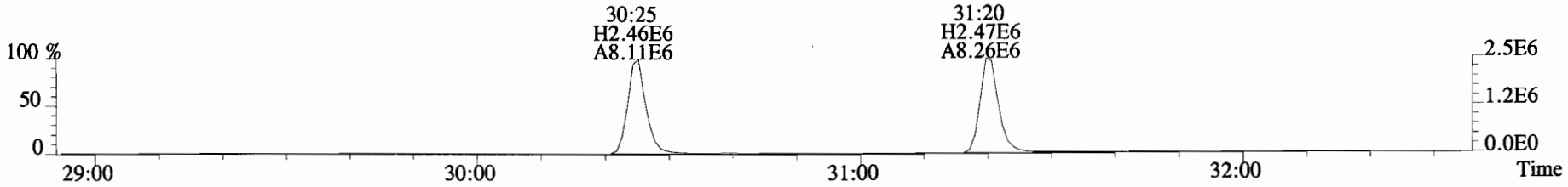
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



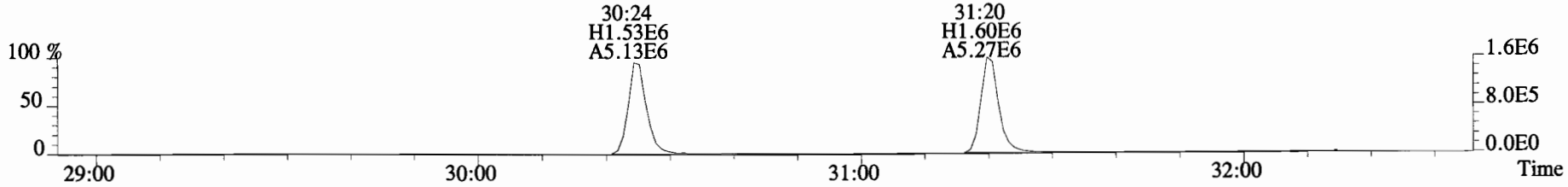
316.9824 S:5



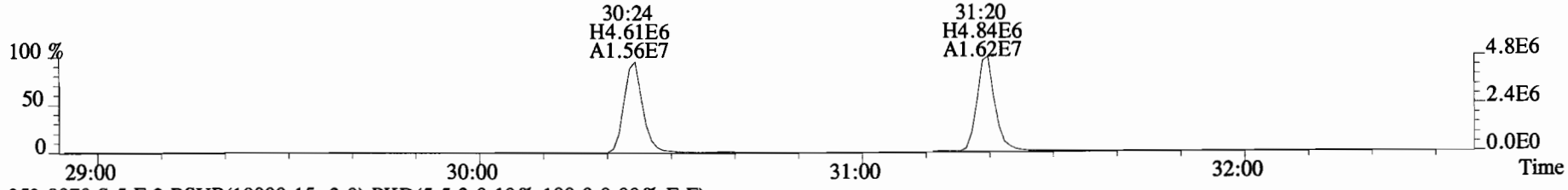
File:150102D1 #1-257 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



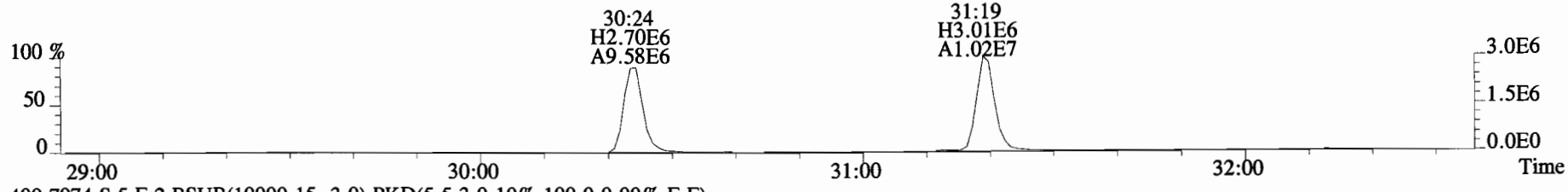
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



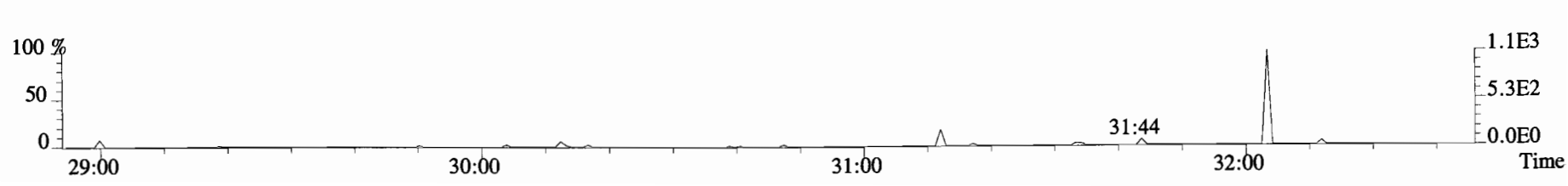
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



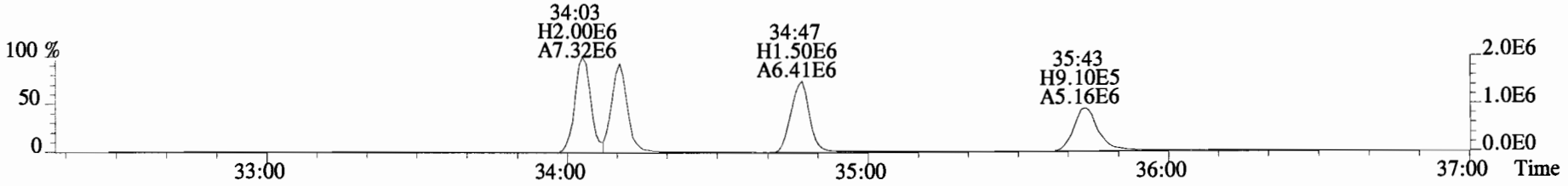
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



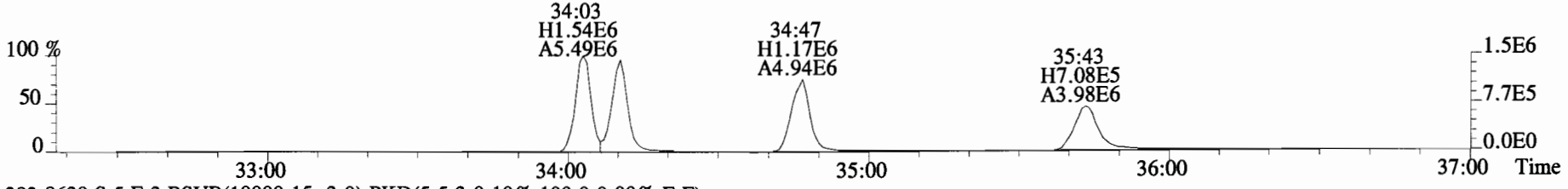
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



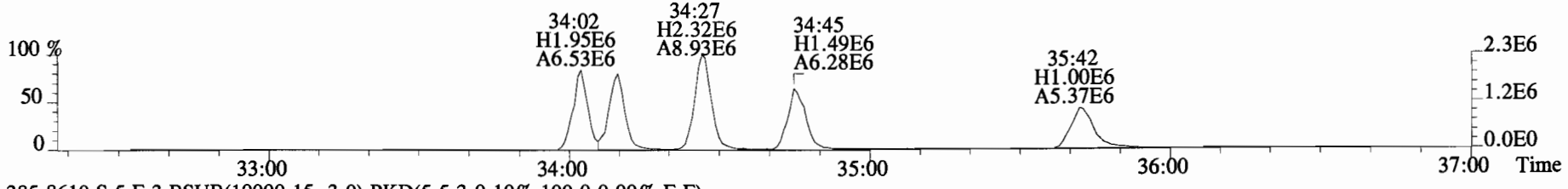
File:150102D1 #1-385 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



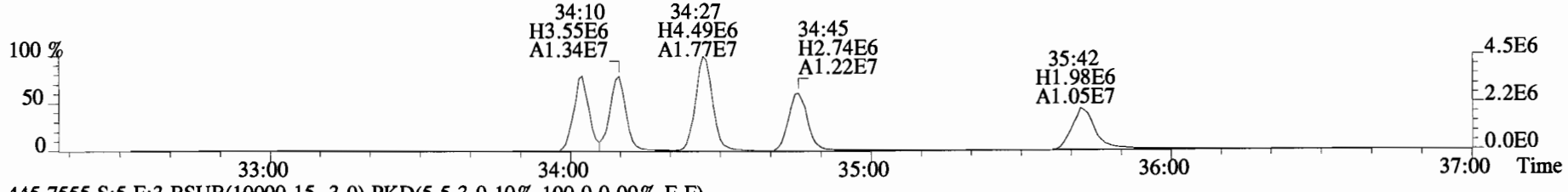
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



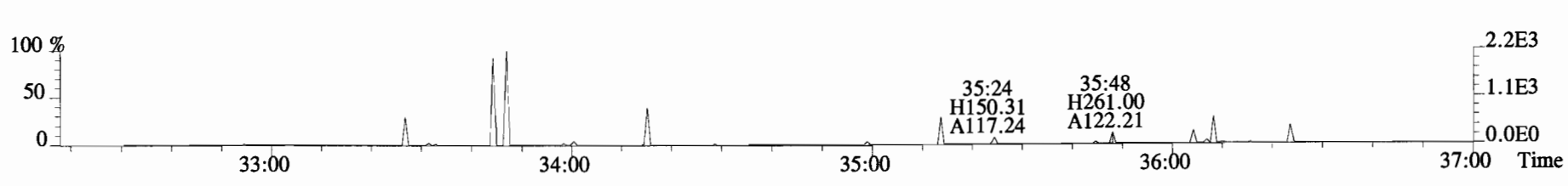
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



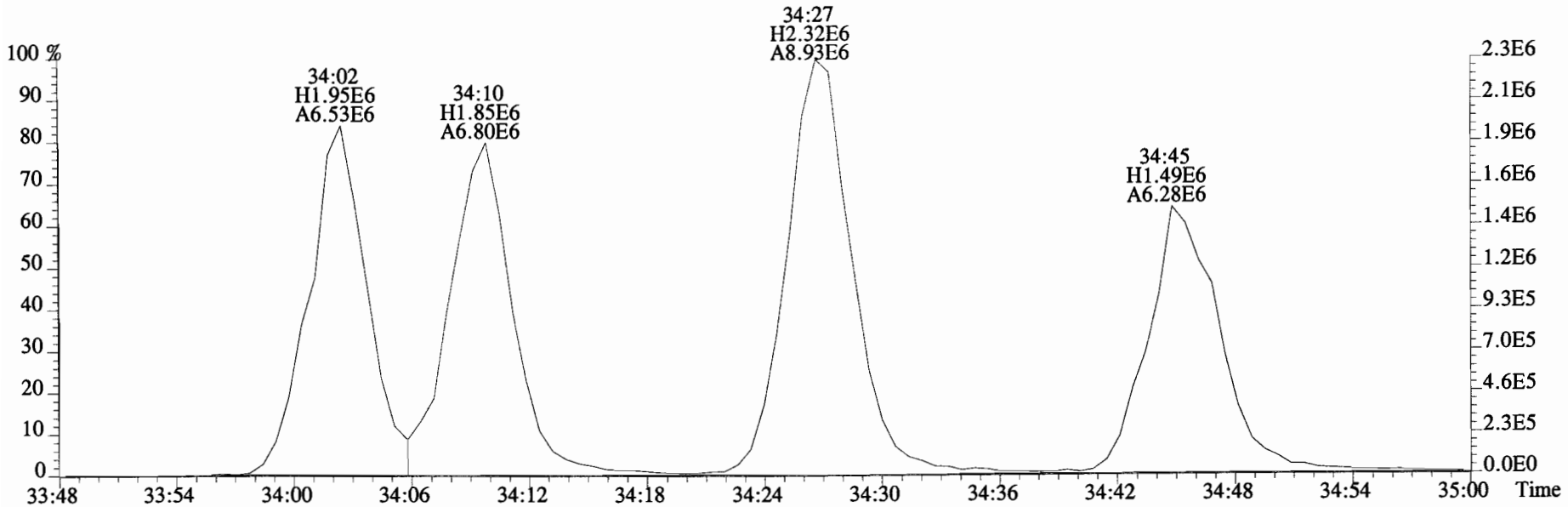
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



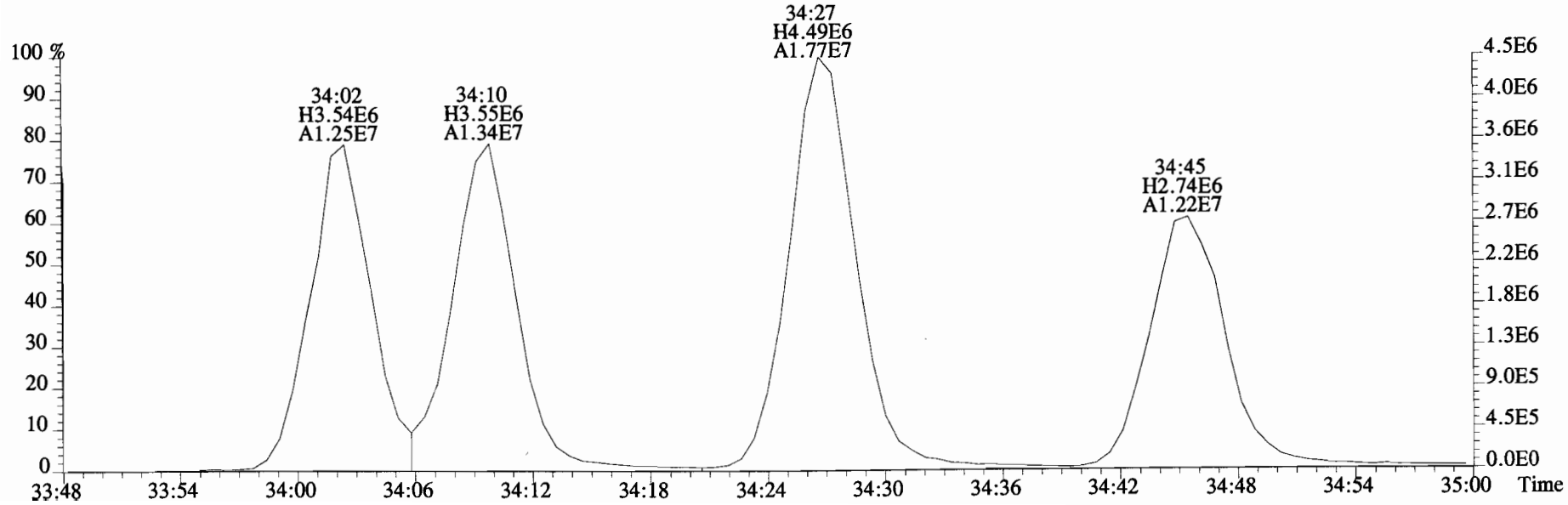
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



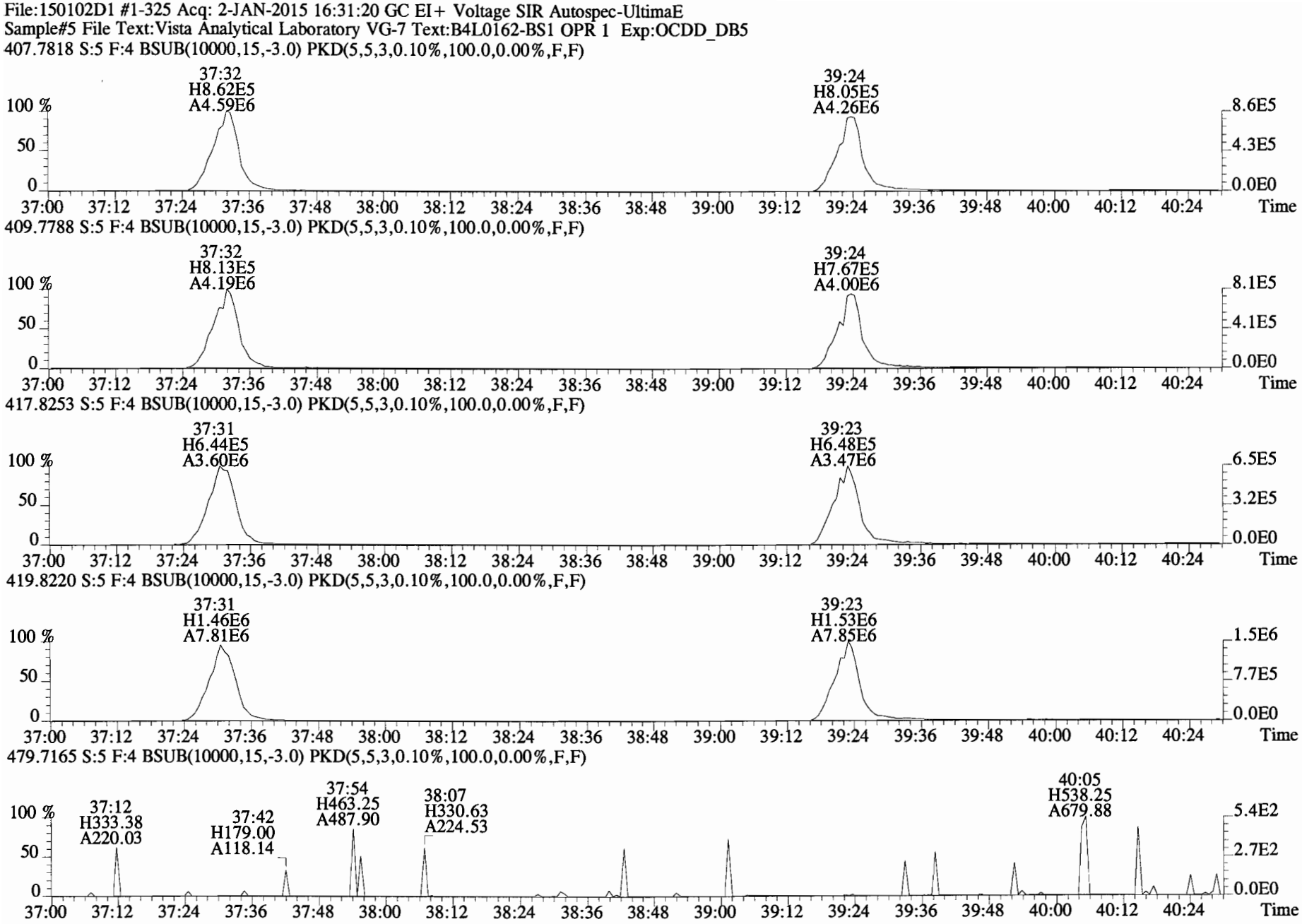
File:150102D1 #1-385 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



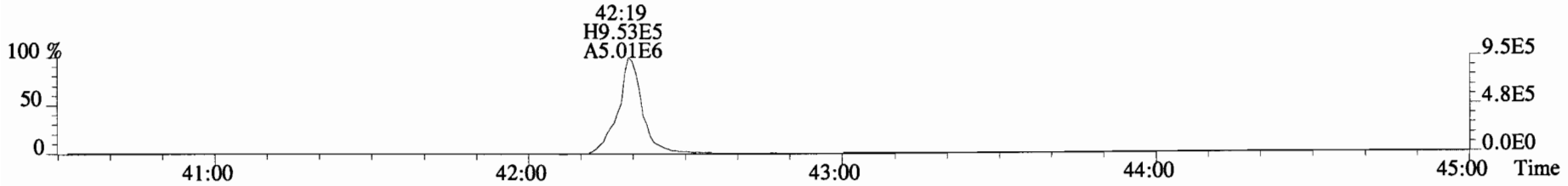
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



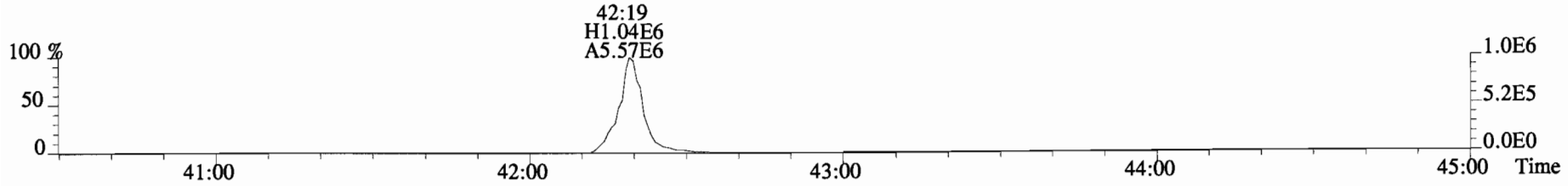
File:150102D1 #1-325 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5



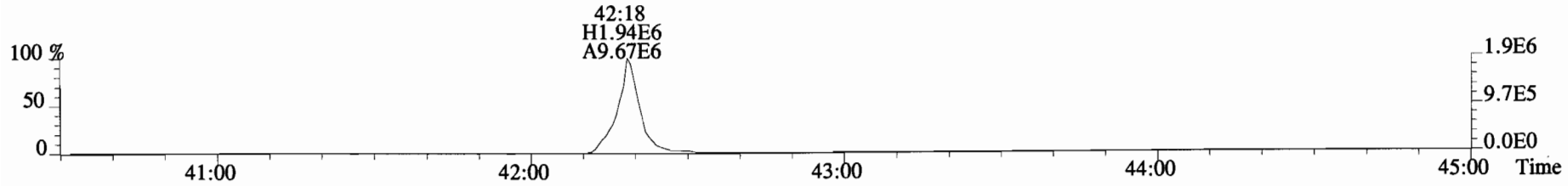
File:150102D1 #1-389 Acq: 2-JAN-2015 16:31:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B4L0162-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



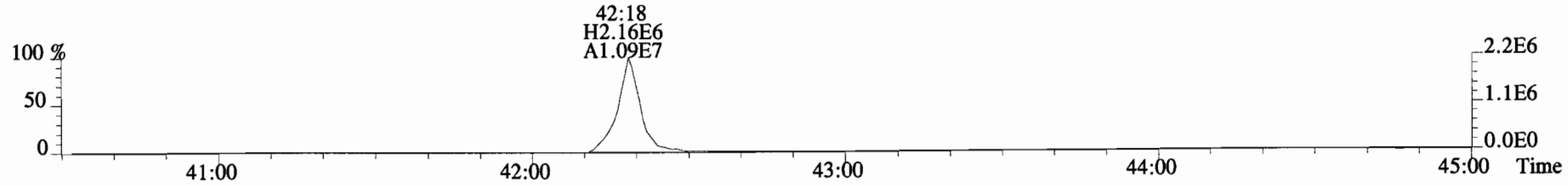
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

Client ID: QC-EB-02-20141222-W Filename: 150102D2 S:8 Acq: 3-JAN-15 12:28:53 ConCal: ST150102D2-1
Lab ID: 1400984-04 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.027 EndCAL: NA

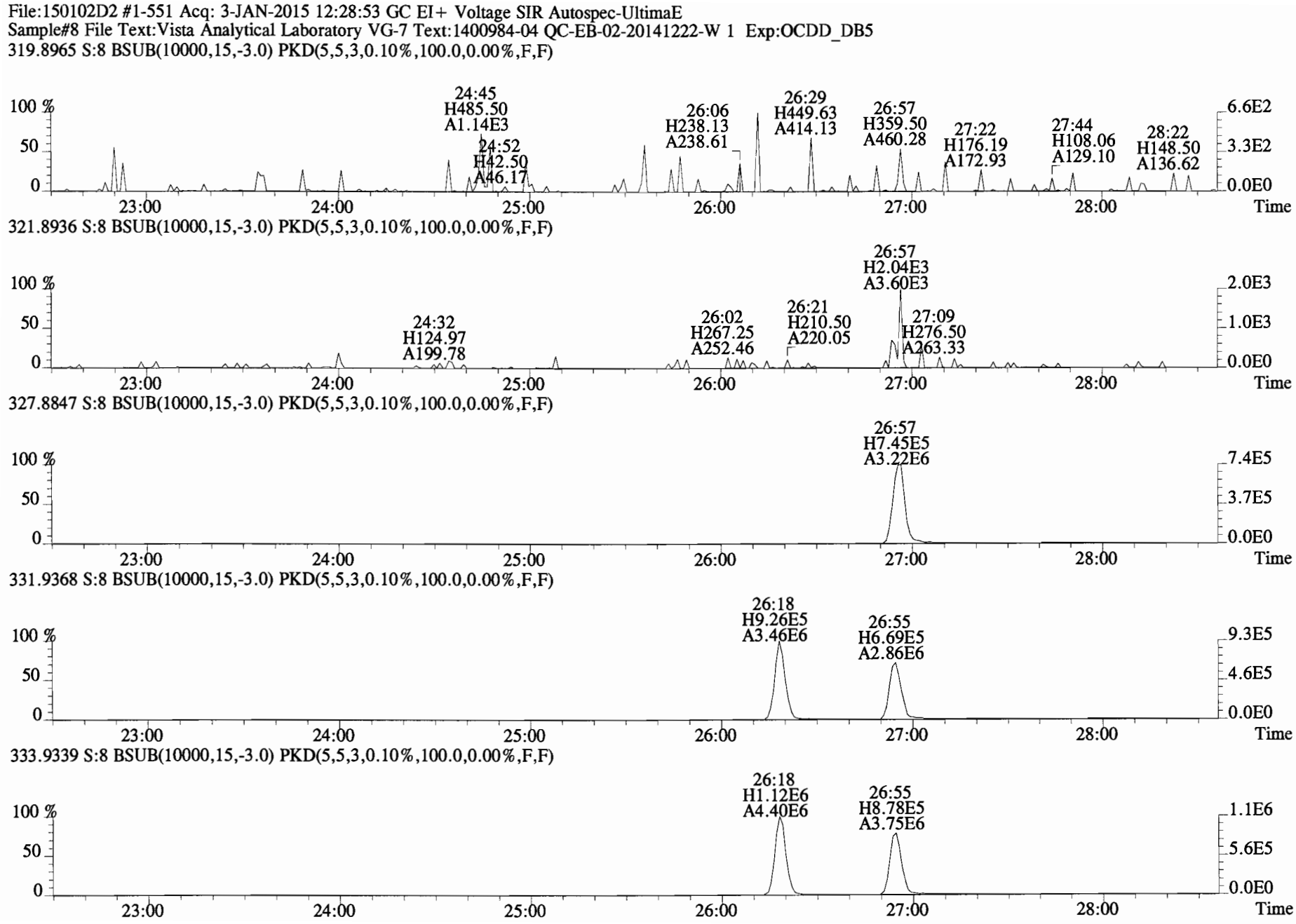
	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.18	NotFnd	*	*		366	2.5	1.71
	1,2,3,7,8-PeCDD	*	*	n	0.92	NotFnd	*	*		219	2.5	0.919
	1,2,3,4,7,8-HxCDD	*	*	n	1.09	NotFnd	*	*		289	2.5	2.32
	1,2,3,6,7,8-HxCDD	*	*	n	1.07	NotFnd	*	*		289	2.5	2.10
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotFnd	*	*		289	2.5	2.65
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.12	NotFnd	*	*		629	2.5	5.35
	OCDD	2.42e+04	0.75	n	0.95	42:05	1.000	14.808		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.08	NotFnd	*	*		274	2.5	0.982
	1,2,3,7,8-PeCDF	*	*	n	1.09	NotFnd	*	*		198	2.5	0.869
	2,3,4,7,8-PeCDF	*	*	n	1.04	NotFnd	*	*		198	2.5	0.839
	1,2,3,4,7,8-HxCDF	*	*	n	1.39	NotFnd	*	*		361	2.5	0.919
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotFnd	*	*		361	2.5	1.05
	2,3,4,6,7,8-HxCDF	*	*	n	1.30	NotFnd	*	*		361	2.5	1.19
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotFnd	*	*		361	2.5	1.87
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.62	NotFnd	*	*		531	2.5	2.64
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotFnd	*	*		531	2.5	2.56
	OCDF	*	*	n	1.10	NotFnd	*	*		423	2.5	4.31

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		366	1.72
Total Penta-Dioxins	*	*		219	0.917
Total Hexa-Dioxins	*	*		298	2.42
Total Hepta-Dioxins	*	*		629	5.35
Total Tetra-Furans	*	*		274	0.982
Total Penta-Furans	0.0000	0.0000		310	1.34
Total Hexa-Furans	*	*		374	1.26
Total Hepta-Furans	*	*		542	2.66

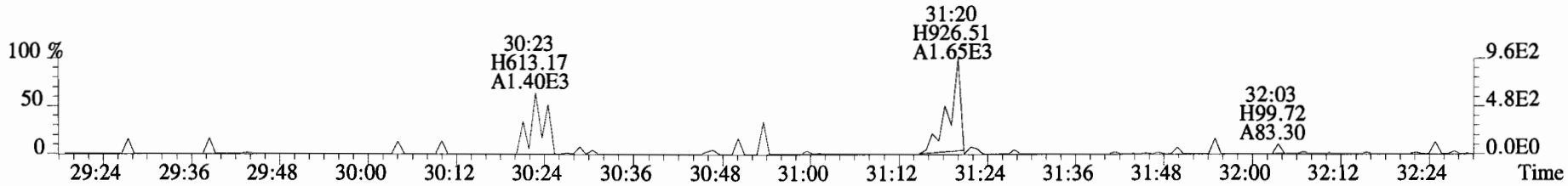
									Rec	Qual
IS	13C-2,3,7,8-TCDD	6.61e+06	0.76	y	1.07	26:55	1.023	1526.1	78.4	
IS	13C-1,2,3,7,8-PeCDD	7.28e+06	0.62	y	1.24	31:36	1.201	1454.6	74.7	
IS	13C-1,2,3,4,7,8-HxCDD	4.57e+06	1.28	y	0.72	34:54	1.014	1270.3	65.2	
IS	13C-1,2,3,6,7,8-HxCDD	5.36e+06	1.24	y	0.74	35:01	1.017	1469.1	75.4	
IS	13C-1,2,3,7,8,9-HxCDD	5.75e+06	1.19	y	0.86	35:19	1.026	1355.0	69.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	4.10e+06	1.06	y	0.64	38:50	1.128	1284.6	66.0	
IS	13C-OCDD	6.71e+06	0.88	y	0.78	42:05	1.222	1727.1	44.3	
IS	13C-2,3,7,8-TCDF	9.86e+06	0.78	y	0.92	26:06	0.992	1586.7	81.5	
IS	13C-1,2,3,7,8-PeCDF	9.04e+06	1.58	y	0.95	30:24	1.155	1414.2	72.6	
IS	13C-2,3,4,7,8-PeCDF	9.54e+06	1.56	y	0.97	31:19	1.191	1460.4	75.0	
IS	13C-1,2,3,4,7,8-HxCDF	6.44e+06	0.49	y	0.99	34:01	0.988	1309.6	67.2	
IS	13C-1,2,3,6,7,8-HxCDF	7.43e+06	0.54	y	1.10	34:09	0.992	1364.7	70.1	
IS	13C-2,3,4,6,7,8-HxCDF	6.86e+06	0.53	y	1.03	34:45	1.009	1340.6	68.8	
IS	13C-1,2,3,7,8,9-HxCDF	5.74e+06	0.50	y	0.86	35:43	1.037	1349.3	69.3	
IS	13C-1,2,3,4,6,7,8-HpCDF	4.18e+06	0.42	y	0.71	37:31	1.089	1179.5	60.6	
IS	13C-1,2,3,4,7,8,9-HpCDF	4.08e+06	0.45	y	0.71	39:23	1.144	1162.8	59.7	
IS	13C-OCDF	7.38e+06	0.86	y	0.87	42:19	1.229	1701.2	43.7	
C/Up	37Cl-2,3,7,8-TCDD	3.22e+06			1.21	26:56	1.024	657.66	84.4	
RS/RT	13C-1,2,3,4-TCDD	7.86e+06	0.79	y	1.00	26:18	*	1947.4		
RS	13C-1,2,3,4-TCDF	1.31e+07	0.77	y	1.00	24:46	*	1947.4		
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.66e+06	0.49	y	1.00	34:26	*	1947.4		

Integrations by Analyst: [signature] Date: 1/4/15

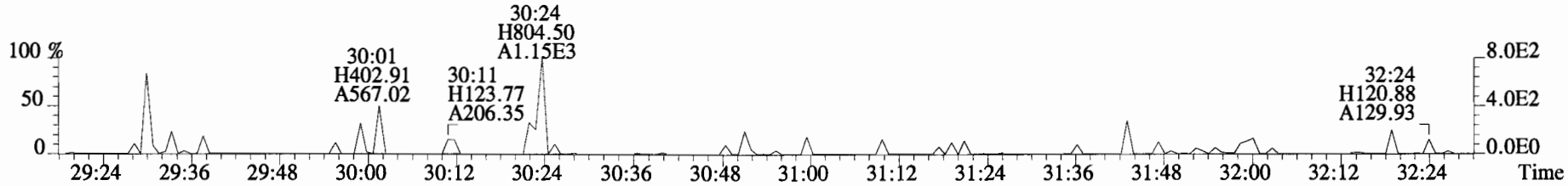
Reviewed by Analyst: [signature] Date: 1/7/15


File:150102D2 #1-551 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:45 H485.50 A1.14E3
24:52 H42.50 A46.17
26:06 H238.13 A238.61
26:29 H449.63 A414.13
26:57 H359.50 A460.28
27:22 H176.19 A172.93
27:44 H108.06 A129.10
28:22 H148.50 A136.62
6.6E2
3.3E2
0.0E0
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:32 H124.97 A199.78
26:02 H267.25 A252.46
26:21 H210.50 A220.05
26:57 H2.04E3 A3.60E3
27:09 H276.50 A263.33
2.0E3
1.0E3
0.0E0
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:57 H7.45E5 A3.22E6
7.4E5
3.7E5
0.0E0
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:18 H9.26E5 A3.46E6
26:55 H6.69E5 A2.86E6
9.3E5
4.6E5
0.0E0
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:18 H1.12E6 A4.40E6
26:55 H8.78E5 A3.75E6
1.1E6
5.6E5
0.0E0
100 %
50
0
23:00
24:00
25:00
26:00
27:00
28:00
Time

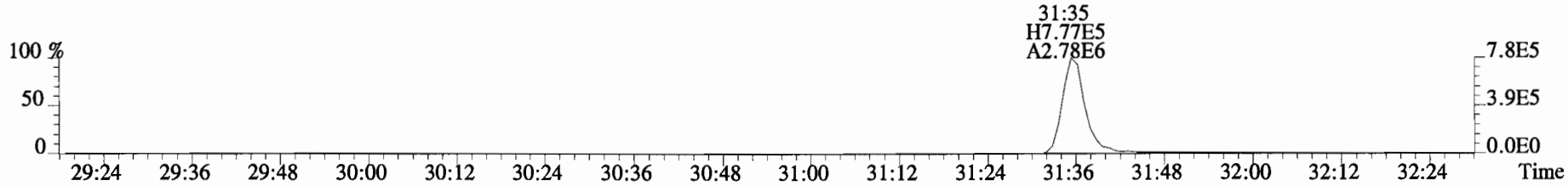
File:150102D2 #1-257 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



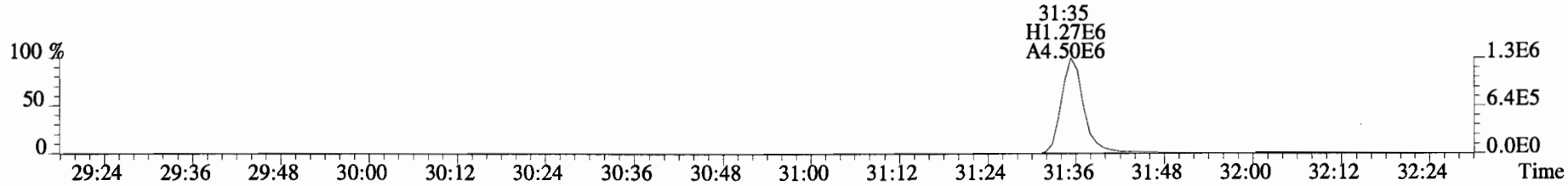
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



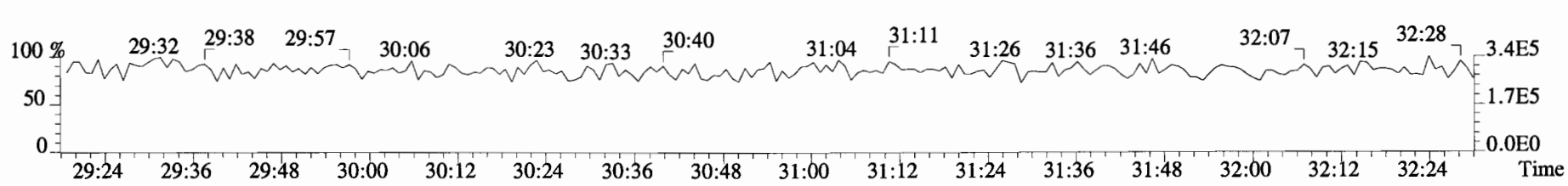
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

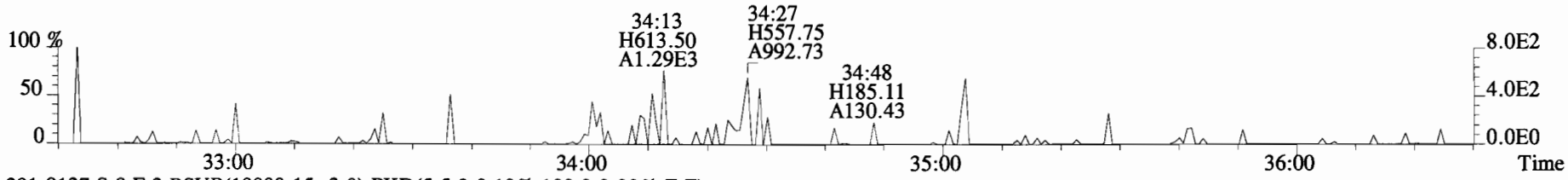


366.9792 S:8 F:2

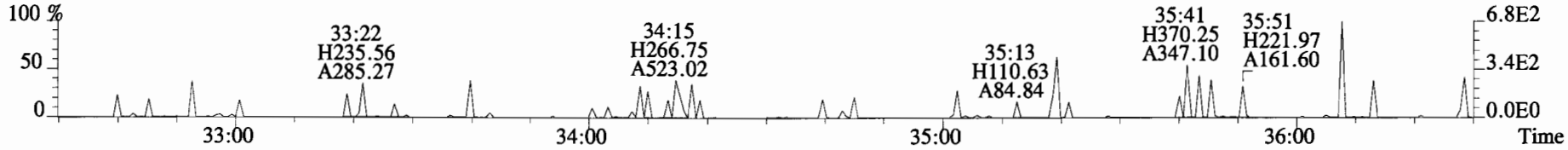


File:150102D2 #1-384 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5

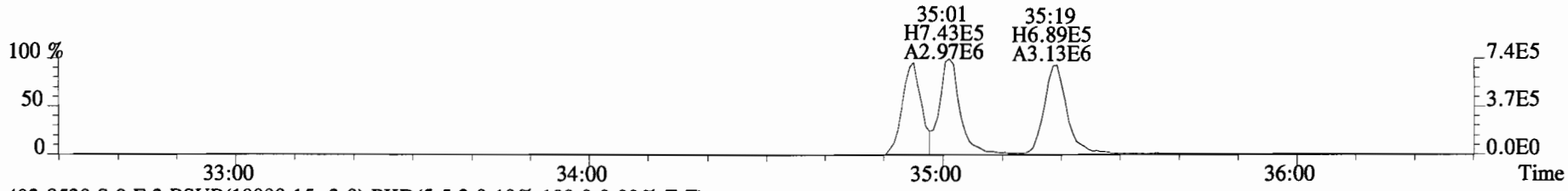
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



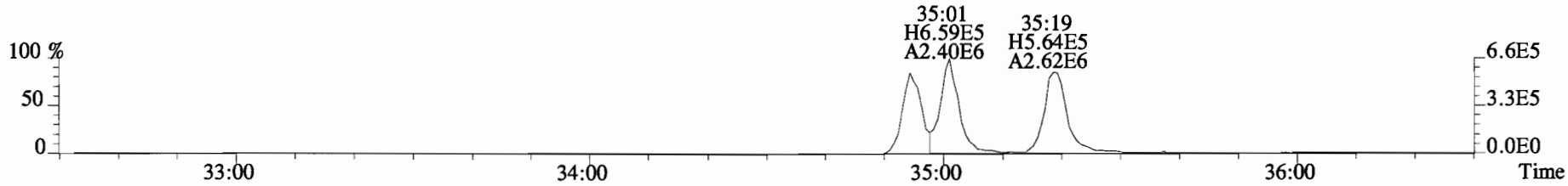
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



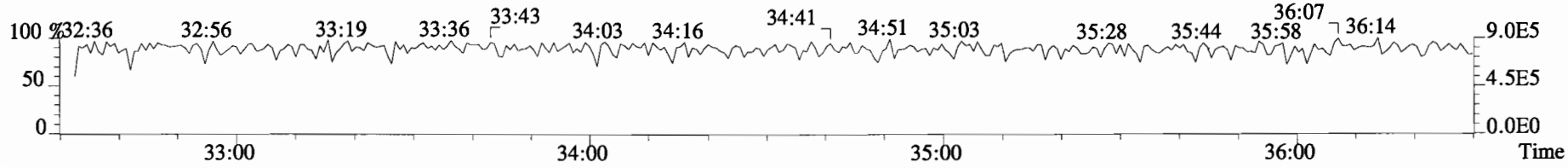
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



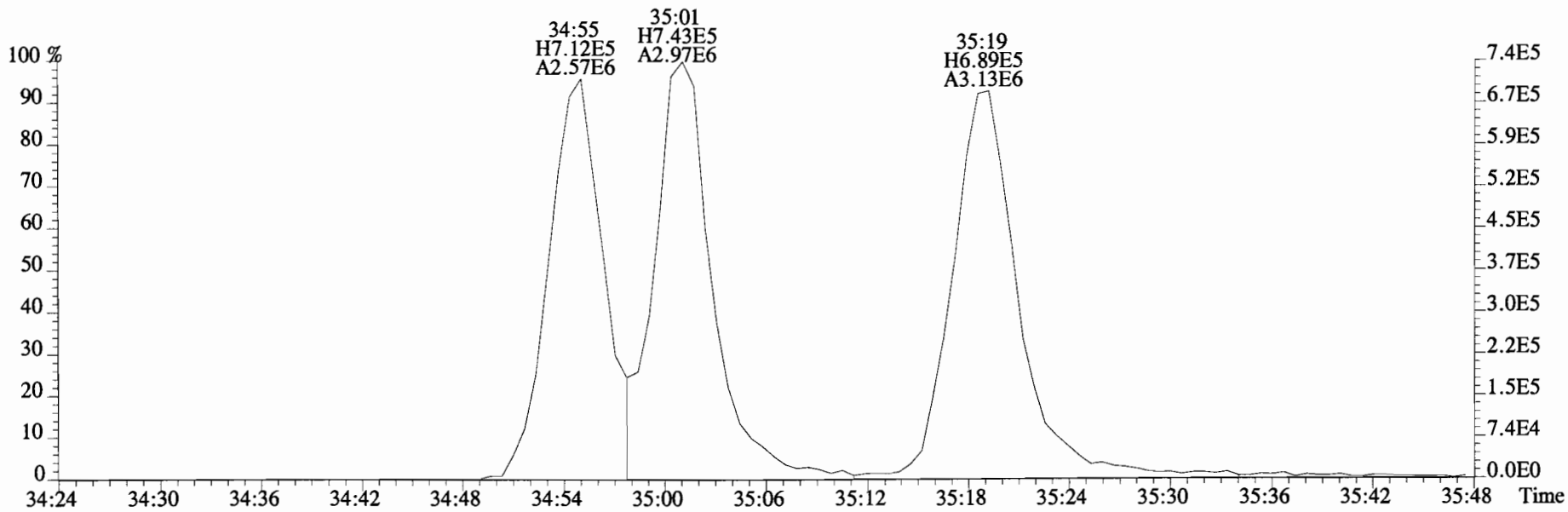
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



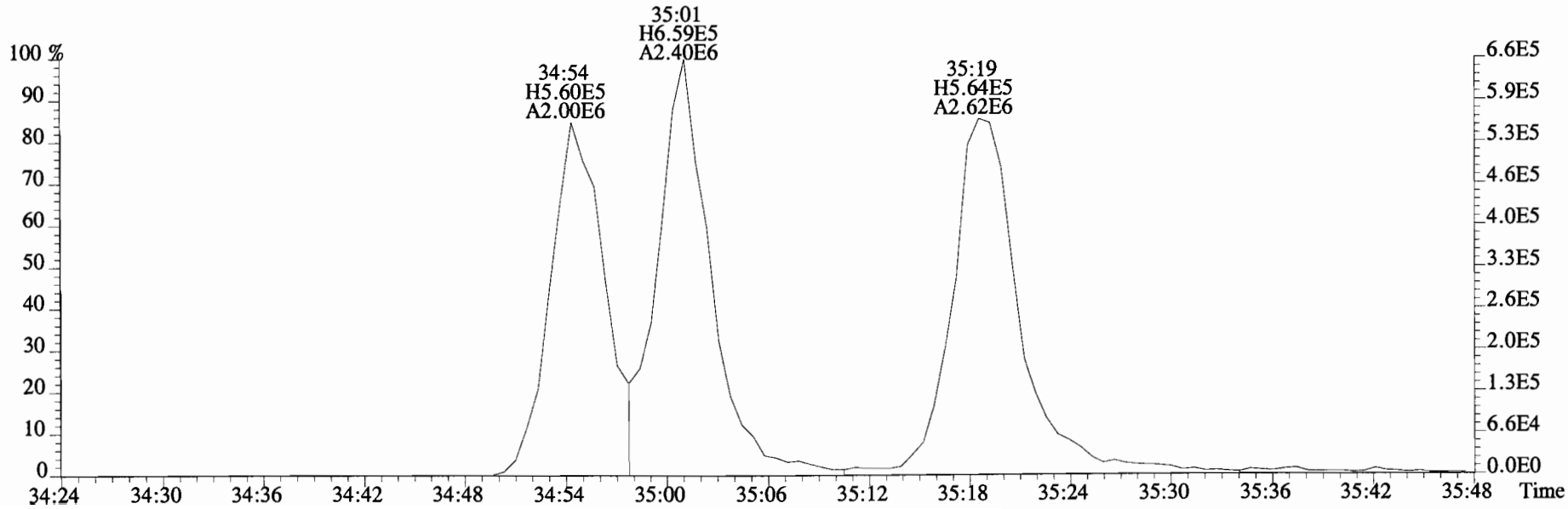
380.9760 S:8 F:3



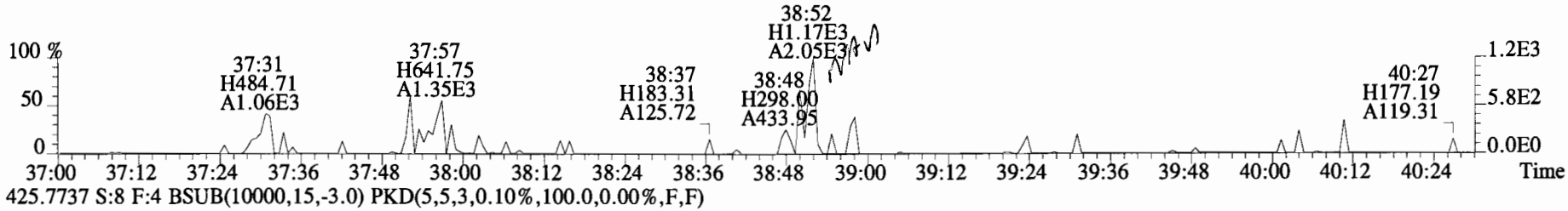
File:150102D2 #1-384 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



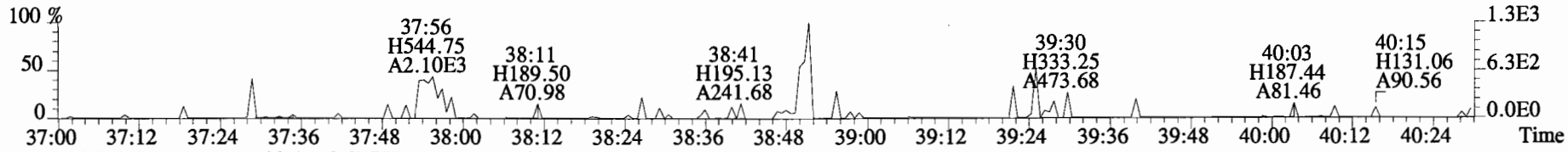
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



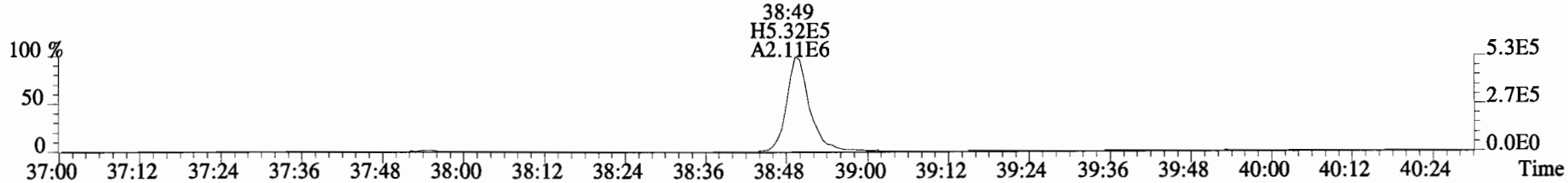
File:150102D2 #1-326 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



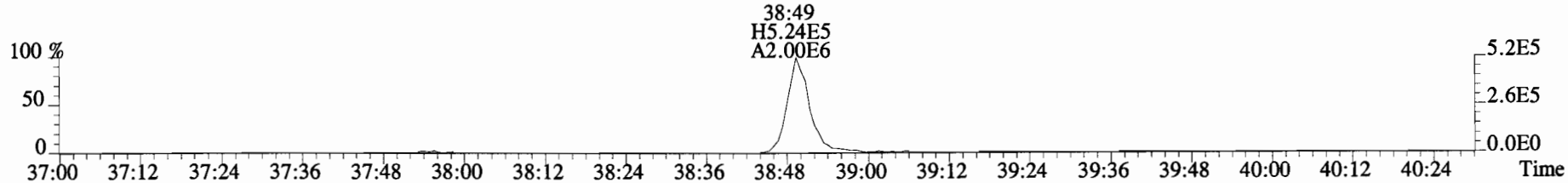
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



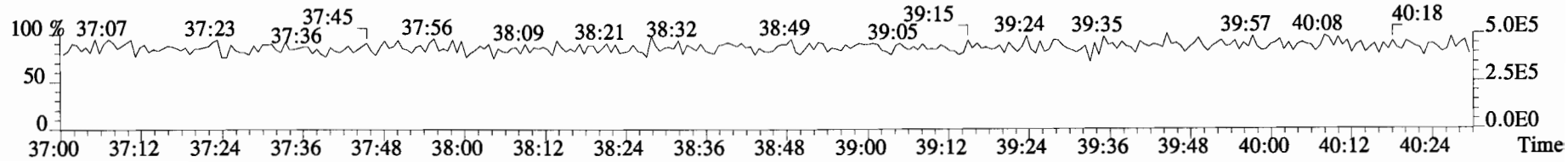
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



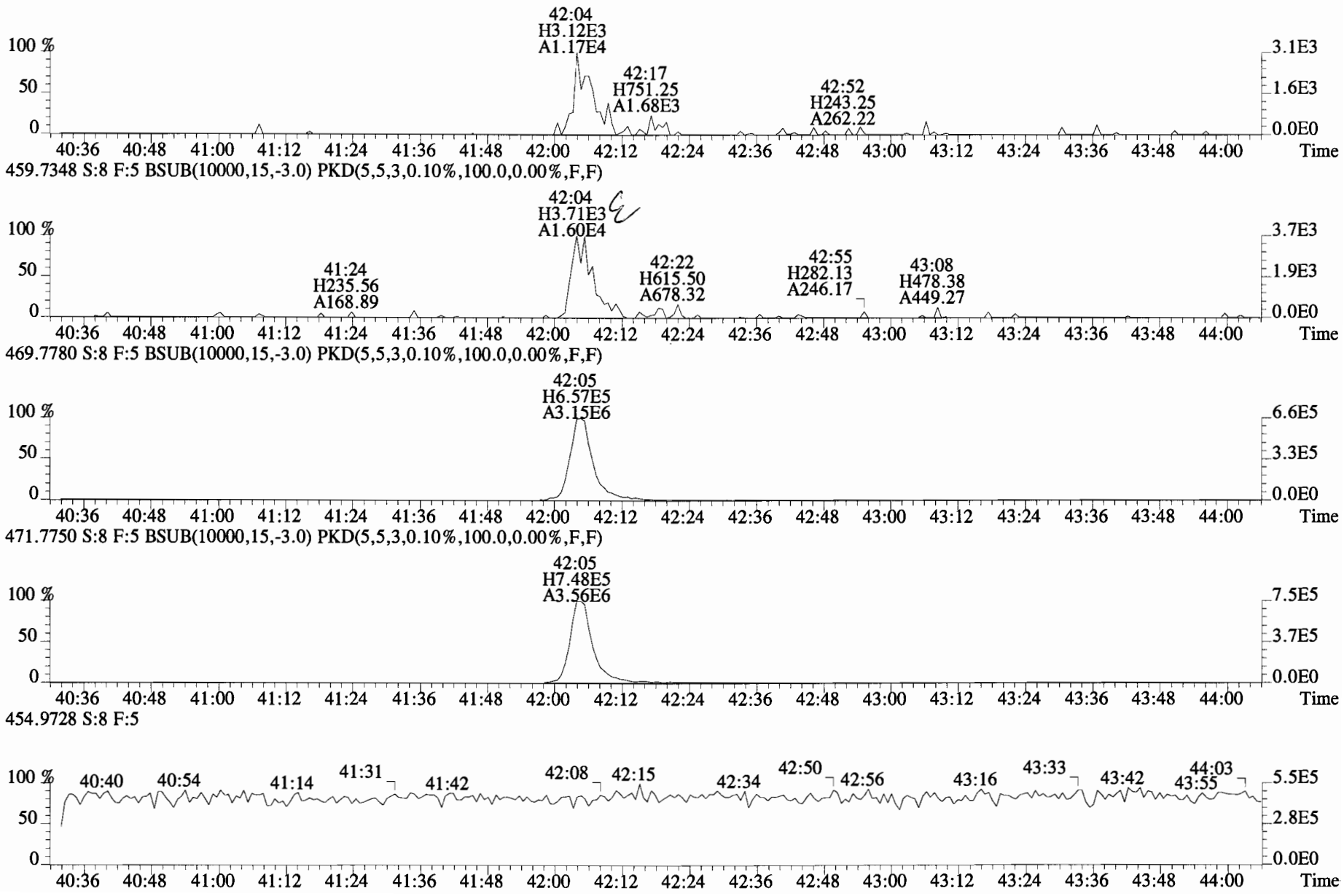
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



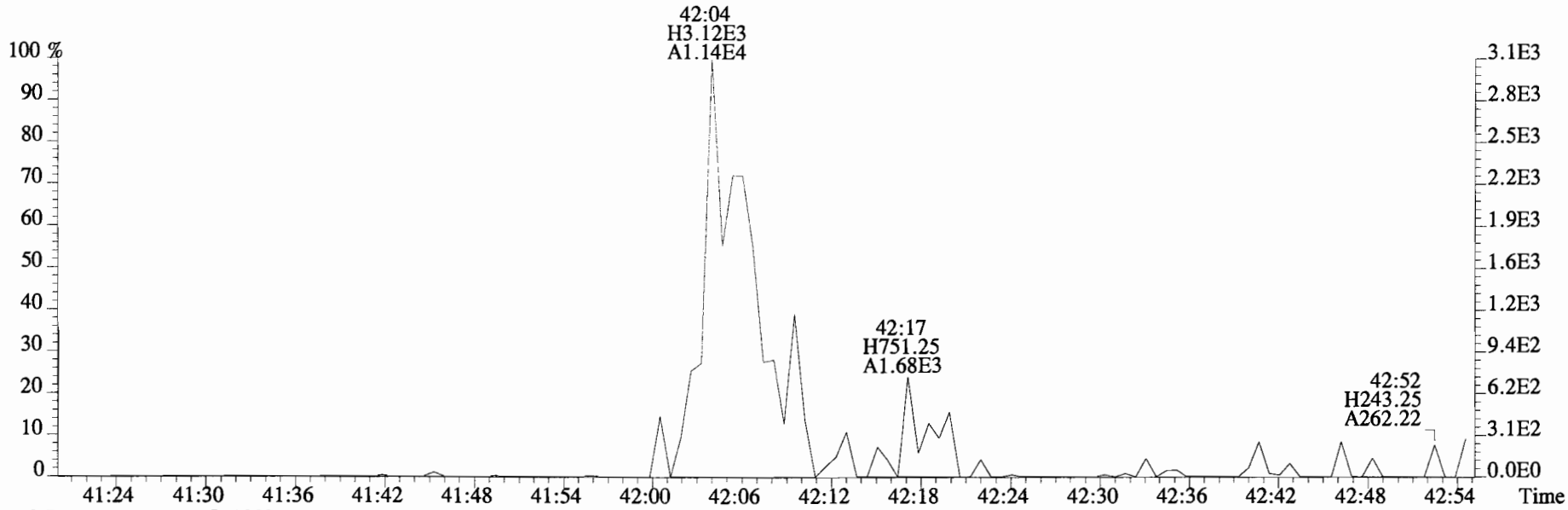
430.9728 S:8 F:4



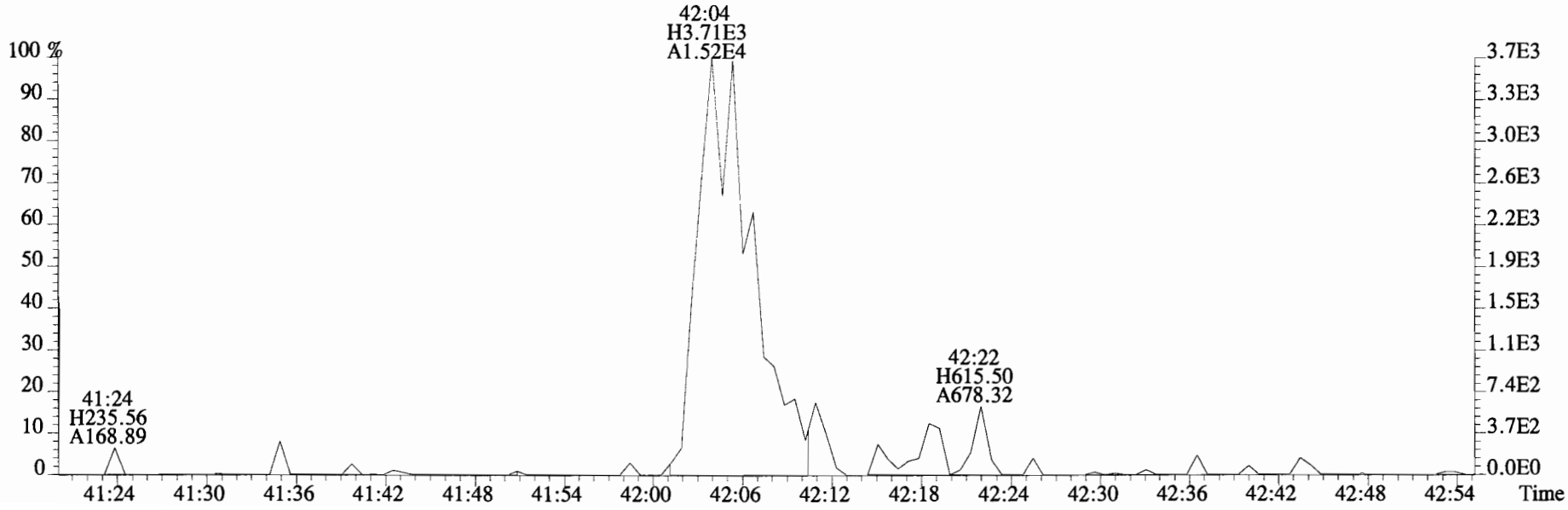
File:150102D2 #1-389 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5

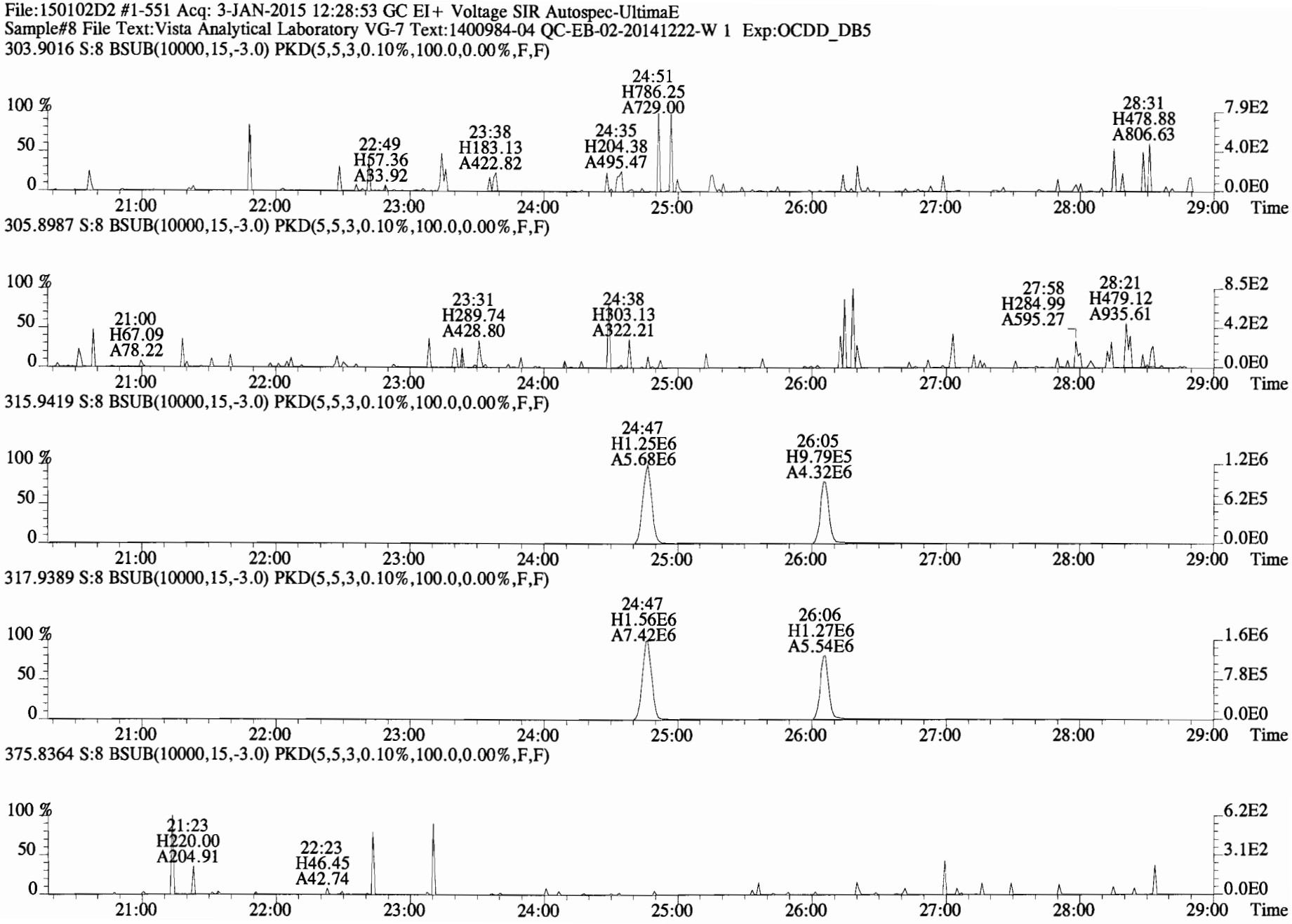


File:150102D2 #1-389 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

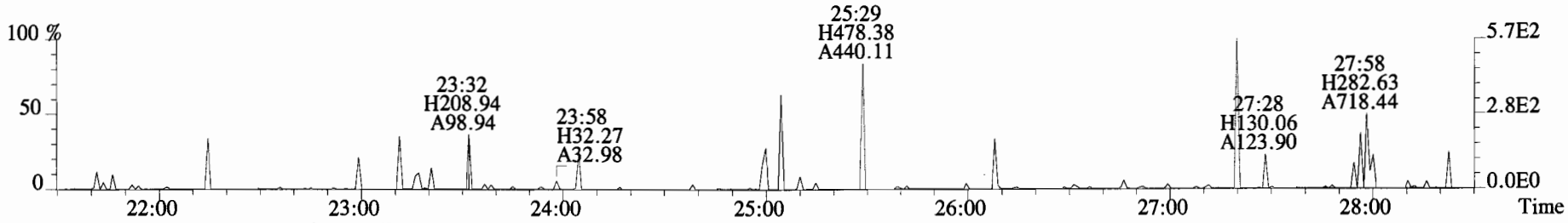


459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

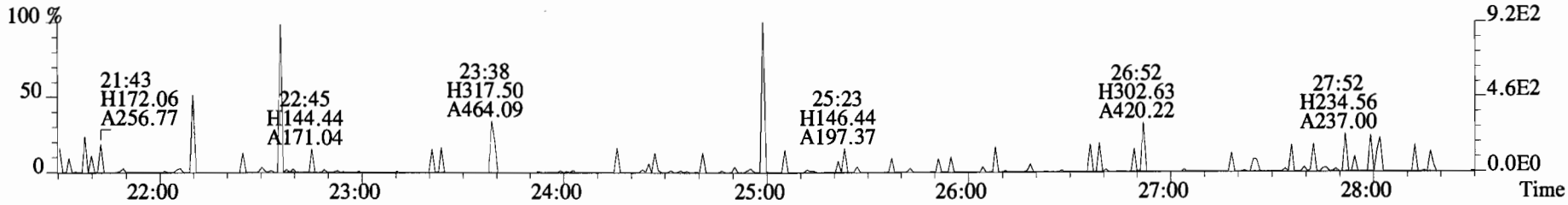



File:150102D2 #1-551 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:51 H786.25 A729.00
28:31 H478.88 A806.63
22:49 H57.36 A33.92
23:38 H183.13 A422.82
24:35 H204.38 A495.47
7.9E2
4.0E2
0.0E0
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:00 H67.09 A78.22
23:31 H289.74 A428.80
24:38 H303.13 A322.21
27:58 H284.99 A595.27
28:21 H479.12 A935.61
8.5E2
4.2E2
0.0E0
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:47 H1.25E6 A5.68E6
26:05 H9.79E5 A4.32E6
1.2E6
6.2E5
0.0E0
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:47 H1.56E6 A7.42E6
26:06 H1.27E6 A5.54E6
1.6E6
7.8E5
0.0E0
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:23 H220.00 A204.91
22:23 H46.45 A42.74
6.2E2
3.1E2
0.0E0
100 %
50
0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
Time

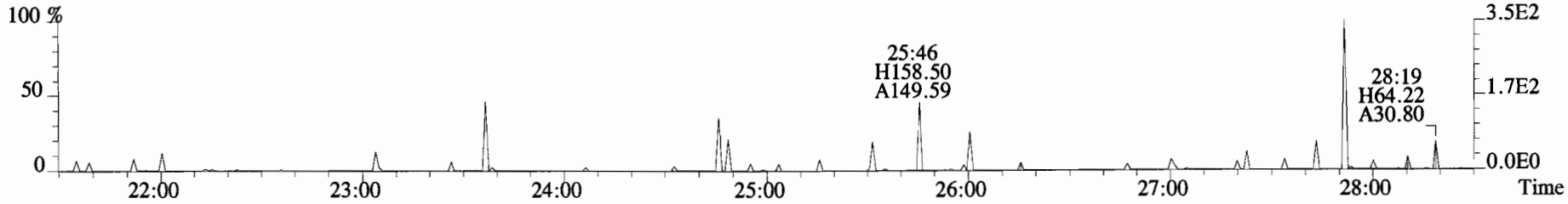
File:150102D2 #1-551 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



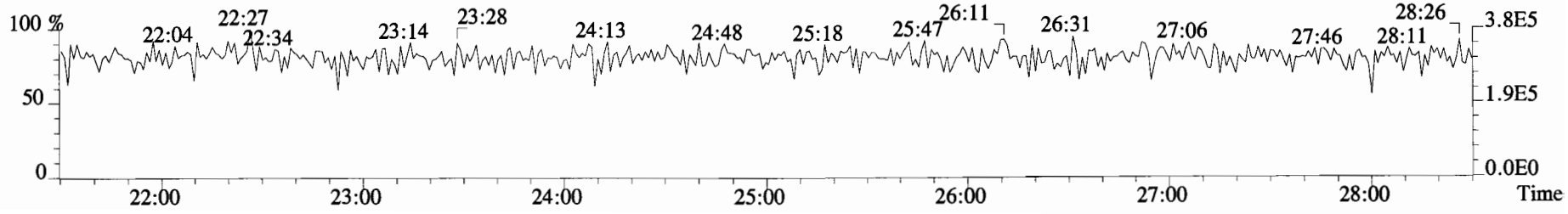
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



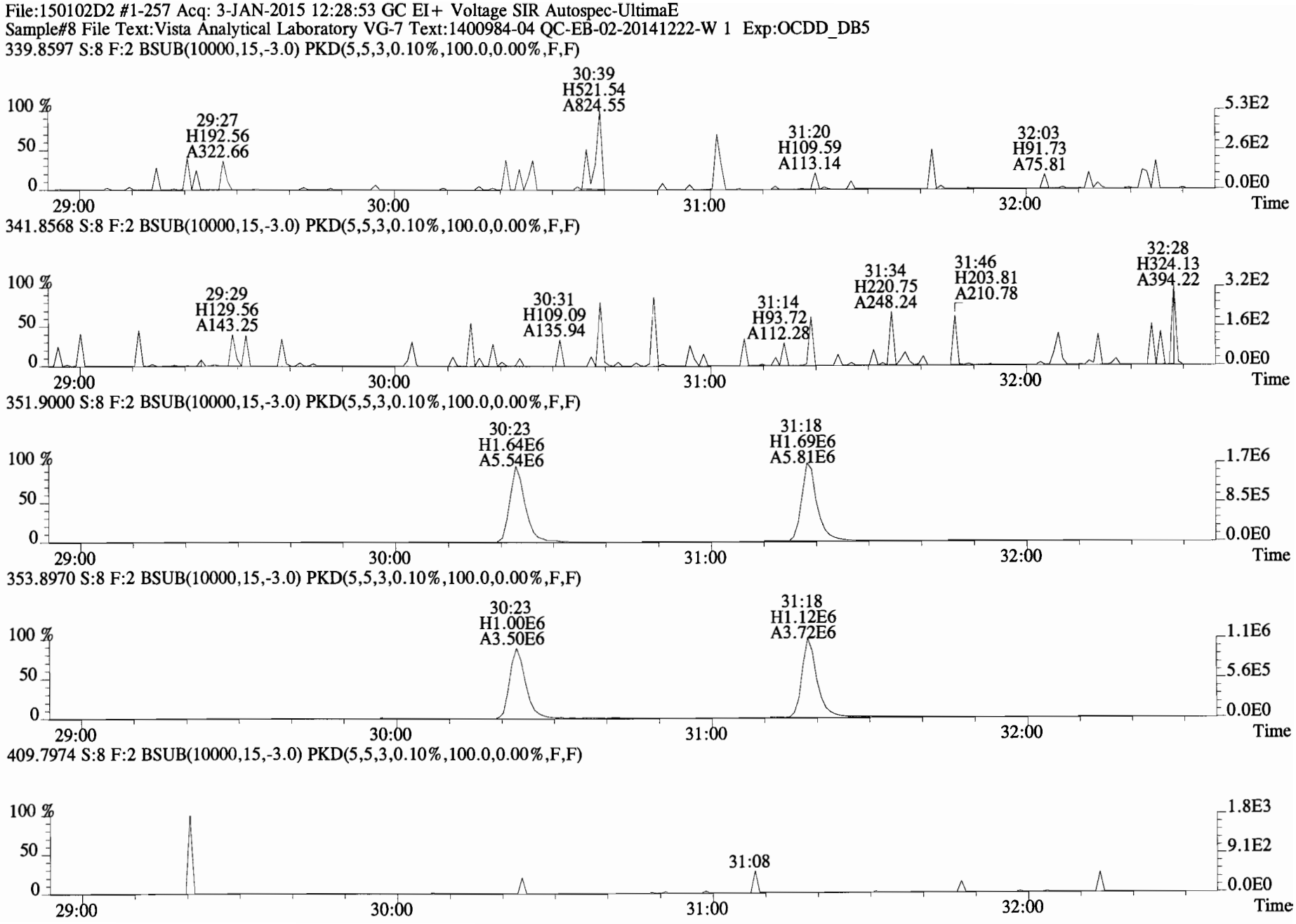
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



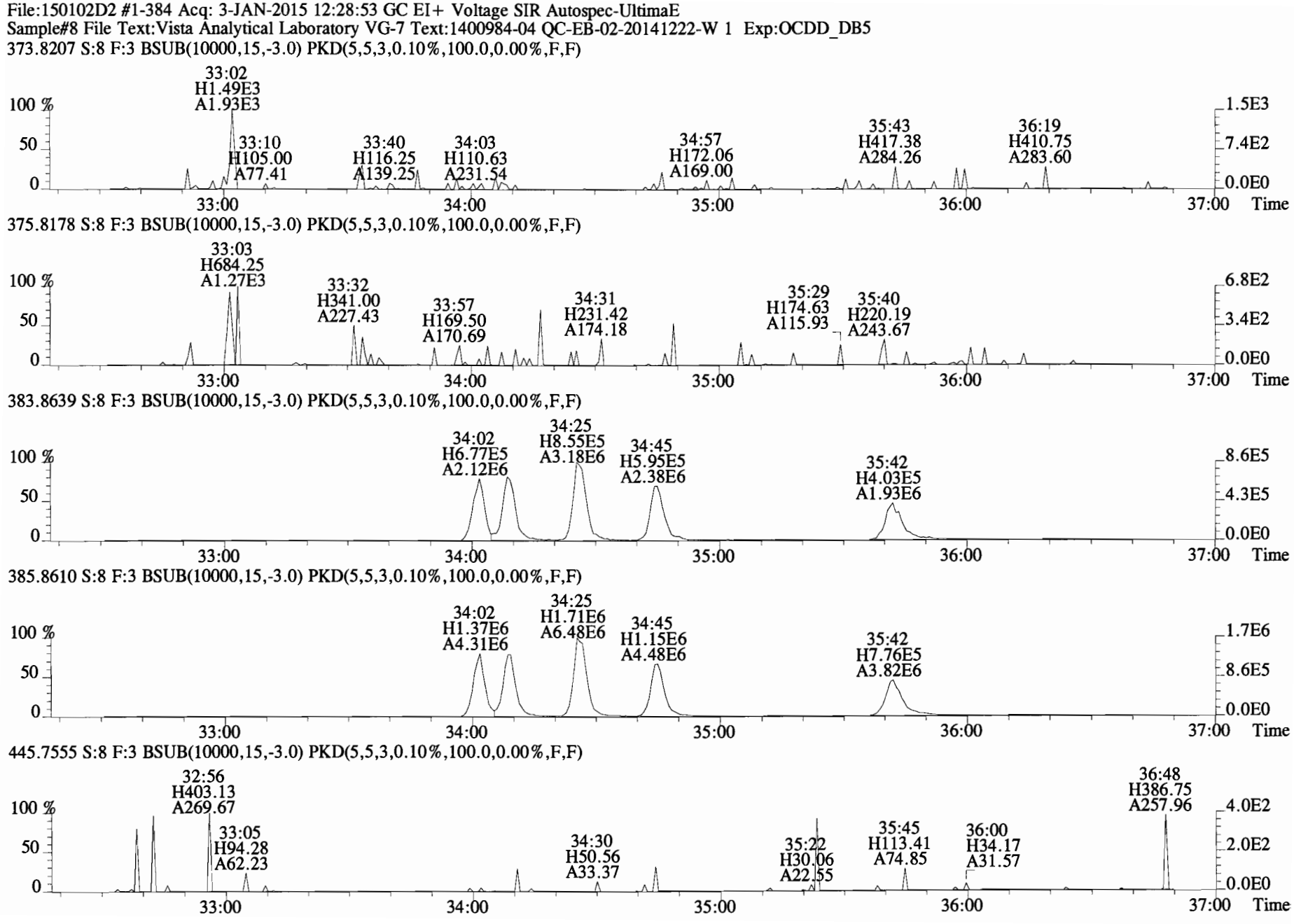
316.9824 S:8



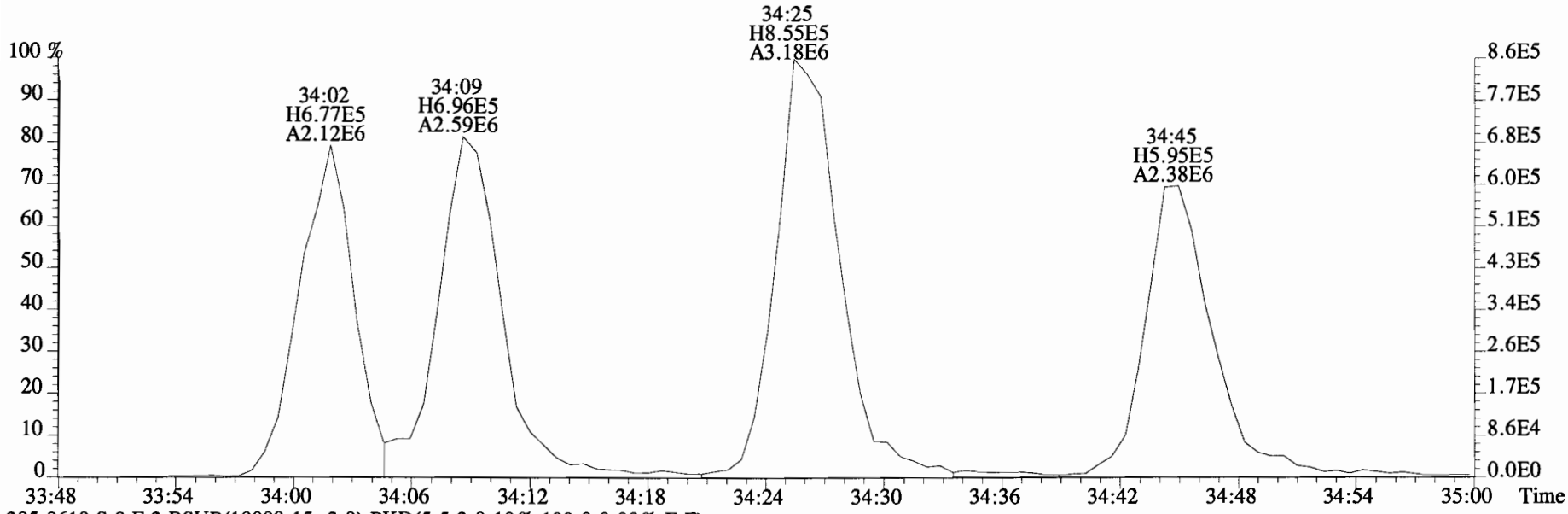
File:150102D2 #1-257 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5



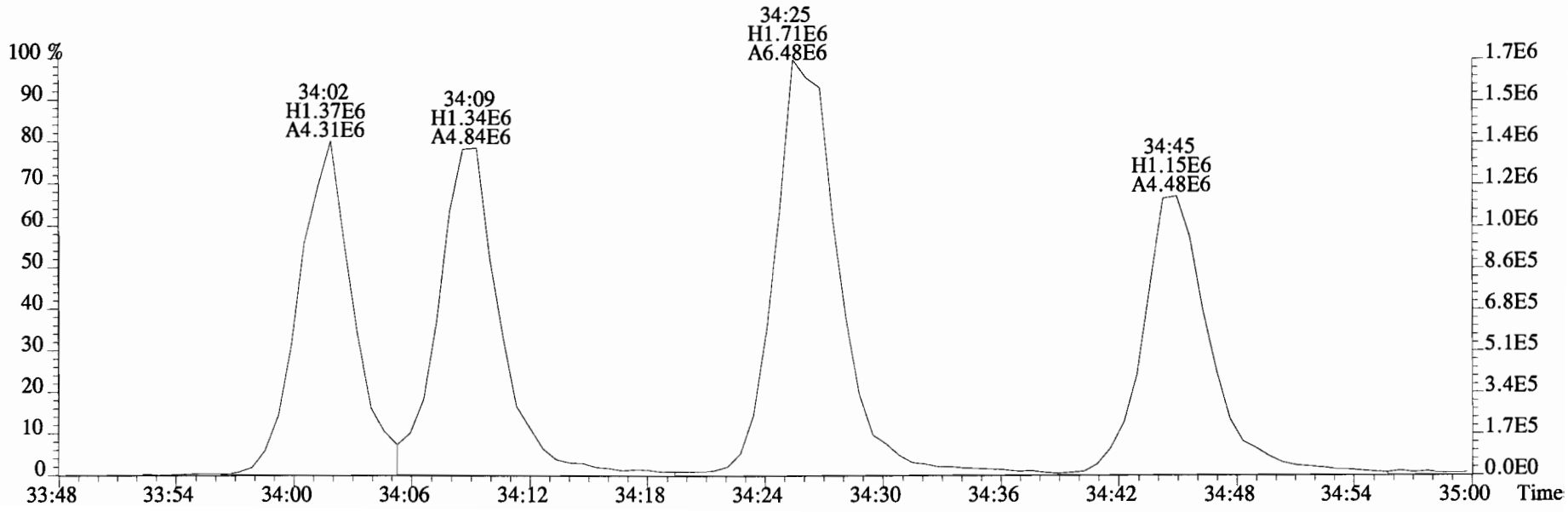
File:150102D2 #1-384 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5



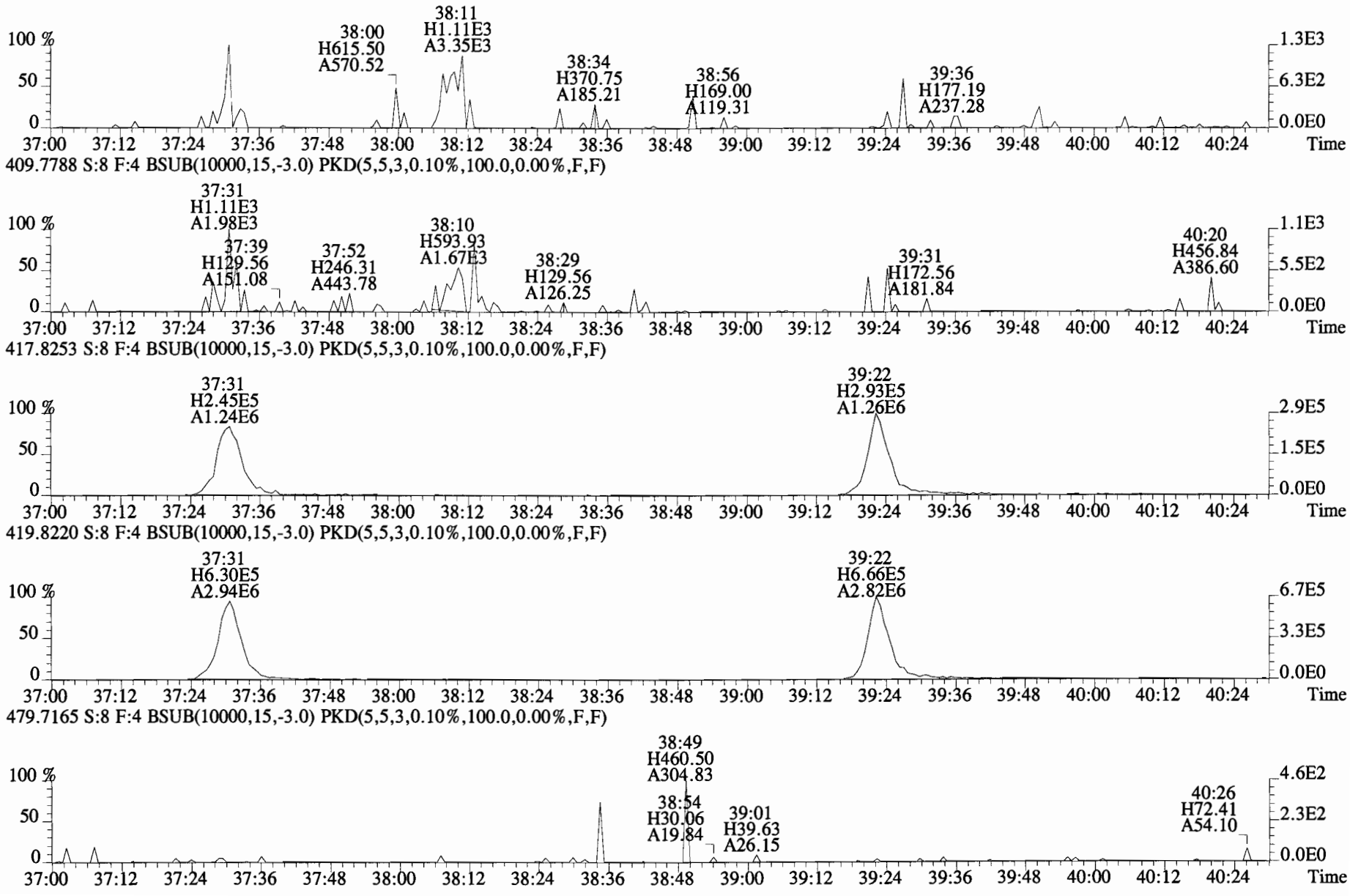
File:150102D2 #1-384 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

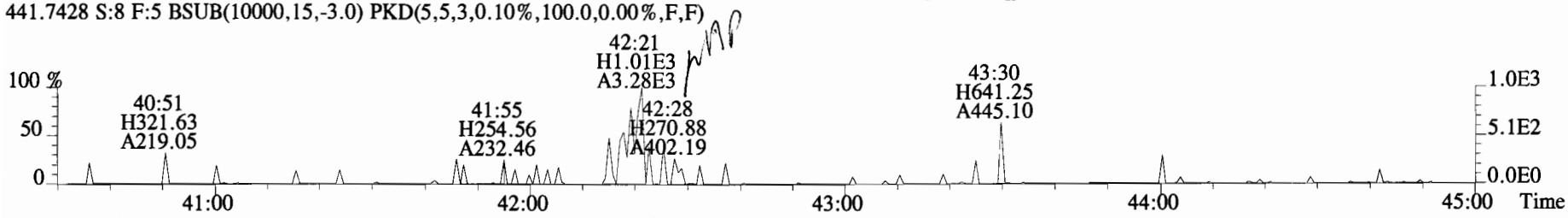


File:150102D2 #1-326 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5

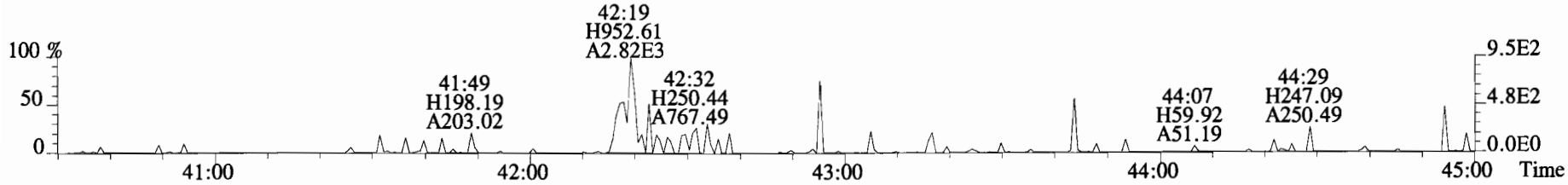


File:150102D2 #1-389 Acq: 3-JAN-2015 12:28:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400984-04 QC-EB-02-20141222-W 1 Exp:OCDD_DB5

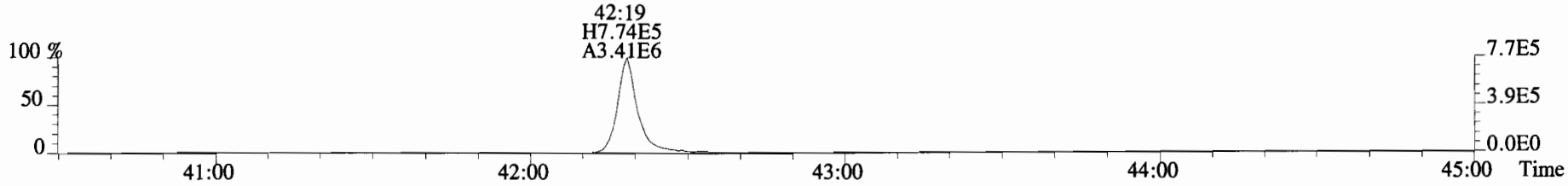
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



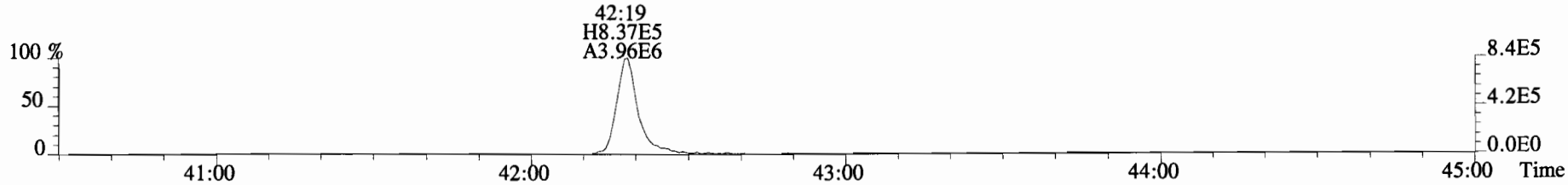
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



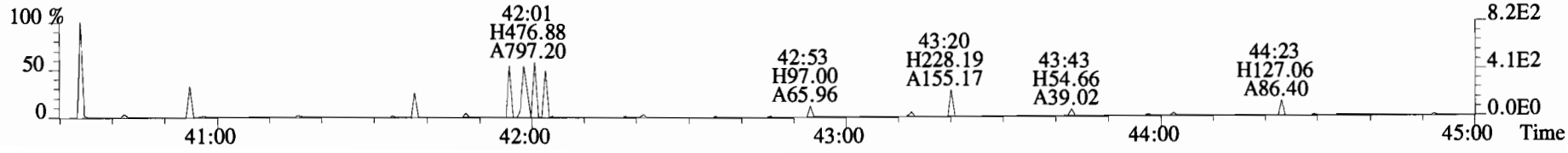
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



SAMPLE DATA

EPA Method 1668C

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1
Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF	1.25	*		2880	2.5	2.29	*	0.996	1.006
Mono	PCB-2	*	*	n	NotF	1.18	*		2880	2.5	2.35	*	0.983	0.993
Mono	PCB-3	*	*	n	NotF	1.22	*		2880	2.5	2.27	*	0.996	1.006
Di	PCB-4/10	*	*	n	NotF	1.55	*		25800	2.5	17.7	*	0.998	1.008
Di	PCB-7/9	*	*	n	NotF	1.27	*		25800	2.5	13.9	*	0.865	0.873
Di	PCB-6	*	*	n	NotF	1.26	*		25800	2.5	14.0	*	0.890	0.899
Di	PCB-5/8	*	*	n	NotF	1.23	*		25800	2.5	14.3	*	0.906	0.916
Di	PCB-14	*	*	n	NotF	1.23	*		25800	2.5	12.5	*	0.949	0.959
Di	PCB-11	1.21e+06	1.51	y	25:19	1.16	24.1		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	*	*	n	NotF	1.10	*		25800	2.5	14.0	*	1.010	1.020
Di	PCB-15	*	*	n	NotF	1.21	*		25800	2.5	12.8	*	1.024	1.034
Tri	PCB-19	*	*	n	NotF	1.30	*		1860	2.5	1.52	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF	1.83	*		1860	2.5	1.07	*	1.032	1.042
Tri	PCB-18	7.08e+04	1.07	y	25:57	0.86	2.60		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	*	*	n	NotF	0.90	*		1860	2.5	1.42	*	0.955	0.965
Tri	PCB-24/27	*	*	n	NotF	1.18	*		1860	2.5	1.08	*	0.976	0.986
Tri	PCB-16/32	*	*	n	NotF	1.03	*		1860	2.5	1.24	*	0.995	1.005
Tri	PCB-34	*	*	n	NotF	1.26	*		2150	2.5	1.15	*	0.956	0.966
Tri	PCB-23	*	*	n	NotF	1.31	*		2150	2.5	1.10	*	0.959	0.969
Tri	PCB-29	*	*	n	NotF	1.33	*		2150	2.5	1.09	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF	1.29	*		2150	2.5	1.12	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF	1.34	*		2150	2.5	1.08	*	0.980	0.990
Tri	PCB-31	7.33e+04	1.25	n	29:04	1.42	1.40	R	*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	8.13e+04	0.95	y	29:10	1.38	1.60		*	2.5	*	1.000	0.996	1.006
Tri	PCB-20/21/33	*	*	n	NotF	1.31	*		2150	2.5	1.10	*	1.017	1.027
Tri	PCB-22	*	*	n	NotF	1.32	*		2150	2.5	1.09	*	1.032	1.042
Tri	PCB-36	*	*	n	NotF	1.38	*		2150	2.5	1.12	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF	1.42	*		2150	2.5	1.09	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF	1.35	*		2150	2.5	1.14	*	0.967	0.976
Tri	PCB-35	*	*	n	NotF	1.38	*		2150	2.5	1.12	*	0.982	0.992
Tri	PCB-37	*	*	n	NotF	1.39	*		2150	2.5	1.11	*	0.996	1.006
Tetra	PCB-54	*	*	n	NotF	1.20	*		2150	2.5	1.38	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF	0.97	*		2150	2.5	1.71	*	1.037	1.047
Tetra	PCB-53	*	*	n	NotF	1.19	*		2150	2.5	1.60	*	0.941	0.951
Tetra	PCB-51	*	*	n	NotF	1.15	*		2150	2.5	1.65	*	0.952	0.962
Tetra	PCB-45	*	*	n	NotF	0.97	*		2150	2.5	1.97	*	0.966	0.976
Tetra	PCB-46	*	*	n	NotF	0.95	*		2150	2.5	2.00	*	0.982	0.992

Integrations by:

Analyst: DMS

Date: 1/5/15

Reviewed by: [signature] Date: 1/7/15

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1

Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	8.32e+04	0.92	n	31:36	1.28	2.58	R	*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF¶	1.37	*		2150	2.5	1.39	*	1.000	1.010
Tetra	PCB-43/49	*	*	n	NotF¶	1.11	*		2150	2.5	1.71	*	1.005	1.015
Tetra	PCB-47	*	*	n	NotF¶	1.13	*		2150	2.5	1.69	*	0.996	1.006
Tetra	PCB-48/75	*	*	n	NotF¶	1.30	*		2150	2.5	1.47	*	0.999	1.009
Tetra	PCB-65	*	*	n	NotF¶	1.33	*		2150	2.5	1.44	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF¶	1.29	*		2150	2.5	1.48	*	1.011	1.021
Tetra	PCB-44	6.90e+04	0.93	n	32:53	0.94	2.88	R	*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	*	*	n	NotF¶	1.22	*		2150	2.5	1.58	*	1.028	1.038
Tetra	PCB-41/64/71/72	7.82e+04	0.98	n	33:43	1.31	2.34	R	*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	*	*	n	NotF¶	1.49	*		2150	2.5	1.29	*	1.054	1.064
Tetra	PCB-40	*	*	n	NotF¶	0.82	*		2150	2.5	2.34	*	1.061	1.071
Tetra	PCB-57	*	*	n	NotF¶	1.11	*		2150	2.5	1.44	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF¶	1.07	*		2150	2.5	1.49	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF¶	1.10	*		2150	2.5	1.46	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF¶	1.12	*		2150	2.5	1.43	*	0.982	0.992
Tetra	PCB-74	*	*	n	NotF¶	1.20	*		2150	2.5	1.33	*	0.990	1.000
Tetra	PCB-61/70	9.19e+04	0.78	y	35:39	1.08	2.51		*	2.5	*	1.001	0.994	1.004
Tetra	PCB-76/66	*	*	n	NotF¶	1.14	*		2150	2.5	1.41	*	1.001	1.011
Tetra	PCB-80	*	*	n	NotF¶	1.28	*		2150	2.5	1.38	*	0.996	1.006
Tetra	PCB-55	*	*	n	NotF¶	1.11	*		2150	2.5	1.58	*	1.005	1.015
Tetra	PCB-56/60	*	*	n	NotF¶	1.09	*		2150	2.5	1.62	*	1.018	1.028
Tetra	PCB-79	*	*	n	NotF¶	1.12	*		2150	2.5	1.56	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF¶	1.24	*		2150	2.5	1.64	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF¶	1.38	*		2150	2.5	1.47	*	0.995	1.005
Tetra	PCB-77	*	*	n	NotF¶	1.21	*		2150	2.5	1.73	*	0.995	1.005
Penta	PCB-104	*	*	n	NotF¶	1.26	*		1880	2.5	2.55	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF¶	1.09	*		1880	2.5	2.95	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF¶	0.93	*		1880	2.5	3.45	*	1.050	1.060
Penta	PCB-100	*	*	n	NotF¶	1.00	*		1880	2.5	3.21	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF¶	1.11	*		1880	2.5	4.14	*	0.981	0.991
Penta	PCB-95/98/102	*	*	n	NotF¶	1.21	*		1880	2.5	3.78	*	0.994	1.004
Penta	PCB-93	*	*	n	NotF¶	1.13	*		1880	2.5	4.06	*	0.998	1.008
Penta	PCB-88/91	*	*	n	NotF¶	1.02	*		1880	2.5	4.50	*	1.006	1.016
Penta	PCB-121	*	*	n	NotF¶	1.90	*		1880	2.5	2.41	*	1.009	1.019
Penta	PCB-84/92	*	*	n	NotF¶	1.05	*		1880	2.5	4.18	*	0.986	0.996
Penta	PCB-89	*	*	n	NotF¶	1.02	*		1880	2.5	4.33	*	0.991	1.001

Analyst: DMS

Date: 1/5/15

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1
Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Penta	PCB-90/101	*	*	n NotF¶	1.19	*		1880	2.5	3.70	*	0.996-1.006
Penta	PCB-113	*	*	n NotF¶	1.35	*		1880	2.5	3.26	*	1.002-1.012
Penta	PCB-99	*	*	n NotF¶	1.29	*		1880	2.5	3.42	*	1.005-1.015
Penta	PCB-119	*	*	n NotF¶	1.72	*		1880	2.5	2.96	*	0.982-0.992
Penta	PCB-108/112	*	*	n NotF¶	1.29	*		1880	2.5	3.96	*	0.986-0.996
Penta	PCB-83	*	*	n NotF¶	1.52	*		1880	2.5	3.35	*	0.991-1.001
Penta	PCB-97	*	*	n NotF¶	1.25	*		1880	2.5	4.08	*	0.996-1.006
Penta	PCB-86	*	*	n NotF¶	1.02	*		1880	2.5	4.99	*	1.000-1.010
Penta	PCB-87/117/125	*	*	n NotF¶	1.56	*		1880	2.5	3.27	*	1.002-1.012
Penta	PCB-111/115	*	*	n NotF¶	1.75	*		1880	2.5	2.91	*	1.007-1.017
Penta	PCB-85/116	*	*	n NotF¶	1.30	*		1880	2.5	3.92	*	1.010-1.020
Penta	PCB-120	*	*	n NotF¶	1.78	*		1880	2.5	2.86	*	1.016-1.026
Penta	PCB-110	*	*	n NotF¶	1.68	*		1880	2.5	3.03	*	1.020-1.030
Penta	PCB-82	*	*	n NotF¶	0.74	*		1880	2.5	5.34	*	0.972-0.982
Penta	PCB-124	*	*	n NotF¶	1.32	*		1880	2.5	2.98	*	0.988-0.998
Penta	PCB-107/109	*	*	n NotF¶	1.22	*		1880	2.5	3.23	*	0.991-1.001
Penta	PCB-123	*	*	n NotF¶	1.22	*		1880	2.5	3.24	*	0.995-1.005
Penta	PCB-106/118	*	*	n NotF¶	1.22	*		1880	2.5	3.09	*	0.996-1.006
Penta	PCB-114	*	*	n NotF¶	1.36	*		2040	2.5	2.41	*	0.995-1.005
Penta	PCB-122	*	*	n NotF¶	1.24	*		2040	2.5	2.65	*	0.999-1.009
Penta	PCB-105	*	*	n NotF¶	1.28	*		2040	2.5	2.49	*	0.995-1.005
Penta	PCB-127	*	*	n NotF¶	1.14	*		2040	2.5	2.57	*	0.995-1.005
Penta	PCB-126	*	*	n NotF¶	1.28	*		2040	2.5	2.39	*	0.995-1.005
Hexa	PCB-155	*	*	n NotF¶	1.14	*		1510	2.5	2.84	*	0.966-1.006
Hexa	PCB-150	*	*	n NotF¶	1.06	*		1510	2.5	3.04	*	1.030-1.040
Hexa	PCB-152	*	*	n NotF¶	1.10	*		1510	2.5	2.94	*	1.043-1.053
Hexa	PCB-145	*	*	n NotF¶	1.09	*		1510	2.5	2.96	*	1.055-1.065
Hexa	PCB-136	*	*	n NotF¶	1.08	*		1510	2.5	2.98	*	1.064-1.074
Hexa	PCB-148	*	*	n NotF¶	0.74	*		1510	2.5	4.36	*	1.066-1.076
Hexa	PCB-154	*	*	n NotF¶	0.88	*		1510	2.5	3.66	*	1.079-1.089
Hexa	PCB-151	*	*	n NotF¶	0.81	*		1510	2.5	3.99	*	1.097-1.107
Hexa	PCB-135	*	*	n NotF¶	0.78	*		1510	2.5	4.15	*	1.101-1.113
Hexa	PCB-144	*	*	n NotF¶	0.82	*		1510	2.5	3.94	*	1.105-1.116
Hexa	PCB-147	*	*	n NotF¶	0.83	*		1510	2.5	3.90	*	1.011-1.120
Hexa	PCB-139/149	*	*	n NotF¶	0.84	*		1510	2.5	3.83	*	1.115-1.127
Hexa	PCB-140	*	*	n NotF¶	0.79	*		1510	2.5	4.12	*	1.120-1.132
Hexa	PCB-134/143	*	*	n NotF¶	0.93	*		2230	2.5	3.49	*	0.970-0.980

Analyst: DMS

Date: 1/5/15

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1 Page 5 of
Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n	NotFnd	0.95	*		2230	2.5	3.42	*	0.977	0.987
Hexa	PCB-131	*	*	n	NotFnd	0.91	*		2230	2.5	3.54	*	0.981	0.991
Hexa	PCB-146/165	*	*	n	NotFnd	1.16	*		2230	2.5	2.80	*	0.986	0.996
Hexa	PCB-132/161	*	*	n	NotFnd	1.11	*		2230	2.5	2.90	*	0.992	1.002
Hexa	PCB-153	*	*	n	NotFnd	1.18	*		2230	2.5	2.74	*	0.995	1.005
Hexa	PCB-168	*	*	n	NotFnd	1.37	*		2230	2.5	2.36	*	1.000	1.010
Hexa	PCB-141	*	*	n	NotFnd	0.97	*		2230	2.5	3.52	*	0.996	1.005
Hexa	PCB-137	*	*	n	NotFnd	1.07	*		2230	2.5	3.20	*	1.004	1.014
Hexa	PCB-130	*	*	n	NotFnd	0.85	*		2230	2.5	4.04	*	1.007	1.017
Hexa	PCB-138/163/164	*	*	n	NotFnd	1.23	*		2230	2.5	2.65	*	0.996	1.006
Hexa	PCB-158/160	*	*	n	NotFnd	1.29	*		2230	2.5	2.52	*	1.001	1.011
Hexa	PCB-129	*	*	n	NotFnd	0.92	*		2230	2.5	3.52	*	1.007	1.017
Hexa	PCB-166	*	*	n	NotFnd	1.12	*		2230	2.5	2.39	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotFnd	1.16	*		2230	2.5	2.29	*	0.995	1.005
Hexa	PCB-128/162	*	*	n	NotFnd	1.02	*		2230	2.5	2.62	*	1.002	1.012
Hexa	PCB-167	*	*	n	NotFnd	1.06	*		2230	2.5	2.19	*	0.995	1.005
Hexa	PCB-156	*	*	n	NotFnd	1.18	*		2230	2.5	2.04	*	0.995	1.005
Hexa	PCB-157	*	*	n	NotFnd	1.08	*		2230	2.5	2.19	*	0.995	1.005
Hexa	PCB-169	*	*	n	NotFnd	1.11	*		2230	2.5	2.28	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotFnd	1.40	*		1880	2.5	1.71	*	0.995	1.005
Hepta	PCB-184	*	*	n	NotFnd	1.24	*		1880	2.5	1.94	*	1.006	1.016
Hepta	PCB-179	*	*	n	NotFnd	1.30	*		1880	2.5	1.84	*	1.024	1.034
Hepta	PCB-176	*	*	n	NotFnd	1.36	*		1880	2.5	1.76	*	1.035	1.045
Hepta	PCB-186	*	*	n	NotFnd	1.28	*		1880	2.5	1.88	*	1.049	1.059
Hepta	PCB-178	*	*	n	NotFnd	0.94	*		1880	2.5	2.56	*	1.061	1.071
Hepta	PCB-175	*	*	n	NotFnd	0.97	*		1880	2.5	2.47	*	1.069	1.079
Hepta	PCB-182/187	*	*	n	NotFnd	1.01	*		1880	2.5	2.36	*	1.073	1.083
Hepta	PCB-183	*	*	n	NotFnd	1.08	*		1880	2.5	2.21	*	1.080	1.090
Hepta	PCB-185	*	*	n	NotFnd	1.34	*		1880	2.5	1.94	*	0.951	0.961
Hepta	PCB-174	*	*	n	NotFnd	1.34	*		1880	2.5	1.94	*	0.958	0.968
Hepta	PCB-181	*	*	n	NotFnd	1.36	*		1880	2.5	1.91	*	0.961	0.971
Hepta	PCB-177	*	*	n	NotFnd	1.24	*		1880	2.5	2.10	*	0.964	0.974
Hepta	PCB-171	*	*	n	NotFnd	1.31	*		1880	2.5	1.98	*	0.970	0.980
Hepta	PCB-173	*	*	n	NotFnd	1.16	*		1880	2.5	2.24	*	0.979	0.989
Hepta	PCB-172	*	*	n	NotFnd	1.22	*		1880	2.5	2.13	*	0.988	0.998
Hepta	PCB-192	*	*	n	NotFnd	1.53	*		1880	2.5	1.70	*	0.991	1.001
Hepta	PCB-180	*	*	n	NotFnd	1.43	*		1880	2.5	1.82	*	0.995	1.005

Analyst: DMS

Date: 1/5/15

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1
Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n NotF	1.65	*		1880	2.5	1.57	*	0.999	1.009
Hepta	PCB-191	*	*	n NotF	1.67	*		1880	2.5	1.56	*	1.004	1.014
Hepta	PCB-170	*	*	n NotF	1.50	*		1880	2.5	2.02	*	0.995	1.005
Hepta	PCB-190	*	*	n NotF	2.02	*		1880	2.5	1.50	*	0.998	1.008
Hepta	PCB-189	*	*	n NotF	1.54	*		1880	2.5	1.47	*	0.995	1.005
Octa	PCB-202	*	*	n NotF	1.04	*		2000	2.5	3.35	*	0.995	1.005
Octa	PCB-201	*	*	n NotF	1.10	*		2000	2.5	3.17	*	1.006	1.016
Octa	PCB-204	*	*	n NotF	0.99	*		2000	2.5	3.51	*	1.009	1.019
Octa	PCB-197	*	*	n NotF	1.07	*		2000	2.5	3.25	*	1.015	1.025
Octa	PCB-200	*	*	n NotF	1.02	*		2000	2.5	3.43	*	1.032	1.044
Octa	PCB-198	*	*	n NotF	0.74	*		2000	2.5	4.70	*	1.058	1.068
Octa	PCB-199	*	*	n NotF	0.73	*		2000	2.5	4.79	*	1.060	1.070
Octa	PCB-196/203	*	*	n NotF	0.77	*		2000	2.5	4.52	*	1.066	1.076
Octa	PCB-195	*	*	n NotF	1.20	*		1500	2.5	1.36	*	0.979	0.989
Octa	PCB-194	*	*	n NotF	1.25	*		1500	2.5	1.31	*	0.995	1.005
Octa	PCB-205	*	*	n NotF	1.41	*		1500	2.5	1.15	*	1.001	1.011
Nona	PCB-208	*	*	n NotF	0.96	*		1250	2.5	1.01	*	0.995	1.005
Nona	PCB-207	*	*	n NotF	0.92	*		1250	2.5	1.07	*	1.001	1.011
Nona	PCB-206	*	*	n NotF	1.03	*		1250	2.5	1.82	*	0.995	1.005
Deca	PCB-209	*	*	n NotF	1.18	*		1100	2.5	2.08	*	0.995	1.005

Analyst: DMS

Date: 1/5/15

Client ID: Method Blank
Lab ID: B5A0001-BLK2

Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1
GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.22	*	
Total Di-PCB	1.21e+06	1.51	y	25:19	1.21	24.1114	
Total Tri-PCB	7.08e+04	1.07	y	25:57	1.16	2.59748	
Total Tri-PCB	8.13e+04	0.95	y	29:10	1.35	1.60431	Sum:4.20179
Total Tetra-PCB	9.19e+04	0.78	y	35:39	1.17	2.51152	
Total Penta-PCB	*	*	n	NotFnd	1.21	*	
Total Penta-PCB	*	*	n	NotFnd	1.26	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.92	*	
Total Hexa-PCB	*	*	n	NotFnd	1.08	*	Sum:0.00000
Total Hepta-PCB	*	*	n	NotFnd	1.27	*	
Total Octa-PCB	*	*	n	NotFnd	0.92	*	
Total Octa-PCB	*	*	n	NotFnd	1.29	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	0.96	*	
Total Deca-PCB	*	*	n	NotFnd	1.18	*	

Total PCB Conc:~~4~~30.8351770000

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Integrations by Analyst: DMJ

Date: 1/5/15

Client ID: Method Blank Filename: 150102E2 S:6 Acq: 2-JAN-15 17:51:35 ConCal: ST150102E2-1
Lab ID: B5A0001-BLK2 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.66e+07	3.32	y	0.89	16:10	0.622	0.622	0.628	1400	70.2
13C-PCB-3	7.50e+07	3.38	y	0.93	18:47	0.723	0.721	0.729	1520	75.9
13C-PCB-4	4.35e+07	1.59	y	0.55	20:08	0.774	0.772	0.780	1490	74.5
13C-PCB-9	7.05e+07	1.61	y	0.83	21:55	0.843	0.840	0.848	1600	79.9
13C-PCB-11	8.69e+07	1.58	y	0.94	25:18	0.973	0.968	0.978	1740	86.9
13C-PCB-19	3.90e+07	1.12	y	0.53	24:17	0.934	0.929	0.939	1370	68.6
13C-PCB-28	7.35e+07	1.08	y	0.89	29:10	1.004	0.999	1.009	1700	85.0
13C-PCB-32	6.35e+07	1.11	y	0.81	27:12	1.046	1.041	1.051	1460	73.1
13C-PCB-37	7.74e+07	1.05	y	0.83	33:02	1.137	1.131	1.143	1910	95.6
13C-PCB-47	5.10e+07	0.80	y	0.74	32:05	0.870	0.867	0.875	1950	97.3
13C-PCB-52	5.04e+07	0.81	y	0.71	31:35	0.857	0.853	0.861	2020	101
13C-PCB-54	5.56e+07	0.82	y	0.85	28:02	0.761	0.758	0.766	1860	92.9
13C-PCB-70	6.77e+07	0.81	y	0.94	35:37	0.966	0.961	0.971	2040	102
13C-PCB-77	5.55e+07	0.84	y	0.89	39:46	1.079	1.073	1.083	1760	88.2
13C-PCB-80	6.54e+07	0.81	y	0.96	36:03	0.978	0.972	0.982	1930	96.4
13C-PCB-81	5.43e+07	0.80	y	0.84	39:10	1.062	1.057	1.067	1840	91.9
13C-PCB-95	2.86e+07	1.61	y	0.74	35:55	0.912	0.908	0.918	1920	95.9
13C-PCB-97	2.72e+07	1.63	y	0.69	38:55	0.989	0.984	0.994	1960	98.1
13C-PCB-101	3.00e+07	1.53	y	0.79	37:37	0.956	0.951	0.961	1910	95.3
13C-PCB-104	3.86e+07	1.59	y	1.00	32:44	0.832	0.829	0.837	1930	96.6
13C-PCB-105	4.73e+07	1.63	y	1.24	43:11	0.929	0.924	0.934	1710	85.3
13C-PCB-114	4.52e+07	1.64	y	1.21	42:20	0.911	0.905	0.915	1670	83.5
13C-PCB-118	3.65e+07	1.59	y	0.98	41:40	1.059	1.054	1.064	1840	92.2
13C-PCB-123	3.33e+07	1.55	y	0.95	41:30	1.054	1.049	1.059	1750	87.5
13C-PCB-126	4.85e+07	1.60	y	1.16	45:25	0.978	0.972	0.982	1860	93.2
13C-PCB-127	5.18e+07	1.66	y	1.34	43:33	0.937	0.931	0.941	1720	86.1
13C-PCB-138	4.20e+07	1.30	y	1.04	44:55	0.967	0.961	0.971	1800	89.8
13C-PCB-141	4.05e+07	1.29	y	1.07	44:05	0.949	0.943	0.953	1690	84.4
13C-PCB-153	4.24e+07	1.32	y	1.11	43:22	0.933	0.927	0.937	1700	85.0
13C-PCB-155	2.98e+07	1.31	y	0.83	37:09	0.944	0.939	0.949	1790	89.3
13C-PCB-156	5.58e+07	1.30	y	1.24	48:10	1.037	1.032	1.042	2000	100.0
13C-PCB-157	5.88e+07	1.30	y	1.31	48:26	1.042	1.037	1.047	2000	100
13C-PCB-159	5.14e+07	1.31	y	1.20	46:13	0.995	0.989	0.999	1910	95.6
13C-PCB-167	5.76e+07	1.32	y	1.32	46:53	1.009	1.004	1.014	1950	97.4
13C-PCB-169	5.25e+07	1.29	y	1.22	50:36	1.089	1.082	1.092	1930	96.5
13C-PCB-170	2.19e+07	0.47	y	0.54	50:58	1.097	1.089	1.101	1820	91.1
13C-PCB-180	2.70e+07	0.48	y	0.67	49:27	1.064	1.059	1.069	1790	89.6
13C-PCB-188	3.10e+07	0.47	y	0.94	42:59	0.925	0.919	0.929	1480	74.0
13C-PCB-189	2.75e+07	0.46	y	0.72	52:31	1.130	1.120	1.132	1720	85.8
13C-PCB-194	3.58e+07	0.92	y	0.81	54:02	0.995	0.990	1.000	1930	96.6
13C-PCB-202	2.80e+07	0.93	y	0.83	48:22	1.041	1.036	1.046	1500	75.0
13C-PCB-206	2.81e+07	0.79	y	0.66	55:39	1.024	1.021	1.031	1870	93.4
13C-PCB-208	4.39e+07	0.78	y	1.12	53:18	0.981	0.976	0.986	1710	85.3
13C-PCB-209	2.62e+07	1.22	y	0.61	57:01	1.050	1.044	1.054	1870	93.3

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.28e+07	0.82	y	1.01	37:56	1.029	1.023	1.033	2060	103
13C-PCB-178	2.65e+07	0.46	y	0.63	45:46	0.985	0.979	0.989	1880	93.9

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.28e+07	0.82	y	1.20	37:56	0.969	0.963	0.973	2240	112
13C-PCB-178	2.65e+07	0.46	y	0.94	45:46	0.925	0.920	0.930	2090	105

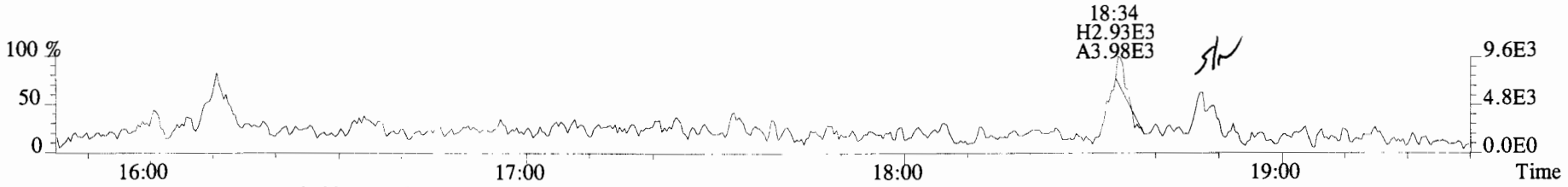
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.07e+08	1.59	y	1.00	26:00	2000
13C-PCB-31	9.74e+07	1.06	y	1.00	29:04	2000
13C-PCB-60	7.04e+07	0.83	y	1.00	36:52	2000
13C-PCB-111	4.02e+07	1.61	y	1.00	39:22	2000
13C-PCB-128	4.48e+07	1.29	y	1.00	46:28	2000
13C-PCB-205	4.57e+07	0.91	y	1.00	54:19	2000

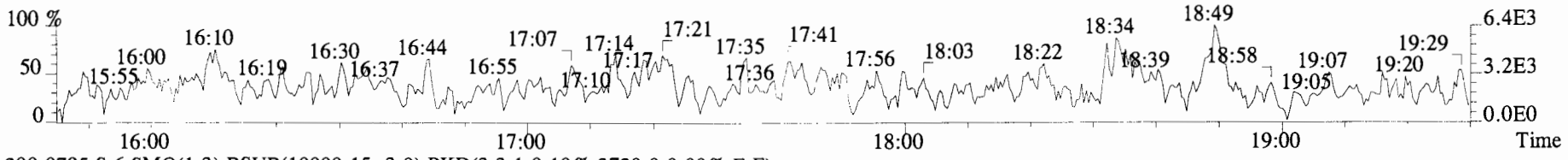
Analyst: DMS

Date: 1/5/15

File:150102E2 #1-728 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2472.0,0.00%,F,F)

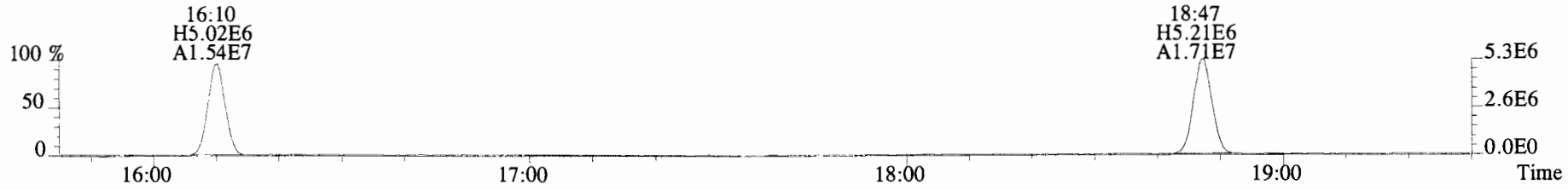


190.0363 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2876.0,0.00%,F,F)

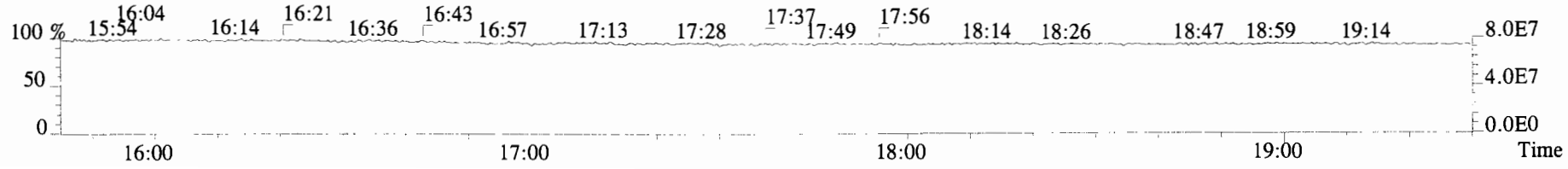


200.0795 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3720.0,0.00%,F,F)

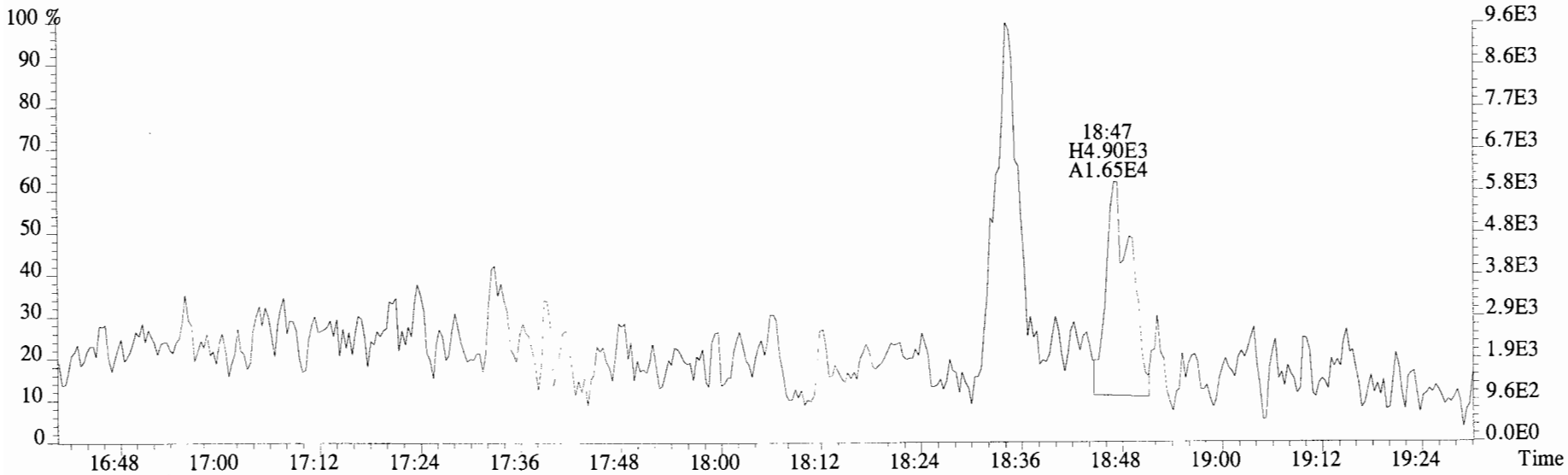
202.0766 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,31864.0,0.00%,F,F)



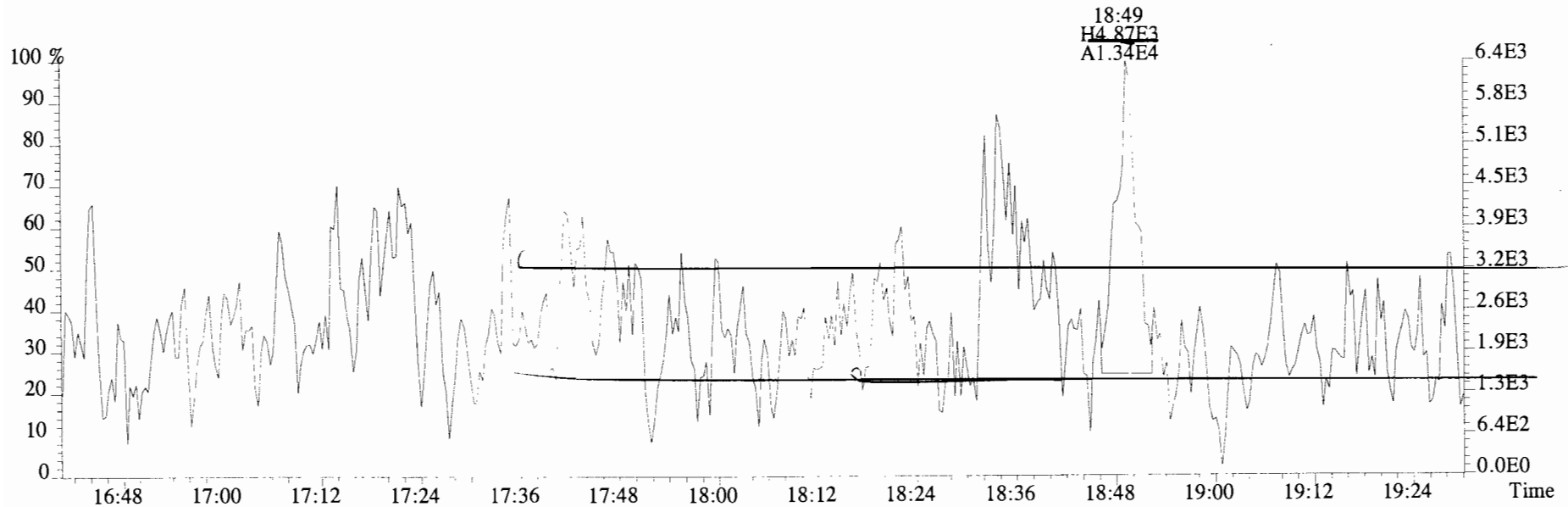
180.9880 S:6



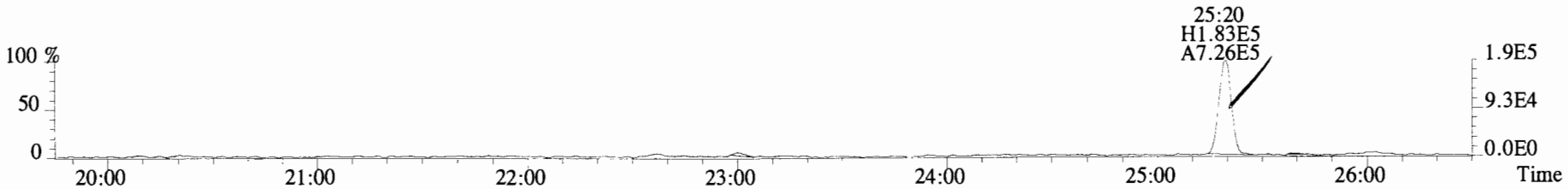
File:150102E2 #1-728 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2472.0,0.00%,F,F)



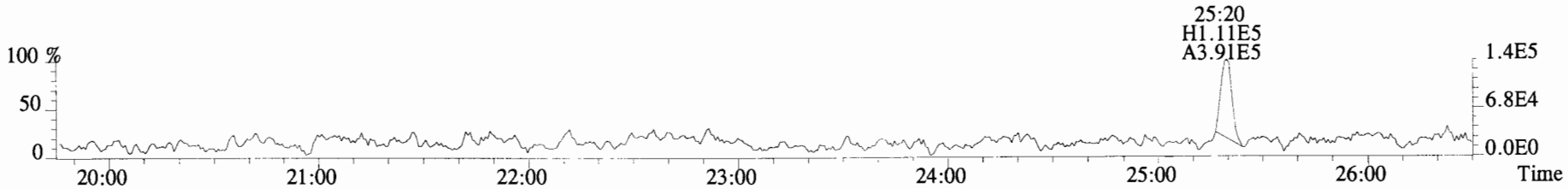
190.0363 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2876.0,0.00%,F,F)



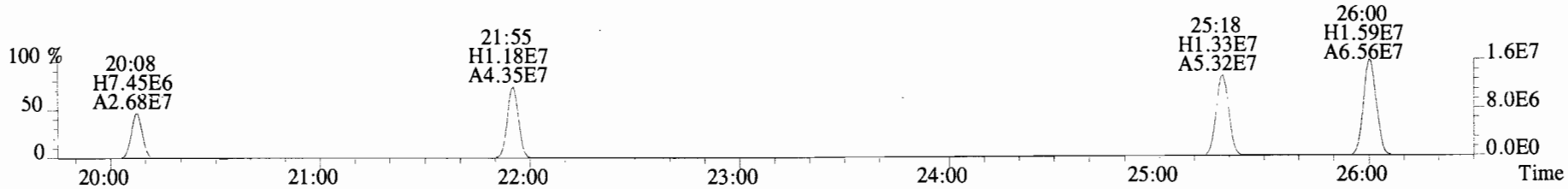
File:150102E2 #1-758 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3456.0,0.00%,F,F)



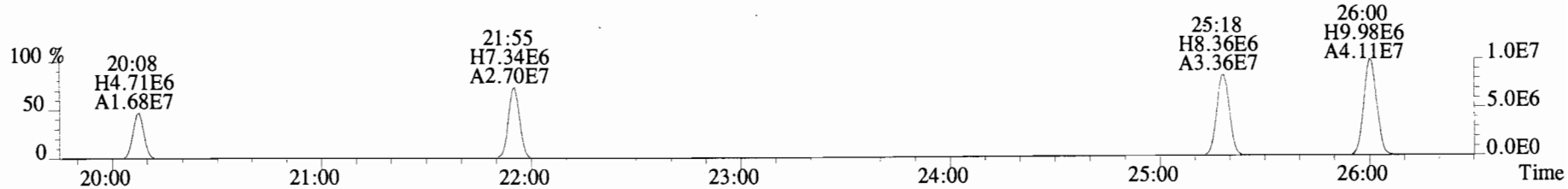
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25816.0,0.00%,F,F)



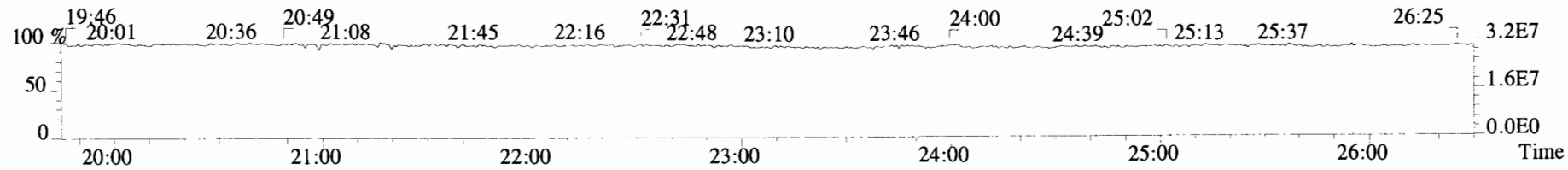
234.0406 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3656.0,0.00%,F,F)



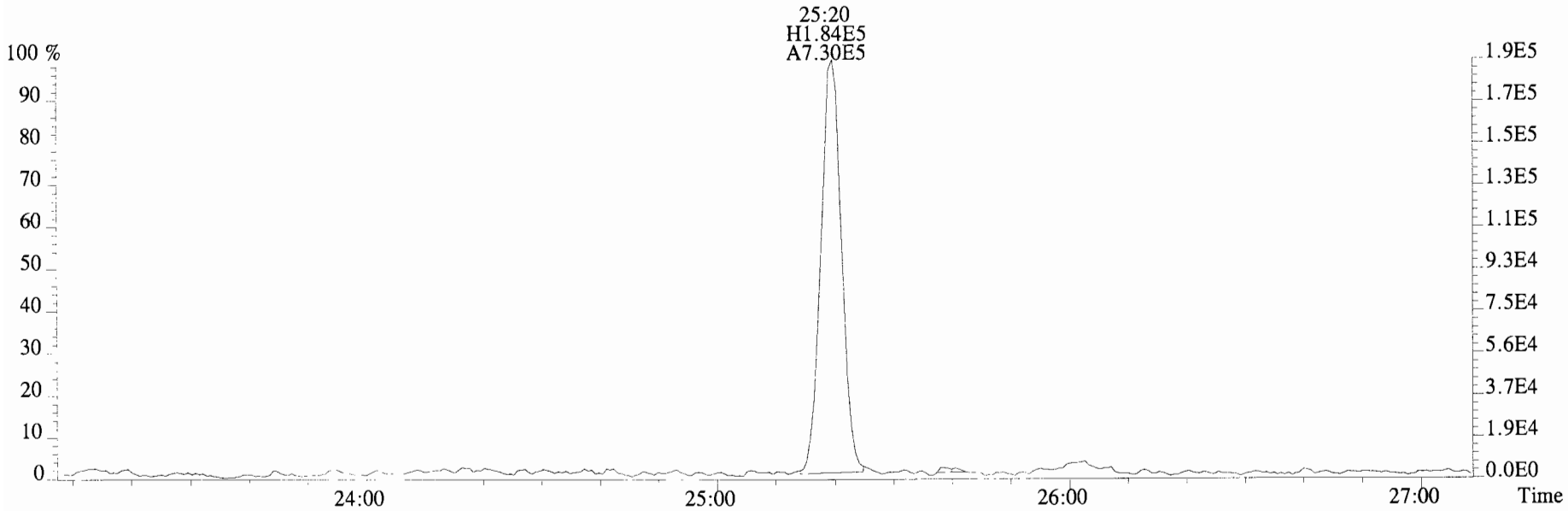
236.0376 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3864.0,0.00%,F,F)



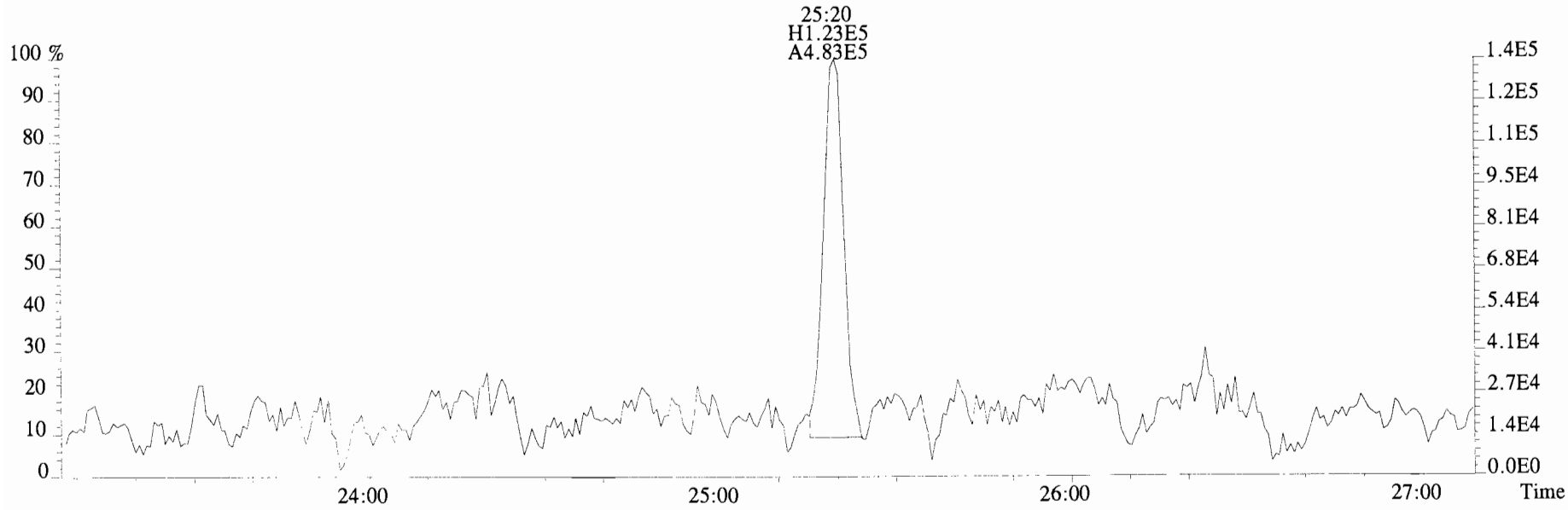
230.9856 S:6 F:2



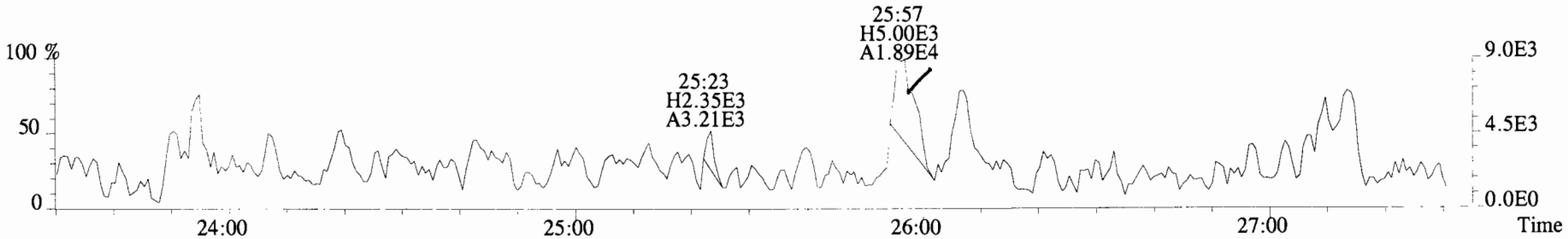
File:150102E2 #1-758 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3456.0,0.00%,F,F)



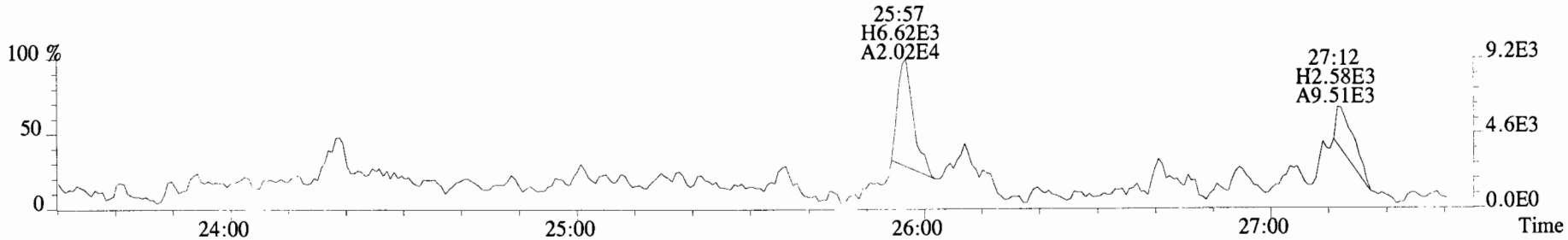
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25816.0,0.00%,F,F)



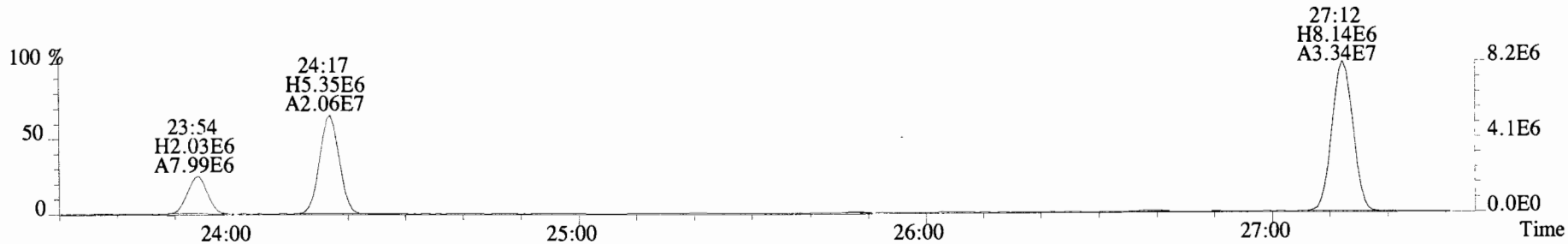
File:150102E2 #1-758 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2960.0,0.00%,F,F)



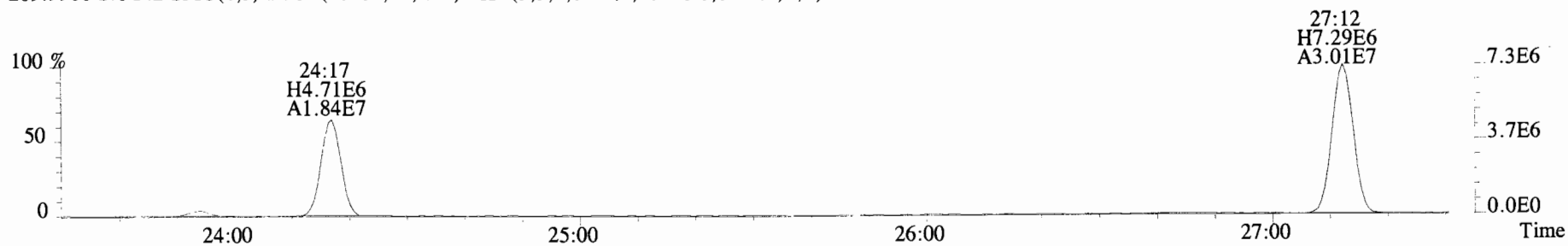
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1860.0,0.00%,F,F)



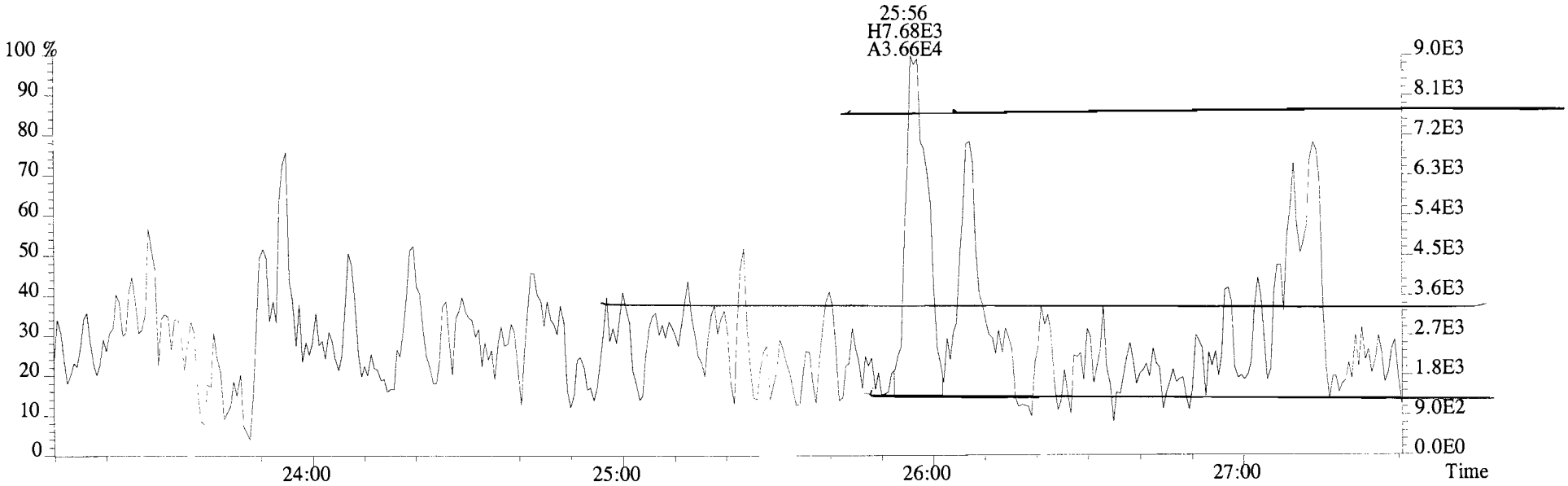
268.0016 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,26900.0,0.00%,F,F)



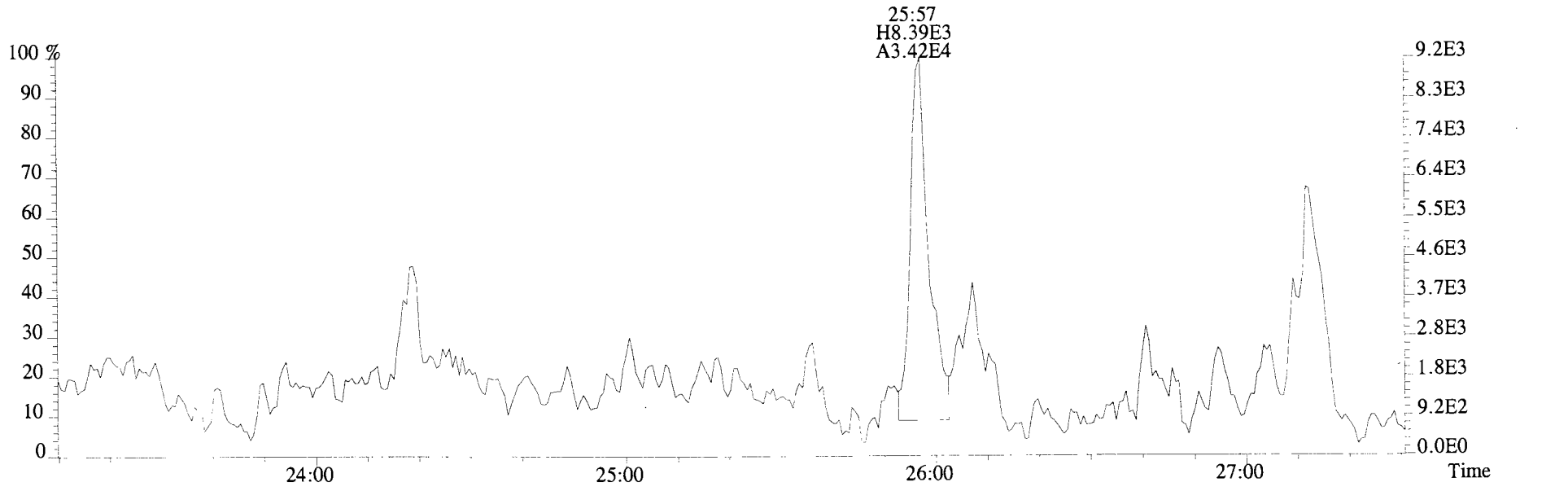
269.9986 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,20276.0,0.00%,F,F)



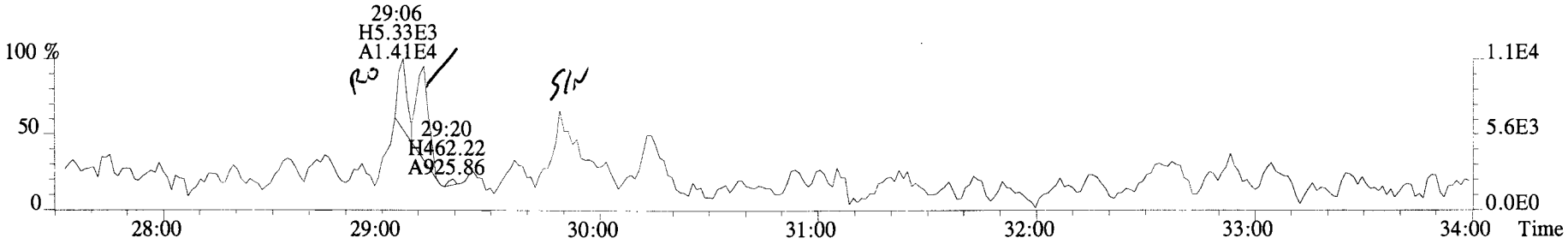
File:150102E2 #1-758 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2960.0,0.00%,F,F)



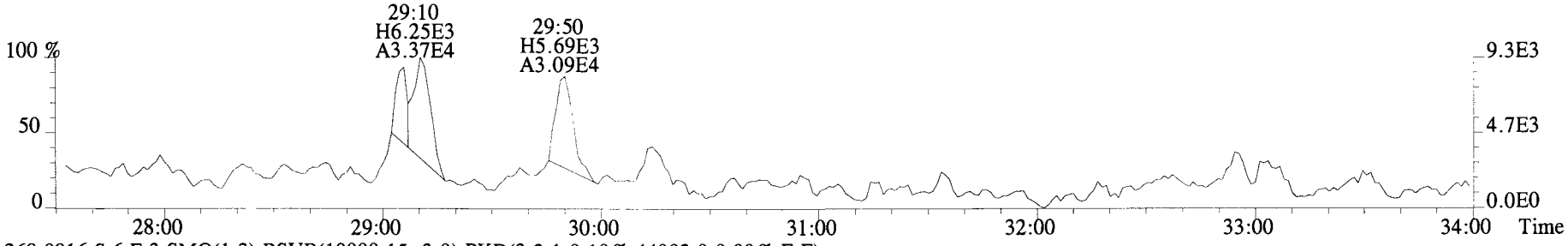
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1860.0,0.00%,F,F)



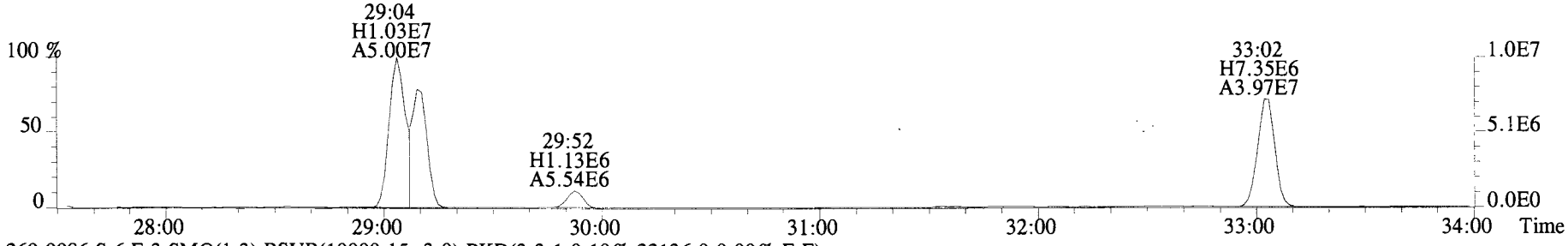
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2748.0,0.00%,F,F)



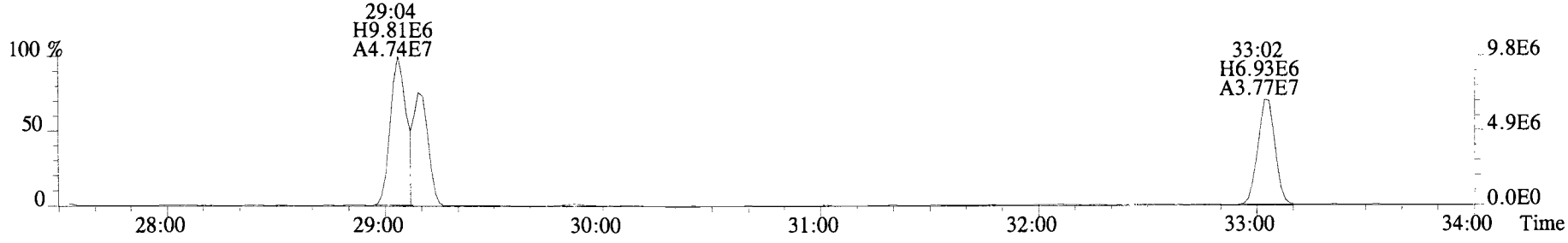
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2152.0,0.00%,F,F)



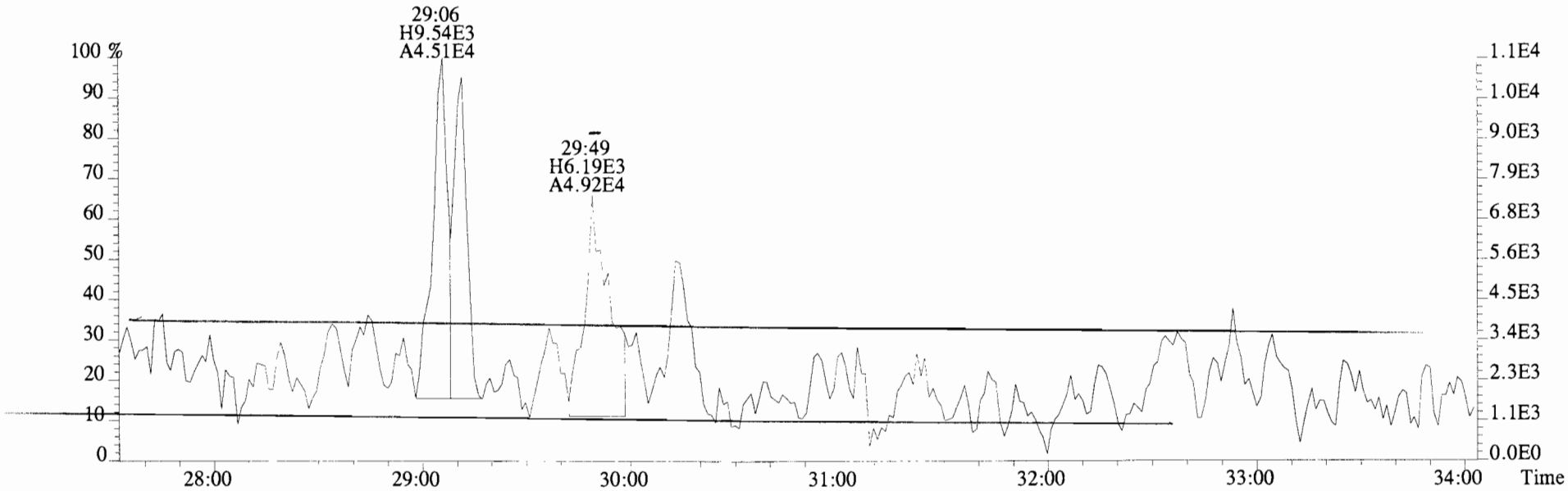
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,44092.0,0.00%,F,F)



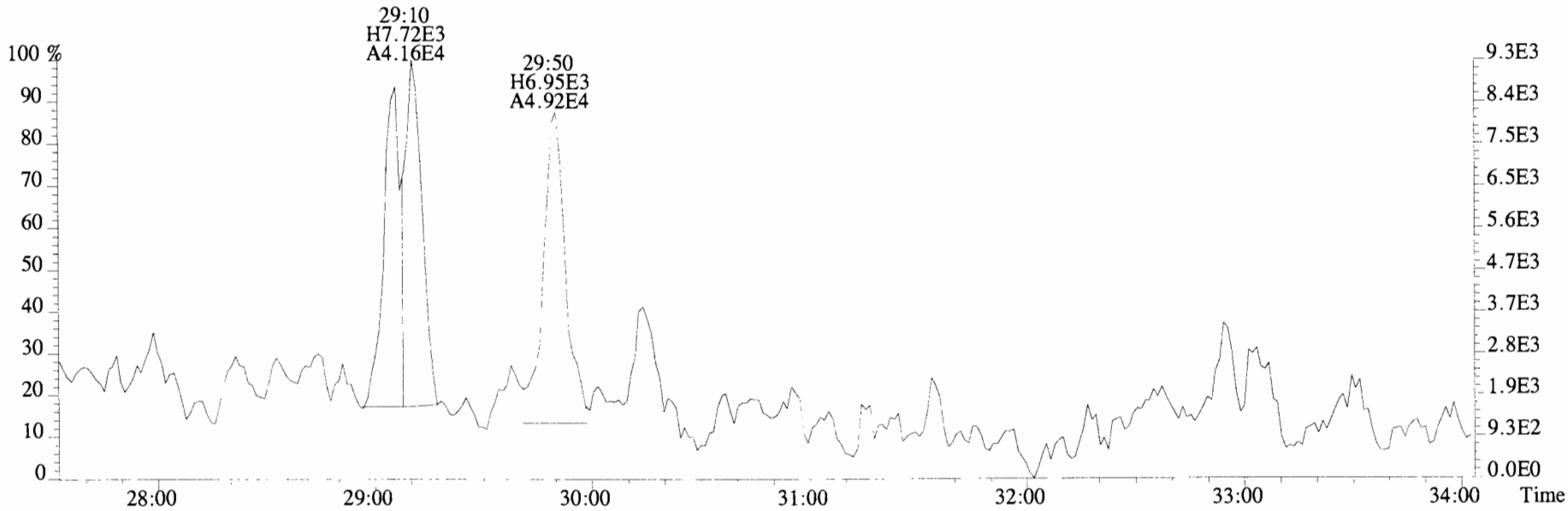
269.9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,22136.0,0.00%,F,F)



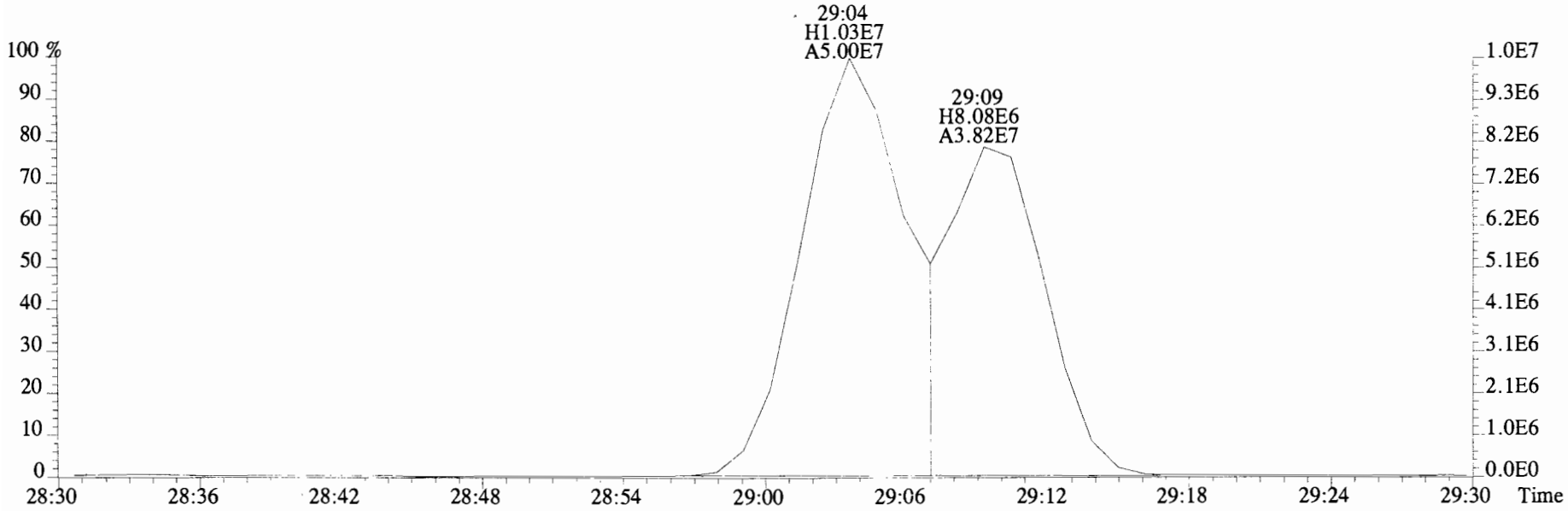
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



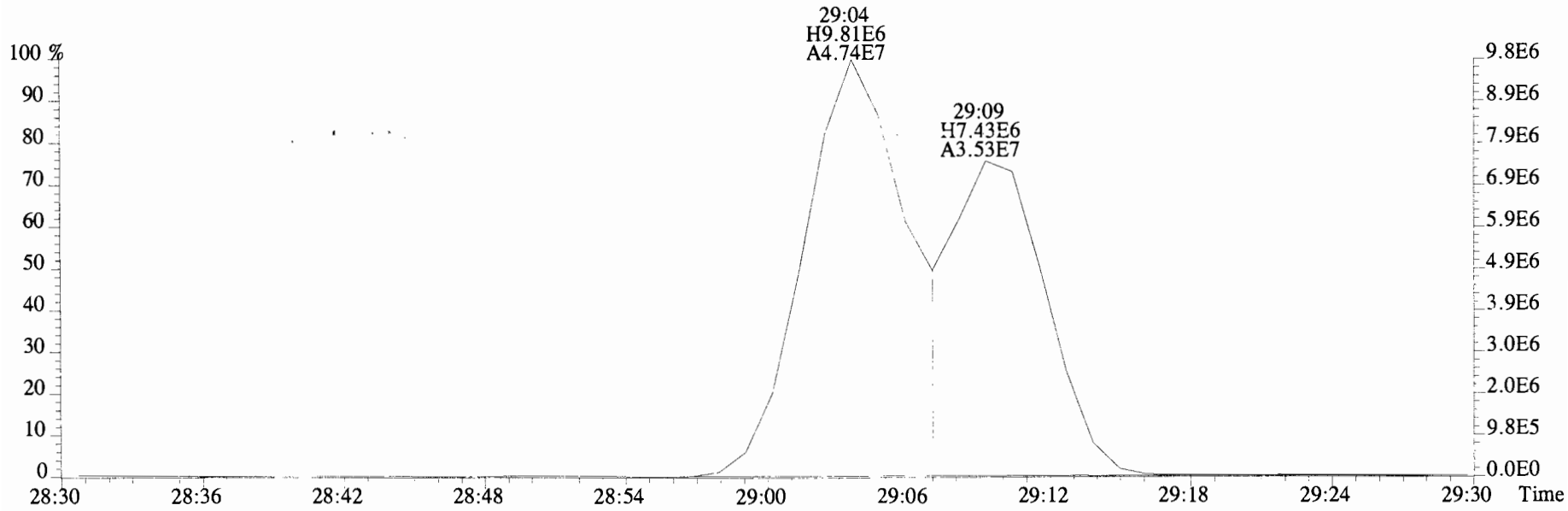
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)

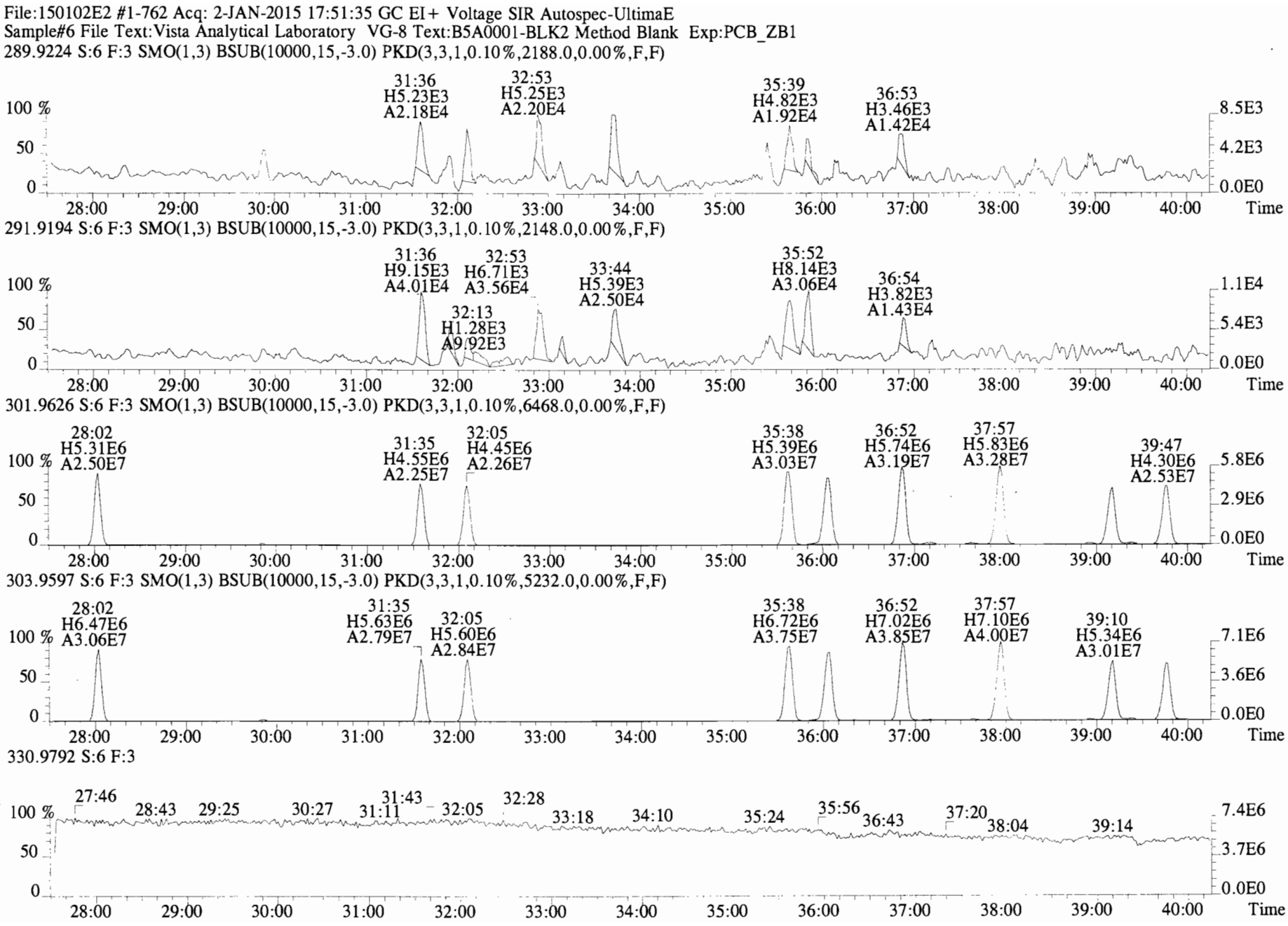


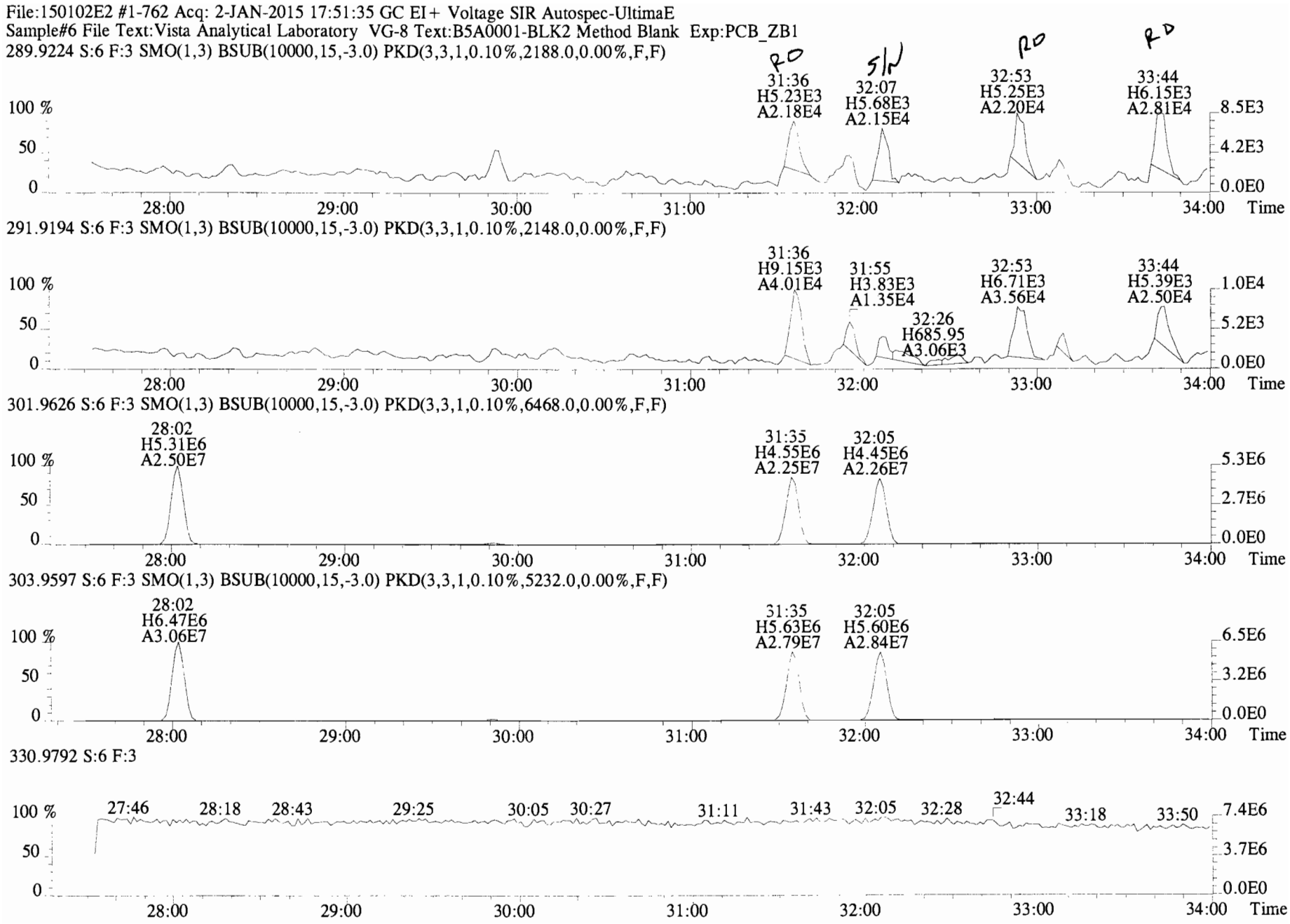
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,44092.0,0.00%,F,F)

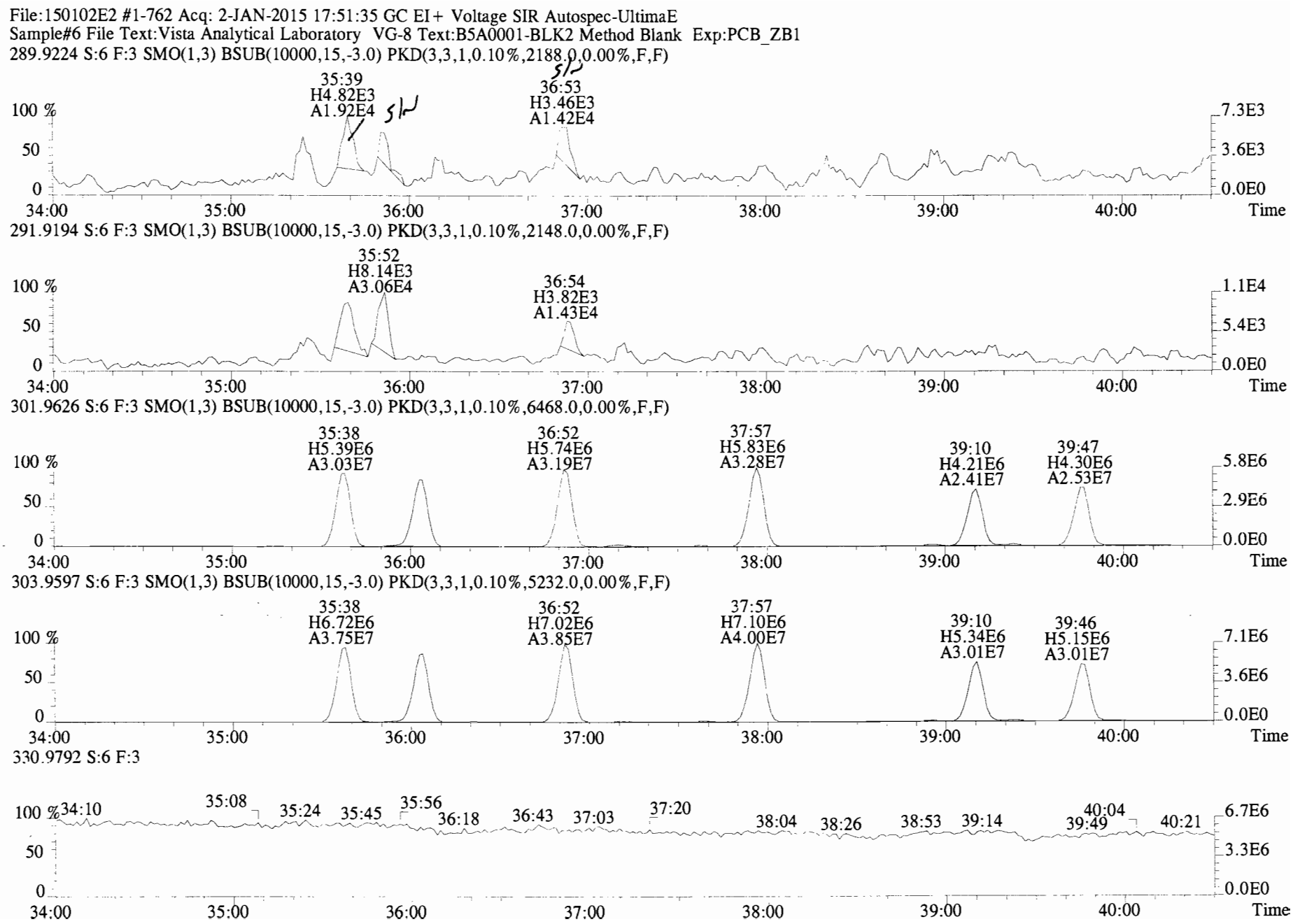


269.9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,22136.0,0.00%,F,F)

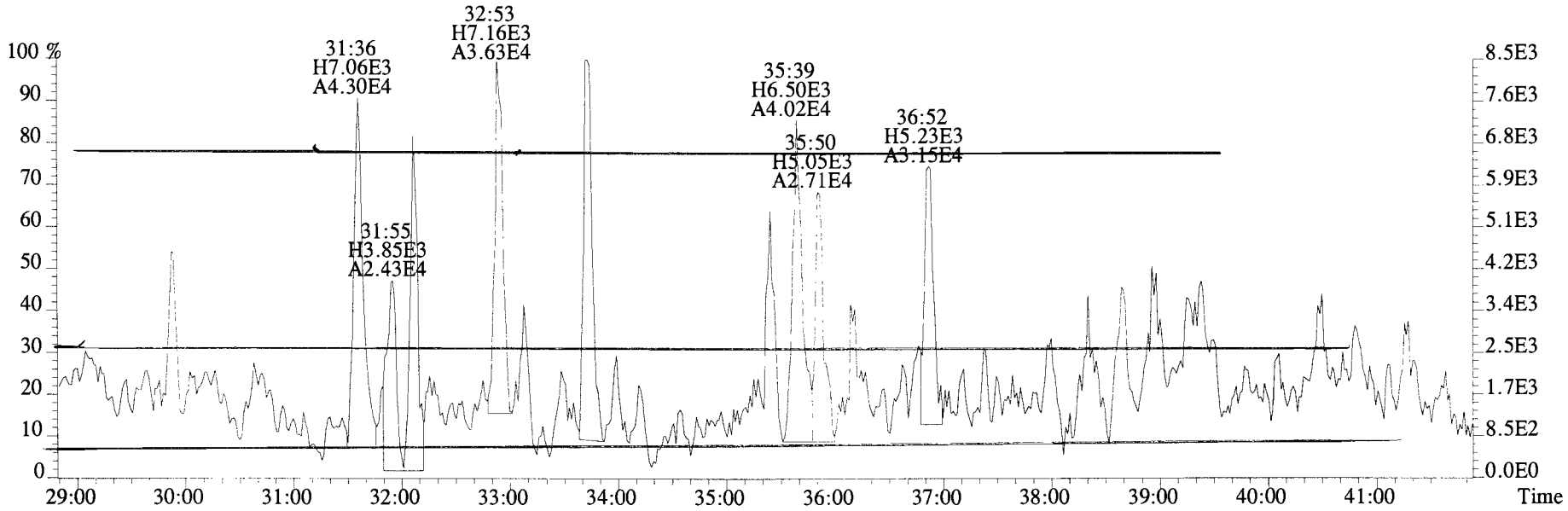



File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2188.0,0.00%,F,F)
31:36 H5.23E3 A2.18E4
32:53 H5.25E3 A2.20E4
35:39 H4.82E3 A1.92E4
36:53 H3.46E3 A1.42E4
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)
31:36 H9.15E3 A4.01E4
32:53 H6.71E3 A3.56E4
32:13 H1.28E3 A9.92E3
33:44 H5.39E3 A2.50E4
35:52 H8.14E3 A3.06E4
36:54 H3.82E3 A1.43E4
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6468.0,0.00%,F,F)
28:02 H5.31E6 A2.50E7
31:35 H4.55E6 A2.25E7
32:05 H4.45E6 A2.26E7
35:38 H5.39E6 A3.03E7
36:52 H5.74E6 A3.19E7
37:57 H5.83E6 A3.28E7
39:47 H4.30E6 A2.53E7
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5232.0,0.00%,F,F)
28:02 H6.47E6 A3.06E7
31:35 H5.63E6 A2.79E7
32:05 H5.60E6 A2.84E7
35:38 H6.72E6 A3.75E7
36:52 H7.02E6 A3.85E7
37:57 H7.10E6 A4.00E7
39:10 H5.34E6 A3.01E7
330.9792 S:6 F:3
27:46
28:43
29:25
30:27
31:11
31:43
32:05
32:28
33:18
34:10
35:24
35:56
36:43
37:20
38:04
39:14
100 %
50
0
8.5E3
4.2E3
0.0E0
1.1E4
5.4E3
5.8E6
2.9E6
7.1E6
3.6E6
7.4E6
3.7E6
28:00
29:00
30:00
31:00
32:00
33:00
34:00
35:00
36:00
37:00
38:00
39:00
40:00
Time

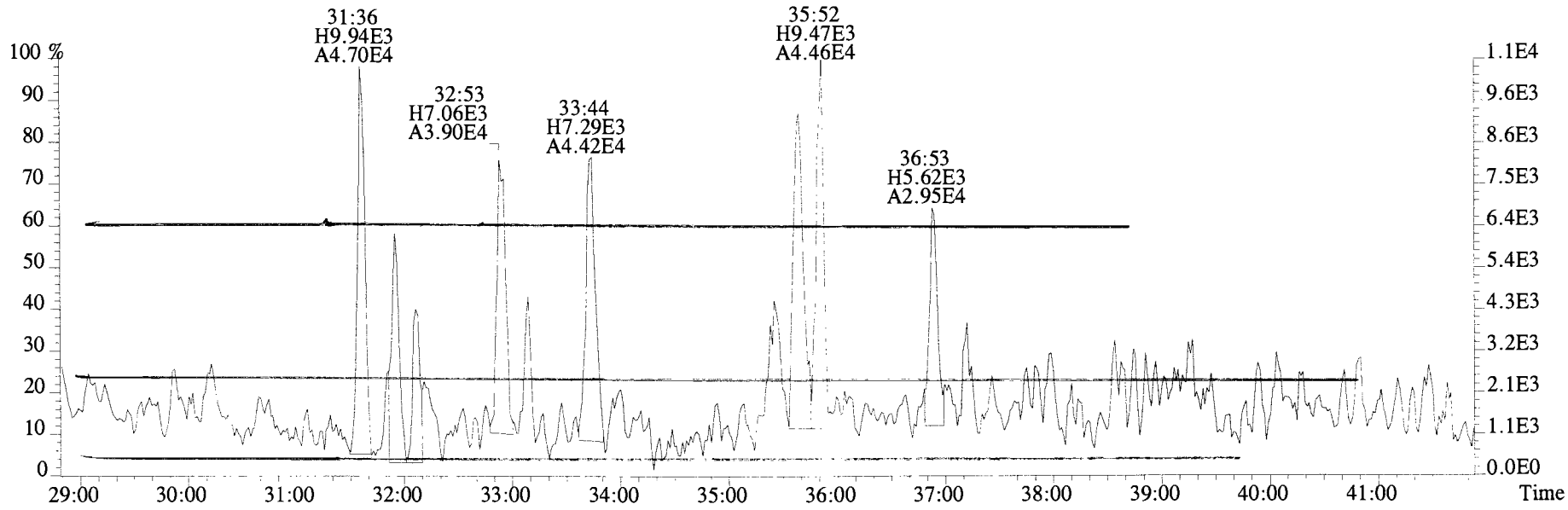

File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2188.0,0.00%,F,F)
RO
31:36
H5.23E3
A2.18E4
S/N
32:07
H5.68E3
A2.15E4
RO
32:53
H5.25E3
A2.20E4
RD
33:44
H6.15E3
A2.81E4
8.5E3
4.2E3
0.0E0
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)
31:36
H9.15E3
A4.01E4
31:55
H3.83E3
A1.35E4
32:26
H685.95
A3.06E3
32:53
H6.71E3
A3.56E4
33:44
H5.39E3
A2.50E4
1.0E4
5.2E3
0.0E0
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6468.0,0.00%,F,F)
28:02
H5.31E6
A2.50E7
31:35
H4.55E6
A2.25E7
32:05
H4.45E6
A2.26E7
5.3E6
2.7E6
0.0E0
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5232.0,0.00%,F,F)
28:02
H6.47E6
A3.06E7
31:35
H5.63E6
A2.79E7
32:05
H5.60E6
A2.84E7
6.5E6
3.2E6
0.0E0
330.9792 S:6 F:3
27:46
28:18
28:43
29:25
30:05
30:27
31:11
31:43
32:05
32:28
32:44
33:18
33:50
7.4E6
3.7E6
0.0E0
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time

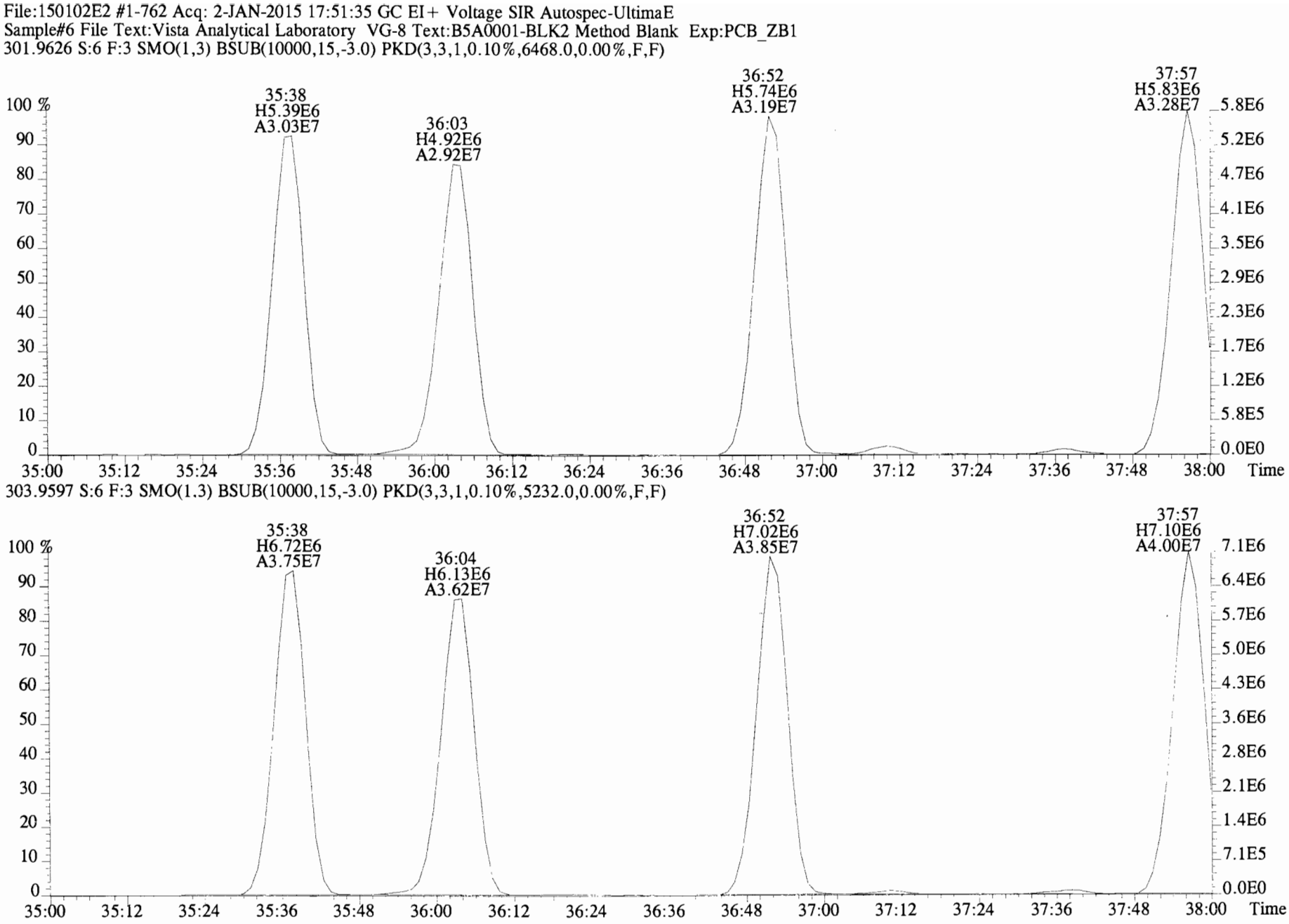

File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2188.0,0.00%,F,F)
35:39 H4.82E3 A1.92E4
36:53 H3.46E3 A1.42E4
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)
35:52 H8.14E3 A3.06E4
36:54 H3.82E3 A1.43E4
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6468.0,0.00%,F,F)
35:38 H5.39E6 A3.03E7
36:52 H5.74E6 A3.19E7
37:57 H5.83E6 A3.28E7
39:10 H4.21E6 A2.41E7
39:47 H4.30E6 A2.53E7
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5232.0,0.00%,F,F)
35:38 H6.72E6 A3.75E7
36:52 H7.02E6 A3.85E7
37:57 H7.10E6 A4.00E7
39:10 H5.34E6 A3.01E7
39:46 H5.15E6 A3.01E7
330.9792 S:6 F:3
100 %
50
0
34:00
35:00
36:00
37:00
38:00
39:00
40:00
Time
7.3E3
3.6E3
0.0E0
1.1E4
5.4E3
5.8E6
2.9E6
7.1E6
3.6E6
6.7E6
3.3E6

File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



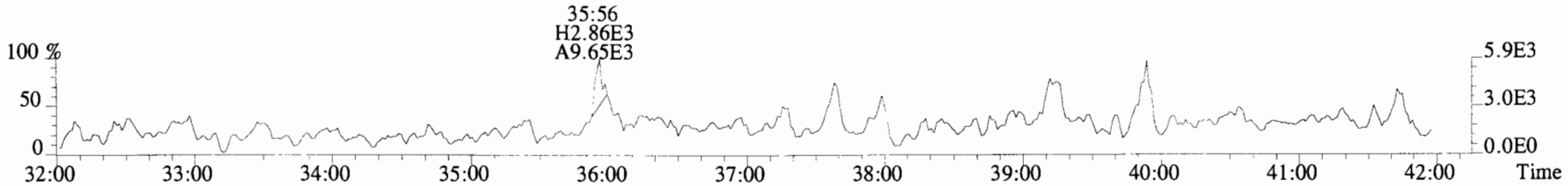
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



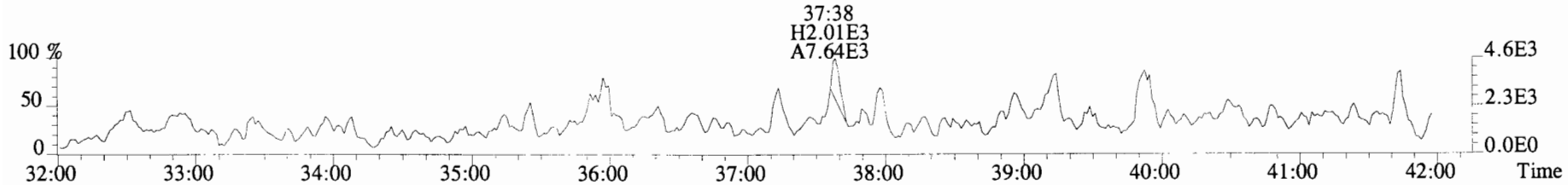

File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6468.0,0.00%,F,F)
35:38
H5.39E6
A3.03E7
36:03
H4.92E6
A2.92E7
36:52
H5.74E6
A3.19E7
37:57
H5.83E6
A3.28E7
100 %
90
80
70
60
50
40
30
20
10
0
5.8E6
5.2E6
4.7E6
4.1E6
3.5E6
2.9E6
2.3E6
1.7E6
1.2E6
5.8E5
0.0E0
35:00
35:12
35:24
35:36
35:48
36:00
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
Time
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5232.0,0.00%,F,F)
35:38
H6.72E6
A3.75E7
36:04
H6.13E6
A3.62E7
36:52
H7.02E6
A3.85E7
37:57
H7.10E6
A4.00E7
100 %
90
80
70
60
50
40
30
20
10
0
7.1E6
6.4E6
5.7E6
5.0E6
4.3E6
3.6E6
2.8E6
2.1E6
1.4E6
7.1E5
0.0E0
35:00
35:12
35:24
35:36
35:48
36:00
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
Time

File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1

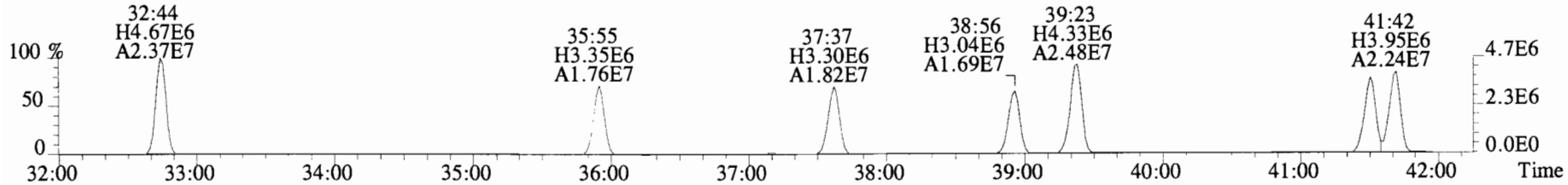
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



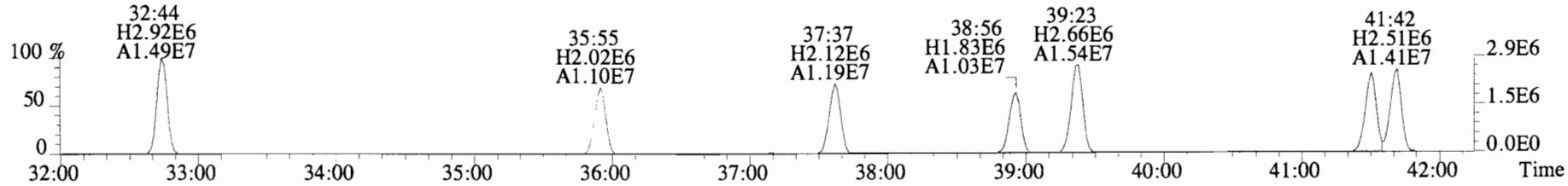
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



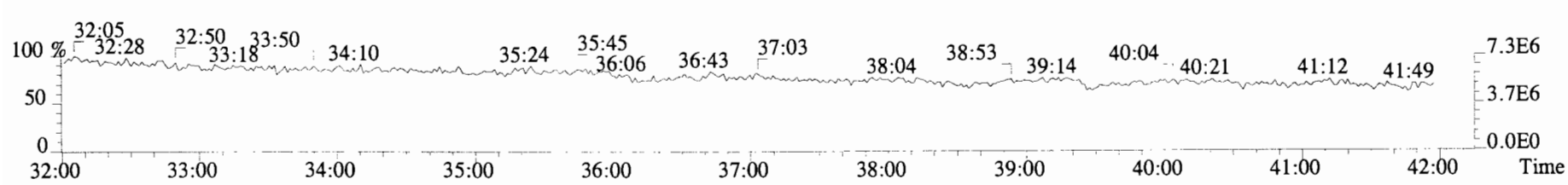
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2404.0,0.00%,F,F)



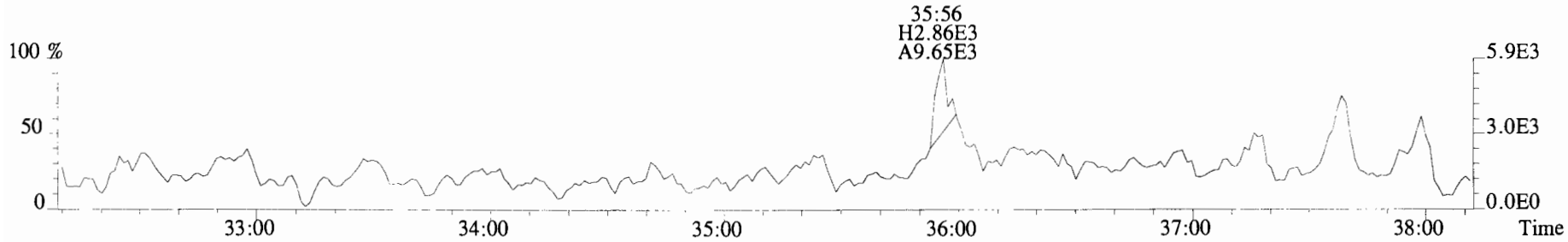
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2456.0,0.00%,F,F)



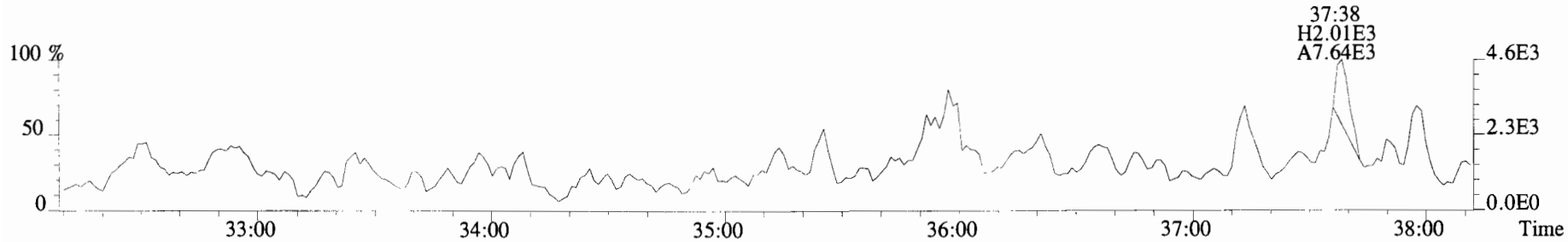
330.9792 S:6 F:3



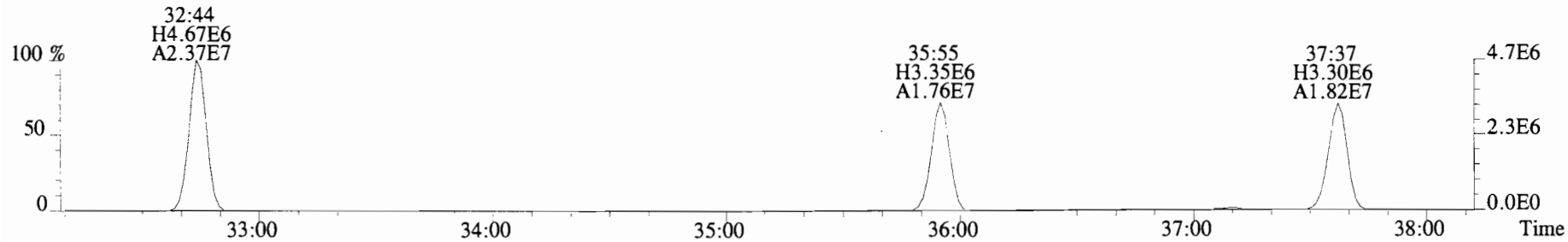
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



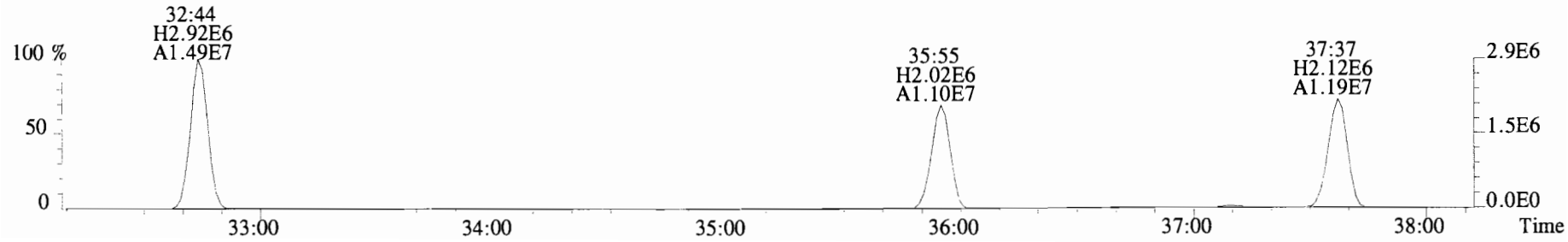
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



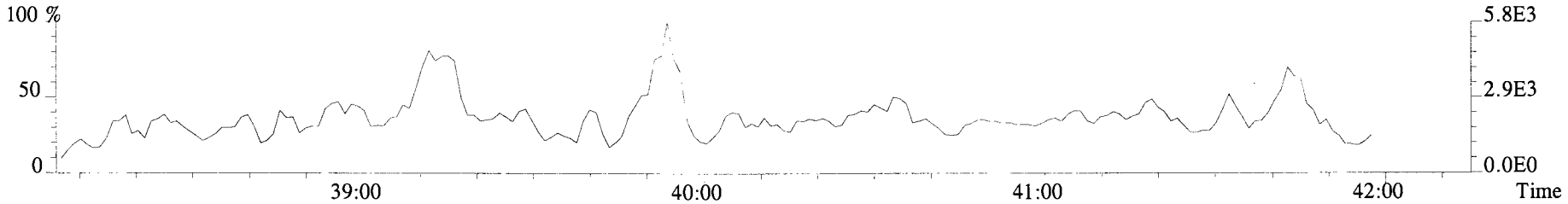
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2404.0,0.00%,F,F)



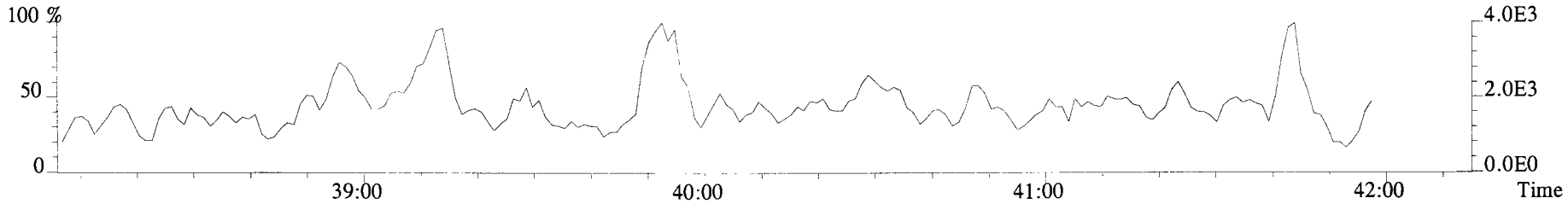
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2456.0,0.00%,F,F)



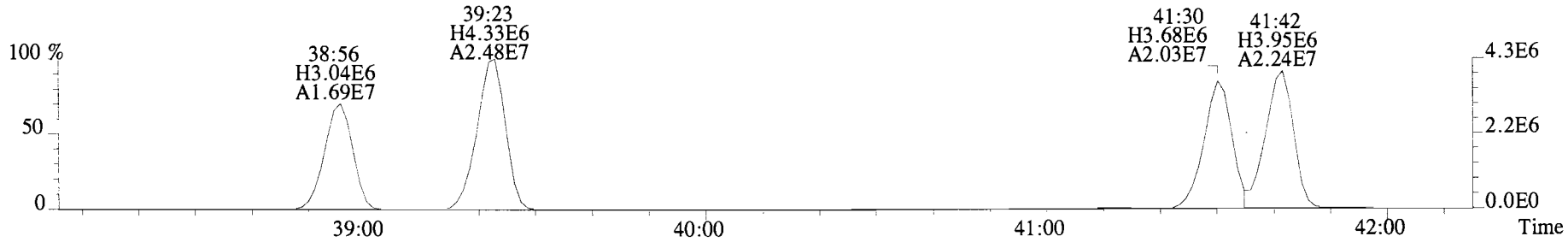
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



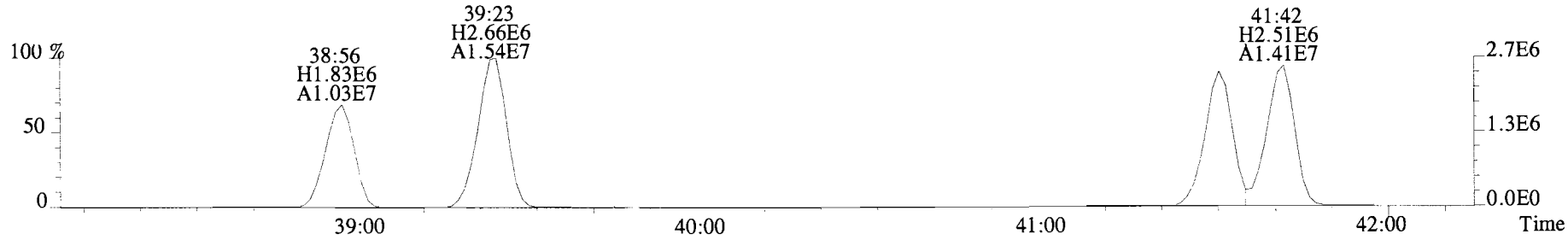
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



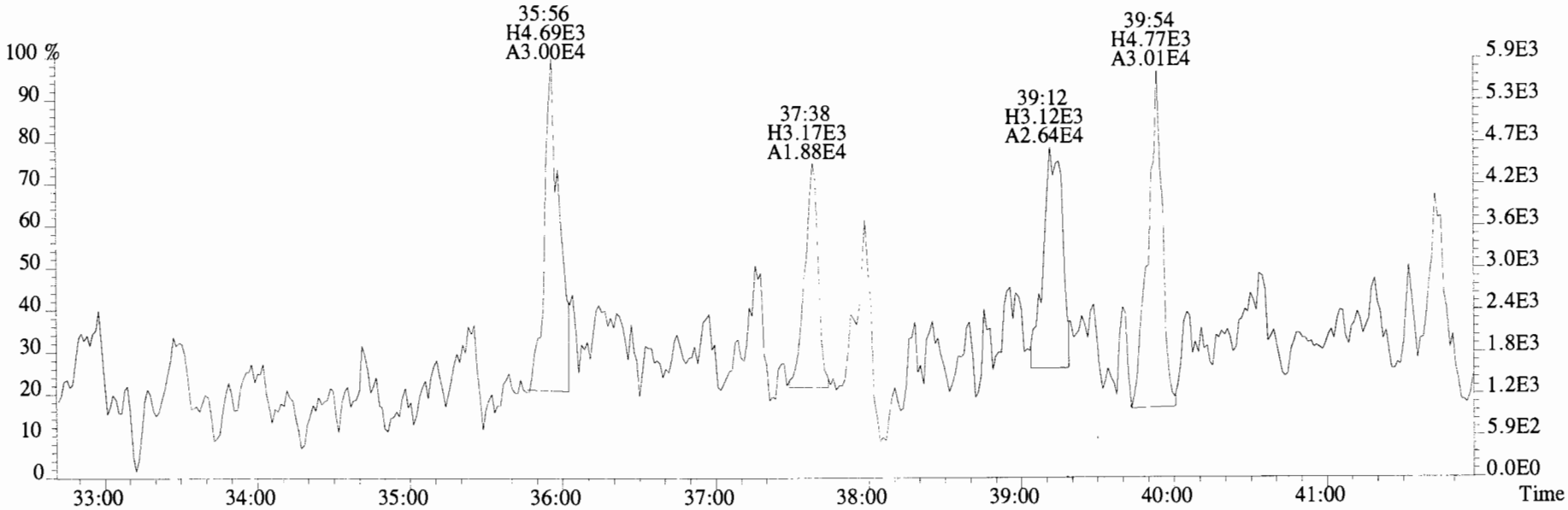
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2404.0,0.00%,F,F)



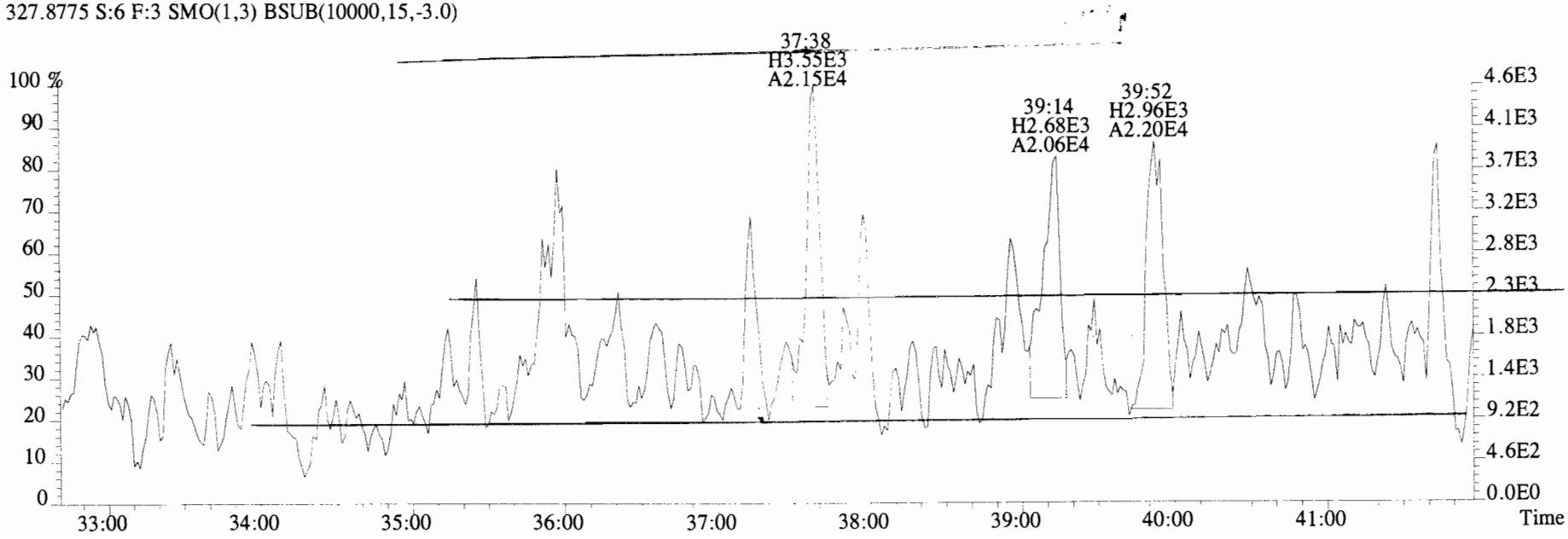
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2456.0,0.00%,F,F)



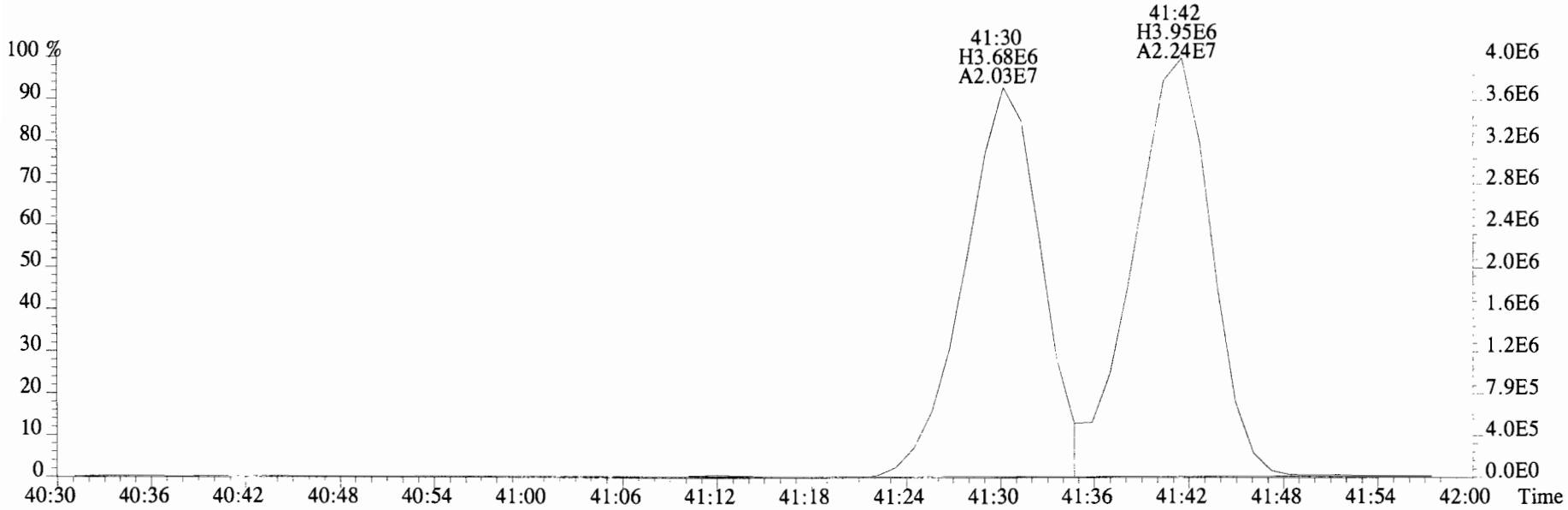
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



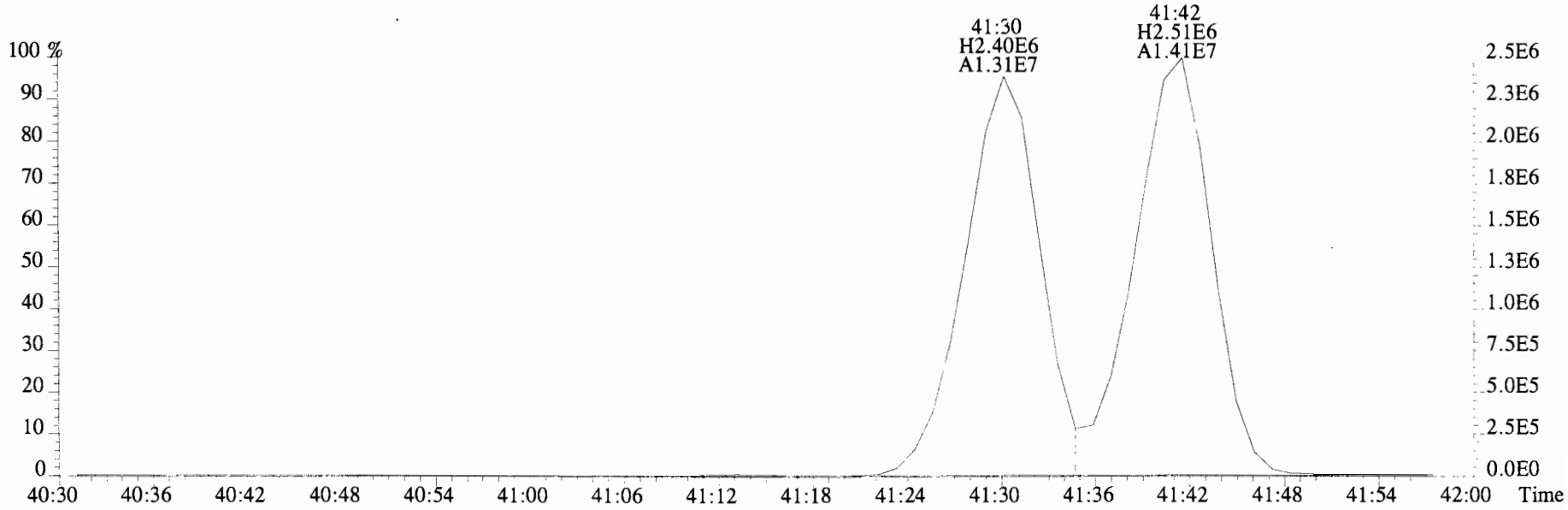
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



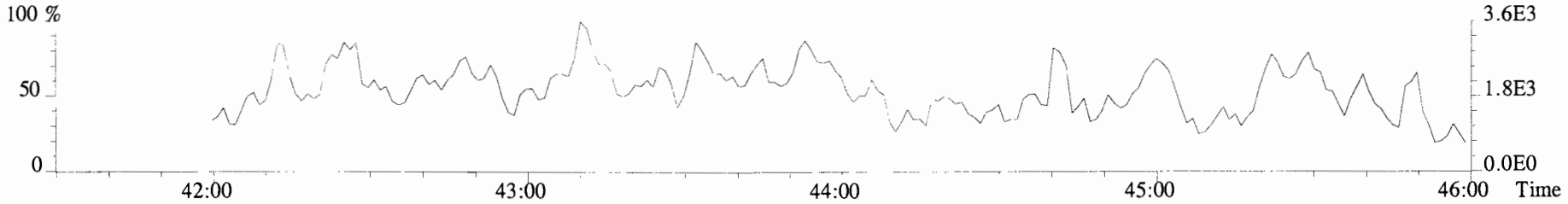
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2404.0,0.00%,F,F)



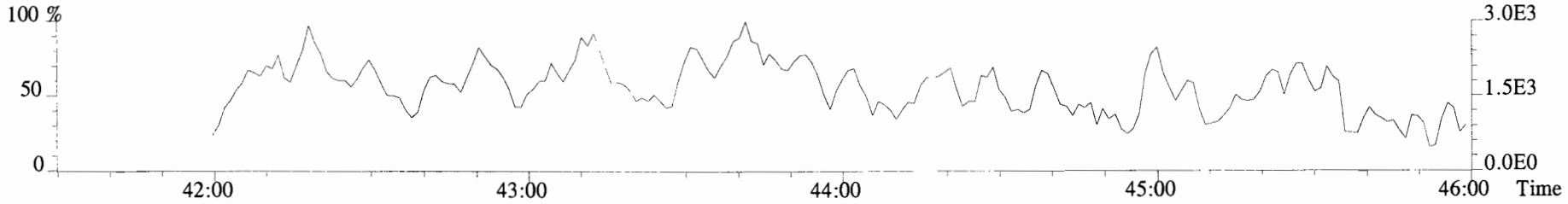
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2456.0,0.00%,F,F)



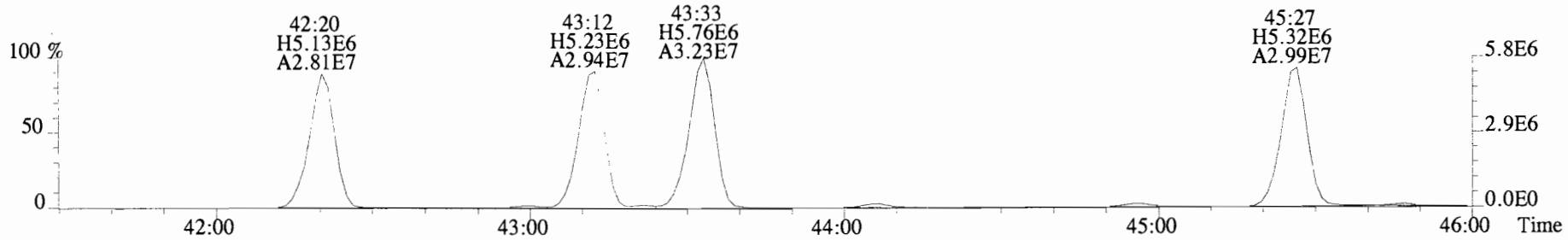
File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2344.0,0.00%,F,F)



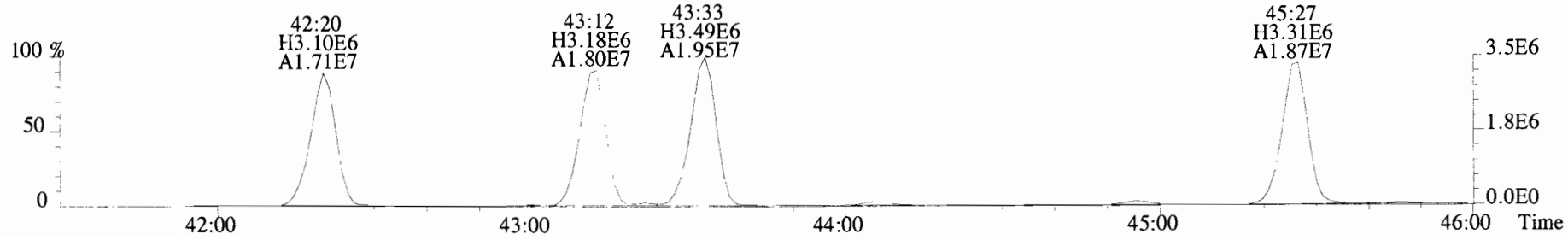
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



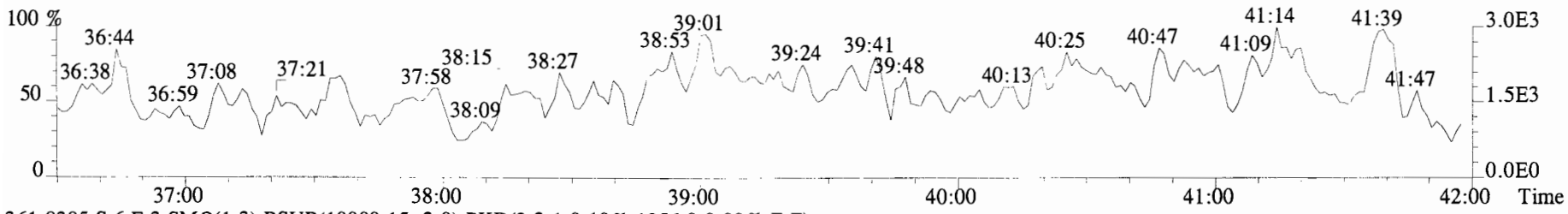
337.9207 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7388.0,0.00%,F,F)



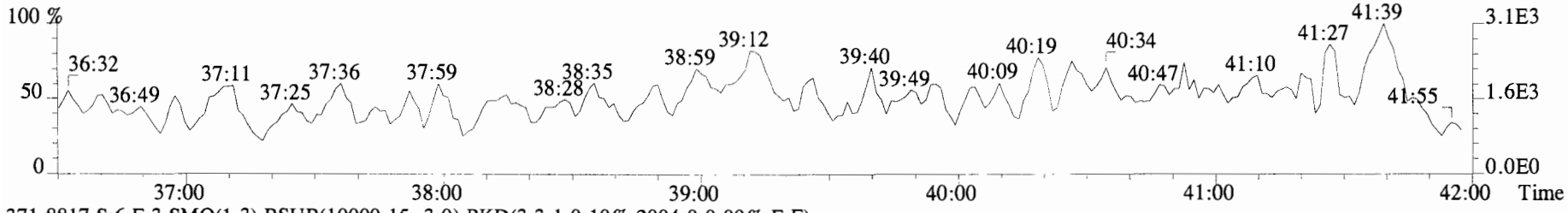
339.9177 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5012.0,0.00%,F,F)



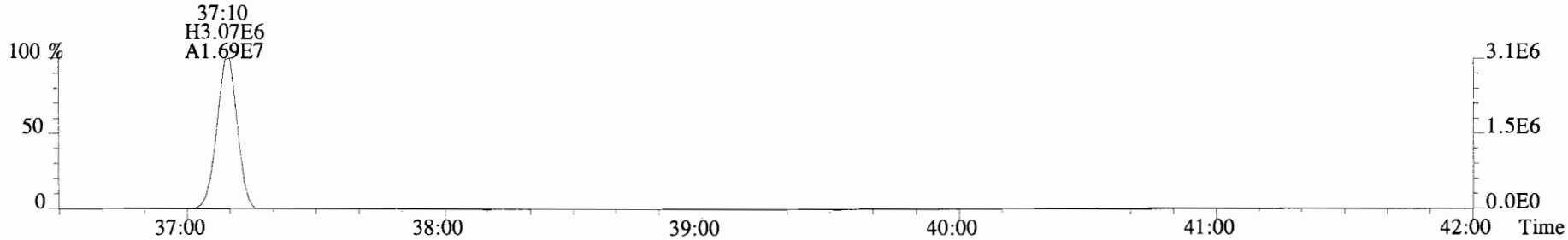
File:150102E2 #1-762 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1996.0,0.00%,F,F)



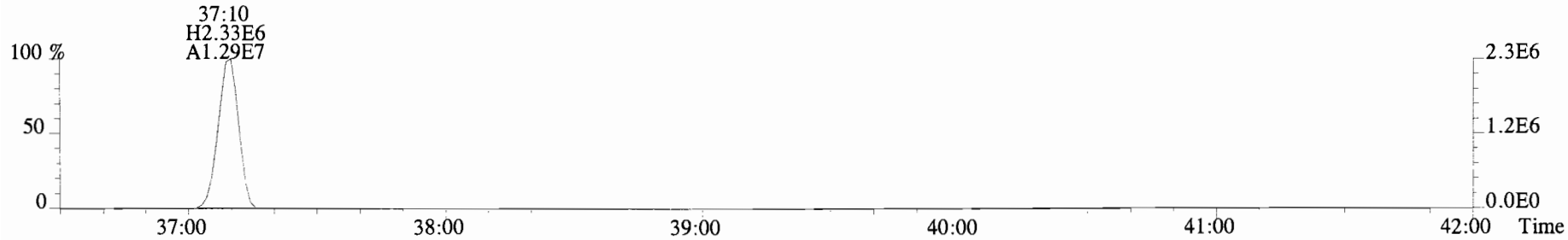
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)

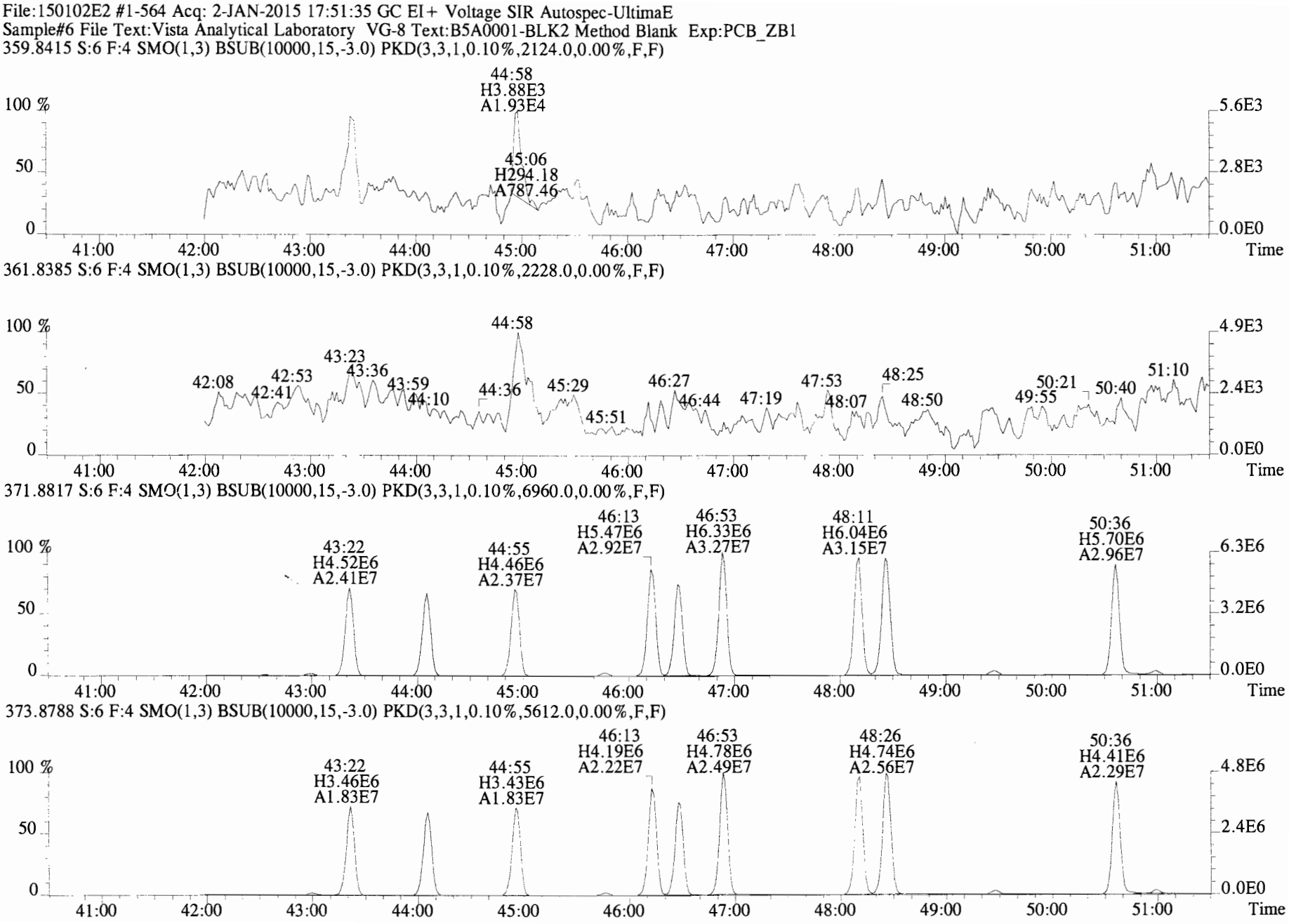


371.8817 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)

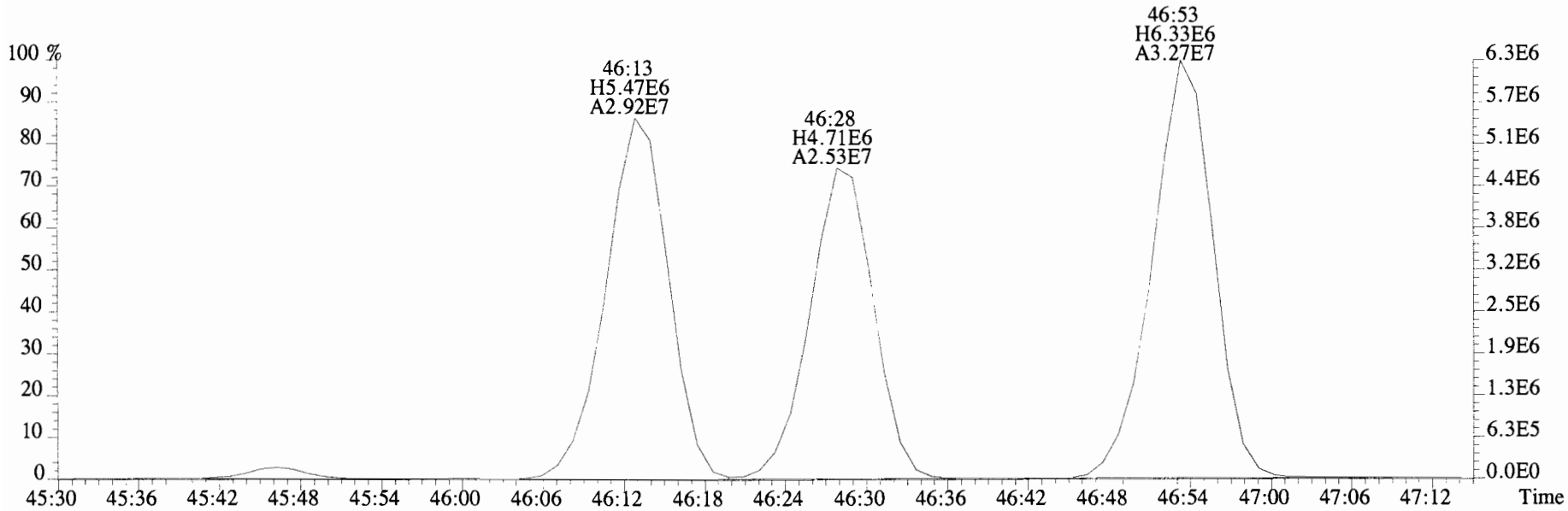


373.8788 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1824.0,0.00%,F,F)

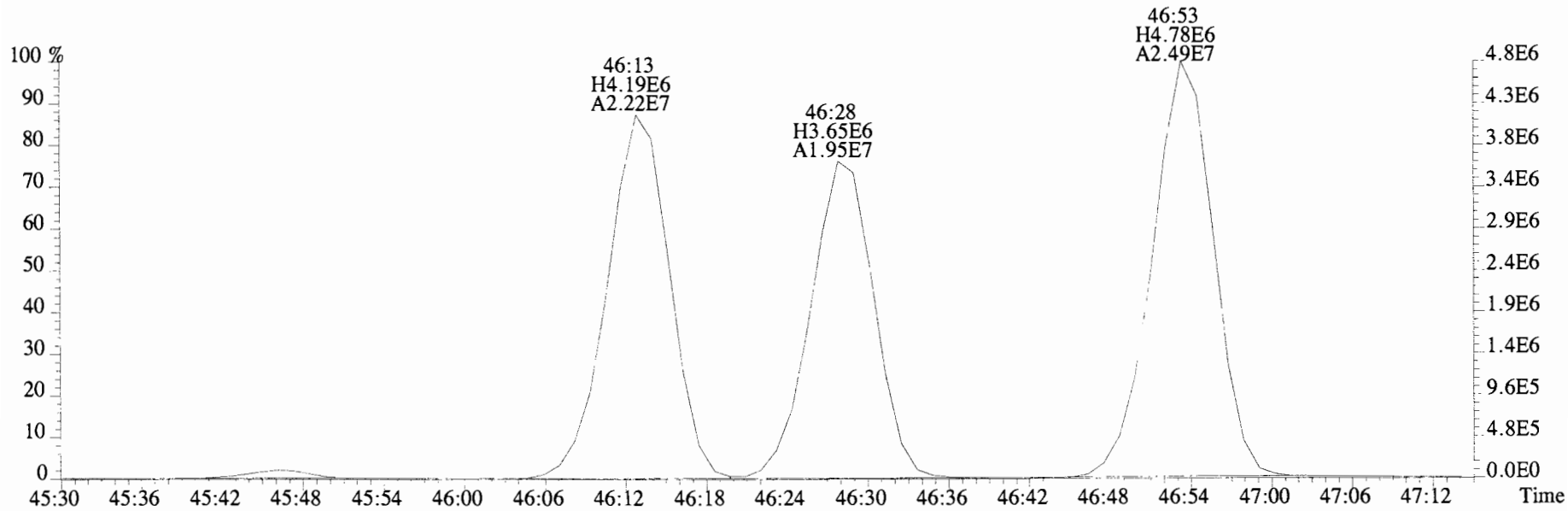


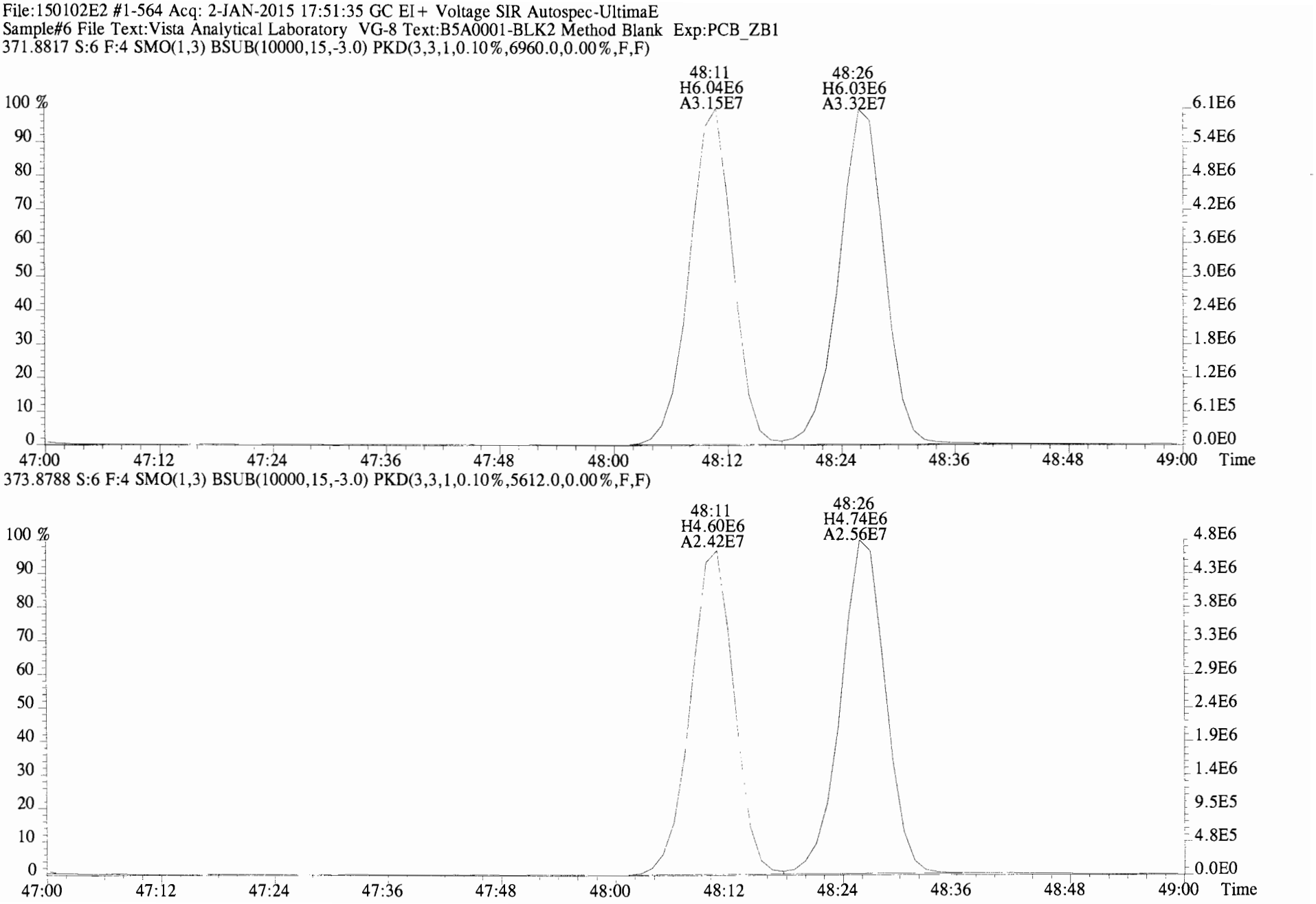

File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)
44:58
H3.88E3
A1.93E4
45:06
H294.18
A787.46
100 %
50
0
5.6E3
2.8E3
0.0E0
41:00
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
Time
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2228.0,0.00%,F,F)
42:08
42:41
42:53
43:23
43:36
43:59
44:10
44:36
44:58
45:29
45:51
46:27
46:44
47:19
47:53
48:07
48:25
48:50
49:55
50:21
50:40
51:10
4.9E3
2.4E3
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6960.0,0.00%,F,F)
43:22
H4.52E6
A2.41E7
44:55
H4.46E6
A2.37E7
46:13
H5.47E6
A2.92E7
46:53
H6.33E6
A3.27E7
48:11
H6.04E6
A3.15E7
50:36
H5.70E6
A2.96E7
6.3E6
3.2E6
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5612.0,0.00%,F,F)
43:22
H3.46E6
A1.83E7
44:55
H3.43E6
A1.83E7
46:13
H4.19E6
A2.22E7
46:53
H4.78E6
A2.49E7
48:26
H4.74E6
A2.56E7
50:36
H4.41E6
A2.29E7
4.8E6
2.4E6

File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6960.0,0.00%,F,F)

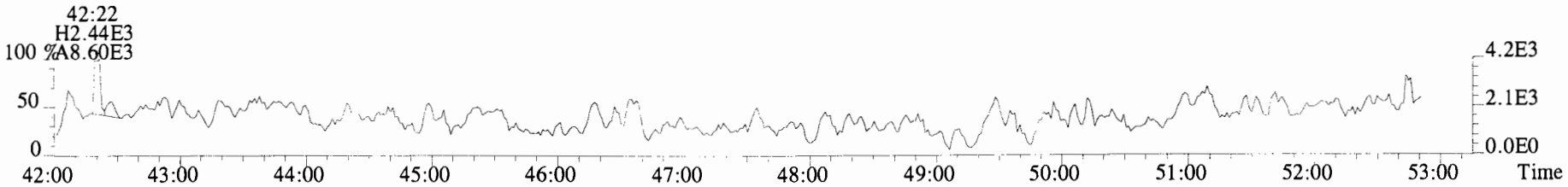


373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5612.0,0.00%,F,F)

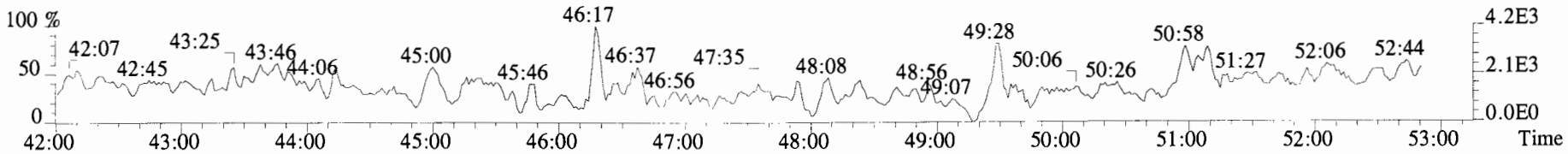



File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6960.0,0.00%,F,F)
48:11
H6.04E6
A3.15E7
48:26
H6.03E6
A3.32E7
100 %
90
80
70
60
50
40
30
20
10
0
6.1E6
5.4E6
4.8E6
4.2E6
3.6E6
3.0E6
2.4E6
1.8E6
1.2E6
6.1E5
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5612.0,0.00%,F,F)
48:11
H4.60E6
A2.42E7
48:26
H4.74E6
A2.56E7
100 %
90
80
70
60
50
40
30
20
10
0
4.8E6
4.3E6
3.8E6
3.3E6
2.9E6
2.4E6
1.9E6
1.4E6
9.5E5
4.8E5
0.0E0
47:00
47:12
47:24
47:36
47:48
48:00
48:12
48:24
48:36
48:48
49:00
Time

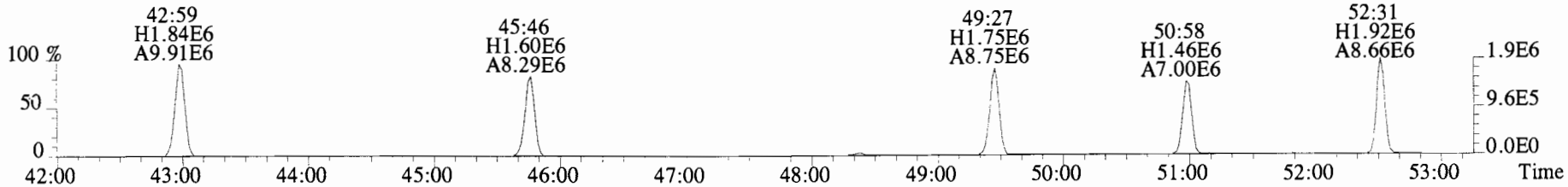
File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)



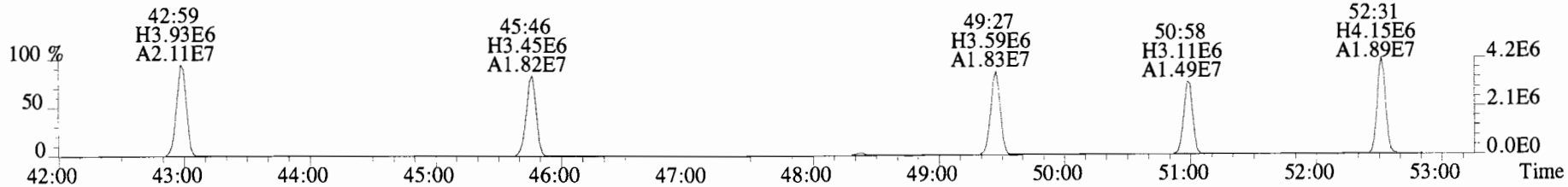
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



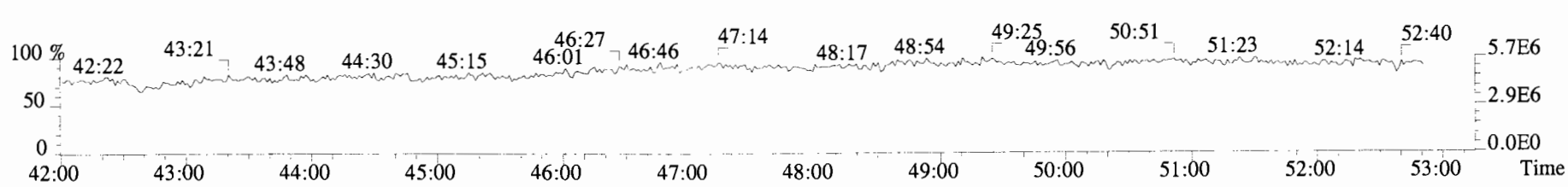
403.8457 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2864.0,0.00%,F,F)



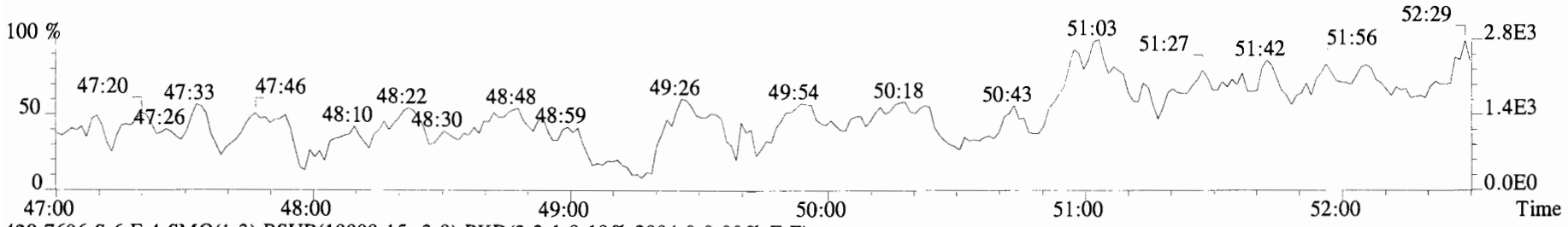
405.8428 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2212.0,0.00%,F,F)



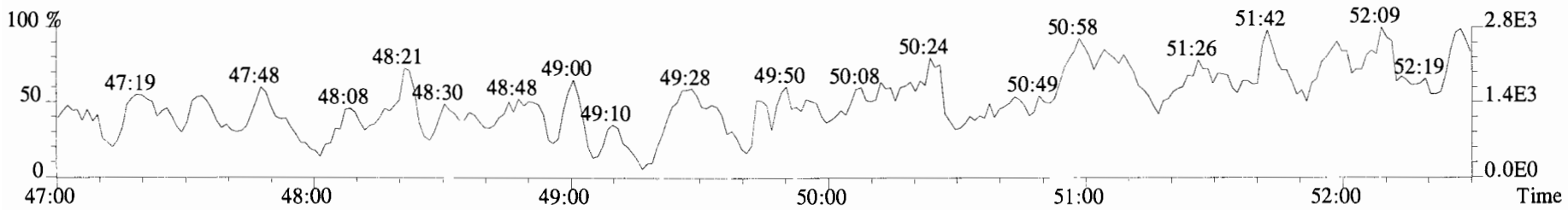
380.9760 S:6 F:4



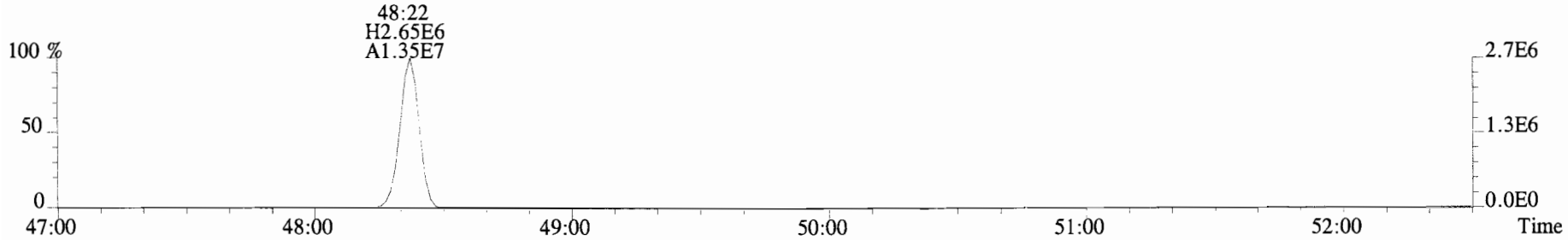
File:150102E2 #1-564 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1904.0,0.00%,F,F)



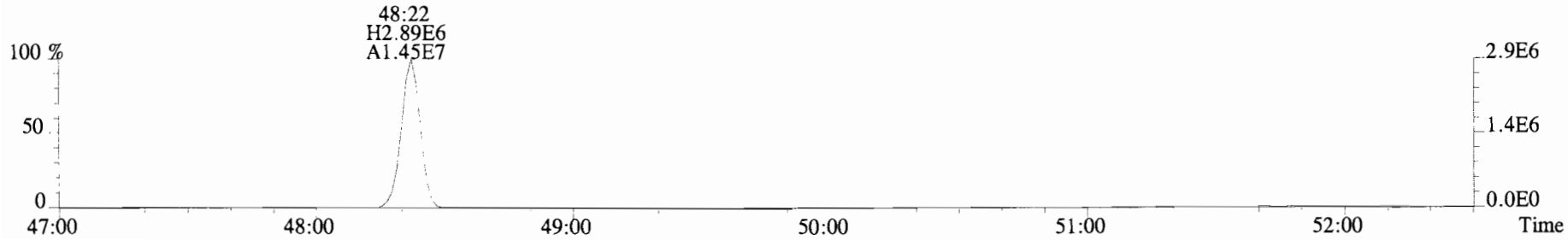
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)



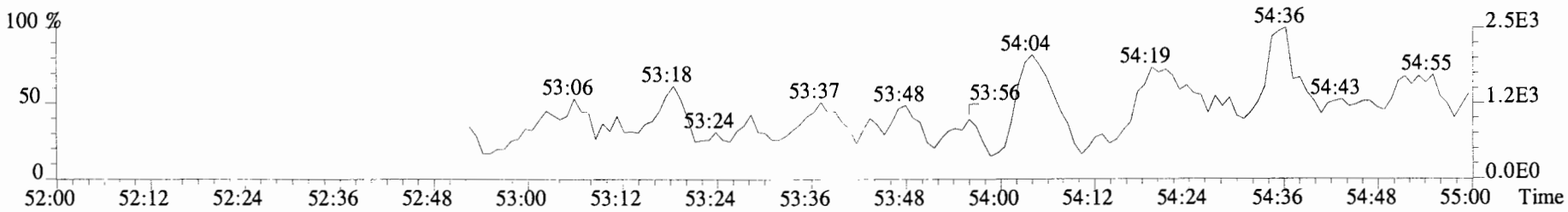
439.8038 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1520.0,0.00%,F,F)



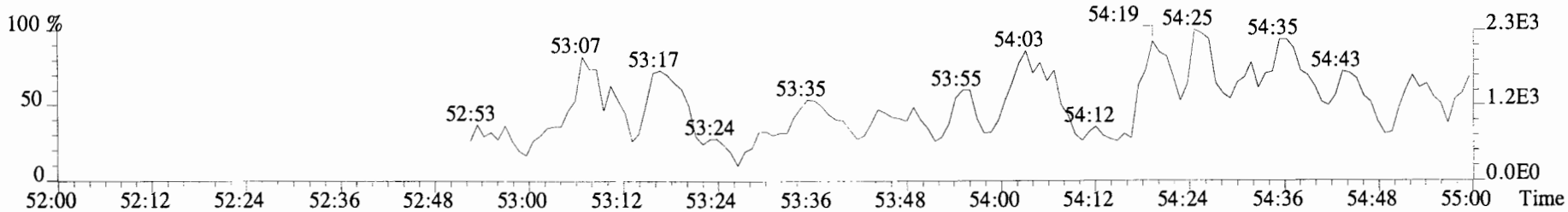
441.8008 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1748.0,0.00%,F,F)



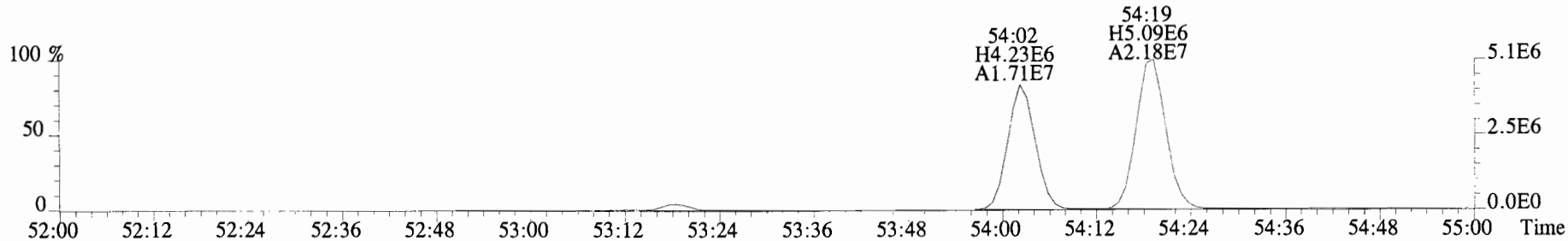
File:150102E2 #1-412 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1416.0,0.00%,F,F)



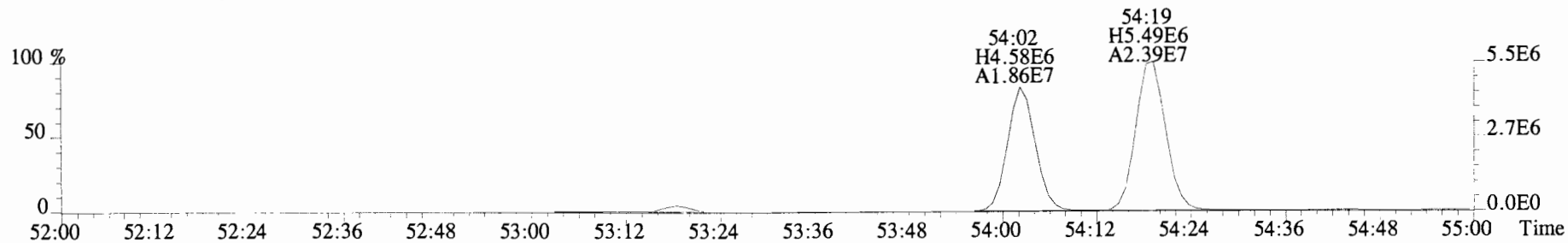
429.7606 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1496.0,0.00%,F,F)



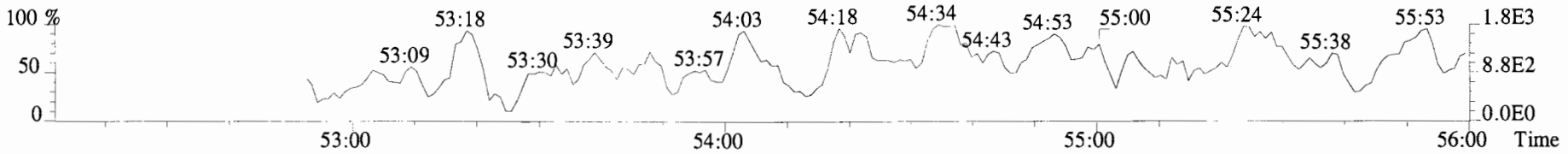
439.8038 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4628.0,0.00%,F,F)



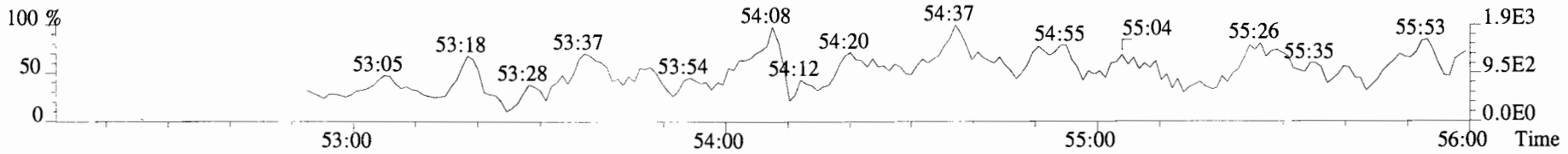
441.8008 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2324.0,0.00%,F,F)



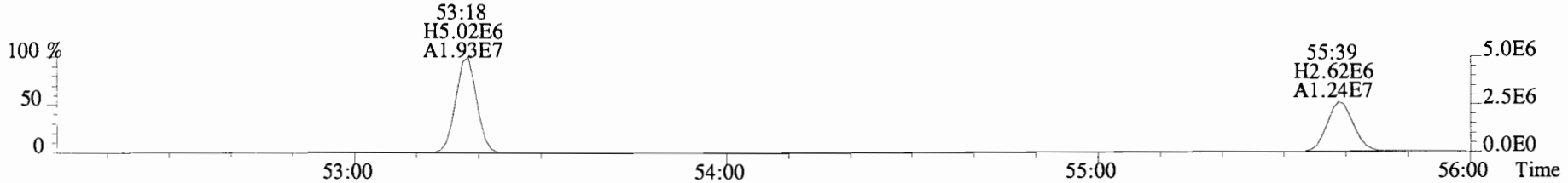
File:150102E2 #1-412 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1344.0,0.00%,F,F)



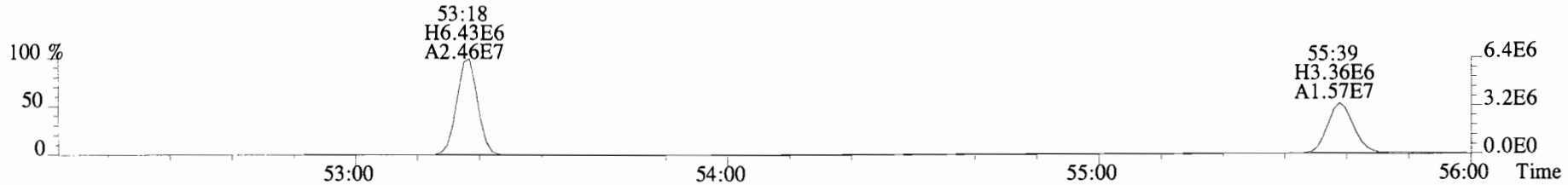
465.7186 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1252.0,0.00%,F,F)



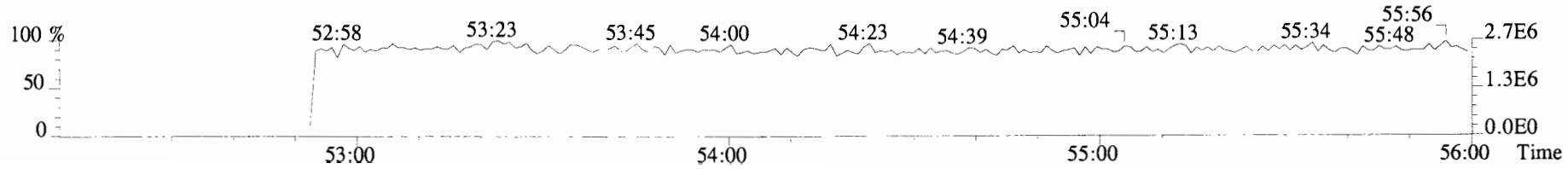
473.7648 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8156.0,0.00%,F,F)



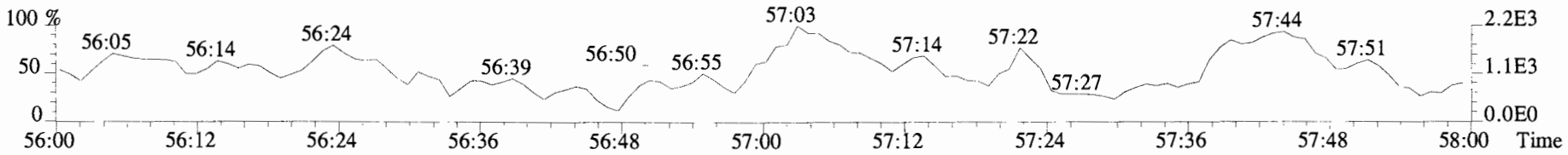
475.7619 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8752.0,0.00%,F,F)



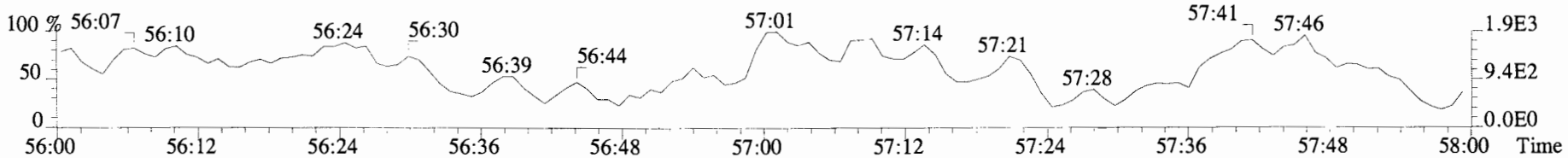
492.9697 S:6 F:5



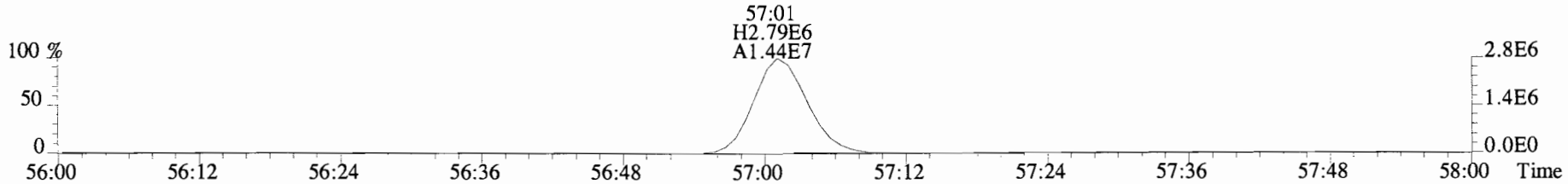
File:150102E2 #1-412 Acq: 2-JAN-2015 17:51:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BLK2 Method Blank Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1336.0,0.00%,F,F)



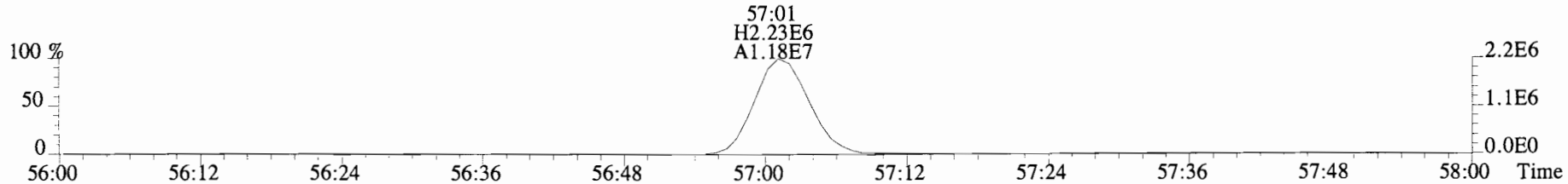
499.6797 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1304.0,0.00%,F,F)



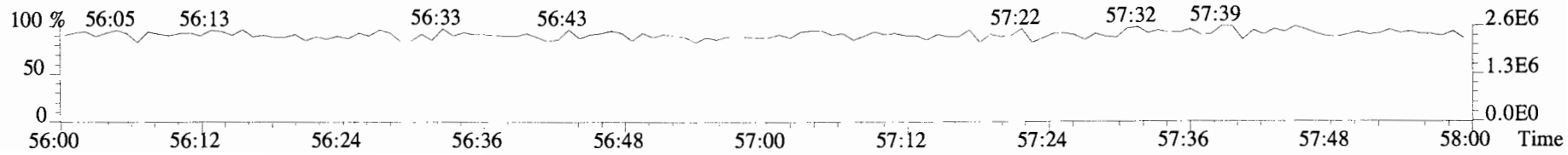
509.7229 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



511.7199 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1284.0,0.00%,F,F)



492.9697 S:6 F:5



EPA METHOD 1668C PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B5A0001-BS1

Matrix : AQUEOUS Ext. Date: 1-2-15 Analysis Date: 2-JAN-15 Time: 15:41:55

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	51.8	30.0-67.5	13C-PCB-1	100	76.2	15-145	13C-PCB-79	100	95.8	40-145
PCB-3	50	51.1	30.0-67.5	13C-PCB-3	100	78.6	15-145	13C-PCB-178	100	83.8	40-145
PCB-4/10	200	235.9	120-270	13C-PCB-4	100	76.0	15-145				
PCB-15	100	119.1	60.0-135	13C-PCB-11	100	83.8	15-145				
PCB-19	50	55.8	30.0-67.5	13C-PCB-19	100	68.7	15-145				
PCB-37	50	51.7	30.0-67.5	13C-PCB-37	100	97.4	15-145				
PCB-54	50	55.0	30.0-67.5	13C-PCB-54	100	85.5	15-145				
PCB-81	50	56.4	30.0-67.5	13C-PCB-81	100	87.8	40-145				
PCB-77	50	57.9	30.0-67.5	13C-PCB-77	100	86.6	40-145				
PCB-104	50	55.0	30.0-67.5	13C-PCB-104	100	88.0	40-145				
PCB-123	50	59.0	30.0-67.5	13C-PCB-123	100	85.7	40-145				
PCB-106/118	100	115.2	60.0-135	13C-PCB-118	100	86.6	40-145				
PCB-114	50	60.1	30.0-67.5	13C-PCB-114	100	87.7	40-145				
PCB-105	50	59.4	30.0-67.5	13C-PCB-105	100	89.0	40-145				
PCB-126	50	59.9	30.0-67.5	13C-PCB-126	100	93.8	40-145				
PCB-155	50	59.4	30.0-67.5	13C-PCB-155	100	70.6	40-145				
PCB-167	50	56.8	30.0-67.5	13C-PCB-167	100	90.0	40-145				
PCB-156	50	56.8	30.0-67.5	13C-PCB-156	100	91.6	40-145				
PCB-157	50	57.6	30.0-67.5	13C-PCB-157	100	90.1	40-145				
PCB-169	50	59.3	30.0-67.5	13C-PCB-169	100	85.5	40-145				
PCB-188	50	55.9	30.0-67.5	13C-PCB-188	100	72.0	40-145				
PCB-189	50	62.3	30.0-67.5	13C-PCB-189	100	77.8	40-145				
PCB-202	50	55.9	30.0-67.5	13C-PCB-202	100	67.2	40-145				
PCB-205	50	63.2	30.0-67.5	13C-PCB-194	100	88.2	40-145				
PCB-208	50	56.2	30.0-67.5	13C-PCB-208	100	77.7	40-145				
PCB-206	50	57.6	30.0-67.5	13C-PCB-206	100	83.7	40-145				
PCB-209	50	61.2	30.0-67.5	13C-PCB-209	100	83.3	40-145				

Analyst: DMS

Date: 1/5/15

EPA METHOD 1668A PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B5A0001-BS1

Matrix : AQUEOUS Ext. Date: 1-2-15 Analysis Date: 2-JAN-15 Time: 15:41:55

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	51.8	25.0-75.0	13C-PCB-1	100	76.2	15-140	13C-PCB-79	100	95.8	40-125
PCB-3	50	51.1	25.0-75.0	13C-PCB-3	100	78.6	15-140	13C-PCB-178	100	83.8	40-125
PCB-4/10	200	235.9	100-300	13C-PCB-4	100	76.0	30-140				
PCB-15	100	119.1	50.0-150	13C-PCB-11	100	83.8	30-140				
PCB-19	50	55.8	25.0-75.0	13C-PCB-19	100	68.7	30-140				
PCB-37	50	51.7	25.0-75.0	13C-PCB-37	100	97.4	30-140				
PCB-54	50	55.0	25.0-75.0	13C-PCB-54	100	85.5	30-140				
PCB-81	50	56.4	25.0-75.0	13C-PCB-81	100	87.8	30-140				
PCB-77	50	57.9	25.0-75.0	13C-PCB-77	100	86.6	30-140				
PCB-104	50	55.0	25.0-75.0	13C-PCB-104	100	88.0	30-140				
PCB-123	50	59.0	25.0-75.0	13C-PCB-123	100	85.7	30-140				
PCB-106/118	100	115.2	50.0-150	13C-PCB-118	100	86.6	30-140				
PCB-114	50	60.1	25.0-75.0	13C-PCB-114	100	87.7	30-140				
PCB-105	50	59.4	25.0-75.0	13C-PCB-105	100	89.0	30-140				
PCB-126	50	59.9	25.0-75.0	13C-PCB-126	100	93.8	30-140				
PCB-155	50	59.4	25.0-75.0	13C-PCB-155	100	70.6	30-140				
PCB-167	50	56.8	25.0-75.0	13C-PCB-167	100	90.0	30-140				
PCB-156	50	56.8	25.0-75.0	13C-PCB-156	100	91.6	30-140				
PCB-157	50	57.6	25.0-75.0	13C-PCB-157	100	90.1	30-140				
PCB-169	50	59.3	25.0-75.0	13C-PCB-169	100	85.5	30-140				
PCB-188	50	55.9	25.0-75.0	13C-PCB-188	100	72.0	30-140				
PCB-189	50	62.3	25.0-75.0	13C-PCB-189	100	77.8	30-140				
PCB-202	50	55.9	25.0-75.0	13C-PCB-202	100	67.2	30-140				
PCB-205	50	63.2	25.0-75.0	13C-PCB-194	100	88.2	30-140				
PCB-208	50	56.2	25.0-75.0	13C-PCB-208	100	77.7	30-140				
PCB-206	50	57.6	25.0-75.0	13C-PCB-206	100	83.7	30-140				
PCB-209	50	61.2	25.0-75.0	13C-PCB-209	100	83.3	30-140				

Analyst: DMS

Date: 1/5/15

Client ID: OPR Filename: 150102E2 S:4 Acq: 2-JAN-15 15:41:55 ConCal: ST150102E2-1

Lab ID: B5A0001-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	3.58e+07	3.02	y	1.25	16:11	1.001	0.996	1.006	51.8177
	PCB-2	3.72e+07	3.00	y	1.18	18:34	0.988	0.983	0.993	53.0851
	PCB-3	3.69e+07	3.02	y	1.22	18:49	1.001	0.996	1.006	51.0618
	PCB-4/10	1.24e+08	1.64	y	1.55	20:11	1.003	0.998	1.008	235.916
	PCB-7/9	1.54e+08	1.64	y	1.27	21:58	0.868	0.865	0.873	229.296
	PCB-6	7.74e+07	1.65	y	1.26	22:36	0.893	0.890	0.899	116.310
	PCB-5/8	1.58e+08	1.65	y	1.23	23:02	0.910	0.906	0.916	242.170
	PCB-14	9.06e+07	1.64	y	1.23	24:08	0.954	0.949	0.959	115.146
	PCB-11	8.60e+07	1.67	y	1.16	25:19	1.001	0.996	1.006	116.145
	PCB-12/13	1.69e+08	1.64	y	1.10	25:42	1.016	1.010	1.020	240.524
	PCB-15	9.19e+07	1.67	y	1.21	26:01	1.028	1.024	1.034	119.062
	PCB-19	2.15e+07	1.07	y	1.30	24:18	1.001	0.996	1.006	55.7667
	PCB-30	3.18e+07	1.07	y	1.83	25:12	1.038	1.032	1.042	58.3859
	PCB-18	2.31e+07	1.08	y	0.86	25:57	0.954	0.949	0.959	55.8279
	PCB-17	2.41e+07	1.06	y	0.90	26:07	0.960	0.955	0.965	55.5846
	PCB-24/27	6.73e+07	1.07	y	1.18	26:42	0.981	0.976	0.986	118.482
-	PCB-16/32	5.58e+07	1.07	y	1.03	27:12	1.000	0.995	1.005	112.343
-	PCB-34	4.22e+07	1.06	y	1.26	28:01	0.961	0.956	0.966	56.1590
	PCB-23	3.79e+07	1.08	y	1.31	28:06	0.964	0.959	0.969	48.5857
	PCB-29	3.92e+07	1.05	y	1.33	28:21	0.972	0.967	0.977	49.4765
	PCB-26	4.00e+07	1.07	y	1.29	28:34	0.980	0.974	0.984	51.9294
	PCB-25	4.03e+07	1.06	y	1.34	28:43	0.985	0.980	0.990	50.3720
	PCB-31	3.89e+07	1.05	y	1.42	29:04	0.997	0.992	1.002	45.9618
	PCB-28	4.41e+07	1.07	y	1.38	29:11	1.001	0.996	1.006	53.7861
	PCB-20/21/33	1.20e+08	1.08	y	1.31	29:47	1.021	1.017	1.027	153.289
	PCB-22	4.32e+07	1.06	y	1.32	30:13	1.036	1.032	1.042	54.8016
	PCB-36	4.29e+07	1.06	y	1.38	30:51	0.934	0.929	0.939	54.6050
	PCB-39	4.42e+07	1.07	y	1.42	31:19	0.948	0.943	0.953	54.5114
	PCB-38	4.23e+07	1.07	y	1.35	32:06	0.971	0.967	0.976	54.6773
	PCB-35	4.26e+07	1.06	y	1.38	32:37	0.987	0.982	0.992	54.1937
	PCB-37	4.11e+07	1.04	y	1.39	33:03	1.000	0.996	1.006	51.7002
	PCB-54	2.73e+07	0.79	y	1.20	28:04	1.001	0.996	1.006	54.9556
	PCB-50	2.18e+07	0.80	y	0.97	29:13	1.043	1.037	1.047	54.2611
	PCB-53	2.26e+07	0.78	y	1.19	29:53	0.946	0.941	0.951	50.8876
	PCB-51	2.29e+07	0.78	y	1.15	30:13	0.957	0.952	0.962	53.2858
	PCB-45	1.94e+07	0.80	y	0.97	30:38	0.970	0.966	0.976	53.8351
	PCB-46	1.79e+07	0.77	y	0.95	31:08	0.986	0.982	0.992	50.3635

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	5.06e+07	0.78	y	1.28	31:37	1.001	0.996	1.006	106.009
	PCB-73	2.89e+07	0.79	y	1.37	31:44	1.005	1.000	1.010	56.3839
	PCB-43/49	4.41e+07	0.80	y	1.11	31:53	1.010	1.005	1.015	106.211
	PCB-47	2.43e+07	0.77	y	1.13	32:06	1.001	0.996	1.006	56.4520
	PCB-48/75	5.31e+07	0.78	y	1.30	32:13	1.004	0.999	1.009	107.180
	PCB-65	2.76e+07	0.77	y	1.33	32:29	1.012	1.007	1.017	54.5674
	PCB-62	2.87e+07	0.78	y	1.29	32:36	1.016	1.011	1.021	58.5804
	PCB-44	2.08e+07	0.79	y	0.94	32:54	1.025	1.020	1.030	58.1399
	PCB-42/59	5.20e+07	0.77	y	1.22	33:07	1.032	1.028	1.038	112.468
	PCB-41/64/71/72	1.15e+08	0.78	y	1.31	33:43	1.051	1.046	1.056	231.172
	PCB-68	3.33e+07	0.78	y	1.49	33:58	1.059	1.054	1.064	59.0914
	PCB-40	1.80e+07	0.78	y	0.82	34:11	1.066	1.061	1.071	57.7695
	PCB-57	3.25e+07	0.77	y	1.11	34:33	0.971	0.965	0.975	59.7293
	PCB-67	3.17e+07	0.78	y	1.07	34:52	0.979	0.974	0.984	60.3350
	PCB-58	2.97e+07	0.79	y	1.10	34:59	0.982	0.977	0.987	55.1250
	PCB-63	3.19e+07	0.78	y	1.12	35:08	0.987	0.982	0.992	58.4468
	PCB-74	3.50e+07	0.77	y	1.20	35:25	0.995	0.990	1.000	59.4387
	PCB-61/70	6.02e+07	0.78	y	1.08	35:36	1.000	0.994	1.004	114.113
	PCB-76/66	6.43e+07	0.77	y	1.14	35:49	1.006	1.001	1.011	115.763
	PCB-80	3.60e+07	0.78	y	1.28	36:03	1.001	0.996	1.006	56.4779
	PCB-55	3.22e+07	0.77	y	1.11	36:22	1.009	1.005	1.015	58.2111
	PCB-56/60	5.95e+07	0.78	y	1.09	36:52	1.023	1.018	1.028	109.841
	PCB-79	3.22e+07	0.77	y	1.12	37:57	1.053	1.048	1.058	57.4749
	PCB-78	2.97e+07	0.77	y	1.24	38:38	0.987	0.982	0.992	57.0846
	PCB-81	3.27e+07	0.78	y	1.38	39:10	1.000	0.995	1.005	56.3848
	PCB-77	3.09e+07	0.78	y	1.21	39:46	1.001	0.995	1.005	57.9043
	PCB-104	1.93e+07	1.60	y	1.26	32:45	1.000	0.996	1.006	55.0477
	PCB-96	1.73e+07	1.64	y	1.09	34:01	1.039	1.034	1.044	57.0446
	PCB-103	1.47e+07	1.63	y	0.93	34:34	1.056	1.050	1.060	56.7874
	PCB-100	1.59e+07	1.57	y	1.00	34:55	1.067	1.061	1.071	57.1313
	PCB-94	1.32e+07	1.64	y	1.11	35:23	0.985	0.981	0.991	58.4762
	PCB-95/98/102	4.36e+07	1.56	y	1.21	35:52	0.999	0.994	1.004	176.799
	PCB-93	1.10e+07	1.72	y	1.13	36:00	1.003	0.998	1.008	47.9125
	PCB-88/91	2.88e+07	1.60	y	1.02	36:17	1.010	1.006	1.016	139.225
	PCB-121	1.78e+07	1.60	y	1.90	36:25	1.014	1.009	1.019	46.1337
	PCB-84/92	2.64e+07	1.64	y	1.05	37:14	0.990	0.986	0.996	113.980
	PCB-89	1.25e+07	1.60	y	1.02	37:25	0.995	0.991	1.001	55.6823

RL: MONO, TRI - DECA: —

RL: DI : —

Integrations by Analyst: DMS Date: 1/5/15

Reviewed by Analyst: [illegible] Date: 1/7/15 1/8/15

Client ID: OPR Filename: 150102E2 S:4 Acq: 2-JAN-15 15:41:55 ConCal: ST150102E2-1

Lab ID: B5A0001-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	2.90e+07	1.60	y	1.19	37:37	1.000	0.996	1.006	110.578
	PCB-113	1.83e+07	1.62	y	1.35	37:51	1.007	1.002	1.012	61.3571
	PCB-99	1.46e+07	1.68	y	1.29	37:57	1.009	1.005	1.015	51.3525
	PCB-119	1.91e+07	1.61	y	1.72	38:24	0.987	0.982	0.992	55.0260
	PCB-108/112	2.92e+07	1.61	y	1.29	38:33	0.991	0.986	0.996	112.314
	PCB-83	1.79e+07	1.63	y	1.52	38:44	0.996	0.991	1.001	58.3809
	PCB-97	1.50e+07	1.60	y	1.25	38:55	1.000	0.996	1.006	59.5772
	PCB-86	1.17e+07	1.65	y	1.02	39:04	1.004	1.000	1.010	56.9058
	B-87/117/125	5.34e+07	1.59	y	1.56	39:11	1.007	1.002	1.012	169.580
	PCB-111/115	3.76e+07	1.61	y	1.75	39:21	1.012	1.007	1.017	106.165
	PCB-85/116	2.83e+07	1.61	y	1.30	39:29	1.015	1.010	1.020	107.741
	PCB-120	2.04e+07	1.60	y	1.78	39:44	1.021	1.016	1.026	56.7340
	PCB-110	1.89e+07	1.60	y	1.68	39:52	1.025	1.020	1.030	55.6306
	PCB-82	1.15e+07	1.66	y	0.74	40:29	0.976	0.972	0.982	60.0115
	PCB-124	2.09e+07	1.57	y	1.32	41:10	0.993	0.988	0.998	60.9630
	PCB-107/109	3.68e+07	1.60	y	1.22	41:19	0.996	0.991	1.001	116.608
	PCB-123	1.86e+07	1.58	y	1.22	41:30	1.001	0.995	1.005	59.0305
-	PCB-106/118	3.82e+07	1.60	y	1.22	41:41	1.001	0.996	1.006	115.206
-	PCB-114	3.00e+07	1.66	y	1.36	42:20	1.001	0.995	1.005	60.1261
	PCB-122	2.64e+07	1.65	y	1.24	42:28	1.004	0.999	1.009	57.9616
	PCB-105	2.92e+07	1.60	y	1.28	43:11	1.000	0.995	1.005	59.4315
	PCB-127	2.77e+07	1.63	y	1.14	43:32	1.000	0.995	1.005	58.3546
	PCB-126	2.92e+07	1.59	y	1.28	45:25	1.000	0.995	1.005	59.9164
	PCB-155	1.26e+07	1.28	y	1.14	37:09	1.001	0.966	1.006	59.4323
	PCB-150	1.22e+07	1.31	y	1.06	38:26	1.035	1.030	1.040	61.3121
	PCB-152	1.27e+07	1.33	y	1.10	38:54	1.047	1.043	1.053	61.8084
	PCB-145	1.24e+07	1.29	y	1.09	39:21	1.060	1.055	1.065	60.6847
	PCB-136	1.28e+07	1.32	y	1.08	39:40	1.058	1.064	1.074	63.2963
	PCB-148	8.80e+06	1.27	y	0.74	39:47	1.071	1.066	1.076	63.6941
	PCB-154	1.05e+07	1.31	y	0.88	40:17	1.085	1.079	1.089	63.4969
	PCB-151	9.57e+06	1.31	y	0.81	40:54	1.101	1.097	1.107	63.3994
	PCB-135	9.49e+06	1.32	y	0.78	41:08	1.107	1.101	1.113	65.2486
	PCB-144	9.11e+06	1.36	y	0.82	41:15	1.111	1.105	1.116	59.5691
	PCB-147	9.72e+06	1.29	y	0.83	41:22	1.114	1.011	1.120	62.8760
	PCB-139/149	2.02e+07	1.28	y	0.84	41:38	1.121	1.115	1.127	128.574
-	PCB-140	9.21e+06	1.30	y	0.79	41:49	1.126	1.120	1.132	62.9044
-	PCB-134/143	3.19e+07	1.25	y	0.93	42:15	0.975	0.970	0.980	105.845

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	3.09e+07	1.27	y	0.95	42:33	0.982	0.977	0.987	100.591
PCB-131	1.46e+07	1.26	y	0.91	42:42	0.985	0.981	0.991	49.2115
PCB-146/165	3.98e+07	1.25	y	1.16	42:56	0.991	0.986	0.996	106.075
PCB-132/161	3.85e+07	1.27	y	1.11	43:11	0.997	0.992	1.002	106.486
PCB-153	2.16e+07	1.28	y	1.18	43:21	1.000	0.995	1.005	56.4753
PCB-168	2.37e+07	1.24	y	1.37	43:34	1.005	1.000	1.010	53.3717
PCB-141	1.72e+07	1.27	y	0.97	44:05	1.000	0.996	1.005	56.2016
PCB-137	1.93e+07	1.23	y	1.07	44:27	1.009	1.004	1.014	57.4580
PCB-130	1.51e+07	1.26	y	0.85	44:34	1.011	1.007	1.017	57.0654
PCB-138/163/164	6.47e+07	1.26	y	1.23	44:56	1.001	0.996	1.006	168.564
PCB-158/160	4.63e+07	1.26	y	1.29	45:11	1.006	1.001	1.011	114.575
PCB-129	1.66e+07	1.26	y	0.92	45:25	1.011	1.007	1.017	57.1965
PCB-166	2.26e+07	1.26	y	1.12	45:53	0.993	0.988	0.998	53.7769
PCB-159	2.49e+07	1.27	y	1.16	46:12	1.000	0.995	1.005	56.8969
PCB-128/162	4.33e+07	1.26	y	1.02	46:30	1.007	1.002	1.012	112.877
PCB-167	2.49e+07	1.28	y	1.06	46:53	1.000	0.995	1.005	56.8277
PCB-156	2.66e+07	1.26	y	1.18	48:10	1.000	0.995	1.005	56.7786
PCB-157	2.56e+07	1.28	y	1.08	48:26	1.000	0.995	1.005	57.5576
PCB-169	2.37e+07	1.25	y	1.11	50:37	1.000	0.995	1.005	59.2836
PCB-188	1.84e+07	1.08	y	1.40	42:59	1.001	0.995	1.005	55.9331
PCB-184	1.72e+07	1.07	y	1.24	43:26	1.011	1.006	1.016	59.4178
PCB-179	1.85e+07	1.07	y	1.30	44:12	1.029	1.024	1.034	60.5113
PCB-176	1.95e+07	1.06	y	1.36	44:40	1.040	1.035	1.045	60.9450
PCB-186	1.80e+07	1.05	y	1.28	45:16	1.054	1.049	1.059	60.2249
PCB-178	1.35e+07	1.08	y	0.94	45:46	1.065	1.061	1.071	61.5420
PCB-175	1.51e+07	1.05	y	0.97	46:06	1.073	1.069	1.079	66.3183
PCB-182/187	3.14e+07	1.07	y	1.01	46:17	1.077	1.073	1.083	132.254
PCB-183	1.58e+07	1.07	y	1.08	46:35	1.085	1.080	1.090	62.3454
PCB-185	1.44e+07	1.09	y	1.34	47:15	0.956	0.951	0.961	57.2092
PCB-174	1.51e+07	1.06	y	1.34	47:37	0.963	0.958	0.968	60.0195
PCB-181	1.44e+07	1.08	y	1.36	47:43	0.965	0.961	0.971	56.3577
PCB-177	1.37e+07	1.07	y	1.24	47:53	0.968	0.964	0.974	59.0224
PCB-171	1.43e+07	1.09	y	1.31	48:10	0.974	0.970	0.980	57.8452
PCB-173	1.29e+07	1.08	y	1.16	48:36	0.983	0.979	0.989	59.1233
PCB-172	1.39e+07	1.11	y	1.22	49:03	0.992	0.988	0.998	60.7769
PCB-192	1.74e+07	1.07	y	1.53	49:15	0.996	0.991	1.001	60.8081
PCB-180	1.54e+07	1.05	y	1.43	49:28	1.000	0.995	1.005	57.4890

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 1/5/15

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	1.89e+07	1.06	y	1.65	49:39	1.004	0.999	1.009	60.7932
	PCB-191	1.88e+07	1.09	y	1.67	49:55	1.010	1.004	1.014	59.8278
	PCB-170	1.35e+07	1.07	y	1.50	50:59	1.000	0.995	1.005	60.5588
	PCB-190	1.86e+07	1.08	y	2.02	51:10	1.004	0.998	1.008	62.0053
	PCB-189	1.86e+07	1.10	y	1.54	52:32	1.000	0.995	1.005	62.2567
	PCB-202	1.13e+07	0.92	y	1.04	48:23	1.000	0.995	1.005	55.8790
	PCB-201	1.28e+07	0.90	y	1.10	48:52	1.010	1.006	1.016	59.7070
	PCB-204	1.12e+07	0.95	y	0.99	49:01	1.014	1.009	1.019	57.8634
	PCB-197	1.22e+07	0.94	y	1.07	49:19	1.020	1.015	1.025	58.3568
	PCB-200	1.19e+07	0.90	y	1.02	50:13	1.038	1.032	1.044	60.2561
	PCB-198	8.40e+06	0.91	y	0.74	51:36	1.067	1.058	1.068	58.0595
	PCB-199	8.32e+06	0.92	y	0.73	51:43	1.069	1.060	1.070	58.6356
-	PCB-196/203	1.82e+07	0.93	y	0.77	51:59	1.075	1.066	1.076	121.350
-	PCB-195	1.83e+07	0.89	y	1.20	53:10	0.984	0.979	0.989	58.9265
	PCB-194	1.96e+07	0.90	y	1.25	54:03	1.000	0.995	1.005	60.6515
	PCB-205	2.32e+07	0.92	y	1.41	54:20	1.005	1.001	1.011	63.2131
	PCB-208	1.71e+07	1.34	y	0.96	53:19	1.000	0.995	1.005	56.1690
	PCB-207	1.72e+07	1.33	y	0.92	53:38	1.006	1.001	1.011	59.2927
	PCB-206	1.18e+07	1.33	y	1.03	55:40	1.000	0.995	1.005	57.6065
	PCB-209	1.34e+07	1.21	y	1.18	57:03	1.000	0.995	1.005	61.2168

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.10e+08	3.02	y	16:11	1.22	155.965	
Total Di-PCB	9.50e+08	1.64	y	20:11	1.21	1414.57	
Total Tri-PCB	2.24e+08	1.07	y	24:18	1.16	456.390	
Total Tri-PCB	6.75e+08	1.06	y	28:01	1.35	855.469	Sum:1311.86
Total Tetra-PCB	1.18e+09	0.79	y	28:04	1.17	2381.32	
Total Penta-PCB	6.62e+08	1.60	y	32:45	1.21	2343.37	
Total Penta-PCB	1.62e+08	1.66	y	42:20	1.26	336.265	Sum:2679.63
Total Hexa-PCB	1.49e+08	1.28	y	37:09	0.92	876.297	
Total Hexa-PCB	5.85e+08	1.25	y	42:15	1.08	1579.79	Sum:2456.09
Total Hepta-PCB	3.92e+08	1.08	y	42:59	1.27	1472.89	
Total Octa-PCB	9.44e+07	0.92	y	48:23	0.92	530.107	
Total Octa-PCB	6.46e+07	0.89	y	53:10	1.29	193.339	Sum:723.446
Total Nona-PCB	4.68e+07	1.34	y	53:19	0.96	175.517	
Total Deca-PCB	1.34e+07	1.21	y	57:03	1.18	61.2168	

Total PCB Conc:12672.2631610

RL: MONO, TRI - DECA: ———

Integrations by Analyst DMS

Date: 1/5/15

Client ID: OPR Filename: 150102E2 S:4 Acq: 2-JAN-15 15:41:55 ConCal: ST150102E2-1

Lab ID: B5A0001-BS1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	5.51e+07	3.34 y	0.89	16:10	0.622	0.622	0.628	76.2	76.2
13C-PCB-3	5.93e+07	3.42 y	0.93	18:47	0.723	0.721	0.729	78.6	78.6
13C-PCB-4	3.38e+07	1.59 y	0.55	20:08	0.774	0.772	0.780	76.0	76.0
13C-PCB-9	5.28e+07	1.60 y	0.83	21:55	0.843	0.840	0.848	78.6	78.6
13C-PCB-11	6.39e+07	1.59 y	0.94	25:18	0.973	0.968	0.978	83.8	83.8
13C-PCB-19	2.98e+07	1.10 y	0.53	24:17	0.934	0.929	0.939	68.7	68.7
13C-PCB-28	5.96e+07	1.07 y	0.89	29:10	1.004	0.999	1.009	95.2	95.2
13C-PCB-32	4.83e+07	1.14 y	0.81	27:12	1.046	1.041	1.051	72.9	72.9
13C-PCB-37	5.71e+07	1.05 y	0.83	33:03	1.137	1.131	1.143	97.4	97.4
13C-PCB-47	3.80e+07	0.80 y	0.74	32:05	0.870	0.867	0.875	89.4	89.4
13C-PCB-52	3.73e+07	0.80 y	0.71	31:35	0.857	0.853	0.861	92.4	92.4
13C-PCB-54	4.15e+07	0.79 y	0.85	28:02	0.761	0.758	0.766	85.5	85.5
13C-PCB-70	4.89e+07	0.80 y	0.94	35:36	0.966	0.961	0.971	90.7	90.7
13C-PCB-77	4.42e+07	0.81 y	0.89	39:45	1.078	1.073	1.083	86.6	86.6
13C-PCB-80	4.99e+07	0.82 y	0.96	36:02	0.978	0.972	0.982	90.8	90.8
13C-PCB-81	4.20e+07	0.79 y	0.84	39:09	1.062	1.057	1.067	87.8	87.8
13C-PCB-95	2.03e+07	1.66 y	0.74	35:54	0.913	0.908	0.918	85.9	85.9
13C-PCB-97	2.02e+07	1.67 y	0.69	38:54	0.989	0.984	0.994	92.2	92.2
13C-PCB-101	2.20e+07	1.61 y	0.79	37:36	0.956	0.951	0.961	88.2	88.2
13C-PCB-104	2.78e+07	1.61 y	1.00	32:44	0.832	0.829	0.837	88.0	88.0
13C-PCB-105	3.83e+07	1.63 y	1.24	43:10	0.929	0.924	0.934	89.0	89.0
13C-PCB-114	3.68e+07	1.61 y	1.21	42:19	0.911	0.905	0.915	87.7	87.7
13C-PCB-118	2.71e+07	1.60 y	0.98	41:40	1.059	1.054	1.064	86.6	86.6
13C-PCB-123	2.59e+07	1.63 y	0.95	41:28	1.054	1.049	1.059	85.7	85.7
13C-PCB-126	3.79e+07	1.63 y	1.16	45:25	0.978	0.972	0.982	93.8	93.8
13C-PCB-127	4.16e+07	1.67 y	1.34	43:31	0.937	0.931	0.941	89.1	89.1
13C-PCB-138	3.13e+07	1.31 y	1.04	44:54	0.967	0.961	0.971	86.3	86.3
13C-PCB-141	3.13e+07	1.28 y	1.07	44:04	0.949	0.943	0.953	84.1	84.1
13C-PCB-153	3.25e+07	1.36 y	1.11	43:20	0.933	0.927	0.937	83.9	83.9
13C-PCB-155	1.87e+07	1.32 y	0.83	37:08	0.944	0.939	0.949	70.6	70.6
13C-PCB-156	3.97e+07	1.29 y	1.24	48:09	1.037	1.032	1.042	91.6	91.6
13C-PCB-157	4.11e+07	1.27 y	1.31	48:25	1.042	1.037	1.047	90.1	90.1
13C-PCB-159	3.76e+07	1.32 y	1.20	46:11	0.994	0.989	0.999	90.1	90.1
13C-PCB-167	4.13e+07	1.29 y	1.32	46:52	1.009	1.004	1.014	90.0	90.0
13C-PCB-169	3.61e+07	1.31 y	1.22	50:36	1.089	1.082	1.092	85.5	85.5
13C-PCB-170	1.49e+07	0.48 y	0.54	50:58	1.097	1.089	1.101	80.1	80.1
13C-PCB-180	1.88e+07	0.45 y	0.67	49:26	1.064	1.059	1.069	80.1	80.1
13C-PCB-188	2.34e+07	0.48 y	0.94	42:58	0.925	0.919	0.929	72.0	72.0
13C-PCB-189	1.94e+07	0.46 y	0.72	52:30	1.130	1.120	1.132	77.8	77.8
13C-PCB-194	2.59e+07	0.95 y	0.81	54:03	0.995	0.990	1.000	88.2	88.2
13C-PCB-202	1.94e+07	0.91 y	0.83	48:22	1.041	1.036	1.046	67.2	67.2
13C-PCB-206	2.00e+07	0.79 y	0.66	55:39	1.025	1.021	1.031	83.7	83.7
13C-PCB-208	3.17e+07	0.77 y	1.12	53:18	0.981	0.976	0.986	77.7	77.7
13C-PCB-209	1.86e+07	1.20 y	0.61	57:02	1.050	1.044	1.054	83.3	83.3

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	5.50e+07	0.82 y	1.01	37:55	1.029	1.023	1.033	95.8	95.8
13C-PCB-178	1.84e+07	0.46 y	0.63	45:44	0.985	0.979	0.989	83.8	83.8

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	5.50e+07	0.82 y	1.20	37:55	0.969	0.963	0.973	109	109
13C-PCB-178	1.84e+07	0.46 y	0.94	45:44	0.925	0.920	0.930	105	105

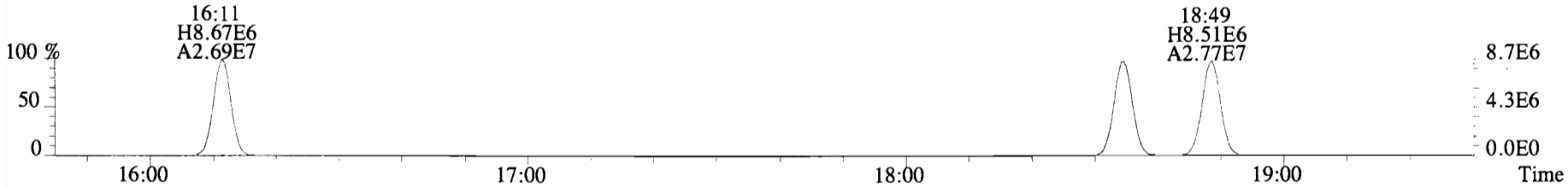
RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	8.14e+07	1.59 y	1.00	26:00	100
13C-PCB-31	7.05e+07	1.07 y	1.00	29:03	100
13C-PCB-60	5.71e+07	0.82 y	1.00	36:51	100
13C-PCB-111	3.18e+07	1.61 y	1.00	39:21	100
13C-PCB-128	3.48e+07	1.26 y	1.00	46:27	100
13C-PCB-205	3.63e+07	0.92 y	1.00	54:19	100

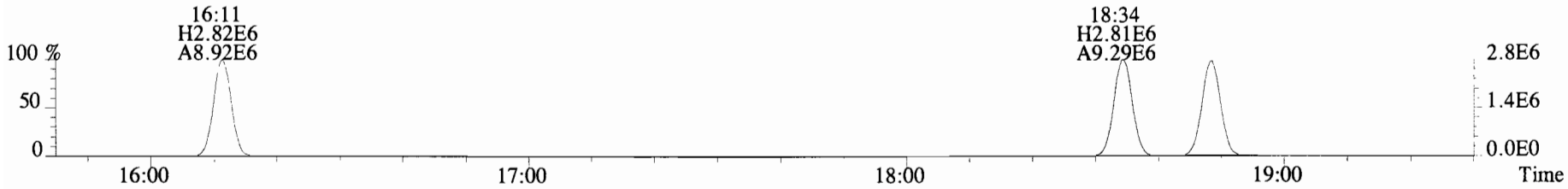
Analyst: DMS

Date: 1/5/15

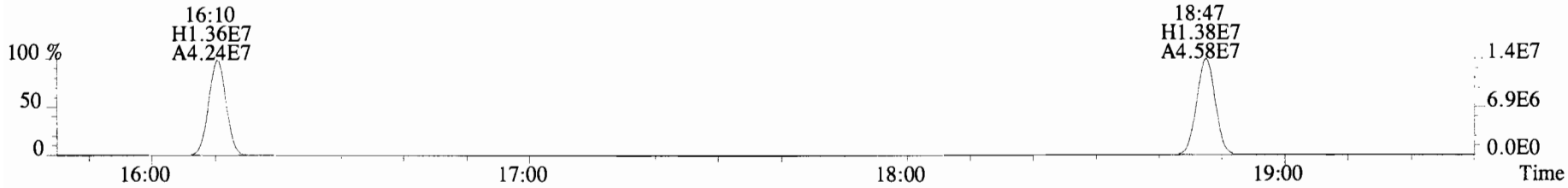
File:150102E2 #1-728 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3672.0,0.00%,F,F)



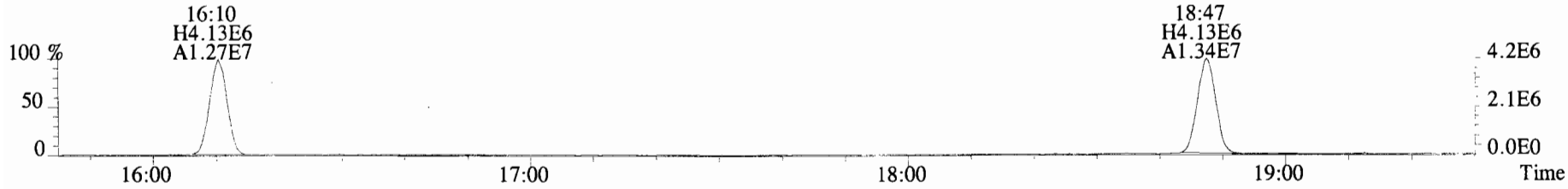
190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3500.0,0.00%,F,F)



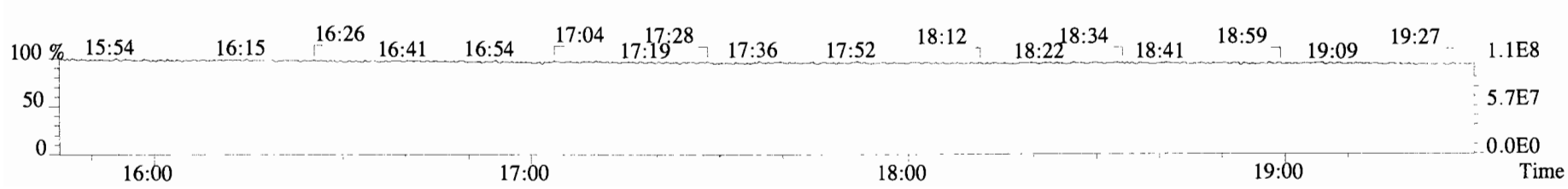
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3928.0,0.00%,F,F)



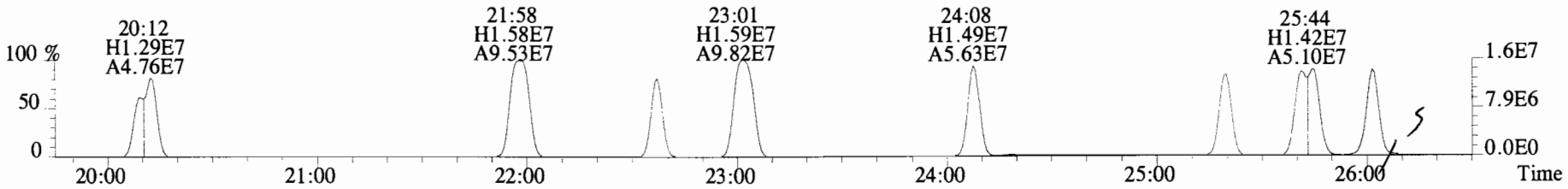
202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30660.0,0.00%,F,F)



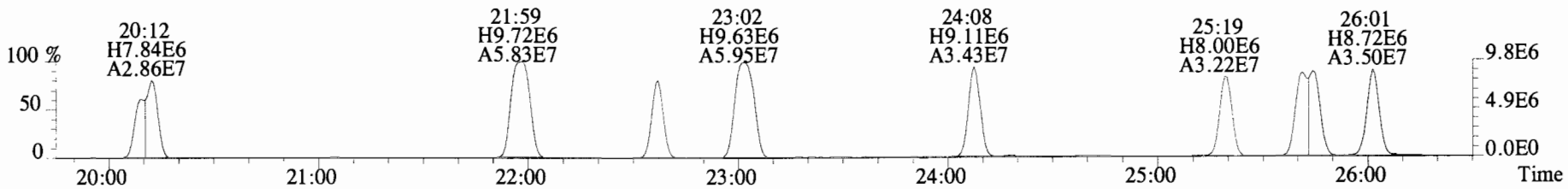
180.9880 S:4



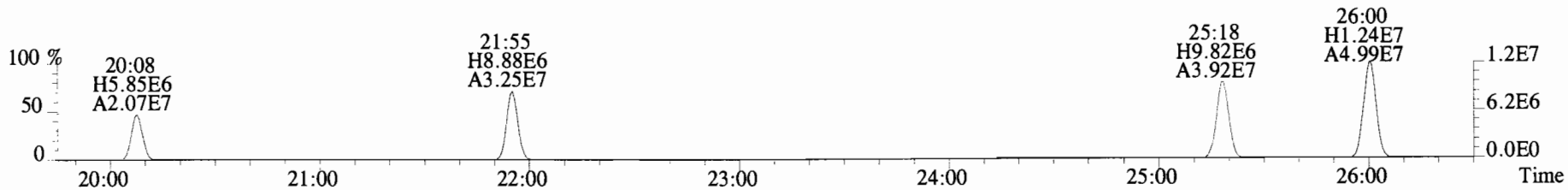
File:150102E2 #1-757 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4604.0,0.00%,F,F)



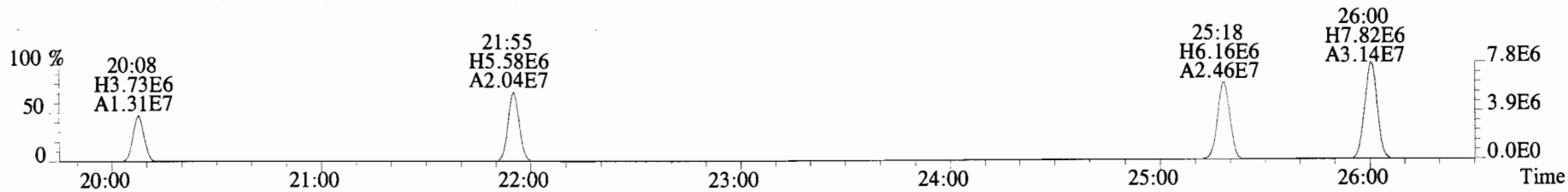
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34716.0,0.00%,F,F)



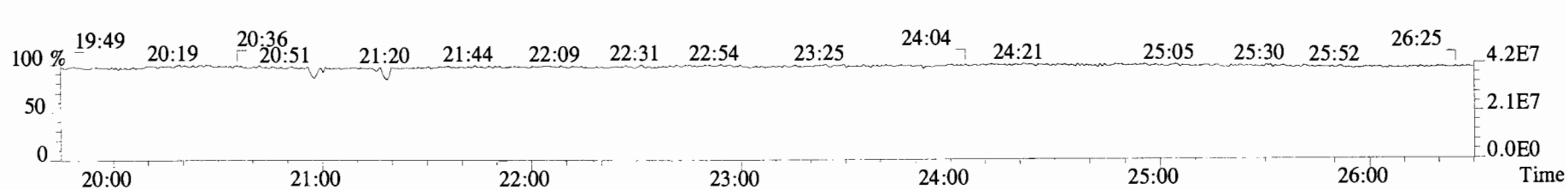
234.0406 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4132.0,0.00%,F,F)



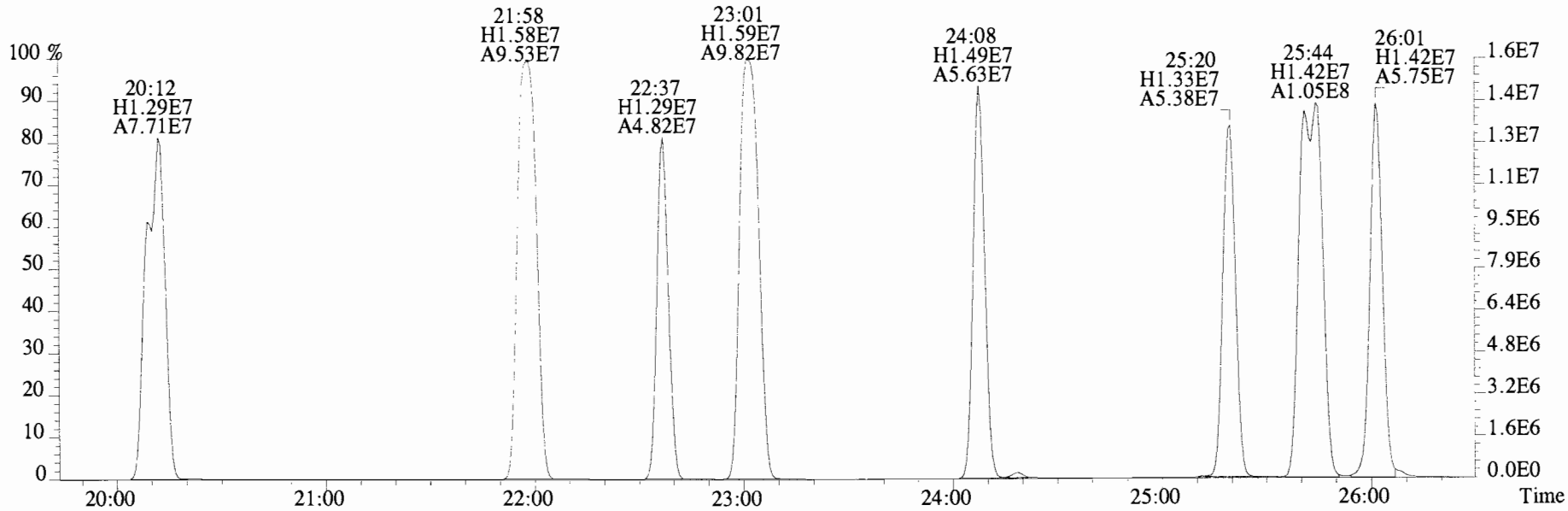
236.0376 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3928.0,0.00%,F,F)



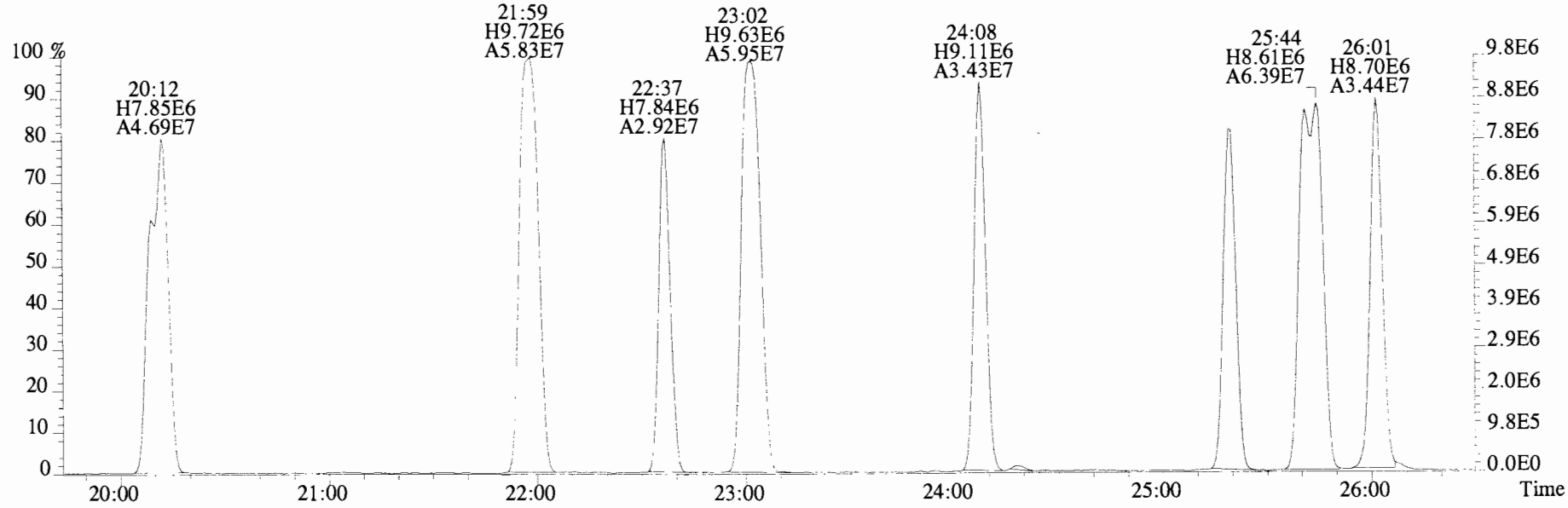
230.9856 S:4 F:2

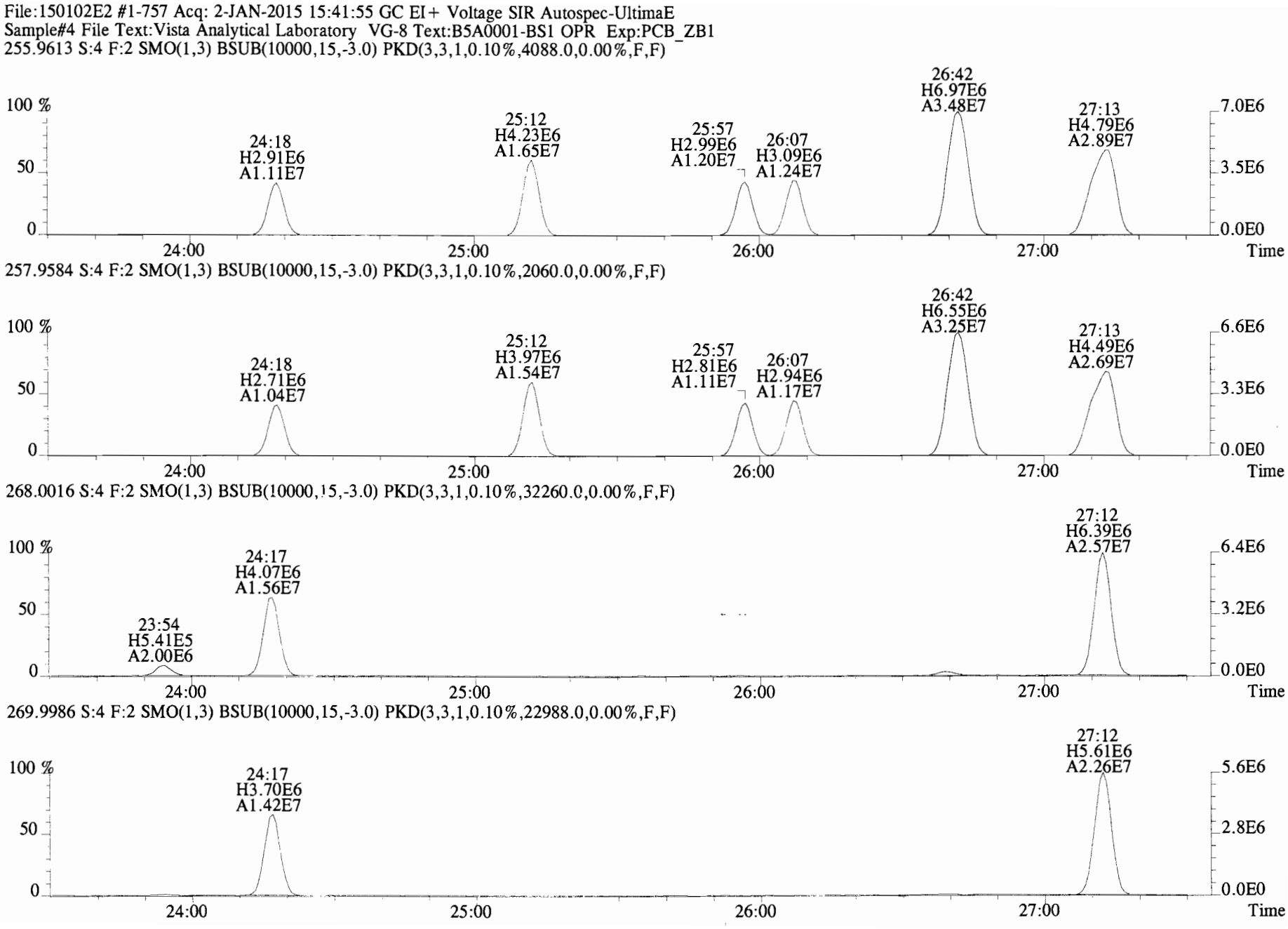


File:150102E2 #1-757 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4604.0,0.00%,F,F)

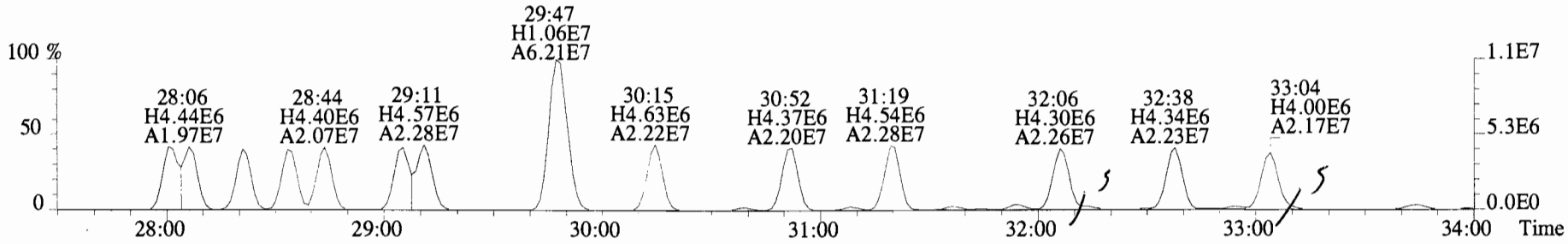


223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34716.0,0.00%,F,F)

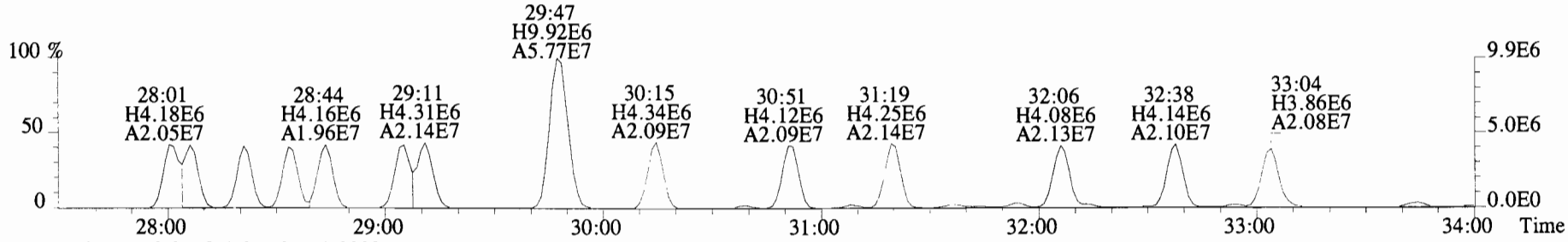



File:150102E2 #1-757 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4088.0,0.00%,F,F)
24:18 H2.91E6 A1.11E7
25:12 H4.23E6 A1.65E7
25:57 H2.99E6 A1.20E7
26:07 H3.09E6 A1.24E7
26:42 H6.97E6 A3.48E7
27:13 H4.79E6 A2.89E7
257.9584 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2060.0,0.00%,F,F)
24:18 H2.71E6 A1.04E7
25:12 H3.97E6 A1.54E7
25:57 H2.81E6 A1.11E7
26:07 H2.94E6 A1.17E7
26:42 H6.55E6 A3.25E7
27:13 H4.49E6 A2.69E7
268.0016 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,32260.0,0.00%,F,F)
23:54 H5.41E5 A2.00E6
24:17 H4.07E6 A1.56E7
27:12 H6.39E6 A2.57E7
269.9986 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,22988.0,0.00%,F,F)
24:17 H3.70E6 A1.42E7
27:12 H5.61E6 A2.26E7
100 %
50
0
24:00
25:00
26:00
27:00
Time
7.0E6
3.5E6
0.0E0
6.6E6
3.3E6
6.4E6
3.2E6
5.6E6
2.8E6

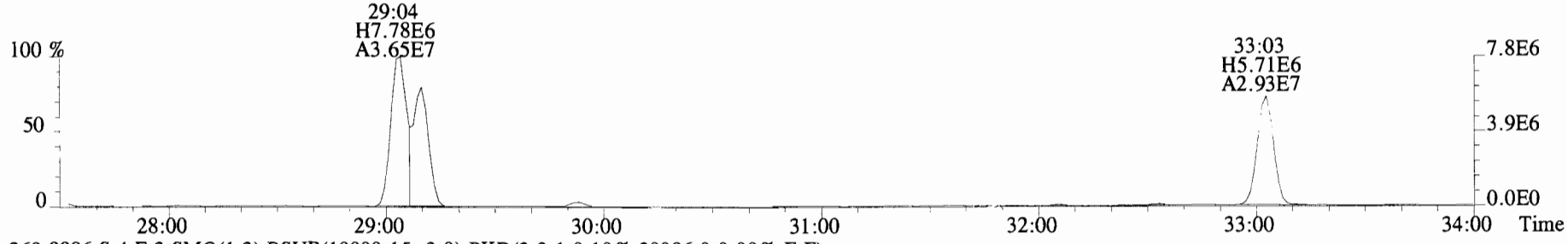
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7640.0,0.00%,F,F)



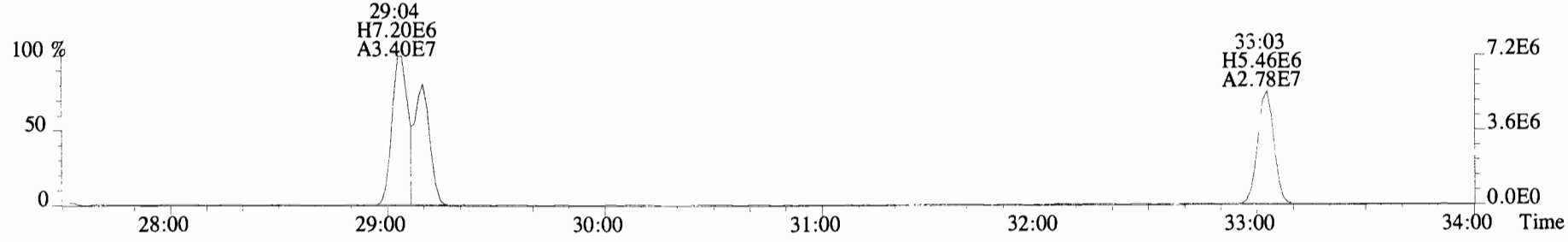
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7776.0,0.00%,F,F)



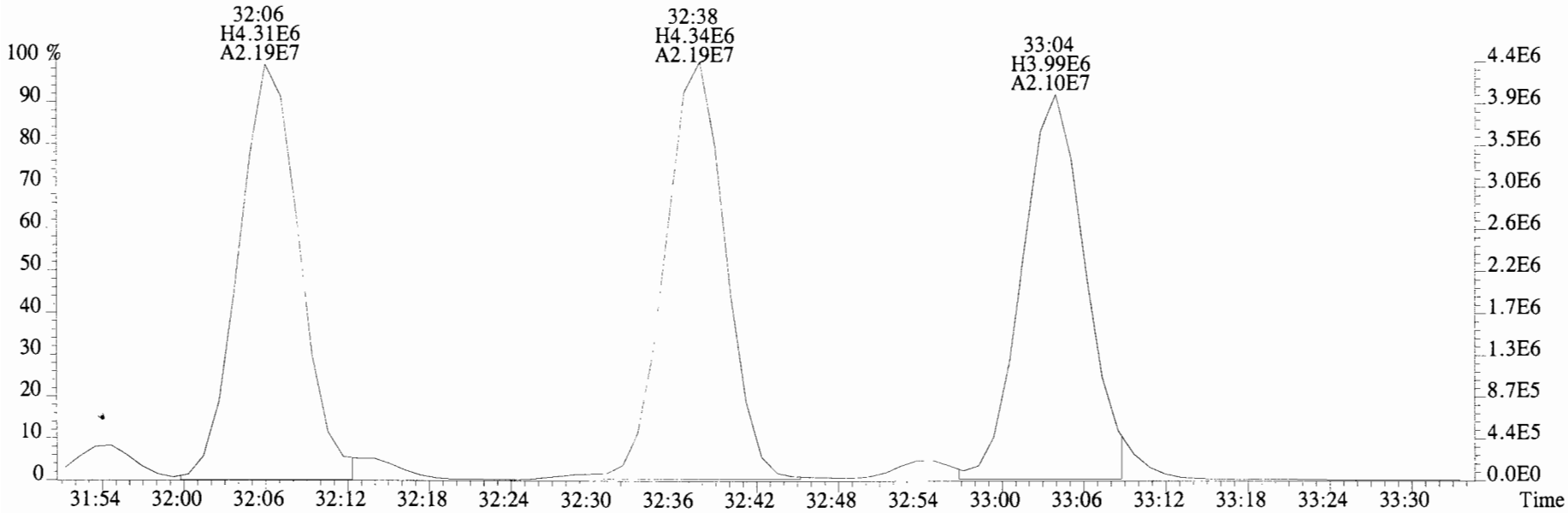
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,31536.0,0.00%,F,F)



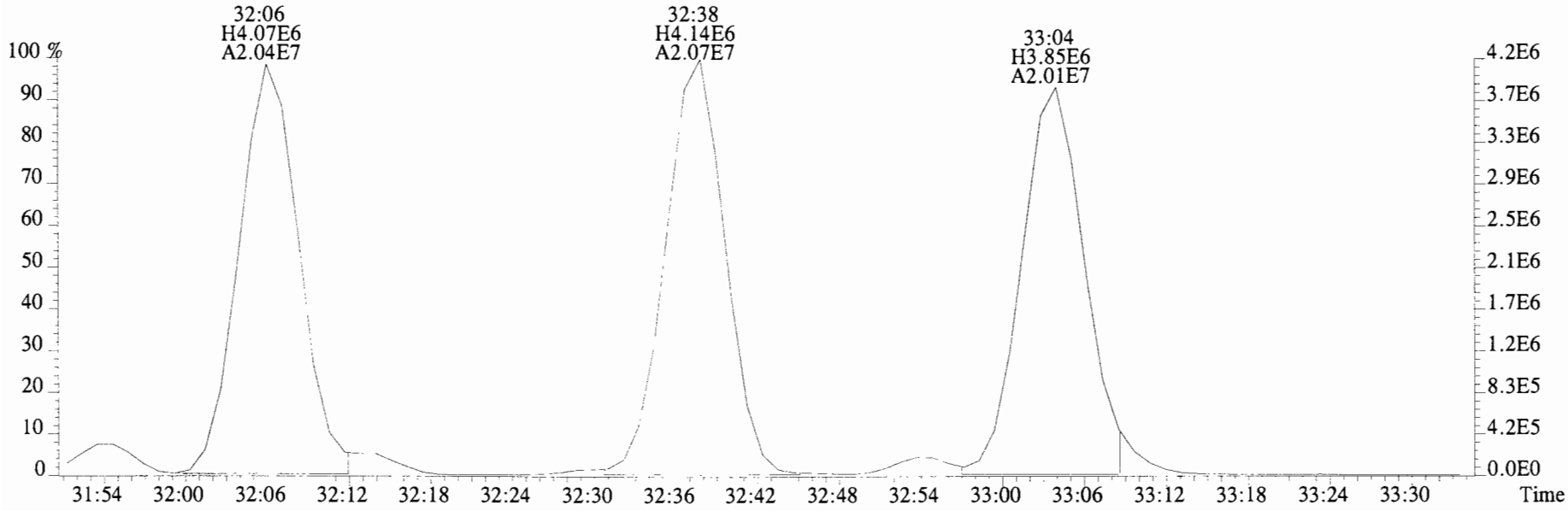
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,20096.0,0.00%,F,F)



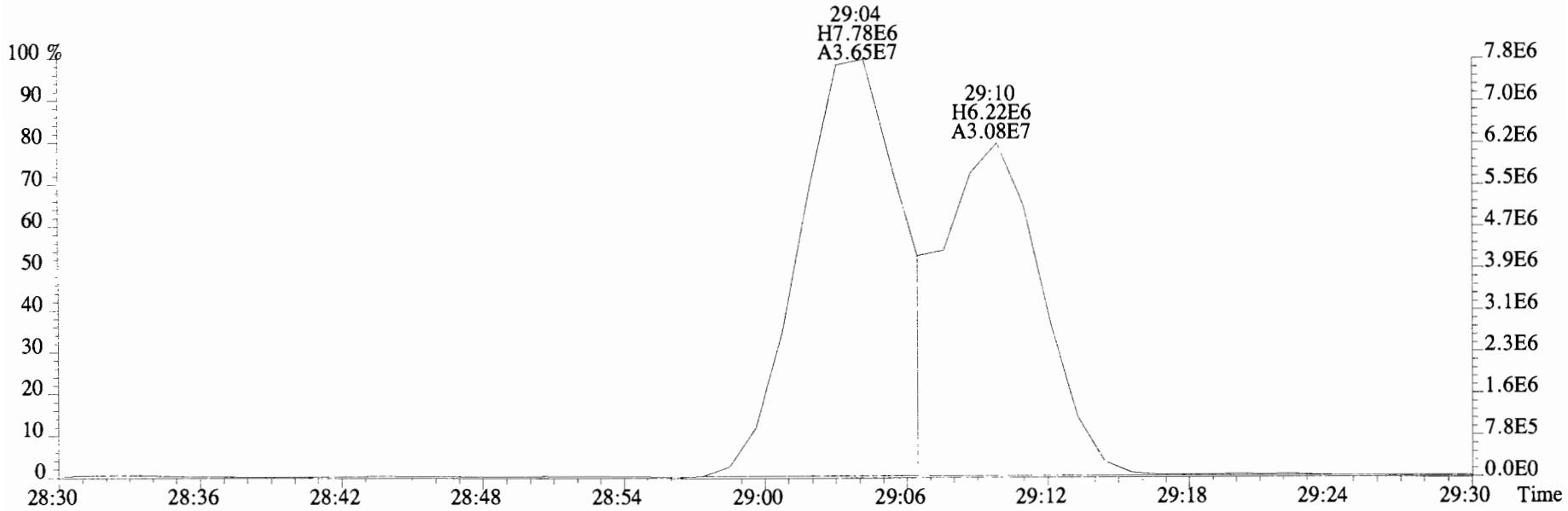
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7640.0,0.00%,F,F)



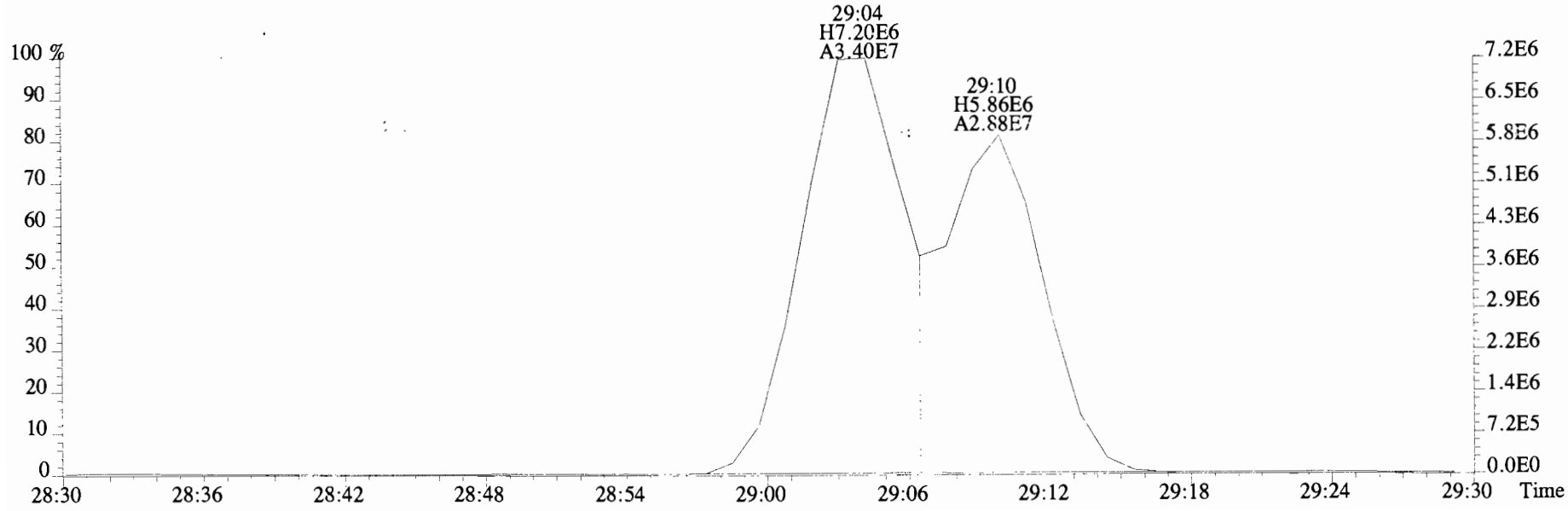
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7776.0,0.00%,F,F)



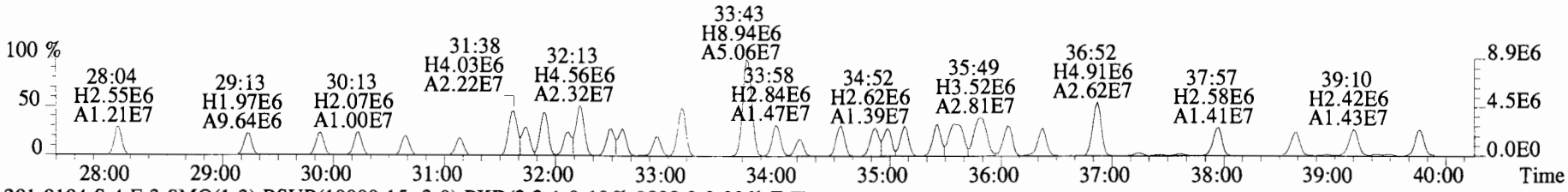
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,31536.0,0.00%,F,F)



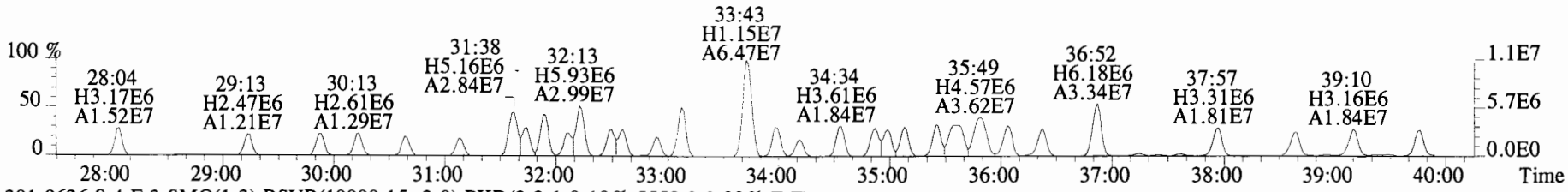
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,20096.0,0.00%,F,F)



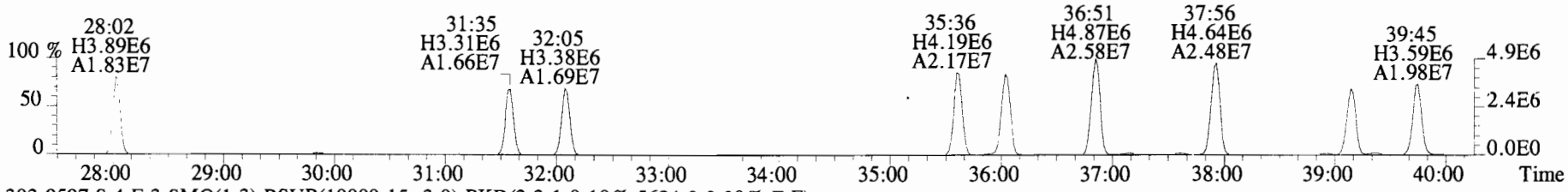
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2624.0,0.00%,F,F)



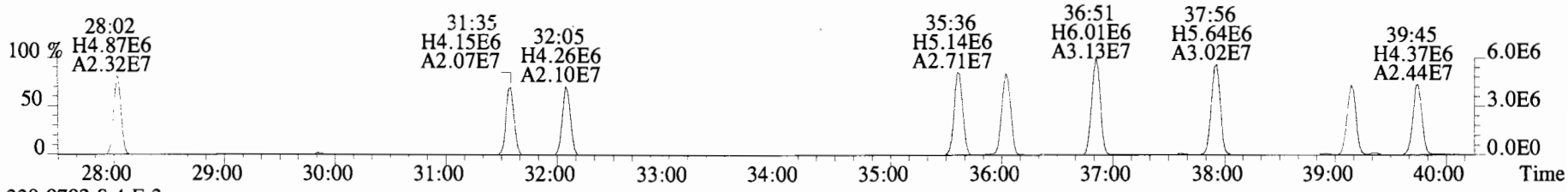
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2808.0,0.00%,F,F)



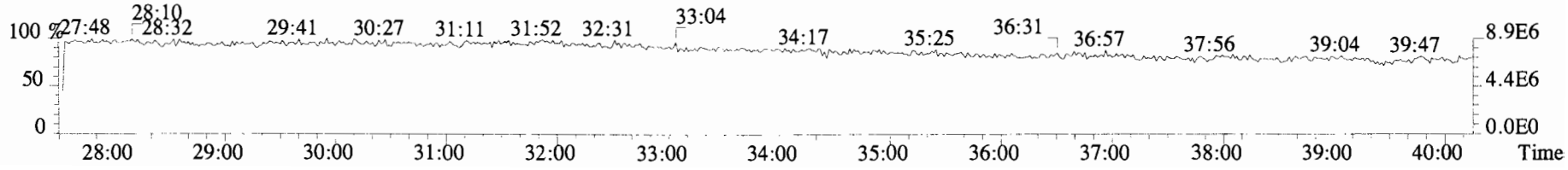
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5552.0,0.00%,F,F)



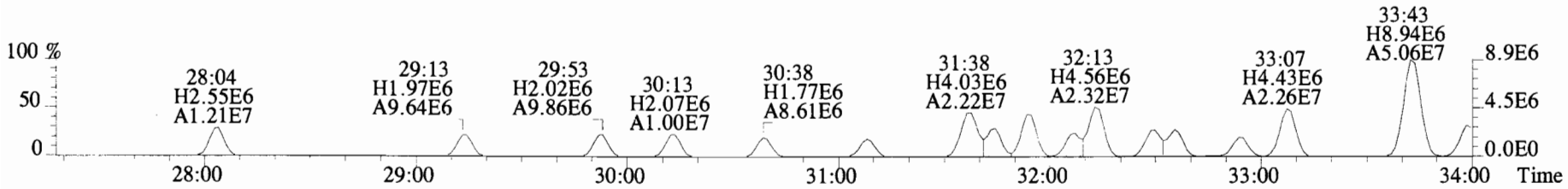
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5624.0,0.00%,F,F)



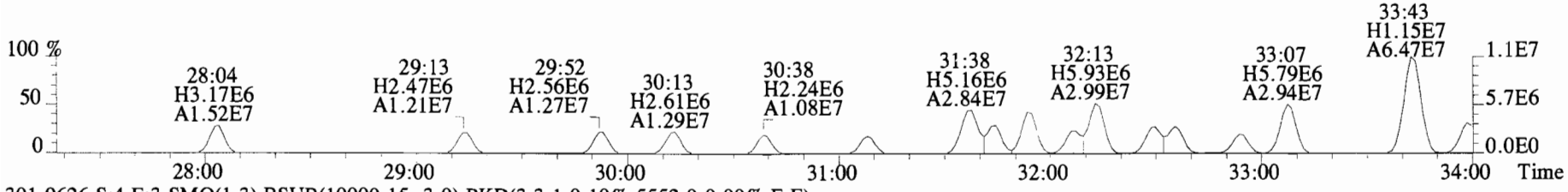
330.9792 S:4 F:3



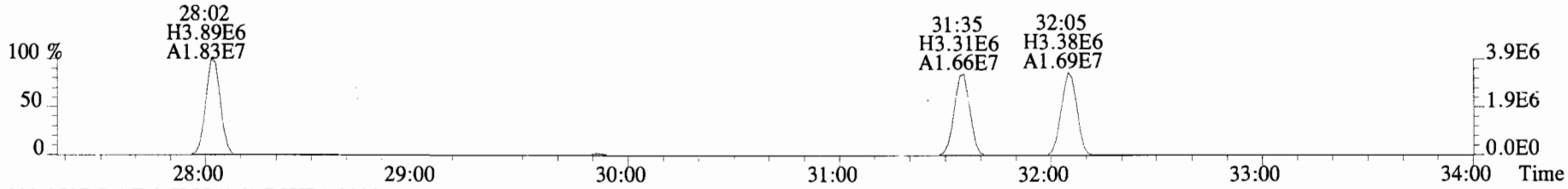
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2624.0,0.00%,F,F)



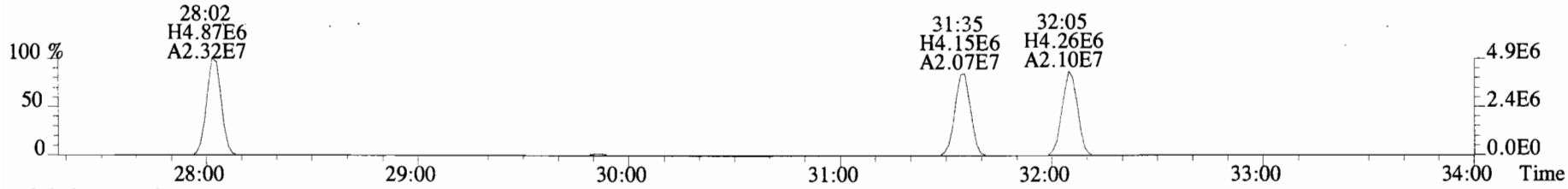
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2808.0,0.00%,F,F)



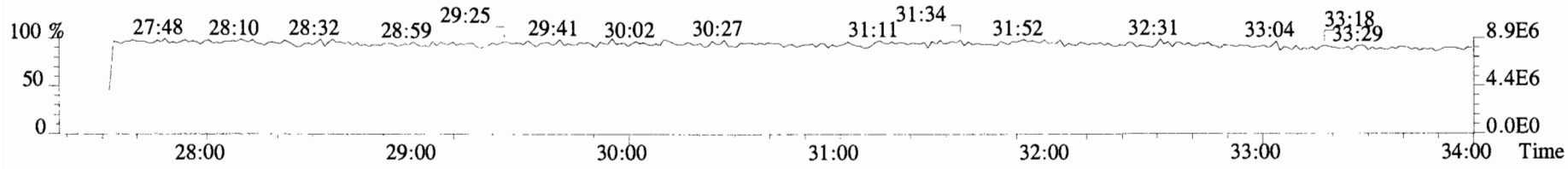
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5552.0,0.00%,F,F)



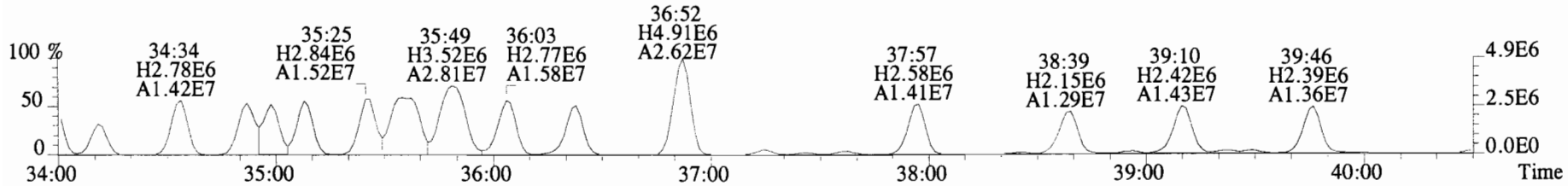
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5624.0,0.00%,F,F)



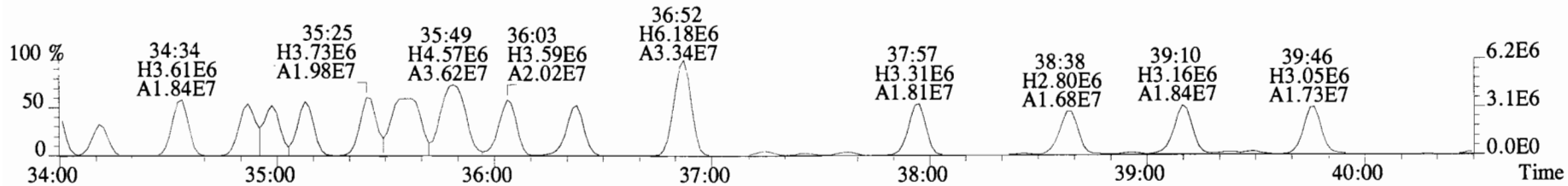
330.9792 S:4 F:3



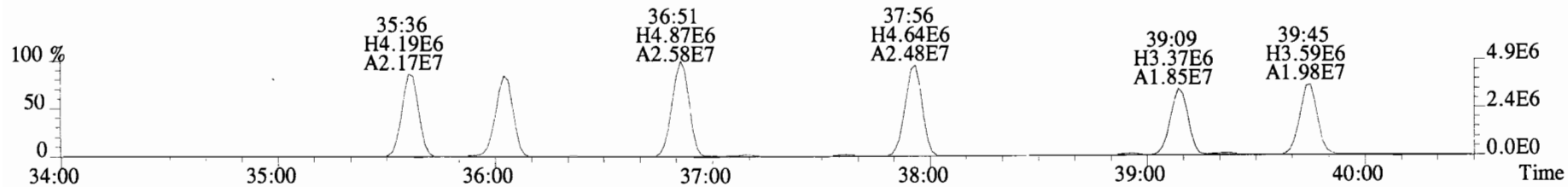
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2624.0,0.00%,F,F)



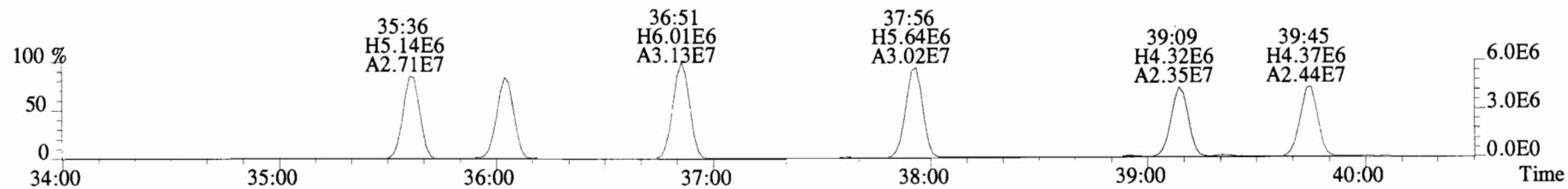
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2808.0,0.00%,F,F)



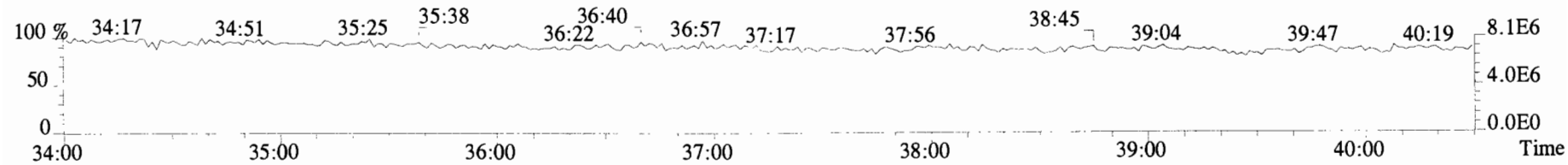
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5552.0,0.00%,F,F)



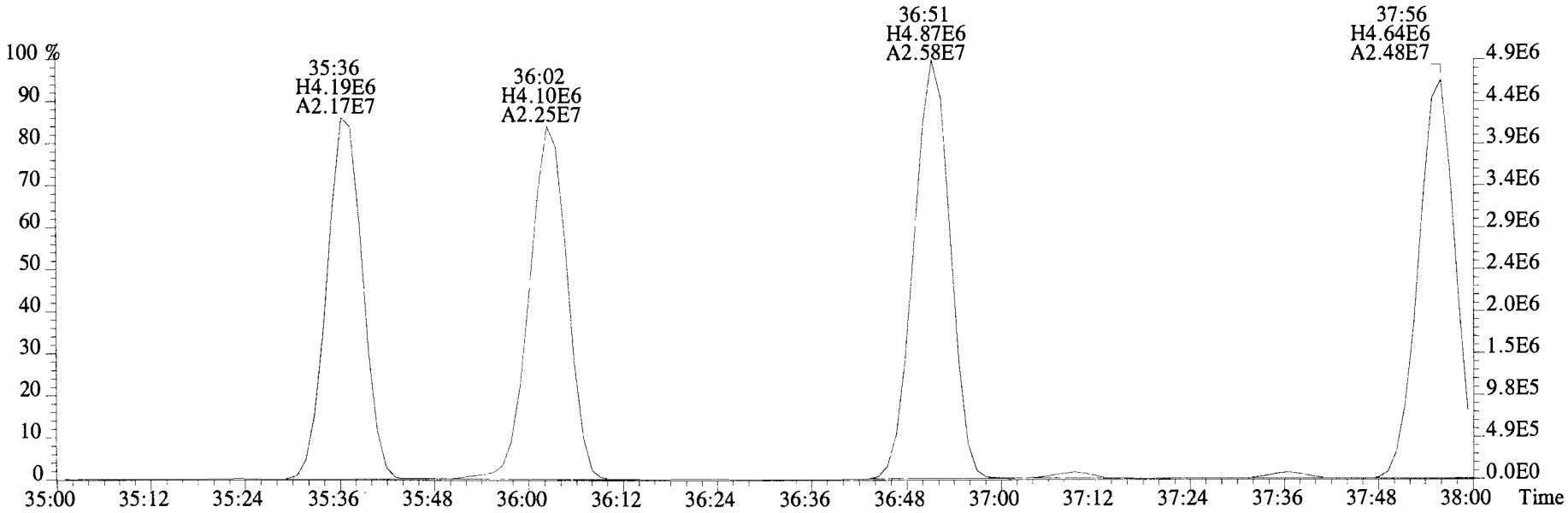
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5624.0,0.00%,F,F)



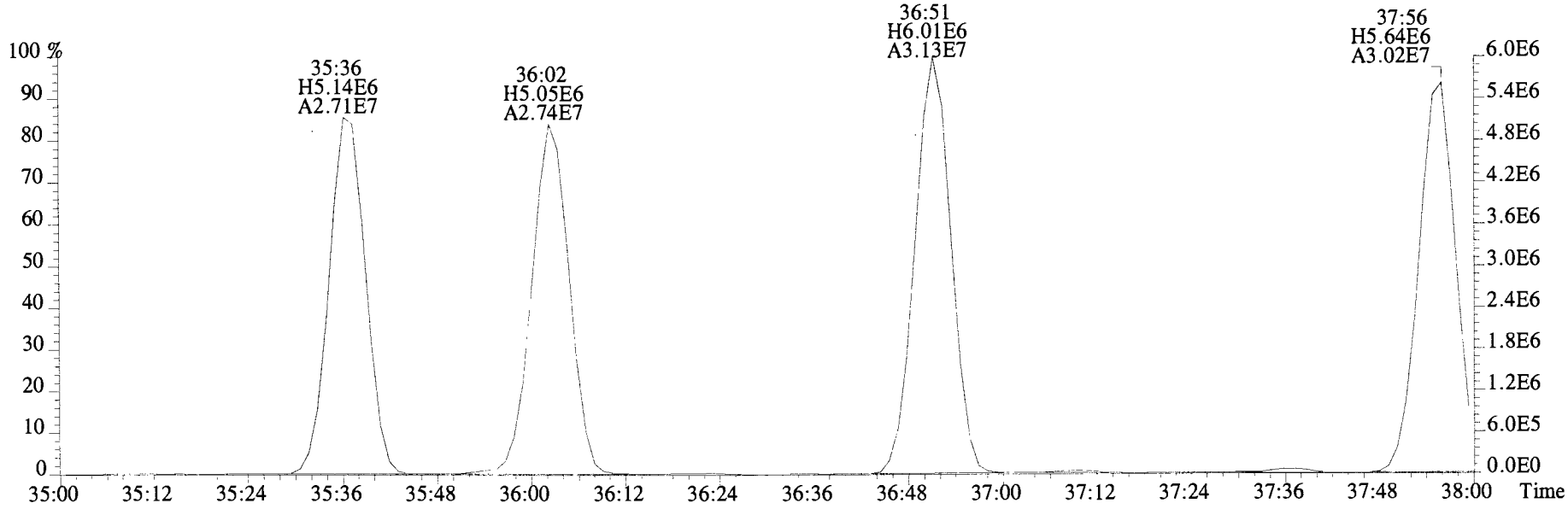
330.9792 S:4 F:3



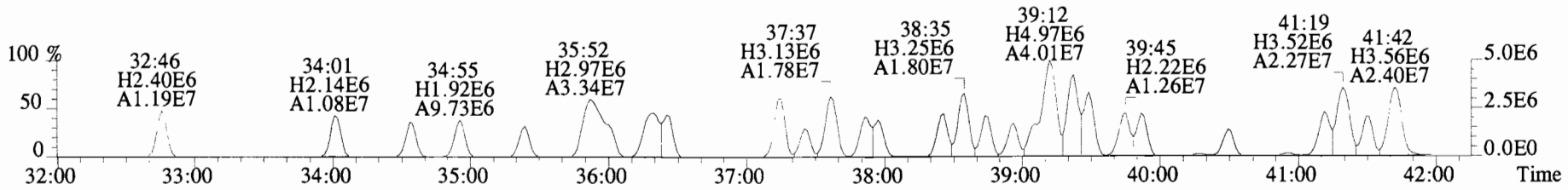
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5552.0,0.00%,F,F)



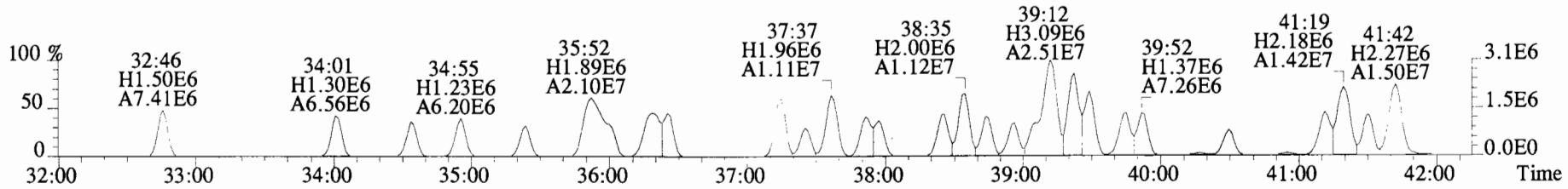
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5624.0,0.00%,F,F)



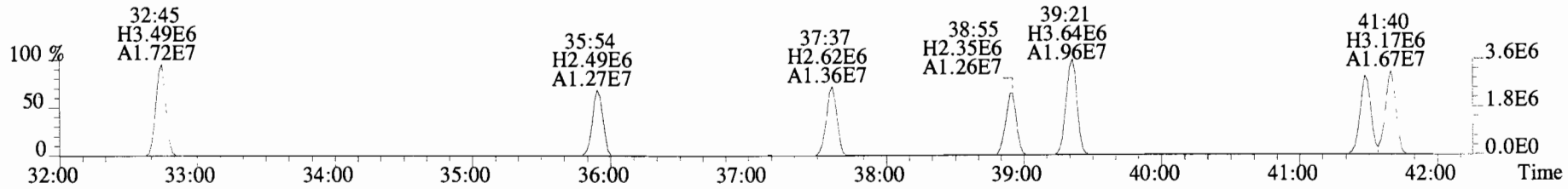
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



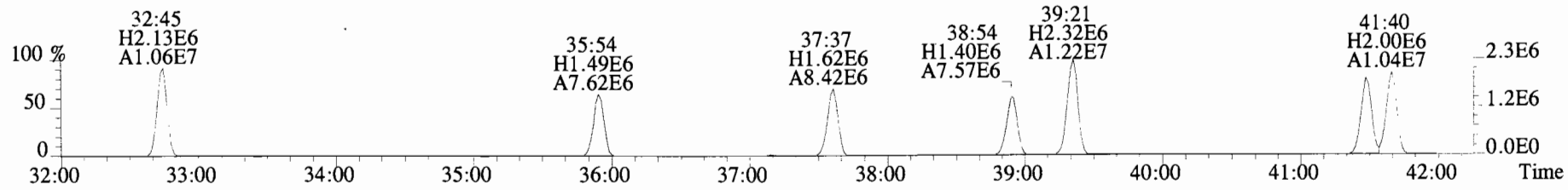
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



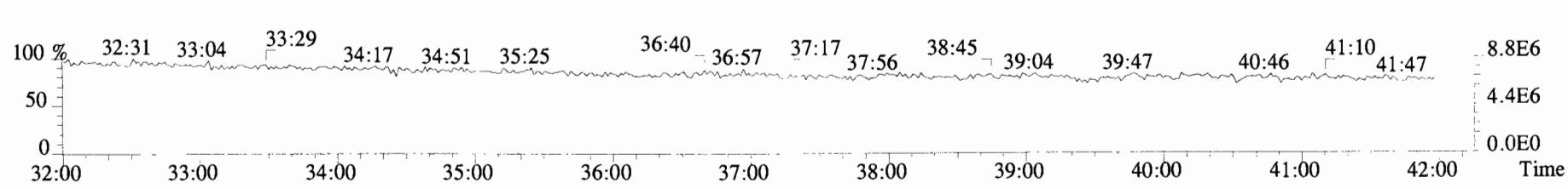
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2304.0,0.00%,F,F)



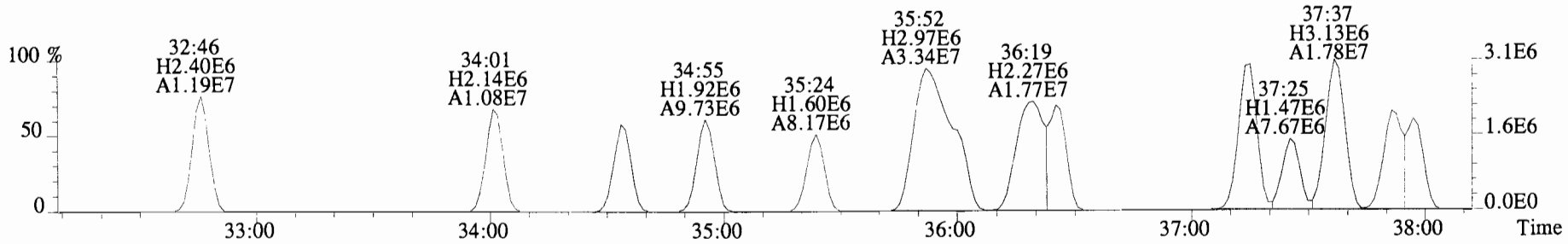
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)



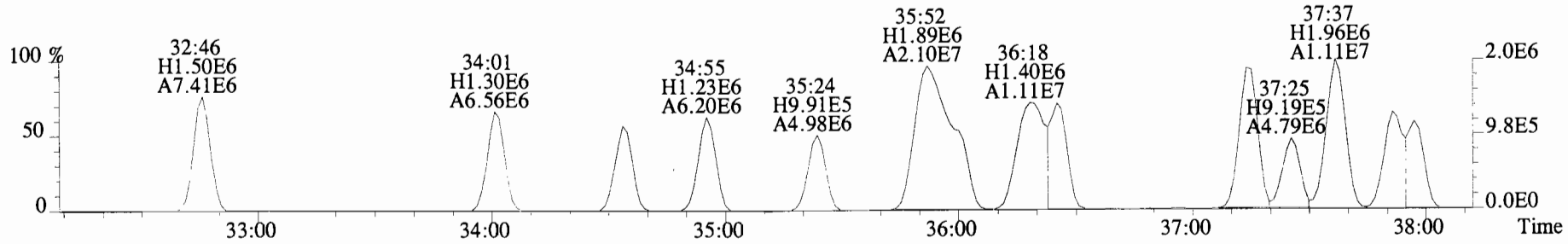
330.9792 S:4 F:3



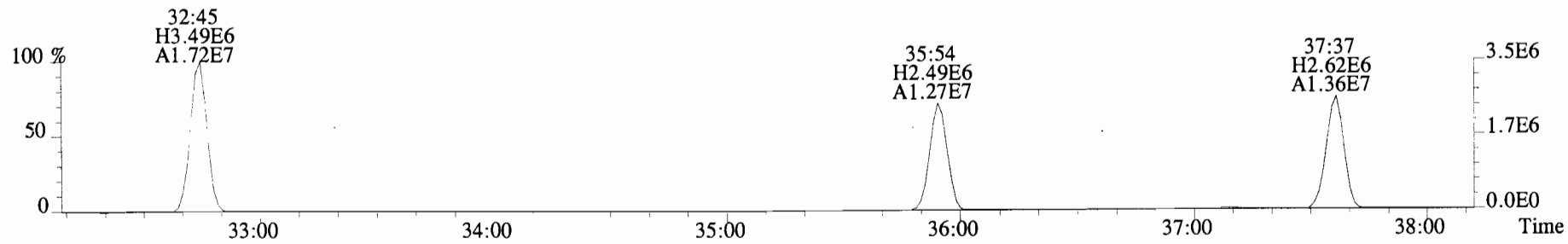
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



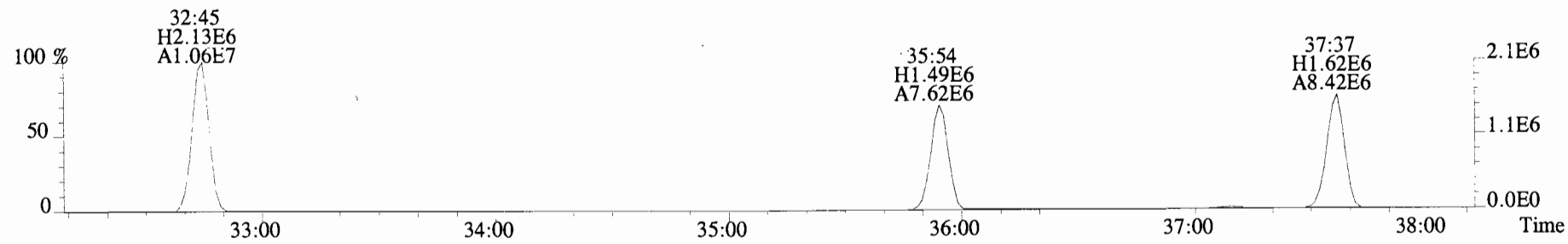
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



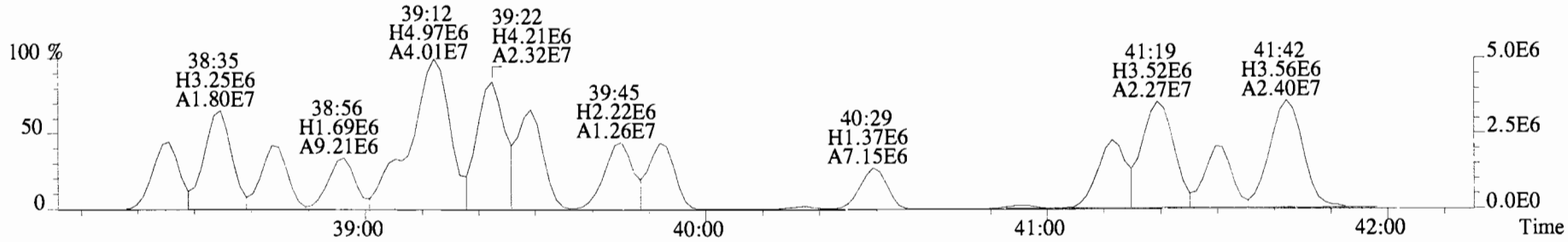
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2304.0,0.00%,F,F)



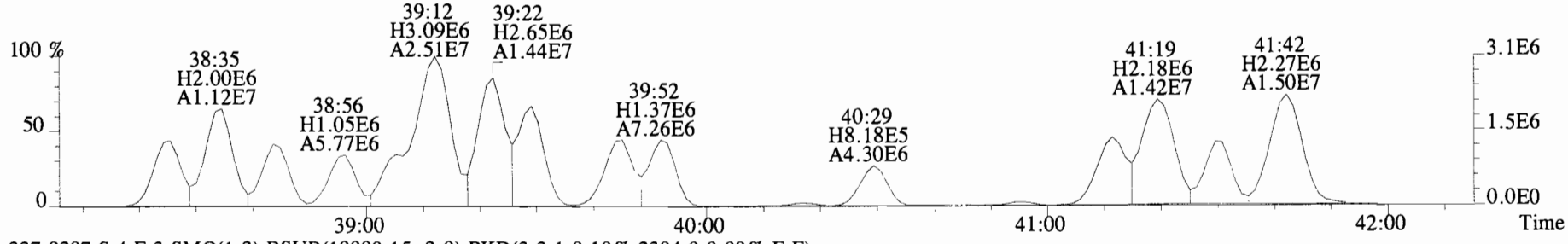
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)



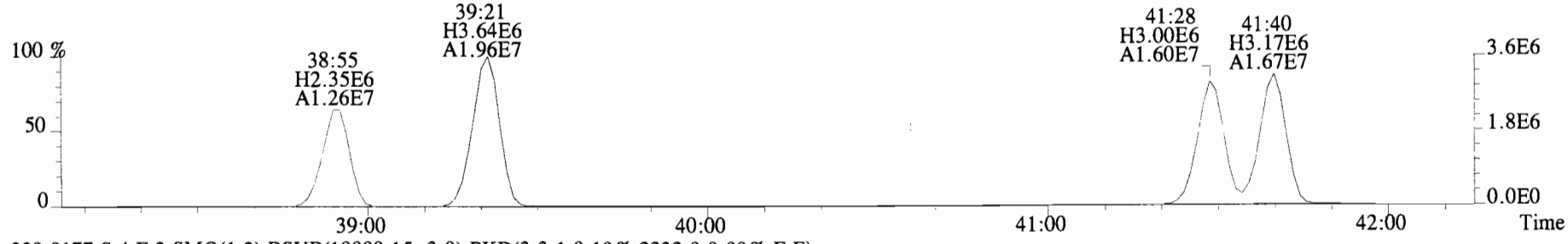
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



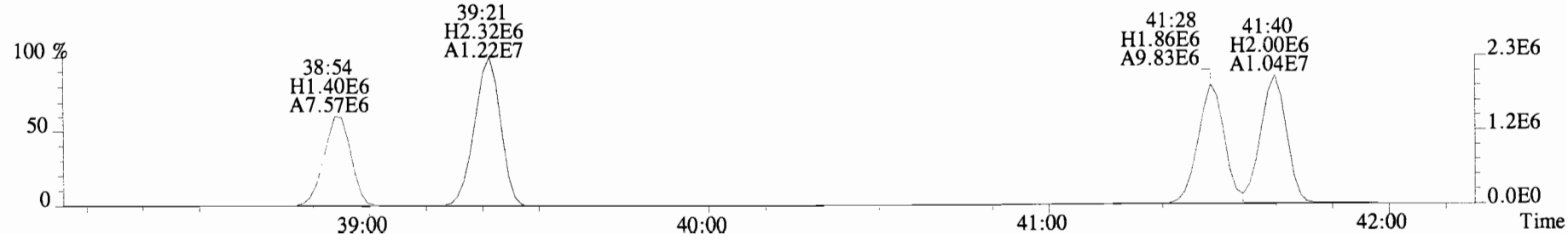
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



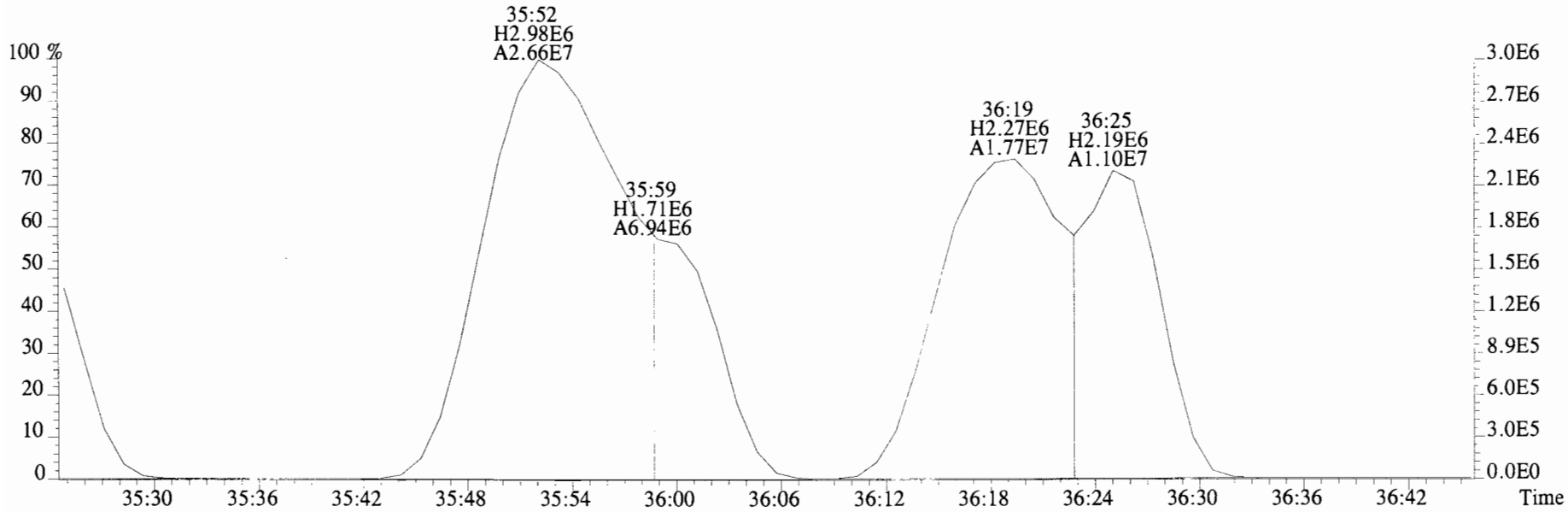
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2304.0,0.00%,F,F)



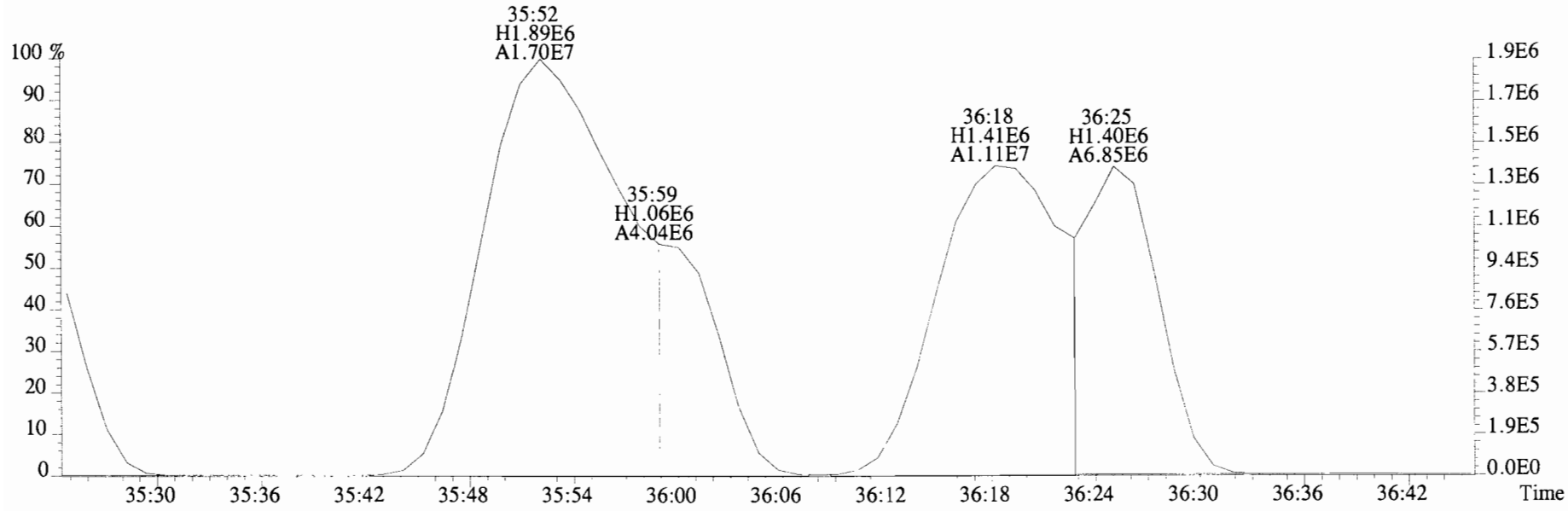
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)



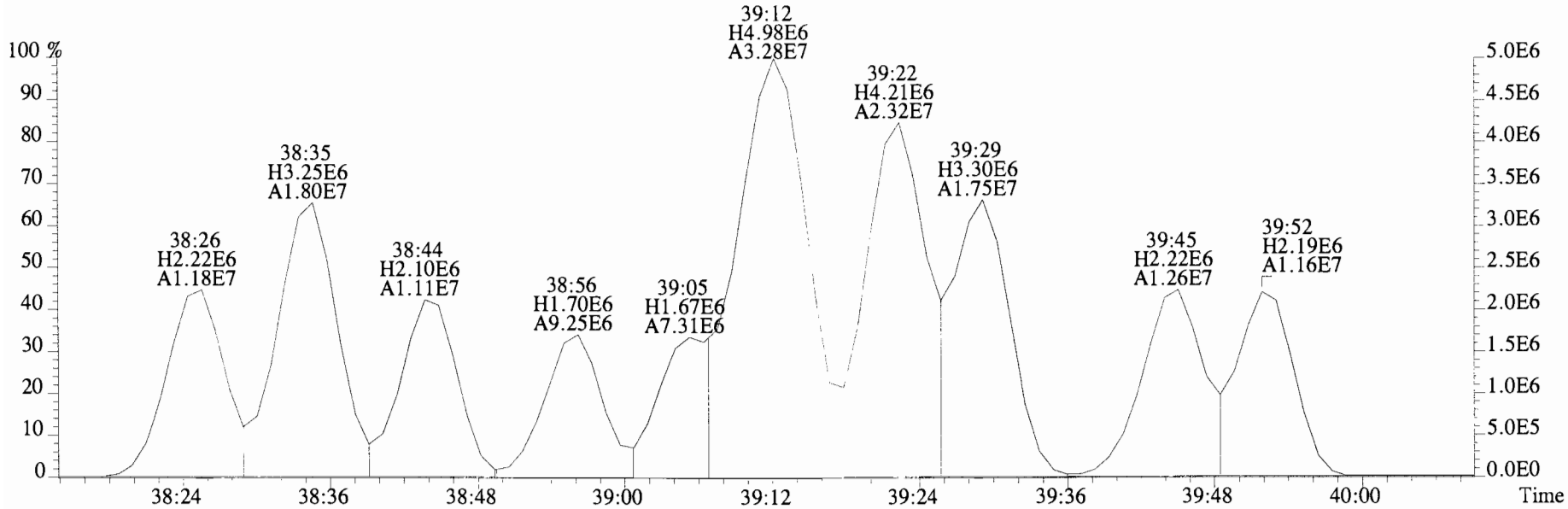
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0)



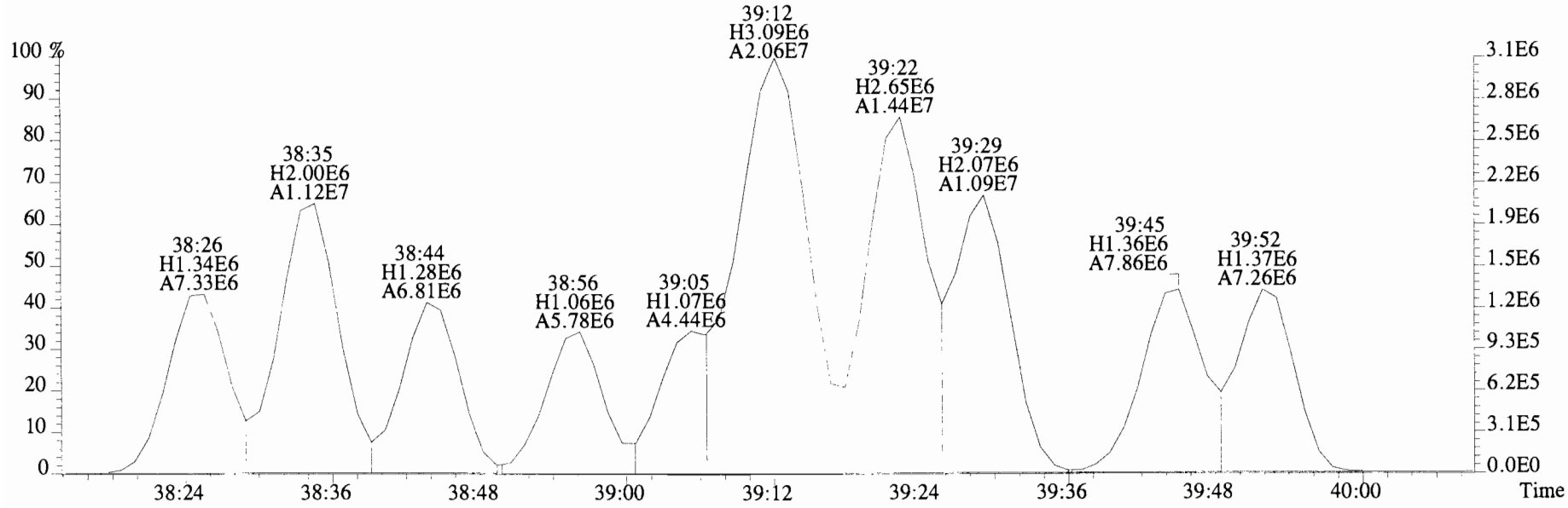
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0)



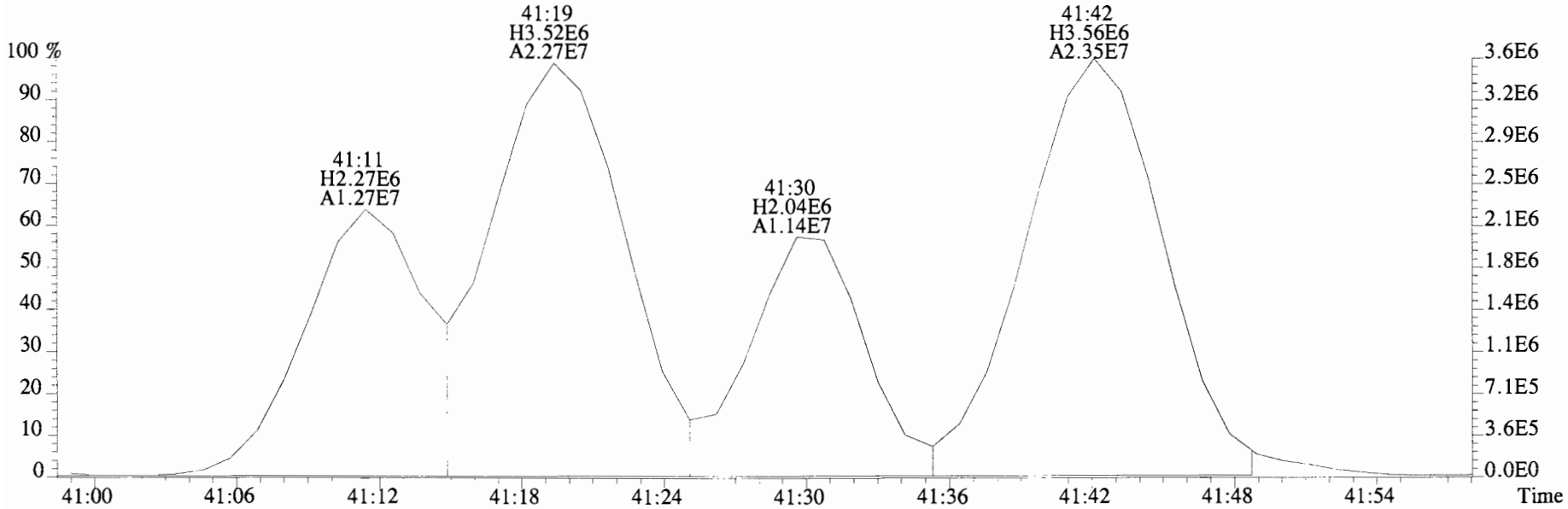
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



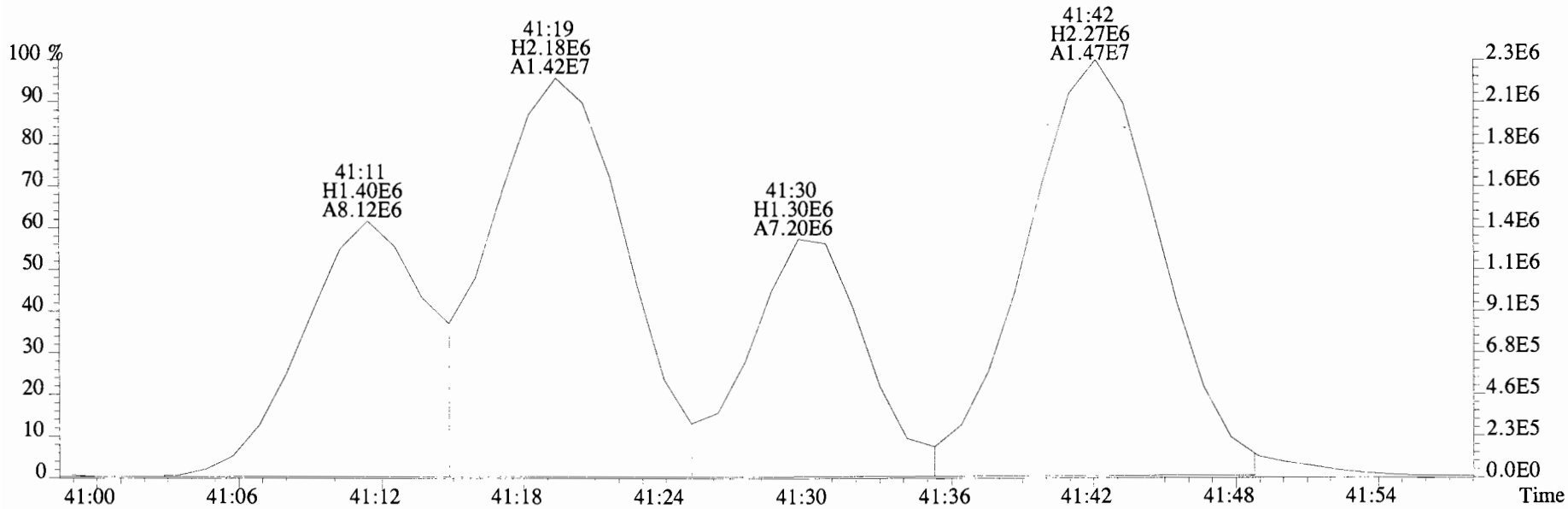
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



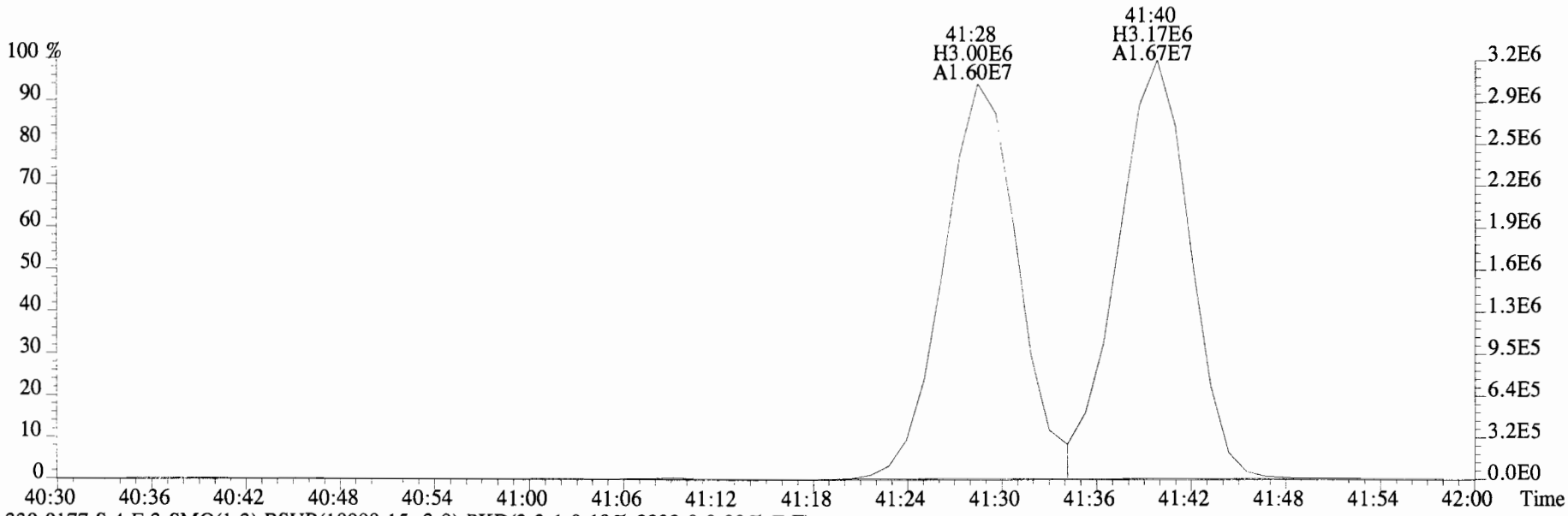
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



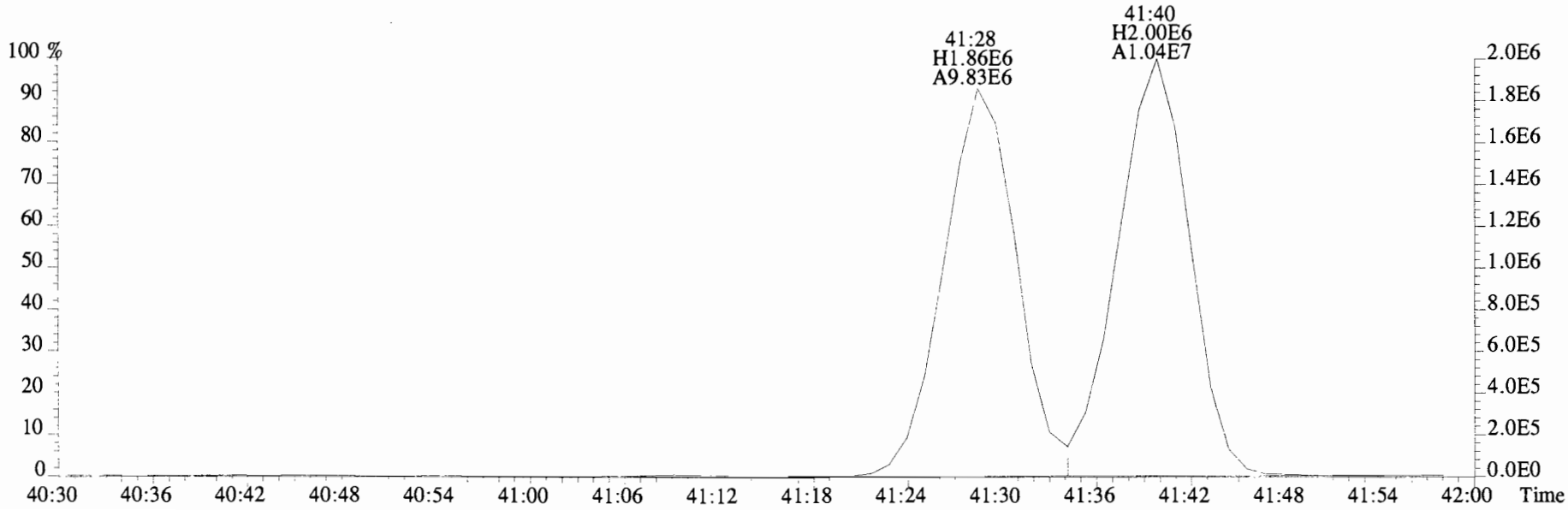
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



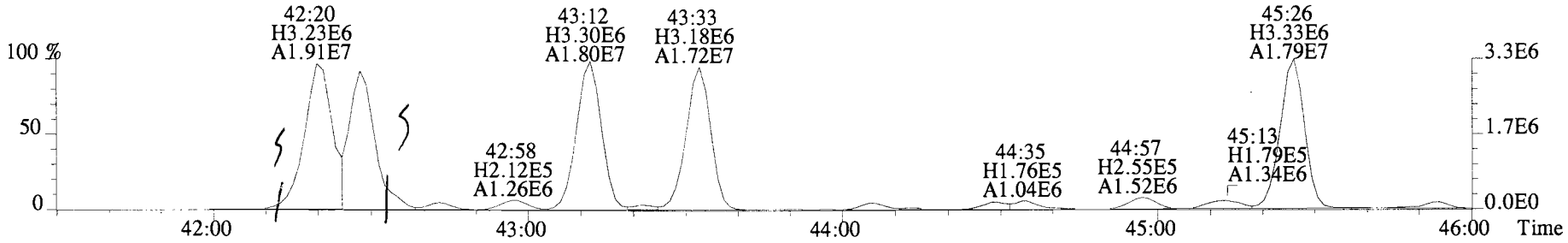
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2304.0,0.00%,F,F)



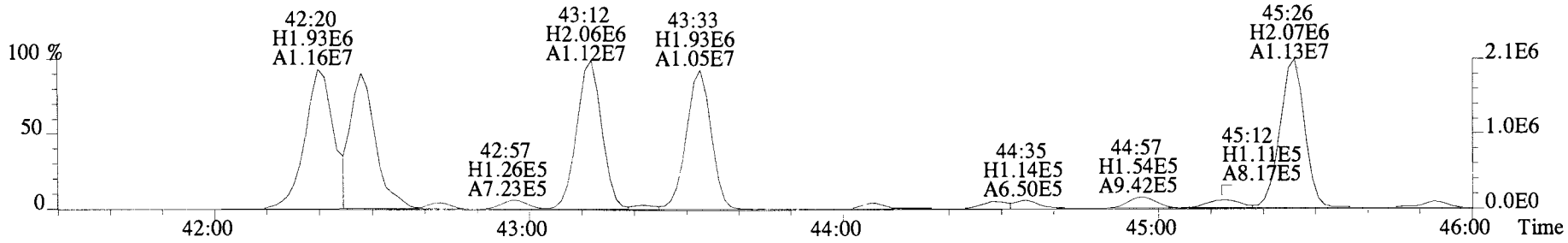
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)



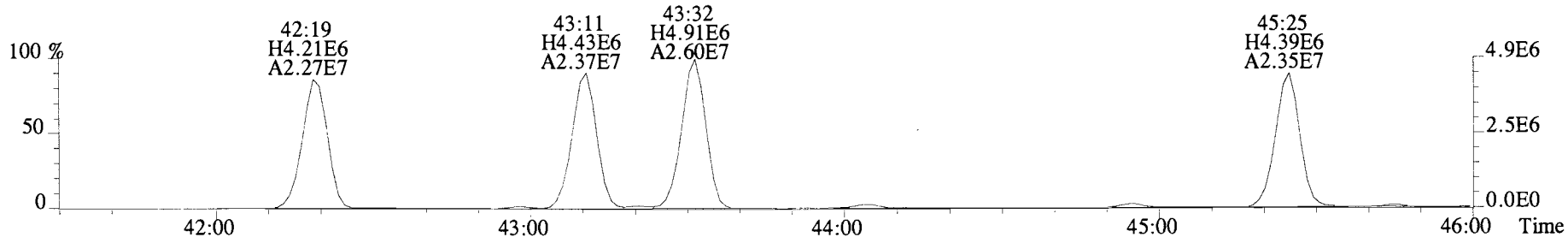
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7144.0,0.00%,F,F)



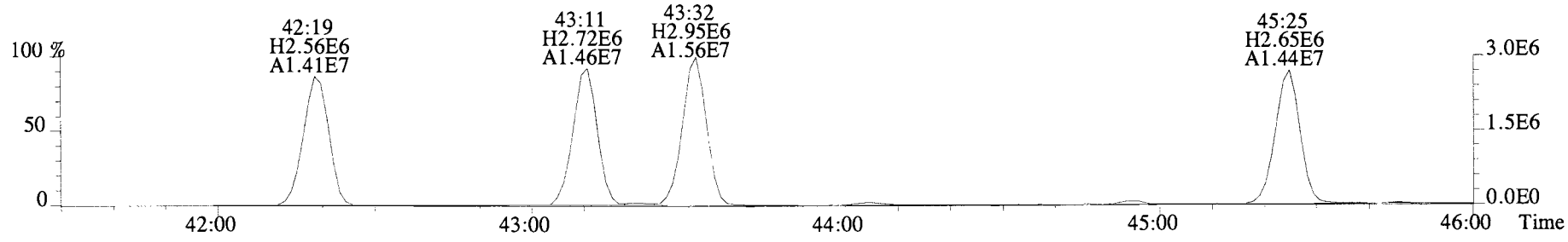
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5560.0,0.00%,F,F)



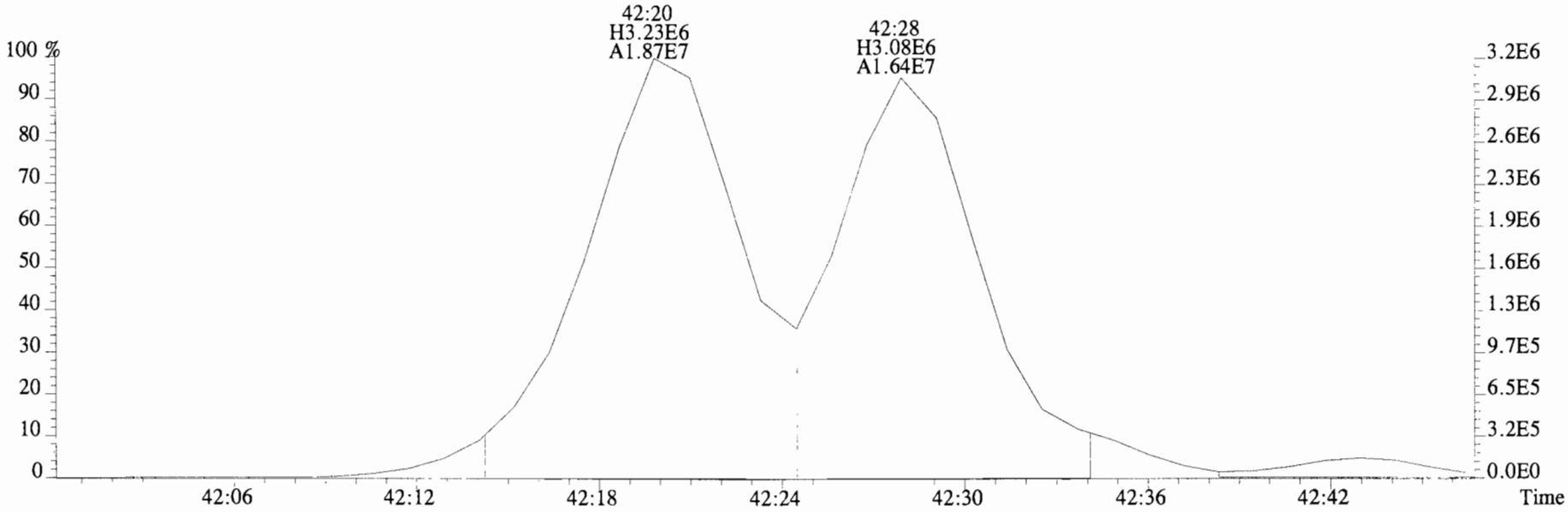
337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9436.0,0.00%,F,F)



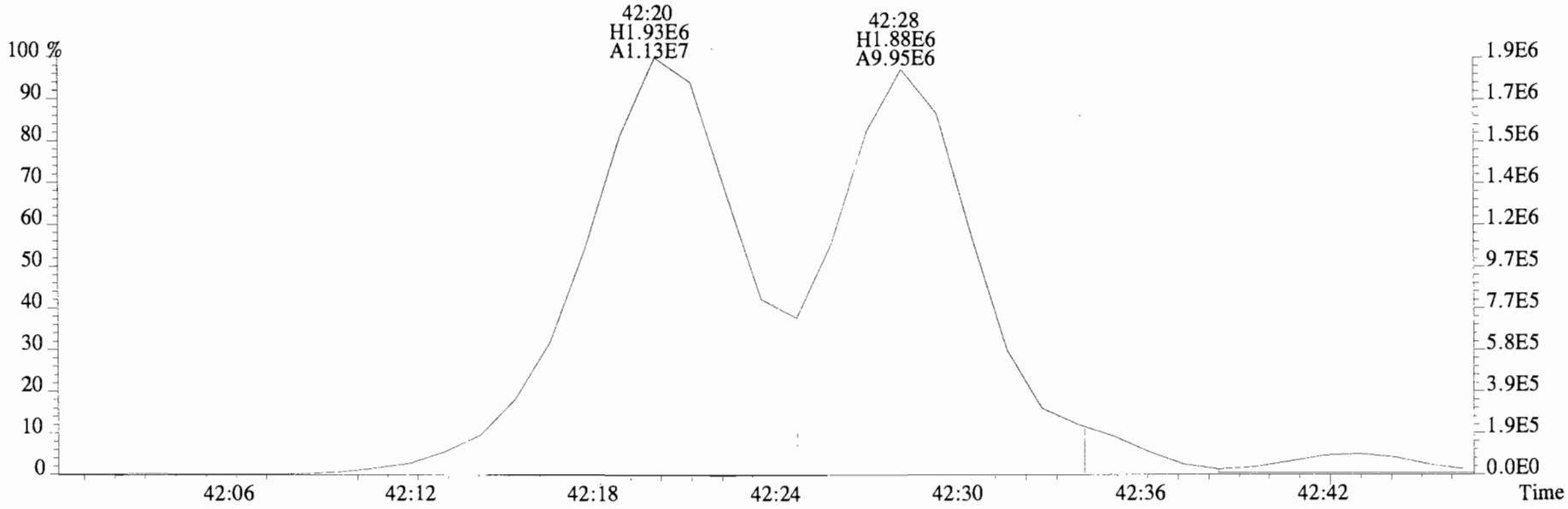
339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4968.0,0.00%,F,F)



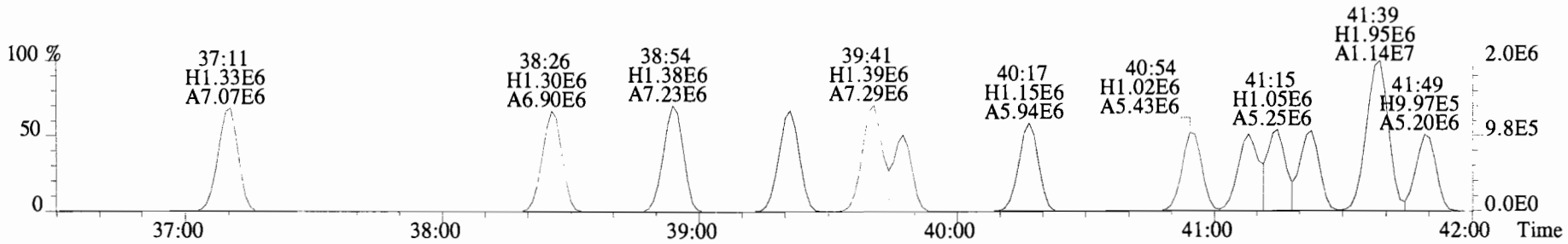
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7144.0,0.00%,F,F)



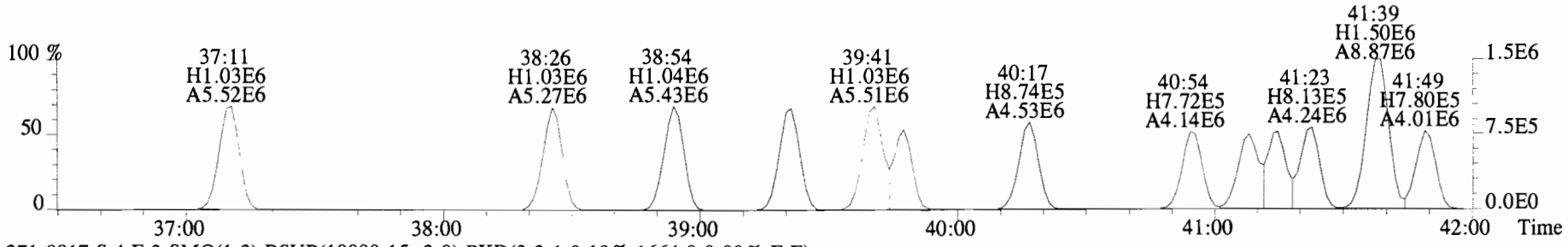
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5560.0,0.00%,F,F)



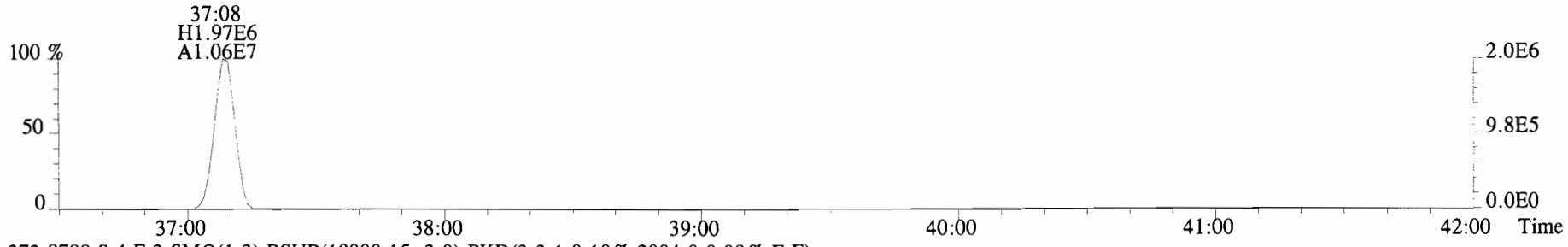
File:150102E2 #1-763 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1968.0,0.00%,F,F)



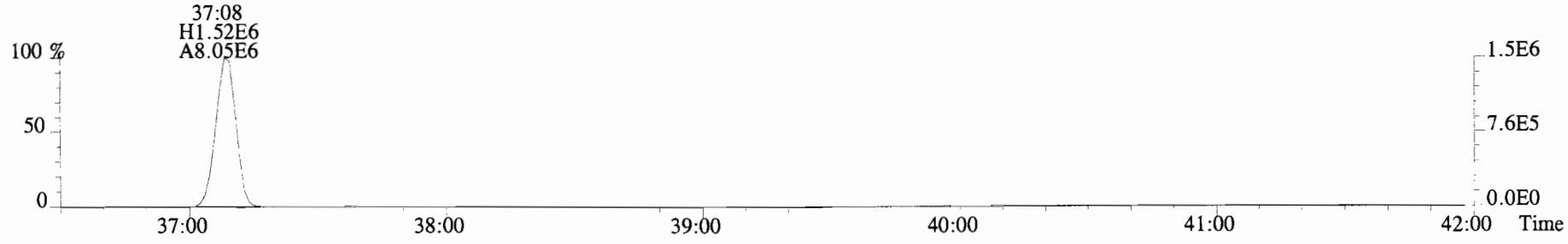
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1748.0,0.00%,F,F)



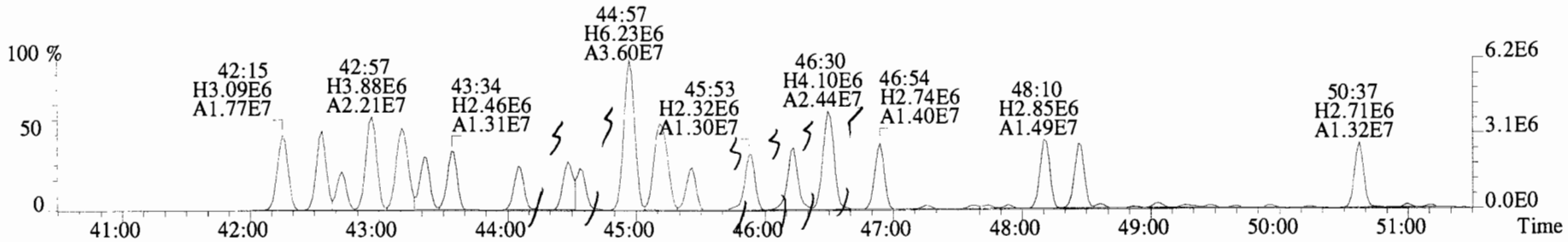
371.8817 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1664.0,0.00%,F,F)



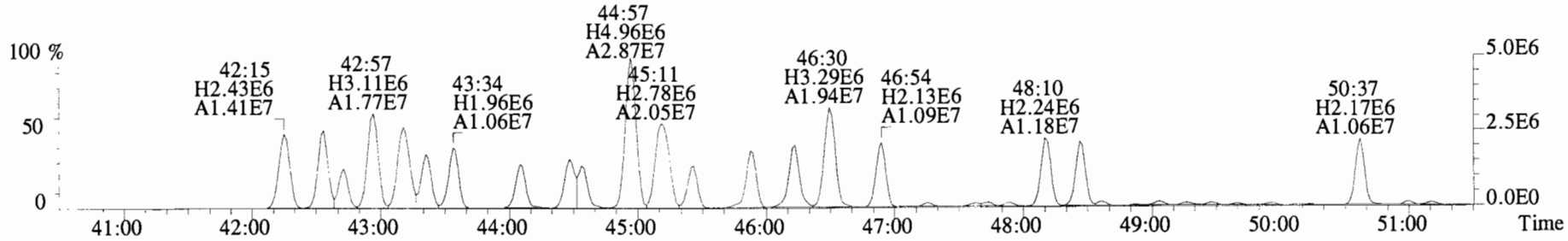
373.8788 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2004.0,0.00%,F,F)



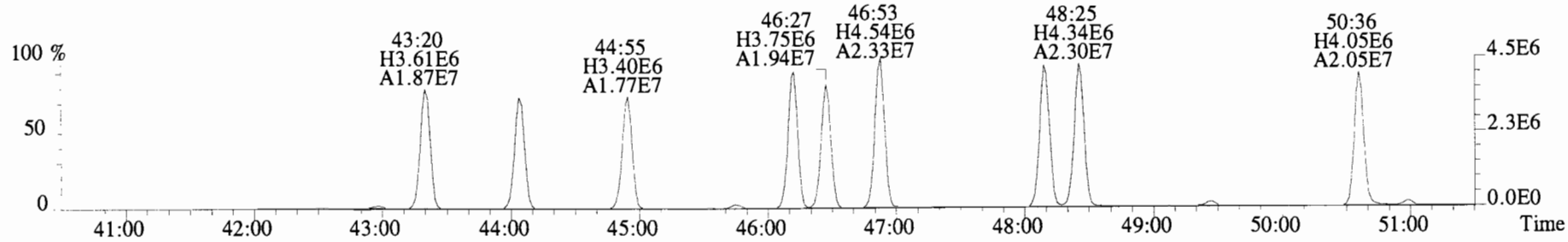
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19128.0,0.00%,F,F)



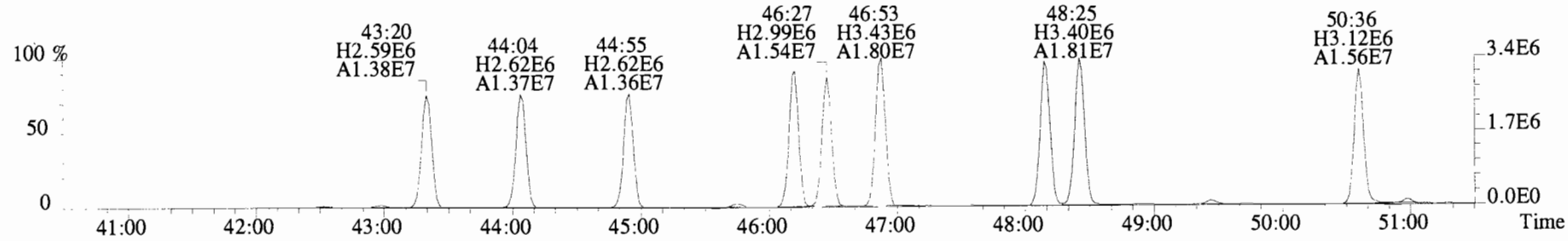
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,12308.0,0.00%,F,F)



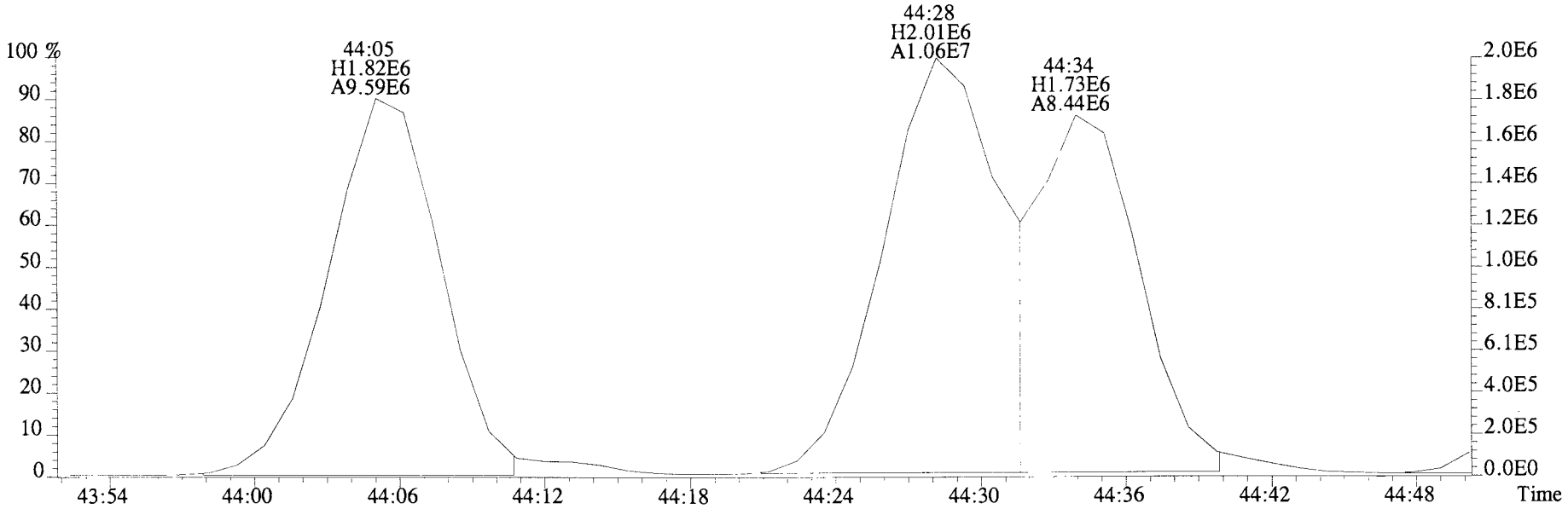
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6268.0,0.00%,F,F)



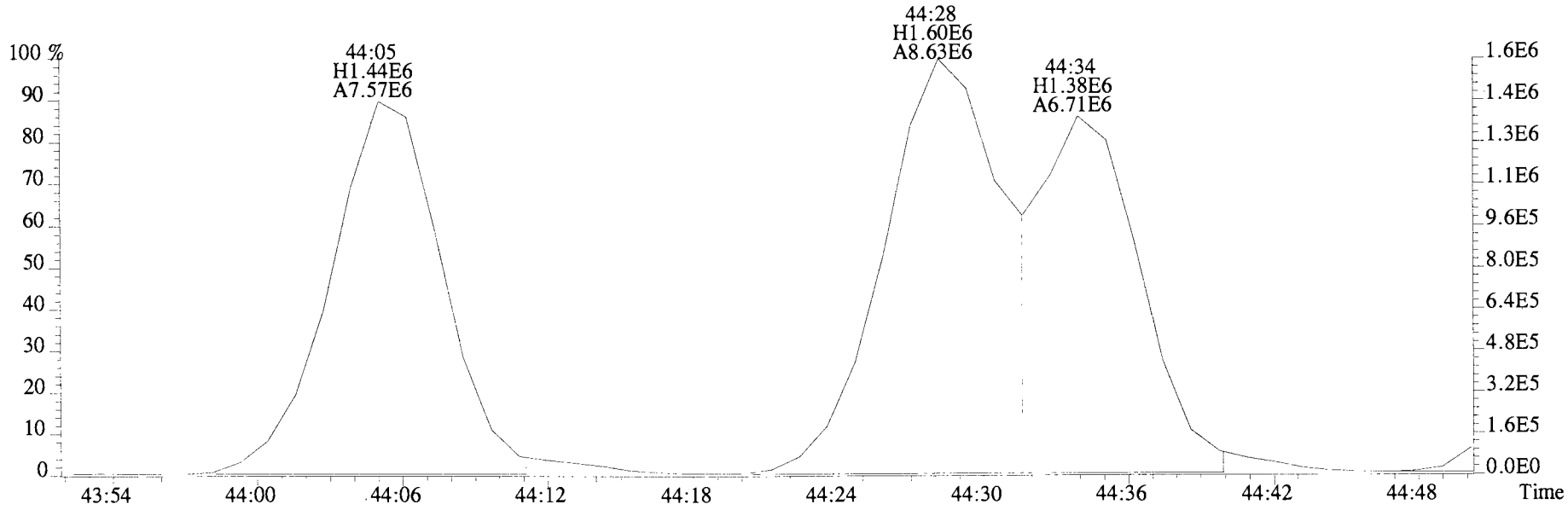
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5392.0,0.00%,F,F)



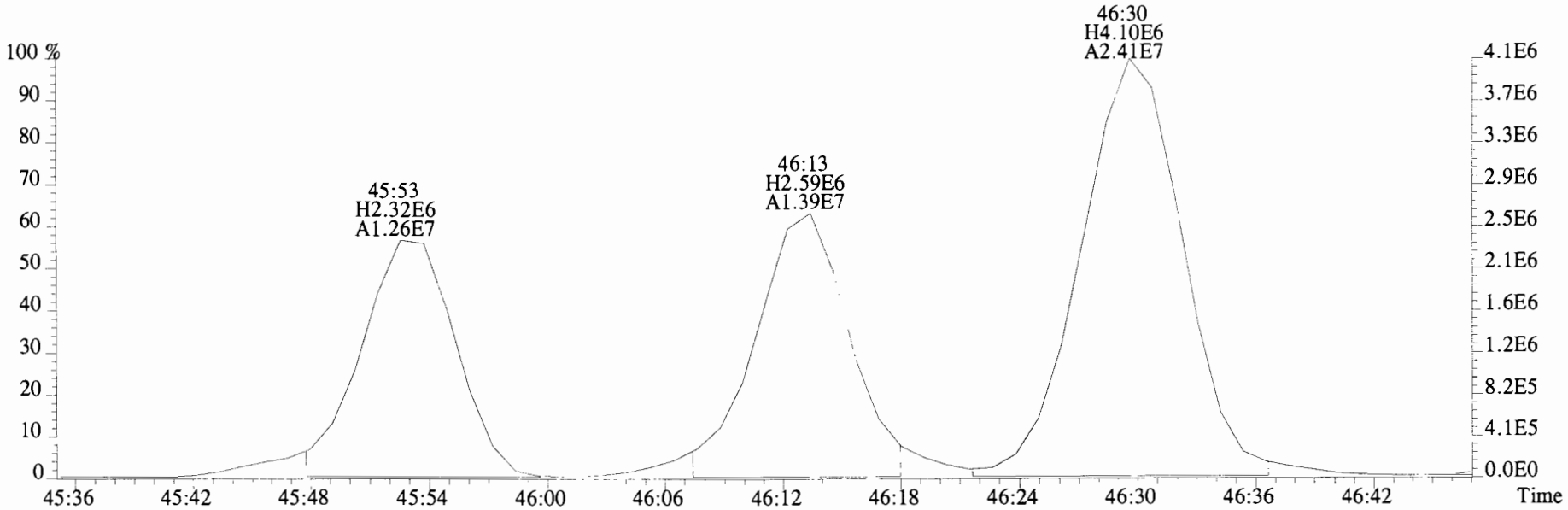
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19128.0,0.00%,F,F)



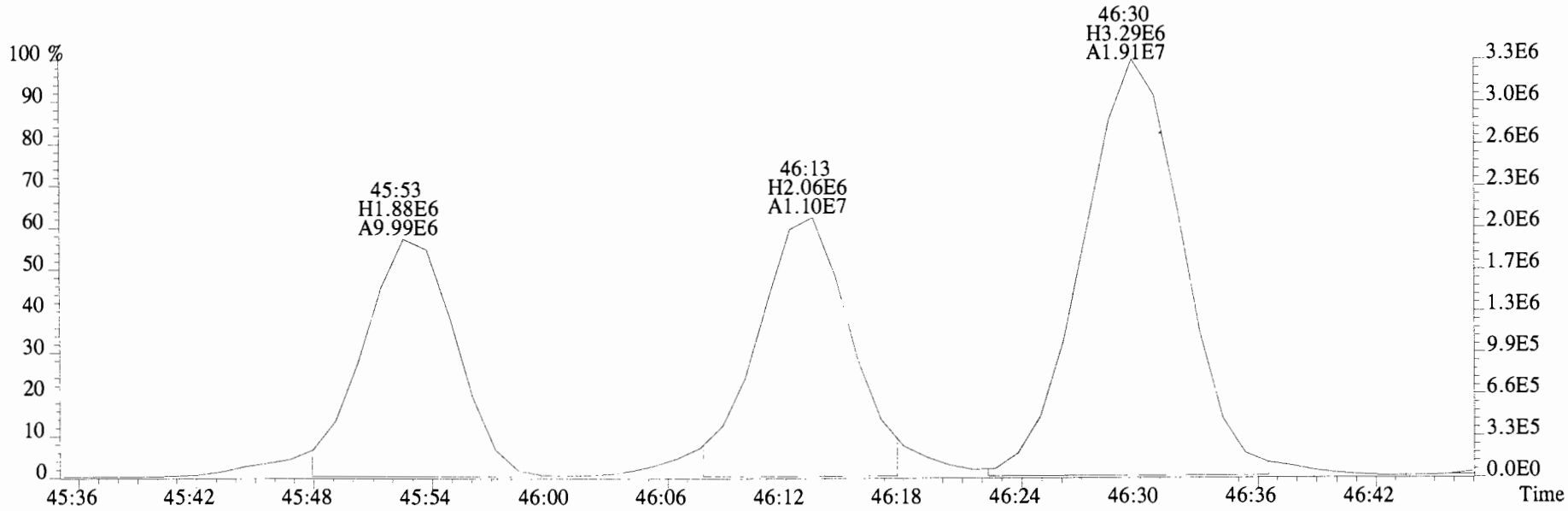
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,12308.0,0.00%,F,F)



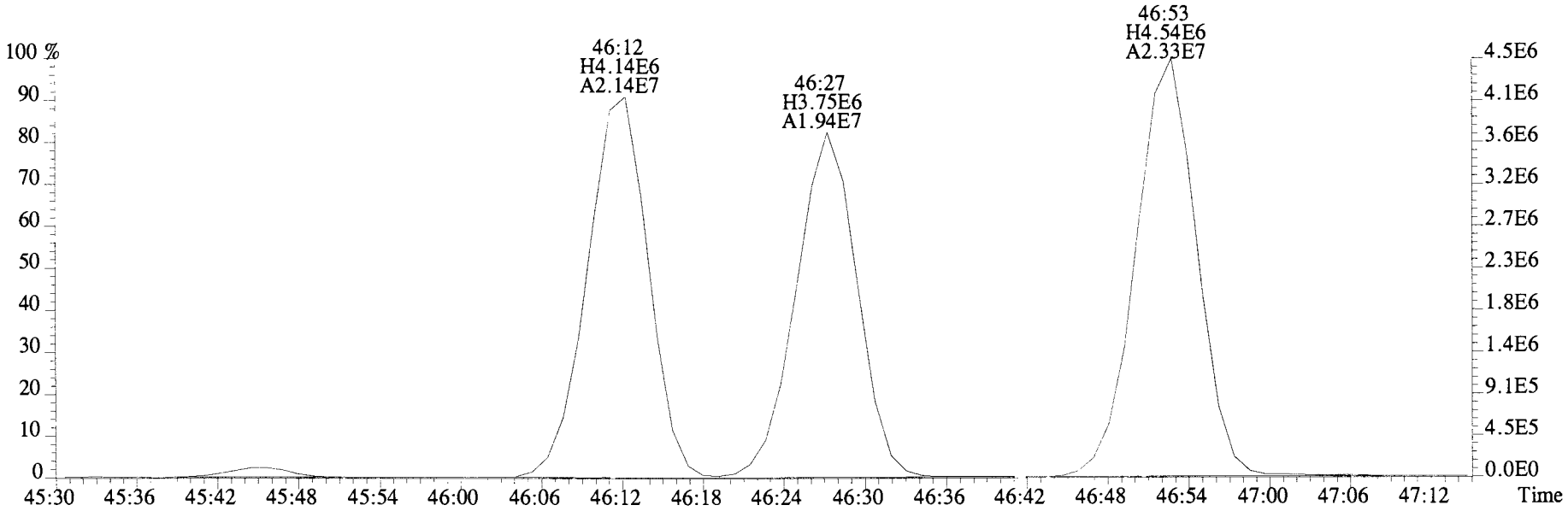
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19128.0,0.00%,F,F)



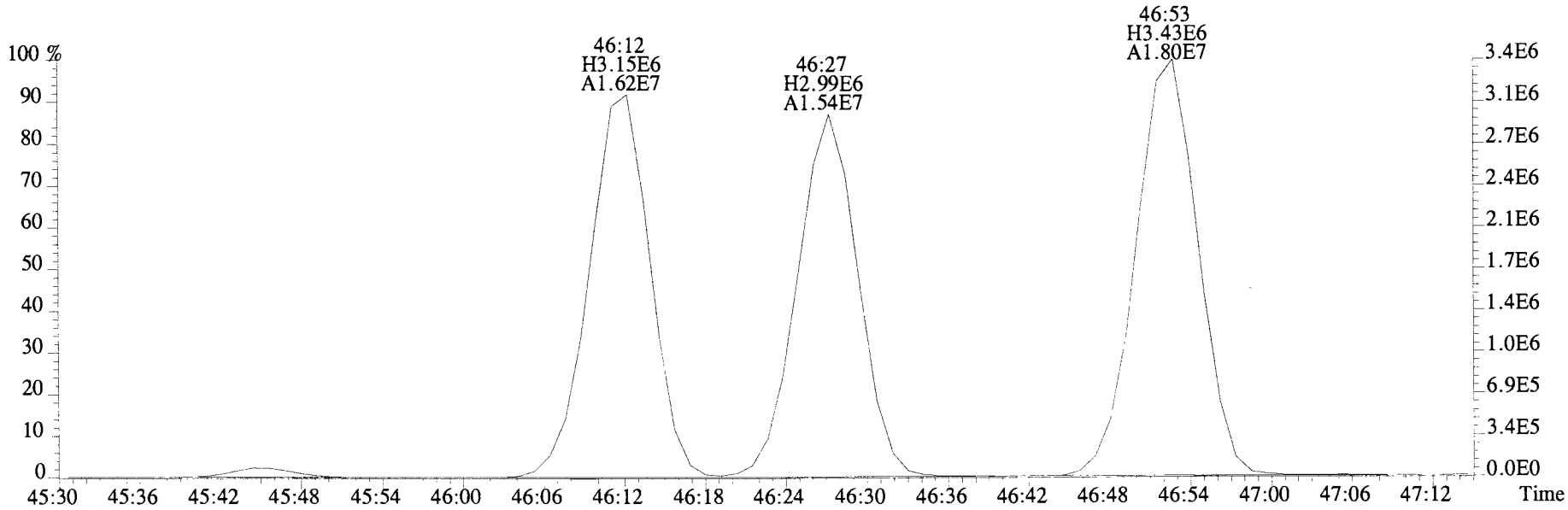
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,12308.0,0.00%,F,F)



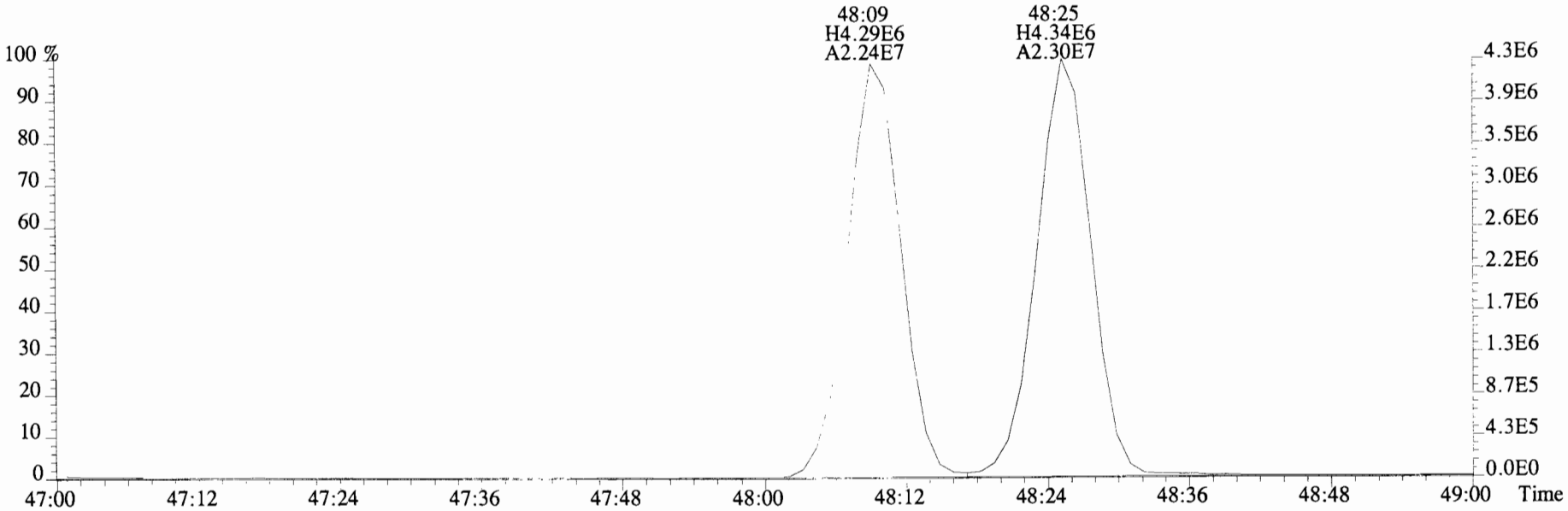
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6268.0,0.00%,F,F)



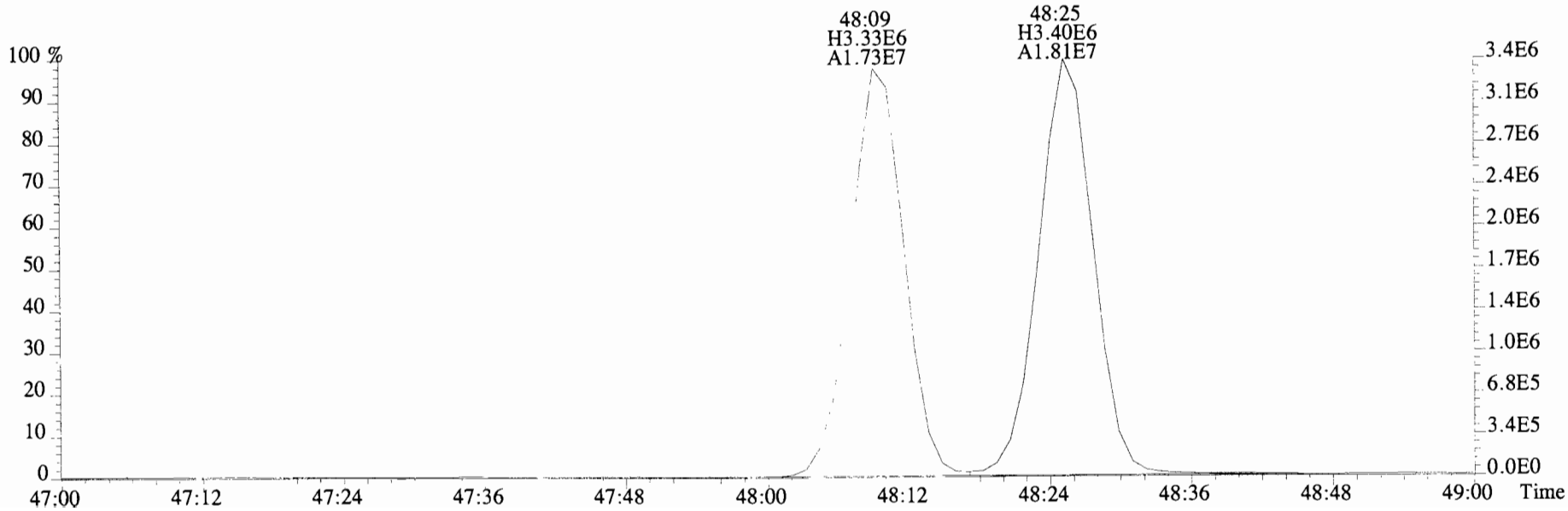
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5392.0,0.00%,F,F)



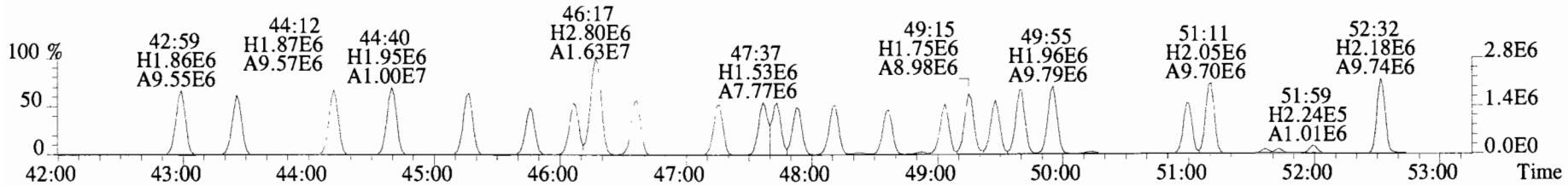
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6268.0,0.00%,F,F)



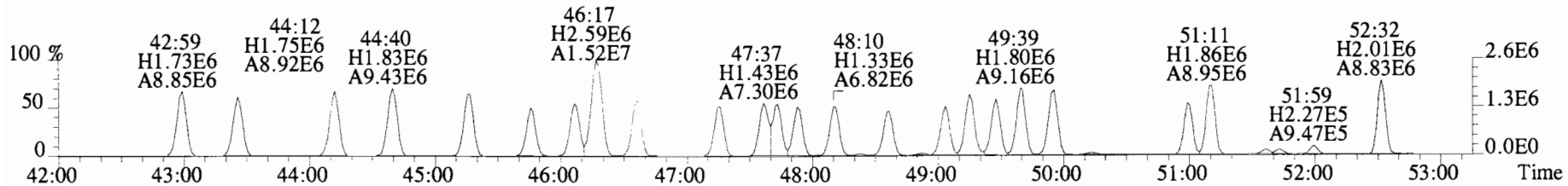
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5392.0,0.00%,F,F)



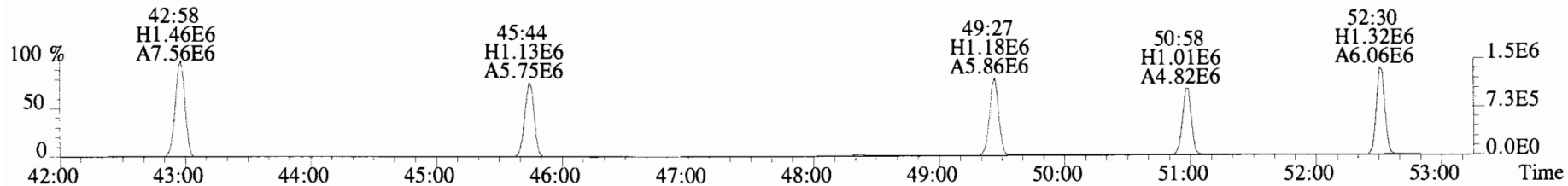
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3520.0,0.00%,F,F)



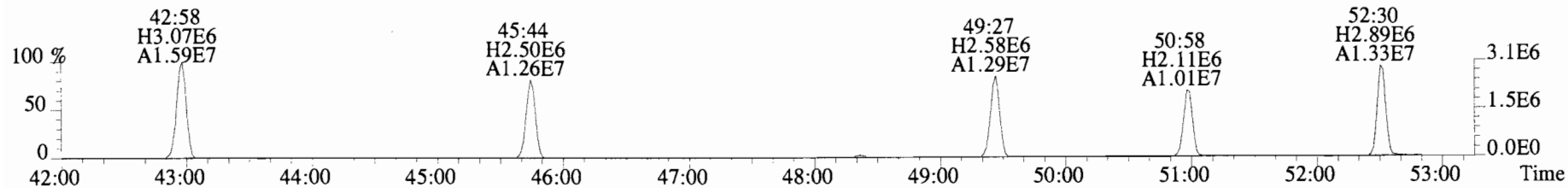
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6880.0,0.00%,F,F)



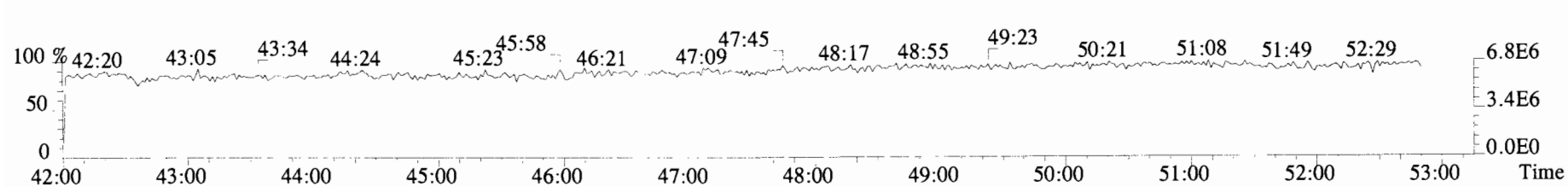
403.8457 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2396.0,0.00%,F,F)



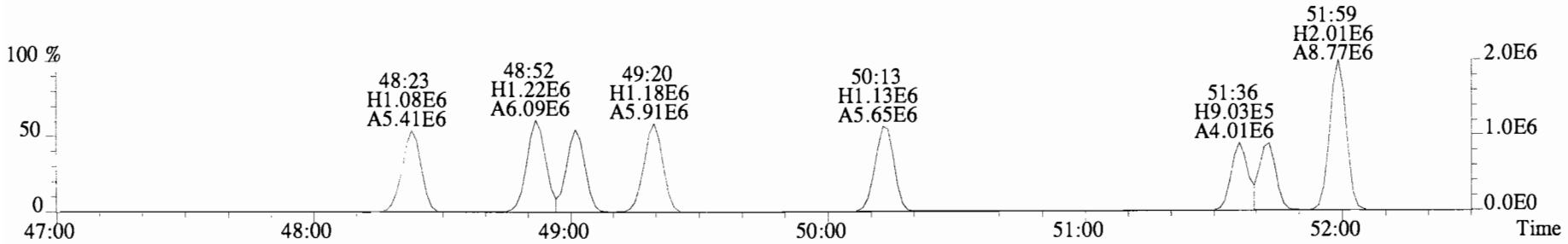
405.8428 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3756.0,0.00%,F,F)



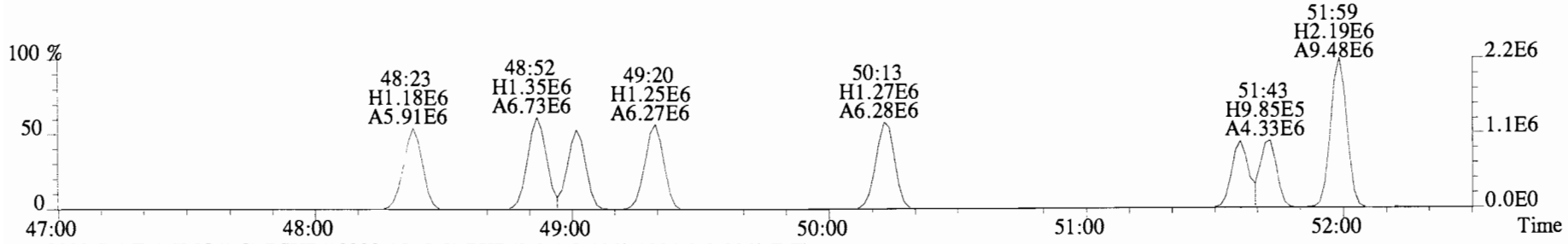
380.9760 S:4 F:4



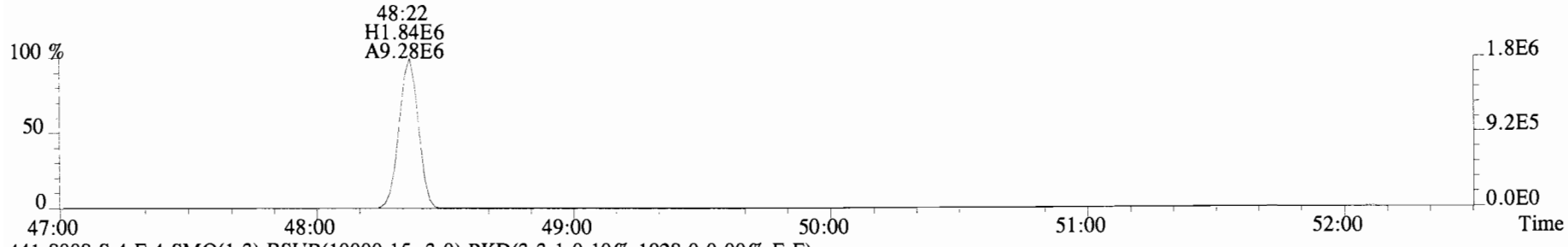
File:150102E2 #1-563 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1612.0,0.00%,F,F)



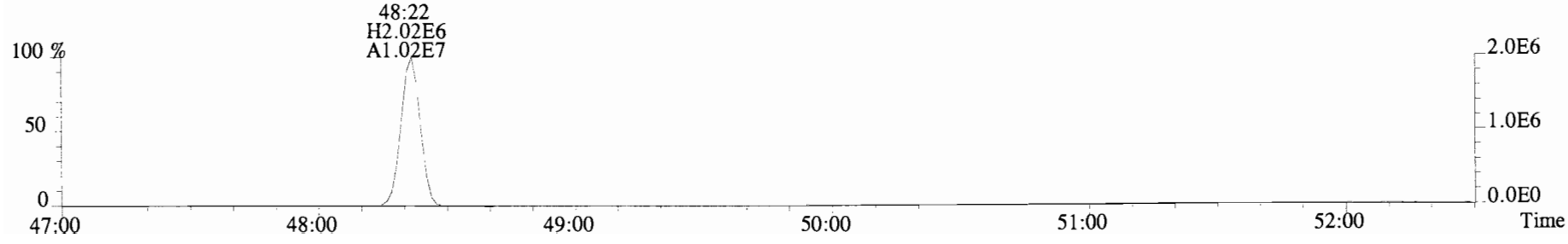
429.7606 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1692.0,0.00%,F,F)



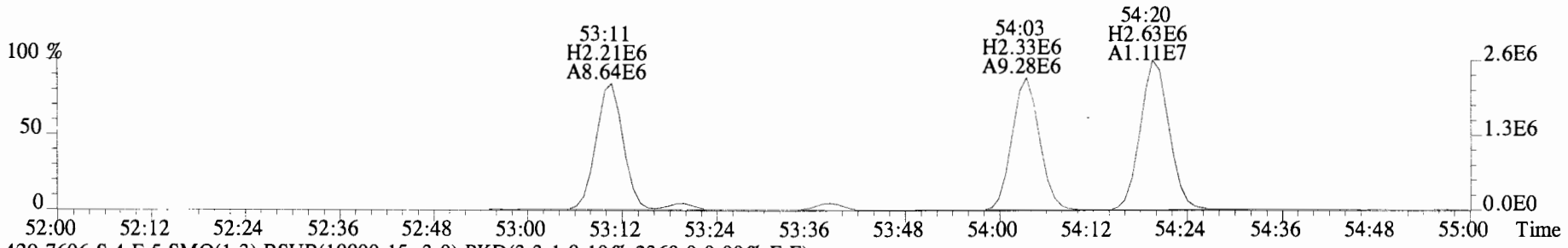
439.8038 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)



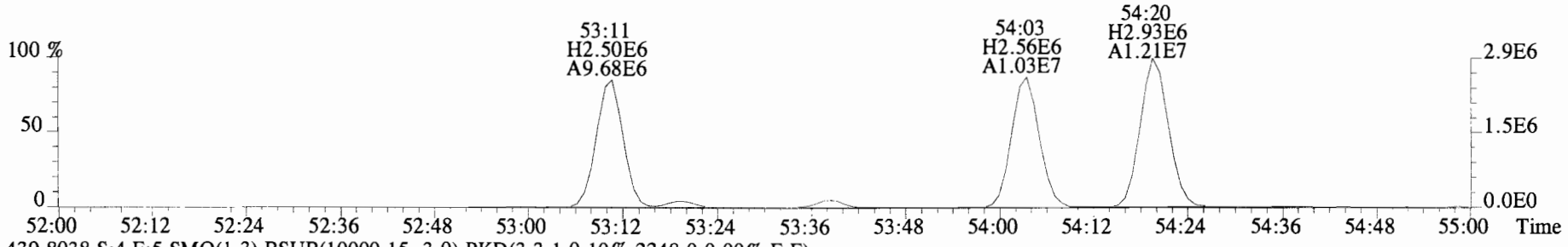
441.8008 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



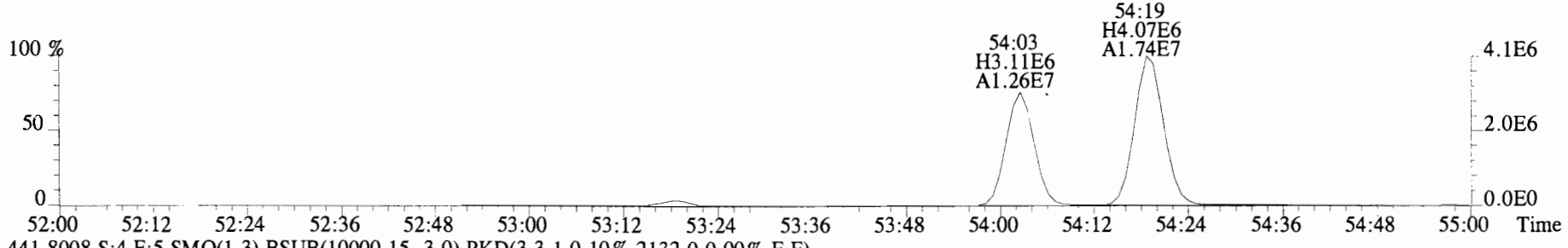
File:150102E2 #1-413 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2908.0,0.00%,F,F)



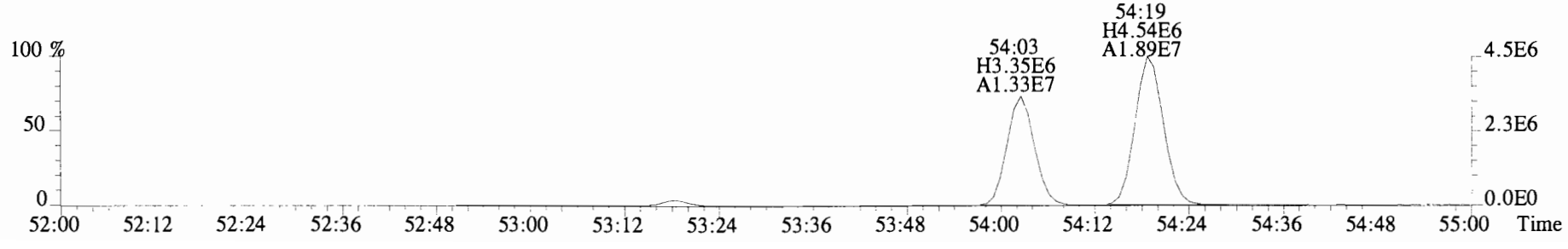
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2360.0,0.00%,F,F)



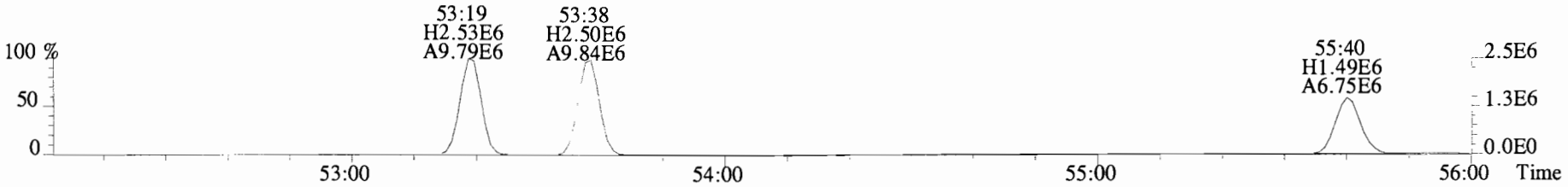
439.8038 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2248.0,0.00%,F,F)



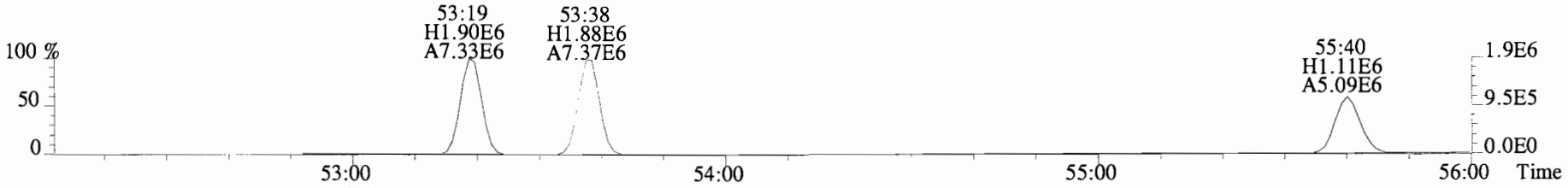
441.8008 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2132.0,0.00%,F,F)



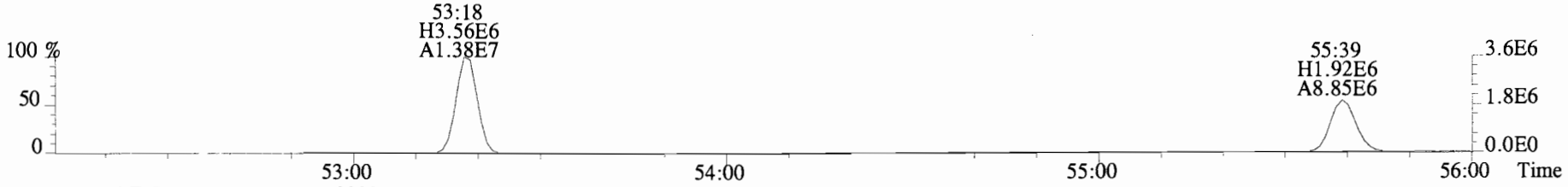
File:150102E2 #1-413 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4452.0,0.00%,F,F)



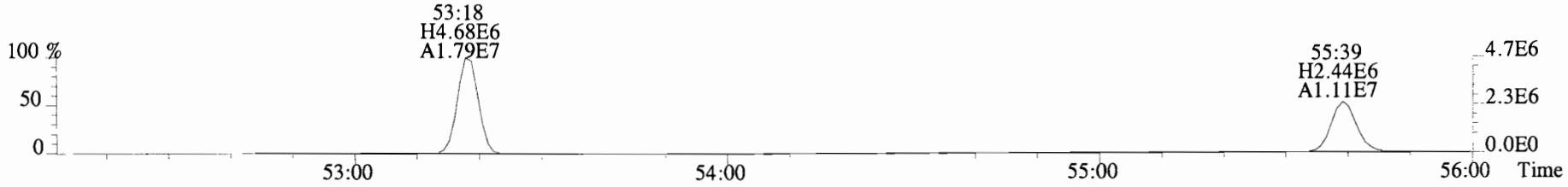
465.7186 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2956.0,0.00%,F,F)



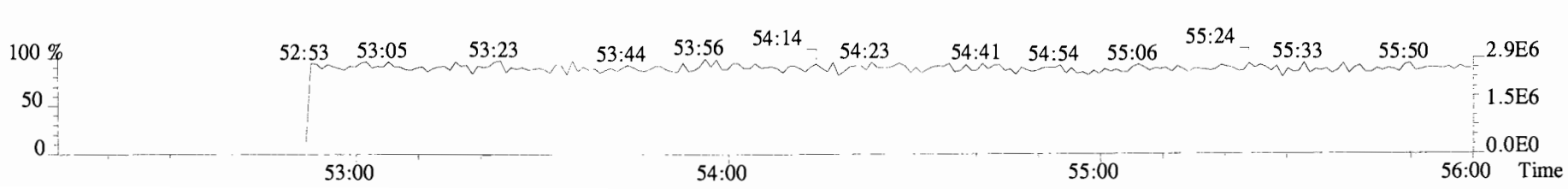
473.7648 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4688.0,0.00%,F,F)



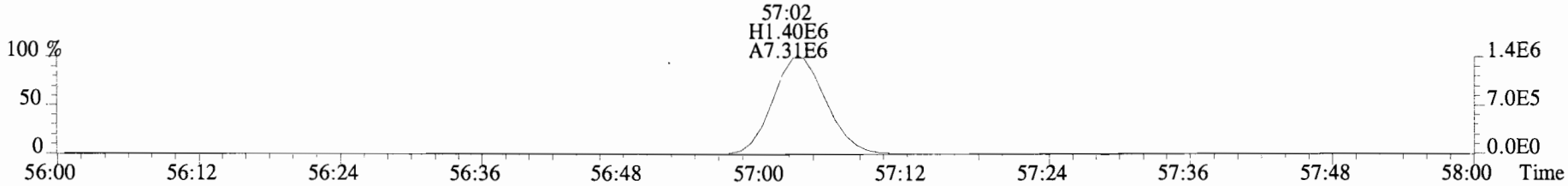
475.7619 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5372.0,0.00%,F,F)



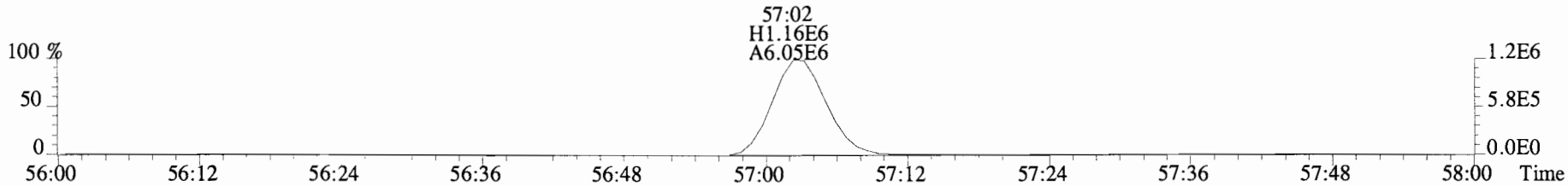
492.9697 S:4 F:5



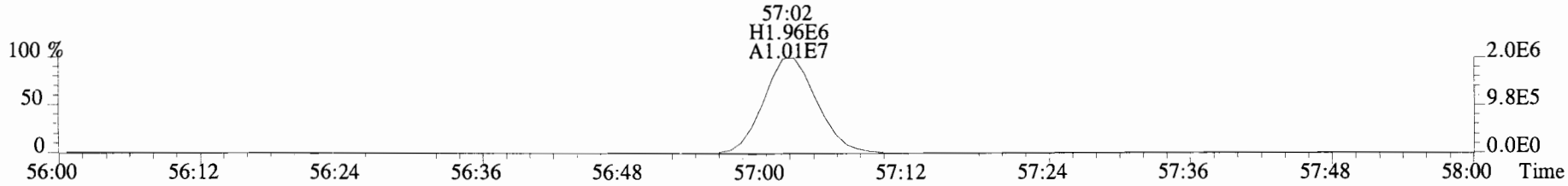
File:150102E2 #1-413 Acq: 2-JAN-2015 15:41:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0001-BS1 OPR Exp:PCB_ZB1
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1236.0,0.00%,F,F)



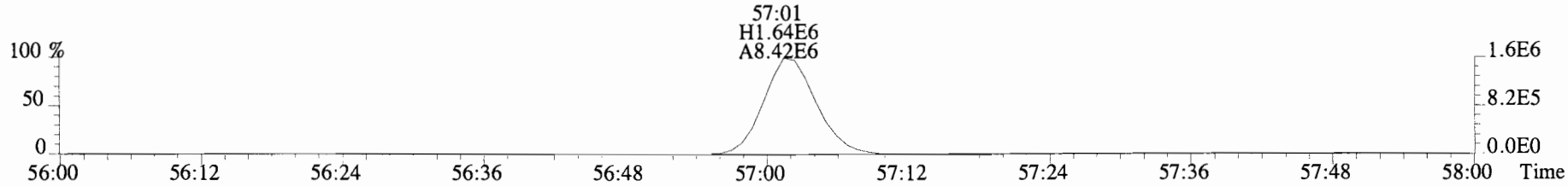
499.6797 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,984.0,0.00%,F,F)



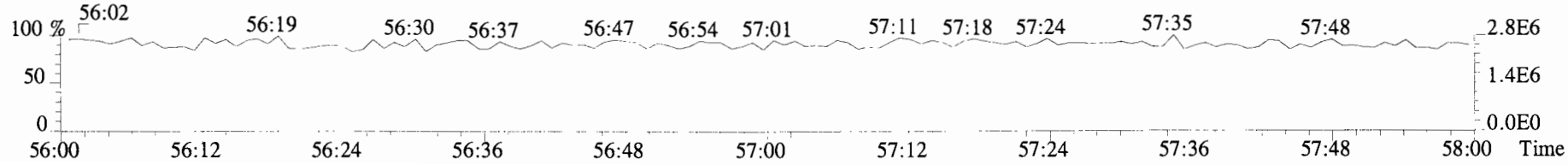
509.7229 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1096.0,0.00%,F,F)



511.7199 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1392.0,0.00%,F,F)



492.9697 S:4 F:5



Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1

Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	6.80e+04	3.52	y	16:11	1.25	1.66		*	2.5	*	1.001	0.996	1.006
Mono	PCB-2	*	*	n	NotF╖	1.18	*		3370	2.5	2.68	*	0.983	0.993
Mono	PCB-3	*	*	n	NotF╖	1.22	*		3370	2.5	2.60	*	0.996	1.006
Di	PCB-4/10	*	*	n	NotF╖	1.55	*		15300	2.5	9.71	*	0.998	1.008
Di	PCB-7/9	*	*	n	NotF╖	1.27	*		15300	2.5	7.31	*	0.865	0.873
Di	PCB-6	*	*	n	NotF╖	1.26	*		15300	2.5	7.36	*	0.890	0.899
Di	PCB-5/8	*	*	n	NotF╖	1.23	*		15300	2.5	7.52	*	0.906	0.916
Di	PCB-14	*	*	n	NotF╖	1.23	*		15300	2.5	6.38	*	0.949	0.959
Di	PCB-11	1.04e+06	1.60	y	25:19	1.16	17.9		*	2.5	*	1.001	0.996	1.006
Di	PCB-12/13	*	*	n	NotF╖	1.10	*		15300	2.5	7.15	*	1.010	1.020
Di	PCB-15	*	*	n	NotF╖	1.21	*		15300	2.5	6.50	*	1.024	1.034
Tri	PCB-19	*	*	n	NotF╖	1.30	*		1740	2.5	1.28	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF╖	1.83	*		1740	2.5	0.906	*	1.032	1.042
Tri	PCB-18	1.69e+05	1.17	y	25:56	0.86	5.48		*	2.5	*	0.953	0.949	0.959
Tri	PCB-17	4.46e+04	1.86	n	26:07	0.90	1.38	R	*	2.5	*	0.960	0.955	0.965
Tri	PCB-24/27	*	*	n	NotF╖	1.18	*		1740	2.5	0.888	*	0.976	0.986
Tri	PCB-16/32	1.25e+05	1.12	y	27:12	1.03	3.38		*	2.5	*	1.000	0.995	1.005
Tri	PCB-34	*	*	n	NotF╖	1.26	*		1930	2.5	0.921	*	0.956	0.966
Tri	PCB-23	*	*	n	NotF╖	1.31	*		1930	2.5	0.886	*	0.959	0.969
Tri	PCB-29	*	*	n	NotF╖	1.33	*		1930	2.5	0.874	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF╖	1.29	*		1930	2.5	0.899	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF╖	1.34	*		1930	2.5	0.865	*	0.980	0.990
Tri	PCB-31	1.81e+05	1.35	n	29:05	1.42	3.19	R	*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	2.14e+05	1.07	y	29:10	1.38	3.87		*	2.5	*	1.000	0.996	1.006
Tri	PCB-20/21/33	1.35e+05	1.45	n	29:49	1.31	2.58	R	*	2.5	*	1.022	1.017	1.027
Tri	PCB-22	8.86e+04	1.13	y	30:14	1.32	1.67		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	*	*	n	NotF╖	1.38	*		1930	2.5	0.957	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF╖	1.42	*		1930	2.5	0.928	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF╖	1.35	*		1930	2.5	0.973	*	0.967	0.976
Tri	PCB-35	*	*	n	NotF╖	1.38	*		1930	2.5	0.957	*	0.982	0.992
Tri	PCB-37	1.06e+05	0.95	y	33:03	1.39	1.91		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	*	*	n	NotF╖	1.20	*		1980	2.5	1.13	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF╖	0.97	*		1980	2.5	1.40	*	1.037	1.047
Tetra	PCB-53	3.72e+04	1.11	n	29:52	1.19	1.13	R	*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	*	*	n	NotF╖	1.15	*		1980	2.5	1.38	*	0.952	0.962
Tetra	PCB-45	*	*	n	NotF╖	0.97	*		1980	2.5	1.65	*	0.966	0.976
Tetra	PCB-46	*	*	n	NotF╖	0.95	*		1980	2.5	1.68	*	0.982	0.992

Integrations by:

Analyst: DMS

Date: 1/13/15

Reviewed by: CT Date: 1/13/15

Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1

Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	2.78e+05	0.72	y	31:36	1.28	7.87		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.37	*		1980	2.5	1.16	*	1.000	1.010
Tetra	PCB-43/49	1.29e+05	0.73	y	31:54	1.11	4.20		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	8.48e+04	1.00	n	32:07	1.13	2.65	R	*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	*	*	n	NotF	1.30	*		1980	2.5	1.21	*	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.33	*		1980	2.5	1.19	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF	1.29	*		1980	2.5	1.22	*	1.011	1.021
Tetra	PCB-44	1.53e+05	0.77	y	32:53	0.94	5.74		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	6.35e+04	1.05	n	33:07	1.22	1.84	R	*	2.5	*	1.032	1.028	1.038
Tetra	PCB-41/64/71/72	2.01e+05	0.83	y	33:43	1.31	5.41		*	2.5	*	1.051	1.046	1.056
Tetra	PCB-68	*	*	n	NotF	1.49	*		1980	2.5	1.07	*	1.054	1.064
Tetra	PCB-40	*	*	n	NotF	0.82	*		1980	2.5	1.93	*	1.061	1.071
Tetra	PCB-57	*	*	n	NotF	1.11	*		1980	2.5	1.16	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF	1.07	*		1980	2.5	1.20	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF	1.10	*		1980	2.5	1.17	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF	1.12	*		1980	2.5	1.15	*	0.982	0.992
Tetra	PCB-74	1.10e+05	0.85	y	35:24	1.20	2.42		*	2.5	*	0.994	0.990	1.000
Tetra	PCB-61/70	3.18e+05	0.86	y	35:38	1.08	7.80		*	2.5	*	1.000	0.994	1.004
Tetra	PCB-76/66	2.81e+05	0.69	y	35:50	1.14	6.54		*	2.5	*	1.006	1.001	1.011
Tetra	PCB-80	*	*	n	NotF	1.28	*		1980	2.5	1.06	*	0.996	1.006
Tetra	PCB-55	*	*	n	NotF	1.11	*		1980	2.5	1.22	*	1.005	1.015
Tetra	PCB-56/60	1.59e+05	0.69	y	36:52	1.09	3.89		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	*	*	n	NotF	1.12	*		1980	2.5	1.21	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.24	*		1980	2.5	1.33	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF	1.38	*		1980	2.5	1.19	*	0.995	1.005
Tetra	PCB-77	*	*	n	NotF	1.21	*		1980	2.5	1.33	*	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.26	*		1740	2.5	2.08	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF	1.09	*		1740	2.5	2.40	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF	0.93	*		1740	2.5	2.81	*	1.050	1.060
Penta	PCB-100	*	*	n	NotF	1.00	*		1740	2.5	2.62	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF	1.11	*		1740	2.5	3.28	*	0.981	0.991
Penta	PCB-95/98/102	2.09e+05	1.73	y	35:56	1.21	10.5		*	2.5	*	1.000	0.994	1.004
Penta	PCB-93	*	*	n	NotF	1.13	*		1740	2.5	3.21	*	0.998	1.008
Penta	PCB-88/91	*	*	n	NotF	1.02	*		1740	2.5	3.56	*	1.006	1.016
Penta	PCB-121	*	*	n	NotF	1.90	*		1740	2.5	1.91	*	1.009	1.019
Penta	PCB-84/92	1.26e+05	1.58	y	37:14	1.05	6.92		*	2.5	*	0.990	0.986	0.996
Penta	PCB-89	*	*	n	NotF	1.02	*		1740	2.5	3.55	*	0.991	1.001

Analyst: DMS

Date: 1/13/15

Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1

Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	3.18e+05	1.48	y 37:37	1.19	15.5		*	2.5	*	1.000	0.996	1.006
Penta	PCB-113	*	*	n NotF╕	1.35	*		1740	2.5	2.67	*	1.002	1.012
Penta	PCB-99	1.04e+05	1.90	n 37:58	1.29	4.69	R	*	2.5	*	1.009	1.005	1.015
Penta	PCB-119	*	*	n NotF╕	1.72	*		1740	2.5	2.31	*	0.982	0.992
Penta	PCB-108/112	*	*	n NotF╕	1.29	*		1740	2.5	3.08	*	0.986	0.996
Penta	PCB-83	*	*	n NotF╕	1.52	*		1740	2.5	2.61	*	0.991	1.001
Penta	PCB-97	8.96e+04	1.24	n 38:56	1.25	4.61	R	*	2.5	*	1.001	0.996	1.006
Penta	PCB-86	*	*	n NotF╕	1.02	*		1740	2.5	3.88	*	1.000	1.010
Penta	PCB-87/117/125	1.34e+05	1.75	y 39:13	1.56	5.52		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	*	*	n NotF╕	1.75	*		1740	2.5	2.26	*	1.007	1.017
Penta	PCB-85/116	*	*	n NotF╕	1.30	*		1740	2.5	3.05	*	1.010	1.020
Penta	PCB-120	*	*	n NotF╕	1.78	*		1740	2.5	2.23	*	1.016	1.026
Penta	PCB-110	4.10e+05	1.60	y 39:52	1.68	15.7		*	2.5	*	1.025	1.020	1.030
Penta	PCB-82	*	*	n NotF╕	0.74	*		1740	2.5	4.27	*	0.972	0.982
Penta	PCB-124	*	*	n NotF╕	1.32	*		1740	2.5	2.38	*	0.988	0.998
Penta	PCB-107/109	*	*	n NotF╕	1.22	*		1740	2.5	2.58	*	0.991	1.001
Penta	PCB-123	*	*	n NotF╕	1.22	*		1740	2.5	2.59	*	0.995	1.005
Penta	PCB-106/118	3.43e+05	1.43	y 41:42	1.22	13.4		*	2.5	*	1.001	0.996	1.006
Penta	PCB-114	*	*	n NotF╕	1.36	*		2120	2.5	2.21	*	0.995	1.005
Penta	PCB-122	*	*	n NotF╕	1.24	*		2120	2.5	2.42	*	0.999	1.009
Penta	PCB-105	2.28e+05	1.65	y 43:11	1.28	6.64		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF╕	1.14	*		2120	2.5	2.20	*	0.995	1.005
Penta	PCB-126	*	*	n NotF╕	1.28	*		2120	2.5	2.09	*	0.995	1.005
Hexa	PCB-155	*	*	n NotF╕	1.14	*		1750	2.5	3.09	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF╕	1.06	*		1750	2.5	3.30	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF╕	1.10	*		1750	2.5	3.19	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF╕	1.09	*		1750	2.5	3.21	*	1.055	1.065
Hexa	PCB-136	*	*	n NotF╕	1.08	*		1750	2.5	3.23	*	1.064	1.074
Hexa	PCB-148	*	*	n NotF╕	0.74	*		1750	2.5	4.73	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF╕	0.88	*		1750	2.5	3.97	*	1.079	1.089
Hexa	PCB-151	6.57e+04	1.17	y 40:55	0.81	5.23		*	2.5	*	1.101	1.097	1.107
Hexa	PCB-135	*	*	n NotF╕	0.78	*		1750	2.5	4.50	*	1.101	1.113
Hexa	PCB-144	*	*	n NotF╕	0.82	*		1750	2.5	4.28	*	1.105	1.116
Hexa	PCB-147	*	*	n NotF╕	0.83	*		1750	2.5	4.23	*	1.011	1.120
Hexa	PCB-139/149	2.54e+05	1.35	y 41:37	0.84	19.4		*	2.5	*	1.120	1.115	1.127
Hexa	PCB-140	*	*	n NotF╕	0.79	*		1750	2.5	4.47	*	1.120	1.132
Hexa	PCB-134/143	*	*	n NotF╕	0.93	*		2470	2.5	3.40	*	0.970	0.980

Analyst: DMS

Date: 1/13/15

Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1

Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n	NotF¬	0.95	*		2470	2.5	3.33	*	0.977	0.987
Hexa	PCB-131	*	*	n	NotF¬	0.91	*		2470	2.5	3.45	*	0.981	0.991
Hexa	PCB-146/165	1.01e+05	1.18	y	42:57	1.16	3.59		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	1.93e+05	1.18	y	43:12	1.11	7.12		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	5.23e+05	1.22	y	43:22	1.18	18.2		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-168	*	*	n	NotF¬	1.37	*		2470	2.5	2.30	*	1.000	1.010
Hexa	PCB-141	1.25e+05	1.21	y	44:06	0.97	5.49		*	2.5	*	1.001	0.996	1.005
Hexa	PCB-137	*	*	n	NotF¬	1.07	*		2470	2.5	3.07	*	1.004	1.014
Hexa	PCB-130	*	*	n	NotF¬	0.85	*		2470	2.5	3.88	*	1.007	1.017
Hexa	PCB-138/163/164	6.48e+05	1.34	y	44:56	1.23	22.7		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-158/160	9.07e+04	1.08	y	45:10	1.29	3.02		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	*	*	n	NotF¬	0.92	*		2470	2.5	3.53	*	1.007	1.017
Hexa	PCB-166	*	*	n	NotF¬	1.12	*		2470	2.5	2.32	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF¬	1.16	*		2470	2.5	2.22	*	0.995	1.005
Hexa	PCB-128/162	1.07e+05	1.25	y	46:29	1.02	3.65		*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	*	*	n	NotF¬	1.06	*		2470	2.5	2.23	*	0.995	1.005
Hexa	PCB-156	7.91e+04	1.27	y	48:11	1.18	2.19		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-157	*	*	n	NotF¬	1.08	*		2470	2.5	2.14	*	0.995	1.005
Hexa	PCB-169	*	*	n	NotF¬	1.11	*		2470	2.5	2.35	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotF¬	1.40	*		2090	2.5	1.59	*	0.995	1.005
Hepta	PCB-184	*	*	n	NotF¬	1.24	*		2090	2.5	1.80	*	1.006	1.016
Hepta	PCB-179	6.06e+04	0.92	y	44:11	1.30	2.60		*	2.5	*	1.028	1.024	1.034
Hepta	PCB-176	*	*	n	NotF¬	1.36	*		2090	2.5	1.64	*	1.035	1.045
Hepta	PCB-186	*	*	n	NotF¬	1.28	*		2090	2.5	1.75	*	1.049	1.059
Hepta	PCB-178	*	*	n	NotF¬	0.94	*		2090	2.5	2.38	*	1.061	1.071
Hepta	PCB-175	*	*	n	NotF¬	0.97	*		2090	2.5	2.30	*	1.069	1.079
Hepta	PCB-182/187	1.85e+05	1.16	y	46:16	1.01	10.2		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	8.28e+04	0.91	y	46:37	1.08	4.28		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	*	*	n	NotF¬	1.34	*		2090	2.5	1.98	*	0.951	0.961
Hepta	PCB-174	1.54e+05	1.00	y	47:37	1.34	7.85		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	*	*	n	NotF¬	1.36	*		2090	2.5	1.95	*	0.961	0.971
Hepta	PCB-177	7.68e+04	0.98	y	47:53	1.24	4.22		*	2.5	*	0.968	0.964	0.974
Hepta	PCB-171	*	*	n	NotF¬	1.31	*		2090	2.5	2.02	*	0.970	0.980
Hepta	PCB-173	*	*	n	NotF¬	1.16	*		2090	2.5	2.29	*	0.979	0.989
Hepta	PCB-172	*	*	n	NotF¬	1.22	*		2090	2.5	2.17	*	0.988	0.998
Hepta	PCB-192	*	*	n	NotF¬	1.53	*		2090	2.5	1.74	*	0.991	1.001
Hepta	PCB-180	3.04e+05	1.04	y	49:27	1.43	14.5		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 1/13/15

Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1
Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF	1.65	*		2090	2.5	1.61	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF	1.67	*		2090	2.5	1.59	*	1.004	1.014
Hepta	PCB-170	1.25e+05	1.11	y	50:58	1.50	7.15		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	*	*	n	NotF	2.02	*		2090	2.5	1.57	*	0.998	1.008
Hepta	PCB-189	*	*	n	NotF	1.54	*		2090	2.5	1.50	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF	1.04	*		1920	2.5	3.07	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF	1.10	*		1920	2.5	2.90	*	1.006	1.016
Octa	PCB-204	*	*	n	NotF	0.99	*		1920	2.5	3.22	*	1.009	1.019
Octa	PCB-197	*	*	n	NotF	1.07	*		1920	2.5	2.98	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF	1.02	*		1920	2.5	3.14	*	1.032	1.044
Octa	PCB-198	*	*	n	NotF	0.74	*		1920	2.5	4.30	*	1.058	1.068
Octa	PCB-199	7.46e+04	0.81	y	51:42	0.73	6.76		*	2.5	*	1.069	1.060	1.070
Octa	PCB-196/203	4.34e+04	0.70	n	51:59	0.77	3.71	R	*	2.5	*	1.075	1.066	1.076
Octa	PCB-195	2.10e+04	1.39	n	53:10	1.20	0.927	R	*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	8.37e+04	0.79	y	54:03	1.25	3.56		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	*	*	n	NotF	1.41	*		1450	2.5	1.08	*	1.001	1.011
Nona	PCB-208	1.86e+04	1.88	n	53:18	0.96	0.809	R	*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	*	*	n	NotF	0.92	*		1220	2.5	0.913	*	1.001	1.011
Nona	PCB-206	2.45e+04	1.77	n	55:39	1.03	1.57	R	*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	*	*	n	NotF	1.18	*		891	2.5	1.43	*	0.995	1.005

Analyst: DMS

Date: 1/13/15

Client ID: QC-EB-02-20141222-W Filename: 150102E2 S:7 Acq:2-JAN-15 18:56:24 ConCal: ST150102E2-1
Lab ID: 1400984-04 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0265 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	6.80e+04	3.52	y	16:11	1.22	1.65916	
Total Di-PCB	1.04e+06	1.60	y	25:19	1.21	17.9278	
Total Tri-PCB	2.94e+05	1.17	y	25:56	1.16	8.86020	
Total Tri-PCB	4.09e+05	1.07	y	29:10	1.35	7.45207	Sum:16.3123
Total Tetra-PCB	1.63e+06	0.72	y	31:36	1.17	43.8795	
Total Penta-PCB	1.54e+06	1.73	y	35:56	1.21	67.4054	
Total Penta-PCB	2.28e+05	1.65	y	43:11	1.26	6.63539	Sum:74.0408
Total Hexa-PCB	3.20e+05	1.17	y	40:55	0.92	24.5884	
Total Hexa-PCB	1.87e+06	1.18	y	42:57	1.08	66.0034	Sum:90.5918
Total Hepta-PCB	9.88e+05	0.92	y	44:11	1.27	50.8220	
Total Octa-PCB	7.46e+04	0.81	y	51:42	0.92	6.76415	
Total Octa-PCB	8.37e+04	0.79	y	54:03	1.29	3.56336	Sum:10.3275
Total Nona-PCB	*	*	n	NotFnd	0.96	*	
Total Deca-PCB	*	*	n	NotFnd	1.18	*	

Total PCB Conc:334.643004000

tetras = 304
MW 11/13/15

Integrations by Analyst: DMS
Date: 11/13/15

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.36e+07	3.34 y	0.89	16:10	0.622	0.622	0.628	1140	58.3
13C-PCB-3	7.54e+07	3.43 y	0.93	18:47	0.722	0.721	0.729	1290	66.3
13C-PCB-4	4.68e+07	1.62 y	0.55	20:07	0.774	0.772	0.780	1360	69.6
13C-PCB-9	7.77e+07	1.60 y	0.83	21:55	0.843	0.840	0.848	1490	76.6
13C-PCB-11	9.75e+07	1.58 y	0.94	25:18	0.973	0.968	0.978	1650	84.7
13C-PCB-19	4.19e+07	1.11 y	0.53	24:17	0.934	0.929	0.939	1250	64.1
13C-PCB-28	7.81e+07	1.08 y	0.89	29:10	1.003	0.999	1.009	1620	83.1
13C-PCB-32	6.99e+07	1.13 y	0.81	27:12	1.046	1.041	1.051	1360	69.9
13C-PCB-37	7.80e+07	1.06 y	0.83	33:02	1.136	1.131	1.143	1730	88.7
13C-PCB-47	5.51e+07	0.81 y	0.74	32:05	0.870	0.867	0.875	1780	91.6
13C-PCB-52	5.38e+07	0.79 y	0.71	31:35	0.857	0.853	0.861	1830	94.1
13C-PCB-54	6.02e+07	0.81 y	0.85	28:02	0.760	0.758	0.766	1710	87.7
13C-PCB-70	7.36e+07	0.82 y	0.94	35:37	0.966	0.961	0.971	1880	96.4
13C-PCB-77	6.03e+07	0.81 y	0.89	39:45	1.078	1.073	1.083	1630	83.5
13C-PCB-80	7.31e+07	0.82 y	0.96	36:03	0.978	0.972	0.982	1830	93.9
13C-PCB-81	6.00e+07	0.81 y	0.84	39:09	1.062	1.057	1.067	1730	88.6
13C-PCB-95	3.21e+07	1.61 y	0.74	35:55	0.912	0.908	0.918	1810	92.7
13C-PCB-97	3.04e+07	1.58 y	0.69	38:54	0.988	0.984	0.994	1850	94.7
13C-PCB-101	3.37e+07	1.60 y	0.79	37:37	0.956	0.951	0.961	1800	92.2
13C-PCB-104	4.24e+07	1.62 y	1.00	32:44	0.831	0.829	0.837	1790	91.7
13C-PCB-105	5.21e+07	1.61 y	1.24	43:11	0.929	0.924	0.934	1640	83.9
13C-PCB-114	5.19e+07	1.67 y	1.21	42:19	0.911	0.905	0.915	1670	85.8
13C-PCB-118	4.08e+07	1.61 y	0.98	41:40	1.058	1.054	1.064	1740	89.1
13C-PCB-123	3.90e+07	1.59 y	0.95	41:29	1.054	1.049	1.059	1720	88.4
13C-PCB-126	5.53e+07	1.66 y	1.16	45:25	0.977	0.972	0.982	1850	94.8
13C-PCB-127	5.81e+07	1.62 y	1.34	43:32	0.937	0.931	0.941	1680	86.3
13C-PCB-138	4.53e+07	1.33 y	1.04	44:55	0.967	0.961	0.971	1690	86.6
13C-PCB-141	4.56e+07	1.29 y	1.07	44:04	0.948	0.943	0.953	1650	84.9
13C-PCB-153	4.75e+07	1.32 y	1.11	43:21	0.933	0.927	0.937	1660	85.1
13C-PCB-155	3.03e+07	1.31 y	0.83	37:09	0.944	0.939	0.949	1520	78.3
13C-PCB-156	5.94e+07	1.29 y	1.24	48:10	1.037	1.032	1.042	1850	95.2
13C-PCB-157	6.40e+07	1.30 y	1.31	48:26	1.042	1.037	1.047	1900	97.4
13C-PCB-159	5.60e+07	1.27 y	1.20	46:12	0.994	0.989	0.999	1810	93.0
13C-PCB-167	6.17e+07	1.32 y	1.32	46:53	1.009	1.004	1.014	1810	93.1
13C-PCB-169	5.42e+07	1.28 y	1.22	50:36	1.089	1.082	1.092	1730	89.0
13C-PCB-170	2.27e+07	0.47 y	0.54	50:58	1.097	1.089	1.101	1650	84.6
13C-PCB-180	2.86e+07	0.46 y	0.67	49:27	1.064	1.059	1.069	1650	84.6
13C-PCB-188	3.48e+07	0.46 y	0.94	42:58	0.925	0.919	0.929	1450	74.2
13C-PCB-189	2.90e+07	0.45 y	0.72	52:31	1.130	1.120	1.132	1580	80.9
13C-PCB-194	3.67e+07	0.91 y	0.81	54:03	0.995	0.990	1.000	1760	90.5
13C-PCB-202	2.95e+07	0.95 y	0.83	48:22	1.041	1.036	1.046	1380	70.6
13C-PCB-206	2.95e+07	0.79 y	0.66	55:39	1.025	1.021	1.031	1750	89.7
13C-PCB-208	4.67e+07	0.76 y	1.12	53:18	0.981	0.976	0.986	1620	83.0
13C-PCB-209	2.97e+07	1.22 y	0.61	57:01	1.050	1.044	1.054	1880	96.6

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.79e+07	0.81 y	1.01	37:56	1.029	1.023	1.033	1870	95.9
13C-PCB-178	2.82e+07	0.46 y	0.63	45:45	0.985	0.979	0.989	1740	89.2

PS vs. IS

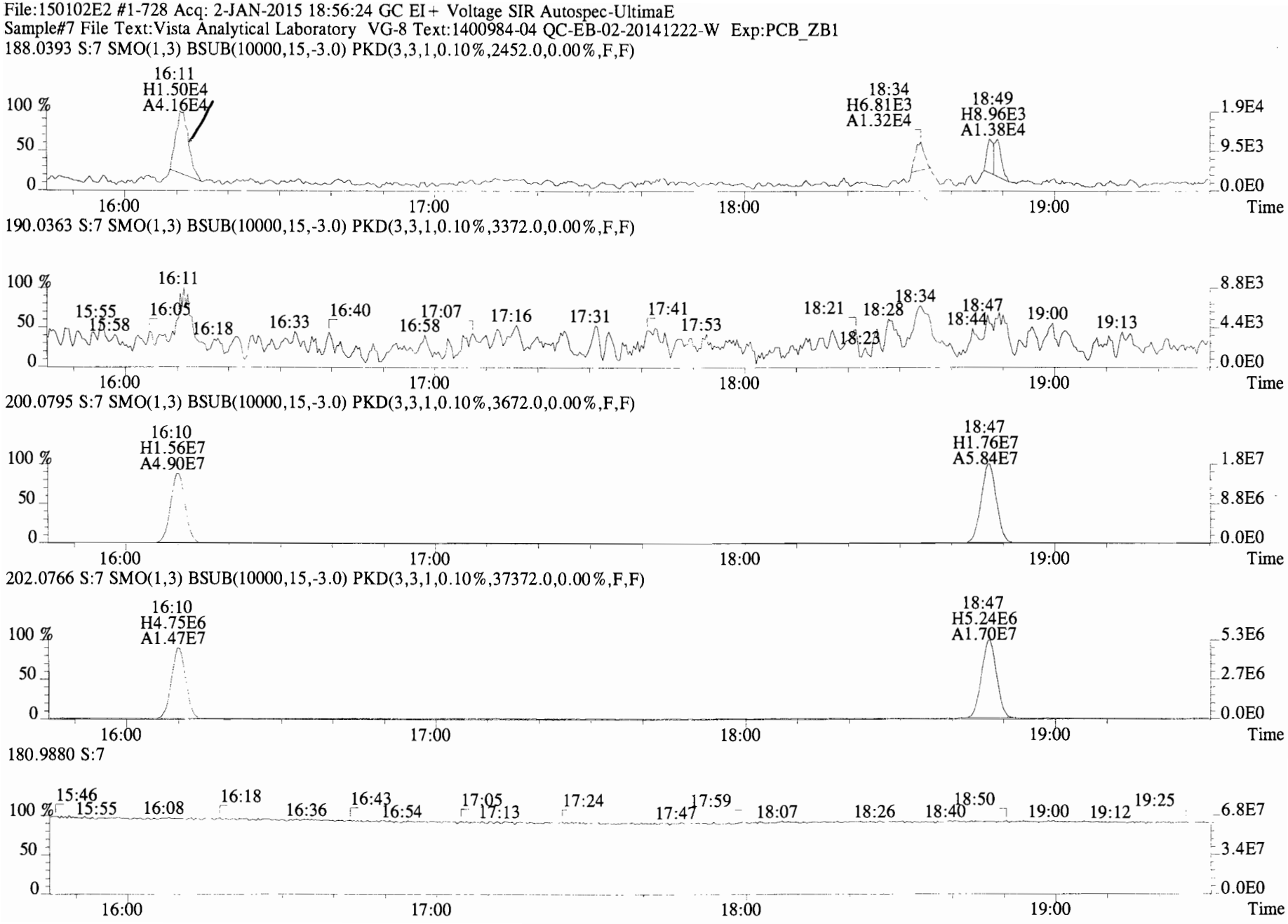
Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.79e+07	0.81 y	1.20	37:56	0.969	0.963	0.973	2110	108
13C-PCB-178	2.82e+07	0.46 y	0.94	45:45	0.925	0.920	0.930	2050	105

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.23e+08	1.58	y	1.00	26:00	1950
13C-PCB-31	1.06e+08	1.06	y	1.00	29:04	1950
13C-PCB-60	8.08e+07	0.81	y	1.00	36:52	1950
13C-PCB-111	4.65e+07	1.65	y	1.00	39:22	1950
13C-PCB-128	5.01e+07	1.27	y	1.00	46:28	1950
13C-PCB-205	5.01e+07	0.91	y	1.00	54:19	1950

Analyst: DMS

Date: 1/13/15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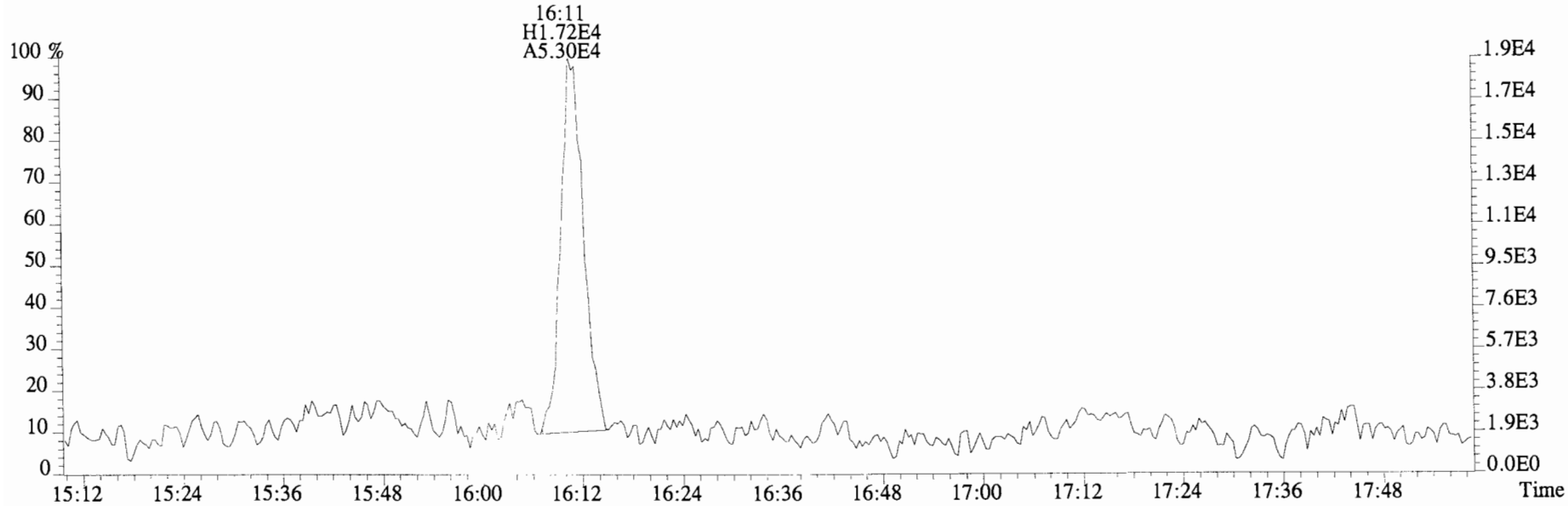
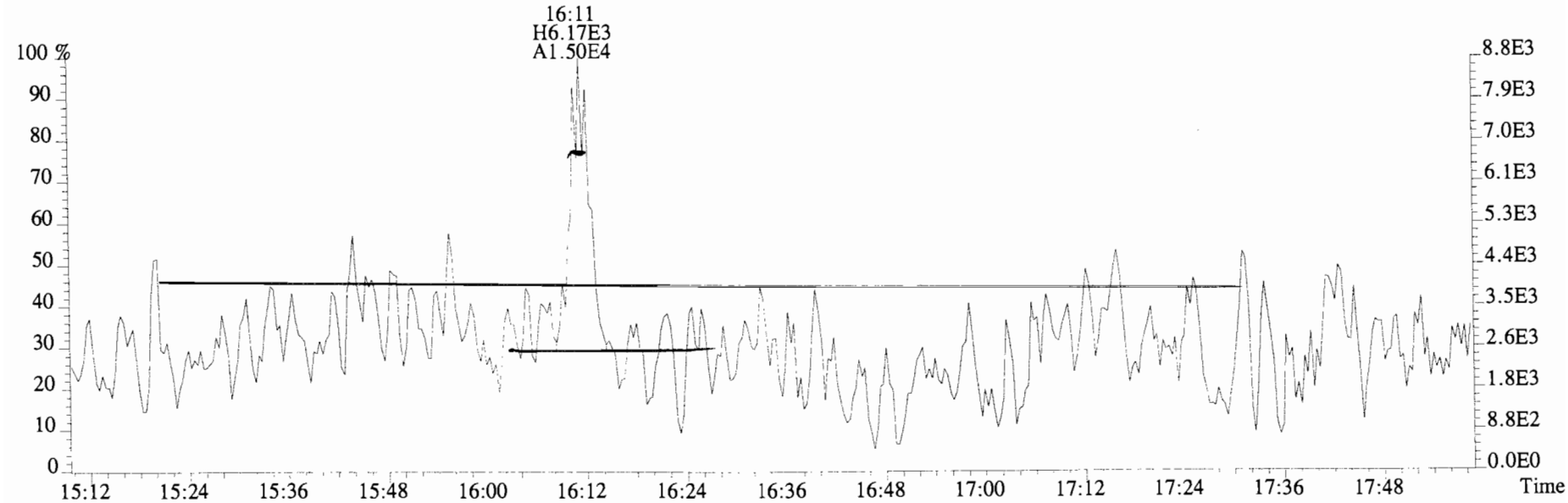
16:11
H1.50E4
A4.16E4
18:34
H6.81E3
A1.32E4
18:49
H8.96E3
A1.38E4
100 %
50
0
1.9E4
9.5E3
0.0E0
16:00
17:00
18:00
19:00
Time
190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3372.0,0.00%,F,F)
16:11
15:55
15:58
16:05
16:18
16:33
16:40
16:58
17:07
17:16
17:31
17:41
17:53
18:21
18:23
18:28
18:34
18:44
18:47
19:00
19:13
8.8E3
4.4E3
0.0E0
200.0795 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3672.0,0.00%,F,F)
16:10
H1.56E7
A4.90E7
18:47
H1.76E7
A5.84E7
1.8E7
8.8E6
0.0E0
202.0766 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,37372.0,0.00%,F,F)
16:10
H4.75E6
A1.47E7
18:47
H5.24E6
A1.70E7
5.3E6
2.7E6
0.0E0
180.9880 S:7
15:46
15:55
16:08
16:18
16:36
16:43
16:54
17:05
17:13
17:24
17:47
17:59
18:07
18:26
18:40
18:50
19:00
19:12
19:25
6.8E7
3.4E7
0.0E0

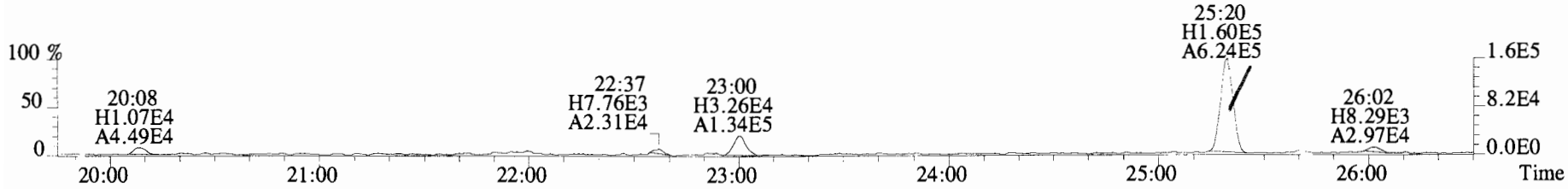
File:150102E2 #1-728 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
188.0393 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2452.0,0.00%,F,F)



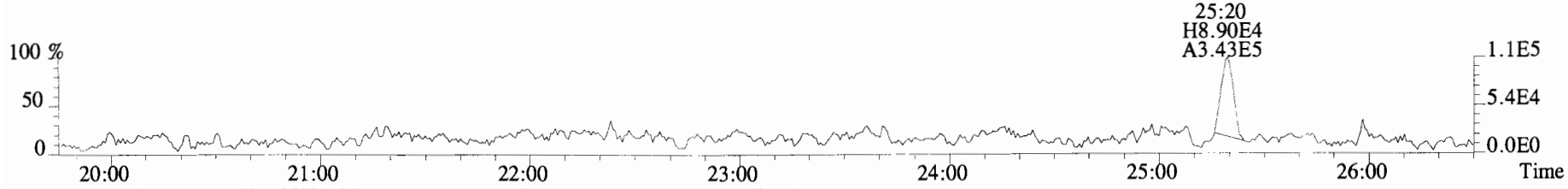
190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3372.0,0.00%,F,F)



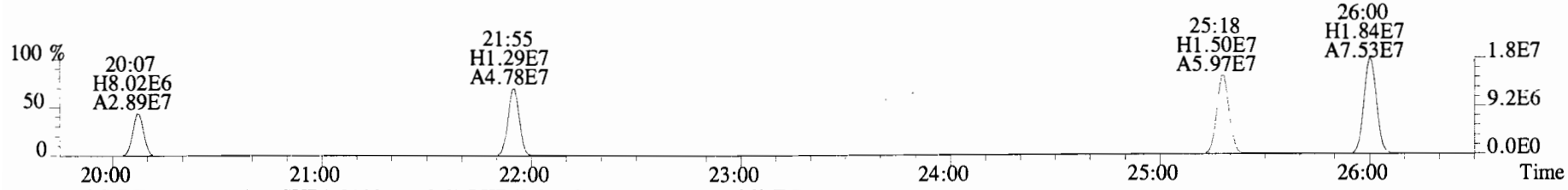
File:150102E2 #1-758 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3040.0,0.00%,F,F)



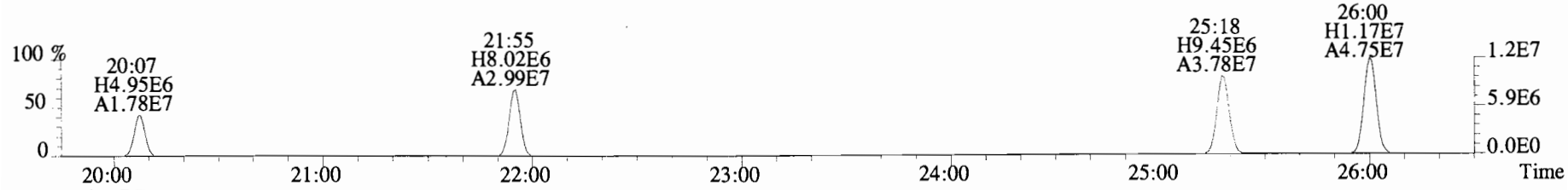
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21368.0,0.00%,F,F)



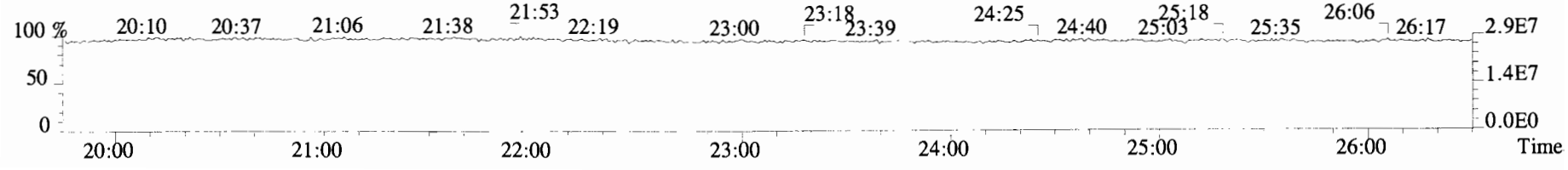
234.0406 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4024.0,0.00%,F,F)



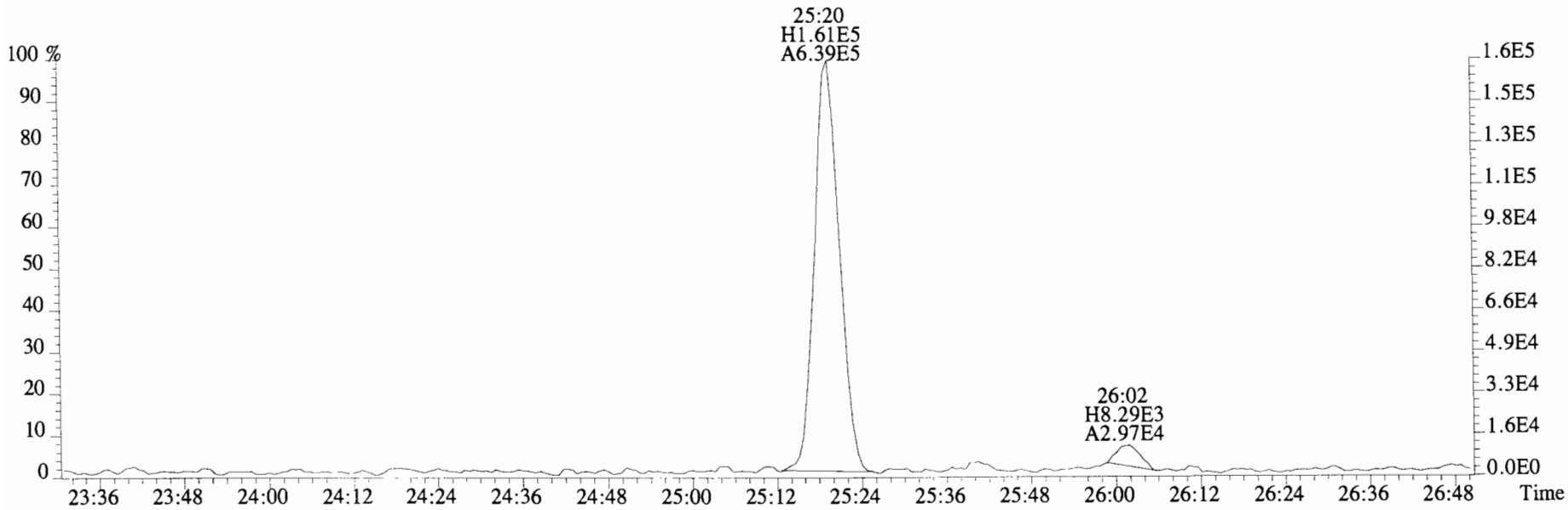
236.0376 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4208.0,0.00%,F,F)



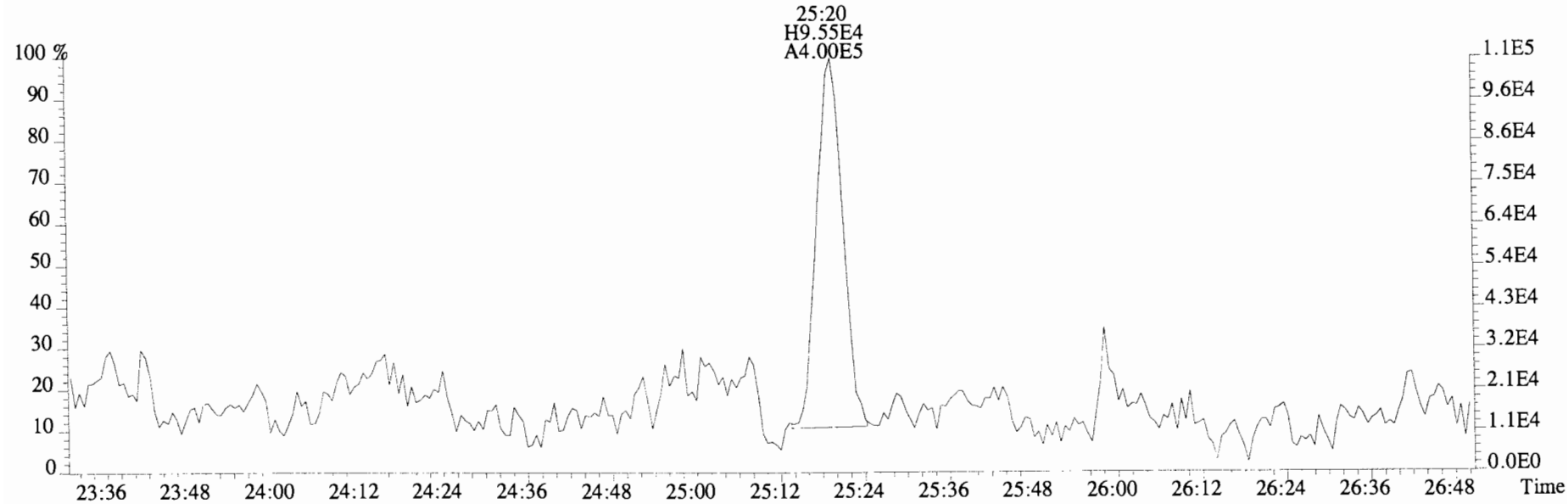
230.9856 S:7 F:2



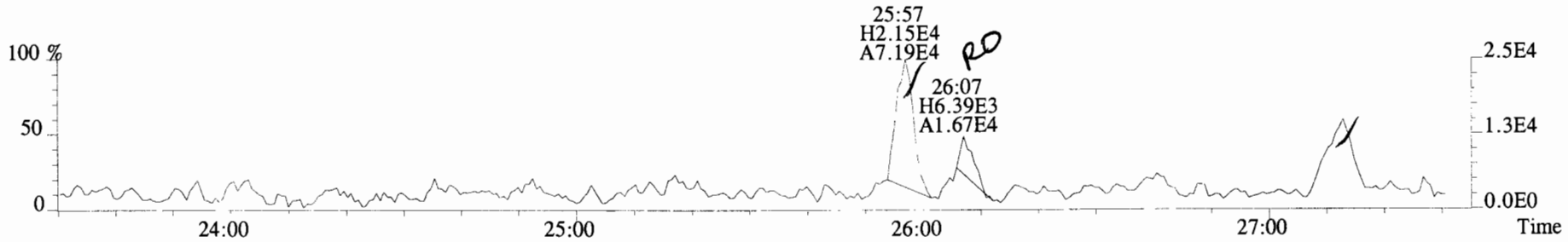
File:150102E2 #1-758 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3040.0,0.00%,F,F)



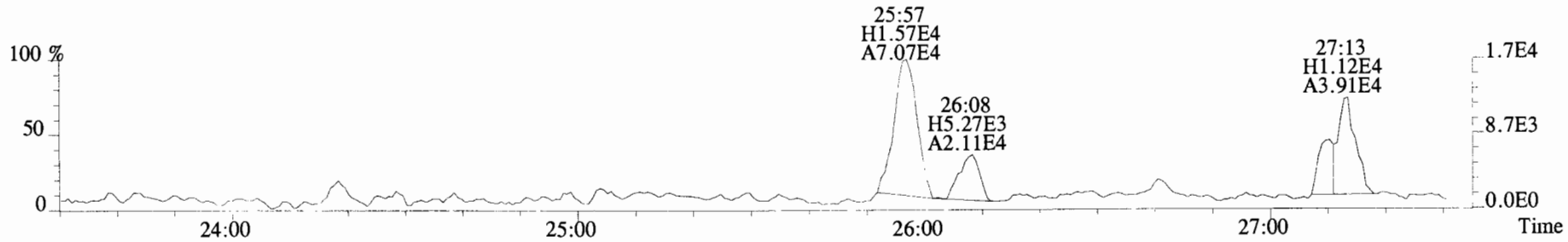
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21368.0,0.00%,F,F)



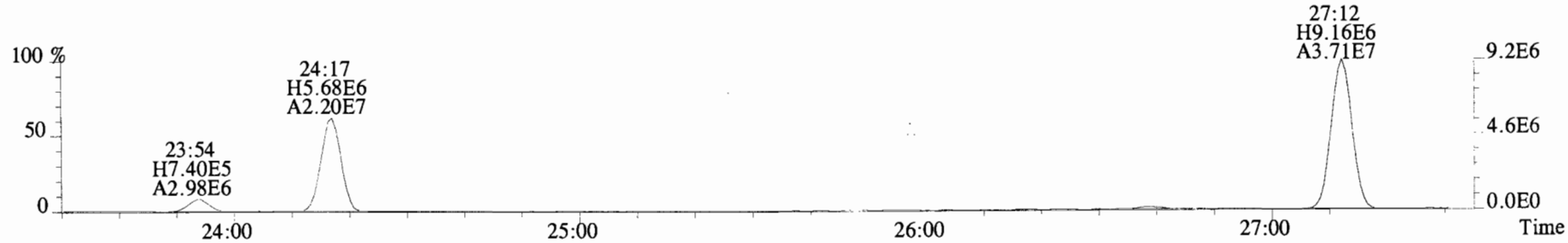
File:150102E2 #1-758 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3716.0,0.00%,F,F)



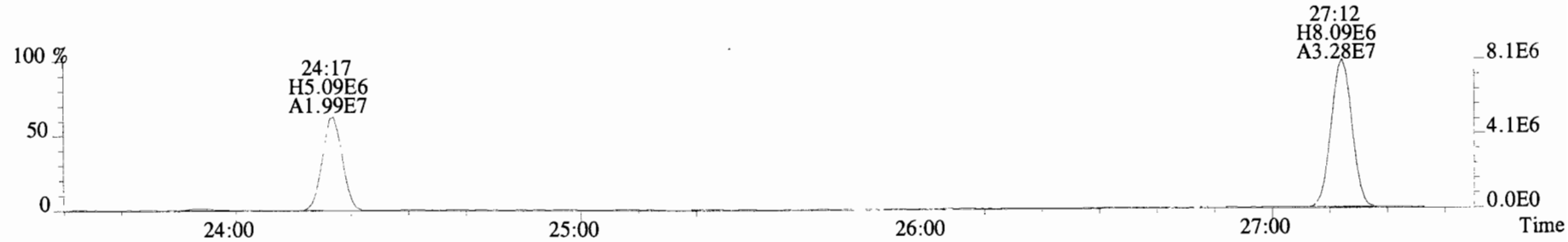
257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



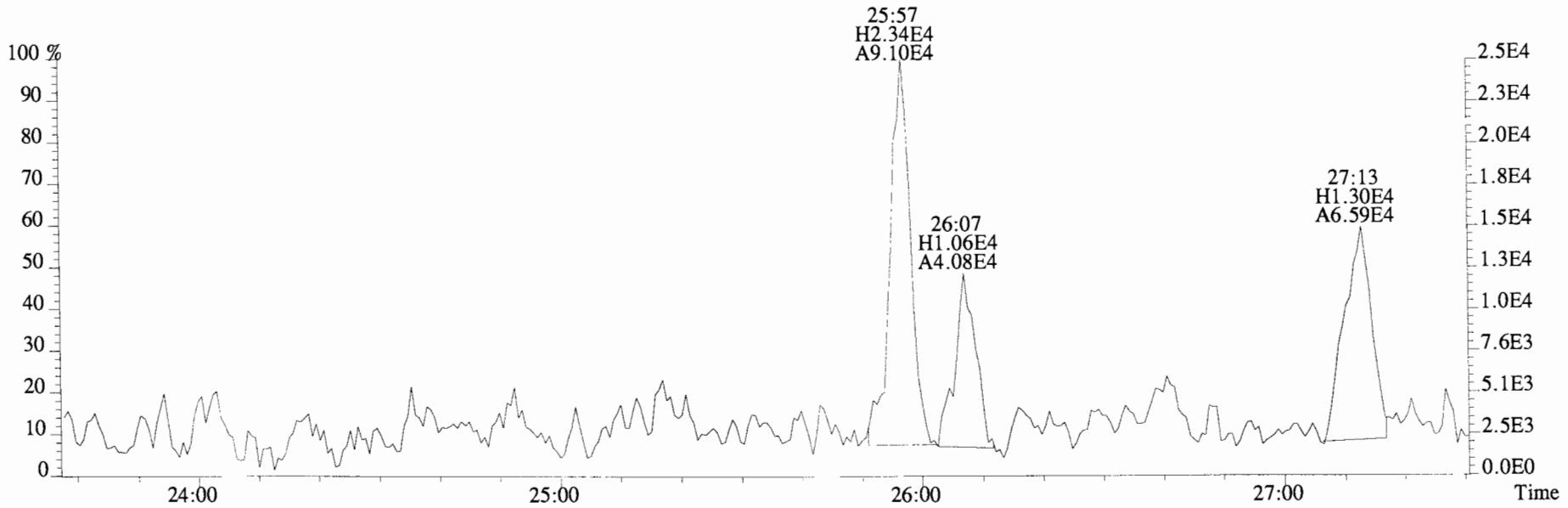
268.0016 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,27140.0,0.00%,F,F)



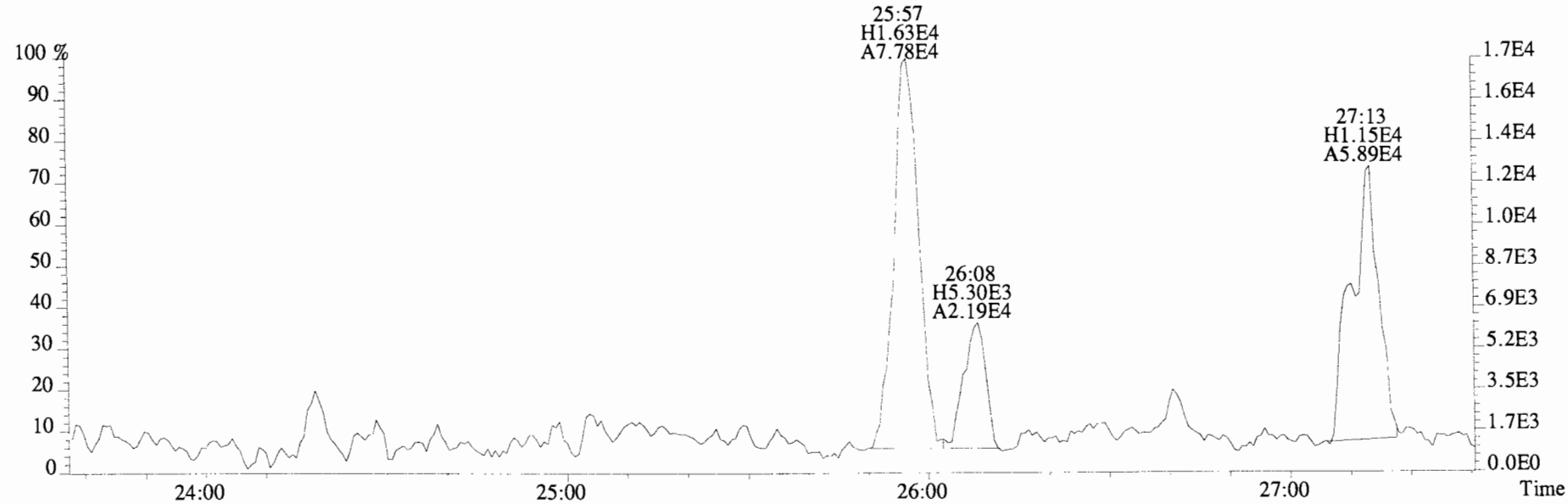
269.9986 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21340.0,0.00%,F,F)



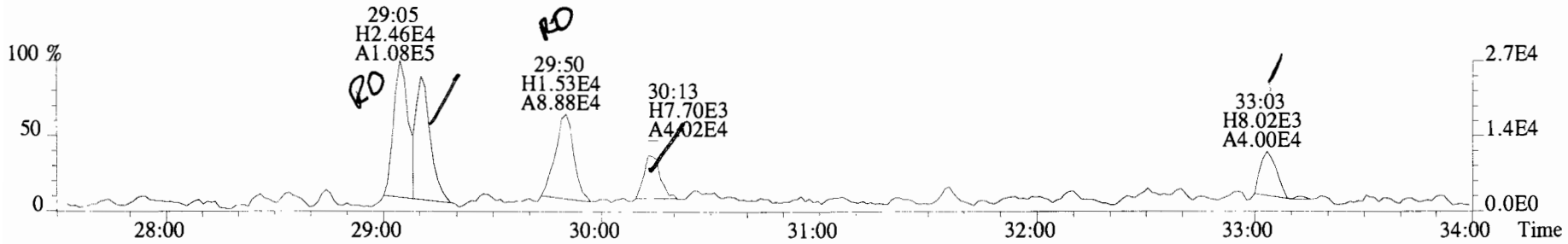
File:150102E2 #1-758 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3716.0,0.00%,F,F)



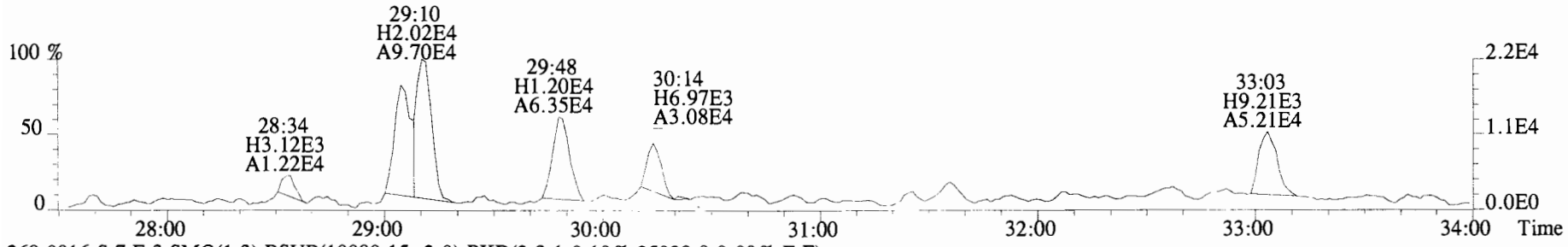
257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



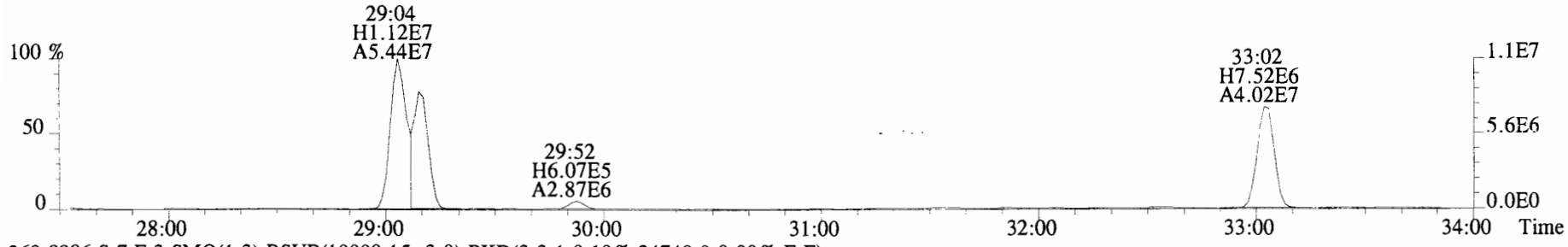
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2352.0,0.00%,F,F)



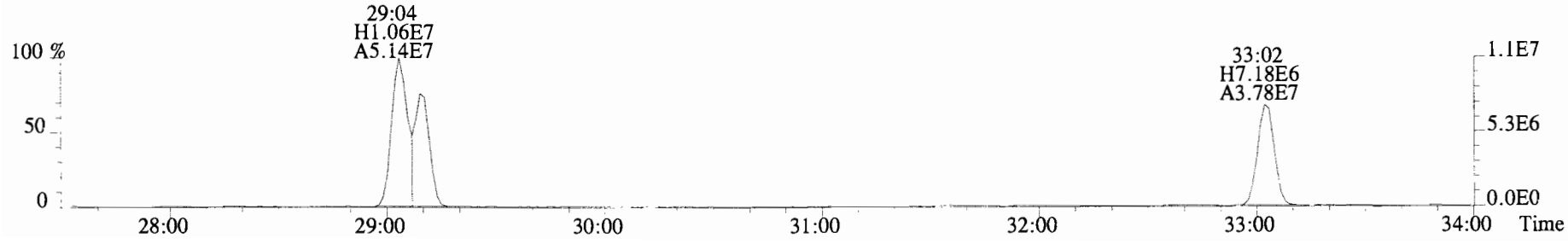
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



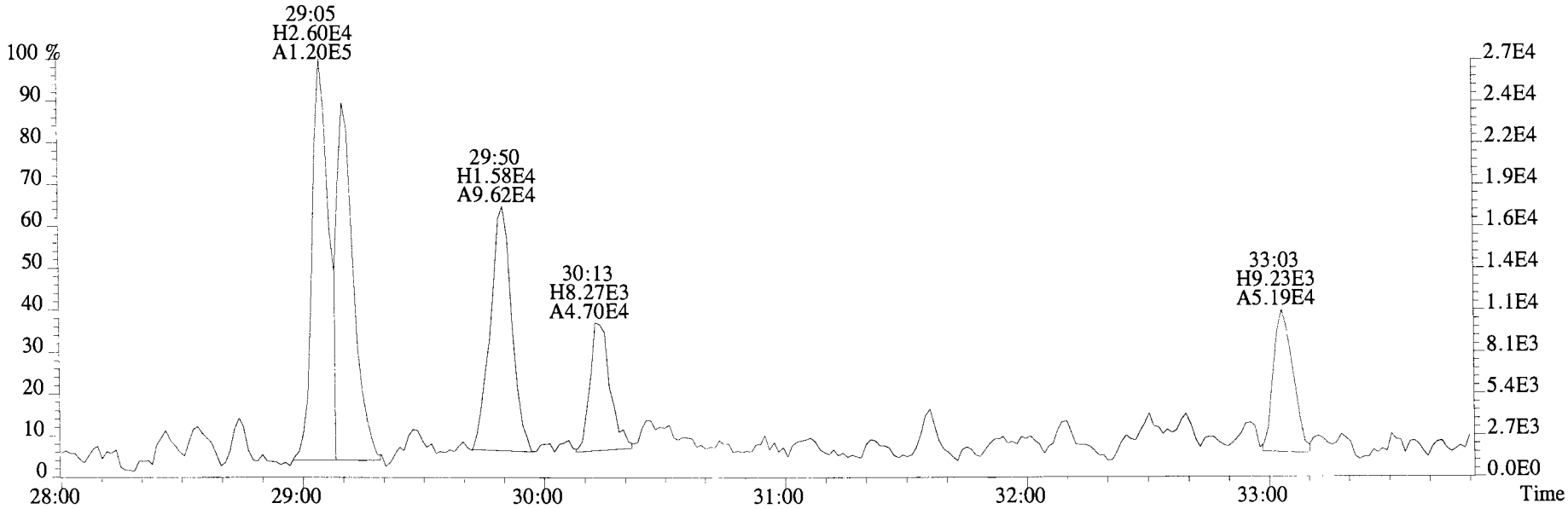
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,35020.0,0.00%,F,F)



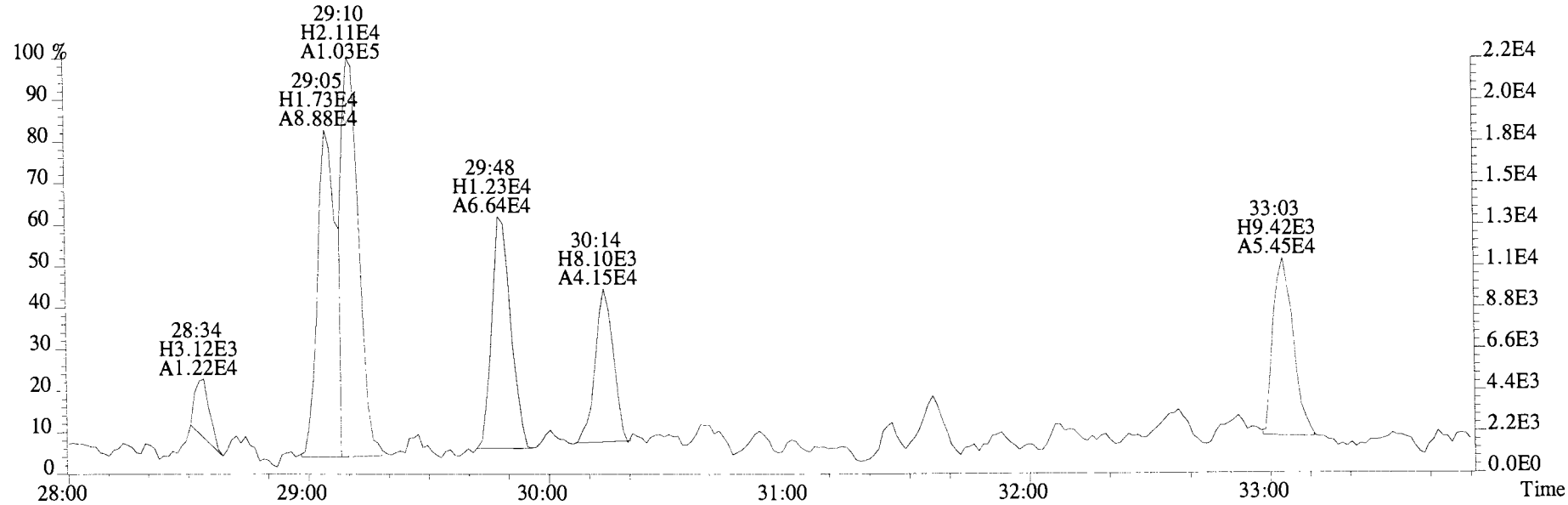
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,24748.0,0.00%,F,F)



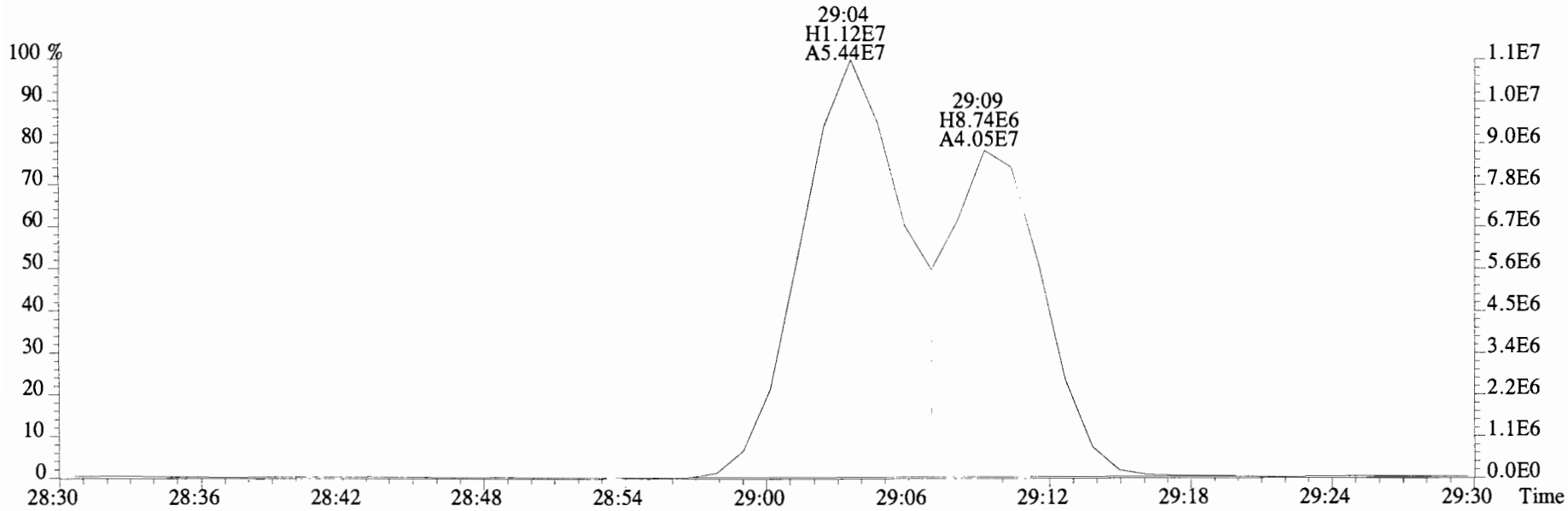
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2352.0,0.00%,F,F)



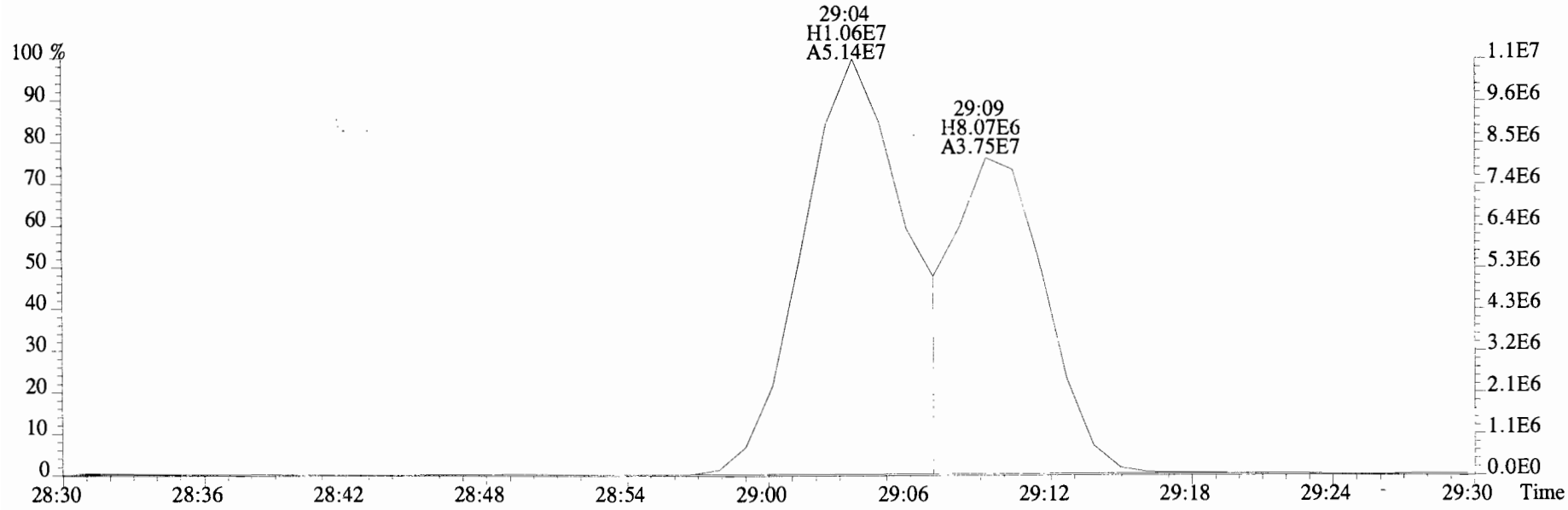
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



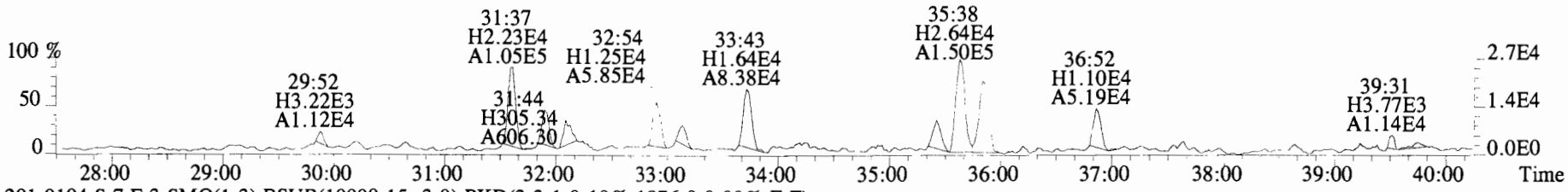
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,35020.0,0.00%,F,F)



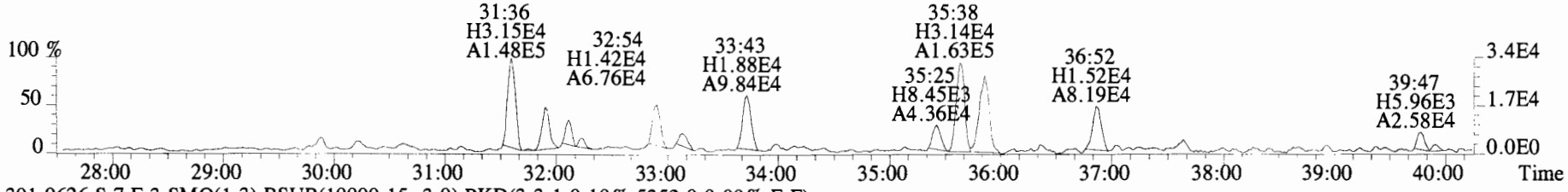
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,24748.0,0.00%,F,F)



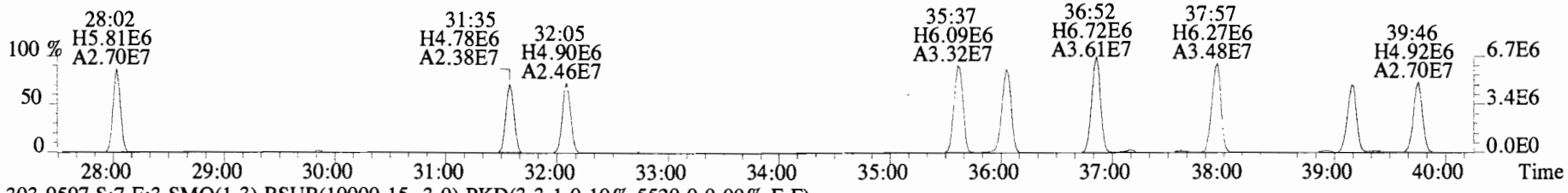
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)



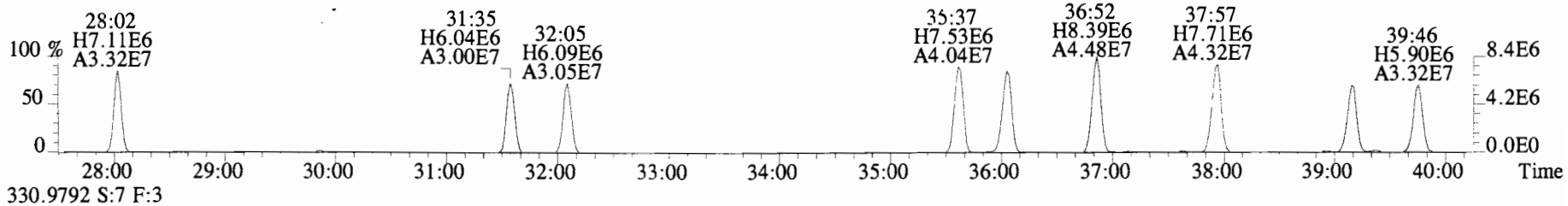
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



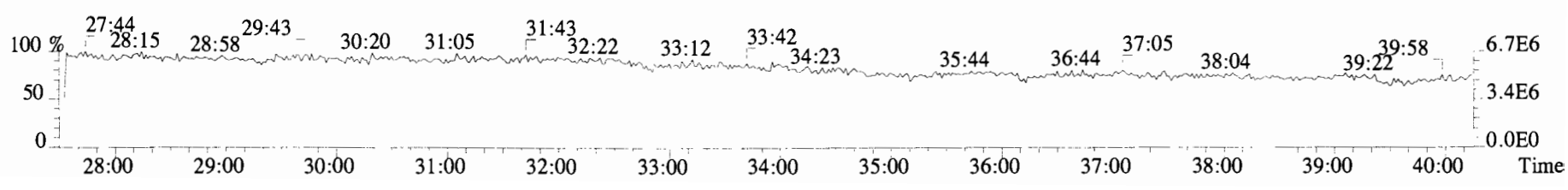
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5352.0,0.00%,F,F)



303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5520.0,0.00%,F,F)

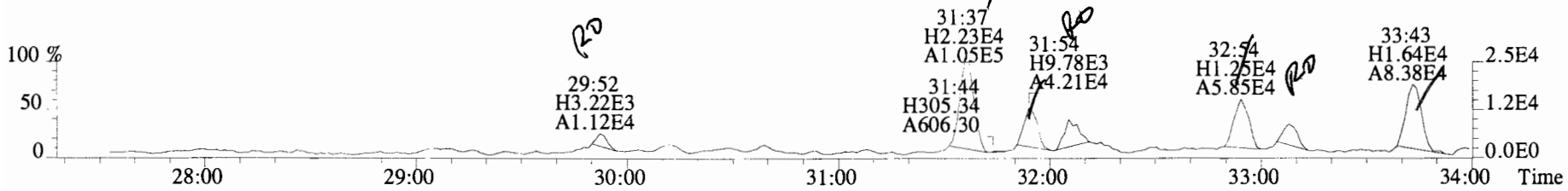


330.9792 S:7 F:3

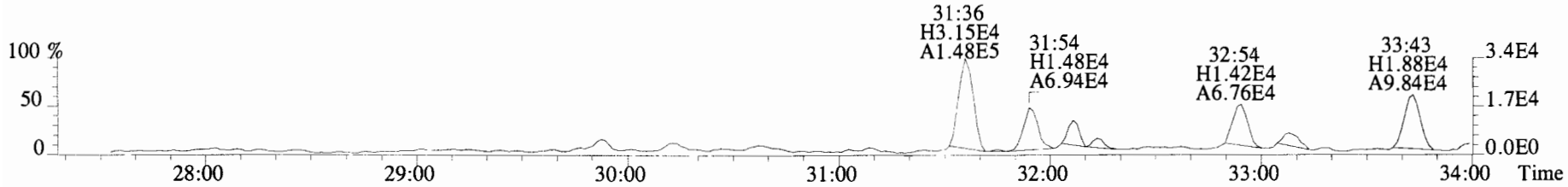


File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1

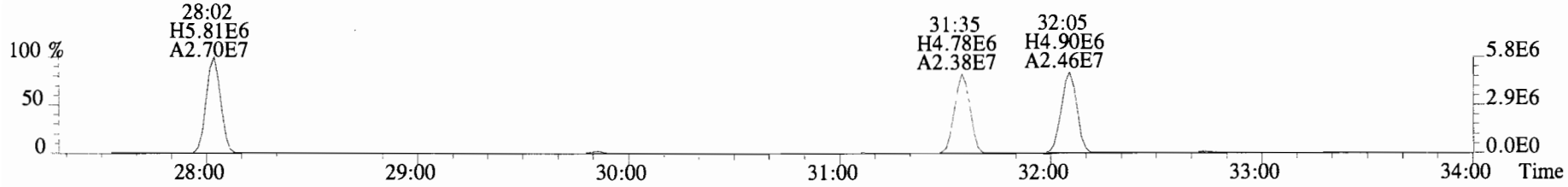
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)



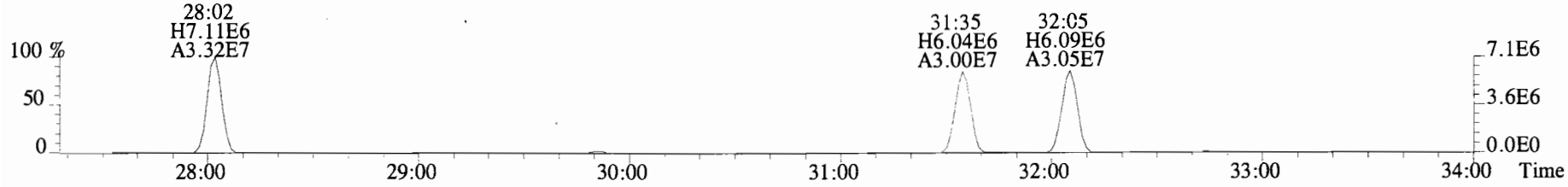
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976 0,0.00%,F,F)



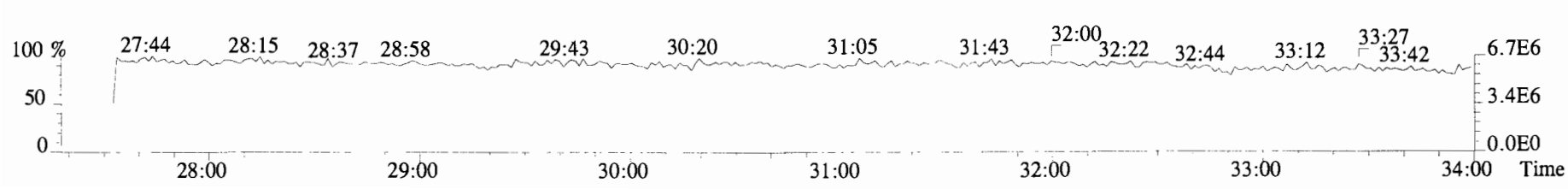
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5352.0,0.00%,F,F)



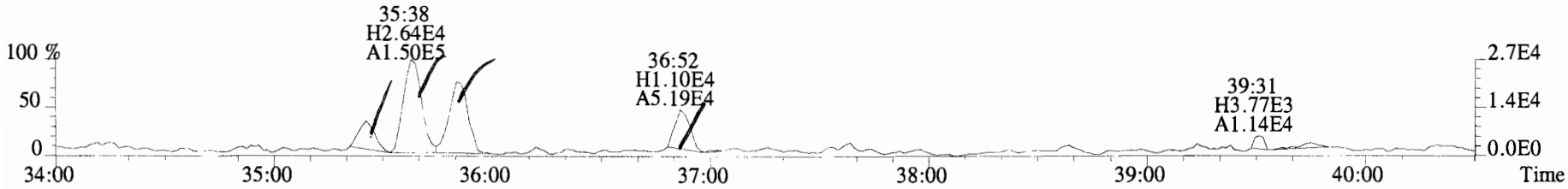
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5520.0,0.00%,F,F)



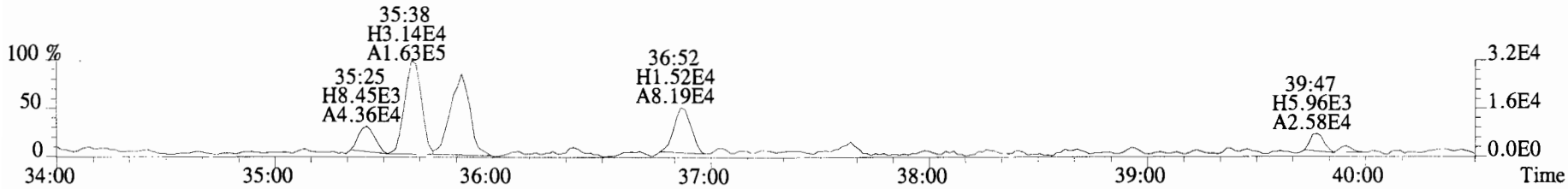
330.9792 S:7 F:3



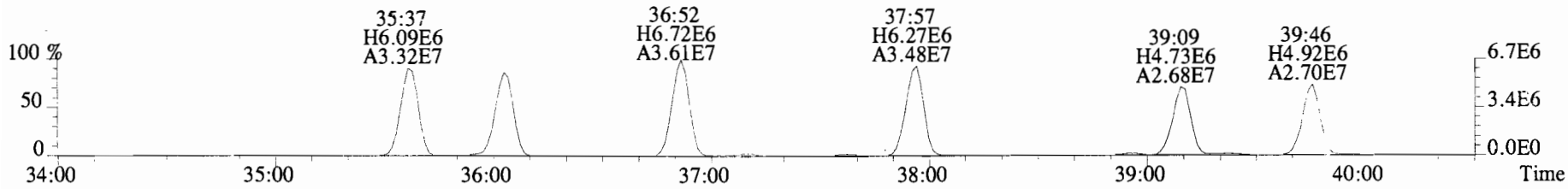
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)



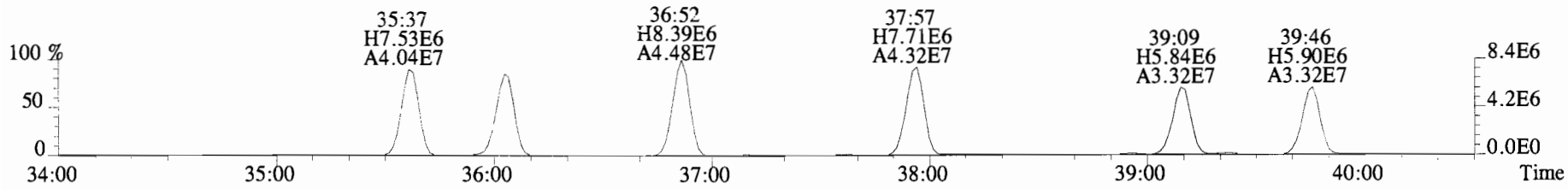
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



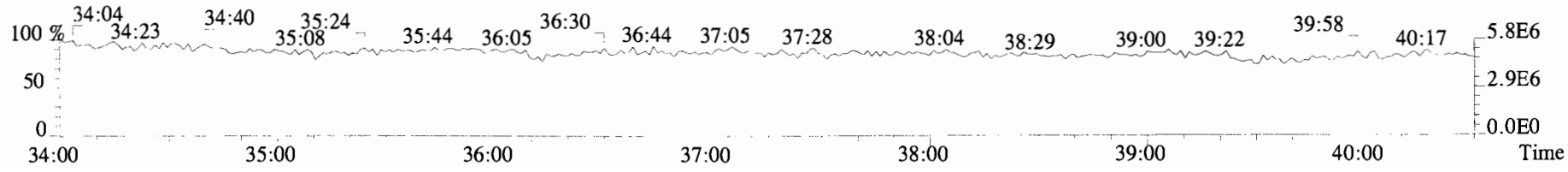
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5352.0,0.00%,F,F)

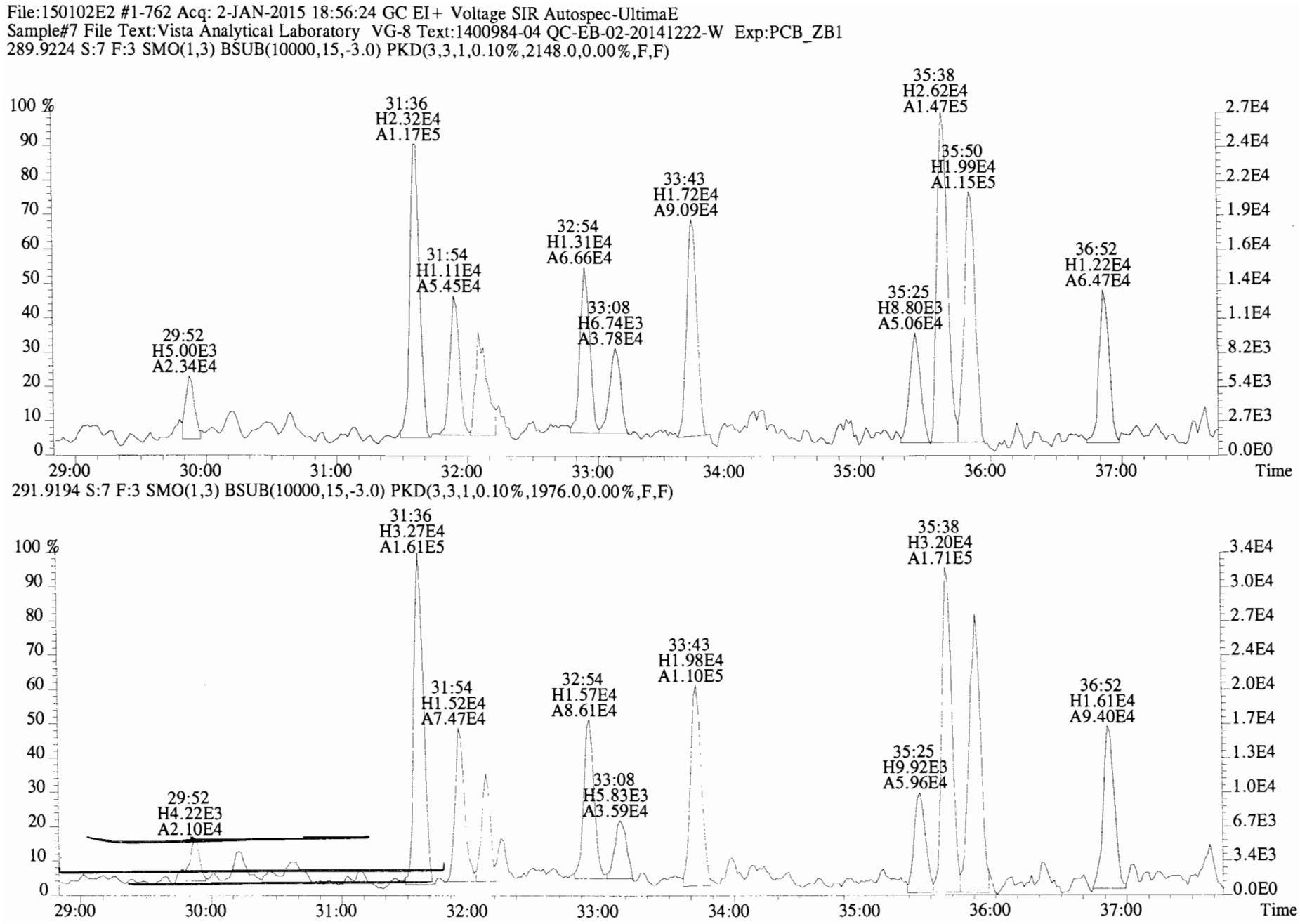


303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5520.0,0.00%,F,F)

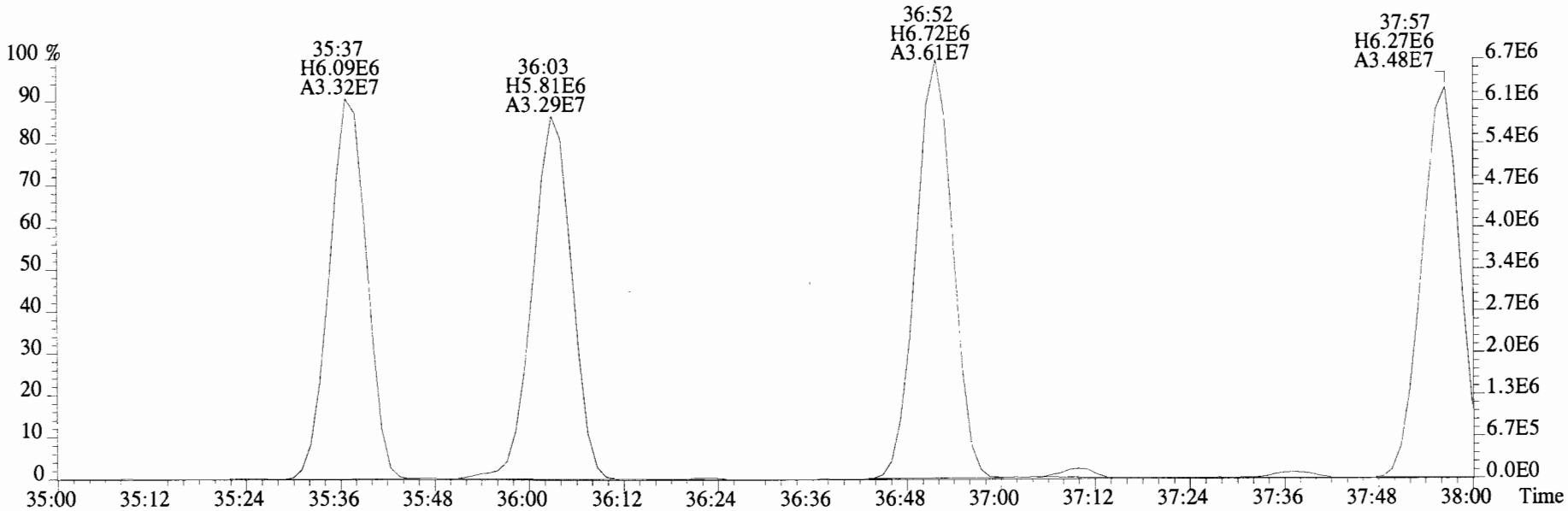


330.9792 S:7 F:3

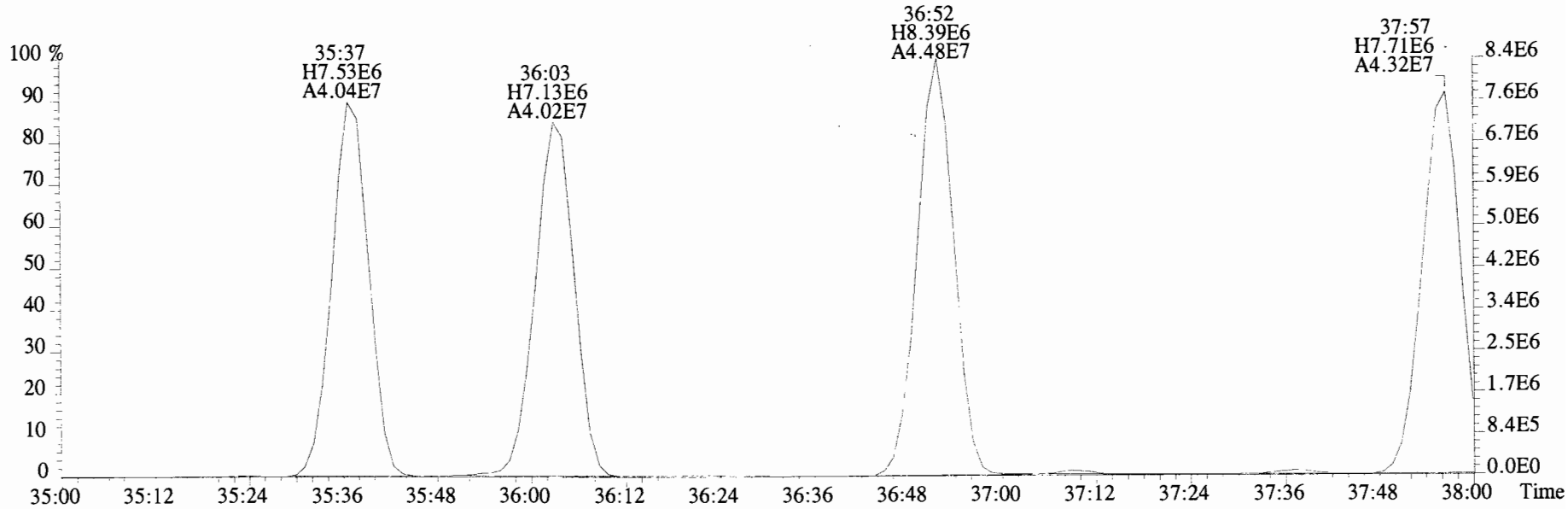



File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2148.0,0.00%,F,F)
29:52 H5.00E3 A2.34E4
31:36 H2.32E4 A1.17E5
31:54 H1.11E4 A5.45E4
32:54 H1.31E4 A6.66E4
33:08 H6.74E3 A3.78E4
33:43 H1.72E4 A9.09E4
35:25 H8.80E3 A5.06E4
35:38 H2.62E4 A1.47E5
35:50 H1.99E4 A1.15E5
36:52 H1.22E4 A6.47E4
Time
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)
29:52 H4.22E3 A2.10E4
31:36 H3.27E4 A1.61E5
31:54 H1.52E4 A7.47E4
32:54 H1.57E4 A8.61E4
33:08 H5.83E3 A3.59E4
33:43 H1.98E4 A1.10E5
35:25 H9.92E3 A5.96E4
35:38 H3.20E4 A1.71E5
36:52 H1.61E4 A9.40E4
Time

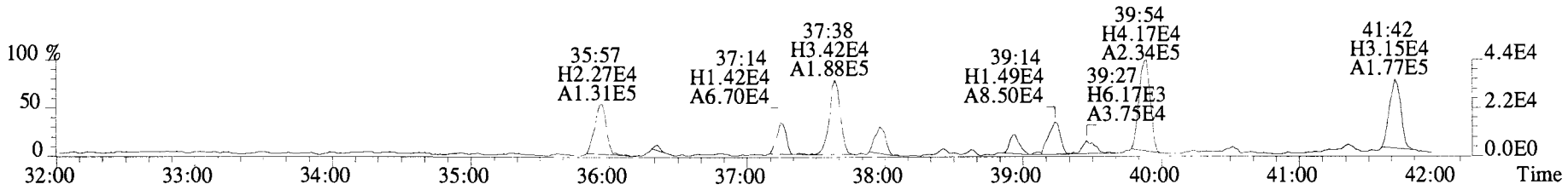
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5352.0,0.00%,F,F)



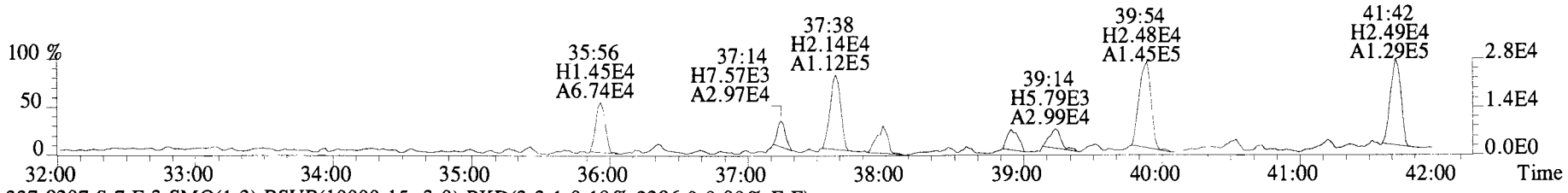
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5520.0,0.00%,F,F)



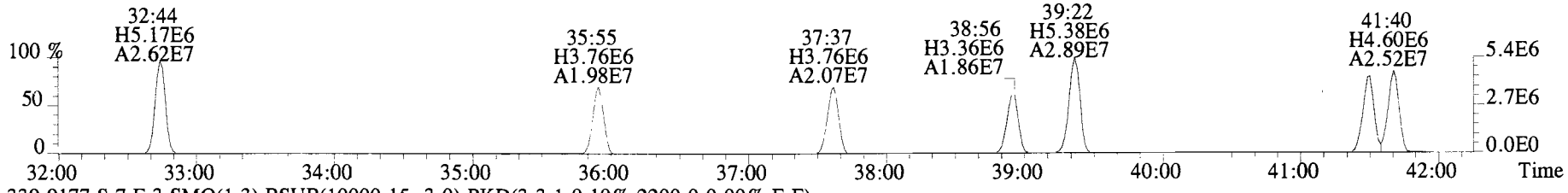
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



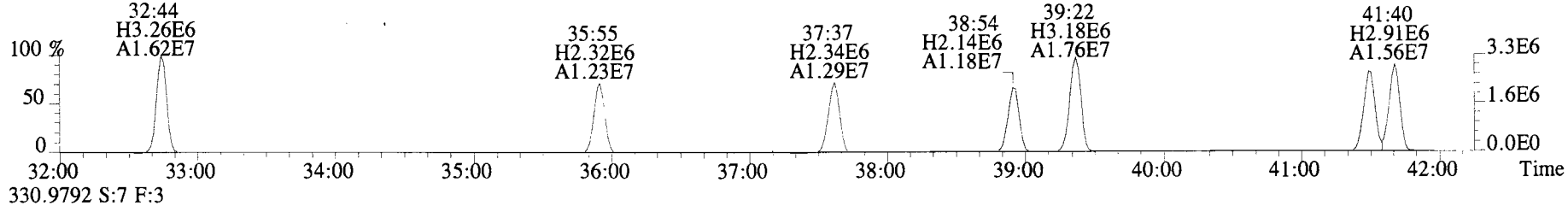
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



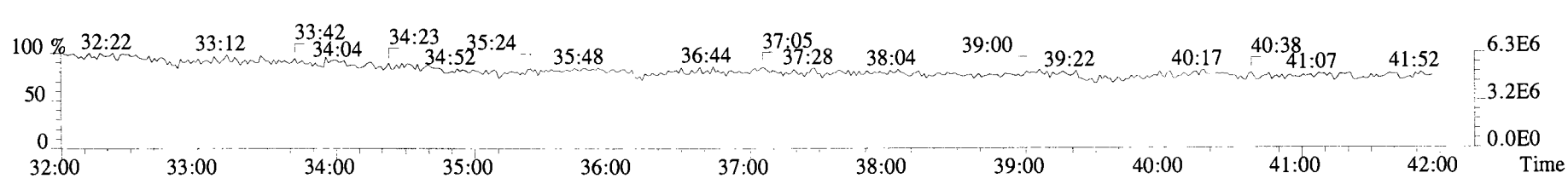
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2296.0,0.00%,F,F)



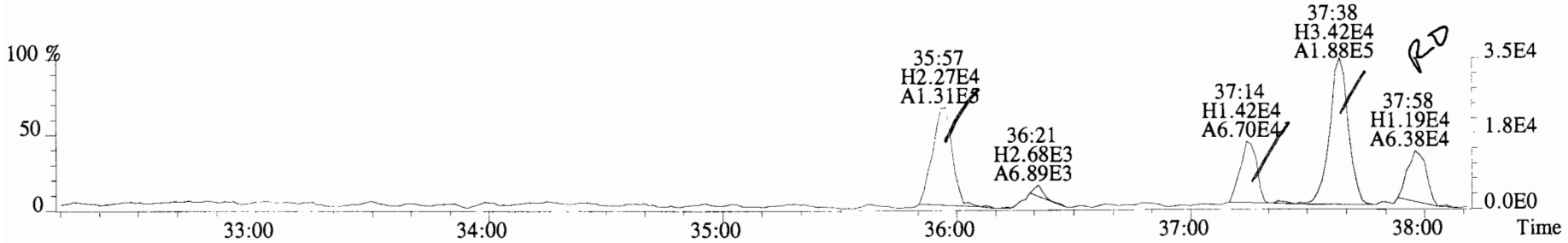
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2200.0,0.00%,F,F)



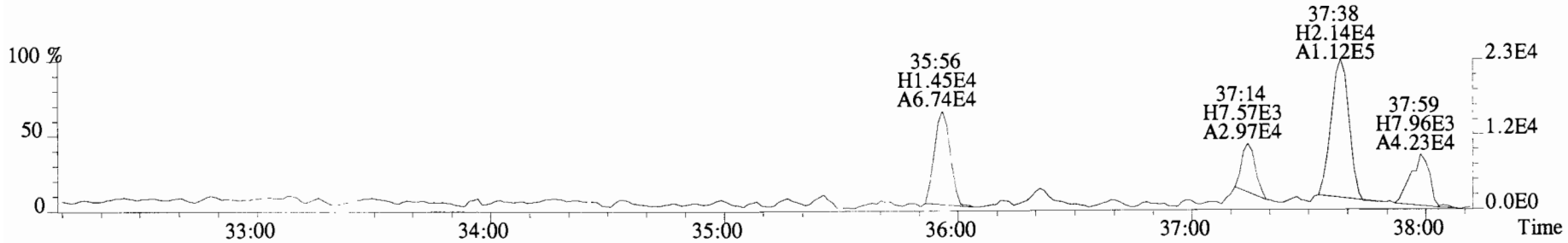
330.9792 S:7 F:3



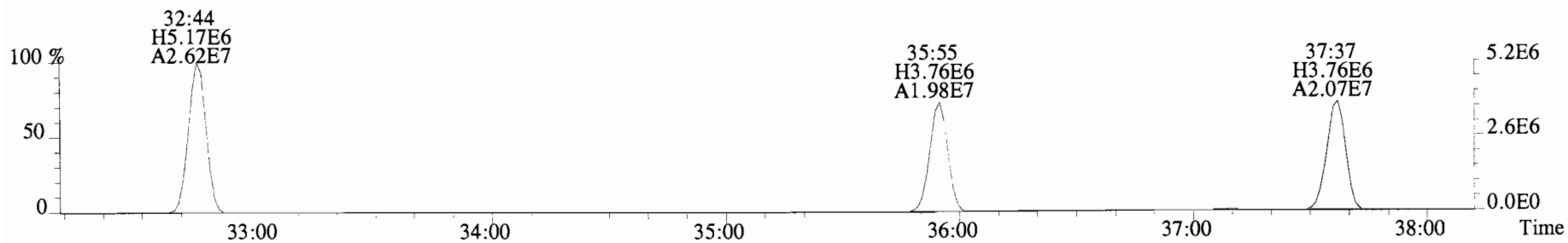
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



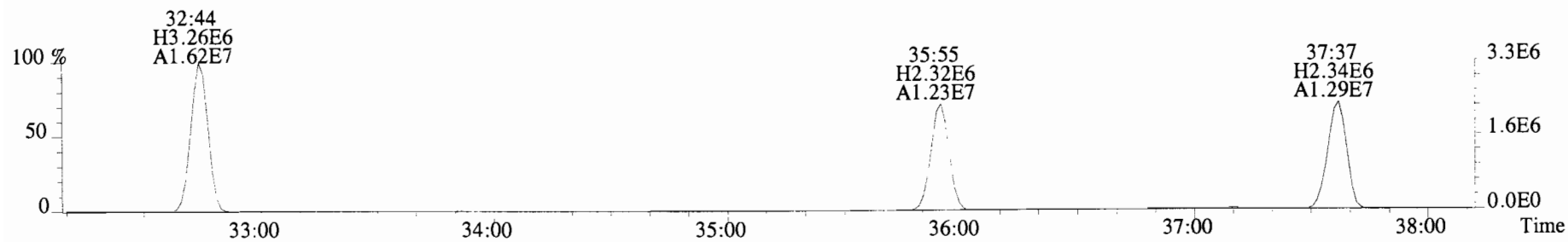
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)



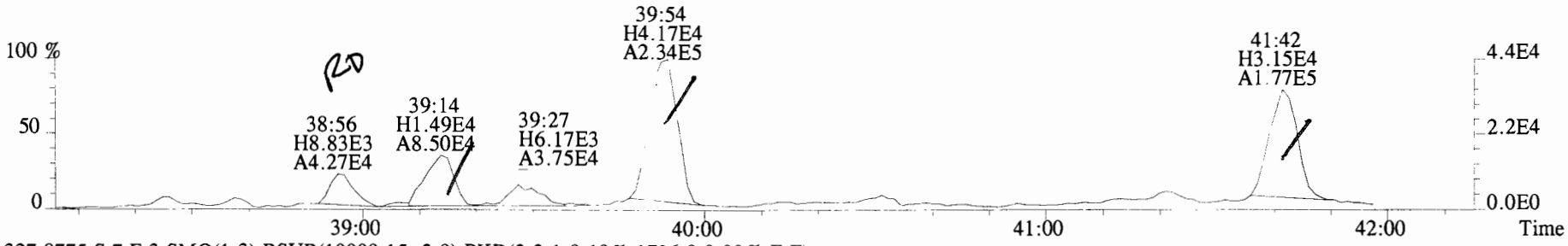
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2296.0,0.00%,F,F)



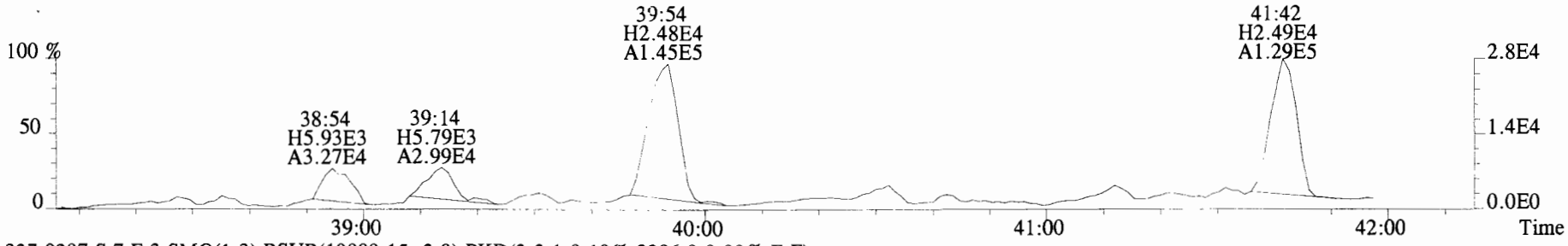
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2200.0,0.00%,F,F)



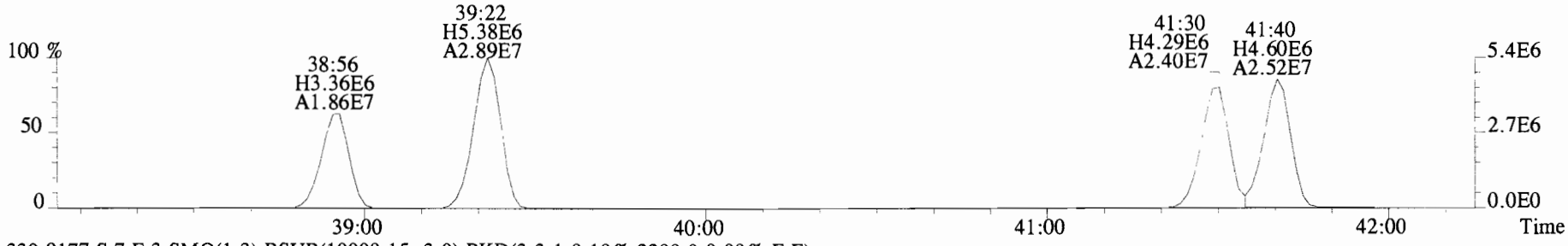
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



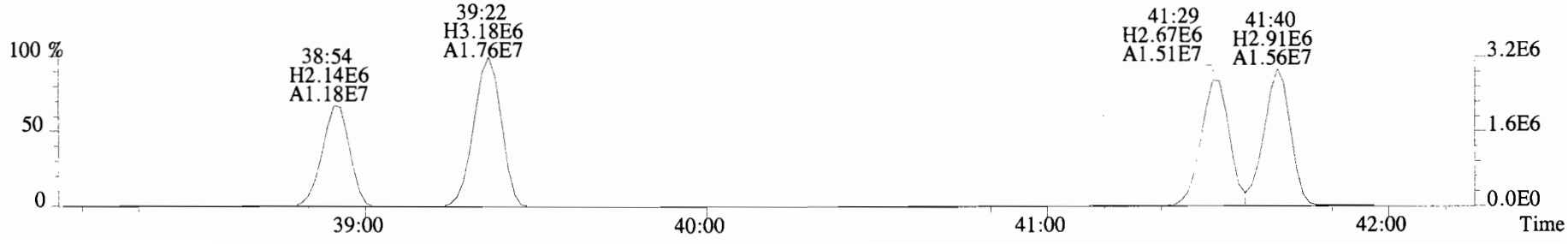
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)

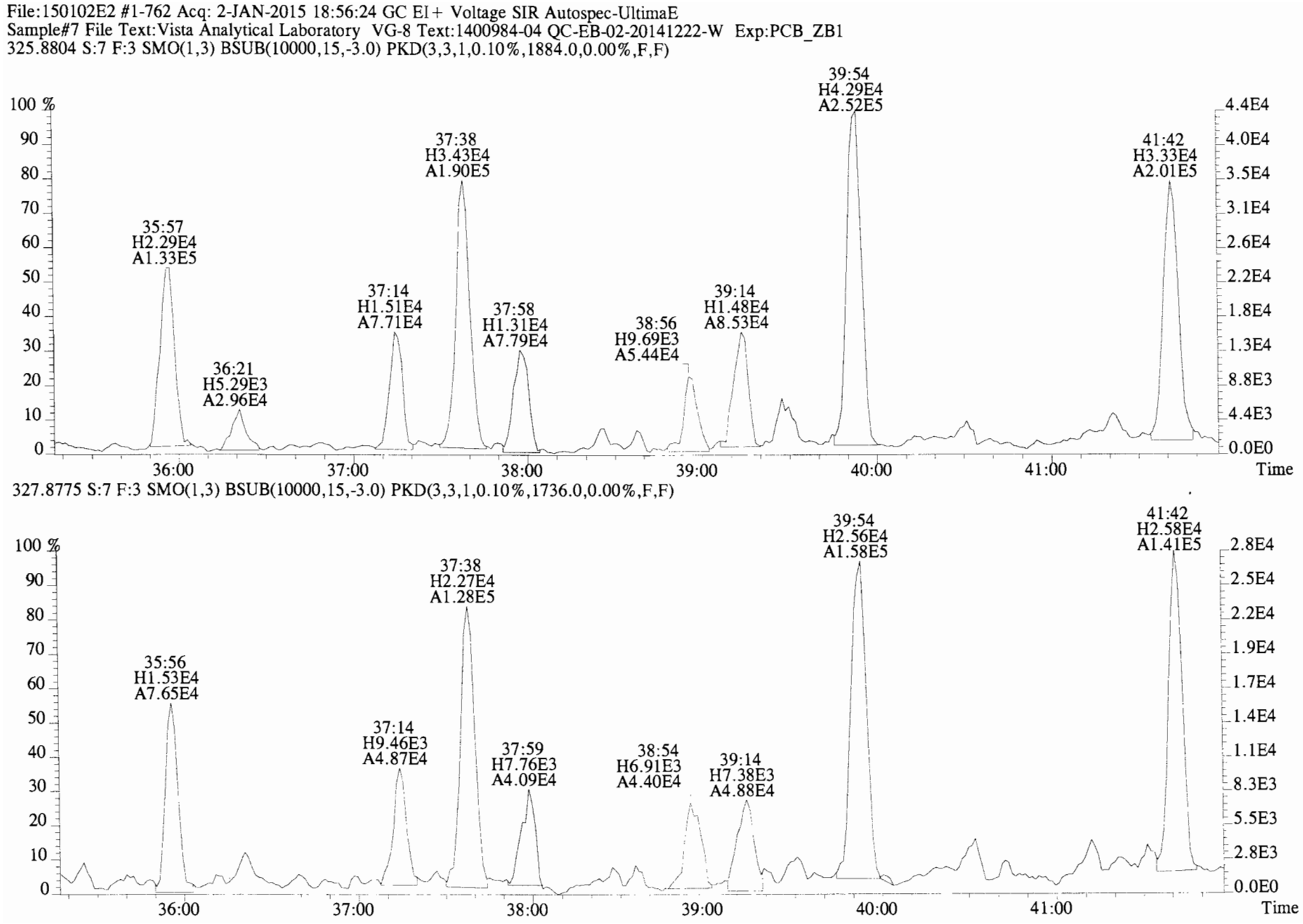


337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2296.0,0.00%,F,F)

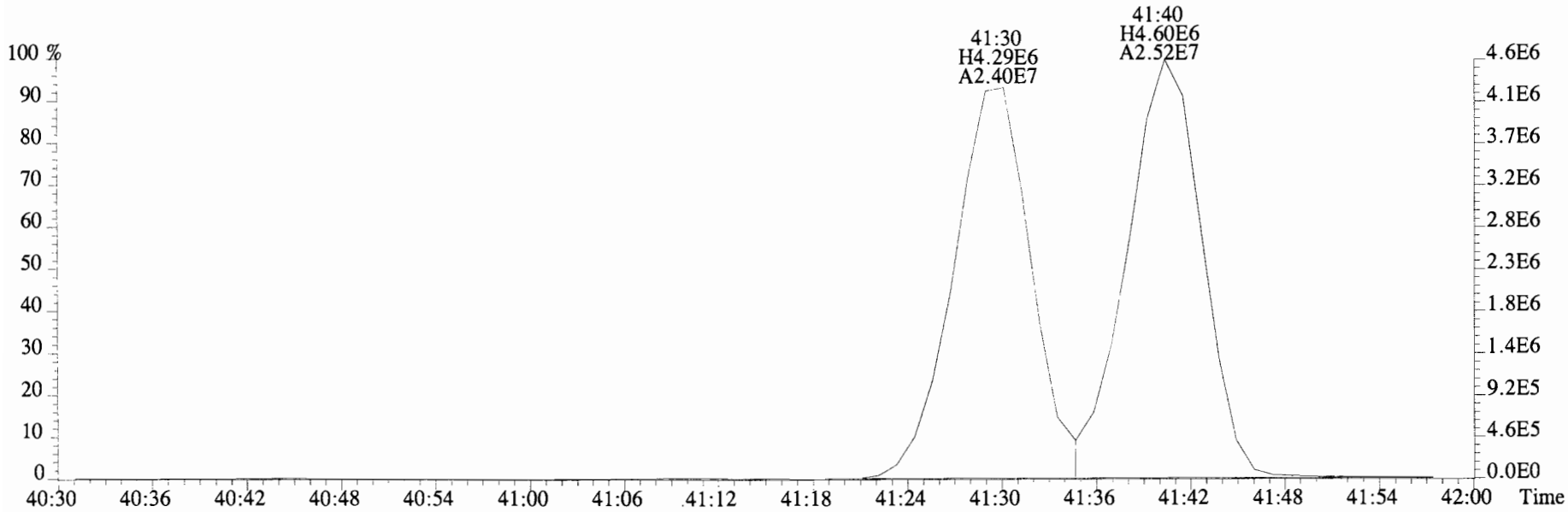


339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2200.0,0.00%,F,F)

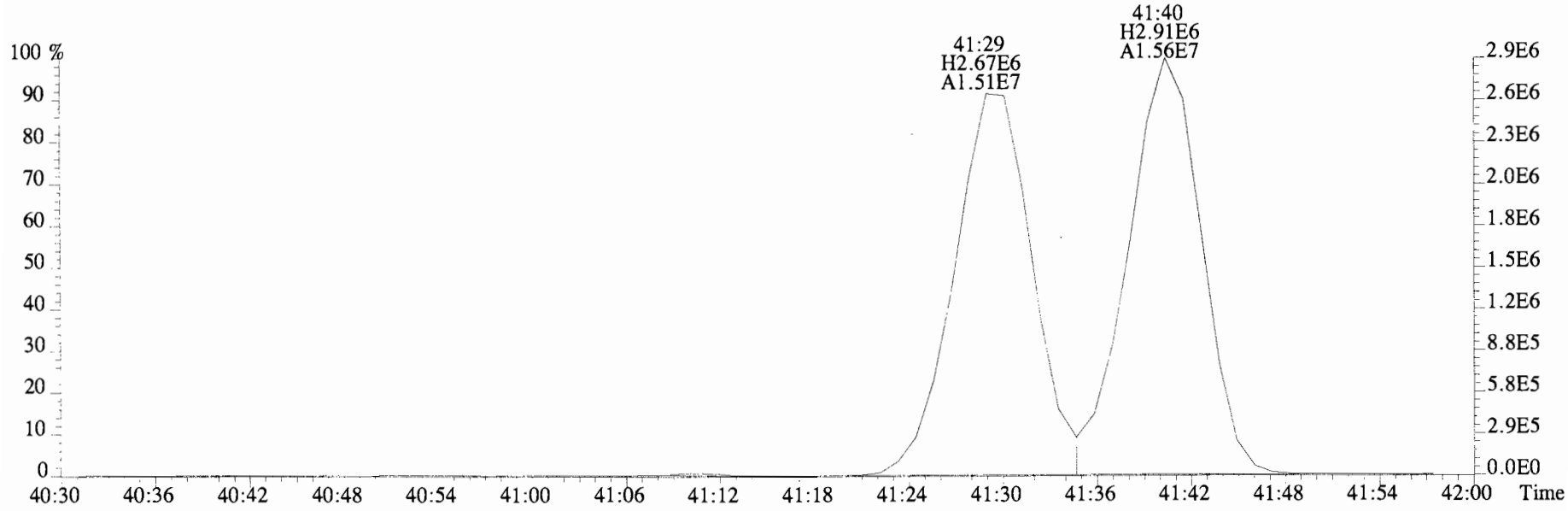



File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)
35:57 H2.29E4 A1.33E5
36:21 H5.29E3 A2.96E4
37:14 H1.51E4 A7.71E4
37:38 H3.43E4 A1.90E5
37:58 H1.31E4 A7.79E4
38:56 H9.69E3 A5.44E4
39:14 H1.48E4 A8.53E4
39:54 H4.29E4 A2.52E5
41:42 H3.33E4 A2.01E5
100 %
Time
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1736.0,0.00%,F,F)
35:56 H1.53E4 A7.65E4
37:14 H9.46E3 A4.87E4
37:38 H2.27E4 A1.28E5
37:59 H7.76E3 A4.09E4
38:54 H6.91E3 A4.40E4
39:14 H7.38E3 A4.88E4
39:54 H2.56E4 A1.58E5
41:42 H2.58E4 A1.41E5
100 %
Time

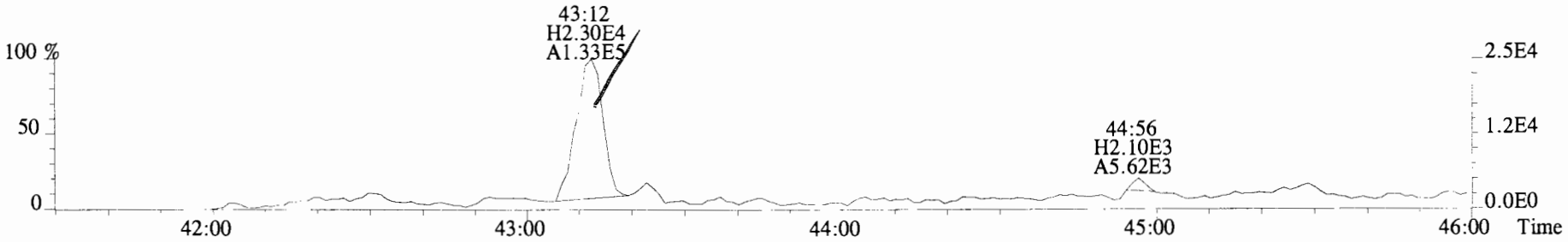
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2296.0,0.00%,F,F)



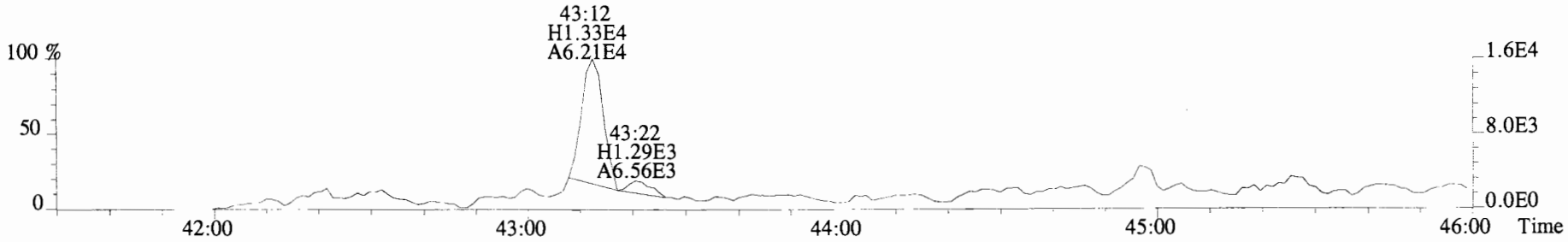
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2200.0,0.00%,F,F)



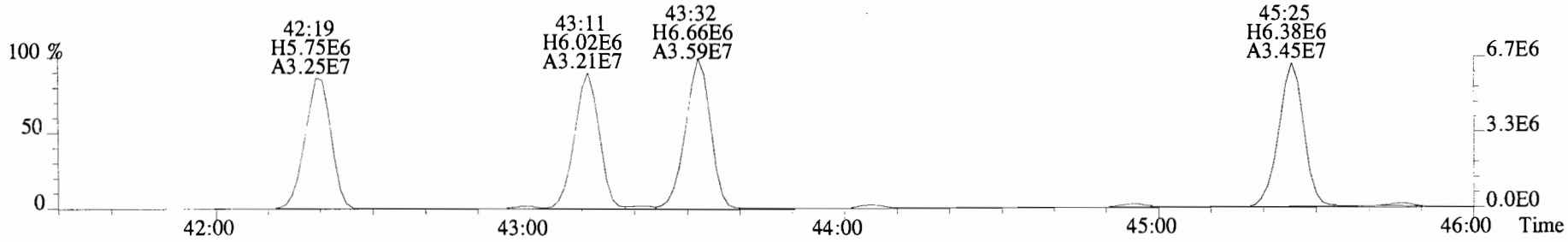
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2204.0,0.00%,F,F)



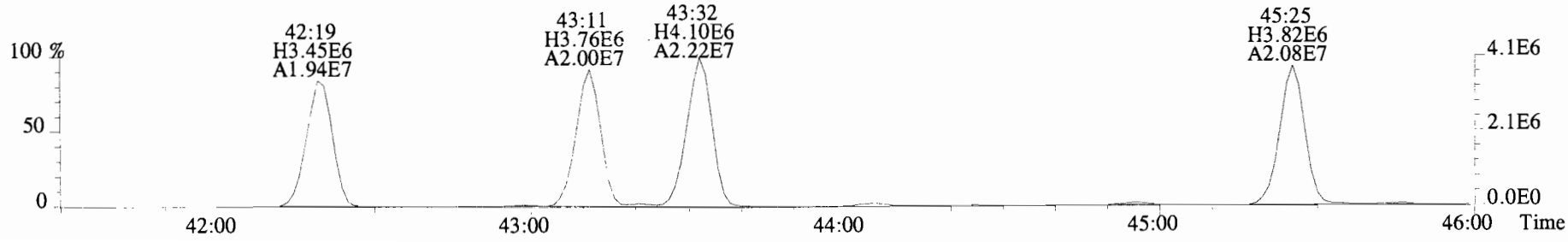
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2116.0,0.00%,F,F)



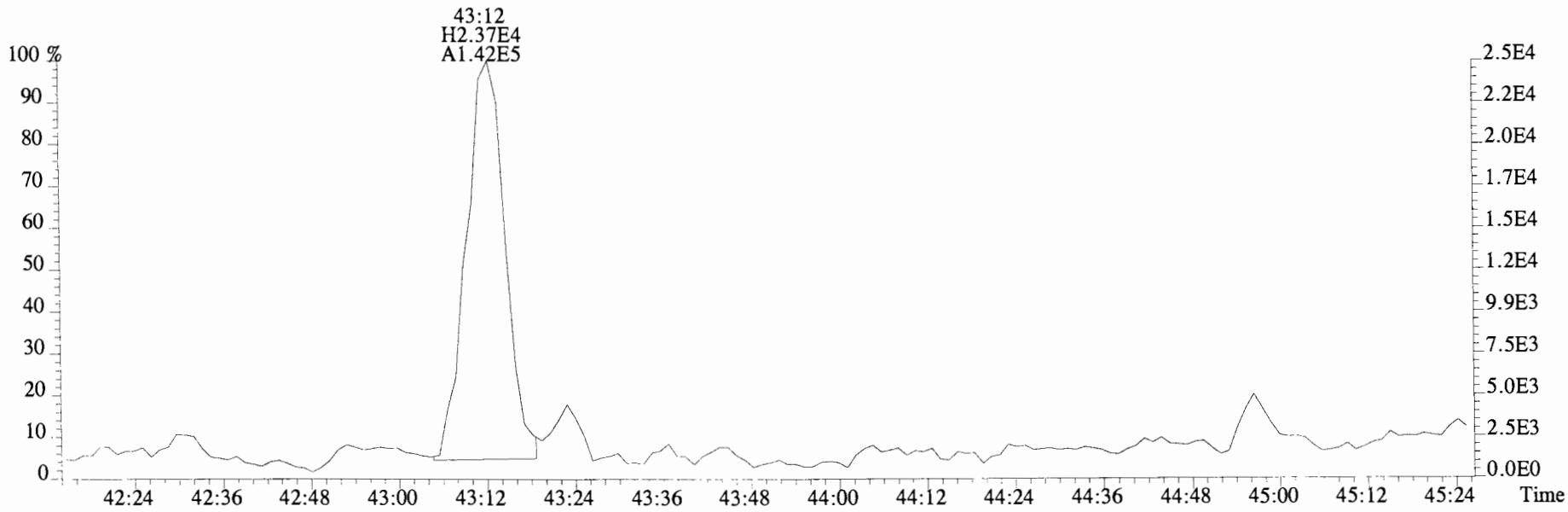
337.9207 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8596.0,0.00%,F,F)



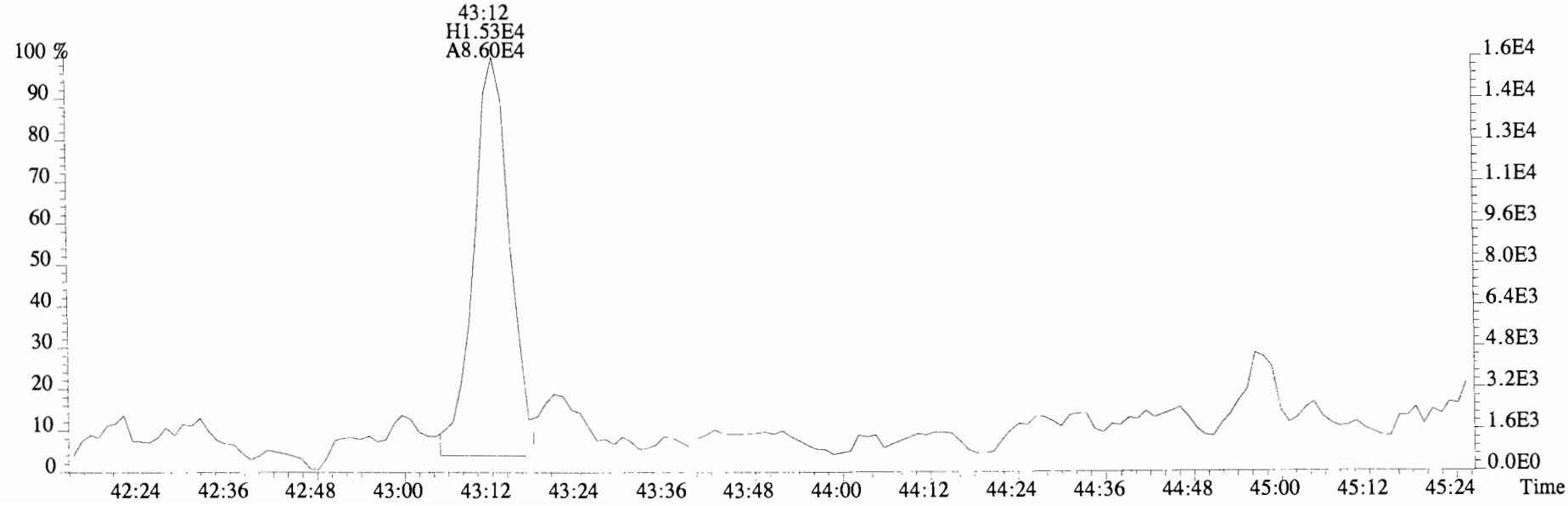
339.9177 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6000.0,0.00%,F,F)



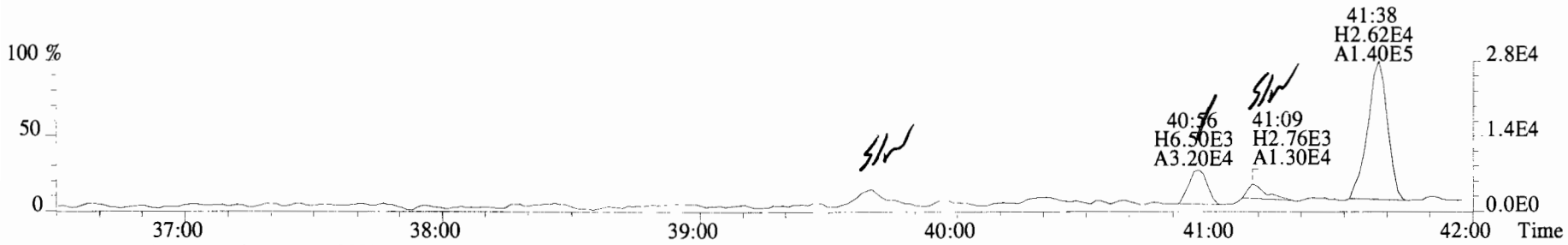
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2204.0,0.00%,F,F)



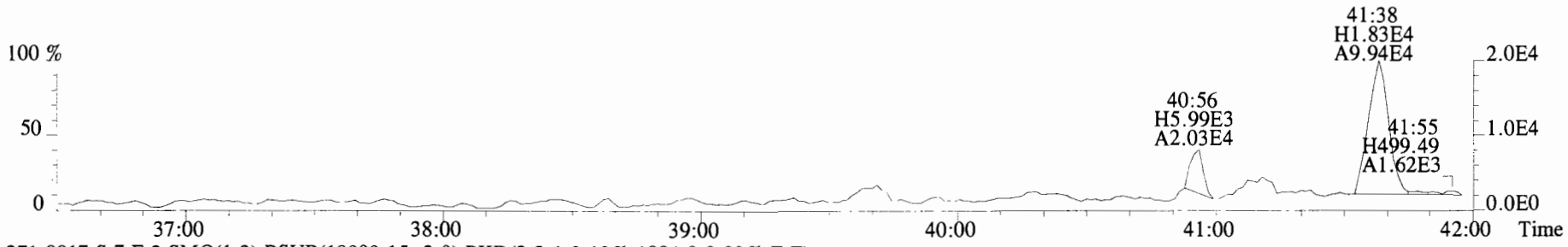
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2116.0,0.00%,F,F)



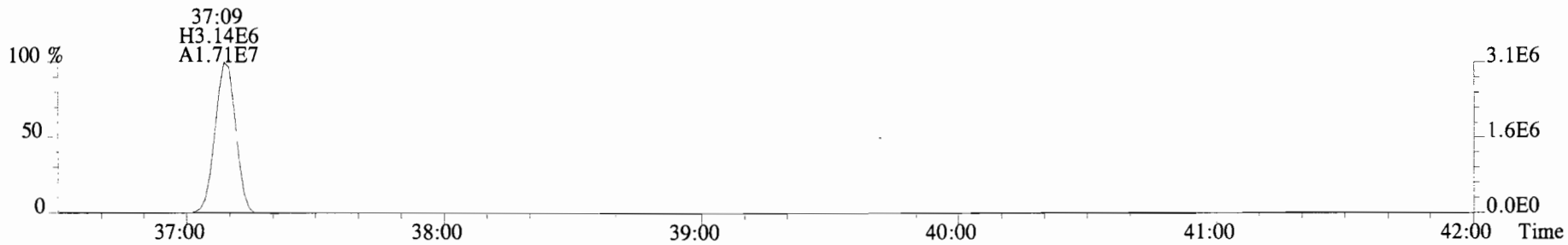
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1688.0,0.00%,F,F)



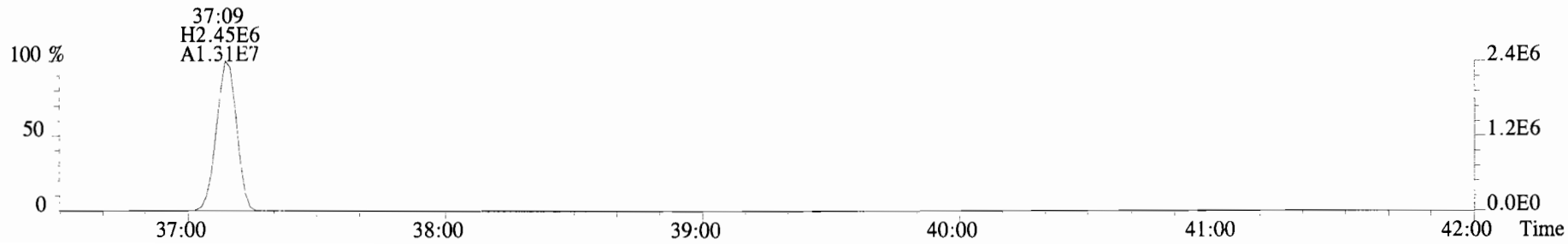
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1748.0,0.00%,F,F)



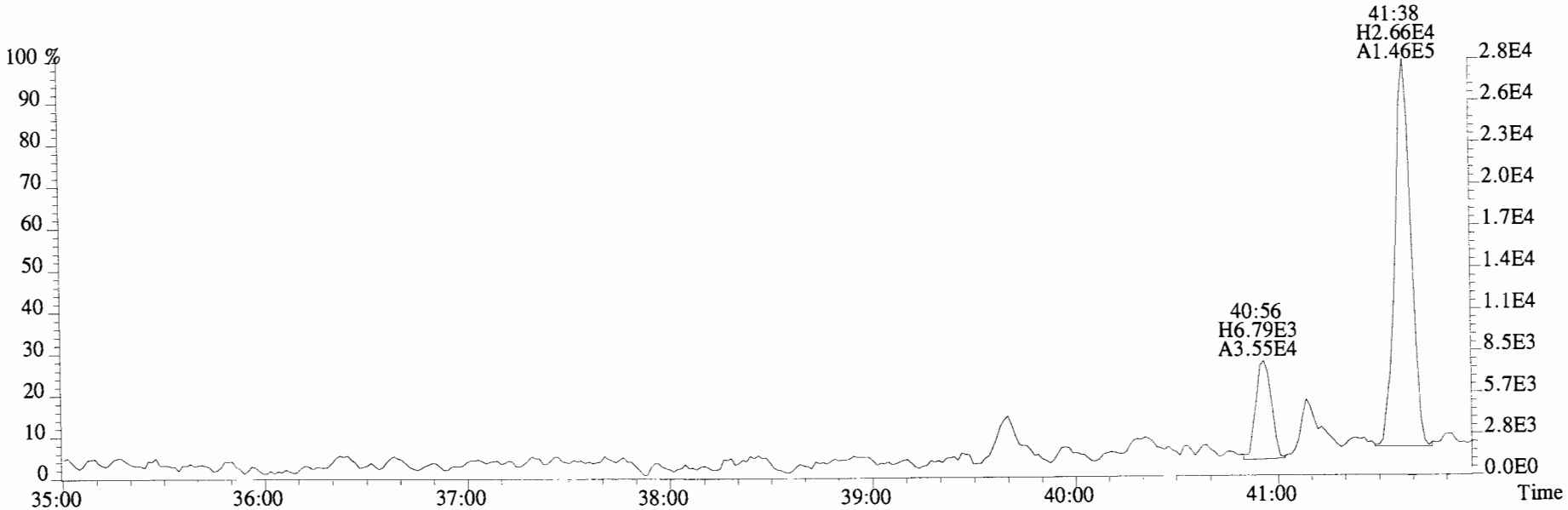
371.8817 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)



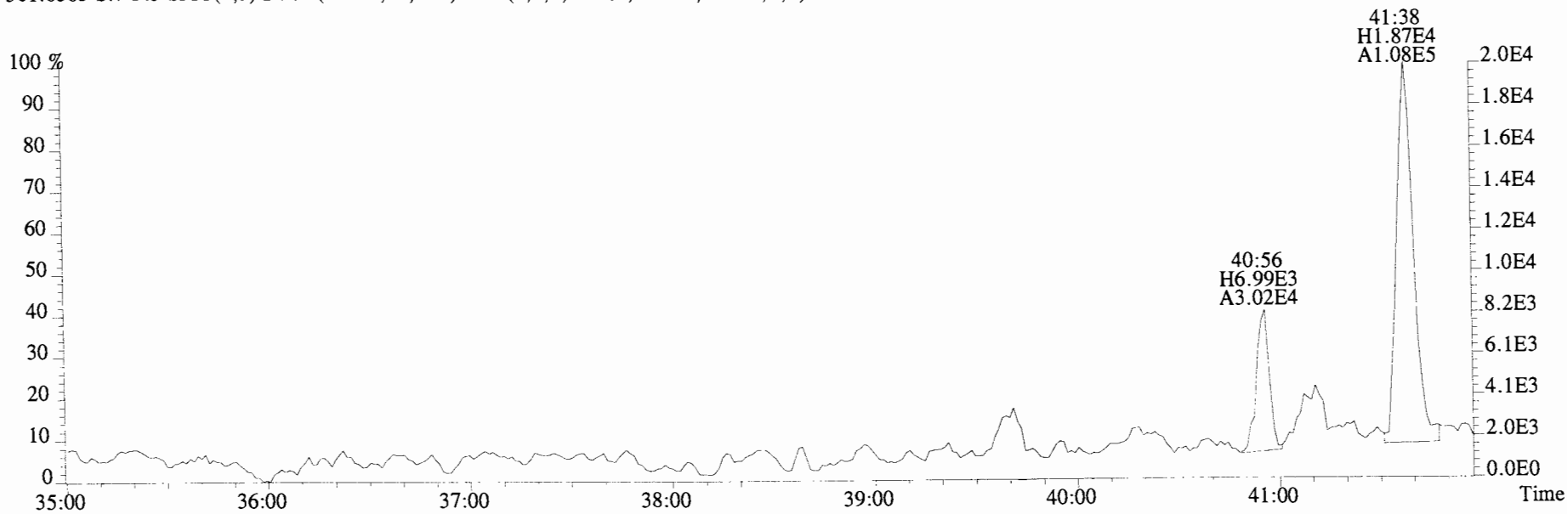
373.8788 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1812.0,0.00%,F,F)



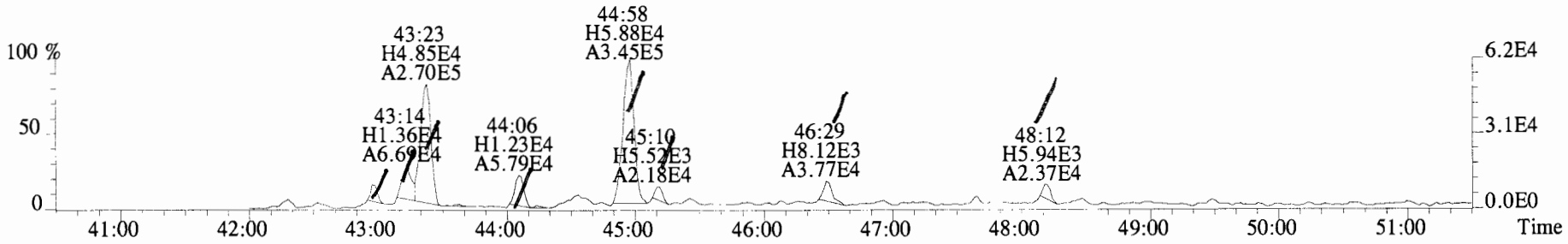
File:150102E2 #1-762 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1688.0,0.00%,F,F)



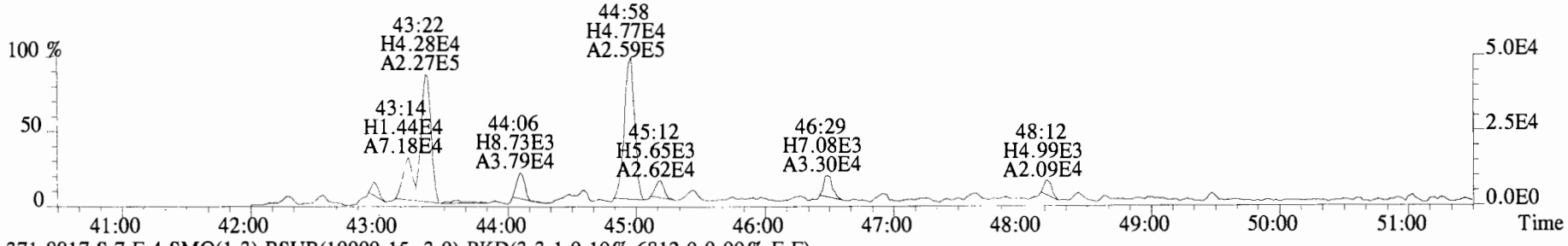
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1748.0,0.00%,F,F)



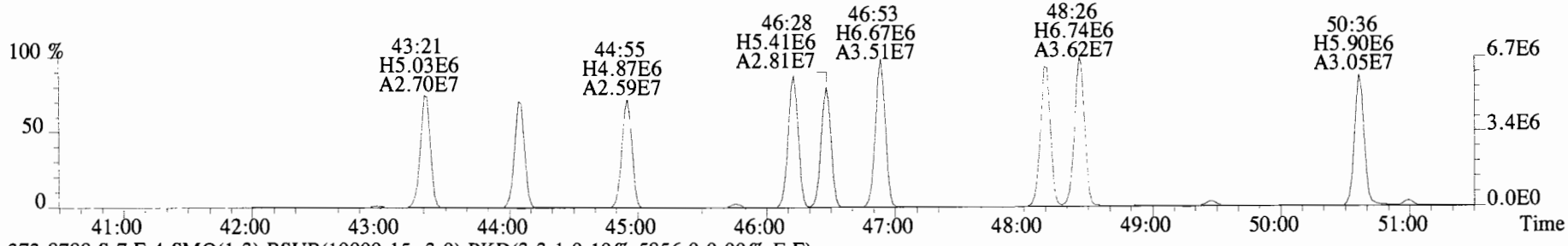
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



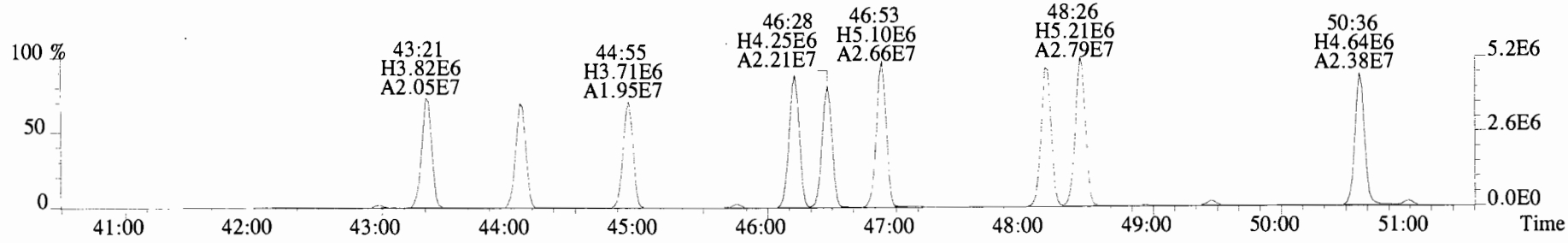
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2468.0,0.00%,F,F)



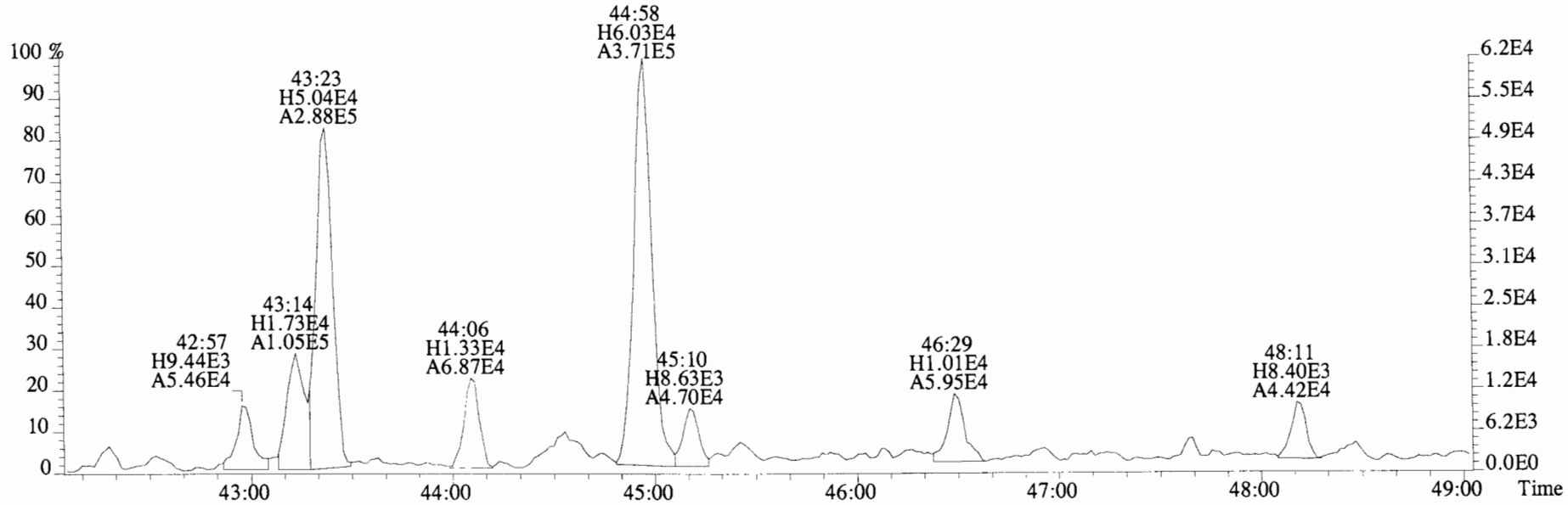
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6812.0,0.00%,F,F)



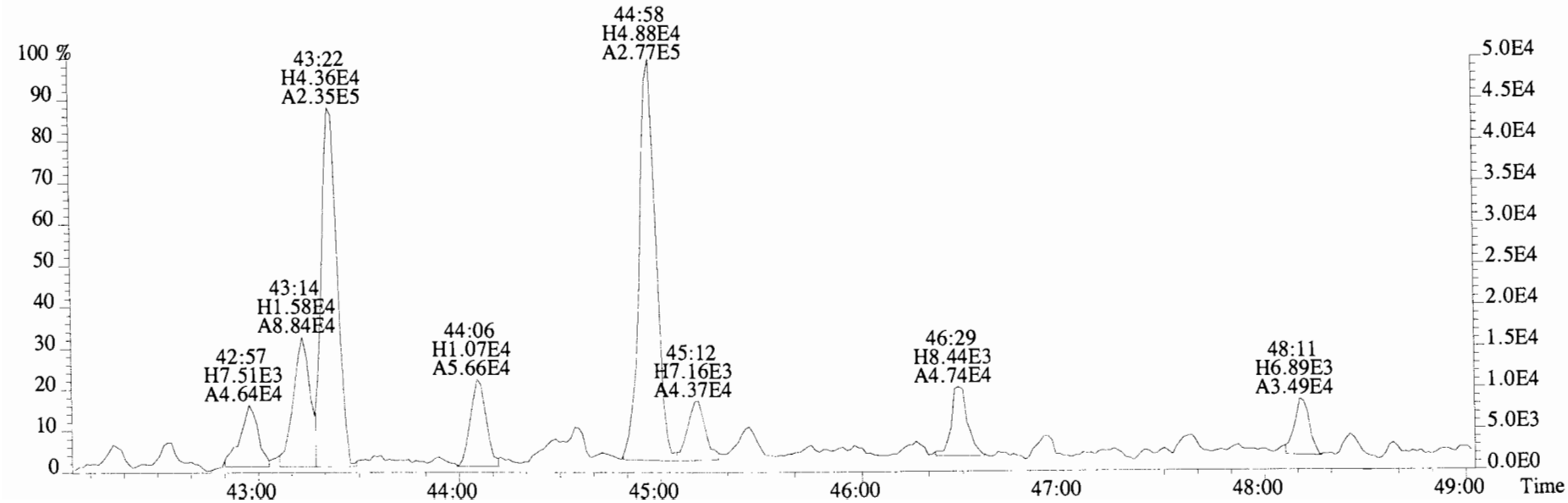
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5856.0,0.00%,F,F)



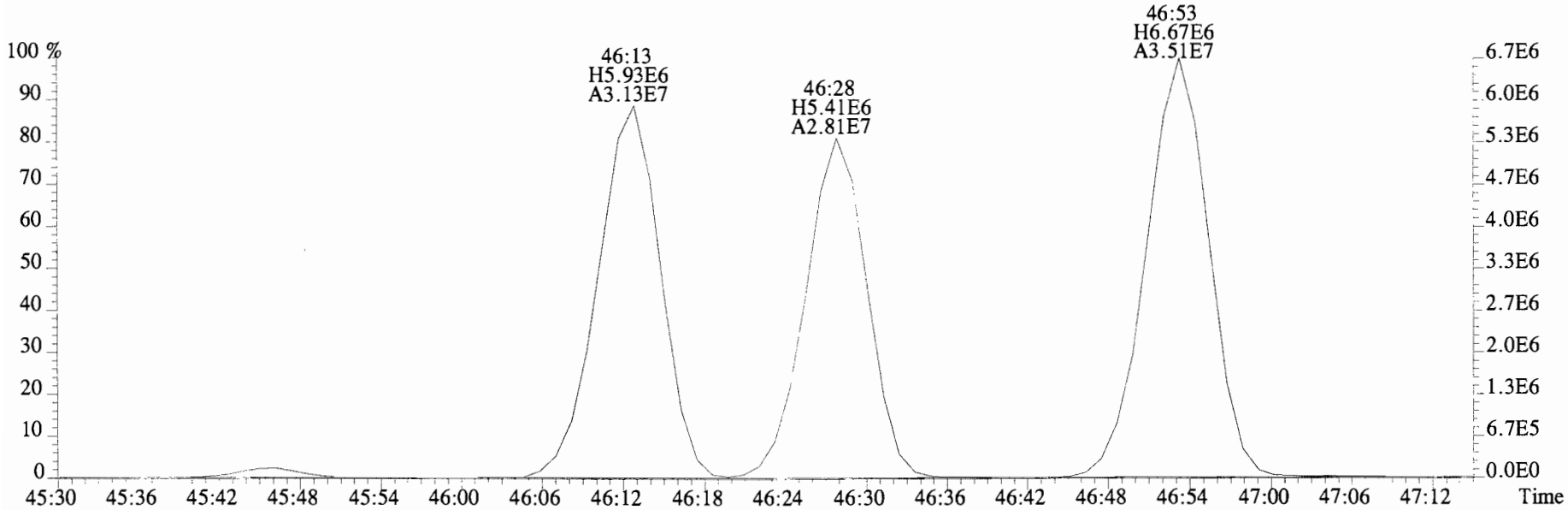
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



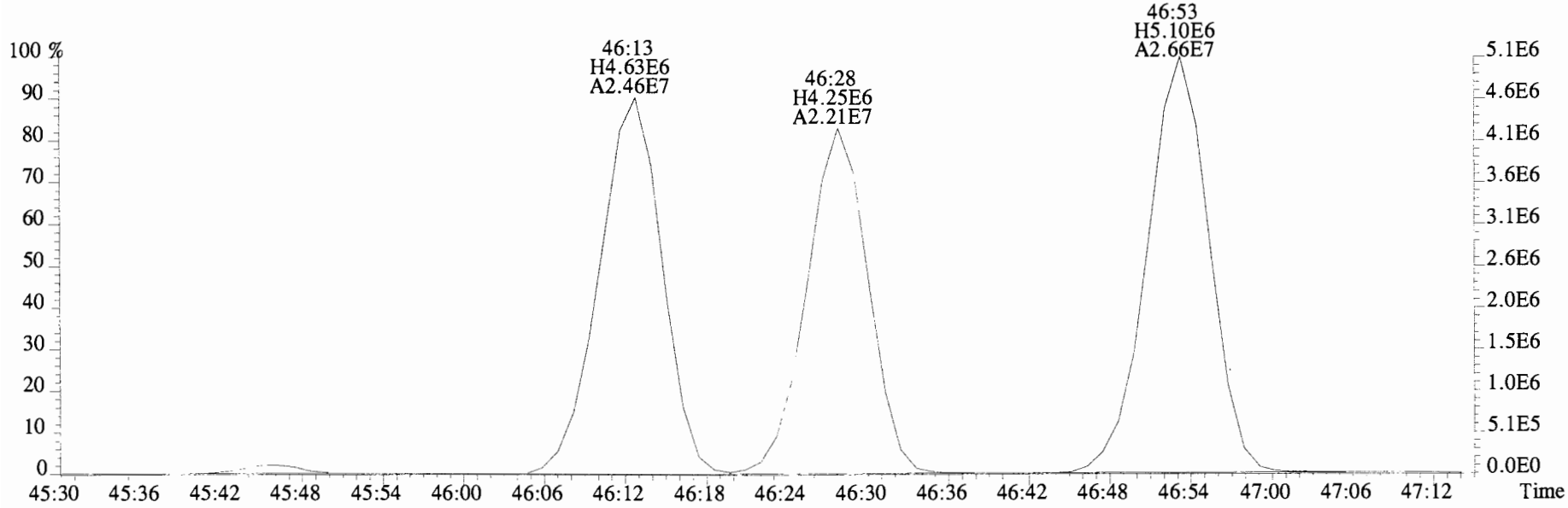
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2468.0,0.00%,F,F)



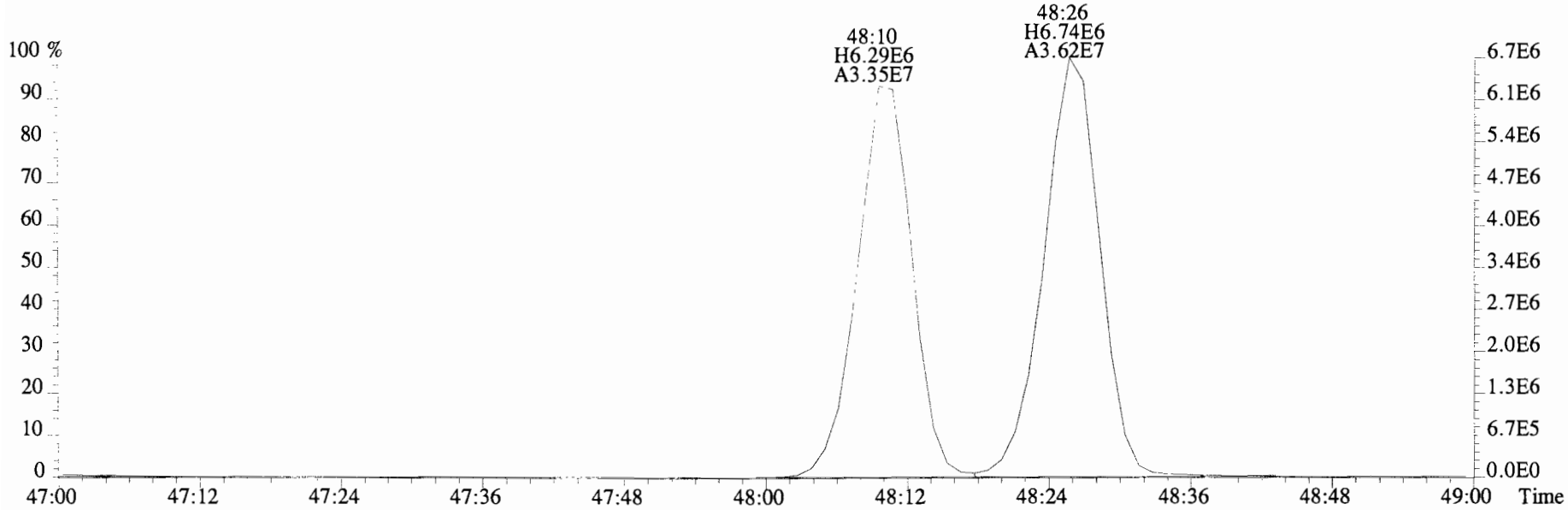
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6812.0,0.00%,F,F)



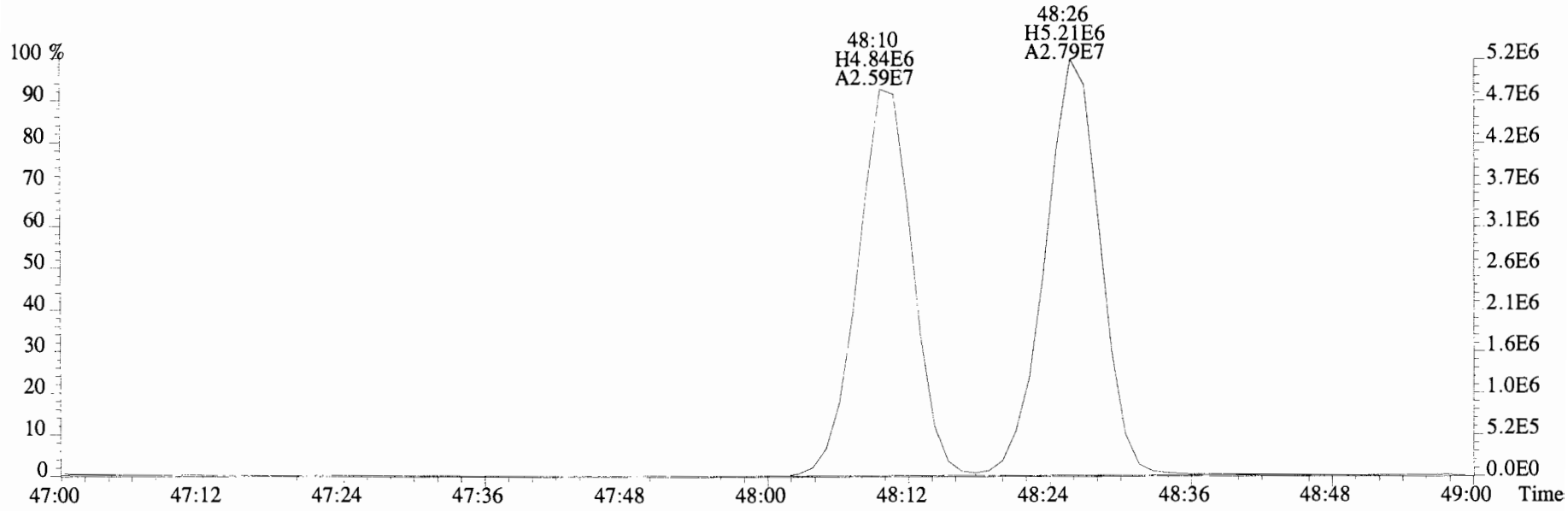
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5856.0,0.00%,F,F)

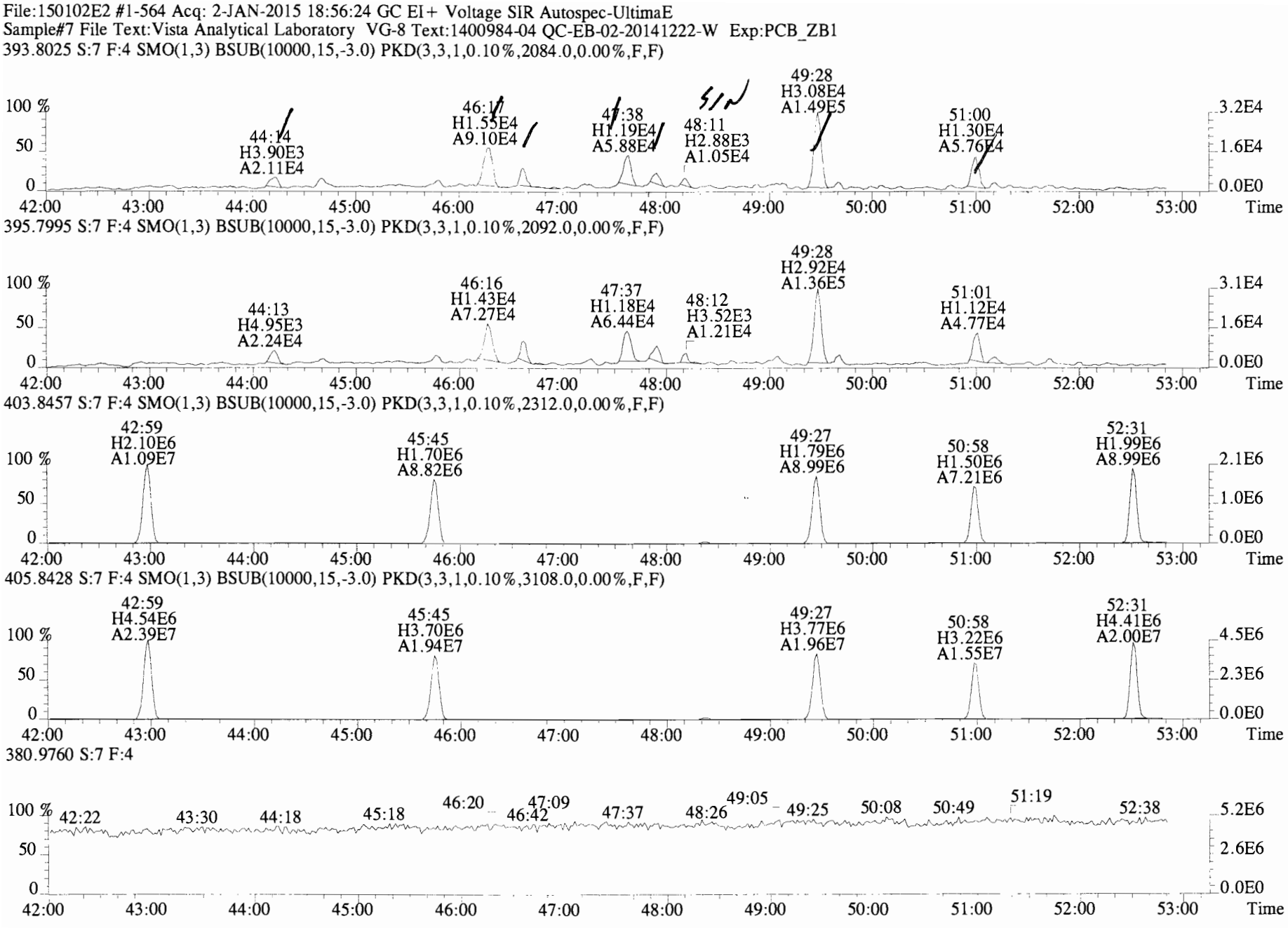


File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6812.0,0.00%,F,F)

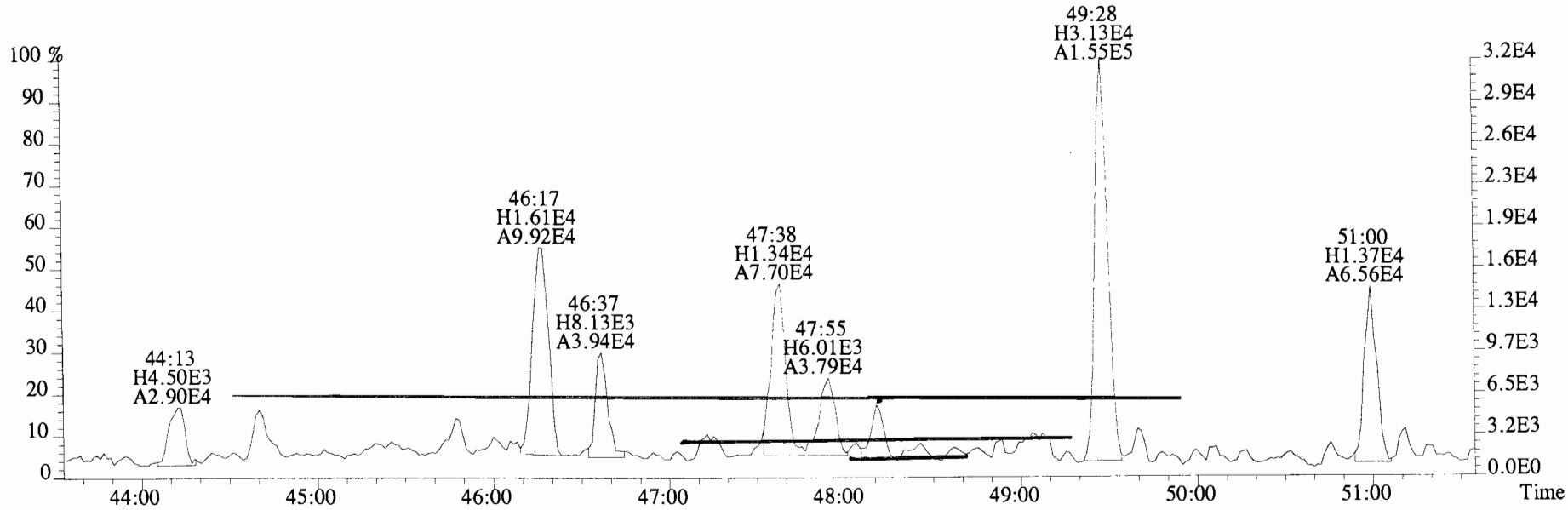


373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5856.0,0.00%,F,F)

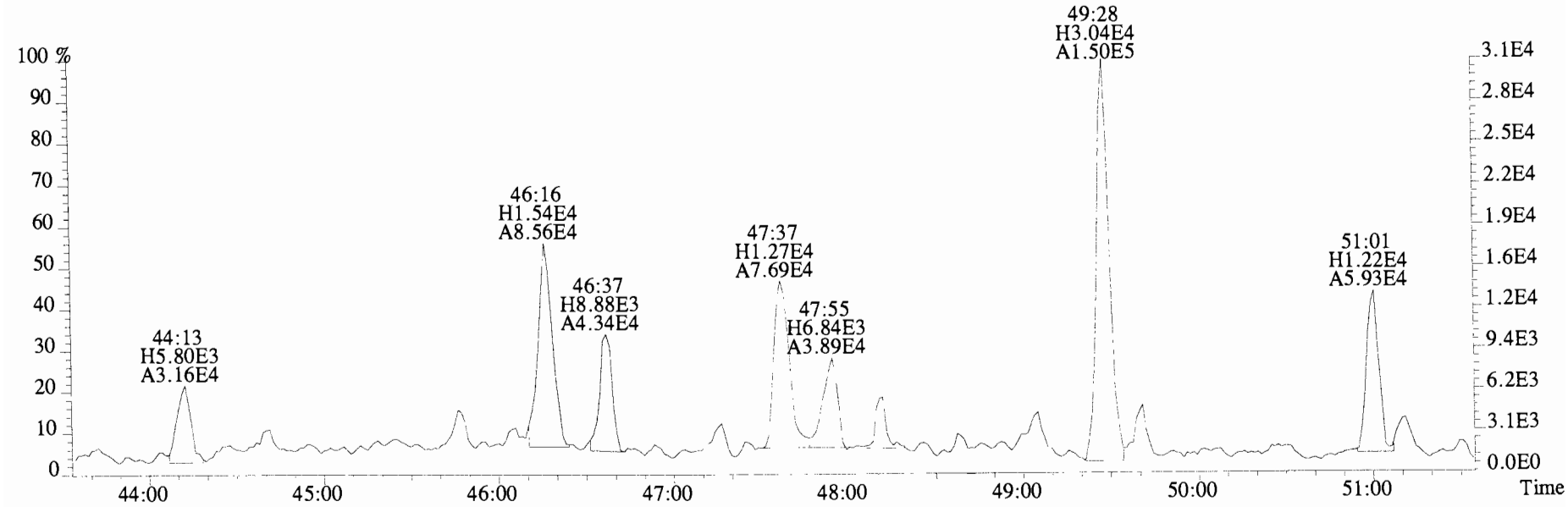



File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2084.0,0.00%,F,F)
44:14 H3.90E3 A2.11E4
46:1 H1.55E4 A9.10E4
47:38 H1.19E4 A5.88E4
48:11 H2.88E3 A1.05E4
49:28 H3.08E4 A1.49E5
51:00 H1.30E4 A5.76E4
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2092.0,0.00%,F,F)
44:13 H4.95E3 A2.24E4
46:16 H1.43E4 A7.27E4
47:37 H1.18E4 A6.44E4
48:12 H3.52E3 A1.21E4
49:28 H2.92E4 A1.36E5
51:01 H1.12E4 A4.77E4
403.8457 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2312.0,0.00%,F,F)
42:59 H2.10E6 A1.09E7
45:45 H1.70E6 A8.82E6
49:27 H1.79E6 A8.99E6
50:58 H1.50E6 A7.21E6
52:31 H1.99E6 A8.99E6
405.8428 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3108.0,0.00%,F,F)
42:59 H4.54E6 A2.39E7
45:45 H3.70E6 A1.94E7
49:27 H3.77E6 A1.96E7
50:58 H3.22E6 A1.55E7
52:31 H4.41E6 A2.00E7
380.9760 S:7 F:4
42:22
43:30
44:18
45:18
46:20
46:42
47:09
47:37
48:26
49:05
49:25
50:08
50:49
51:19
52:38
100 %
50
0
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
52:00
53:00
Time
3.2E4
1.6E4
0.0E0
3.1E4
2.1E6
1.0E6
4.5E6
2.3E6
5.2E6
2.6E6

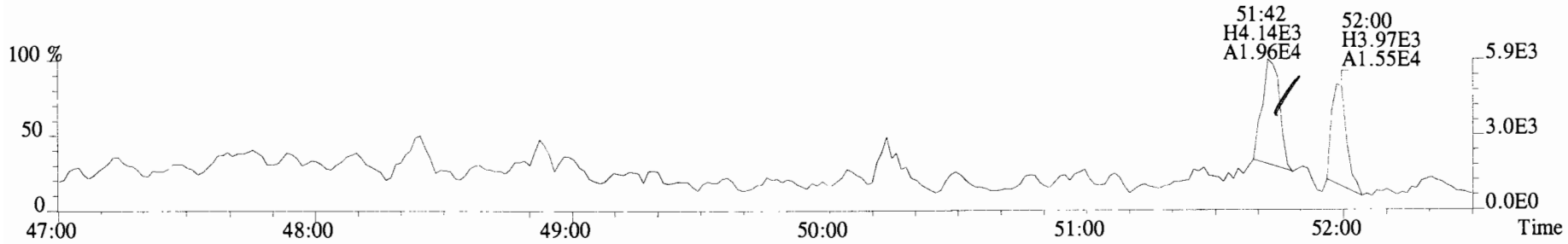
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2084.0,0.00%,F,F)



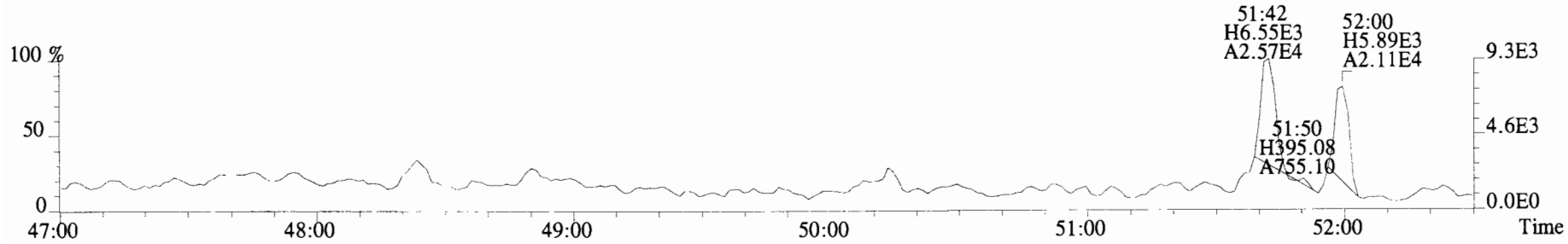
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2092.0,0.00%,F,F)



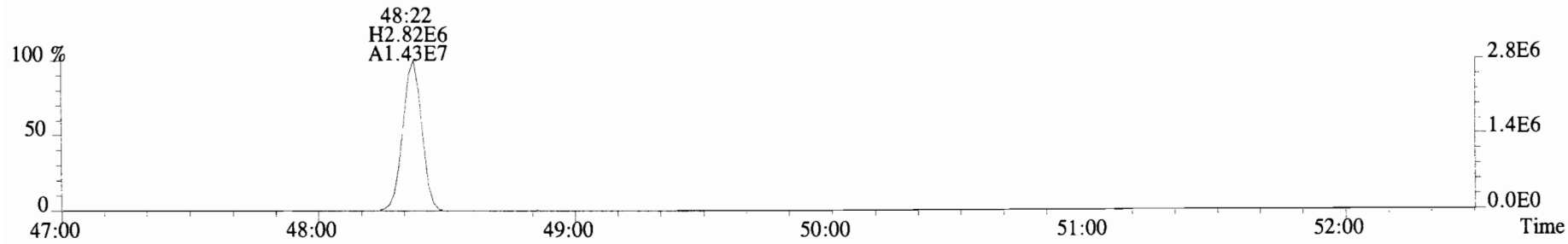
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1732.0,0.00%,F,F)



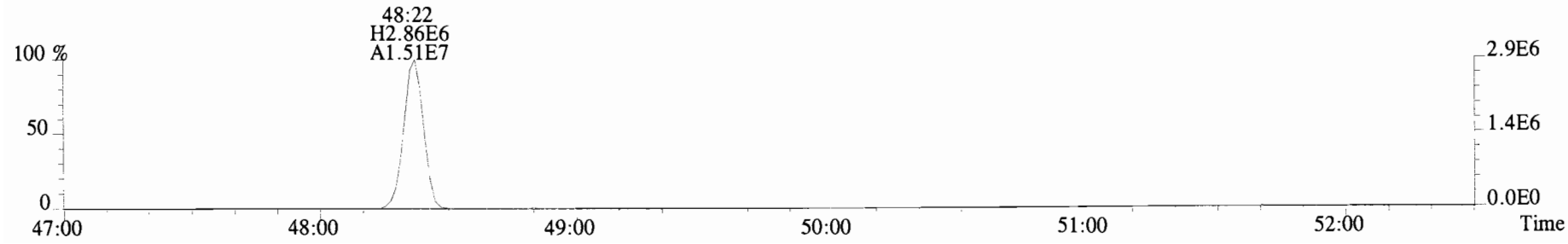
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1916.0,0.00%,F,F)



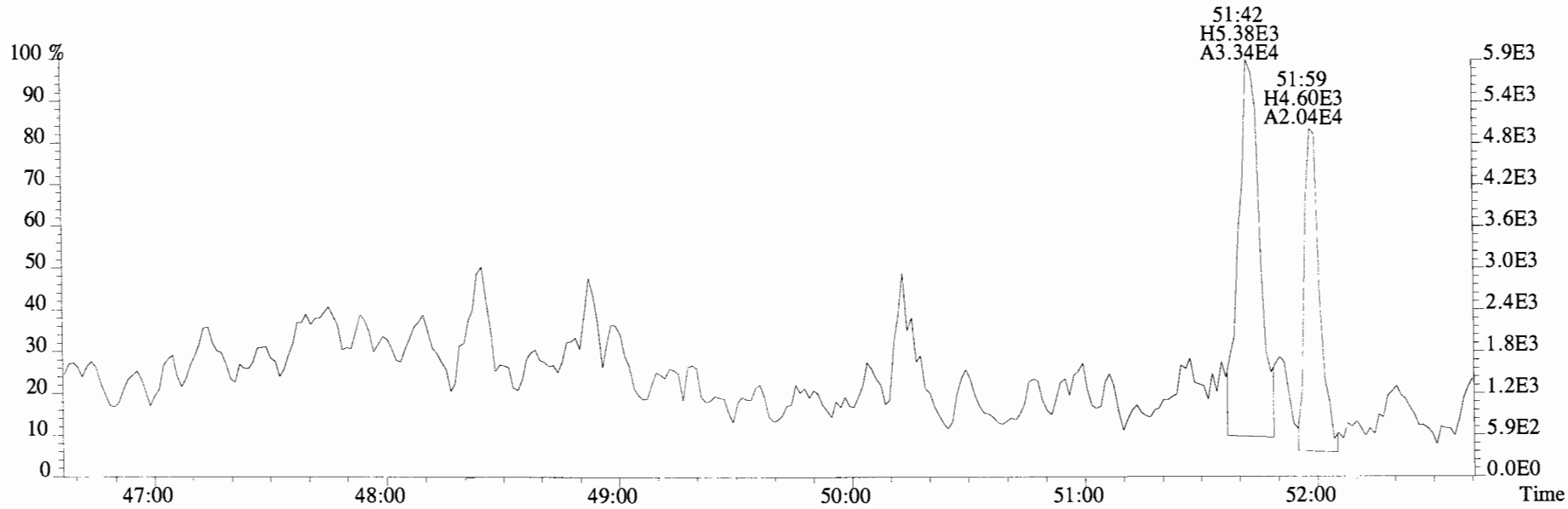
439.8038 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2076.0,0.00%,F,F)



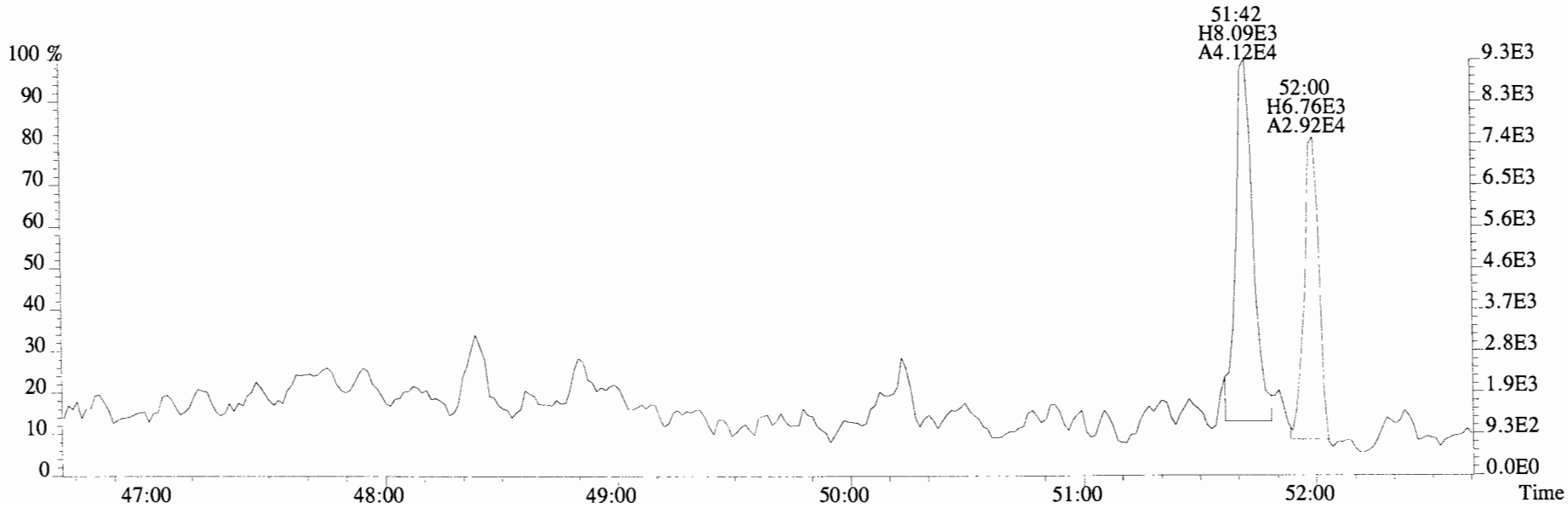
441.8008 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1960.0,0.00%,F,F)



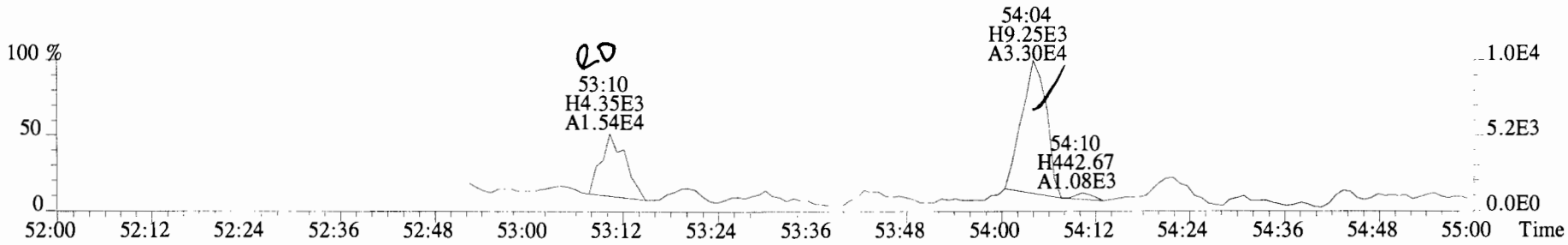
File:150102E2 #1-564 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1732.0,0.00%,F,F)



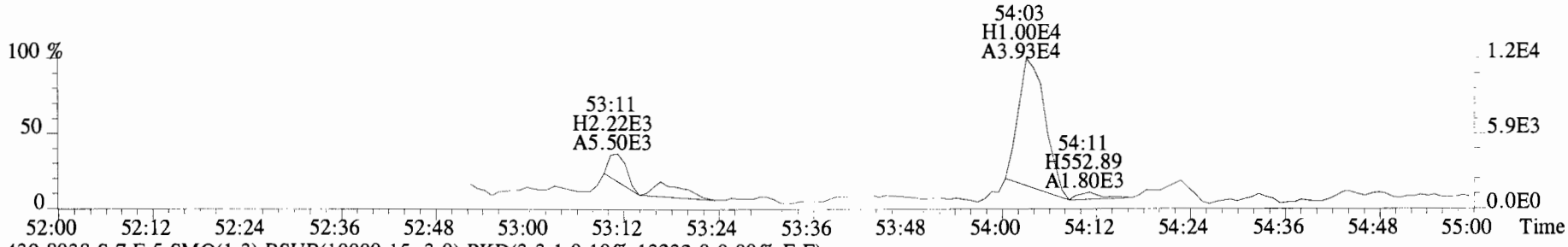
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1916.0,0.00%,F,F)



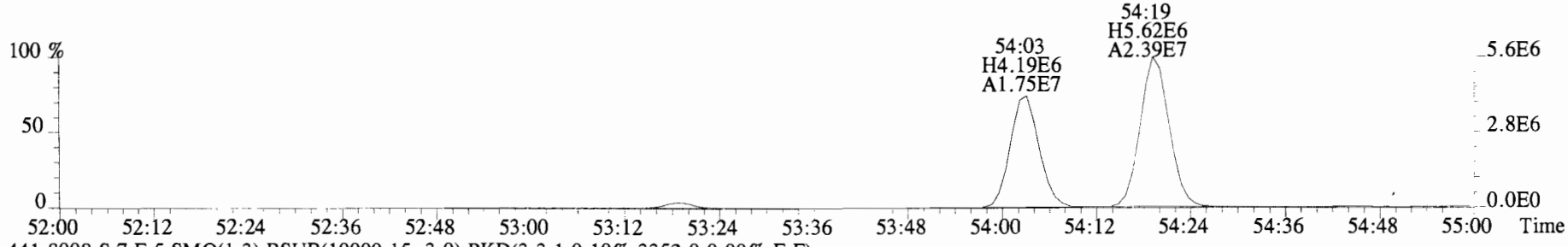
File:150102E2 #1-412 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



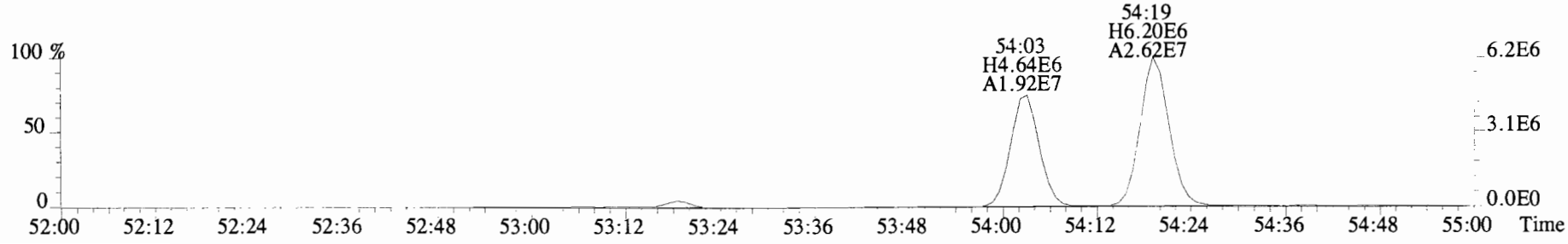
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



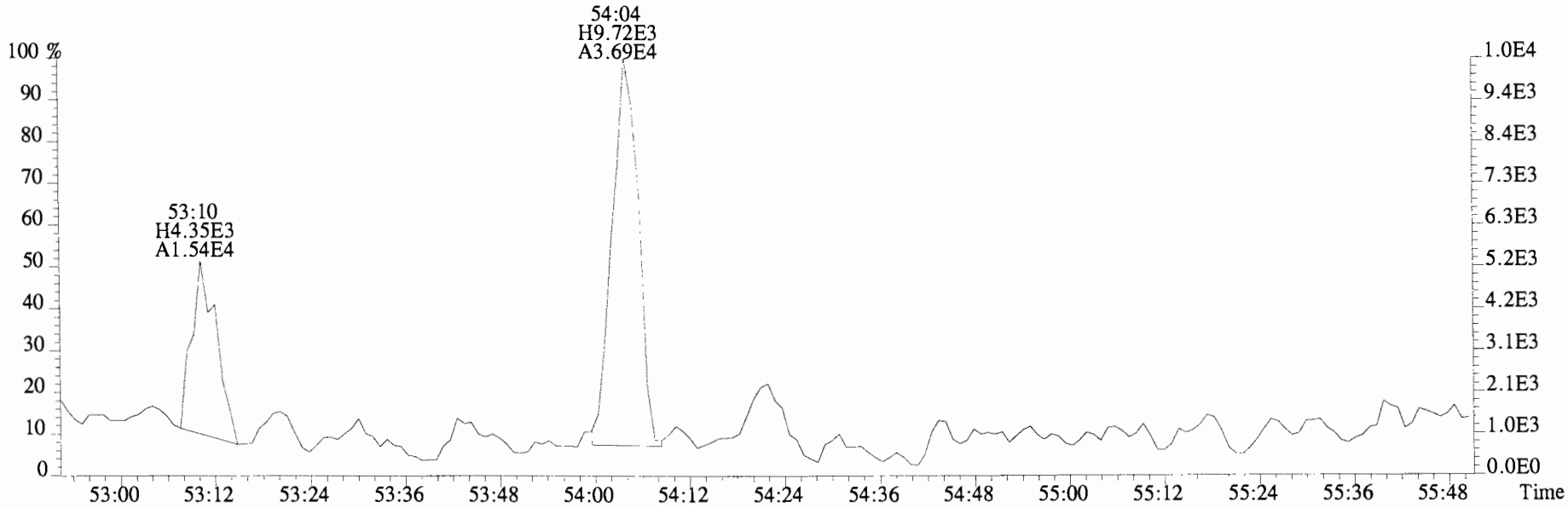
439.8038 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,13232.0,0.00%,F,F)



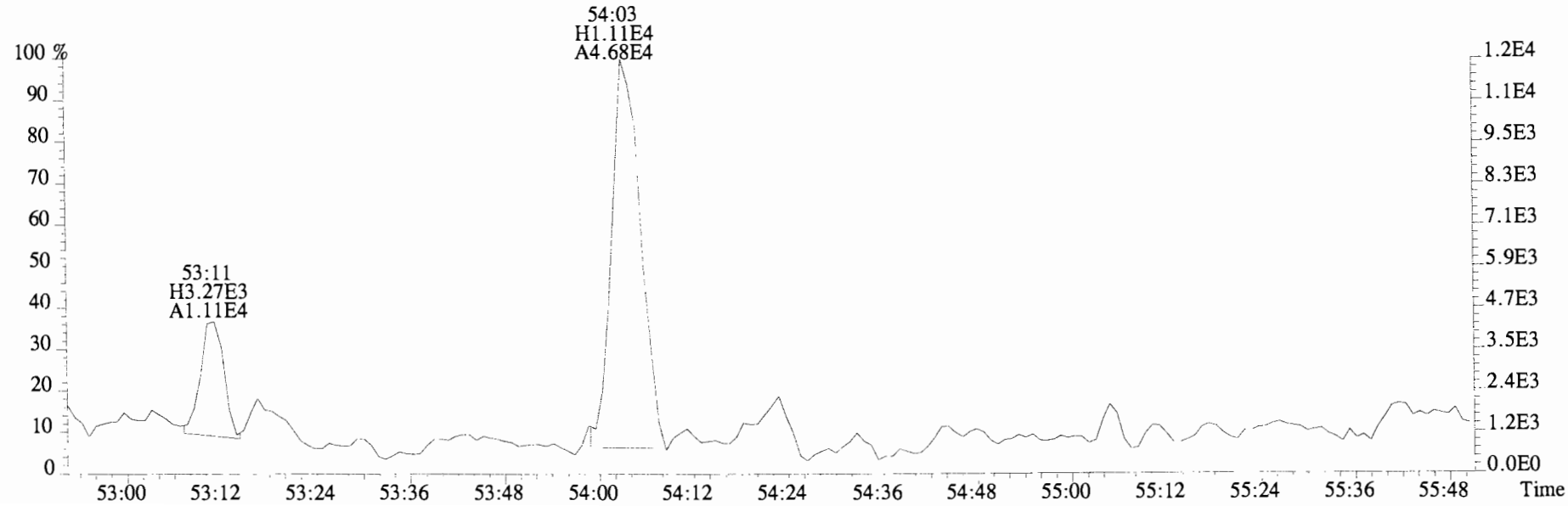
441.8008 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3352.0,0.00%,F,F)

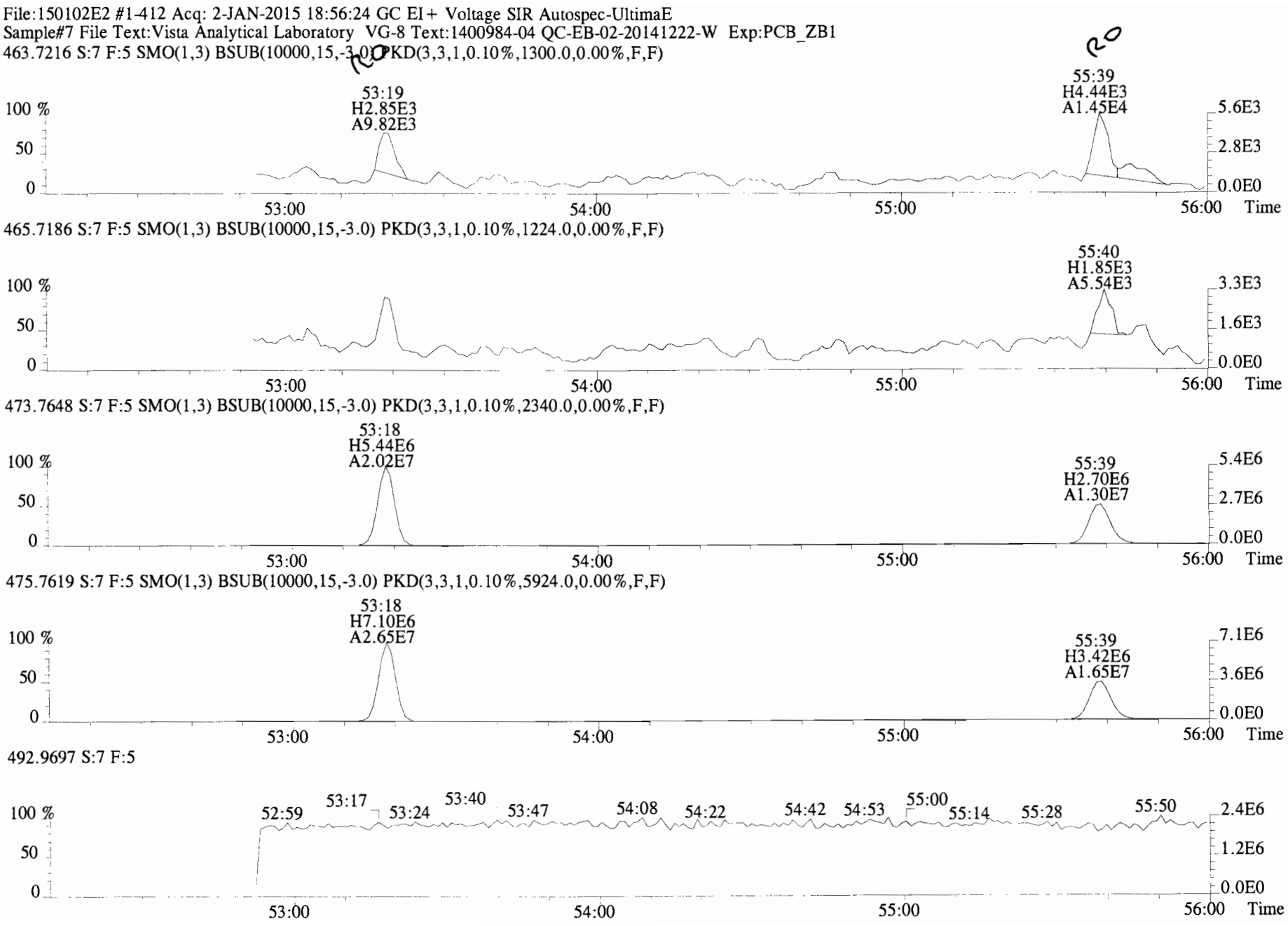


File:150102E2 #1-412 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)

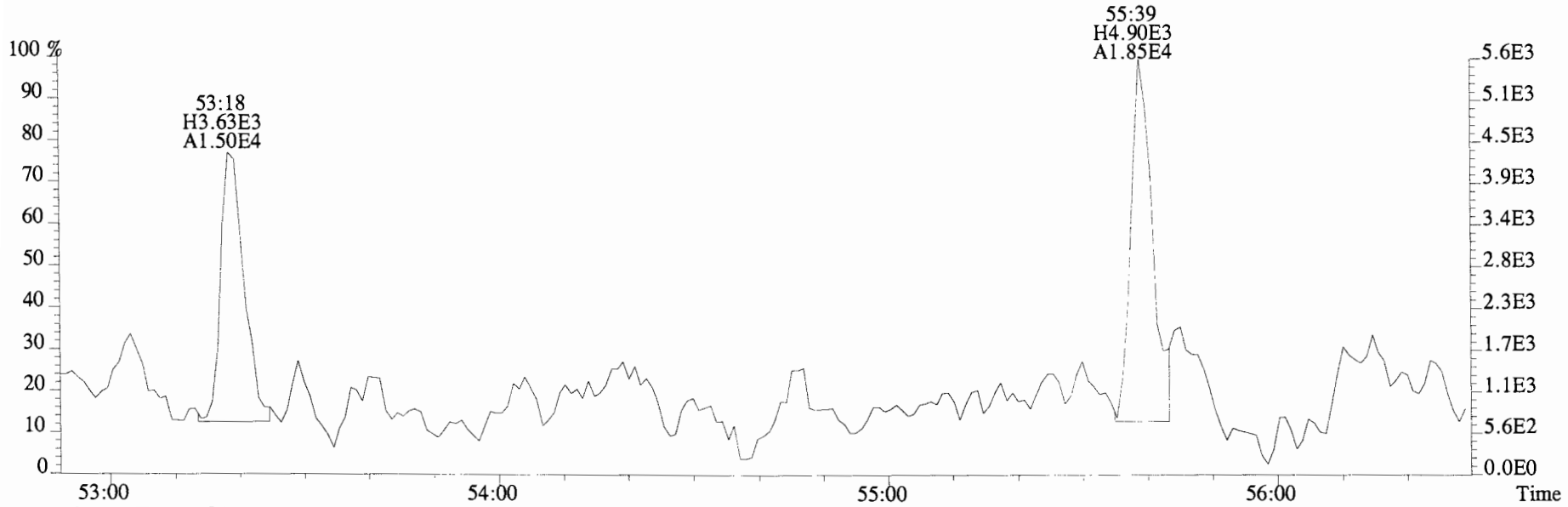


429.7696 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)

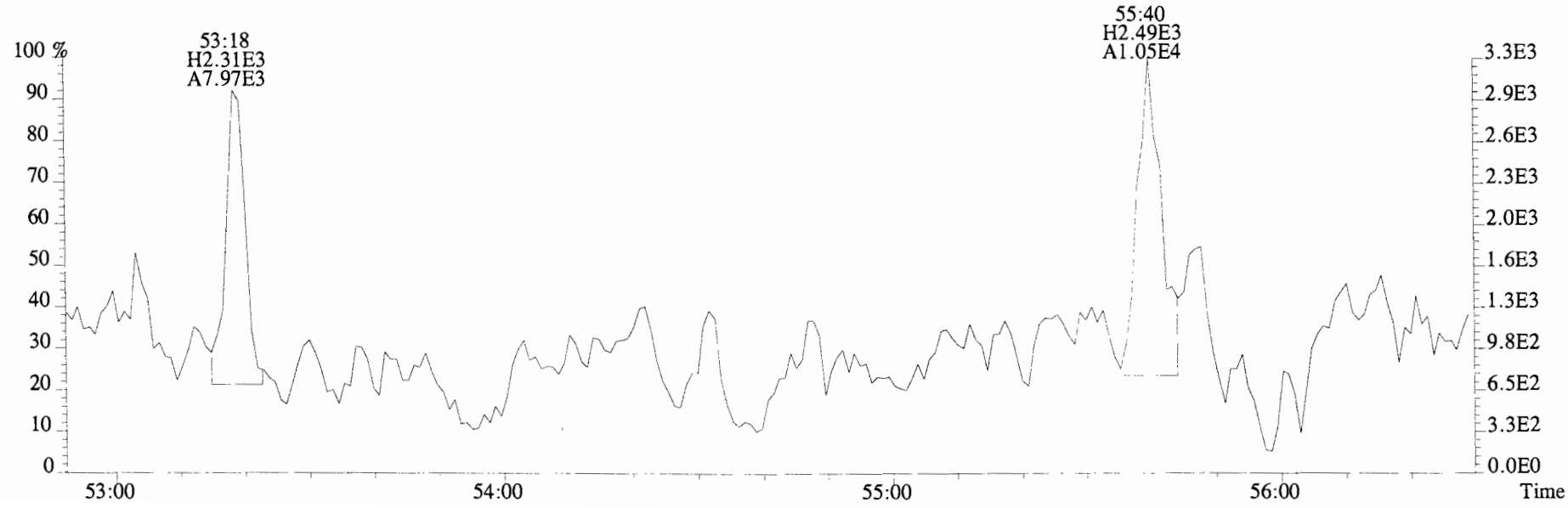



File:150102E2 #1-412 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1300.0,0.00%,F,F)
53:19
H2.85E3
A9.82E3
55:39
H4.44E3
A1.45E4
100 %
50
0
5.6E3
2.8E3
0.0E0
53:00
54:00
55:00
56:00
Time
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1224.0,0.00%,F,F)
55:40
H1.85E3
A5.54E3
3.3E3
1.6E3
473.7648 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2340.0,0.00%,F,F)
53:18
H5.44E6
A2.02E7
55:39
H2.70E6
A1.30E7
5.4E6
2.7E6
475.7619 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5924.0,0.00%,F,F)
53:18
H7.10E6
A2.65E7
55:39
H3.42E6
A1.65E7
7.1E6
3.6E6
492.9697 S:7 F:5
52:59
53:17
53:24
53:40
53:47
54:08
54:22
54:42
54:53
55:00
55:14
55:28
55:50
2.4E6
1.2E6

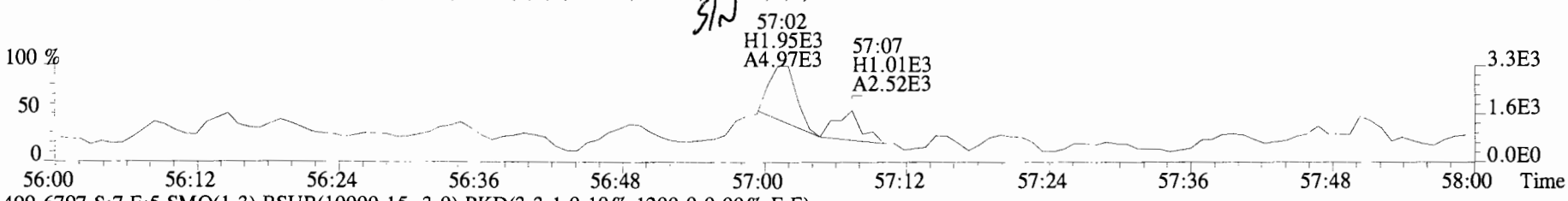
File:150102E2 #1-412 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1300.0,0.00%,F,F)



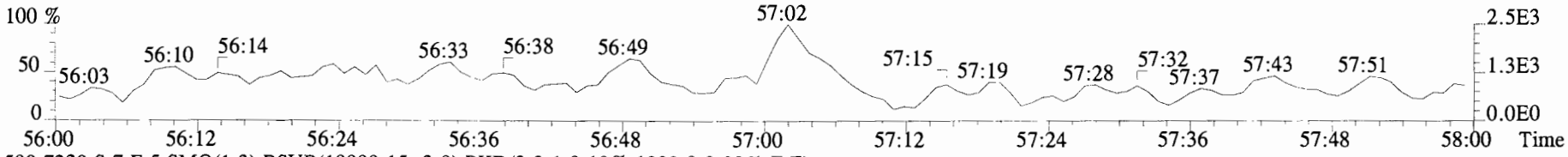
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1224.0,0.00%,F,F)



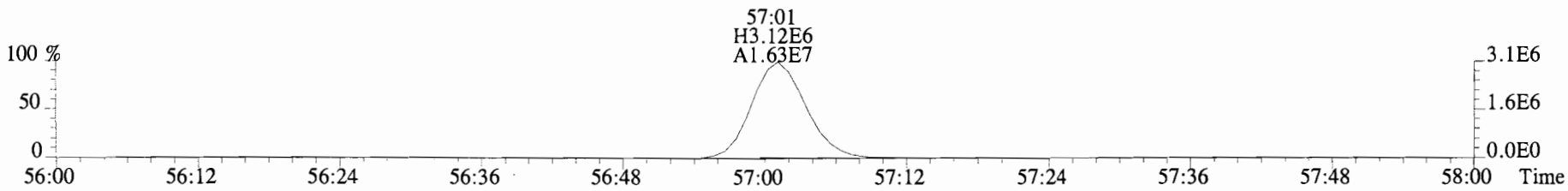
File:150102E2 #1-412 Acq: 2-JAN-2015 18:56:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-04 QC-EB-02-20141222-W Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1020.0,0.00%,F,F)



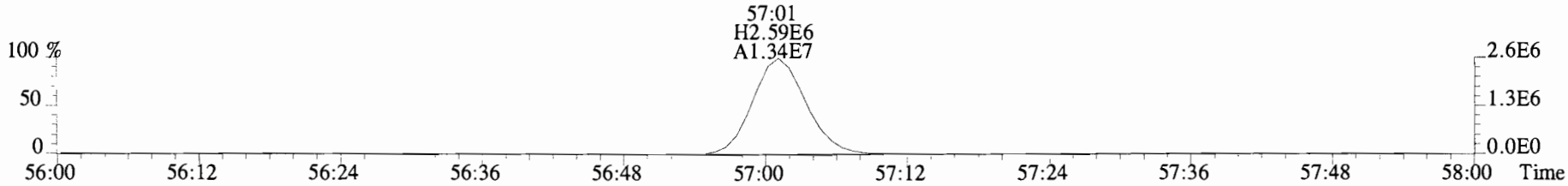
499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1200.0,0.00%,F,F)



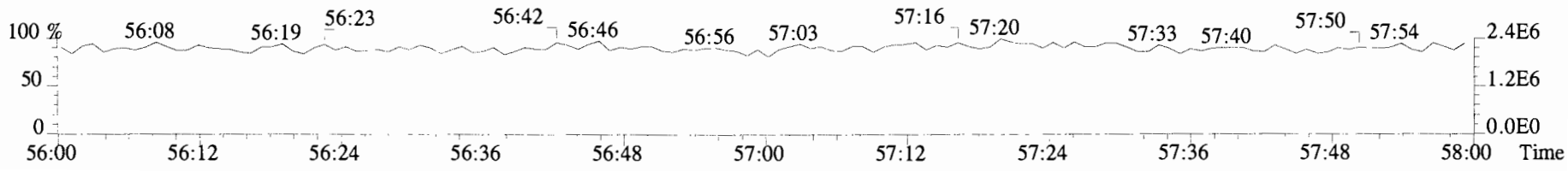
509.7229 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1292.0,0.00%,F,F)



511.7199 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1240.0,0.00%,F,F)



492.9697 S:7 F:5



CONTINUING CALIBRATION

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150102D2-1

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	9.79	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.59	0.54-0.72	y	46.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	y	48.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	47.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	47.9	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	99.5	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	8.93	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	46.5	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	47.0	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	48.2	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	49.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	50.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.3	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	51.0	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	99.9	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: [signature]

Date: 1/4/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	97.0	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	94.7	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	y	97.2	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	100	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.18	1.05-1.43	y	101	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	103	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	186	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.73	0.65-0.89	y	94.6	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	97.0	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	96.9	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	99.3	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.8	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	93.6	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.49	0.43-0.59	y	105	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	106	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.42	0.37-0.51	y	97.6	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	179	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.2	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: [signature]

Date: 1/9/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-16-14

RT Window Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

ZB-5MS IS Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:11	1,3,6,8-TCDF (F)	20:59
1,2,8,9-TCDD (L)	27:48	1,2,8,9-TCDF (L)	27:57
1,2,4,7,9-PeCDD (F)	29:28	1,3,4,6,8-PeCDF (F)	27:54
1,2,3,8,9-PeCDD (L)	31:57	1,2,3,8,9-PeCDF (L)	32:12
1,2,4,6,7,9-HxCDD (F)	33:22	1,2,3,4,6,8-HxCDF (F)	32:51
1,2,3,7,8,9-HxCDD (L)	35:18	1,2,3,7,8,9-HxCDF (L)	35:42
1,2,3,4,6,7,9-HpCDD (F)	37:54	1,2,3,4,6,7,8-HpCDF (F)	37:30
1,2,3,4,6,7,8-HpCDD (L)	38:49	1,2,3,4,7,8,9-HpCDF (L)	39:22

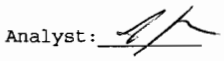
(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: 

Date: 1/9/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.202	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.191	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: [signature]

Date: 1/4/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-16-14

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150102D2 S#1 Analysis Date: 3-JAN-15 Time: 06:47:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.128	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: 

Date: 1/5/14

Client ID: 1613 CS3 14I1102 Filename: 150102D2 S:1 Acq: 3-JAN-15 06:47:15 ConCal: ST150102D2-1

Lab ID: ST150102D2-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-16-14 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	7.54e+05	0.74 y	1.18	26:53	1.001	9.7939		*	2.5	*
	1,2,3,7,8-PeCDD	3.15e+06	0.59 y	0.92	31:35	1.000	46.867		*	2.5	*
	1,2,3,4,7,8-HxCDD	2.90e+06	1.20 y	1.09	34:54	1.000	48.670		*	2.5	*
	1,2,3,6,7,8-HxCDD	3.13e+06	1.27 y	1.07	35:01	1.000	51.072		*	2.5	*
	1,2,3,7,8,9-HxCDD	2.98e+06	1.23 y	0.93	35:18	1.000	47.443		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	2.76e+06	1.03 y	1.12	38:49	1.000	47.895		*	2.5	*
	OCDD	5.37e+06	0.89 y	0.95	42:04	1.000	99.513		*	2.5	*
	2,3,7,8-TCDF	9.08e+05	0.76 y	1.08	26:04	1.001	8.9349		*	2.5	*
	1,2,3,7,8-PeCDF	5.03e+06	1.62 y	1.09	30:22	1.001	46.467		*	2.5	*
	2,3,4,7,8-PeCDF	4.97e+06	1.63 y	1.04	31:18	1.000	46.996		*	2.5	*
	1,2,3,4,7,8-HxCDF	5.13e+06	1.29 y	1.39	34:01	1.000	48.239		*	2.5	*
	1,2,3,6,7,8-HxCDF	5.21e+06	1.30 y	1.26	34:09	1.001	49.401		*	2.5	*
	2,3,4,6,7,8-HxCDF	4.86e+06	1.32 y	1.30	34:44	1.000	49.785		*	2.5	*
	1,2,3,7,8,9-HxCDF	4.21e+06	1.32 y	1.19	35:42	1.001	50.527		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	4.60e+06	1.06 y	1.62	37:30	1.000	48.310		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	4.19e+06	1.10 y	1.53	39:22	1.000	51.008		*	2.5	*
	OCDF	6.70e+06	0.92 y	1.10	42:18	1.000	99.851		*	2.5	*
IS	13C-2,3,7,8-TCDD	6.50e+06	0.76 y	1.07	26:52	1.023	97.045				
IS	13C-1,2,3,7,8-PeCDD	7.32e+06	0.63 y	1.24	31:34	1.202	94.728				
IS	13C-1,2,3,4,7,8-HxCDD	5.48e+06	1.20 y	0.72	34:53	1.014	97.237				
IS	13C-1,2,3,6,7,8-HxCDD	5.75e+06	1.22 y	0.74	34:60	1.017	100.38				
IS	13C-1,2,3,7,8,9-HxCDD	6.74e+06	1.18 y	0.86	35:17	1.025	101.26				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.16e+06	1.04 y	0.64	38:49	1.128	103.00				
IS	13C-OCDD	1.13e+07	0.87 y	0.78	42:04	1.222	186.15				
IS	13C-2,3,7,8-TCDF	9.44e+06	0.73 y	0.92	26:03	0.992	94.639				
IS	13C-1,2,3,7,8-PeCDF	9.95e+06	1.59 y	0.95	30:21	1.156	96.991				
IS	13C-2,3,4,7,8-PeCDF	1.02e+07	1.57 y	0.97	31:17	1.191	96.857				
IS	13C-1,2,3,4,7,8-HxCDF	7.65e+06	0.54 y	0.99	34:00	0.988	99.252				
IS	13C-1,2,3,6,7,8-HxCDF	8.36e+06	0.52 y	1.10	34:07	0.992	97.848				
IS	13C-2,3,4,6,7,8-HxCDF	7.51e+06	0.50 y	1.03	34:44	1.009	93.585				
IS	13C-1,2,3,7,8,9-HxCDF	7.00e+06	0.49 y	0.86	35:40	1.037	104.81				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.89e+06	0.43 y	0.71	37:29	1.089	106.10				
IS	13C-1,2,3,4,7,8,9-HpCDF	5.38e+06	0.42 y	0.71	39:21	1.143	97.585				
IS	13C-OCDF	1.22e+07	0.89 y	0.87	42:17	1.229	179.07				
C/Up	37Cl-2,3,7,8-TCDD	7.69e+05		1.21	26:53	1.024	10.171				
RS/RT	13C-1,2,3,4-TCDD	6.24e+06	0.76 y	1.00	26:16	*	100.00				
RS	13C-1,2,3,4-TCDF	1.08e+07	0.79 y	1.00	24:42	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.78e+06	0.51 y	1.00	34:25	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	54.5	54.8		*	*
Total Penta-Dioxins	151	152		*	*
Total Hexa-Dioxins	191	193		*	*
Total Hepta-Dioxins	122	123		*	*
Total Tetra-Furans	29.7	29.9		*	*
Total Penta-Furans	194.29	195.81		*	*
Total Hexa-Furans	245	247		*	*
Total Hepta-Furans	99.7	101		*	*

	Rec	Qual
IS	97.0	
IS	94.7	
IS	97.2	
IS	100	
IS	101	
IS	103	
IS	93.1	
IS	94.6	
IS	97.0	
IS	96.9	
IS	99.3	
IS	97.8	
IS	93.6	
IS	105	
IS	106	
IS	97.6	
IS	89.5	
C/Up	102	

Integrations by Analyst: [signature] Date: 1/4/15

Reviewed by Analyst: CT Date: 1/5/15

Vista Analytical Laboratory - Injection Log Run file: 150102D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150102D2	1	ST150102D2-1	MAS	3-JAN-15	06:47:15	ST150102D2-1	NA
150102D2	2	ST150102D2-2	MAS	3-JAN-15	07:36:04	ST150102D2-2	ST150102D2-3
150102D2	3	B4L0160-BS1	MAS	3-JAN-15	08:24:50	ST150102D2-2	ST150102D2-3
150102D2	4	SOLVENT BLANK	MAS	3-JAN-15	09:13:36	NA	NA
150102D2	5	B4L0160-BLK1	MAS	3-JAN-15	10:02:22	ST150102D2-2	ST150102D2-3
150102D2	6	1400990-01	MAS	3-JAN-15	10:51:10	ST150102D2-1	NA
150102D2	7	1400991-01	MAS	3-JAN-15	11:39:59	ST150102D2-1	NA
150102D2	8	1400984-04	MAS	3-JAN-15	12:28:53	ST150102D2-1	NA
150102D2	9	1400992-01	MAS	3-JAN-15	13:17:42	ST150102D2-1	NA
150102D2	10	1400968-01	MAS	3-JAN-15	14:06:31	ST150102D2-2	ST150102D2-3
150102D2	11	1400969-01	MAS	3-JAN-15	14:55:20	ST150102D2-2	ST150102D2-3
150102D2	12	SOLVENT BLANK	MAS	3-JAN-15	15:44:06	NA	NA
150102D2	13	ST150102D2-3	MAS	3-JAN-15	16:32:59	ST150102D2-2	ST150102D2-3

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150102D2-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: CT 1/5/15
Initials & Date

** Ending standard criteria applicable to 8290 only.*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.92	2.66-3.60	y	49.4	37.5-62.5
PCB-2	2.95	2.66-3.60	y	51.1	37.5-62.5
PCB-3	2.95	2.66-3.60	y	49.9	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	224.3	150-250
PCB-7/9	1.63	1.33-1.79	y	219.3	150-250
PCB-6	1.64	1.33-1.79	y	104.6	75.0-125
PCB-5/8	1.63	1.33-1.79	y	220.2	150-250
PCB-14	1.64	1.33-1.79	y	111.6	75.0-125
PCB-11	1.65	1.33-1.79	y	110.3	75.0-125
PCB-12/13	1.65	1.33-1.79	y	222.2	150-250
PCB-15	1.65	1.33-1.79	y	110.7	75.0-125
PCB-19	1.07	0.88-1.20	y	52.0	37.5-62.5
PCB-30	1.08	0.88-1.20	y	53.8	37.5-62.5
PCB-18	1.08	0.88-1.20	y	52.1	37.5-62.5
PCB-17	1.08	0.88-1.20	y	52.8	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	106.7	75.0-125
PCB-16/32	1.07	0.88-1.20	y	105.2	75.0-125
PCB-34	1.02	0.88-1.20	y	52.6	37.5-62.5
PCB-23	1.03	0.88-1.20	y	44.9	37.5-62.5
PCB-29	1.03	0.88-1.20	y	49.2	37.5-62.5
PCB-26	1.05	0.88-1.20	y	48.6	37.5-62.5
PCB-25	1.00	0.88-1.20	y	46.6	37.5-62.5
PCB-31	1.03	0.88-1.20	y	42.4	37.5-62.5
PCB-28	1.05	0.88-1.20	y	49.2	37.5-62.5
PCB-20/21/33	1.02	0.88-1.20	y	133.1	112.5-225
PCB-22	1.03	0.88-1.20	y	51.8	37.5-62.5
PCB-36	1.03	0.88-1.20	y	47.8	37.5-62.5
PCB-39	1.03	0.88-1.20	y	46.9	37.5-62.5
PCB-38	1.02	0.88-1.20	y	48.1	37.5-62.5
PCB-35	1.02	0.88-1.20	y	45.2	37.5-62.5
PCB-37	1.04	0.88-1.20	y	48.2	37.5-62.5
PCB-54	0.76	0.65-0.89	y	54.6	37.5-62.5
PCB-50	0.77	0.65-0.89	y	52.4	37.5-62.5
PCB-53	0.78	0.65-0.89	y	51.1	37.5-62.5
PCB-51	0.78	0.65-0.89	y	54.2	37.5-62.5
PCB-45	0.77	0.65-0.89	y	54.2	37.5-62.5
PCB-46	0.77	0.65-0.89	y	50.1	37.5-62.5
PCB-52/69	0.77	0.65-0.89	y	110.4	75.0-125
PCB-73	0.78	0.65-0.89	y	54.5	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	103.9	75.0-125
PCB-47	0.75	0.65-0.89	y	53.7	37.5-62.5
PCB-48/75	0.78	0.65-0.89	y	108.2	75.0-125
PCB-65	0.77	0.65-0.89	y	53.9	37.5-62.5
PCB-62	0.78	0.65-0.89	y	52.7	37.5-62.5
PCB-44	0.76	0.65-0.89	y	54.3	37.5-62.5
PCB-42/59	0.77	0.65-0.89	y	108.6	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	217.8	150-250
PCB-68	0.77	0.65-0.89	y	55.0	37.5-62.5
PCB-40	0.79	0.65-0.89	y	51.1	37.5-62.5
PCB-57	0.77	0.65-0.89	y	56.0	37.5-62.5
PCB-67	0.76	0.65-0.89	y	56.4	37.5-62.5
PCB-58	0.79	0.65-0.89	y	55.5	37.5-62.5
PCB-63	0.79	0.65-0.89	y	58.2	37.5-62.5
PCB-74	0.80	0.65-0.89	y	57.2	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	109.3	75.0-125
PCB-76/66	0.79	0.65-0.89	y	108.9	75.0-125
PCB-80	0.78	0.65-0.89	y	53.8	37.5-62.5
PCB-55	0.78	0.65-0.89	y	54.1	37.5-62.5
PCB-56/60	0.78	0.65-0.89	y	107.7	75.0-125
PCB-79	0.77	0.65-0.89	y	54.1	37.5-62.5
PCB-78	0.79	0.65-0.89	y	56.2	37.5-62.5
PCB-81	0.77	0.65-0.89	y	56.0	37.5-62.5
PCB-77	0.80	0.65-0.89	y	55.9	37.5-62.5
PCB-104	1.55	1.32-1.78	y	54.5	37.5-62.5
PCB-96	1.59	1.32-1.78	y	53.4	37.5-62.5
PCB-103	1.60	1.32-1.78	y	55.4	37.5-62.5
PCB-100	1.59	1.32-1.78	y	55.0	37.5-62.5
PCB-94	1.61	1.32-1.78	y	54.7	37.5-62.5
PCB-95/98/102	1.59	1.32-1.78	y	158.7	112.5-225
PCB-93	1.65	1.32-1.78	y	51.9	37.5-62.5
PCB-88/91	1.59	1.32-1.78	y	111.3	75.0-125
PCB-121	1.62	1.32-1.78	y	51.9	37.5-62.5

Analyst: DMS

Date: 1/2/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.59	1.32-1.78	y	105.9	75.0-125
PCB-89	1.63	1.32-1.78	y	54.2	37.5-62.5
PCB-90/101	1.58	1.32-1.78	y	105.8	75.0-125
PCB-113	1.60	1.32-1.78	y	52.0	37.5-62.5
PCB-99	1.65	1.32-1.78	y	54.6	37.5-62.5
PCB-119	1.64	1.32-1.78	y	56.7	37.5-62.5
PCB-108/112	1.61	1.32-1.78	y	110.3	75.0-125
PCB-83	1.64	1.32-1.78	y	56.4	37.5-62.5
PCB-97	1.57	1.32-1.78	y	55.0	37.5-62.5
PCB-86	1.61	1.32-1.78	y	56.6	37.5-62.5
PCB-87/117/125	1.60	1.32-1.78	y	164.4	112.5-225
PCB-111/115	1.60	1.32-1.78	y	108.2	75.0-125
PCB-85/116	1.62	1.32-1.78	y	113.7	75.0-125
PCB-120	1.58	1.32-1.78	y	56.3	37.5-62.5
PCB-110	1.61	1.32-1.78	y	55.8	37.5-62.5
PCB-82	1.63	1.32-1.78	y	52.8	37.5-62.5
PCB-124	1.62	1.32-1.78	y	55.6	37.5-62.5
PCB-107/109	1.62	1.32-1.78	y	107.2	75.0-125
PCB-123	1.61	1.32-1.78	y	55.5	37.5-62.5
PCB-106/118	1.59	1.32-1.78	y	109.3	75.0-125
PCB-114	1.62	1.32-1.78	y	53.7	37.5-62.5
PCB-122	1.60	1.32-1.78	y	53.8	37.5-62.5
PCB-105	1.65	1.32-1.78	y	56.4	37.5-62.5
PCB-127	1.67	1.32-1.78	y	54.7	37.5-62.5
PCB-126	1.62	1.32-1.78	y	55.0	37.5-62.5
PCB-155	1.28	1.05-1.43	y	57.6	37.5-62.5
PCB-150	1.30	1.05-1.43	y	56.5	37.5-62.5
PCB-152	1.26	1.05-1.43	y	55.0	37.5-62.5
PCB-145	1.29	1.05-1.43	y	54.5	37.5-62.5
PCB-136	1.29	1.05-1.43	y	52.0	37.5-62.5
PCB-148	1.33	1.05-1.43	y	60.3	37.5-62.5
PCB-154	1.28	1.05-1.43	y	56.0	37.5-62.5
PCB-151	1.31	1.05-1.43	y	53.0	37.5-62.5
PCB-135	1.27	1.05-1.43	y	53.1	37.5-62.5
PCB-144	1.29	1.05-1.43	y	52.3	37.5-62.5
PCB-147	1.30	1.05-1.43	y	53.3	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	108.6	75.0-125
PCB-140	1.30	1.05-1.43	y	53.7	37.5-62.5
PCB-134/143	1.26	1.05-1.43	y	103.6	75.0-125
PCB-133/142	1.24	1.05-1.43	y	100.5	75.0-125
PCB-131	1.23	1.05-1.43	y	50.5	37.5-62.5
PCB-146/165	1.25	1.05-1.43	y	106.6	75.0-125
PCB-132/161	1.25	1.05-1.43	y	102.8	75.0-125
PCB-153	1.25	1.05-1.43	y	55.0	37.5-62.5
PCB-168	1.25	1.05-1.43	y	52.1	37.5-62.5
PCB-141	1.26	1.05-1.43	y	52.5	37.5-62.5
PCB-137	1.27	1.05-1.43	y	53.1	37.5-62.5
PCB-130	1.24	1.05-1.43	y	55.6	37.5-62.5
PCB-138/163/164	1.26	1.05-1.43	y	164.5	112.5-225
PCB-158/160	1.25	1.05-1.43	y	109.1	75.0-125
PCB-129	1.25	1.05-1.43	y	51.8	37.5-62.5
PCB-166	1.23	1.05-1.43	y	53.2	37.5-62.5
PCB-159	1.26	1.05-1.43	y	53.8	37.5-62.5
PCB-128/162	1.24	1.05-1.43	y	103.2	75.0-125
PCB-167	1.22	1.05-1.43	y	54.3	37.5-62.5
PCB-156	1.23	1.05-1.43	y	53.4	37.5-62.5
PCB-157	1.25	1.05-1.43	y	53.8	37.5-62.5
PCB-169	1.26	1.05-1.43	y	54.7	37.5-62.5
PCB-188	1.08	0.89-1.21	y	53.5	37.5-62.5
PCB-184	1.07	0.89-1.21	y	54.6	37.5-62.5
PCB-179	1.07	0.89-1.21	y	53.4	37.5-62.5
PCB-176	1.03	0.89-1.21	y	53.3	37.5-62.5
PCB-186	1.07	0.89-1.21	y	54.4	37.5-62.5
PCB-178	1.05	0.89-1.21	y	54.0	37.5-62.5
PCB-175	1.04	0.89-1.21	y	55.9	37.5-62.5
PCB-182/187	1.07	0.89-1.21	y	112.1	75.0-125
PCB-183	1.08	0.89-1.21	y	53.0	37.5-62.5
PCB-185	1.07	0.89-1.21	y	54.6	37.5-62.5
PCB-174	1.05	0.89-1.21	y	57.1	37.5-62.5
PCB-181	1.09	0.89-1.21	y	52.3	37.5-62.5
PCB-177	1.08	0.89-1.21	y	53.9	37.5-62.5
PCB-171	1.05	0.89-1.21	y	53.6	37.5-62.5
PCB-173	1.06	0.89-1.21	y	53.3	37.5-62.5
PCB-172	1.06	0.89-1.21	y	54.8	37.5-62.5

Analyst: DMS

Date: 1/2/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.07	0.89-1.21	y	56.3	37.5-62.5
PCB-180	1.04	0.89-1.21	y	54.9	37.5-62.5
PCB-193	1.07	0.89-1.21	y	55.5	37.5-62.5
PCB-191	1.06	0.89-1.21	y	55.7	37.5-62.5
PCB-170	1.04	0.89-1.21	y	54.0	37.5-62.5
PCB-190	1.08	0.89-1.21	y	55.7	37.5-62.5
PCB-189	1.07	0.89-1.21	y	54.7	37.5-62.5
PCB-202	0.93	0.76-1.02	y	52.5	37.5-62.5
PCB-201	0.90	0.76-1.02	y	53.0	37.5-62.5
PCB-204	0.92	0.76-1.02	y	54.7	37.5-62.5
PCB-197	0.93	0.76-1.02	y	54.3	37.5-62.5
PCB-200	0.90	0.76-1.02	y	54.0	37.5-62.5
PCB-198	0.91	0.76-1.02	y	52.0	37.5-62.5
PCB-199	0.90	0.76-1.02	y	53.5	37.5-62.5
PCB-196/203	0.92	0.76-1.02	y	108.3	75.0-125
PCB-195	0.92	0.76-1.02	y	52.5	37.5-62.5
PCB-194	0.91	0.76-1.02	y	53.6	37.5-62.5
PCB-205	0.92	0.76-1.02	y	56.7	37.5-62.5
PCB-208	1.30	1.14-1.54	y	49.4	37.5-62.5
PCB-207	1.33	1.14-1.54	y	52.2	37.5-62.5
PCB-206	1.36	1.14-1.54	y	51.7	37.5-62.5
PCB-209	1.20	0.99-1.33	y	54.8	37.5-62.5

Analyst: DMS

Date: 1/2/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.35	2.66-3.60	y	114.3	50.0-145
13C-PCB-3	3.44	2.66-3.60	y	108.4	50.0-145
13C-PCB-4	1.60	1.33-1.79	y	105.2	50.0-145
13C-PCB-9	1.62	1.33-1.79	y	106.1	50.0-145
13C-PCB-11	1.62	1.33-1.79	y	99.9	50.0-145
13C-PCB-19	1.13	0.88-1.20	y	86.8	50.0-145
13C-PCB-32	1.10	0.88-1.20	y	87.6	50.0-145
13C-PCB-28	1.08	0.88-1.20	y	103.2	50.0-145
13C-PCB-37	1.08	0.88-1.20	y	104.3	50.0-145
13C-PCB-54	0.82	0.65-0.89	y	98.7	50.0-145
13C-PCB-52	0.80	0.65-0.89	y	97.8	50.0-145
13C-PCB-47	0.81	0.65-0.89	y	95.4	50.0-145
13C-PCB-70	0.81	0.65-0.89	y	95.2	50.0-145
13C-PCB-80	0.83	0.65-0.89	y	98.7	50.0-145
13C-PCB-81	0.83	0.65-0.89	y	96.0	50.0-145
13C-PCB-77	0.83	0.65-0.89	y	97.7	50.0-145
13C-PCB-104	1.64	1.32-1.78	y	97.8	50.0-145
13C-PCB-95	1.64	1.32-1.78	y	96.7	50.0-145
13C-PCB-101	1.69	1.32-1.78	y	97.2	50.0-145
13C-PCB-97	1.63	1.32-1.78	y	96.5	50.0-145
13C-PCB-123	1.66	1.32-1.78	y	97.0	50.0-145
13C-PCB-118	1.68	1.32-1.78	y	97.4	50.0-145
13C-PCB-114	1.60	1.32-1.78	y	111.8	50.0-145
13C-PCB-105	1.62	1.32-1.78	y	111.7	50.0-145
13C-PCB-127	1.63	1.32-1.78	y	112.3	50.0-145
13C-PCB-126	1.63	1.32-1.78	y	115.7	50.0-145
13C-PCB-155	1.32	1.05-1.43	y	78.4	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	101.9	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	102.4	50.0-145
13C-PCB-138	1.31	1.05-1.43	y	101.8	50.0-145
13C-PCB-159	1.32	1.05-1.43	y	104.8	50.0-145
13C-PCB-167	1.28	1.05-1.43	y	102.3	50.0-145
13C-PCB-156	1.29	1.05-1.43	y	101.8	50.0-145
13C-PCB-157	1.32	1.05-1.43	y	101.8	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.28	1.05-1.43	y	100.0	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	86.5	50 - 145
13C-PCB-180	0.45	0.38-0.52	y	86.7	50 - 145
13C-PCB-170	0.45	0.38-0.52	y	88.1	50 - 145
13C-PCB-189	0.47	0.38-0.52	y	89.8	50 - 145
13C-PCB-202	0.91	0.76-1.02	y	76.0	50 - 145
13C-PCB-194	0.93	0.76-1.02	y	95.7	50 - 145
13C-PCB-208	0.77	0.65-0.89	y	93.0	50 - 145
13C-PCB-206	0.80	0.65-0.89	y	97.2	50 - 145
13C-PCB-209	1.23	0.99-1.33	y	106.9	50 - 145

CRS vs. RS

13C-PCB-79	0.80	0.65-0.89	y	99.3	75 - 125
13C-PCB-178	0.47	0.38-0.52	y	90.3	75 - 125

Analyst: DMS

Date: 1/2/15

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.92	2.66-3.60	y	49.4	35.0-65.0
PCB-2	2.95	2.66-3.60	y	51.1	35.0-65.0
PCB-3	2.95	2.66-3.60	y	49.9	35.0-65.0
PCB-4/10	1.64	1.33-1.79	y	224.3	140-260
PCB-7/9	1.63	1.33-1.79	y	219.3	140-260
PCB-6	1.64	1.33-1.79	y	104.6	70.0-130
PCB-5/8	1.63	1.33-1.79	y	220.2	140-260
PCB-14	1.64	1.33-1.79	y	111.6	70.0-130
PCB-11	1.65	1.33-1.79	y	110.3	70.0-130
PCB-12/13	1.65	1.33-1.79	y	222.2	140-260
PCB-15	1.65	1.33-1.79	y	110.7	70.0-130
PCB-19	1.07	0.88-1.20	y	52.0	35.0-65.0
PCB-30	1.08	0.88-1.20	y	53.8	35.0-65.0
PCB-18	1.08	0.88-1.20	y	52.1	35.0-65.0
PCB-17	1.08	0.88-1.20	y	52.8	35.0-65.0
PCB-24/27	1.06	0.88-1.20	y	106.7	70.0-130
PCB-16/32	1.07	0.88-1.20	y	105.2	70.0-130
PCB-34	1.02	0.88-1.20	y	52.6	35.0-65.0
PCB-23	1.03	0.88-1.20	y	44.9	35.0-65.0
PCB-29	1.03	0.88-1.20	y	49.2	35.0-65.0
PCB-26	1.05	0.88-1.20	y	48.6	35.0-65.0
PCB-25	1.00	0.88-1.20	y	46.6	35.0-65.0
PCB-31	1.03	0.88-1.20	y	42.4	35.0-65.0
PCB-28	1.05	0.88-1.20	y	49.2	35.0-65.0
PCB-20/21/33	1.02	0.88-1.20	y	133.1	105-195
PCB-22	1.03	0.88-1.20	y	51.8	35.0-65.0
PCB-36	1.03	0.88-1.20	y	47.8	35.0-65.0
PCB-39	1.03	0.88-1.20	y	46.9	35.0-65.0
PCB-38	1.02	0.88-1.20	y	48.1	35.0-65.0
PCB-35	1.02	0.88-1.20	y	45.2	35.0-65.0
PCB-37	1.04	0.88-1.20	y	48.2	35.0-65.0
PCB-54	0.76	0.65-0.89	y	54.6	35.0-65.0
PCB-50	0.77	0.65-0.89	y	52.4	35.0-65.0
PCB-53	0.78	0.65-0.89	y	51.1	35.0-65.0
PCB-51	0.78	0.65-0.89	y	54.2	35.0-65.0
PCB-45	0.77	0.65-0.89	y	54.2	35.0-65.0
PCB-46	0.77	0.65-0.89	y	50.1	35.0-65.0

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.77	0.65-0.89	y	110.4	70.0-130
PCB-73	0.78	0.65-0.89	y	54.5	35.0-65.0
PCB-43/49	0.77	0.65-0.89	y	103.9	70.0-130
PCB-47	0.75	0.65-0.89	y	53.7	35.0-65.0
PCB-48/75	0.78	0.65-0.89	y	108.2	70.0-130
PCB-65	0.77	0.65-0.89	y	53.9	35.0-65.0
PCB-62	0.78	0.65-0.89	y	52.7	35.0-65.0
PCB-44	0.76	0.65-0.89	y	54.3	35.0-65.0
PCB-42/59	0.77	0.65-0.89	y	108.6	70.0-130
PCB-41/64/71/72	0.78	0.65-0.89	y	217.8	140-260
PCB-68	0.77	0.65-0.89	y	55.0	35.0-65.0
PCB-40	0.79	0.65-0.89	y	51.1	35.0-65.0
PCB-57	0.77	0.65-0.89	y	56.0	35.0-65.0
PCB-67	0.76	0.65-0.89	y	56.4	35.0-65.0
PCB-58	0.79	0.65-0.89	y	55.5	35.0-65.0
PCB-63	0.79	0.65-0.89	y	58.2	35.0-65.0
PCB-74	0.80	0.65-0.89	y	57.2	35.0-65.0
PCB-61/70	0.78	0.65-0.89	y	109.3	70.0-130
PCB-76/66	0.79	0.65-0.89	y	108.9	70.0-130
PCB-80	0.78	0.65-0.89	y	53.8	35.0-65.0
PCB-55	0.78	0.65-0.89	y	54.1	35.0-65.0
PCB-56/60	0.78	0.65-0.89	y	107.7	70.0-130
PCB-79	0.77	0.65-0.89	y	54.1	35.0-65.0
PCB-78	0.79	0.65-0.89	y	56.2	35.0-65.0
PCB-81	0.77	0.65-0.89	y	56.0	35.0-65.0
PCB-77	0.80	0.65-0.89	y	55.9	35.0-65.0
PCB-104	1.55	1.32-1.78	y	54.5	35.0-65.0
PCB-96	1.59	1.32-1.78	y	53.4	35.0-65.0
PCB-103	1.60	1.32-1.78	y	55.4	35.0-65.0
PCB-100	1.59	1.32-1.78	y	55.0	35.0-65.0
PCB-94	1.61	1.32-1.78	y	54.7	35.0-65.0
PCB-95/98/102	1.59	1.32-1.78	y	158.7	105-195
PCB-93	1.65	1.32-1.78	y	51.9	35.0-65.0
PCB-88/91	1.59	1.32-1.78	y	111.3	70.0-130
PCB-121	1.62	1.32-1.78	y	51.9	35.0-65.0

Analyst: DMS

Date: 1/2/15

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.59	1.32-1.78	y	105.9	70.0-130	PCB-140	1.30	1.05-1.43	y	53.7	35.0-65.0
PCB-89	1.63	1.32-1.78	y	54.2	35.0-65.0	PCB-134/143	1.26	1.05-1.43	y	103.6	70.0-130
PCB-90/101	1.58	1.32-1.78	y	105.8	70.0-130	PCB-133/142	1.24	1.05-1.43	y	100.5	70.0-130
PCB-113	1.60	1.32-1.78	y	52.0	35.0-65.0	PCB-131	1.23	1.05-1.43	y	50.5	35.0-65.0
PCB-99	1.65	1.32-1.78	y	54.6	35.0-65.0	PCB-146/165	1.25	1.05-1.43	y	106.6	70.0-130
PCB-119	1.64	1.32-1.78	y	56.7	35.0-65.0	PCB-132/161	1.25	1.05-1.43	y	102.8	70.0-130
PCB-108/112	1.61	1.32-1.78	y	110.3	70.0-130	PCB-153	1.25	1.05-1.43	y	55.0	35.0-65.0
PCB-83	1.64	1.32-1.78	y	56.4	35.0-65.0	PCB-168	1.25	1.05-1.43	y	52.1	35.0-65.0
PCB-97	1.57	1.32-1.78	y	55.0	35.0-65.0	PCB-141	1.26	1.05-1.43	y	52.5	35.0-65.0
PCB-86	1.61	1.32-1.78	y	56.6	35.0-65.0	PCB-137	1.27	1.05-1.43	y	53.1	35.0-65.0
PCB-87/117/125	1.60	1.32-1.78	y	164.4	105-195	PCB-130	1.24	1.05-1.43	y	55.6	35.0-65.0
PCB-111/115	1.60	1.32-1.78	y	108.2	70.0-130	PCB-138/163/164	1.26	1.05-1.43	y	164.5	105-195
PCB-85/116	1.62	1.32-1.78	y	113.7	70.0-130	PCB-158/160	1.25	1.05-1.43	y	109.1	70.0-130
PCB-120	1.58	1.32-1.78	y	56.3	35.0-65.0	PCB-129	1.25	1.05-1.43	y	51.8	35.0-65.0
PCB-110	1.61	1.32-1.78	y	55.8	35.0-65.0	PCB-166	1.23	1.05-1.43	y	53.2	35.0-65.0
PCB-82	1.63	1.32-1.78	y	52.8	35.0-65.0	PCB-159	1.26	1.05-1.43	y	53.8	35.0-65.0
PCB-124	1.62	1.32-1.78	y	55.6	35.0-65.0	PCB-128/162	1.24	1.05-1.43	y	103.2	70.0-130
PCB-107/109	1.62	1.32-1.78	y	107.2	70.0-130	PCB-167	1.22	1.05-1.43	y	54.3	35.0-65.0
PCB-123	1.61	1.32-1.78	y	55.5	35.0-65.0	PCB-156	1.23	1.05-1.43	y	53.4	35.0-65.0
PCB-106/118	1.59	1.32-1.78	y	109.3	70.0-130	PCB-157	1.25	1.05-1.43	y	53.8	35.0-65.0
PCB-114	1.62	1.32-1.78	y	53.7	35.0-65.0	PCB-169	1.26	1.05-1.43	y	54.7	35.0-65.0
PCB-122	1.60	1.32-1.78	y	53.8	35.0-65.0	PCB-188	1.08	0.89-1.21	y	53.5	35.0-65.0
PCB-105	1.65	1.32-1.78	y	56.4	35.0-65.0	PCB-184	1.07	0.89-1.21	y	54.6	35.0-65.0
PCB-127	1.67	1.32-1.78	y	54.7	35.0-65.0	PCB-179	1.07	0.89-1.21	y	53.4	35.0-65.0
PCB-126	1.62	1.32-1.78	y	55.0	35.0-65.0	PCB-176	1.03	0.89-1.21	y	53.3	35.0-65.0
PCB-155	1.28	1.05-1.43	y	57.6	35.0-65.0	PCB-186	1.07	0.89-1.21	y	54.4	35.0-65.0
PCB-150	1.30	1.05-1.43	y	56.5	35.0-65.0	PCB-178	1.05	0.89-1.21	y	54.0	35.0-65.0
PCB-152	1.26	1.05-1.43	y	55.0	35.0-65.0	PCB-175	1.04	0.89-1.21	y	55.9	35.0-65.0
PCB-145	1.29	1.05-1.43	y	54.5	35.0-65.0	PCB-182/187	1.07	0.89-1.21	y	112.1	70.0-130
PCB-136	1.29	1.05-1.43	y	52.0	35.0-65.0	PCB-183	1.08	0.89-1.21	y	53.0	35.0-65.0
PCB-148	1.33	1.05-1.43	y	60.3	35.0-65.0	PCB-185	1.07	0.89-1.21	y	54.6	35.0-65.0
PCB-154	1.28	1.05-1.43	y	56.0	35.0-65.0	PCB-174	1.05	0.89-1.21	y	57.1	35.0-65.0
PCB-151	1.31	1.05-1.43	y	53.0	35.0-65.0	PCB-181	1.09	0.89-1.21	y	52.3	35.0-65.0
PCB-135	1.27	1.05-1.43	y	53.1	35.0-65.0	PCB-177	1.08	0.89-1.21	y	53.9	35.0-65.0
PCB-144	1.29	1.05-1.43	y	52.3	35.0-65.0	PCB-171	1.05	0.89-1.21	y	53.6	35.0-65.0
PCB-147	1.30	1.05-1.43	y	53.3	35.0-65.0	PCB-173	1.06	0.89-1.21	y	53.3	35.0-65.0
PCB-139/149	1.27	1.05-1.43	y	108.6	70.0-130	PCB-172	1.06	0.89-1.21	y	54.8	35.0-65.0

Analyst: DMJ

Date: 1/2/15

NATIVE PCB CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.07	0.89-1.21	y	56.3	35.0-65.0
PCB-180	1.04	0.89-1.21	y	54.9	35.0-65.0
PCB-193	1.07	0.89-1.21	y	55.5	35.0-65.0
PCB-191	1.06	0.89-1.21	y	55.7	35.0-65.0
PCB-170	1.04	0.89-1.21	y	54.0	35.0-65.0
PCB-190	1.08	0.89-1.21	y	55.7	35.0-65.0
PCB-189	1.07	0.89-1.21	y	54.7	35.0-65.0
PCB-202	0.93	0.76-1.02	y	52.5	35.0-65.0
PCB-201	0.90	0.76-1.02	y	53.0	35.0-65.0
PCB-204	0.92	0.76-1.02	y	54.7	35.0-65.0
PCB-197	0.93	0.76-1.02	y	54.3	35.0-65.0
PCB-200	0.90	0.76-1.02	y	54.0	35.0-65.0
PCB-198	0.91	0.76-1.02	y	52.0	35.0-65.0
PCB-199	0.90	0.76-1.02	y	53.5	35.0-65.0
PCB-196/203	0.92	0.76-1.02	y	108.3	70.0-130
PCB-195	0.92	0.76-1.02	y	52.5	35.0-65.0
PCB-194	0.91	0.76-1.02	y	53.6	35.0-65.0
PCB-205	0.92	0.76-1.02	y	56.7	35.0-65.0
PCB-208	1.30	1.14-1.54	y	49.4	35.0-65.0
PCB-207	1.33	1.14-1.54	y	52.2	35.0-65.0
PCB-206	1.36	1.14-1.54	y	51.7	35.0-65.0
PCB-209	1.20	0.99-1.34	y	54.8	35.0-65.0

Analyst: DMS

Date: 1/2/15

LABELED 1668A CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150102E2-1 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 150102E2 S#1 Analysis Date: 2-JAN-15 Time: 12:27:30

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.35	2.66-3.60	y	114.3	50.0-150
13C-PCB-3	3.44	2.66-3.60	y	108.4	50.0-150
13C-PCB-4	1.60	1.33-1.79	y	105.2	50.0-150
13C-PCB-9	1.62	1.33-1.79	y	106.1	50.0-150
13C-PCB-11	1.62	1.33-1.79	y	99.9	50.0-150
13C-PCB-19	1.13	0.88-1.20	y	86.8	50.0-150
13C-PCB-32	1.10	0.88-1.20	y	87.6	50.0-150
13C-PCB-28	1.08	0.88-1.20	y	103.2	50.0-150
13C-PCB-37	1.08	0.88-1.20	y	104.3	50.0-150
13C-PCB-54	0.82	0.65-0.89	y	98.7	50.0-150
13C-PCB-52	0.80	0.65-0.89	y	97.8	50.0-150
13C-PCB-47	0.81	0.65-0.89	y	95.4	50.0-150
13C-PCB-70	0.81	0.65-0.89	y	95.2	50.0-150
13C-PCB-80	0.83	0.65-0.89	y	98.7	50.0-150
13C-PCB-81	0.83	0.65-0.89	y	96.0	50.0-150
13C-PCB-77	0.83	0.65-0.89	y	97.7	50.0-150
13C-PCB-104	1.64	1.32-1.78	y	97.8	50.0-150
13C-PCB-95	1.64	1.32-1.78	y	96.7	50.0-150
13C-PCB-101	1.69	1.32-1.78	y	97.2	50.0-150
13C-PCB-97	1.63	1.32-1.78	y	96.5	50.0-150
13C-PCB-123	1.66	1.32-1.78	y	97.0	50.0-150
13C-PCB-118	1.68	1.32-1.78	y	97.4	50.0-150
13C-PCB-114	1.60	1.32-1.78	y	111.8	50.0-150
13C-PCB-105	1.62	1.32-1.78	y	111.7	50.0-150
13C-PCB-127	1.63	1.32-1.78	y	112.3	50.0-150
13C-PCB-126	1.63	1.32-1.78	y	115.7	50.0-150
13C-PCB-155	1.32	1.05-1.43	y	78.4	50.0-150
13C-PCB-153	1.29	1.05-1.43	y	101.9	50.0-150
13C-PCB-141	1.29	1.05-1.43	y	102.4	50.0-150
13C-PCB-138	1.31	1.05-1.43	y	101.8	50.0-150
13C-PCB-159	1.32	1.05-1.43	y	104.8	50.0-150
13C-PCB-167	1.28	1.05-1.43	y	102.3	50.0-150
13C-PCB-156	1.29	1.05-1.43	y	101.8	50.0-150
13C-PCB-157	1.32	1.05-1.43	y	101.8	50.0-150
13C-PCB-169	1.28	1.05-1.43	y	100.0	50 - 150
13C-PCB-188	0.46	0.38-0.52	y	86.5	50 - 150
13C-PCB-180	0.45	0.38-0.52	y	86.7	50 - 150
13C-PCB-170	0.45	0.38-0.52	y	88.1	50 - 150
13C-PCB-189	0.47	0.38-0.52	y	89.8	50 - 150
13C-PCB-202	0.91	0.76-1.02	y	76.0	50 - 150
13C-PCB-194	0.93	0.76-1.02	y	95.7	50 - 150
13C-PCB-208	0.77	0.65-0.89	y	93.0	50 - 150
13C-PCB-206	0.80	0.65-0.89	y	97.2	50 - 150
13C-PCB-209	1.23	0.99-1.33	y	106.9	50 - 150
CRS vs. RS					
13C-PCB-79	0.80	0.65-0.89	y	99.3	60 - 130
13C-PCB-178	0.47	0.38-0.52	y	90.3	60 - 130
PS vs. IS					
13C-PCB-79	0.80	0.65-0.89	y	103.4	60 - 130
13C-PCB-178	0.47	0.38-0.52	y	104.1	60 - 130

Analyst: DMS

Date: 1/2/15

Client ID: PCB CS3 14L2401 Filename: 150102E2 S:1 Acq: 2-JAN-15 12:27:30 ConCal: ST150102E2-1
Lab ID: ST150102E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	6.68e+07	2.92	y	1.25	16:08	1.001	0.996	1.006	49.4296
	PCB-2	6.42e+07	2.95	y	1.18	18:31	0.988	0.983	0.993	51.1065
	PCB-3	6.47e+07	2.95	y	1.22	18:46	1.001	0.996	1.006	49.9089
	PCB-4/10	2.12e+08	1.64	y	1.55	20:08	1.003	0.998	1.008	224.284
	PCB-7/9	2.58e+08	1.63	y	1.27	21:55	0.868	0.865	0.873	219.325
	PCB-6	1.22e+08	1.64	y	1.26	22:34	0.893	0.890	0.899	104.597
	PCB-5/8	2.52e+08	1.63	y	1.23	22:59	0.910	0.906	0.916	220.155
	PCB-14	1.36e+08	1.64	y	1.23	24:05	0.953	0.949	0.959	111.628
	PCB-11	1.27e+08	1.65	y	1.16	25:17	1.001	0.996	1.006	110.294
	PCB-12/13	2.42e+08	1.65	y	1.10	25:40	1.016	1.010	1.020	222.162
	PCB-15	1.33e+08	1.65	y	1.21	25:59	1.029	1.024	1.034	110.677
	PCB-19	3.29e+07	1.07	y	1.30	24:16	1.001	0.996	1.006	51.9911
	PCB-30	4.81e+07	1.08	y	1.83	25:10	1.038	1.032	1.042	53.7858
	PCB-18	3.38e+07	1.08	y	0.86	25:55	0.954	0.949	0.959	52.1234
	PCB-17	3.58e+07	1.08	y	0.90	26:05	0.960	0.955	0.965	52.7603
	PCB-24/27	9.47e+07	1.06	y	1.18	26:39	0.981	0.976	0.986	106.667
-	PCB-16/32	8.17e+07	1.07	y	1.03	27:10	1.000	0.995	1.005	105.222
-	PCB-34	4.99e+07	1.02	y	1.26	27:58	0.960	0.956	0.966	52.6283
	PCB-23	4.42e+07	1.03	y	1.31	28:04	0.964	0.959	0.969	44.8512
	PCB-29	4.91e+07	1.03	y	1.33	28:19	0.972	0.967	0.977	49.1671
	PCB-26	4.72e+07	1.05	y	1.29	28:31	0.979	0.974	0.984	48.5968
	PCB-25	4.71e+07	1.00	y	1.34	28:40	0.984	0.980	0.990	46.6175
	PCB-31	4.53e+07	1.03	y	1.42	29:02	0.997	0.992	1.002	42.4334
	PCB-28	5.10e+07	1.05	y	1.38	29:09	1.001	0.996	1.006	49.2311
	PCB-20/21/33	1.31e+08	1.02	y	1.31	29:45	1.022	1.017	1.027	133.111
	PCB-22	5.15e+07	1.03	y	1.32	30:11	1.036	1.032	1.042	51.7784
	PCB-36	4.68e+07	1.03	y	1.38	30:49	0.934	0.929	0.939	47.8002
	PCB-39	4.73e+07	1.03	y	1.42	31:17	0.948	0.943	0.953	46.8548
	PCB-38	4.64e+07	1.02	y	1.35	32:03	0.971	0.967	0.976	48.1473
	PCB-35	4.43e+07	1.02	y	1.38	32:34	0.987	0.982	0.992	45.2465
	PCB-37	4.77e+07	1.04	y	1.39	33:01	1.001	0.996	1.006	48.2275
	PCB-54	3.94e+07	0.76	y	1.20	28:01	1.001	0.996	1.006	54.5839
	PCB-50	3.05e+07	0.77	y	0.97	29:11	1.043	1.037	1.047	52.3771
	PCB-53	3.02e+07	0.78	y	1.19	29:50	0.946	0.941	0.951	51.0842
	PCB-51	3.11e+07	0.78	y	1.15	30:10	0.957	0.952	0.962	54.2435
	PCB-45	2.61e+07	0.77	y	0.97	30:36	0.970	0.966	0.976	54.2370
	PCB-46	2.37e+07	0.77	y	0.95	31:06	0.986	0.982	0.992	50.0582

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	7.03e+07	0.77	y	1.28	31:34	1.001	0.996	1.006	110.439
	PCB-73	3.72e+07	0.78	y	1.37	31:41	1.005	1.000	1.010	54.5275
	PCB-43/49	5.76e+07	0.77	y	1.11	31:51	1.010	1.005	1.015	103.944
	PCB-47	3.10e+07	0.75	y	1.13	32:03	1.000	0.996	1.006	53.7086
	PCB-48/75	7.20e+07	0.78	y	1.30	32:09	1.003	0.999	1.009	108.210
	PCB-65	3.66e+07	0.77	y	1.33	32:26	1.012	1.007	1.017	53.8573
	PCB-62	3.47e+07	0.78	y	1.29	32:32	1.015	1.011	1.021	52.6613
	PCB-44	2.60e+07	0.76	y	0.94	32:51	1.025	1.020	1.030	54.3413
	PCB-42/59	6.74e+07	0.77	y	1.22	33:04	1.032	1.028	1.038	108.606
	PCB-41/64/71/72	1.46e+08	0.78	y	1.31	33:39	1.050	1.046	1.056	217.782
	PCB-68	4.17e+07	0.77	y	1.49	33:55	1.058	1.054	1.064	55.0190
	PCB-40	2.13e+07	0.79	y	0.82	34:08	1.065	1.061	1.071	51.0945
	PCB-57	4.03e+07	0.77	y	1.11	34:29	0.970	0.965	0.975	55.9550
	PCB-67	3.92e+07	0.76	y	1.07	34:49	0.979	0.974	0.984	56.4471
	PCB-58	3.95e+07	0.79	y	1.10	34:55	0.982	0.977	0.987	55.4592
	PCB-63	4.20e+07	0.79	y	1.12	35:04	0.986	0.982	0.992	58.2014
	PCB-74	4.45e+07	0.80	y	1.20	35:21	0.994	0.990	1.000	57.1620
	PCB-61/70	7.62e+07	0.78	y	1.08	35:32	0.999	0.994	1.004	109.251
	PCB-76/66	7.99e+07	0.79	y	1.14	35:45	1.005	1.001	1.011	108.864
	PCB-80	4.69e+07	0.78	y	1.28	35:59	1.000	0.996	1.006	53.8367
	PCB-55	4.09e+07	0.78	y	1.11	36:18	1.009	1.005	1.015	54.0610
	PCB-56/60	7.99e+07	0.78	y	1.09	36:48	1.023	1.018	1.028	107.698
	PCB-79	4.15e+07	0.77	y	1.12	37:51	1.052	1.048	1.058	54.1388
	PCB-78	4.02e+07	0.79	y	1.24	38:34	0.987	0.982	0.992	56.2197
	PCB-81	4.47e+07	0.77	y	1.38	39:05	1.000	0.995	1.005	56.0157
	PCB-77	4.24e+07	0.80	y	1.21	39:41	1.000	0.995	1.005	55.8902
	PCB-104	2.49e+07	1.55	y	1.26	32:42	1.000	0.996	1.006	54.4765
	PCB-96	2.12e+07	1.59	y	1.09	33:57	1.039	1.034	1.044	53.4457
	PCB-103	1.88e+07	1.60	y	0.93	34:30	1.055	1.050	1.060	55.3851
	PCB-100	2.00e+07	1.59	y	1.00	34:52	1.067	1.061	1.071	54.9553
	PCB-94	1.63e+07	1.61	y	1.11	35:20	0.986	0.981	0.991	54.6808
	PCB-95/98/102	5.18e+07	1.59	y	1.21	35:49	0.999	0.994	1.004	158.652
	PCB-93	1.58e+07	1.65	y	1.13	35:57	1.003	0.998	1.008	51.9057
	PCB-88/91	3.05e+07	1.59	y	1.02	36:14	1.011	1.006	1.016	111.326
	PCB-121	2.66e+07	1.62	y	1.90	36:21	1.014	1.009	1.019	51.9305
	PCB-84/92	3.18e+07	1.59	y	1.05	37:11	0.991	0.986	0.996	105.942
	PCB-89	1.57e+07	1.63	y	1.02	37:22	0.995	0.991	1.001	54.2115

RL: MONO, TRI - DECA: ——

RL: DI : ——

Integrations by Analyst: DMS Date: 1/2/15

Reviewed by Analyst: [signature] Date: 1/4/15

Client ID: PCB CS3 14L2401 Filename: 150102E2 S:1 Acq: 2-JAN-15 12:27:30 ConCal: ST150102E2-1
Lab ID: ST150102E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	3.59e+07	1.58	y	1.19	37:32	1.000	0.996	1.006	105.849
	PCB-113	2.00e+07	1.60	y	1.35	37:47	1.007	1.002	1.012	51.9810
	PCB-99	2.01e+07	1.65	y	1.29	37:53	1.009	1.005	1.015	54.6014
	PCB-119	2.43e+07	1.64	y	1.72	38:21	0.987	0.982	0.992	56.7329
	PCB-108/112	3.53e+07	1.61	y	1.29	38:30	0.991	0.986	0.996	110.306
	PCB-83	2.13e+07	1.64	y	1.52	38:39	0.995	0.991	1.001	56.3828
	PCB-97	1.71e+07	1.57	y	1.25	38:52	1.001	0.996	1.006	54.9935
	PCB-86	1.44e+07	1.61	y	1.02	39:00	1.004	1.000	1.010	56.6273
	B-87/117/125	6.37e+07	1.60	y	1.56	39:08	1.008	1.002	1.012	164.406
	PCB-111/115	4.71e+07	1.60	y	1.75	39:17	1.011	1.007	1.017	108.200
	PCB-85/116	3.68e+07	1.62	y	1.30	39:25	1.015	1.010	1.020	113.743
	PCB-120	2.49e+07	1.58	y	1.78	39:39	1.021	1.016	1.026	56.2502
	PCB-110	2.33e+07	1.61	y	1.68	39:47	1.024	1.020	1.030	55.7854
	PCB-82	1.34e+07	1.63	y	0.74	40:25	0.976	0.972	0.982	52.8204
	PCB-124	2.53e+07	1.62	y	1.32	41:06	0.993	0.988	0.998	55.6218
	PCB-107/109	4.51e+07	1.62	y	1.22	41:15	0.996	0.991	1.001	107.217
	PCB-123	2.32e+07	1.61	y	1.22	41:25	1.000	0.995	1.005	55.4629
-	PCB-106/118	4.80e+07	1.59	y	1.22	41:36	1.000	0.996	1.006	109.304
-	PCB-114	3.86e+07	1.62	y	1.36	42:15	1.000	0.995	1.005	53.6906
	PCB-122	3.53e+07	1.60	y	1.24	42:23	1.004	0.999	1.009	53.8208
	PCB-105	3.93e+07	1.65	y	1.28	43:06	1.000	0.995	1.005	56.3967
	PCB-127	3.70e+07	1.67	y	1.14	43:27	1.000	0.995	1.005	54.7073
	PCB-126	3.73e+07	1.62	y	1.28	45:20	1.000	0.995	1.005	54.9768
	PCB-155	1.59e+07	1.28	y	1.14	37:06	1.001	0.966	1.006	57.5802
	PCB-150	1.47e+07	1.30	y	1.06	38:22	1.035	1.030	1.040	56.4882
	PCB-152	1.47e+07	1.26	y	1.10	38:50	1.047	1.043	1.053	55.0484
	PCB-145	1.45e+07	1.29	y	1.09	39:17	1.059	1.055	1.065	54.5110
	PCB-136	1.37e+07	1.29	y	1.08	39:36	1.068	1.064	1.074	51.9844
	PCB-148	1.09e+07	1.33	y	0.74	39:43	1.071	1.066	1.076	60.3068
	PCB-154	1.21e+07	1.28	y	0.88	40:12	1.084	1.079	1.089	55.9688
	PCB-151	1.05e+07	1.31	y	0.81	40:51	1.101	1.097	1.107	52.9899
	PCB-135	1.01e+07	1.27	y	0.78	41:03	1.107	1.101	1.113	53.1465
	PCB-144	1.04e+07	1.29	y	0.82	41:10	1.110	1.105	1.116	52.2599
	PCB-147	1.08e+07	1.30	y	0.83	41:18	1.114	1.011	1.120	53.2827
	PCB-139/149	2.23e+07	1.27	y	0.84	41:34	1.121	1.115	1.127	108.587
-	PCB-140	1.03e+07	1.30	y	0.79	41:44	1.126	1.120	1.132	53.7371
-	PCB-134/143	4.28e+07	1.26	y	0.93	42:11	0.975	0.970	0.980	103.580

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-133/142	4.23e+07	1.24	y	0.95	42:28	0.982	0.977	0.987	100.502
	PCB-131	2.06e+07	1.23	y	0.91	42:37	0.985	0.981	0.991	50.5459
	PCB-146/165	5.49e+07	1.25	y	1.16	42:51	0.991	0.986	0.996	106.572
	PCB-132/161	5.10e+07	1.25	y	1.11	43:06	0.996	0.992	1.002	102.820
	PCB-153	2.89e+07	1.25	y	1.18	43:17	1.001	0.995	1.005	55.0461
	PCB-168	3.18e+07	1.25	y	1.37	43:29	1.005	1.000	1.010	52.1287
	PCB-141	2.21e+07	1.26	y	0.97	44:00	1.000	0.996	1.005	52.5484
	PCB-137	2.45e+07	1.27	y	1.07	44:24	1.009	1.004	1.014	53.0579
	PCB-130	2.03e+07	1.24	y	0.85	44:29	1.011	1.007	1.017	55.6198
	PCB-138/163/164	8.42e+07	1.26	y	1.23	44:53	1.001	0.996	1.006	164.528
	PCB-158/160	5.88e+07	1.25	y	1.29	45:06	1.006	1.001	1.011	109.130
	PCB-129	2.00e+07	1.25	y	0.92	45:20	1.011	1.007	1.017	51.7768
	PCB-166	2.93e+07	1.23	y	1.12	45:48	0.993	0.988	0.998	53.2063
	PCB-159	3.10e+07	1.26	y	1.16	46:08	1.000	0.995	1.005	53.8394
	PCB-128/162	5.20e+07	1.24	y	1.02	46:25	1.006	1.002	1.012	103.170
	PCB-167	3.06e+07	1.22	y	1.06	46:48	1.000	0.995	1.005	54.2549
	PCB-156	3.14e+07	1.23	y	1.18	48:06	1.000	0.995	1.005	53.4020
	PCB-157	3.06e+07	1.25	y	1.08	48:22	1.000	0.995	1.005	53.8105
	PCB-169	2.89e+07	1.26	y	1.11	50:34	1.001	0.995	1.005	54.7349
	PCB-188	2.39e+07	1.08	y	1.40	42:55	1.001	0.995	1.005	53.4548
	PCB-184	2.15e+07	1.07	y	1.24	43:21	1.011	1.006	1.016	54.5878
	PCB-179	2.22e+07	1.07	y	1.30	44:07	1.029	1.024	1.034	53.4335
	PCB-176	2.31e+07	1.03	y	1.36	44:35	1.040	1.035	1.045	53.2813
	PCB-186	2.21e+07	1.07	y	1.28	45:12	1.054	1.049	1.059	54.4472
	PCB-178	1.61e+07	1.05	y	0.94	45:42	1.066	1.061	1.071	53.9537
	PCB-175	1.72e+07	1.04	y	0.97	46:03	1.074	1.069	1.079	55.8843
	PCB-182/187	3.62e+07	1.07	y	1.01	46:13	1.078	1.073	1.083	112.134
	PCB-183	1.82e+07	1.08	y	1.08	46:32	1.085	1.080	1.090	52.9792
	PCB-185	1.68e+07	1.07	y	1.34	47:11	0.956	0.951	0.961	54.5734
	PCB-174	1.75e+07	1.05	y	1.34	47:33	0.963	0.958	0.968	57.0874
	PCB-181	1.64e+07	1.09	y	1.36	47:40	0.965	0.961	0.971	52.3257
	PCB-177	1.54e+07	1.08	y	1.24	47:49	0.969	0.964	0.974	53.8889
	PCB-171	1.62e+07	1.05	y	1.31	48:07	0.974	0.970	0.980	53.6043
	PCB-173	1.42e+07	1.06	y	1.16	48:32	0.983	0.979	0.989	53.3284
	PCB-172	1.54e+07	1.06	y	1.22	48:60	0.992	0.988	0.998	54.8097
	PCB-192	1.97e+07	1.07	y	1.53	49:11	0.996	0.991	1.001	56.2836
	PCB-180	1.80e+07	1.04	y	1.43	49:24	1.000	0.995	1.005	54.9057

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 1/2/15

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	2.11e+07	1.07	y	1.65	49:36	1.004	0.999	1.009	55.5078
	PCB-191	2.14e+07	1.06	y	1.67	49:52	1.010	1.004	1.014	55.7009
	PCB-170	1.50e+07	1.04	y	1.50	50:57	1.000	0.995	1.005	53.9897
	PCB-190	2.08e+07	1.08	y	2.02	51:07	1.004	0.998	1.008	55.7149
	PCB-189	2.13e+07	1.07	y	1.54	52:29	1.000	0.995	1.005	54.6824
	PCB-202	1.36e+07	0.93	y	1.04	48:19	1.000	0.995	1.005	52.5191
	PCB-201	1.45e+07	0.90	y	1.10	48:48	1.010	1.006	1.016	52.9811
	PCB-204	1.35e+07	0.92	y	0.99	48:58	1.014	1.009	1.019	54.7126
	PCB-197	1.45e+07	0.93	y	1.07	49:16	1.020	1.015	1.025	54.2829
	PCB-200	1.37e+07	0.90	y	1.02	50:10	1.039	1.032	1.044	54.0052
	PCB-198	9.62e+06	0.91	y	0.74	51:34	1.067	1.058	1.068	52.0489
	PCB-199	9.69e+06	0.90	y	0.73	51:40	1.070	1.060	1.070	53.4658
-	PCB-196/203	2.08e+07	0.92	y	0.77	51:57	1.075	1.066	1.076	108.344
-	PCB-195	2.02e+07	0.92	y	1.20	53:09	0.984	0.979	0.989	52.4999
	PCB-194	2.14e+07	0.91	y	1.25	54:02	1.000	0.995	1.005	53.5567
	PCB-205	2.57e+07	0.92	y	1.41	54:18	1.005	1.001	1.011	56.7100
	PCB-208	2.05e+07	1.30	y	0.96	53:17	1.000	0.995	1.005	49.4257
	PCB-207	2.06e+07	1.33	y	0.92	53:36	1.006	1.001	1.011	52.2097
	PCB-206	1.41e+07	1.36	y	1.03	55:39	1.000	0.995	1.005	51.7093
	PCB-209	1.74e+07	1.20	y	1.18	57:01	1.000	0.995	1.005	54.7634

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.96e+08	2.92	y	16:08	1.22	150.445	
Total Di-PCB	1.49e+09	1.64	y	20:08	1.21	1327.79	
Total Tri-PCB	3.27e+08	1.07	y	24:16	1.16	422.549	
Total Tri-PCB	7.74e+08	1.02	y	27:58	1.35	780.170	Sum:1202.72
Total Tetra-PCB	1.50e+09	0.76	y	28:01	1.17	2242.50	
Total Penta-PCB	8.14e+08	1.55	y	32:42	1.21	2238.53	
Total Penta-PCB	2.06e+08	1.62	y	42:15	1.26	300.472	Sum:2539.00
Total Hexa-PCB	1.71e+08	1.28	y	37:06	0.92	765.891	
Total Hexa-PCB	7.47e+08	1.26	y	42:11	1.08	1506.52	Sum:2272.41
Total Hepta-PCB	4.55e+08	1.08	y	42:55	1.27	1326.74	
Total Octa-PCB	1.10e+08	0.93	y	48:19	0.92	482.360	
Total Octa-PCB	6.95e+07	0.85	y	52:55	1.29	168.372	Sum:650.731
Total Nona-PCB	5.58e+07	1.30	y	53:17	0.96	154.983	
Total Deca-PCB	1.74e+07	1.20	y	57:01	1.18	54.7634	

Total PCB Conc:11847.0880080

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 1/2/15

Client ID: PCB CS3 14L2401 Filename: 150102E2 S:1 Acq: 2-JAN-15 12:27:30 ConCal: ST150102E2-1

Lab ID: ST150102E2-1 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.08e+08	3.35 y	0.89	16:07	0.621	0.622	0.628	114	114
13C-PCB-3	1.06e+08	3.44 y	0.93	18:45	0.722	0.721	0.729	108	108
13C-PCB-4	6.09e+07	1.60 y	0.55	20:05	0.773	0.772	0.780	105	105
13C-PCB-9	9.27e+07	1.62 y	0.83	21:53	0.843	0.840	0.848	106	106
13C-PCB-11	9.91e+07	1.62 y	0.94	25:16	0.973	0.968	0.978	99.9	99.9
13C-PCB-19	4.89e+07	1.13 y	0.53	24:14	0.934	0.929	0.939	86.8	86.8
13C-PCB-28	7.52e+07	1.08 y	0.89	29:07	1.004	0.999	1.009	103	103
13C-PCB-32	7.55e+07	1.10 y	0.81	27:10	1.046	1.041	1.051	87.6	87.6
13C-PCB-37	7.11e+07	1.08 y	0.83	32:59	1.137	1.131	1.143	104	104
13C-PCB-47	5.10e+07	0.81 y	0.74	32:03	0.871	0.867	0.875	95.4	95.4
13C-PCB-52	4.98e+07	0.80 y	0.71	31:32	0.857	0.853	0.861	97.8	97.8
13C-PCB-54	6.02e+07	0.82 y	0.85	27:59	0.761	0.758	0.766	98.7	98.7
13C-PCB-70	6.46e+07	0.81 y	0.94	35:34	0.966	0.961	0.971	95.2	95.2
13C-PCB-77	6.27e+07	0.83 y	0.89	39:40	1.078	1.073	1.083	97.7	97.7
13C-PCB-80	6.83e+07	0.83 y	0.96	35:59	0.978	0.972	0.982	98.7	98.7
13C-PCB-81	5.78e+07	0.83 y	0.84	39:04	1.062	1.057	1.067	96.0	96.0
13C-PCB-95	2.69e+07	1.64 y	0.74	35:51	0.913	0.908	0.918	96.7	96.7
13C-PCB-97	2.49e+07	1.63 y	0.69	38:50	0.989	0.984	0.994	96.5	96.5
13C-PCB-101	2.85e+07	1.69 y	0.79	37:32	0.956	0.951	0.961	97.2	97.2
13C-PCB-104	3.64e+07	1.64 y	1.00	32:41	0.832	0.829	0.837	97.8	97.8
13C-PCB-105	5.43e+07	1.62 y	1.24	43:06	0.929	0.924	0.934	112	112
13C-PCB-114	5.30e+07	1.60 y	1.21	42:14	0.911	0.905	0.915	112	112
13C-PCB-118	3.59e+07	1.68 y	0.98	41:35	1.059	1.054	1.064	97.4	97.4
13C-PCB-123	3.44e+07	1.66 y	0.95	41:24	1.054	1.049	1.059	97.0	97.0
13C-PCB-126	5.28e+07	1.63 y	1.16	45:20	0.977	0.972	0.982	116	116
13C-PCB-127	5.93e+07	1.63 y	1.34	43:26	0.936	0.931	0.941	112	112
13C-PCB-138	4.18e+07	1.31 y	1.04	44:50	0.967	0.961	0.971	102	102
13C-PCB-141	4.31e+07	1.29 y	1.07	43:59	0.948	0.943	0.953	102	102
13C-PCB-153	4.46e+07	1.29 y	1.11	43:15	0.933	0.927	0.937	102	102
13C-PCB-155	2.44e+07	1.32 y	0.83	37:05	0.944	0.939	0.949	78.4	78.4
13C-PCB-156	4.98e+07	1.29 y	1.24	48:05	1.037	1.032	1.042	102	102
13C-PCB-157	5.25e+07	1.32 y	1.31	48:21	1.043	1.037	1.047	102	102
13C-PCB-159	4.94e+07	1.32 y	1.20	46:07	0.994	0.989	0.999	105	105
13C-PCB-167	5.31e+07	1.28 y	1.32	46:48	1.009	1.004	1.014	102	102
13C-PCB-169	4.77e+07	1.28 y	1.22	50:32	1.090	1.082	1.092	100.0	100.0
13C-PCB-170	1.85e+07	0.45 y	0.54	50:56	1.098	1.089	1.101	88.1	88.1
13C-PCB-180	2.30e+07	0.45 y	0.67	49:23	1.065	1.059	1.069	86.7	86.7
13C-PCB-188	3.18e+07	0.46 y	0.94	42:53	0.925	0.919	0.929	86.5	86.5
13C-PCB-189	2.52e+07	0.47 y	0.72	52:28	1.131	1.120	1.132	89.8	89.8
13C-PCB-194	3.20e+07	0.93 y	0.81	54:01	0.995	0.990	1.000	95.7	95.7
13C-PCB-202	2.48e+07	0.91 y	0.83	48:18	1.041	1.036	1.046	76.0	76.0
13C-PCB-206	2.64e+07	0.80 y	0.66	55:38	1.025	1.021	1.031	97.2	97.2
13C-PCB-208	4.31e+07	0.77 y	1.12	53:16	0.981	0.976	0.986	93.0	93.0
13C-PCB-209	2.71e+07	1.23 y	0.61	57:00	1.050	1.044	1.054	107	107

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.18e+07	0.80 y	1.01	37:51	1.029	1.023	1.033	99.3	99.3
13C-PCB-178	2.24e+07	0.47 y	0.63	45:41	0.985	0.979	0.989	90.3	90.3

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.18e+07	0.80 y	1.20	37:51	0.969	0.963	0.973	103	103
13C-PCB-178	2.24e+07	0.47 y	0.94	45:41	0.925	0.920	0.930	104	104

RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	1.06e+08	1.60 y	1.00	25:58	100
13C-PCB-31	8.20e+07	1.05 y	1.00	29:01	100
13C-PCB-60	7.19e+07	0.82 y	1.00	36:48	100
13C-PCB-111	3.74e+07	1.61 y	1.00	39:16	100
13C-PCB-128	3.93e+07	1.25 y	1.00	46:23	100
13C-PCB-205	4.13e+07	0.92 y	1.00	54:17	100

Analyst: DMS

Date: 1/2/15

Vista Analytical Laboratory - Injection Log Run file: 150102E2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150102E2	1	ST150102E2-1	DMS	2-JAN-15	12:27:30	ST150102E2-1	NA
150102E2	2	SOLVENT BLANK	DMS	2-JAN-15	13:32:15	ST150102E2-1	NA
150102E2	3	SOLVENT BLANK	DMS	2-JAN-15	14:37:04	ST150102E2-1	NA
150102E2	4	B5A0001-BS1	DMS	2-JAN-15	15:41:55	ST150102E2-1	NA
150102E2	5	SOLVENT BLANK	DMS	2-JAN-15	16:46:44	ST150102E2-1	NA
150102E2	6	B5A0001-BLK2	DMS	2-JAN-15	17:51:35	ST150102E2-1	NA
150102E2	7	1400984-04	DMS	2-JAN-15	18:56:24	ST150102E2-1	NA
150102E2	8	1400934-02RE1	DMS	2-JAN-15	20:01:15	ST150102E2-1	NA
150102E2	9	1400951-01@10X	DMS	2-JAN-15	21:06:04	ST150102E2-1	NA
150102E2	10	1400951-04@10X	DMS	2-JAN-15	22:10:55	ST150102E2-1	NA
150102E2	11	1400900-18@10X	DMS	2-JAN-15	23:15:38	ST150102E2-1	NA
150102E2	12	SOLVENT BLANK	DMS	3-JAN-15	00:20:29	ST150102E2-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150102E2-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	–	–
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	–	
Manual integrations included?	–	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: ___ 11/4/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Inst. ID. VG-7

Data filename: 141016D1

			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7
			10	0.25	0.50	2.0	40	200
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
1,2,3,7,8-PeCDD	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
1,2,3,4,7,8-HxCDD	1.09	5.48 %	1.08	1.18	1.07	1.00	1.08	1.12
1,2,3,6,7,8-HxCDD	1.07	5.59 %	1.06	1.06	1.07	0.96	1.13	1.12
1,2,3,7,8,9-HxCDD	0.93	4.12 %	0.92	0.98	0.95	0.86	0.93	0.94
1,2,3,4,6,7,8-HpCDD	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
OCDD	0.95	4.99 %	0.97	0.96	0.97	0.85	0.97	0.98
2,3,7,8-TCDF	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
1,2,3,7,8-PeCDF	1.09	5.09 %	1.10	1.13	1.05	1.00	1.11	1.14
2,3,4,7,8-PeCDF	1.04	3.90 %	1.05	1.04	1.06	0.96	1.07	1.08
1,2,3,4,7,8-HxCDF	1.39	3.27 %	1.40	1.42	1.37	1.31	1.42	1.42
1,2,3,6,7,8-HxCDF	1.26	5.39 %	1.26	1.34	1.29	1.14	1.26	1.30
2,3,4,6,7,8-HxCDF	1.30	4.20 %	1.28	1.30	1.33	1.20	1.34	1.35
1,2,3,7,8,9-HxCDF	1.19	3.60 %	1.16	1.25	1.18	1.13	1.20	1.23
1,2,3,4,6,7,8-HpCDF	1.62	4.07 %	1.59	1.67	1.66	1.49	1.64	1.64
1,2,3,4,7,8,9-HpCDF	1.53	4.58 %	1.54	1.58	1.55	1.39	1.53	1.57
OCDF	1.10	4.20 %	1.11	1.09	1.13	1.01	1.13	1.14
13C-2,3,7,8-TCDD	1.07	5.97 %	1.05	1.00	1.07	1.04	1.10	1.18
13C-1,2,3,7,8-PeCDD	1.24	12.79 %	1.06	1.09	1.23	1.23	1.34	1.49
13C-1,2,3,4,7,8-HxCDD	0.72	7.50 %	0.70	0.69	0.70	0.70	0.73	0.83
13C-1,2,3,6,7,8-HxCDD	0.74	6.26 %	0.72	0.71	0.71	0.71	0.73	0.83
13C-1,2,3,7,8,9-HxCDD	0.86	6.66 %	0.83	0.81	0.83	0.83	0.86	0.97
13C-1,2,3,4,6,7,8-HpCDD	0.64	7.66 %	0.63	0.61	0.61	0.62	0.66	0.74
13C-OCDD	0.78	10.54 %	0.70	0.73	0.76	0.77	0.79	0.94
13C-2,3,7,8-TCDF	0.92	3.07 %	0.93	0.89	0.91	0.91	0.94	0.97
13C-1,2,3,7,8-PeCDF	0.95	10.44 %	0.86	0.87	0.90	0.95	1.01	1.12
13C-2,3,4,7,8-PeCDF	0.97	10.58 %	0.89	0.89	0.91	0.96	1.02	1.15
13C-1,2,3,4,7,8-HxCDF	0.99	7.56 %	0.92	0.94	0.96	0.98	1.01	1.13
13C-1,2,3,6,7,8-HxCDF	1.10	7.86 %	1.07	1.00	1.05	1.09	1.12	1.25
13C-2,3,4,6,7,8-HxCDF	1.03	5.39 %	0.97	1.00	1.02	1.01	1.04	1.13
13C-1,2,3,7,8,9-HxCDF	0.86	7.21 %	0.84	0.82	0.82	0.83	0.87	0.98
13C-1,2,3,4,6,7,8-HpCDF	0.71	7.44 %	0.70	0.69	0.67	0.69	0.72	0.82
13C-1,2,3,4,7,8,9-HpCDF	0.71	9.22 %	0.65	0.69	0.67	0.67	0.74	0.83
13C-OCDF	0.87	11.25 %	0.82	0.80	0.83	0.85	0.88	1.06
37Cl-2,3,7,8-TCDD	1.21	11.67 %	1.22	1.08	1.03	1.24	1.27	1.43
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

ms 10/17/14
CG 10/17/14

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	2.08e+06	0.73 y	26:60	-	1.11
2	Unk	1,2,3,7,8-PeCDD	50.00	8.78e+06	0.61 y	31:30	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	50.00	7.82e+06	1.26 y	34:50	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.94e+06	1.25 y	34:57	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	50.00	7.97e+06	1.24 y	35:15	-	0.92
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	7.29e+06	1.04 y	38:42	-	1.12
7	Unk	OCDD	100.00	1.40e+07	0.89 y	42:02	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.78e+06	0.80 y	26:13	-	1.00
9	Unk	1,2,3,7,8-PeCDF	50.00	1.40e+07	1.59 y	30:20	-	1.10
10	Unk	2,3,4,7,8-PeCDF	50.00	1.38e+07	1.59 y	31:14	-	1.05
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.34e+07	1.29 y	33:56	-	1.40
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.40e+07	1.29 y	34:04	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.29e+07	1.31 y	34:40	-	1.28
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.01e+07	1.27 y	35:39	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.16e+07	1.08 y	37:30	-	1.59
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.04e+07	1.07 y	39:16	-	1.54
17	Unk	OCDF	100.00	1.88e+07	0.91 y	42:16	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	1.87e+07	0.79 y	26:58	-	1.05
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.90e+07	0.63 y	31:29	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.44e+07	1.25 y	34:49	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.50e+07	1.25 y	34:56	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.72e+07	1.23 y	35:14	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.30e+07	1.07 y	38:42	-	0.63
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:02	-	0.70
43	IS	13C-2,3,7,8-TCDF	100.00	2.77e+07	0.74 y	26:12	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.54e+07	1.55 y	30:19	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.61 y	31:13	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.92e+07	0.51 y	33:55	-	0.92
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.23e+07	0.50 y	34:03	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	34:39	-	0.97
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.73e+07	0.51 y	35:38	-	0.84
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.46e+07	0.43 y	37:29	-	0.70
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.35e+07	0.45 y	39:15	-	0.65
52	IS	13C-OCDF	200.00	3.39e+07	0.92 y	42:15	-	0.82
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.18e+06		26:59	-	1.22
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.79e+07	0.80 y	26:24	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.97e+07	0.78 y	24:58	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.08e+07	0.51 y	34:21	-	1.00

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	5.01e+04	0.71	y	27:03	-	1.36
2	Unk	1,2,3,7,8-PeCDD	1.25	1.89e+05	0.58	y	31:32	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.80e+05	1.38	y	34:52	-	1.18
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.66e+05	1.38	y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.76e+05	1.42	y	35:17	-	0.98
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.40e+05	0.92	y	38:44	-	1.04
7	Unk	OCDD	2.50	3.13e+05	0.92	y	42:04	-	0.96
8	Unk	2,3,7,8-TCDF	0.25	6.52e+04	0.82	y	26:17	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1.25	3.11e+05	1.49	y	30:22	-	1.13
10	Unk	2,3,4,7,8-PeCDF	1.25	2.91e+05	1.54	y	31:15	-	1.04
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.95e+05	1.36	y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.95e+05	1.26	y	34:06	-	1.34
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.89e+05	1.31	y	34:43	-	1.30
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.25e+05	1.36	y	35:41	-	1.25
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.54e+05	1.14	y	37:32	-	1.67
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.39e+05	1.08	y	39:18	-	1.58
17	Unk	OCDF	2.50	3.84e+05	0.91	y	42:18	-	1.09
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79	y	27:02	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.61e+07	0.64	y	31:32	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.24	y	34:51	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.31	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.44e+07	1.29	y	35:16	-	0.81
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.07e+07	1.03	y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.60e+07	0.89	y	42:03	-	0.73
43	IS	13C-2,3,7,8-TCDF	100.00	2.24e+07	0.75	y	26:16	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.20e+07	1.59	y	30:21	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.24e+07	1.61	y	31:15	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.66e+07	0.52	y	33:57	-	0.94
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.77e+07	0.51	y	34:05	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.77e+07	0.51	y	34:42	-	1.00
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.45e+07	0.52	y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.22e+07	0.44	y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.21e+07	0.43	y	39:17	-	0.69
52	IS	13C-OCDF	200.00	2.81e+07	0.92	y	42:17	-	0.80
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	4.00e+04			27:03	-	1.08
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.48e+07	0.80	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.52e+07	0.78	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.77e+07	0.53	y	34:23	-	1.00

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	9.47e+04	0.71	y	27:03	-	1.22
2	Unk	1,2,3,7,8-PeCDD	2.50	4.17e+05	0.58	y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.52e+05	1.23	y	34:52	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.60e+05	1.19	y	34:59	-	1.07
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.72e+05	1.18	y	35:16	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.28e+05	1.04	y	38:44	-	1.14
7	Unk	OCDD	5.00	7.00e+05	0.91	y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	0.50	1.35e+05	0.76	y	26:17	-	1.15
9	Unk	1,2,3,7,8-PeCDF	2.50	6.14e+05	1.75	y	30:22	-	1.05
10	Unk	2,3,4,7,8-PeCDF	2.50	6.26e+05	1.44	y	31:15	-	1.06
11	Unk	1,2,3,4,7,8-HxCDF	2.50	6.24e+05	1.23	y	33:58	-	1.37
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.42e+05	1.32	y	34:06	-	1.29
13	Unk	2,3,4,6,7,8-HxCDF	2.50	6.41e+05	1.24	y	34:42	-	1.33
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.56e+05	1.22	y	35:40	-	1.18
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.07	y	37:32	-	1.66
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.91e+05	1.14	y	39:17	-	1.55
17	Unk	OCDF	5.00	8.91e+05	0.93	y	42:17	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.56e+07	0.78	y	27:02	-	1.07
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.79e+07	0.63	y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.32e+07	1.27	y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.35e+07	1.26	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.56e+07	1.27	y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.05	y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.89e+07	0.89	y	42:03	-	0.76
43	IS	13C-2,3,7,8-TCDF	100.00	2.36e+07	0.78	y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.34e+07	1.58	y	30:21	-	0.90
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.37e+07	1.54	y	31:14	-	0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.82e+07	0.52	y	33:57	-	0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.99e+07	0.52	y	34:05	-	1.05
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.93e+07	0.52	y	34:41	-	1.02
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.55e+07	0.53	y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.26e+07	0.43	y	37:31	-	0.67
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44	y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.15e+07	0.89	y	42:17	-	0.83
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	7.54e+04			27:03	-	1.03
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.46e+07	0.79	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.60e+07	0.77	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.89e+07	0.52	y	34:22	-	1.00

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.13e+05	0.82	y	27:03	-	1.06
2	Unk	1,2,3,7,8-PeCDD	10.00	1.47e+06	0.59	y	31:32	-	0.84
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.26e+06	1.28	y	34:52	-	1.00
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.24e+06	1.26	y	34:59	-	0.96
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.30e+06	1.28	y	35:17	-	0.86
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.04	y	38:44	-	1.07
7	Unk	OCDD	20.00	2.38e+06	0.87	y	42:03	-	0.85
8	Unk	2,3,7,8-TCDF	2.00	4.47e+05	0.78	y	26:17	-	0.99
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.55	y	30:22	-	1.00
10	Unk	2,3,4,7,8-PeCDF	10.00	2.32e+06	1.57	y	31:15	-	0.96
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.31e+06	1.29	y	33:58	-	1.31
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.24e+06	1.28	y	34:06	-	1.14
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.19e+06	1.30	y	34:42	-	1.20
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.69e+06	1.33	y	35:41	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.86e+06	1.10	y	37:32	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.69e+06	1.09	y	39:17	-	1.39
17	Unk	OCDF	20.00	3.11e+06	0.93	y	42:17	-	1.01
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79	y	27:02	-	1.04
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.74e+07	0.63	y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.26e+07	1.28	y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.29e+07	1.24	y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.51e+07	1.23	y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.13e+07	1.05	y	38:43	-	0.62
42	IS	13C-OCDD	200.00	2.79e+07	0.88	y	42:03	-	0.77
43	IS	13C-2,3,7,8-TCDF	100.00	2.26e+07	0.77	y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.36e+07	1.54	y	30:21	-	0.95
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.40e+07	1.57	y	31:14	-	0.96
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.77e+07	0.50	y	33:57	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.97e+07	0.51	y	34:05	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52	y	34:41	-	1.01
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.50e+07	0.52	y	35:40	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.24e+07	0.43	y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.22e+07	0.43	y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.07e+07	0.90	y	42:17	-	0.85
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.51e+05			27:03	-	1.24
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.49e+07	0.77	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.80e+07	0.52	y	34:22	-	1.00

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	6.36e+06	0.79 y	27:03	-	1.16
2	Unk	1,2,3,7,8-PeCDD	200.00	3.08e+07	0.61 y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	200.00	2.57e+07	1.25 y	34:52	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	200.00	2.66e+07	1.26 y	34:59	-	1.13
5	Unk	1,2,3,7,8,9-HxCDD	200.00	2.59e+07	1.24 y	35:17	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.46e+07	1.04 y	38:44	-	1.14
7	Unk	OCDD	400.00	5.00e+07	0.89 y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	40.00	8.92e+06	0.77 y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	200.00	4.90e+07	1.58 y	30:22	-	1.11
10	Unk	2,3,4,7,8-PeCDF	200.00	4.76e+07	1.60 y	31:15	-	1.07
11	Unk	1,2,3,4,7,8-HxCDF	200.00	4.66e+07	1.28 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	200.00	4.56e+07	1.28 y	34:06	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	200.00	4.54e+07	1.26 y	34:42	-	1.34
14	Unk	1,2,3,7,8,9-HxCDF	200.00	3.40e+07	1.28 y	35:40	-	1.20
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.84e+07	1.09 y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.69e+07	1.08 y	39:17	-	1.53
17	Unk	OCDF	400.00	6.50e+07	0.92 y	42:18	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.37e+07	0.81 y	27:02	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.63 y	31:31	-	1.34
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.19e+07	1.25 y	34:51	-	0.73
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.18e+07	1.26 y	34:58	-	0.73
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.40e+07	1.24 y	35:16	-	0.86
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.08e+07	1.07 y	38:43	-	0.66
42	IS	13C-OCDD	200.00	2.58e+07	0.89 y	42:03	-	0.79
43	IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.77 y	26:16	-	0.94
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.21e+07	1.61 y	30:21	-	1.01
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.23e+07	1.57 y	31:14	-	1.02
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.64e+07	0.51 y	33:57	-	1.01
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.82e+07	0.50 y	34:05	-	1.12
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.69e+07	0.51 y	34:41	-	1.04
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.52 y	35:40	-	0.87
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.45 y	37:31	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.20e+07	0.44 y	39:16	-	0.74
52	IS	13C-OCDF	200.00	2.87e+07	0.89 y	42:17	-	0.88
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	6.31e+06		27:03	-	1.27
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.24e+07	0.82 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.19e+07	0.79 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.63e+07	0.51 y	34:22	-	1.00

Filename: 141016D1 S: 7 Acquired: 16-OCT-14 15:56:26
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-6 1613 CS5 14I1823

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	200.00	3.39e+07	0.77 y	27:03	-	1.20
2	Unk	1,2,3,7,8-PeCDD	1000.00	1.69e+08	0.62 y	31:32	-	0.95
3	Unk	1,2,3,4,7,8-HxCDD	1000.00	1.51e+08	1.26 y	34:52	-	1.12
4	Unk	1,2,3,6,7,8-HxCDD	1000.00	1.51e+08	1.26 y	34:59	-	1.12
5	Unk	1,2,3,7,8,9-HxCDD	1000.00	1.48e+08	1.26 y	35:17	-	0.94
6	Unk	1,2,3,4,6,7,8-HpCDD	1000.00	1.39e+08	1.04 y	38:43	-	1.17
7	Unk	OCDD	2000.00	2.98e+08	0.90 y	42:03	-	0.98
8	Unk	2,3,7,8-TCDF	200.00	4.44e+07	0.78 y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	1000.00	2.73e+08	1.58 y	30:22	-	1.14
10	Unk	2,3,4,7,8-PeCDF	1000.00	2.66e+08	1.60 y	31:15	-	1.08
11	Unk	1,2,3,4,7,8-HxCDF	1000.00	2.60e+08	1.27 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1000.00	2.64e+08	1.27 y	34:06	-	1.30
13	Unk	2,3,4,6,7,8-HxCDF	1000.00	2.48e+08	1.29 y	34:42	-	1.35
14	Unk	1,2,3,7,8,9-HxCDF	1000.00	1.95e+08	1.28 y	35:40	-	1.23
15	Unk	1,2,3,4,6,7,8-HpCDF	1000.00	2.17e+08	1.09 y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	1000.00	2.10e+08	1.10 y	39:17	-	1.57
17	Unk	OCDF	2000.00	3.92e+08	0.91 y	42:17	-	1.14
36	IS	13C-2,3,7,8-TCDD	100.00	1.41e+07	0.77 y	27:02	-	1.18
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.78e+07	0.65 y	31:31	-	1.49
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.35e+07	1.26 y	34:51	-	0.83
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.34e+07	1.26 y	34:58	-	0.83
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.57e+07	1.27 y	35:15	-	0.97
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.19e+07	1.05 y	38:43	-	0.74
42	IS	13C-OCDD	200.00	3.03e+07	0.87 y	42:03	-	0.94
43	IS	13C-2,3,7,8-TCDF	100.00	2.06e+07	0.74 y	26:15	-	0.97
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.39e+07	1.59 y	30:21	-	1.12
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.46e+07	1.62 y	31:14	-	1.15
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.83e+07	0.52 y	33:57	-	1.13
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.03e+07	0.52 y	34:05	-	1.25
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.84e+07	0.51 y	34:41	-	1.13
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.59e+07	0.51 y	35:39	-	0.98
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.32e+07	0.43 y	37:31	-	0.82
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.34e+07	0.44 y	39:16	-	0.83
52	IS	13C-OCDF	200.00	3.45e+07	0.89 y	42:17	-	1.06
53	C/Up	37Cl-2,3,7,8-TCDD	200.00	3.41e+07		27:03	-	1.43
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.19e+07	0.82 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.14e+07	0.76 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.62e+07	0.52 y	34:22	-	1.00

Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Inst. ID. VG-7

Data filename: 141016D1			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7
			10	0.25	0.50	2.0	40	200
	RRT Limits							
Name	Lower	Upper	RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.000	1.000
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.001	1.000	1.000	1.000	1.000
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.001	1.000	1.001	1.001	1.001	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.001	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.001	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.021	1.021	1.021	1.021	1.021	1.021
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.192	1.191	1.191	1.191	1.191	1.191
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.026	1.026	1.026	1.026	1.026	1.026
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.126	1.126	1.126	1.126	1.126
13C-OCDD	1.085	-1.365	1.224	1.223	1.223	1.223	1.223	1.223
13C-2,3,7,8-TCDF	0.923	-1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.148	1.147	1.147	1.147	1.147	1.147
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.182	1.181	1.180	1.180	1.180	1.181
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.037	1.037	1.038	1.038	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.091	1.091	1.091	1.091	1.091	1.091
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.143	1.142	1.143	1.143	1.143	1.142
13C-OCDF	1.091	-1.371	1.230	1.230	1.230	1.230	1.230	1.230
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.022	1.022	1.022	1.022	1.022
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.11
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.11
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.02
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.02
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.12
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.12
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.00
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.00
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	1.07
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	1.07
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	1.07
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	1.07
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.28
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.28
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.57
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.57

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.36
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.36
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.94
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.94
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.07
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.07
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.04
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.04
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.16
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.16
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.08
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.08
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.08
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.08
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.33
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.33
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.62
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.62

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.22
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.22
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.03
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.03
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.14
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.14
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.15
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.15
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.05
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.05
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.05
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.05
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.30
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.30
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.60
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.60

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.06
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.06
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.84
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.84
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	0.94
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	0.94
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.07
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.07
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	0.99
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	0.99
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	0.98
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	0.98
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	0.98
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	0.98
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.19
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.19
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.44
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.44

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.16
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.16
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.93
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.93
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.04
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.04
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.14
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.14
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.08
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.08
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.09
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.09
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.09
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.09
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.31
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.31
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.59
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.59

Filename: 141016D1 S: 7 Acquired: 16-OCT-14 15:56:26
Run: 141016D1 Analyte: Cal: 1613VG7-10-16-14 Results:
Sample text: ST141016D1-6 1613 CS5 14I1823

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	-	n	-	-	1.20
19	Tot	TCDD EMPC	0.00	-	-	n	-	-	1.20
20	Tot	Total Penta-Dioxins	0.00	-	-	n	-	-	0.95
21	Tot	PeCDD EMPC	0.00	-	-	n	-	-	0.95
22	Tot	Total Hexa-Dioxins	0.00	-	-	n	-	-	1.06
23	Tot	HxCDD EMPC	0.00	-	-	n	-	-	1.06
24	Tot	Total Hepta-Dioxins	0.00	-	-	n	-	-	1.17
25	Tot	HpCDD EMPC	0.00	-	-	n	-	-	1.17
26	Tot	Total Tetra-Furans	0.00	-	-	n	-	-	1.08
27	Tot	TCDF EMPC	0.00	-	-	n	-	-	1.08
28	Tot	1st Func. Penta-Furans	0.00	-	-	n	-	-	1.11
29	Tot	1st Func. PeCDF EMPC	0.00	-	-	n	-	-	1.11
30	Tot	Total Penta-Furans	0.00	-	-	n	-	-	1.11
31	Tot	PeCDF EMPC	0.00	-	-	n	-	-	1.11
32	Tot	Total Hexa-Furans	0.00	-	-	n	-	-	1.32
33	Tot	HxCDF EMPC	0.00	-	-	n	-	-	1.32
34	Tot	Total Hepta-Furans	0.00	-	-	n	-	-	1.60
35	Tot	HpCDF EMPC	0.00	-	-	n	-	-	1.60

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 141016D1 Analyte: Cal: 1613VG7-10-16-1 Inst. ID. VG-7

Data filename: 141016D1

Name	Mean RRF	%RSD	Samp# 1 10 RRF#1	Samp# 3 0.25 RRF#2	Samp# 4 0.50 RRF#3	Samp# 5 2.0 RRF#4	Samp# 6 40 RRF#5	Samp# 7 200 RRF#6
Total Tetra-Dioxins	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
TCDD EMPC	1.18	8.84 %	1.11	1.36	1.22	1.06	1.16	1.20
Total Penta-Dioxins	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
PeCDD EMPC	0.92	4.24 %	0.93	0.94	0.93	0.84	0.93	0.95
Total Hexa-Dioxins	1.02	4.51 %	1.02	1.07	1.03	0.94	1.04	1.06
HxCDD EMPC	1.02	4.51 %	1.02	1.07	1.03	0.94	1.04	1.06
Total Hepta-Dioxins	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
HpCDD EMPC	1.12	4.25 %	1.12	1.04	1.14	1.07	1.14	1.17
Total Tetra-Furans	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
TCDF EMPC	1.08	6.64 %	1.00	1.16	1.15	0.99	1.08	1.08
1st Func. Penta-Furans	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
1st Func. PeCDF EMPC	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
Total Penta-Furans	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
PeCDF EMPC	1.06	4.30 %	1.07	1.08	1.05	0.98	1.09	1.11
Total Hexa-Furans	1.29	3.86 %	1.28	1.33	1.30	1.19	1.31	1.32
HxCDF EMPC	1.29	3.86 %	1.28	1.33	1.30	1.19	1.31	1.32
Total Hepta-Furans	1.57	4.23 %	1.57	1.62	1.60	1.44	1.59	1.60
HpCDF EMPC	1.57	4.23 %	1.57	1.62	1.60	1.44	1.59	1.60

Vista Analytical Laboratory - Injection Log Run file: 141016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141016D1	1	ST141016D1-1	MAS	16-OCT-14	11:05:57	ST141016D1-1	NA
141016D1	2	SOLVENT BLANK	MAS	16-OCT-14	11:54:17	ST141016D1-1	NA
141016D1	3	ST141016D1-2	MAS	16-OCT-14	12:42:43	ST141016D1-1	NA
141016D1	4	ST141016D1-3	MAS	16-OCT-14	13:31:08	ST141016D1-1	NA
141016D1	5	ST141016D1-4	MAS	16-OCT-14	14:19:34	ST141016D1-1	NA
141016D1	6	ST141016D1-5	MAS	16-OCT-14	15:08:00	ST141016D1-1	NA
141016D1	7	ST141016D1-6	MAS	16-OCT-14	15:56:26	ST141016D1-1	NA
141016D1	8	SOLVENT BLANK	MAS	16-OCT-14	16:44:52	ST141016D1-1	NA
141016D1	9	SS141016D1-1	MAS	16-OCT-14	17:33:17	ST141016D1-1	NA
141016D1	10	SOLVENT BLANK	MAS	16-OCT-14	18:21:38	ST141016D1-1	NA

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 140620E1 Analyte: Cal: PCBVG8-6-20-14 Inst. ID. VG-8

Data filename: 140620E1

			Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
			0.25	1.0	2.5	50	400	750
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
PCB-1	1.25	8.70 %	1.37	1.26	1.26	1.31	1.05	1.27
PCB-2	1.18	8.61 %	1.27	1.26	1.14	1.24	1.00	1.18
PCB-3	1.22	8.48 %	1.31	1.29	1.23	1.26	1.02	1.20
PCB-4/10	1.55	8.01 %	1.67	1.64	1.55	1.61	1.32	1.54
PCB-7/9	1.27	8.90 %	1.43	1.30	1.26	1.30	1.08	1.25
PCB-6	1.26	11.24 %	1.49	1.29	1.26	1.26	1.06	1.20
PCB-5/8	1.23	6.34 %	1.29	1.29	1.23	1.28	1.08	1.23
PCB-14	1.23	11.07 %	1.45	1.24	1.21	1.27	1.03	1.20
PCB-11	1.16	9.82 %	1.33	1.19	1.16	1.18	0.97	1.13
PCB-12/13	1.10	7.82 %	1.20	1.12	1.10	1.14	0.94	1.09
PCB-15	1.21	10.03 %	1.40	1.19	1.22	1.24	1.02	1.18
PCB-19	1.30	14.66 %	1.63	1.31	1.26	1.28	1.05	1.23
PCB-30	1.83	9.12 %	2.06	1.88	1.82	1.87	1.54	1.82
PCB-18	0.86	12.65 %	1.03	0.90	0.85	0.87	0.70	0.81
PCB-17	0.90	11.34 %	1.04	0.96	0.89	0.92	0.74	0.86
PCB-24/27	1.18	9.77 %	1.33	1.20	1.18	1.22	0.98	1.15
PCB-16/32	1.03	12.28 %	1.23	1.08	1.02	1.03	0.84	0.98
PCB-34	1.26	11.67 %	1.47	1.39	1.25	1.23	1.07	1.16
PCB-23	1.31	14.20 %	1.54	1.27	1.41	1.44	1.02	1.19
PCB-29	1.33	17.31 %	1.74	1.32	1.32	1.36	1.06	1.18
PCB-26	1.29	15.40 %	1.62	1.31	1.32	1.31	1.03	1.16
PCB-25	1.34	13.58 %	1.63	1.37	1.36	1.38	1.09	1.21
PCB-31	1.42	18.76 %	1.87	1.40	1.46	1.41	1.05	1.32
PCB-28	1.38	11.74 %	1.60	1.43	1.41	1.45	1.18	1.20
PCB-20/21/33	1.31	12.96 %	1.59	1.33	1.32	1.34	1.08	1.21
PCB-22	1.32	10.73 %	1.50	1.38	1.35	1.39	1.09	1.23
PCB-36	1.38	8.85 %	1.47	1.49	1.38	1.43	1.16	1.32
PCB-39	1.42	9.22 %	1.58	1.49	1.41	1.46	1.19	1.39
PCB-38	1.35	7.47 %	1.39	1.45	1.36	1.41	1.16	1.35
PCB-35	1.38	8.01 %	1.52	1.38	1.35	1.44	1.19	1.38
PCB-37	1.39	9.07 %	1.58	1.40	1.39	1.41	1.18	1.39
PCB-54	1.20	8.53 %	1.29	1.28	1.18	1.24	1.01	1.18
PCB-50	0.97	9.30 %	1.08	1.01	0.96	0.99	0.81	0.95
PCB-53	1.19	11.55 %	1.42	1.24	1.14	1.19	1.00	1.14
PCB-51	1.15	7.40 %	1.21	1.18	1.17	1.23	0.99	1.14
PCB-45	0.97	8.59 %	1.04	0.99	1.00	1.02	0.81	0.93
PCB-46	0.95	15.50 %	1.21	0.98	0.90	0.95	0.77	0.88
PCB-52/69	1.28	8.47 %	1.35	1.33	1.33	1.35	1.07	1.23
PCB-73	1.37	6.52 %	1.42	1.39	1.31	1.43	1.22	1.45
PCB-43/49	1.11	10.59 %	1.30	1.13	1.10	1.13	0.94	1.08
PCB-47	1.13	11.84 %	1.34	1.18	1.04	1.20	0.96	1.07

DMS 6/23/14

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PCB-48/75	1.30	10.70 %	1.52	1.28	1.33	1.31	1.08	1.30
PCB-65	1.33	13.12 %	1.67	1.30	1.28	1.32	1.15	1.30
PCB-62	1.29	10.74 %	1.39	1.40	1.30	1.38	1.03	1.25
PCB-44	0.94	10.79 %	1.08	0.90	0.98	0.98	0.78	0.92
PCB-42/59	1.22	9.45 %	1.36	1.25	1.21	1.26	1.01	1.21
PCB-41/64/71/72	1.31	8.83 %	1.48	1.32	1.28	1.35	1.12	1.33
PCB-68	1.49	9.40 %	1.63	1.59	1.48	1.51	1.23	1.46
PCB-40	0.82	12.75 %	0.99	0.83	0.82	0.83	0.67	0.78
PCB-57	1.11	10.20 %	1.26	1.18	1.11	1.15	0.92	1.07
PCB-67	1.07	9.89 %	1.05	1.20	1.12	1.15	0.90	1.03
PCB-58	1.10	11.05 %	1.29	1.13	1.12	1.09	0.91	1.07

PCB-63	1.12	7.49 %	1.17	1.17	1.14	1.16	0.95	1.12
PCB-74	1.20	8.89 %	1.31	1.27	1.22	1.25	1.00	1.18
PCB-61/70	1.08	8.22 %	1.18	1.13	1.08	1.10	0.92	1.06
PCB-76/66	1.14	10.54 %	1.31	1.18	1.12	1.17	0.94	1.10
PCB-80	1.28	9.96 %	1.46	1.33	1.28	1.28	1.07	1.24
PCB-55	1.11	7.19 %	1.16	1.17	1.10	1.14	0.96	1.12
PCB-56/60	1.09	10.58 %	1.26	1.12	1.07	1.09	0.91	1.07
PCB-79	1.12	8.90 %	1.26	1.11	1.12	1.15	0.95	1.13
PCB-78	1.24	11.08 %	1.43	1.32	1.20	1.27	1.02	1.18
PCB-81	1.38	9.94 %	1.51	1.50	1.41	1.41	1.14	1.31
PCB-77	1.21	8.98 %	1.33	1.26	1.22	1.25	1.02	1.17
PCB-104	1.26	10.21 %	1.42	1.31	1.28	1.27	1.03	1.22
PCB-96	1.09	9.49 %	1.24	1.12	1.08	1.10	0.92	1.10
PCB-103	0.93	8.17 %	1.00	0.98	0.89	0.95	0.80	0.98
PCB-100	1.00	7.45 %	1.03	1.08	0.97	1.01	0.87	1.05
PCB-94	1.11	11.35 %	1.31	1.11	1.11	1.13	0.91	1.08
PCB-95/98/102	1.21	9.28 %	1.36	1.25	1.18	1.30	1.04	1.17
PCB-93	1.13	18.48 %	1.36	1.34	1.21	0.95	0.84	1.08
PCB-88/91	1.02	8.29 %	1.00	1.06	1.02	1.15	0.89	1.00
PCB-121	1.90	16.11 %	2.27	2.21	1.94	1.69	1.46	1.85
PCB-84/92	1.05	9.56 %	1.15	1.13	1.05	1.09	0.87	1.02
PCB-89	1.02	10.73 %	1.15	1.04	1.02	1.08	0.83	0.98
PCB-90/101	1.19	9.91 %	1.34	1.26	1.19	1.21	0.99	1.15
PCB-113	1.35	10.72 %	1.54	1.26	1.32	1.51	1.16	1.33
PCB-99	1.29	12.88 %	1.43	1.48	1.35	1.20	1.03	1.24
PCB-119	1.72	7.60 %	1.78	1.88	1.72	1.73	1.48	1.73
PCB-108/112	1.29	7.44 %	1.31	1.39	1.29	1.33	1.10	1.30
PCB-83	1.52	7.96 %	1.66	1.53	1.51	1.58	1.30	1.54
PCB-97	1.25	8.07 %	1.35	1.26	1.27	1.32	1.06	1.23
PCB-86	1.02	10.03 %	1.19	0.96	1.05	0.98	0.90	1.06
PCB-87/117/125	1.56	6.32 %	1.67	1.60	1.55	1.59	1.37	1.57
PCB-111/115	1.75	13.48 %	2.16	1.80	1.69	1.76	1.43	1.66
PCB-85/116	1.30	6.67 %	1.30	1.35	1.33	1.34	1.13	1.35
PCB-120	1.78	10.02 %	2.08	1.80	1.76	1.75	1.52	1.77
PCB-110	1.68	10.37 %	1.90	1.78	1.65	1.72	1.38	1.64
PCB-82	0.74	11.58 %	0.83	0.83	0.73	0.73	0.60	0.71
PCB-124	1.32	11.30 %	1.54	1.34	1.33	1.32	1.07	1.33
PCB-107/109	1.22	8.01 %	1.35	1.31	1.18	1.24	1.08	1.17
PCB-123	1.22	9.00 %	1.30	1.30	1.23	1.28	1.01	1.20
PCB-106/118	1.22	9.57 %	1.37	1.27	1.25	1.26	1.01	1.19
PCB-114	1.36	10.69 %	1.57	1.37	1.36	1.37	1.11	1.35
PCB-122	1.24	10.69 %	1.41	1.32	1.20	1.25	1.02	1.22
PCB-105	1.28	7.83 %	1.36	1.29	1.33	1.34	1.09	1.28
PCB-127	1.14	11.20 %	1.33	1.18	1.14	1.16	0.94	1.09
PCB-126	1.28	9.08 %	1.46	1.28	1.28	1.32	1.10	1.27
PCB-155	1.14	7.40 %	1.11	1.20	1.18	1.20	0.98	1.15
PCB-150	1.06	7.11 %	1.15	1.04	1.05	1.11	0.94	1.10
PCB-152	1.10	11.78 %	1.32	1.08	1.06	1.12	0.92	1.09
PCB-145	1.09	12.69 %	1.35	1.06	1.05	1.11	0.92	1.08
PCB-136	1.08	11.65 %	1.25	1.02	1.08	1.14	0.88	1.14

PCB-148	0.74	7.71 %	0.84	0.75	0.68	0.75	0.70	0.72
PCB-154	0.88	8.65 %	0.96	0.88	0.88	0.93	0.74	0.91
PCB-151	0.81	9.63 %	0.91	0.82	0.78	0.86	0.68	0.81
PCB-135	0.78	6.32 %	0.83	0.75	0.76	0.81	0.70	0.82
PCB-144	0.82	10.98 %	0.93	0.81	0.78	0.90	0.68	0.82
PCB 147	0.83	12.38 %	1.00	0.76	0.78	0.88	0.70	0.85
PCB-139/149	0.84	7.77 %	0.91	0.82	0.83	0.91	0.73	0.86
PCB-140	0.79	11.18 %	0.91	0.73	0.76	0.86	0.66	0.80
PCB-134/143	0.93	12.49 %	1.13	0.94	0.90	0.94	0.78	0.87
PCB-133/142	0.95	11.69 %	1.12	0.98	0.91	0.96	0.79	0.90
PCB-131	0.91	13.39 %	1.11	0.96	0.90	0.90	0.74	0.87

PCB-146/165	1.16	9.91 %	1.33	1.19	1.14	1.16	0.97	1.13
PCB-132/161	1.11	10.87 %	1.31	1.14	1.09	1.13	0.93	1.07
PCB-153	1.18	8.19 %	1.21	1.24	1.26	1.18	0.99	1.18
PCB-168	1.37	10.18 %	1.56	1.44	1.37	1.37	1.14	1.35
PCB-141	0.97	8.49 %	1.08	1.00	0.97	0.99	0.83	0.99
PCB-137	1.07	6.76 %	1.12	1.16	1.05	1.03	0.96	1.11
PCB-130	0.85	9.16 %	0.85	0.83	0.87	0.94	0.71	0.89
PCB-138/163/164	1.23	7.23 %	1.30	1.28	1.22	1.26	1.05	1.24
PCB-158/160	1.29	7.06 %	1.37	1.33	1.29	1.34	1.11	1.29
PCB-129	0.92	10.90 %	1.06	0.98	0.93	0.93	0.76	0.88
PCB-166	1.12	8.09 %	1.17	1.21	1.11	1.13	0.94	1.13
PCB-159	1.16	9.05 %	1.24	1.24	1.18	1.17	0.96	1.20
PCB-128/162	1.02	8.78 %	1.10	1.03	1.04	1.07	0.85	1.03
PCB-167	1.06	9.67 %	1.20	1.04	1.10	1.09	0.88	1.05
PCB-156	1.18	12.60 %	1.44	1.20	1.18	1.17	0.98	1.12
PCB-157	1.08	8.46 %	1.17	1.12	1.13	1.11	0.91	1.06
PCB-169	1.11	8.78 %	1.24	1.15	1.12	1.11	0.94	1.09
PCB-188	1.40	9.77 %	1.59	1.44	1.43	1.43	1.17	1.37
PCB-184	1.24	9.34 %	1.35	1.30	1.25	1.28	1.02	1.23
PCB-179	1.30	11.40 %	1.50	1.37	1.32	1.31	1.05	1.28
PCB-176	1.36	12.01 %	1.55	1.47	1.35	1.38	1.07	1.34
PCB-186	1.28	10.58 %	1.46	1.30	1.25	1.31	1.05	1.29
PCB-178	0.94	10.89 %	0.99	1.05	0.96	0.96	0.75	0.92
PCB-175	0.97	9.63 %	1.03	1.01	0.98	1.02	0.78	0.99
PCB-182/187	1.01	8.25 %	1.07	1.03	1.01	1.06	0.85	1.07
PCB-183	1.08	11.32 %	1.18	1.17	1.08	1.10	0.85	1.12
PCB-185	1.34	11.43 %	1.58	1.37	1.30	1.36	1.10	1.35
PCB-174	1.34	6.35 %	1.41	1.36	1.36	1.32	1.18	1.40
PCB-181	1.36	12.64 %	1.56	1.48	1.28	1.43	1.08	1.33
PCB-177	1.24	12.38 %	1.50	1.23	1.20	1.28	1.03	1.21
PCB-171	1.31	10.27 %	1.52	1.33	1.34	1.31	1.10	1.28
PCB-173	1.16	12.99 %	1.43	1.13	1.15	1.17	0.97	1.11
PCB-172	1.22	11.23 %	1.47	1.18	1.22	1.24	1.05	1.18
PCB-192	1.53	7.91 %	1.69	1.58	1.49	1.56	1.33	1.51
PCB-180	1.43	12.38 %	1.72	1.48	1.44	1.42	1.18	1.34
PCB-193	1.65	9.91 %	1.90	1.71	1.65	1.68	1.40	1.59
PCB-191	1.67	12.03 %	2.04	1.63	1.65	1.68	1.43	1.61
PCB-170	1.50	10.78 %	1.66	1.67	1.51	1.50	1.23	1.44
PCB-190	2.02	10.04 %	2.33	2.09	1.97	2.04	1.70	1.98
PCB-189	1.54	8.43 %	1.70	1.58	1.55	1.59	1.30	1.54
PCB-202	1.04	12.36 %	1.24	1.11	1.01	1.04	0.85	0.99
PCB-201	1.10	11.84 %	1.33	1.11	1.06	1.11	0.92	1.09
PCB-204	0.99	8.55 %	1.10	0.99	0.99	1.04	0.84	1.00
PCB-197	1.07	11.41 %	1.28	1.04	1.04	1.12	0.90	1.06
PCB-200	1.02	8.06 %	1.11	1.02	1.02	1.07	0.87	1.02
PCB-198	0.74	13.95 %	0.90	0.81	0.69	0.77	0.60	0.70
PCB-199	0.73	6.67 %	0.75	0.75	0.73	0.77	0.63	0.74
PCB-196/203	0.77	7.49 %	0.82	0.80	0.75	0.81	0.67	0.79
PCB-195	1.20	7.95 %	1.32	1.23	1.17	1.25	1.04	1.19
PCB-194	1.25	15.62 %	1.61	1.21	1.22	1.24	1.02	1.17

PCB-205	1.41	12.03 %	1.70	1.44	1.41	1.41	1.17	1.36
PCB-208	0.96	16.01 %	1.25	0.95	0.93	0.95	0.78	0.91
PCB-207	0.92	8.32 %	0.99	0.97	0.91	0.93	0.78	0.91
PCB-206	1.03	12.39 %	1.24	1.05	1.03	1.02	0.84	0.98
PCB-209	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
Total Mono-PCB	1.22	8.44 %	1.32	1.27	1.21	1.27	1.02	1.22
Total Di-PCB	1.21	8.72 %	1.35	1.24	1.21	1.25	1.03	1.19
Total Tri-PCB	1.16	11.17 %	1.36	1.20	1.15	1.18	0.96	1.12

Total Tri-PCB	1.35	11.56 %	1.58	1.38	1.36	1.39	1.11	1.26
Total Tetra-PCB	1.17	9.20 %	1.32	1.21	1.17	1.21	0.99	1.15
Total Penta-PCB	1.21	8.50 %	1.33	1.27	1.21	1.24	1.03	1.21
Total Penta-PCB	1.26	9.64 %	1.42	1.29	1.26	1.29	1.05	1.24
Total Hexa-PCB	0.92	8.86 %	1.03	0.90	0.89	0.96	0.78	0.93
Total Hexa-PCB	1.08	8.82 %	1.20	1.12	1.08	1.10	0.91	1.07
Total Hepta-PCB	1.27	10.02 %	1.44	1.31	1.27	1.30	1.05	1.26
Total Octa-PCB	0.92	9.46 %	1.04	0.94	0.89	0.95	0.77	0.91
Total Octa-PCB	1.29	11.68 %	1.54	1.29	1.26	1.30	1.08	1.24
Total Nona-PCB	0.96	11.85 %	1.15	0.98	0.94	0.96	0.79	0.93
Total Deca-PCB	1.18	8.31 %	1.27	1.19	1.21	1.23	0.99	1.16
13C-PCB-1	0.89	8.16 %	0.97	0.94	0.91	0.88	0.88	0.76
13C-PCB-3	0.93	4.27 %	0.98	0.94	0.94	0.93	0.91	0.86
13C-PCB-4	0.55	3.55 %	0.56	0.57	0.56	0.55	0.53	0.52
13C-PCB-9	0.83	2.91 %	0.84	0.85	0.84	0.82	0.80	0.79
13C-PCB-11	0.94	1.99 %	0.94	0.96	0.96	0.92	0.93	0.91
13C-PCB-19	0.53	4.01 %	0.55	0.55	0.55	0.53	0.52	0.50
13C-PCB-32	0.81	1.81 %	0.83	0.82	0.83	0.81	0.81	0.79
13C-PCB-28	0.89	8.44 %	0.79	0.91	0.83	0.85	0.96	0.98
13C-PCB-37	0.83	4.85 %	0.80	0.83	0.80	0.80	0.87	0.89
13C-PCB-54	0.85	5.64 %	0.86	0.89	0.91	0.84	0.83	0.77
13C-PCB-52	0.71	4.89 %	0.72	0.74	0.75	0.70	0.68	0.66
13C-PCB-47	0.74	4.31 %	0.74	0.78	0.78	0.73	0.73	0.70
13C-PCB-70	0.94	2.25 %	0.96	0.97	0.96	0.93	0.94	0.91
13C-PCB-80	0.96	2.89 %	0.96	1.00	0.99	0.95	0.95	0.92
13C-PCB-81	0.84	2.20 %	0.83	0.82	0.84	0.82	0.86	0.86
13C-PCB-77	0.89	1.89 %	0.88	0.87	0.90	0.88	0.91	0.91
13C-PCB-104	1.00	6.42 %	0.99	1.06	1.07	0.98	0.96	0.90
13C-PCB-95	0.74	2.70 %	0.74	0.78	0.75	0.73	0.74	0.72
13C-PCB-101	0.79	2.14 %	0.79	0.81	0.79	0.77	0.78	0.77
13C-PCB-97	0.69	1.41 %	0.70	0.69	0.70	0.69	0.69	0.67
13C-PCB-123	0.95	4.62 %	0.88	0.92	0.98	1.00	0.95	0.97
13C-PCB-118	0.98	3.93 %	0.92	0.95	0.99	1.03	1.01	0.99
13C-PCB-114	1.21	3.28 %	1.26	1.20	1.21	1.18	1.25	1.15
13C-PCB-105	1.24	3.05 %	1.26	1.24	1.25	1.20	1.29	1.19
13C-PCB-127	1.34	2.73 %	1.37	1.34	1.38	1.29	1.36	1.30
13C-PCB-126	1.16	2.72 %	1.16	1.17	1.20	1.12	1.19	1.14
13C-PCB-155	0.83	3.93 %	0.86	0.87	0.84	0.83	0.81	0.78
13C-PCB-153	1.11	2.81 %	1.14	1.11	1.13	1.10	1.15	1.06
13C-PCB-141	1.07	3.72 %	1.13	1.09	1.09	1.06	1.06	1.01
13C-PCB-138	1.04	2.24 %	1.06	1.05	1.06	1.02	1.06	1.01
13C-PCB-159	1.20	1.72 %	1.21	1.19	1.22	1.17	1.22	1.19
13C-PCB-167	1.32	1.88 %	1.32	1.33	1.36	1.29	1.32	1.31
13C-PCB-156	1.24	1.98 %	1.23	1.25	1.28	1.21	1.26	1.24
13C-PCB-157	1.31	1.61 %	1.31	1.31	1.34	1.28	1.33	1.29
13C-PCB-169	1.22	1.81 %	1.22	1.21	1.25	1.19	1.22	1.20
13C-PCB-188	0.94	3.81 %	0.97	0.93	0.93	0.93	0.98	0.88
13C-PCB-180	0.67	2.62 %	0.71	0.67	0.67	0.67	0.67	0.65
13C-PCB-170	0.54	1.49 %	0.55	0.54	0.54	0.53	0.54	0.52
13C-PCB-189	0.72	1.73 %	0.72	0.70	0.73	0.73	0.71	0.70
13C-PCB-202	0.83	2.31 %	0.86	0.83	0.83	0.84	0.84	0.80

13C-PCB-194	0.81	1.33 %	0.82	0.82	0.82	0.80	0.81	0.79
13C-PCB-208	1.12	2.11 %	1.10	1.14	1.13	1.14	1.14	1.09
13C-PCB-206	0.66	3.31 %	0.63	0.65	0.66	0.70	0.65	0.65
13C-PCB-209	0.61	2.62 %	0.59	0.60	0.62	0.64	0.61	0.62
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.01	4.78 %	0.97	0.97	0.99	1.09	0.99	1.02
13C-PCB-178	0.63	4.30 %	0.62	0.61	0.62	0.69	0.62	0.62
13C-PCB-79	1.20	5.38 %	1.18	1.18	1.17	1.33	1.15	1.19
13C-PCB-178	0.94	5.01 %	0.88	0.91	0.92	1.02	0.93	0.96

Filename: 140620E1 S: 1 Acquired: 20-JUN-14 09:31:44
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-1 PCB CS0 13H1202

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	4.35e+05	2.82 y	16:14	-	1.37
2	Mono	PCB-2	0.25	4.10e+05	3.17 y	18:35	-	1.27
3	Mono	PCB-3	0.25	4.22e+05	2.92 y	18:49	-	1.31
4	Di	PCB-4/10	1.00	1.23e+06	1.61 y	20:10	-	1.67
5	Di	PCB-7/9	1.00	1.58e+06	1.70 y	21:56	-	1.43
6	Di	PCB-6	0.50	8.23e+05	1.36 y	22:35	-	1.49
7	Di	PCB-5/8	1.00	1.42e+06	1.76 y	23:00	-	1.29
8	Di	PCB-14	0.50	8.96e+05	1.59 y	24:05	-	1.45
9	Di	PCB-11	0.50	8.18e+05	1.39 y	25:16	-	1.33
10	Di	PCB-12/13	1.00	1.48e+06	1.71 y	25:40	-	1.20
11	Di	PCB-15	0.50	8.65e+05	1.43 y	25:58	-	1.40
12	Tri	PCB-19	0.25	2.94e+05	1.11 y	24:16	-	1.63
13	Tri	PCB-30	0.25	3.70e+05	0.89 y	25:09	-	2.06
14	Tri	PCB-18	0.25	2.78e+05	1.19 y	25:54	-	1.03
15	Tri	PCB-17	0.25	2.82e+05	0.94 y	26:04	-	1.04
16	Tri	PCB-24/27	0.50	7.21e+05	1.01 y	26:38	-	1.33
17	Tri	PCB-16/32	0.50	6.64e+05	1.06 y	27:09	-	1.23
18	Tri	PCB-34	0.25	3.70e+05	1.06 y	27:56	-	1.47
19	Tri	PCB-23	0.25	3.85e+05	1.19 y	28:02	-	1.54
20	Tri	PCB-29	0.25	4.36e+05	1.18 y	28:17	-	1.74
21	Tri	PCB-26	0.25	4.07e+05	0.97 y	28:29	-	1.62
22	Tri	PCB-25	0.25	4.10e+05	1.07 y	28:39	-	1.63
23	Tri	PCB-31	0.25	4.70e+05	1.15 y	29:00	-	1.87
24	Tri	PCB-28	0.25	4.03e+05	1.12 y	29:07	-	1.60
25	Tri	PCB-20/21/33	0.75	1.20e+06	1.11 y	29:43	-	1.59
26	Tri	PCB-22	0.25	3.76e+05	1.05 y	30:10	-	1.50
27	Tri	PCB-36	0.25	3.74e+05	1.12 y	30:47	-	1.47
28	Tri	PCB-39	0.25	3.99e+05	1.02 y	31:14	-	1.58
29	Tri	PCB-38	0.25	3.51e+05	1.20 y	32:00	-	1.39
30	Tri	PCB-35	0.25	3.85e+05	1.07 y	32:32	-	1.52
31	Tri	PCB-37	0.25	4.00e+05	0.99 y	32:58	-	1.58
32	Tetra	PCB-54	0.25	3.02e+05	0.84 y	27:59	-	1.29
33	Tetra	PCB-50	0.25	2.51e+05	0.85 y	29:09	-	1.08
34	Tetra	PCB-53	0.25	2.75e+05	0.70 y	29:47	-	1.42
35	Tetra	PCB-51	0.25	2.35e+05	0.68 y	30:08	-	1.21
36	Tetra	PCB-45	0.25	2.02e+05	0.82 y	30:34	-	1.04
37	Tetra	PCB-46	0.25	2.36e+05	0.75 y	31:04	-	1.21
38	Tetra	PCB-52/69	0.50	5.24e+05	0.82 y	31:32	-	1.35
39	Tetra	PCB-73	0.25	2.76e+05	0.88 y	31:39	-	1.42
40	Tetra	PCB-43/49	0.50	5.07e+05	0.72 y	31:49	-	1.30

41	Tetra	PCB-47	0.25	2.69e+05	0.78 y	32:00	-	1.34
42	Tetra	PCB-48/75	0.50	6.11e+05	0.75 y	32:07	-	1.52
43	Tetra	PCB-65	0.25	3.35e+05	0.81 y	32:23	-	1.67
44	Tetra	PCB-62	0.25	2.78e+05	0.66 y	32:30	-	1.39
45	Tetra	PCB-44	0.25	2.18e+05	0.67 y	32:48	-	1.08
46	Tetra	PCB-42/59	0.50	5.48e+05	0.72 y	33:02	-	1.36
47	Tetra	PCB-41/64/71/72	1.00	1.19e+06	0.71 y	33:37	-	1.48
48	Tetra	PCB-68	0.25	3.28e+05	0.80 y	33:52	-	1.63
49	Tetra	PCB-40	0.25	1.99e+05	0.82 y	34:05	-	0.99
50	Tetra	PCB-57	0.25	3.26e+05	0.66 y	34:27	-	1.26
51	Tetra	PCB-67	0.25	2.73e+05	0.74 y	34:45	-	1.05

52	Tetra	PCB-58	0.25	3.35e+05	0.79	y	34:52	-	1.29
53	Tetra	PCB-63	0.25	3.04e+05	0.78	y	35:01	-	1.17
54	Tetra	PCB-74	0.25	3.39e+05	0.76	y	35:18	-	1.31
55	Tetra	PCB-61/70	0.50	6.13e+05	0.75	y	35:29	-	1.18
56	Tetra	PCB-76/66	0.50	6.79e+05	0.81	y	35:42	-	1.31
57	Tetra	PCB-80	0.25	3.81e+05	0.73	y	35:56	-	1.46
58	Tetra	PCB-55	0.25	3.04e+05	0.81	y	36:16	-	1.16
59	Tetra	PCB-56/60	0.50	6.61e+05	0.75	y	36:46	-	1.26
60	Tetra	PCB-79	0.25	3.31e+05	0.86	y	37:48	-	1.26
61	Tetra	PCB-78	0.25	3.20e+05	0.80	y	38:30	-	1.43
62	Tetra	PCB-81	0.25	3.39e+05	0.75	y	39:02	-	1.51
63	Tetra	PCB-77	0.25	3.19e+05	0.68	y	39:38	-	1.33
64	Penta	PCB-104	0.25	2.39e+05	1.52	y	32:40	-	1.42
65	Penta	PCB-96	0.25	2.08e+05	1.62	y	33:56	-	1.24
66	Penta	PCB-103	0.25	1.68e+05	1.38	y	34:27	-	1.00
67	Penta	PCB-100	0.25	1.73e+05	1.61	y	34:49	-	1.03
68	Penta	PCB-94	0.25	1.64e+05	1.42	y	35:17	-	1.31
69	Penta	PCB-95/98/102	0.75	5.11e+05	1.73	y	35:45	-	1.36
70	Penta	PCB-93	0.25	1.71e+05	1.64	y	35:54	-	1.36
71	Penta	PCB-88/91	0.50	2.51e+05	1.76	y	36:10	-	1.00
72	Penta	PCB-121	0.25	2.86e+05	1.39	y	36:17	-	2.27
73	Penta	PCB-84/92	0.50	3.08e+05	1.45	y	37:07	-	1.15
74	Penta	PCB-89	0.25	1.54e+05	1.32	y	37:19	-	1.15
75	Penta	PCB-90/101	0.50	3.59e+05	1.43	y	37:29	-	1.34
76	Penta	PCB-113	0.25	2.06e+05	1.63	y	37:44	-	1.54
77	Penta	PCB-99	0.25	1.92e+05	1.34	y	37:49	-	1.43
78	Penta	PCB-119	0.25	2.11e+05	1.49	y	38:18	-	1.78
79	Penta	PCB-108/112	0.50	3.11e+05	1.68	y	38:27	-	1.31
80	Penta	PCB-83	0.25	1.96e+05	1.33	y	38:37	-	1.66
81	Penta	PCB-97	0.25	1.60e+05	1.69	y	38:48	-	1.35
82	Penta	PCB-86	0.25	1.41e+05	1.52	y	38:56	-	1.19
83	Penta	PCB-87/117/125	0.75	5.92e+05	1.55	y	39:04	-	1.67
84	Penta	PCB-111/115	0.50	5.11e+05	1.55	y	39:14	-	2.16
85	Penta	PCB-85/116	0.50	3.09e+05	1.69	y	39:22	-	1.30
86	Penta	PCB-120	0.25	2.47e+05	1.58	y	39:35	-	2.08
87	Penta	PCB-110	0.25	2.26e+05	1.34	y	39:44	-	1.90
88	Penta	PCB-82	0.25	1.23e+05	1.66	y	40:23	-	0.83
89	Penta	PCB-124	0.25	2.30e+05	1.74	y	41:02	-	1.54
90	Penta	PCB-107/109	0.50	4.02e+05	1.57	y	41:12	-	1.35
91	Penta	PCB-123	0.25	1.93e+05	1.66	y	41:22	-	1.30
92	Penta	PCB-106/118	0.50	4.29e+05	1.45	y	41:33	-	1.37
93	Penta	PCB-114	0.25	2.76e+05	1.56	y	42:12	-	1.57
94	Penta	PCB-122	0.25	2.48e+05	1.55	y	42:20	-	1.41
95	Penta	PCB-105	0.25	2.42e+05	1.73	y	43:04	-	1.36
96	Penta	PCB-127	0.25	2.56e+05	1.65	y	43:24	-	1.33
97	Penta	PCB-126	0.25	2.38e+05	1.59	y	45:17	-	1.46
98	Hexa	PCB-155	0.25	1.62e+05	1.06	y	37:03	-	1.11
99	Hexa	PCB-150	0.25	1.67e+05	1.15	y	38:19	-	1.15
100	Hexa	PCB-152	0.25	1.92e+05	1.35	y	38:47	-	1.32
101	Hexa	PCB-145	0.25	1.95e+05	1.19	y	39:13	-	1.35

102	Hexa	PCB-136	0.25	1.82e+05	1.10	y	39:34	-	1.25
103	Hexa	PCB-148	0.25	1.22e+05	1.18	y	39:39	-	0.84
104	Hexa	PCB-154	0.25	1.40e+05	1.29	y	40:09	-	0.96
105	Hexa	PCB-151	0.25	1.32e+05	1.38	y	40:47	-	0.91
106	Hexa	PCB-135	0.25	1.21e+05	1.08	y	40:59	-	0.83
107	Hexa	PCB-144	0.25	1.35e+05	1.36	y	41:07	-	0.93
108	Hexa	PCB-147	0.25	1.45e+05	1.24	y	41:14	-	1.00
109	Hexa	PCB-139/149	0.50	2.63e+05	1.42	y	41:30	-	0.91
110	Hexa	PCB-140	0.25	1.32e+05	1.26	y	41:41	-	0.91
111	Hexa	PCB-134/143	0.50	3.60e+05	1.29	y	42:07	-	1.13
112	Hexa	PCB-133/142	0.50	3.59e+05	1.27	y	42:25	-	1.12

113	Hexa	PCB-131	0.25	1.78e-05	1.22 y	42:35	-	1.11
114	Hexa	PCB-146/165	0.50	4.25e+05	1.38 y	42:48	-	1.33
115	Hexa	PCB-132/161	0.50	4.18e+05	1.33 y	43:03	-	1.31
116	Hexa	PCB-153	0.25	1.94e+05	1.33 y	43:13	-	1.21
117	Hexa	PCB-168	0.25	2.50e+05	1.10 y	43:25	-	1.56
118	Hexa	PCB-141	0.25	1.70e+05	1.16 y	43:57	-	1.08
119	Hexa	PCB-137	0.25	1.76e+05	1.34 y	44:20	-	1.12
120	Hexa	PCB-130	0.25	1.34e+05	1.41 y	44:26	-	0.85
121	Hexa	PCB-138/163/164	0.75	5.80e+05	1.22 y	44:49	-	1.30
122	Hexa	PCB-158/160	0.50	4.07e+05	1.26 y	45:04	-	1.37
123	Hexa	PCB-129	0.25	1.58e+05	1.11 y	45:18	-	1.06
124	Hexa	PCB-166	0.25	1.98e+05	1.26 y	45:46	-	1.17
125	Hexa	PCB-159	0.25	2.11e+05	1.18 y	46:04	-	1.24
126	Hexa	PCB-128/162	0.50	3.74e+05	1.26 y	46:22	-	1.10
127	Hexa	PCB-167	0.25	2.22e+05	1.41 y	46:46	-	1.20
128	Hexa	PCB-156	0.25	2.47e+05	1.24 y	48:03	-	1.44
129	Hexa	PCB-157	0.25	2.16e+05	1.36 y	48:20	-	1.17
130	Hexa	PCB-169	0.25	2.12e+05	1.07 y	50:23	-	1.24
131	Hepta	PCB-188	0.25	2.17e+05	1.02 y	42:51	-	1.59
132	Hepta	PCB-184	0.25	1.84e+05	0.94 y	43:18	-	1.35
133	Hepta	PCB-179	0.25	2.05e+05	1.05 y	44:04	-	1.50
134	Hepta	PCB-176	0.25	2.12e+05	1.04 y	44:32	-	1.55
135	Hepta	PCB-186	0.25	2.00e+05	0.97 y	45:09	-	1.46
136	Hepta	PCB-178	0.25	1.35e+05	0.98 y	45:38	-	0.99
137	Hepta	PCB-175	0.25	1.41e+05	1.08 y	45:58	-	1.03
138	Hepta	PCB-182/187	0.50	2.91e+05	0.90 y	46:09	-	1.07
139	Hepta	PCB-183	0.25	1.61e+05	0.95 y	46:29	-	1.18
140	Hepta	PCB-185	0.25	1.56e+05	0.97 y	47:08	-	1.58
141	Hepta	PCB-174	0.25	1.40e+05	1.03 y	47:30	-	1.41
142	Hepta	PCB-181	0.25	1.55e+05	1.17 y	47:37	-	1.56
143	Hepta	PCB-177	0.25	1.49e+05	1.09 y	47:46	-	1.50
144	Hepta	PCB-171	0.25	1.51e+05	0.93 y	48:05	-	1.52
145	Hepta	PCB-173	0.25	1.42e+05	0.96 y	48:30	-	1.43
146	Hepta	PCB-172	0.25	1.45e+05	1.13 y	48:55	-	1.47
147	Hepta	PCB-192	0.25	1.68e+05	0.90 y	49:08	-	1.69
148	Hepta	PCB-180	0.25	1.70e+05	0.97 y	49:20	-	1.72
149	Hepta	PCB-193	0.25	1.88e+05	1.13 y	49:31	-	1.90
150	Hepta	PCB-191	0.25	2.02e+05	1.05 y	49:45	-	2.04
151	Hepta	PCB-170	0.25	1.27e+05	1.19 y	50:44	-	1.66
152	Hepta	PCB-190	0.25	1.78e+05	0.91 y	50:55	-	2.33
153	Hepta	PCB-189	0.25	1.70e+05	1.20 y	52:11	-	1.70
154	Octa	PCB-202	0.25	1.49e+05	0.98 y	48:16	-	1.24
155	Octa	PCB-201	0.25	1.60e+05	1.02 y	48:45	-	1.33
156	Octa	PCB-204	0.25	1.33e+05	0.77 y	48:54	-	1.10
157	Octa	PCB-197	0.25	1.54e+05	0.92 y	49:13	-	1.28
158	Octa	PCB-200	0.25	1.34e+05	1.01 y	50:02	-	1.11
159	Octa	PCB-198	0.25	1.08e+05	0.88 y	51:19	-	0.90
160	Octa	PCB-199	0.25	9.08e+04	0.94 y	51:25	-	0.75
161	Octa	PCB-196/203	0.50	1.98e+05	0.81 y	51:40	-	0.82
162	Octa	PCB-195	0.25	1.39e+05	0.81 y	52:48	-	1.32

163	Octa		PCB-194	0.25	1.70e+05	0.85	y	53:40	- 1.61
164	Octa		PCB-205	0.25	1.79e+05	0.98	y	53:57	- 1.70
165	Nona		PCB-208	0.25	1.78e+05	1.17	y	52:57	- 1.25
166	Nona		PCB-207	0.25	1.41e+05	1.37	y	53:14	- 0.99
167	Nona		PCB-206	0.25	1.02e+05	1.41	y	55:20	- 1.24
168	Deca		PCB-209	0.25	9.69e+04	1.15	y	56:37	- 1.27
169	Tot Ή	Total Mono-PCB		0.00	-	-	n	-	- 1.32
170	Tot Ή	Total Di-PCB		0.00	-	-	n	-	- 1.35

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.36
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.58
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.32
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.33
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.42
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.03
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.20
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.44
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.04
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.54
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.15
182	Tot ╗	Total Deca-PCB	0.25	9.69e+04	1.15	y	56:37	-	1.27
183	Mono╗	13C-PCB-1	100.00	1.27e+08	3.28	y	16:13	-	0.97
184	Mono╗	13C-PCB-3	100.00	1.29e+08	3.32	y	18:48	-	0.98
185	Di-IS	13C-PCB-4	100.00	7.37e+07	1.59	y	20:07	-	0.56
186	Di-IS	13C-PCB-9	100.00	1.10e+08	1.57	y	21:53	-	0.84
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.57	y	25:15	-	0.94
188	Tri-╗	13C-PCB-19	100.00	7.18e+07	1.06	y	24:15	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.08e+08	1.08	y	27:09	-	0.83
190	Tri-╗	13C-PCB-28	100.00	1.00e+08	1.05	y	29:05	-	0.79
191	Tri-╗	13C-PCB-37	100.00	1.01e+08	1.07	y	32:57	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.33e+07	0.80	y	27:59	-	0.86
193	Tetr╗	13C-PCB-52	100.00	7.77e+07	0.81	y	31:30	-	0.72
194	Tetr╗	13C-PCB-47	100.00	8.03e+07	0.78	y	32:00	-	0.74
195	Tetr╗	13C-PCB-70	100.00	1.04e+08	0.80	y	35:31	-	0.96
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:55	-	0.96
197	Tetr╗	13C-PCB-81	100.00	8.95e+07	0.80	y	39:02	-	0.83
198	Tetr╗	13C-PCB-77	100.00	9.58e+07	0.80	y	39:37	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.72e+07	1.63	y	32:39	-	0.99
200	Pent╗	13C-PCB-95	100.00	5.03e+07	1.61	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	5.37e+07	1.61	y	37:29	-	0.79
202	Pent╗	13C-PCB-97	100.00	4.74e+07	1.63	y	38:47	-	0.70
203	Pent╗	13C-PCB-123	100.00	5.97e+07	1.63	y	41:21	-	0.88
204	Pent╗	13C-PCB-118	100.00	6.28e+07	1.61	y	41:32	-	0.92
205	Pent╗	13C-PCB-114	100.00	7.04e+07	1.59	y	42:11	-	1.26
206	Pent╗	13C-PCB-105	100.00	7.09e+07	1.60	y	43:03	-	1.26
207	Pent╗	13C-PCB-127	100.00	7.69e+07	1.57	y	43:22	-	1.37
208	Pent╗	13C-PCB-126	100.00	6.51e+07	1.55	y	45:17	-	1.16
209	Hexa╗	13C-PCB-155	100.00	5.81e+07	1.27	y	37:02	-	0.86
210	Hexa╗	13C-PCB-153	100.00	6.40e+07	1.30	y	43:12	-	1.14
211	Hexa╗	13C-PCB-141	100.00	6.31e+07	1.28	y	43:56	-	1.13
212	Hexa	13C-PCB-138	100.00	5.96e+07	1.29	y	44:47	-	1.06
213	Hexa╗	13C-PCB-159	100.00	6.79e+07	1.28	y	46:04	-	1.21
214	Hexa╗	13C-PCB-167	100.00	7.42e+07	1.28	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	6.87e+07	1.28	y	48:02	-	1.23
216	Hexa╗	13C-PCB-157	100.00	7.37e+07	1.28	y	48:18	-	1.31
217	Hexa╗	13C-PCB-169	100.00	6.83e+07	1.27	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	5.45e+07	0.46	y	42:50	-	0.97
219	Hept╗	13C-PCB-180	100.00	3.96e+07	0.47	y	49:19	-	0.71
220	Hept╗	13C-PCB-170	100.00	3.06e+07	0.46	y	50:44	-	0.55
221	Hept╗	13C-PCB-189	100.00	4.02e+07	0.46	y	52:11	-	0.72

222	Octa¶	13C-PCB-202	100.00	4.83e+07	0.91 y	48:15	-	0.86
223	Octa¶	13C-PCB-194	100.00	4.22e+07	0.90 y	53:39	-	0.82
224	Nona¶	13C-PCB-208	100.00	5.69e+07	0.78 y	52:56	-	1.10
225	Nona¶	13C-PCB-206	100.00	3.28e+07	0.79 y	55:19	-	0.63
226	Deca¶	13C-PCB-209	100.00	3.05e+07	1.17 y	56:36	-	0.59
227	DI-RS	13C-PCB-15	100.00	1.31e+08	1.57 y	25:58	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.27e+08	1.06 y	28:59	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.09e+08	0.78 y	36:45	-	1.00
230	Penta	13C-PCB-111	100.00	6.79e+07	1.58 y	39:12	-	1.00
231	Hexa¶	13C-PCB-128	100.00	5.60e+07	1.28 y	46:20	-	1.00

232	Octa╗	13C-PCB-205	100.00	5.17e+07	0.93	y	53:56	-	1.00
233	CRS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	0.97
234	CRS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.62
235	PS	13C-PCB-79	100.00	1.05e+08	0.80	y	37:48	-	1.18
236	PS	13C-PCB-178	100.00	3.50e+07	0.45	y	45:37	-	0.88

Filename: 140620E1 S: 2 Acquired: 20-JUN-14 10:35:42
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-2 PCB CS1 13H1204

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	1.98e+06	3.08 y	16:16	-	1.26
2	Mono	PCB-2	1.00	1.97e+06	2.92 y	18:37	-	1.26
3	Mono	PCB-3	1.00	2.01e+06	3.12 y	18:51	-	1.29
4	Di	PCB-4/10	4.00	6.16e+06	1.55 y	20:12	-	1.64
5	Di	PCB-7/9	4.00	7.32e+06	1.64 y	21:57	-	1.30
6	Di	PCB-6	2.00	3.65e+06	1.60 y	22:37	-	1.29
7	Di	PCB-5/8	4.00	7.27e+06	1.61 y	23:01	-	1.29
8	Di	PCB-14	2.00	3.94e+06	1.66 y	24:06	-	1.24
9	Di	PCB-11	2.00	3.77e+06	1.68 y	25:17	-	1.19
10	Di	PCB-12/13	4.00	7.13e+06	1.61 y	25:41	-	1.12
11	Di	PCB-15	2.00	3.79e+06	1.72 y	26:00	-	1.19
12	Tri	PCB-19	1.00	1.20e+06	1.12 y	24:17	-	1.31
13	Tri	PCB-30	1.00	1.72e+06	1.12 y	25:10	-	1.88
14	Tri	PCB-18	1.00	1.24e+06	1.05 y	25:55	-	0.90
15	Tri	PCB-17	1.00	1.31e+06	1.07 y	26:05	-	0.96
16	Tri	PCB-24/27	2.00	3.29e+06	1.07 y	26:40	-	1.20
17	Tri	PCB-16/32	2.00	2.95e+06	1.04 y	27:10	-	1.08
18	Tri	PCB-34	1.00	1.94e+06	1.06 y	27:58	-	1.39
19	Tri	PCB-23	1.00	1.78e+06	1.00 y	28:04	-	1.27
20	Tri	PCB-29	1.00	1.84e+06	1.07 y	28:18	-	1.32
21	Tri	PCB-26	1.00	1.83e+06	1.06 y	28:31	-	1.31
22	Tri	PCB-25	1.00	1.92e+06	1.07 y	28:40	-	1.37
23	Tri	PCB-31	1.00	1.96e+06	1.10 y	29:02	-	1.40
24	Tri	PCB-28	1.00	2.00e+06	1.03 y	29:07	-	1.43
25	Tri	PCB-20/21/33	3.00	5.56e+06	1.09 y	29:45	-	1.33
26	Tri	PCB-22	1.00	1.93e+06	1.07 y	30:11	-	1.38
27	Tri	PCB-36	1.00	1.90e+06	1.15 y	30:47	-	1.49
28	Tri	PCB-39	1.00	1.91e+06	1.10 y	31:16	-	1.49
29	Tri	PCB-38	1.00	1.86e+06	1.05 y	32:02	-	1.45
30	Tri	PCB-35	1.00	1.77e+06	1.19 y	32:33	-	1.38
31	Tri	PCB-37	1.00	1.80e+06	1.09 y	32:59	-	1.40
32	Tetra	PCB-54	1.00	1.51e+06	0.77 y	28:01	-	1.28
33	Tetra	PCB-50	1.00	1.19e+06	0.86 y	29:11	-	1.01
34	Tetra	PCB-53	1.00	1.21e+06	0.82 y	29:49	-	1.24
35	Tetra	PCB-51	1.00	1.15e+06	0.86 y	30:10	-	1.18
36	Tetra	PCB-45	1.00	9.70e+05	0.76 y	30:36	-	0.99
37	Tetra	PCB-46	1.00	9.57e+05	0.75 y	31:05	-	0.98
38	Tetra	PCB-52/69	2.00	2.60e+06	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	1.00	1.36e+06	0.84 y	31:40	-	1.39
40	Tetra	PCB-43/49	2.00	2.21e+06	0.81 y	31:50	-	1.13
41	Tetra	PCB-47	1.00	1.22e+06	0.72 y	32:02	-	1.18

42	Tetra	PCB-48/75	2.00	2.64e+06	0.76	y	32:09	- 1.28
43	Tetra	PCB-65	1.00	1.34e+06	0.76	y	32:25	- 1.30
44	Tetra	PCB-62	1.00	1.44e+06	0.77	y	32:32	- 1.40
45	Tetra	PCB-44	1.00	9.24e+05	0.78	y	32:50	- 0.90
46	Tetra	PCB-42/59	2.00	2.58e+06	0.75	y	33:04	- 1.25
47	Tetra	PCB-41/64/71/72	4.00	5.45e+06	0.78	y	33:39	- 1.32
48	Tetra	PCB-68	1.00	1.64e+06	0.79	y	33:54	- 1.59
49	Tetra	PCB-40	1.00	8.54e+05	0.76	y	34:07	- 0.83
50	Tetra	PCB-57	1.00	1.51e+06	0.73	y	34:29	- 1.18
51	Tetra	PCB-67	1.00	1.53e+06	0.78	y	34:47	- 1.20
52	Tetra	PCB-58	1.00	1.45e+06	0.75	y	34:54	- 1.13

53	Tetra	PCB-63	1.00	1.51e+06	0.75 y	35:03	-	1.17
54	Tetra	PCB-74	1.00	1.62e+06	0.77 y	35:20	-	1.27
55	Tetra	PCB-61/70	2.00	2.91e+06	0.80 y	35:31	-	1.13
56	Tetra	PCB-76/66	2.00	3.02e+06	0.75 y	35:44	-	1.18
57	Tetra	PCB-80	1.00	1.75e+06	0.82 y	35:57	-	1.33
58	Tetra	PCB-55	1.00	1.55e+06	0.78 y	36:17	-	1.17
59	Tetra	PCB-56/60	2.00	2.96e+06	0.79 y	36:47	-	1.12
60	Tetra	PCB-79	1.00	1.47e+06	0.75 y	37:50	-	1.11
61	Tetra	PCB-78	1.00	1.43e+06	0.78 y	38:32	-	1.32
62	Tetra	PCB-81	1.00	1.62e+06	0.82 y	39:04	-	1.50
63	Tetra	PCB-77	1.00	1.46e+06	0.80 y	39:40	-	1.26
64	Penta	PCB-104	1.00	1.12e+06	1.57 y	32:42	-	1.31
65	Penta	PCB-96	1.00	9.56e+05	1.70 y	33:57	-	1.12
66	Penta	PCB-103	1.00	8.44e+05	1.51 y	34:29	-	0.98
67	Penta	PCB-100	1.00	9.21e+05	1.69 y	34:50	-	1.08
68	Penta	PCB-94	1.00	6.94e+05	1.57 y	35:18	-	1.11
69	Penta	PCB-95/98/102	3.00	2.34e+06	1.61 y	35:47	-	1.25
70	Penta	PCB-93	1.00	8.35e+05	1.78 y	35:55	-	1.34
71	Penta	PCB-88/91	2.00	1.32e+06	1.53 y	36:12	-	1.06
72	Penta	PCB-121	1.00	1.38e+06	1.59 y	36:18	-	2.21
73	Penta	PCB-84/92	2.00	1.48e+06	1.69 y	37:09	-	1.13
74	Penta	PCB-89	1.00	6.78e+05	1.51 y	37:20	-	1.04
75	Penta	PCB-90/101	2.00	1.64e+06	1.61 y	37:31	-	1.26
76	Penta	PCB-113	1.00	8.19e+05	1.58 y	37:44	-	1.26
77	Penta	PCB-99	1.00	9.67e+05	1.59 y	37:50	-	1.48
78	Penta	PCB-119	1.00	1.04e+06	1.76 y	38:18	-	1.88
79	Penta	PCB-108/112	2.00	1.54e+06	1.59 y	38:27	-	1.39
80	Penta	PCB-83	1.00	8.48e+05	1.61 y	38:38	-	1.53
81	Penta	PCB-97	1.00	7.01e+05	1.71 y	38:49	-	1.26
82	Penta	PCB-86	1.00	5.31e+05	1.42 y	38:58	-	0.96
83	Penta	PCB-87/117/125	3.00	2.66e+06	1.67 y	39:05	-	1.60
84	Penta	PCB-111/115	2.00	2.00e+06	1.53 y	39:15	-	1.80
85	Penta	PCB-85/116	2.00	1.50e+06	1.61 y	39:23	-	1.35
86	Penta	PCB-120	1.00	1.00e+06	1.51 y	39:37	-	1.80
87	Penta	PCB-110	1.00	9.88e+05	1.74 y	39:46	-	1.78
88	Penta	PCB-82	1.00	6.18e+05	1.61 y	40:23	-	0.83
89	Penta	PCB-124	1.00	9.98e+05	1.74 y	41:03	-	1.34
90	Penta	PCB-107/109	2.00	1.94e+06	1.58 y	41:12	-	1.31
91	Penta	PCB-123	1.00	9.67e+05	1.61 y	41:22	-	1.30
92	Penta	PCB-106/118	2.00	1.95e+06	1.71 y	41:35	-	1.27
93	Penta	PCB-114	1.00	1.19e+06	1.64 y	42:13	-	1.37
94	Penta	PCB-122	1.00	1.14e+06	1.68 y	42:21	-	1.32
95	Penta	PCB-105	1.00	1.16e+06	1.68 y	43:05	-	1.29
96	Penta	PCB-127	1.00	1.14e+06	1.58 y	43:24	-	1.18
97	Penta	PCB-126	1.00	1.08e+06	1.48 y	45:19	-	1.28
98	Hexa	PCB-155	1.00	8.43e+05	1.23 y	37:03	-	1.20
99	Hexa	PCB-150	1.00	7.33e+05	1.34 y	38:20	-	1.04
100	Hexa	PCB-152	1.00	7.58e+05	1.20 y	38:48	-	1.08
101	Hexa	PCB-145	1.00	7.48e+05	1.15 y	39:15	-	1.06
102	Hexa	PCB-136	1.00	7.19e+05	1.34 y	39:33	-	1.02

103	Hexa	PCB-148	1.00	5.31e-05	1.18 y	39:40	-	0.75
104	Hexa	PCB-154	1.00	6.17e+05	1.37 y	40:10	-	0.88
105	Hexa	PCB-151	1.00	5.78e+05	1.33 y	40:48	-	0.82
106	Hexa	PCB-135	1.00	5.29e+05	1.36 y	41:01	-	0.75
107	Hexa	PCB-144	1.00	5.73e+05	1.29 y	41:08	-	0.81
108	Hexa	PCB-147	1.00	5.38e+05	1.32 y	41:16	-	0.76
109	Hexa	PCB-139/149	2.00	1.16e+06	1.33 y	41:30	-	0.82
110	Hexa	PCB-140	1.00	5.12e+05	1.26 y	41:42	-	0.73
111	Hexa	PCB-134/143	2.00	1.51e+06	1.24 y	42:09	-	0.94
112	Hexa	PCB-133/142	2.00	1.57e+06	1.37 y	42:26	-	0.98
113	Hexa	PCB-131	1.00	7.67e+05	1.32 y	42:36	-	0.96

114	Hexa	PCB-146/165	2.00	1.91e+06	1.21 y	42:48	-	1.19
115	Hexa	PCB-132/161	2.00	1.82e+06	1.22 y	43:03	-	1.14
116	Hexa	PCB-153	1.00	9.94e+05	1.17 y	43:14	-	1.24
117	Hexa	PCB-168	1.00	1.15e+06	1.10 y	43:27	-	1.44
118	Hexa	PCB-141	1.00	7.87e+05	1.28 y	43:58	-	1.00
119	Hexa	PCB-137	1.00	9.10e+05	1.29 y	44:21	-	1.16
120	Hexa	PCB-130	1.00	6.47e+05	1.23 y	44:28	-	0.83
121	Hexa	PCB-138/163/164	3.00	2.92e+06	1.18 y	44:50	-	1.28
122	Hexa	PCB-158/160	2.00	2.01e+06	1.38 y	45:05	-	1.33
123	Hexa	PCB-129	1.00	7.44e+05	1.17 y	45:19	-	0.98
124	Hexa	PCB-166	1.00	1.04e+06	1.28 y	45:46	-	1.21
125	Hexa	PCB-159	1.00	1.07e+06	1.23 y	46:05	-	1.24
126	Hexa	PCB-128/162	2.00	1.76e+06	1.16 y	46:22	-	1.03
127	Hexa	PCB-167	1.00	1.00e+06	1.19 y	46:47	-	1.04
128	Hexa	PCB-156	1.00	1.09e+06	1.12 y	48:04	-	1.20
129	Hexa	PCB-157	1.00	1.06e+06	1.22 y	48:20	-	1.12
130	Hexa	PCB-169	1.00	1.01e+06	1.16 y	50:24	-	1.15
131	Hepta	PCB-188	1.00	9.64e+05	1.15 y	42:52	-	1.44
132	Hepta	PCB-184	1.00	8.74e+05	0.93 y	43:18	-	1.30
133	Hepta	PCB-179	1.00	9.19e+05	1.16 y	44:06	-	1.37
134	Hepta	PCB-176	1.00	9.89e+05	1.02 y	44:34	-	1.47
135	Hepta	PCB-186	1.00	8.74e+05	1.12 y	45:09	-	1.30
136	Hepta	PCB-178	1.00	7.05e+05	1.02 y	45:38	-	1.05
137	Hepta	PCB-175	1.00	6.78e+05	0.95 y	45:59	-	1.01
138	Hepta	PCB-182/187	2.00	1.38e+06	0.98 y	46:11	-	1.03
139	Hepta	PCB-183	1.00	7.83e+05	1.07 y	46:29	-	1.17
140	Hepta	PCB-185	1.00	6.66e+05	0.96 y	47:09	-	1.37
141	Hepta	PCB-174	1.00	6.57e+05	1.07 y	47:31	-	1.36
142	Hepta	PCB-181	1.00	7.19e+05	0.90 y	47:36	-	1.48
143	Hepta	PCB-177	1.00	5.95e+05	0.98 y	47:47	-	1.23
144	Hepta	PCB-171	1.00	6.43e+05	1.06 y	48:04	-	1.33
145	Hepta	PCB-173	1.00	5.49e+05	1.09 y	48:31	-	1.13
146	Hepta	PCB-172	1.00	5.72e+05	1.17 y	48:57	-	1.18
147	Hepta	PCB-192	1.00	7.66e+05	1.07 y	49:09	-	1.58
148	Hepta	PCB-180	1.00	7.16e+05	1.13 y	49:20	-	1.48
149	Hepta	PCB-193	1.00	8.30e+05	1.09 y	49:32	-	1.71
150	Hepta	PCB-191	1.00	7.89e+05	1.14 y	49:46	-	1.63
151	Hepta	PCB-170	1.00	6.49e+05	1.09 y	50:45	-	1.67
152	Hepta	PCB-190	1.00	8.09e+05	1.12 y	50:55	-	2.09
153	Hepta	PCB-189	1.00	8.02e+05	1.19 y	52:12	-	1.58
154	Octa	PCB-202	1.00	6.64e+05	0.98 y	48:17	-	1.11
155	Octa	PCB-201	1.00	6.64e+05	0.96 y	48:46	-	1.11
156	Octa	PCB-204	1.00	5.92e+05	0.96 y	48:55	-	0.99
157	Octa	PCB-197	1.00	6.20e+05	0.87 y	49:13	-	1.04
158	Octa	PCB-200	1.00	6.09e+05	0.92 y	50:03	-	1.02
159	Octa	PCB-198	1.00	4.81e+05	0.77 y	51:20	-	0.81
160	Octa	PCB-199	1.00	4.49e+05	0.78 y	51:25	-	0.75
161	Octa	PCB-196/203	2.00	9.60e+05	0.87 y	51:40	-	0.80
162	Octa	PCB-195	1.00	6.50e+05	0.91 y	52:49	-	1.23
163	Octa	PCB-194	1.00	6.42e+05	1.01 y	53:40	-	1.21

164	Octa	PCB-205	1.00	7.63e+05	0.88	y	53:57	-	1.44
165	Nona	PCB-208	1.00	7.07e+05	1.32	y	52:57	-	0.95
166	Nona	PCB-207	1.00	7.22e+05	1.40	y	53:16	-	0.97
167	Nona	PCB-206	1.00	4.47e+05	1.26	y	55:21	-	1.05
168	Deca	PCB-209	1.00	4.65e+05	1.13	y	56:37	-	1.19
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.24
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.20

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.38
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.27
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.12
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.31
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.94
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.29
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.98
182	Tot ╗	Total Deca-PCB	1.00	4.65e+05	1.13	y	56:37	-	1.19
183	Mono╗	13C-PCB-1	100.00	1.56e+08	3.23	y	16:15	-	0.94
184	Mono╗	13C-PCB-3	100.00	1.56e+08	3.29	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	9.40e+07	1.58	y	20:09	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.41e+08	1.60	y	21:55	-	0.85
187	Di-IS	13C-PCB-11	100.00	1.59e+08	1.57	y	25:17	-	0.96
188	Tri-╗	13C-PCB-19	100.00	9.18e+07	1.06	y	24:16	-	0.55
189	Tri-╗	13C-PCB-32	100.00	1.37e+08	1.08	y	27:10	-	0.82
190	Tri-╗	13C-PCB-28	100.00	1.40e+08	1.05	y	29:07	-	0.91
191	Tri-╗	13C-PCB-37	100.00	1.28e+08	1.06	y	32:59	-	0.83
192	Tetr╗	13C-PCB-54	100.00	1.18e+08	0.81	y	28:00	-	0.89
193	Tetr╗	13C-PCB-52	100.00	9.78e+07	0.79	y	31:30	-	0.74
194	Tetr╗	13C-PCB-47	100.00	1.03e+08	0.79	y	32:01	-	0.78
195	Tetr╗	13C-PCB-70	100.00	1.28e+08	0.80	y	35:31	-	0.97
196	Tetr╗	13C-PCB-80	100.00	1.32e+08	0.81	y	35:56	-	1.00
197	Tetr╗	13C-PCB-81	100.00	1.09e+08	0.81	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	1.16e+08	0.80	y	39:38	-	0.87
199	Pent╗	13C-PCB-104	100.00	8.57e+07	1.62	y	32:41	-	1.06
200	Pent╗	13C-PCB-95	100.00	6.25e+07	1.56	y	35:50	-	0.78
201	Pent╗	13C-PCB-101	100.00	6.52e+07	1.58	y	37:30	-	0.81
202	Pent╗	13C-PCB-97	100.00	5.55e+07	1.65	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.42e+07	1.57	y	41:21	-	0.92
204	Pent╗	13C-PCB-118	100.00	7.69e+07	1.66	y	41:33	-	0.95
205	Pent╗	13C-PCB-114	100.00	8.65e+07	1.61	y	42:12	-	1.20
206	Pent╗	13C-PCB-105	100.00	8.97e+07	1.59	y	43:03	-	1.24
207	Pent╗	13C-PCB-127	100.00	9.70e+07	1.57	y	43:23	-	1.34
208	Pent╗	13C-PCB-126	100.00	8.43e+07	1.60	y	45:18	-	1.17
209	Hexa╗	13C-PCB-155	100.00	7.04e+07	1.28	y	37:03	-	0.87
210	Hexa╗	13C-PCB-153	100.00	8.00e+07	1.28	y	43:13	-	1.11
211	Hexa╗	13C-PCB-141	100.00	7.84e+07	1.29	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	7.60e+07	1.27	y	44:48	-	1.05
213	Hexa╗	13C-PCB-159	100.00	8.60e+07	1.28	y	46:05	-	1.19
214	Hexa╗	13C-PCB-167	100.00	9.61e+07	1.31	y	46:45	-	1.33
215	Hexa╗	13C-PCB-156	100.00	9.01e+07	1.28	y	48:03	-	1.25
216	Hexa╗	13C-PCB-157	100.00	9.47e+07	1.27	y	48:19	-	1.31
217	Hexa╗	13C-PCB-169	100.00	8.76e+07	1.27	y	50:24	-	1.21
218	Hept╗	13C-PCB-188	100.00	6.71e+07	0.47	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.84e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.88e+07	0.48	y	50:45	-	0.54
221	Hept╗	13C-PCB-189	100.00	5.08e+07	0.46	y	52:10	-	0.70
222	Octa╗	13C-PCB-202	100.00	5.96e+07	0.91	y	48:16	-	0.83

223	Octa¶	13C-PCB-194	100.00	5.30e+07	0.91	y	53:40	-	0.82
224	Nona¶	13C-PCB-208	100.00	7.41e+07	0.77	y	52:56	-	1.14
225	Nona¶	13C-PCB-206	100.00	4.24e+07	0.79	y	55:20	-	0.65
226	Deca¶	13C-PCB-209	100.00	3.91e+07	1.19	y	56:37	-	0.60
227	DI-RS	13C-PCB-15	100.00	1.66e+08	1.58	y	25:59	-	1.00
228	Tri-¶	13C-PCB-31	100.00	1.54e+08	1.06	y	29:00	-	1.00
229	Tetr¶	13C-PCB-60	100.00	1.33e+08	0.79	y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	8.06e+07	1.63	y	39:14	-	1.00
231	Hexa¶	13C-PCB-128	100.00	7.22e+07	1.30	y	46:21	-	1.00
232	Octa¶	13C-PCB-205	100.00	6.47e+07	0.91	y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 0.97
234	CRS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.61
235	PS		13C-PCB-79	100.00	1.28e+08	0.81	y	37:49	- 1.18
236	PS		13C-PCB-178	100.00	4.42e+07	0.46	y	45:38	- 0.91

Filename: 140620E1 S: 3 Acquired: 20-JUN-14 11:39:47
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-3 PCB CS2 13H1205

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	2.50	1.09e+07	2.94 y	16:15	-	1.26
2	Mono	PCB-2	2.50	1.01e+07	3.00 y	18:37	-	1.14
3	Mono	PCB-3	2.50	1.09e+07	3.06 y	18:51	-	1.23
4	Di	PCB-4/10	10.00	3.30e+07	1.63 y	20:12	-	1.55
5	Di	PCB-7/9	10.00	4.03e+07	1.63 y	21:58	-	1.26
6	Di	PCB-6	5.00	2.02e+07	1.66 y	22:36	-	1.26
7	Di	PCB-5/8	10.00	3.95e+07	1.65 y	23:01	-	1.23
8	Di	PCB-14	5.00	2.20e+07	1.65 y	24:06	-	1.21
9	Di	PCB-11	5.00	2.10e+07	1.68 y	25:18	-	1.16
10	Di	PCB-12/13	10.00	3.98e+07	1.61 y	25:41	-	1.10
11	Di	PCB-15	5.00	2.21e+07	1.67 y	25:59	-	1.22
12	Tri	PCB-19	2.50	6.55e+06	1.07 y	24:18	-	1.26
13	Tri	PCB-30	2.50	9.41e+06	1.06 y	25:11	-	1.82
14	Tri	PCB-18	2.50	6.63e+06	1.06 y	25:55	-	0.85
15	Tri	PCB-17	2.50	6.98e+06	1.08 y	26:06	-	0.89
16	Tri	PCB-24/27	5.00	1.85e+07	1.06 y	26:40	-	1.18
17	Tri	PCB-16/32	5.00	1.59e+07	1.07 y	27:10	-	1.02
18	Tri	PCB-34	2.50	9.58e+06	1.09 y	27:57	-	1.25
19	Tri	PCB-23	2.50	1.08e+07	1.09 y	28:03	-	1.41
20	Tri	PCB-29	2.50	1.02e+07	1.10 y	28:18	-	1.32
21	Tri	PCB-26	2.50	1.02e+07	1.06 y	28:30	-	1.32
22	Tri	PCB-25	2.50	1.04e+07	1.14 y	28:40	-	1.36
23	Tri	PCB-31	2.50	1.12e+07	1.09 y	29:02	-	1.46
24	Tri	PCB-28	2.50	1.08e+07	1.11 y	29:08	-	1.41
25	Tri	PCB-20/21/33	7.50	3.04e+07	1.09 y	29:45	-	1.32
26	Tri	PCB-22	2.50	1.03e+07	1.06 y	30:11	-	1.35
27	Tri	PCB-36	2.50	1.02e+07	1.08 y	30:48	-	1.38
28	Tri	PCB-39	2.50	1.04e+07	1.08 y	31:16	-	1.41
29	Tri	PCB-38	2.50	1.00e+07	1.09 y	32:03	-	1.36
30	Tri	PCB-35	2.50	9.94e+06	1.07 y	32:33	-	1.35
31	Tri	PCB-37	2.50	1.02e+07	1.12 y	32:59	-	1.39
32	Tetra	PCB-54	2.50	7.98e+06	0.79 y	28:02	-	1.18
33	Tetra	PCB-50	2.50	6.47e+06	0.77 y	29:11	-	0.96
34	Tetra	PCB-53	2.50	6.40e+06	0.77 y	29:50	-	1.14
35	Tetra	PCB-51	2.50	6.58e+06	0.81 y	30:10	-	1.17
36	Tetra	PCB-45	2.50	5.60e+06	0.78 y	30:36	-	1.00
37	Tetra	PCB-46	2.50	5.09e+06	0.75 y	31:05	-	0.90
38	Tetra	PCB-52/69	5.00	1.50e+07	0.79 y	31:33	-	1.33
39	Tetra	PCB-73	2.50	7.36e+06	0.75 y	31:40	-	1.31
40	Tetra	PCB-43/49	5.00	1.23e+07	0.78 y	31:50	-	1.10
41	Tetra	PCB-47	2.50	6.07e+06	0.76 y	32:02	-	1.04

42	Tetra	PCB-48/75	5.00	1.55e+07	0.77 y	32:09	-	1.33
43	Tetra	PCB-65	2.50	7.45e+06	0.79 y	32:25	-	1.28
44	Tetra	PCB-62	2.50	7.60e+06	0.79 y	32:32	-	1.30
45	Tetra	PCB-44	2.50	5.73e+06	0.74 y	32:50	-	0.98
46	Tetra	PCB-42/59	5.00	1.41e+07	0.77 y	33:04	-	1.21
47	Tetra	PCB-41/64/71/72	10.00	2.98e+07	0.78 y	33:39	-	1.28
48	Tetra	PCB-68	2.50	8.64e+06	0.79 y	33:54	-	1.48
49	Tetra	PCB-40	2.50	4.77e+06	0.77 y	34:07	-	0.82
50	Tetra	PCB-57	2.50	7.93e+06	0.79 y	34:28	-	1.11
51	Tetra	PCB-67	2.50	8.04e+06	0.68 y	34:46	-	1.12
52	Tetra	PCB-58	2.50	8.03e+06	0.88 y	34:53	-	1.12

53	Tetra	PCB-63	2.50	8.15e+06	0.80 y	35:03	-	1.14
54	Tetra	PCB-74	2.50	8.76e+06	0.78 y	35:20	-	1.22
55	Tetra	PCB-61/70	5.00	1.56e+07	0.76 y	35:31	-	1.08
56	Tetra	PCB-76/66	5.00	1.60e+07	0.79 y	35:44	-	1.12
57	Tetra	PCB-80	2.50	9.48e+06	0.78 y	35:58	-	1.28
58	Tetra	PCB-55	2.50	8.11e+06	0.77 y	36:17	-	1.10
59	Tetra	PCB-56/60	5.00	1.58e+07	0.77 y	36:47	-	1.07
60	Tetra	PCB-79	2.50	8.31e+06	0.75 y	37:50	-	1.12
61	Tetra	PCB-78	2.50	7.55e+06	0.77 y	38:32	-	1.20
62	Tetra	PCB-81	2.50	8.89e+06	0.79 y	39:04	-	1.41
63	Tetra	PCB-77	2.50	8.13e+06	0.82 y	39:39	-	1.22
64	Penta	PCB-104	2.50	6.23e+06	1.51 y	32:41	-	1.28
65	Penta	PCB-96	2.50	5.23e+06	1.55 y	33:57	-	1.08
66	Penta	PCB-103	2.50	4.30e+06	1.55 y	34:29	-	0.89
67	Penta	PCB-100	2.50	4.69e+06	1.55 y	34:50	-	0.97
68	Penta	PCB-94	2.50	3.79e+06	1.67 y	35:18	-	1.11
69	Penta	PCB-95/98/102	7.50	1.21e+07	1.60 y	35:48	-	1.18
70	Penta	PCB-93	2.50	4.14e+06	1.71 y	35:56	-	1.21
71	Penta	PCB-88/91	5.00	6.98e+06	1.52 y	36:13	-	1.02
72	Penta	PCB-121	2.50	6.62e+06	1.66 y	36:18	-	1.94
73	Penta	PCB-84/92	5.00	7.58e+06	1.59 y	37:08	-	1.05
74	Penta	PCB-89	2.50	3.69e+06	1.55 y	37:20	-	1.02
75	Penta	PCB-90/101	5.00	8.58e+06	1.58 y	37:30	-	1.19
76	Penta	PCB-113	2.50	4.74e+06	1.59 y	37:45	-	1.32
77	Penta	PCB-99	2.50	4.85e+06	1.65 y	37:50	-	1.35
78	Penta	PCB-119	2.50	5.47e+06	1.52 y	38:19	-	1.72
79	Penta	PCB-108/112	5.00	8.21e+06	1.65 y	38:28	-	1.29
80	Penta	PCB-83	2.50	4.81e+06	1.57 y	38:38	-	1.51
81	Penta	PCB-97	2.50	4.05e+06	1.59 y	38:49	-	1.27
82	Penta	PCB-86	2.50	3.35e+06	1.53 y	38:57	-	1.05
83	Penta	PCB-87/117/125	7.50	1.48e+07	1.59 y	39:05	-	1.55
84	Penta	PCB-111/115	5.00	1.08e+07	1.58 y	39:14	-	1.69
85	Penta	PCB-85/116	5.00	8.48e+06	1.60 y	39:22	-	1.33
86	Penta	PCB-120	2.50	5.59e+06	1.63 y	39:37	-	1.76
87	Penta	PCB-110	2.50	5.26e+06	1.59 y	39:45	-	1.65
88	Penta	PCB-82	2.50	3.23e+06	1.69 y	40:24	-	0.73
89	Penta	PCB-124	2.50	5.89e+06	1.57 y	41:04	-	1.33
90	Penta	PCB-107/109	5.00	1.04e+07	1.65 y	41:13	-	1.18
91	Penta	PCB-123	2.50	5.43e+06	1.52 y	41:23	-	1.23
92	Penta	PCB-106/118	5.00	1.13e+07	1.59 y	41:34	-	1.25
93	Penta	PCB-114	2.50	6.81e+06	1.68 y	42:13	-	1.36
94	Penta	PCB-122	2.50	6.01e+06	1.59 y	42:21	-	1.20
95	Penta	PCB-105	2.50	6.91e+06	1.69 y	43:05	-	1.33
96	Penta	PCB-127	2.50	6.53e+06	1.64 y	43:25	-	1.14
97	Penta	PCB-126	2.50	6.39e+06	1.68 y	45:18	-	1.28
98	Hexa	PCB-155	2.50	4.51e+06	1.22 y	37:04	-	1.18
99	Hexa	PCB-150	2.50	4.00e+06	1.22 y	38:20	-	1.05
100	Hexa	PCB-152	2.50	4.04e+06	1.22 y	38:48	-	1.06
101	Hexa	PCB-145	2.50	4.00e+06	1.28 y	39:14	-	1.05
102	Hexa	PCB-136	2.50	4.13e+06	1.32 y	39:34	-	1.08

103	Hexa	PCB-148	2.50	2.58e-06	1.36 y	39:41	-	0.68
104	Hexa	PCB-154	2.50	3.37e+06	1.28 y	40:09	-	0.88
105	Hexa	PCB-151	2.50	2.97e+06	1.35 y	40:48	-	0.78
106	Hexa	PCB-135	2.50	2.92e+06	1.29 y	41:00	-	0.76
107	Hexa	PCB-144	2.50	2.97e+06	1.28 y	41:07	-	0.78
108	Hexa	PCB-147	2.50	2.99e+06	1.23 y	41:15	-	0.78
109	Hexa	PCB-139/149	5.00	6.36e+06	1.23 y	41:31	-	0.83
110	Hexa	PCB-140	2.50	2.90e+06	1.28 y	41:42	-	0.76
111	Hexa	PCB-134/143	5.00	8.39e+06	1.23 y	42:08	-	0.90
112	Hexa	PCB-133/142	5.00	8.52e+06	1.22 y	42:26	-	0.91
113	Hexa	PCB-131	2.50	4.20e+06	1.24 y	42:36	-	0.90

114	Hexa	PCB-146/165	5.00	1.07e+07	1.23 y	42:49	-	1.14
115	Hexa	PCB-132/161	5.00	1.02e+07	1.22 y	43:04	-	1.09
116	Hexa	PCB-153	2.50	5.91e+06	1.25 y	43:13	-	1.26
117	Hexa	PCB-168	2.50	6.38e+06	1.17 y	43:26	-	1.37
118	Hexa	PCB-141	2.50	4.37e+06	1.21 y	43:58	-	0.97
119	Hexa	PCB-137	2.50	4.74e+06	1.24 y	44:21	-	1.05
120	Hexa	PCB-130	2.50	3.95e+06	1.26 y	44:27	-	0.87
121	Hexa	PCB-138/163/164	7.50	1.61e+07	1.23 y	44:50	-	1.22
122	Hexa	PCB-158/160	5.00	1.14e+07	1.26 y	45:04	-	1.29
123	Hexa	PCB-129	2.50	4.07e+06	1.27 y	45:19	-	0.93
124	Hexa	PCB-166	2.50	5.65e+06	1.19 y	45:46	-	1.11
125	Hexa	PCB-159	2.50	5.99e+06	1.25 y	46:05	-	1.18
126	Hexa	PCB-128/162	5.00	1.06e+07	1.20 y	46:23	-	1.04
127	Hexa	PCB-167	2.50	6.20e+06	1.24 y	46:46	-	1.10
128	Hexa	PCB-156	2.50	6.26e+06	1.23 y	48:04	-	1.18
129	Hexa	PCB-157	2.50	6.28e+06	1.27 y	48:20	-	1.13
130	Hexa	PCB-169	2.50	5.82e+06	1.20 y	50:24	-	1.12
131	Hepta	PCB-188	2.50	5.50e+06	1.08 y	42:52	-	1.43
132	Hepta	PCB-184	2.50	4.81e+06	1.08 y	43:19	-	1.25
133	Hepta	PCB-179	2.50	5.06e+06	1.03 y	44:06	-	1.32
134	Hepta	PCB-176	2.50	5.19e+06	1.06 y	44:34	-	1.35
135	Hepta	PCB-186	2.50	4.80e+06	1.01 y	45:11	-	1.25
136	Hepta	PCB-178	2.50	3.68e+06	1.04 y	45:40	-	0.96
137	Hepta	PCB-175	2.50	3.76e+06	1.07 y	46:00	-	0.98
138	Hepta	PCB-182/187	5.00	7.80e+06	1.03 y	46:11	-	1.01
139	Hepta	PCB-183	2.50	4.14e+06	1.08 y	46:30	-	1.08
140	Hepta	PCB-185	2.50	3.61e+06	1.06 y	47:09	-	1.30
141	Hepta	PCB-174	2.50	3.80e+06	1.05 y	47:31	-	1.36
142	Hepta	PCB-181	2.50	3.56e+06	1.02 y	47:38	-	1.28
143	Hepta	PCB-177	2.50	3.33e+06	1.02 y	47:47	-	1.20
144	Hepta	PCB-171	2.50	3.72e+06	1.05 y	48:04	-	1.34
145	Hepta	PCB-173	2.50	3.21e+06	1.03 y	48:31	-	1.15
146	Hepta	PCB-172	2.50	3.40e+06	1.05 y	48:57	-	1.22
147	Hepta	PCB-192	2.50	4.16e+06	1.05 y	49:09	-	1.49
148	Hepta	PCB-180	2.50	4.01e+06	1.10 y	49:21	-	1.44
149	Hepta	PCB-193	2.50	4.60e+06	1.04 y	49:32	-	1.65
150	Hepta	PCB-191	2.50	4.58e+06	1.05 y	49:46	-	1.65
151	Hepta	PCB-170	2.50	3.36e+06	1.02 y	50:45	-	1.51
152	Hepta	PCB-190	2.50	4.37e+06	1.06 y	50:55	-	1.97
153	Hepta	PCB-189	2.50	4.66e+06	1.06 y	52:12	-	1.55
154	Octa	PCB-202	2.50	3.48e+06	0.98 y	48:17	-	1.01
155	Octa	PCB-201	2.50	3.65e+06	0.94 y	48:46	-	1.06
156	Octa	PCB-204	2.50	3.41e+06	0.91 y	48:55	-	0.99
157	Octa	PCB-197	2.50	3.58e+06	0.96 y	49:14	-	1.04
158	Octa	PCB-200	2.50	3.52e+06	0.95 y	50:03	-	1.02
159	Octa	PCB-198	2.50	2.39e+06	0.96 y	51:19	-	0.69
160	Octa	PCB-199	2.50	2.50e+06	0.94 y	51:25	-	0.73
161	Octa	PCB-196/203	5.00	5.16e+06	0.89 y	51:41	-	0.75
162	Octa	PCB-195	2.50	3.62e+06	0.88 y	52:48	-	1.17
163	Octa	PCB-194	2.50	3.77e+06	0.94 y	53:40	-	1.22

164	Octa	PCB-205	2.50	4.34e+06	0.90	y	53:57	-	1.41
165	Nona	PCB-208	2.50	3.94e+06	1.36	y	52:56	-	0.93
166	Nona	PCB-207	2.50	3.87e+06	1.29	y	53:15	-	0.91
167	Nona	PCB-206	2.50	2.57e+06	1.40	y	55:20	-	1.03
168	Deca	PCB-209	2.50	2.82e+06	1.17	y	56:37	-	1.21
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.21
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.21
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.15

172	Tot ╕	Total Tri-PCB	0.00	-	-	n	-	-	1.36
173	Tot ╕	Total Tetra-PCB	0.00	-	-	n	-	-	1.17
174	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╕	Total Penta-PCB	0.00	-	-	n	-	-	1.26
176	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	0.89
177	Tot ╕	Total Hexa-PCB	0.00	-	-	n	-	-	1.08
178	Tot ╕	Total Hepta-PCB	0.00	-	-	n	-	-	1.27
179	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	0.89
180	Tot ╕	Total Octa-PCB	0.00	-	-	n	-	-	1.26
181	Tot ╕	Total Nona-PCB	0.00	-	-	n	-	-	0.94
182	Tot ╕	Total Deca-PCB	2.50	2.82e+06	1.17	y	56:37	-	1.21
183	Mono╕	13C-PCB-1	100.00	3.46e+08	3.25	y	16:14	-	0.91
184	Mono╕	13C-PCB-3	100.00	3.56e+08	3.24	y	18:50	-	0.94
185	Di-IS	13C-PCB-4	100.00	2.13e+08	1.57	y	20:09	-	0.56
186	Di-IS	13C-PCB-9	100.00	3.20e+08	1.57	y	21:55	-	0.84
187	Di-IS	13C-PCB-11	100.00	3.64e+08	1.57	y	25:16	-	0.96
188	Tri-╕	13C-PCB-19	100.00	2.07e+08	1.06	y	24:16	-	0.55
189	Tri-╕	13C-PCB-32	100.00	3.14e+08	1.08	y	27:10	-	0.83
190	Tri-╕	13C-PCB-28	100.00	3.07e+08	1.06	y	29:07	-	0.83
191	Tri-╕	13C-PCB-37	100.00	2.95e+08	1.07	y	32:58	-	0.80
192	Tetr╕	13C-PCB-54	100.00	2.71e+08	0.81	y	28:00	-	0.91
193	Tetr╕	13C-PCB-52	100.00	2.25e+08	0.80	y	31:31	-	0.75
194	Tetr╕	13C-PCB-47	100.00	2.33e+08	0.79	y	32:01	-	0.78
195	Tetr╕	13C-PCB-70	100.00	2.87e+08	0.80	y	35:32	-	0.96
196	Tetr╕	13C-PCB-80	100.00	2.96e+08	0.81	y	35:56	-	0.99
197	Tetr╕	13C-PCB-81	100.00	2.52e+08	0.80	y	39:03	-	0.84
198	Tetr╕	13C-PCB-77	100.00	2.67e+08	0.80	y	39:38	-	0.90
199	Pent╕	13C-PCB-104	100.00	1.94e+08	1.60	y	32:40	-	1.07
200	Pent╕	13C-PCB-95	100.00	1.37e+08	1.60	y	35:50	-	0.75
201	Pent╕	13C-PCB-101	100.00	1.44e+08	1.61	y	37:30	-	0.79
202	Pent╕	13C-PCB-97	100.00	1.27e+08	1.61	y	38:48	-	0.70
203	Pent╕	13C-PCB-123	100.00	1.77e+08	1.58	y	41:22	-	0.98
204	Pent╕	13C-PCB-118	100.00	1.80e+08	1.61	y	41:33	-	0.99
205	Pent╕	13C-PCB-114	100.00	2.01e+08	1.59	y	42:12	-	1.21
206	Pent╕	13C-PCB-105	100.00	2.08e+08	1.59	y	43:04	-	1.25
207	Pent╕	13C-PCB-127	100.00	2.30e+08	1.60	y	43:23	-	1.38
208	Pent╕	13C-PCB-126	100.00	2.00e+08	1.58	y	45:18	-	1.20
209	Hexa╕	13C-PCB-155	100.00	1.53e+08	1.28	y	37:03	-	0.84
210	Hexa╕	13C-PCB-153	100.00	1.87e+08	1.28	y	43:13	-	1.13
211	Hexa╕	13C-PCB-141	100.00	1.81e+08	1.27	y	43:57	-	1.09
212	Hexa	13C-PCB-138	100.00	1.75e+08	1.26	y	44:48	-	1.06
213	Hexa╕	13C-PCB-159	100.00	2.03e+08	1.26	y	46:04	-	1.22
214	Hexa╕	13C-PCB-167	100.00	2.26e+08	1.29	y	46:46	-	1.36
215	Hexa╕	13C-PCB-156	100.00	2.13e+08	1.27	y	48:03	-	1.28
216	Hexa╕	13C-PCB-157	100.00	2.22e+08	1.29	y	48:20	-	1.34
217	Hexa╕	13C-PCB-169	100.00	2.08e+08	1.29	y	50:23	-	1.25
218	Hept╕	13C-PCB-188	100.00	1.54e+08	0.47	y	42:51	-	0.93
219	Hept╕	13C-PCB-180	100.00	1.11e+08	0.47	y	49:20	-	0.67
220	Hept╕	13C-PCB-170	100.00	8.90e+07	0.47	y	50:44	-	0.54
221	Hept╕	13C-PCB-189	100.00	1.21e+08	0.46	y	52:11	-	0.73
222	Octa╕	13C-PCB-202	100.00	1.38e+08	0.91	y	48:16	-	0.83

223	Octa╗	13C-PCB-194	100.00	1.24e+08	0.92 y	53:39	-	0.82
224	Nona╗	13C-PCB-208	100.00	1.70e+08	0.78 y	52:56	-	1.13
225	Nona╗	13C-PCB-206	100.00	1.00e+08	0.81 y	55:19	-	0.66
226	Deca╗	13C-PCB-209	100.00	9.32e+07	1.21 y	56:36	-	0.62
227	DI-RS	13C-PCB-15	100.00	3.79e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	3.70e+08	1.06 y	29:01	-	1.00
229	Tetr╗	13C-PCB-60	100.00	2.98e+08	0.79 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.81e+08	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.66e+08	1.28 y	46:22	-	1.00
232	Octa╗	13C-PCB-205	100.00	1.51e+08	0.90 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 0.99
234	CRS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.62
235	PS		13C-PCB-79	100.00	2.94e+08	0.79	y	37:49	- 1.17
236	PS		13C-PCB-178	100.00	1.02e+08	0.47	y	45:38	- 0.92

Filename: 140620E1 S: 4 Acquired: 20-JUN-14 12:43:46
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-4 PCB CS3 14F1901

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	7.81e+07	2.96 y	16:15	-	1.31
2	Mono	PCB-2	50.00	7.76e+07	2.98 y	18:36	-	1.24
3	Mono	PCB-3	50.00	7.92e+07	2.99 y	18:50	-	1.26
4	Di	PCB-4/10	200.00	2.38e+08	1.63 y	20:12	-	1.61
5	Di	PCB-7/9	200.00	2.89e+08	1.64 y	21:57	-	1.30
6	Di	PCB-6	100.00	1.40e+08	1.64 y	22:36	-	1.26
7	Di	PCB-5/8	200.00	2.85e+08	1.64 y	23:01	-	1.28
8	Di	PCB-14	100.00	1.58e+08	1.64 y	24:06	-	1.27
9	Di	PCB-11	100.00	1.47e+08	1.66 y	25:17	-	1.18
10	Di	PCB-12/13	200.00	2.83e+08	1.65 y	25:41	-	1.14
11	Di	PCB-15	100.00	1.54e+08	1.67 y	26:00	-	1.24
12	Tri	PCB-19	50.00	4.61e+07	1.05 y	24:17	-	1.28
13	Tri	PCB-30	50.00	6.74e+07	1.06 y	25:10	-	1.87
14	Tri	PCB-18	50.00	4.73e+07	1.06 y	25:55	-	0.87
15	Tri	PCB-17	50.00	4.99e+07	1.05 y	26:05	-	0.92
16	Tri	PCB-24/27	100.00	1.33e+08	1.06 y	26:40	-	1.22
17	Tri	PCB-16/32	100.00	1.13e+08	1.05 y	27:10	-	1.03
18	Tri	PCB-34	50.00	6.57e+07	1.09 y	27:57	-	1.23
19	Tri	PCB-23	50.00	7.68e+07	1.09 y	28:02	-	1.44
20	Tri	PCB-29	50.00	7.27e+07	1.09 y	28:18	-	1.36
21	Tri	PCB-26	50.00	7.01e+07	1.08 y	28:30	-	1.31
22	Tri	PCB-25	50.00	7.40e+07	1.09 y	28:40	-	1.38
23	Tri	PCB-31	50.00	7.56e+07	1.08 y	29:02	-	1.41
24	Tri	PCB-28	50.00	7.73e+07	1.11 y	29:07	-	1.45
25	Tri	PCB-20/21/33	150.00	2.14e+08	1.09 y	29:45	-	1.34
26	Tri	PCB-22	50.00	7.44e+07	1.09 y	30:11	-	1.39
27	Tri	PCB-36	50.00	7.19e+07	1.09 y	30:47	-	1.43
28	Tri	PCB-39	50.00	7.33e+07	1.08 y	31:16	-	1.46
29	Tri	PCB-38	50.00	7.08e+07	1.08 y	32:02	-	1.41
30	Tri	PCB-35	50.00	7.21e+07	1.11 y	32:33	-	1.44
31	Tri	PCB-37	50.00	7.05e+07	1.09 y	32:59	-	1.41
32	Tetra	PCB-54	50.00	5.75e+07	0.77 y	28:01	-	1.24
33	Tetra	PCB-50	50.00	4.62e+07	0.77 y	29:11	-	0.99
34	Tetra	PCB-53	50.00	4.60e+07	0.78 y	29:49	-	1.19
35	Tetra	PCB-51	50.00	4.72e+07	0.78 y	30:10	-	1.23
36	Tetra	PCB-45	50.00	3.93e+07	0.78 y	30:36	-	1.02
37	Tetra	PCB-46	50.00	3.68e+07	0.76 y	31:04	-	0.95
38	Tetra	PCB-52/69	100.00	1.04e+08	0.77 y	31:33	-	1.35
39	Tetra	PCB-73	50.00	5.52e+07	0.77 y	31:39	-	1.43
40	Tetra	PCB-43/49	100.00	8.70e+07	0.78 y	31:50	-	1.13
41	Tetra	PCB-47	50.00	4.87e+07	0.76 y	32:02	-	1.20

42	Tetra	PCB-48/75	100.00	1.06e-08	0.78 y	32:09	-	1.31
43	Tetra	PCB-65	50.00	5.35e-07	0.77 y	32:25	-	1.32
44	Tetra	PCB-62	50.00	5.60e+07	0.77 y	32:32	-	1.38
45	Tetra	PCB-44	50.00	3.98e+07	0.78 y	32:49	-	0.98
46	Tetra	PCB-42/59	100.00	1.02e+08	0.77 y	33:02	-	1.26
47	Tetra	PCB-41/64/71/72	200.00	2.19e+08	0.78 y	33:38	-	1.35
48	Tetra	PCB-68	50.00	6.14e+07	0.78 y	33:54	-	1.51
49	Tetra	PCB-40	50.00	3.36e+07	0.77 y	34:06	-	0.83
50	Tetra	PCB-57	50.00	5.91e+07	0.77 y	34:28	-	1.15
51	Tetra	PCB-67	50.00	5.87e+07	0.78 y	34:46	-	1.15
52	Tetra	PCB-58	50.00	5.57e+07	0.78 y	34:53	-	1.09

53	Tetra	PCB-63	50.00	5.92e+07	0.76	y	35:03	- 1.16
54	Tetra	PCB-74	50.00	6.39e+07	0.77	y	35:20	- 1.25
55	Tetra	PCB-61/70	100.00	1.13e+08	0.78	y	35:30	- 1.10
56	Tetra	PCB-76/66	100.00	1.20e+08	0.77	y	35:43	- 1.17
57	Tetra	PCB-80	50.00	6.75e+07	0.78	y	35:56	- 1.28
58	Tetra	PCB-55	50.00	6.01e+07	0.77	y	36:17	- 1.14
59	Tetra	PCB-56/60	100.00	1.15e+08	0.77	y	36:46	- 1.09
60	Tetra	PCB-79	50.00	6.07e+07	0.78	y	37:50	- 1.15
61	Tetra	PCB-78	50.00	5.78e+07	0.78	y	38:32	- 1.27
62	Tetra	PCB-81	50.00	6.42e+07	0.78	y	39:03	- 1.41
63	Tetra	PCB-77	50.00	6.12e+07	0.79	y	39:39	- 1.25
64	Penta	PCB-104	50.00	4.42e+07	1.62	y	32:41	- 1.27
65	Penta	PCB-96	50.00	3.85e+07	1.59	y	33:57	- 1.10
66	Penta	PCB-103	50.00	3.30e+07	1.58	y	34:29	- 0.95
67	Penta	PCB-100	50.00	3.53e+07	1.61	y	34:49	- 1.01
68	Penta	PCB-94	50.00	2.93e+07	1.58	y	35:18	- 1.13
69	Penta	PCB-95/98/102	150.00	1.01e+08	1.60	y	35:47	- 1.30
70	Penta	PCB-93	50.00	2.46e+07	1.63	y	35:56	- 0.95
71	Penta	PCB-88/91	100.00	5.97e+07	1.61	y	36:12	- 1.15
72	Penta	PCB-121	50.00	4.37e+07	1.56	y	36:19	- 1.69
73	Penta	PCB-84/92	100.00	5.90e+07	1.59	y	37:08	- 1.09
74	Penta	PCB-89	50.00	2.93e+07	1.61	y	37:19	- 1.08
75	Penta	PCB-90/101	100.00	6.59e+07	1.60	y	37:31	- 1.21
76	Penta	PCB-113	50.00	4.09e+07	1.59	y	37:45	- 1.51
77	Penta	PCB-99	50.00	3.25e+07	1.60	y	37:51	- 1.20
78	Penta	PCB-119	50.00	4.22e+07	1.61	y	38:18	- 1.73
79	Penta	PCB-108/112	100.00	6.46e+07	1.63	y	38:27	- 1.33
80	Penta	PCB-83	50.00	3.86e+07	1.62	y	38:38	- 1.58
81	Penta	PCB-97	50.00	3.20e+07	1.59	y	38:49	- 1.32
82	Penta	PCB-86	50.00	2.38e+07	1.53	y	38:58	- 0.98
83	Penta	PCB-87/117/125	150.00	1.16e+08	1.58	y	39:05	- 1.59
84	Penta	PCB-111/115	100.00	8.59e+07	1.72	y	39:15	- 1.76
85	Penta	PCB-85/116	100.00	6.54e+07	1.46	y	39:23	- 1.34
86	Penta	PCB-120	50.00	4.27e+07	1.57	y	39:37	- 1.75
87	Penta	PCB-110	50.00	4.19e+07	1.60	y	39:46	- 1.72
88	Penta	PCB-82	50.00	2.58e+07	1.60	y	40:23	- 0.73
89	Penta	PCB-124	50.00	4.68e+07	1.60	y	41:03	- 1.32
90	Penta	PCB-107/109	100.00	8.79e+07	1.59	y	41:12	- 1.24
91	Penta	PCB-123	50.00	4.52e+07	1.59	y	41:22	- 1.28
92	Penta	PCB-106/118	100.00	9.20e+07	1.60	y	41:35	- 1.26
93	Penta	PCB-114	50.00	5.39e+07	1.62	y	42:13	- 1.37
94	Penta	PCB-122	50.00	4.95e+07	1.62	y	42:21	- 1.25
95	Penta	PCB-105	50.00	5.39e+07	1.63	y	43:05	- 1.34
96	Penta	PCB-127	50.00	5.03e+07	1.65	y	43:24	- 1.16
97	Penta	PCB-126	50.00	4.94e+07	1.62	y	45:19	- 1.32
98	Hexa	PCB-155	50.00	3.50e+07	1.27	y	37:03	- 1.20
99	Hexa	PCB-150	50.00	3.24e+07	1.28	y	38:20	- 1.11
100	Hexa	PCB-152	50.00	3.29e+07	1.26	y	38:48	- 1.12
101	Hexa	PCB-145	50.00	3.24e+07	1.26	y	39:15	- 1.11
102	Hexa	PCB-136	50.00	3.34e+07	1.27	y	39:35	- 1.14

103	Hexa	PCB-148	50.00	2.20e-07	1.30 y	39:40	-	0.75
104	Hexa	PCB-154	50.00	2.71e+07	1.26 y	40:10	-	0.93
105	Hexa	PCB-151	50.00	2.51e+07	1.30 y	40:47	-	0.86
106	Hexa	PCB-135	50.00	2.36e+07	1.28 y	41:01	-	0.81
107	Hexa	PCB-144	50.00	2.64e+07	1.36 y	41:08	-	0.90
108	Hexa	PCB-147	50.00	2.56e+07	1.18 y	41:16	-	0.88
109	Hexa	PCB-139/149	100.00	5.31e+07	1.27 y	41:30	-	0.91
110	Hexa	PCB-140	50.00	2.51e+07	1.27 y	41:42	-	0.86
111	Hexa	PCB-134/143	100.00	6.92e+07	1.24 y	42:08	-	0.94
112	Hexa	PCB-133/142	100.00	7.07e+07	1.23 y	42:26	-	0.96
113	Hexa	PCB-131	50.00	3.31e+07	1.22 y	42:36	-	0.90

114	Hexa	PCB-146/165	100.00	8.55e+07	1.24	y	42:48	- 1.16
115	Hexa	PCB-132/161	100.00	8.32e+07	1.22	y	43:03	- 1.13
116	Hexa	PCB-153	50.00	4.33e+07	1.22	y	43:14	- 1.18
117	Hexa	PCB-168	50.00	5.02e+07	1.21	y	43:27	- 1.37
118	Hexa	PCB-141	50.00	3.51e+07	1.21	y	43:58	- 0.99
119	Hexa	PCB-137	50.00	3.65e+07	1.26	y	44:21	- 1.03
120	Hexa	PCB-130	50.00	3.32e+07	1.23	y	44:27	- 0.94
121	Hexa	PCB-138/163/164	150.00	1.29e+08	1.23	y	44:50	- 1.26
122	Hexa	PCB-158/160	100.00	9.17e+07	1.23	y	45:05	- 1.34
123	Hexa	PCB-129	50.00	3.18e+07	1.24	y	45:19	- 0.93
124	Hexa	PCB-166	50.00	4.43e+07	1.22	y	45:46	- 1.13
125	Hexa	PCB-159	50.00	4.56e+07	1.22	y	46:05	- 1.17
126	Hexa	PCB-128/162	100.00	8.34e+07	1.23	y	46:22	- 1.07
127	Hexa	PCB-167	50.00	4.70e+07	1.21	y	46:47	- 1.09
128	Hexa	PCB-156	50.00	4.75e+07	1.22	y	48:04	- 1.17
129	Hexa	PCB-157	50.00	4.75e+07	1.22	y	48:20	- 1.11
130	Hexa	PCB-169	50.00	4.39e+07	1.23	y	50:24	- 1.11
131	Hepta	PCB-188	50.00	4.42e+07	1.02	y	42:52	- 1.43
132	Hepta	PCB-184	50.00	3.95e+07	1.05	y	43:18	- 1.28
133	Hepta	PCB-179	50.00	4.06e+07	1.05	y	44:06	- 1.31
134	Hepta	PCB-176	50.00	4.27e+07	1.05	y	44:34	- 1.38
135	Hepta	PCB-186	50.00	4.05e+07	1.04	y	45:10	- 1.31
136	Hepta	PCB-178	50.00	2.95e+07	1.05	y	45:39	- 0.96
137	Hepta	PCB-175	50.00	3.17e+07	1.05	y	46:00	- 1.02
138	Hepta	PCB-182/187	100.00	6.54e+07	1.04	y	46:11	- 1.06
139	Hepta	PCB-183	50.00	3.41e+07	1.05	y	46:29	- 1.10
140	Hepta	PCB-185	50.00	3.05e+07	1.05	y	47:09	- 1.36
141	Hepta	PCB-174	50.00	2.96e+07	1.04	y	47:31	- 1.32
142	Hepta	PCB-181	50.00	3.21e+07	1.07	y	47:37	- 1.43
143	Hepta	PCB-177	50.00	2.87e+07	1.06	y	47:48	- 1.28
144	Hepta	PCB-171	50.00	2.95e+07	1.04	y	48:05	- 1.31
145	Hepta	PCB-173	50.00	2.63e+07	1.05	y	48:31	- 1.17
146	Hepta	PCB-172	50.00	2.77e+07	1.03	y	48:57	- 1.24
147	Hepta	PCB-192	50.00	3.49e+07	1.05	y	49:09	- 1.56
148	Hepta	PCB-180	50.00	3.18e+07	1.04	y	49:20	- 1.42
149	Hepta	PCB-193	50.00	3.77e+07	1.05	y	49:32	- 1.68
150	Hepta	PCB-191	50.00	3.78e+07	1.05	y	49:47	- 1.68
151	Hepta	PCB-170	50.00	2.67e+07	1.04	y	50:46	- 1.50
152	Hepta	PCB-190	50.00	3.64e+07	1.03	y	50:55	- 2.04
153	Hepta	PCB-189	50.00	3.89e+07	1.04	y	52:12	- 1.59
154	Octa	PCB-202	50.00	2.93e+07	0.91	y	48:17	- 1.04
155	Octa	PCB-201	50.00	3.13e+07	0.93	y	48:46	- 1.11
156	Octa	PCB-204	50.00	2.91e+07	0.88	y	48:56	- 1.04
157	Octa	PCB-197	50.00	3.14e+07	0.91	y	49:13	- 1.12
158	Octa	PCB-200	50.00	3.00e+07	0.91	y	50:03	- 1.07
159	Octa	PCB-198	50.00	2.15e+07	0.90	y	51:20	- 0.77
160	Octa	PCB-199	50.00	2.15e+07	0.89	y	51:25	- 0.77
161	Octa	PCB-196/203	100.00	4.56e+07	0.90	y	51:41	- 0.81
162	Octa	PCB-195	50.00	2.93e+07	0.91	y	52:49	- 1.25
163	Octa	PCB-194	50.00	2.92e+07	0.90	y	53:41	- 1.24

164	Octa	PCB-205	50.00	3.30e+07	0.92	y	53:58	-	1.41
165	Nona	PCB-208	50.00	3.17e+07	1.33	y	52:57	-	0.95
166	Nona	PCB-207	50.00	3.11e+07	1.32	y	53:16	-	0.93
167	Nona	PCB-206	50.00	2.08e+07	1.33	y	55:21	-	1.02
168	Deca	PCB-209	50.00	2.28e+07	1.19	y	56:38	-	1.23
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.27
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.25
171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.18

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.39
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.21
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.10
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.30
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.95
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.30
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.96
182	Tot ╗	Total Deca-PCB	50.00	2.28e+07	1.19	y	56:38	-	1.23
183	Mono╗	13C-PCB-1	100.00	1.19e+08	3.24	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.26e+08	3.30	y	18:49	-	0.93
185	Di-IS	13C-PCB-4	100.00	7.38e+07	1.60	y	20:09	-	0.55
186	Di-IS	13C-PCB-9	100.00	1.12e+08	1.59	y	21:55	-	0.82
187	Di-IS	13C-PCB-11	100.00	1.24e+08	1.58	y	25:16	-	0.92
188	Tri-╗	13C-PCB-19	100.00	7.23e+07	1.06	y	24:16	-	0.53
189	Tri-╗	13C-PCB-32	100.00	1.09e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.07e+08	1.05	y	29:07	-	0.85
191	Tri-╗	13C-PCB-37	100.00	1.00e+08	1.07	y	32:59	-	0.80
192	Tetr╗	13C-PCB-54	100.00	9.29e+07	0.81	y	28:00	-	0.84
193	Tetr╗	13C-PCB-52	100.00	7.70e+07	0.79	y	31:30	-	0.70
194	Tetr╗	13C-PCB-47	100.00	8.12e+07	0.80	y	32:01	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.02e+08	0.79	y	35:31	-	0.93
196	Tetr╗	13C-PCB-80	100.00	1.05e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	9.11e+07	0.80	y	39:03	-	0.82
198	Tetr╗	13C-PCB-77	100.00	9.78e+07	0.81	y	39:38	-	0.88
199	Pent╗	13C-PCB-104	100.00	6.97e+07	1.58	y	32:40	-	0.98
200	Pent╗	13C-PCB-95	100.00	5.18e+07	1.63	y	35:49	-	0.73
201	Pent╗	13C-PCB-101	100.00	5.42e+07	1.60	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	4.87e+07	1.60	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	7.09e+07	1.58	y	41:21	-	1.00
204	Pent╗	13C-PCB-118	100.00	7.31e+07	1.59	y	41:32	-	1.03
205	Pent╗	13C-PCB-114	100.00	7.90e+07	1.61	y	42:12	-	1.18
206	Pent╗	13C-PCB-105	100.00	8.02e+07	1.61	y	43:03	-	1.20
207	Pent╗	13C-PCB-127	100.00	8.65e+07	1.59	y	43:23	-	1.29
208	Pent╗	13C-PCB-126	100.00	7.48e+07	1.61	y	45:18	-	1.12
209	Hexa╗	13C-PCB-155	100.00	5.86e+07	1.27	y	37:02	-	0.83
210	Hexa╗	13C-PCB-153	100.00	7.35e+07	1.25	y	43:13	-	1.10
211	Hexa╗	13C-PCB-141	100.00	7.09e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	6.83e+07	1.26	y	44:48	-	1.02
213	Hexa╗	13C-PCB-159	100.00	7.82e+07	1.30	y	46:05	-	1.17
214	Hexa╗	13C-PCB-167	100.00	8.59e+07	1.26	y	46:45	-	1.29
215	Hexa╗	13C-PCB-156	100.00	8.11e+07	1.27	y	48:03	-	1.21
216	Hexa╗	13C-PCB-157	100.00	8.59e+07	1.29	y	48:19	-	1.28
217	Hexa╗	13C-PCB-169	100.00	7.93e+07	1.27	y	50:24	-	1.19
218	Hept╗	13C-PCB-188	100.00	6.19e+07	0.46	y	42:51	-	0.93
219	Hept╗	13C-PCB-180	100.00	4.49e+07	0.47	y	49:19	-	0.67
220	Hept╗	13C-PCB-170	100.00	3.58e+07	0.45	y	50:45	-	0.53
221	Hept╗	13C-PCB-189	100.00	4.91e+07	0.46	y	52:11	-	0.73
222	Octa╗	13C-PCB-202	100.00	5.62e+07	0.92	y	48:16	-	0.84

223	Octa╗	13C-PCB-194	100.00	4.69e+07	0.91 y	53:40	-	0.80
224	Nona╗	13C-PCB-208	100.00	6.66e+07	0.78 y	52:56	-	1.14
225	Nona╗	13C-PCB-206	100.00	4.07e+07	0.77 y	55:20	-	0.70
226	Deca╗	13C-PCB-209	100.00	3.70e+07	1.21 y	56:37	-	0.64
227	DI-RS	13C-PCB-15	100.00	1.35e+08	1.56 y	25:58	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.25e+08	1.06 y	29:00	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.11e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	7.09e+07	1.59 y	39:14	-	1.00
231	Hexa╗	13C-PCB-128	100.00	6.69e+07	1.26 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	5.82e+07	0.91 y	53:57	-	1.00

233	CRS	13C-PCB-79	100.00	1.21e+08	0.80	y	37:49	-	1.09
234	CRS	13C-PCB-178	100.00	4.58e+07	0.46	y	45:38	-	0.69
235	PS	13C-PCB-79	100.00	1.21e+08	0.80	y	37:49	-	1.33
236	PS	13C-PCB-178	100.00	4.58e+07	0.46	y	45:38	-	1.02

Filename: 140620E1 S: 5 Acquired: 20-JUN-14 13:47:50
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-5 PCB CS4 13H1206

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	6.95e+08	2.97 y	16:15	-	1.05
2	Mono	PCB-2	400.00	6.84e+08	2.99 y	18:36	-	1.00
3	Mono	PCB-3	400.00	7.00e+08	3.00 y	18:50	-	1.02
4	Di	PCB-4/10	1600.00	2.12e+09	1.63 y	20:12	-	1.32
5	Di	PCB-7/9	1600.00	2.61e+09	1.63 y	21:57	-	1.08
6	Di	PCB-6	800.00	1.28e+09	1.64 y	22:36	-	1.06
7	Di	PCB-5/8	1600.00	2.62e+09	1.64 y	23:01	-	1.08
8	Di	PCB-14	800.00	1.44e+09	1.64 y	24:06	-	1.03
9	Di	PCB-11	800.00	1.36e+09	1.65 y	25:17	-	0.97
10	Di	PCB-12/13	1600.00	2.65e+09	1.64 y	25:41	-	0.94
11	Di	PCB-15	800.00	1.43e+09	1.63 y	26:00	-	1.02
12	Tri	PCB-19	400.00	4.09e+08	1.05 y	24:17	-	1.05
13	Tri	PCB-30	400.00	5.99e+08	1.06 y	25:10	-	1.54
14	Tri	PCB-18	400.00	4.25e+08	1.06 y	25:55	-	0.70
15	Tri	PCB-17	400.00	4.49e+08	1.05 y	26:05	-	0.74
16	Tri	PCB-24/27	800.00	1.19e+09	1.05 y	26:39	-	0.98
17	Tri	PCB-16/32	800.00	1.02e+09	1.06 y	27:10	-	0.84
18	Tri	PCB-34	400.00	6.61e+08	1.09 y	27:57	-	1.07
19	Tri	PCB-23	400.00	6.32e+08	1.10 y	28:03	-	1.02
20	Tri	PCB-29	400.00	6.52e+08	1.09 y	28:18	-	1.06
21	Tri	PCB-26	400.00	6.34e+08	1.11 y	28:30	-	1.03
22	Tri	PCB-25	400.00	6.76e+08	1.08 y	28:39	-	1.09
23	Tri	PCB-31	400.00	6.48e+08	1.08 y	29:01	-	1.05
24	Tri	PCB-28	400.00	7.30e+08	1.09 y	29:08	-	1.18
25	Tri	PCB-20/21/33	1200.00	2.00e+09	1.09 y	29:44	-	1.08
26	Tri	PCB-22	400.00	6.74e+08	1.09 y	30:10	-	1.09
27	Tri	PCB-36	400.00	6.53e+08	1.09 y	30:47	-	1.16
28	Tri	PCB-39	400.00	6.69e+08	1.09 y	31:15	-	1.19
29	Tri	PCB-38	400.00	6.54e+08	1.09 y	32:02	-	1.16
30	Tri	PCB-35	400.00	6.68e+08	1.09 y	32:32	-	1.19
31	Tri	PCB-37	400.00	6.65e+08	1.09 y	33:00	-	1.18
32	Tetra	PCB-54	400.00	5.24e+08	0.78 y	28:01	-	1.01
33	Tetra	PCB-50	400.00	4.18e+08	0.77 y	29:10	-	0.81
34	Tetra	PCB-53	400.00	4.29e+08	0.78 y	29:49	-	1.00
35	Tetra	PCB-51	400.00	4.24e+08	0.77 y	30:09	-	0.99
36	Tetra	PCB-45	400.00	3.49e+08	0.77 y	30:35	-	0.81
37	Tetra	PCB-46	400.00	3.30e+08	0.78 y	31:05	-	0.77
38	Tetra	PCB-52/69	800.00	9.21e+08	0.77 y	31:32	-	1.07
39	Tetra	PCB-73	400.00	5.23e+08	0.78 y	31:39	-	1.22
40	Tetra	PCB-43/49	800.00	8.03e+08	0.77 y	31:49	-	0.94
41	Tetra	PCB-47	400.00	4.43e+08	0.77 y	32:02	-	0.96

42	Tetra	PCB-48/75	800.00	9.95e+08	0.78 y	32:08	-	1.08
43	Tetra	PCB-65	400.00	5.26e+08	0.77 y	32:24	-	1.15
44	Tetra	PCB-62	400.00	4.75e+08	0.78 y	32:31	-	1.03
45	Tetra	PCB-44	400.00	3.59e+08	0.78 y	32:49	-	0.78
46	Tetra	PCB-42/59	800.00	9.31e+08	0.78 y	33:03	-	1.01
47	Tetra	PCB-41/64/71/72	1600.00	2.06e+09	0.78 y	33:38	-	1.12
48	Tetra	PCB-68	400.00	5.66e+08	0.78 y	33:53	-	1.23
49	Tetra	PCB-40	400.00	3.06e+08	0.78 y	34:07	-	0.67
50	Tetra	PCB-57	400.00	5.45e+08	0.78 y	34:27	-	0.92
51	Tetra	PCB-67	400.00	5.29e+08	0.77 y	34:45	-	0.90
52	Tetra	PCB-58	400.00	5.39e+08	0.78 y	34:53	-	0.91

53	Tetra	PCB-63	400.00	5.63e+08	0.78 y	35:02	-	0.95
54	Tetra	PCB-74	400.00	5.92e-08	0.78 y	35:19	-	1.00
55	Tetra	PCB-61/70	800.00	1.09e+09	0.78 y	35:30	-	0.92
56	Tetra	PCB-76/66	800.00	1.11e+09	0.78 y	35:43	-	0.94
57	Tetra	PCB-80	400.00	6.36e+08	0.78 y	35:57	-	1.07
58	Tetra	PCB-55	400.00	5.70e+08	0.78 y	36:16	-	0.96
59	Tetra	PCB-56/60	800.00	1.08e+09	0.77 y	36:46	-	0.91
60	Tetra	PCB-79	400.00	5.68e+08	0.78 y	37:49	-	0.95
61	Tetra	PCB-78	400.00	5.53e+08	0.77 y	38:31	-	1.02
62	Tetra	PCB-81	400.00	6.17e+08	0.77 y	39:03	-	1.14
63	Tetra	PCB-77	400.00	5.82e+08	0.80 y	39:38	-	1.02
64	Penta	PCB-104	400.00	3.92e+08	1.60 y	32:41	-	1.03
65	Penta	PCB-96	400.00	3.47e+08	1.59 y	33:56	-	0.92
66	Penta	PCB-103	400.00	3.03e+08	1.60 y	34:28	-	0.80
67	Penta	PCB-100	400.00	3.29e+08	1.60 y	34:50	-	0.87
68	Penta	PCB-94	400.00	2.68e+08	1.60 y	35:18	-	0.91
69	Penta	PCB-95/98/102	1200.00	9.09e+08	1.60 y	35:47	-	1.04
70	Penta	PCB-93	400.00	2.47e+08	1.60 y	35:56	-	0.84
71	Penta	PCB-88/91	800.00	5.23e+08	1.56 y	36:12	-	0.89
72	Penta	PCB-121	400.00	4.29e+08	1.64 y	36:18	-	1.46
73	Penta	PCB-84/92	800.00	5.39e+08	1.60 y	37:08	-	0.87
74	Penta	PCB-89	400.00	2.55e+08	1.60 y	37:20	-	0.83
75	Penta	PCB-90/101	800.00	6.11e+08	1.59 y	37:30	-	0.99
76	Penta	PCB-113	400.00	3.59e+08	1.58 y	37:45	-	1.16
77	Penta	PCB-99	400.00	3.19e+08	1.61 y	37:50	-	1.03
78	Penta	PCB-119	400.00	4.01e+08	1.59 y	38:18	-	1.48
79	Penta	PCB-108/112	800.00	5.97e+08	1.60 y	38:28	-	1.10
80	Penta	PCB-83	400.00	3.51e+08	1.60 y	38:37	-	1.30
81	Penta	PCB-97	400.00	2.87e+08	1.60 y	38:48	-	1.06
82	Penta	PCB-86	400.00	2.42e+08	1.63 y	38:58	-	0.90
83	Penta	PCB-87/117/125	1200.00	1.11e+09	1.59 y	39:05	-	1.37
84	Penta	PCB-111/115	800.00	7.75e+08	1.58 y	39:15	-	1.43
85	Penta	PCB-85/116	800.00	6.10e+08	1.63 y	39:23	-	1.13
86	Penta	PCB-120	400.00	4.12e+08	1.59 y	39:36	-	1.52
87	Penta	PCB-110	400.00	3.74e+08	1.60 y	39:45	-	1.38
88	Penta	PCB-82	400.00	2.25e+08	1.60 y	40:23	-	0.60
89	Penta	PCB-124	400.00	4.01e+08	1.59 y	41:04	-	1.07
90	Penta	PCB-107/109	800.00	8.08e+08	1.60 y	41:12	-	1.08
91	Penta	PCB-123	400.00	3.78e+08	1.60 y	41:22	-	1.01
92	Penta	PCB-106/118	800.00	8.07e+08	1.60 y	41:34	-	1.01
93	Penta	PCB-114	400.00	4.81e+08	1.63 y	42:13	-	1.11
94	Penta	PCB-122	400.00	4.40e+08	1.59 y	42:21	-	1.02
95	Penta	PCB-105	400.00	4.86e+08	1.61 y	43:04	-	1.09
96	Penta	PCB-127	400.00	4.44e+08	1.65 y	43:24	-	0.94
97	Penta	PCB-126	400.00	4.53e+08	1.69 y	45:18	-	1.10
98	Hexa	PCB-155	400.00	3.12e+08	1.27 y	37:04	-	0.98
99	Hexa	PCB-150	400.00	2.99e+08	1.28 y	38:19	-	0.94
100	Hexa	PCB-152	400.00	2.95e+08	1.28 y	38:47	-	0.92
101	Hexa	PCB-145	400.00	2.95e+08	1.27 y	39:15	-	0.92
102	Hexa	PCB-136	400.00	2.81e+08	1.31 y	39:34	-	0.88

103	Hexa	PCB-148	400.00	2.24e+08	1.24 y	39:40	-	0.70
104	Hexa	PCB-154	400.00	2.37e+08	1.27 y	40:09	-	0.74
105	Hexa	PCB-151	400.00	2.17e+08	1.27 y	40:48	-	0.68
106	Hexa	PCB-135	400.00	2.24e+08	1.25 y	41:00	-	0.70
107	Hexa	PCB-144	400.00	2.17e+08	1.28 y	41:07	-	0.68
108	Hexa	PCB-147	400.00	2.25e+08	1.29 y	41:15	-	0.70
109	Hexa	PCB-139/149	800.00	4.68e+08	1.28 y	41:31	-	0.73
110	Hexa	PCB-140	400.00	2.12e+08	1.27 y	41:42	-	0.66
111	Hexa	PCB-134/143	800.00	6.17e+08	1.24 y	42:08	-	0.78
112	Hexa	PCB-133/142	800.00	6.26e+08	1.23 y	42:26	-	0.79
113	Hexa	PCB-131	400.00	2.95e+08	1.25 y	42:36	-	0.74

114	Hexa	PCB-146/165	800.00	7.73e+08	1.24 y	42:49	-	0.97
115	Hexa	PCB-132/161	800.00	7.41e+08	1.23 y	43:04	-	0.93
116	Hexa	PCB-153	400.00	3.95e+08	1.23 y	43:13	-	0.99
117	Hexa	PCB-168	400.00	4.52e+08	1.23 y	43:26	-	1.14
118	Hexa	PCB-141	400.00	3.03e+08	1.23 y	43:57	-	0.83
119	Hexa	PCB-137	400.00	3.53e+08	1.24 y	44:20	-	0.96
120	Hexa	PCB-130	400.00	2.61e+08	1.22 y	44:27	-	0.71
121	Hexa	PCB-138/163/164	1200.00	1.16e+09	1.23 y	44:49	-	1.05
122	Hexa	PCB-158/160	800.00	8.21e+08	1.23 y	45:04	-	1.11
123	Hexa	PCB-129	400.00	2.80e+08	1.23 y	45:18	-	0.76
124	Hexa	PCB-166	400.00	3.99e+08	1.23 y	45:46	-	0.94
125	Hexa	PCB-159	400.00	4.06e+08	1.26 y	46:06	-	0.96
126	Hexa	PCB-128/162	800.00	7.15e+08	1.23 y	46:23	-	0.85
127	Hexa	PCB-167	400.00	4.05e+08	1.22 y	46:46	-	0.88
128	Hexa	PCB-156	400.00	4.28e+08	1.23 y	48:03	-	0.98
129	Hexa	PCB-157	400.00	4.21e+08	1.24 y	48:20	-	0.91
130	Hexa	PCB-169	400.00	3.99e+08	1.23 y	50:23	-	0.94
131	Hepta	PCB-188	400.00	3.97e+08	1.04 y	42:51	-	1.17
132	Hepta	PCB-184	400.00	3.45e+08	1.05 y	43:18	-	1.02
133	Hepta	PCB-179	400.00	3.55e+08	1.05 y	44:05	-	1.05
134	Hepta	PCB-176	400.00	3.64e+08	1.05 y	44:33	-	1.07
135	Hepta	PCB-186	400.00	3.55e+08	1.05 y	45:10	-	1.05
136	Hepta	PCB-178	400.00	2.55e+08	1.05 y	45:39	-	0.75
137	Hepta	PCB-175	400.00	2.66e+08	1.05 y	46:00	-	0.78
138	Hepta	PCB-182/187	800.00	5.78e+08	1.06 y	46:10	-	0.85
139	Hepta	PCB-183	400.00	2.87e+08	1.05 y	46:29	-	0.85
140	Hepta	PCB-185	400.00	2.56e+08	1.05 y	47:09	-	1.10
141	Hepta	PCB-174	400.00	2.74e+08	1.04 y	47:30	-	1.18
142	Hepta	PCB-181	400.00	2.51e+08	1.05 y	47:37	-	1.08
143	Hepta	PCB-177	400.00	2.40e+08	1.05 y	47:47	-	1.03
144	Hepta	PCB-171	400.00	2.57e+08	1.05 y	48:05	-	1.10
145	Hepta	PCB-173	400.00	2.26e+08	1.05 y	48:30	-	0.97
146	Hepta	PCB-172	400.00	2.44e+08	1.05 y	48:57	-	1.05
147	Hepta	PCB-192	400.00	3.09e+08	1.05 y	49:08	-	1.33
148	Hepta	PCB-180	400.00	2.75e+08	1.05 y	49:20	-	1.18
149	Hepta	PCB-193	400.00	3.25e+08	1.06 y	49:31	-	1.40
150	Hepta	PCB-191	400.00	3.32e+08	1.05 y	49:46	-	1.43
151	Hepta	PCB-170	400.00	2.30e+08	1.05 y	50:45	-	1.23
152	Hepta	PCB-190	400.00	3.17e+08	1.05 y	50:55	-	1.70
153	Hepta	PCB-189	400.00	3.22e+08	1.05 y	52:11	-	1.30
154	Octa	PCB-202	400.00	2.47e+08	0.91 y	48:16	-	0.85
155	Octa	PCB-201	400.00	2.67e+08	0.90 y	48:45	-	0.92
156	Octa	PCB-204	400.00	2.45e+08	0.91 y	48:54	-	0.84
157	Octa	PCB-197	400.00	2.62e+08	0.91 y	49:13	-	0.90
158	Octa	PCB-200	400.00	2.51e+08	0.91 y	50:03	-	0.87
159	Octa	PCB-198	400.00	1.73e+08	0.90 y	51:19	-	0.60
160	Octa	PCB-199	400.00	1.84e+08	0.91 y	51:25	-	0.63
161	Octa	PCB-196/203	800.00	3.87e+08	0.90 y	51:41	-	0.67
162	Octa	PCB-195	400.00	2.55e+08	0.91 y	52:49	-	1.04
163	Octa	PCB-194	400.00	2.51e+08	0.92 y	53:40	-	1.02

164	Octa		PCB-205	400.00	2.86e+08	0.92	y	53:57	- 1.17
165	Nona		PCB-208	400.00	2.69e+08	1.32	y	52:57	- 0.78
166	Nona		PCB-207	400.00	2.66e+08	1.33	y	53:15	- 0.78
167	Nona		PCB-206	400.00	1.66e+08	1.33	y	55:21	- 0.84
168	Deca		PCB-209	400.00	1.83e+08	1.19	y	56:38	- 0.99
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.02
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.03
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 0.96

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.11
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	0.99
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.03
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.05
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.78
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.91
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.05
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.77
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.08
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.79
182	Tot ╗	Total Deca-PCB	400.00	1.83e+08	1.19	y	56:38	-	0.99
183	Mono╗	13C-PCB-1	100.00	1.66e+08	3.23	y	16:14	-	0.88
184	Mono╗	13C-PCB-3	100.00	1.71e+08	3.33	y	18:49	-	0.91
185	Di-IS	13C-PCB-4	100.00	1.00e+08	1.57	y	20:08	-	0.53
186	Di-IS	13C-PCB-9	100.00	1.51e+08	1.58	y	21:55	-	0.80
187	Di-IS	13C-PCB-11	100.00	1.75e+08	1.57	y	25:16	-	0.93
188	Tri-╗	13C-PCB-19	100.00	9.71e+07	1.07	y	24:16	-	0.52
189	Tri-╗	13C-PCB-32	100.00	1.52e+08	1.07	y	27:10	-	0.81
190	Tri-╗	13C-PCB-28	100.00	1.54e+08	1.06	y	29:06	-	0.96
191	Tri-╗	13C-PCB-37	100.00	1.41e+08	1.06	y	32:58	-	0.87
192	Tetr╗	13C-PCB-54	100.00	1.29e+08	0.81	y	27:60	-	0.83
193	Tetr╗	13C-PCB-52	100.00	1.07e+08	0.80	y	31:31	-	0.68
194	Tetr╗	13C-PCB-47	100.00	1.15e+08	0.80	y	32:00	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.48e+08	0.80	y	35:31	-	0.94
196	Tetr╗	13C-PCB-80	100.00	1.49e+08	0.80	y	35:56	-	0.95
197	Tetr╗	13C-PCB-81	100.00	1.35e+08	0.82	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.43e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.47e+07	1.61	y	32:40	-	0.96
200	Pent╗	13C-PCB-95	100.00	7.32e+07	1.57	y	35:49	-	0.74
201	Pent╗	13C-PCB-101	100.00	7.72e+07	1.62	y	37:30	-	0.78
202	Pent╗	13C-PCB-97	100.00	6.76e+07	1.59	y	38:48	-	0.69
203	Pent╗	13C-PCB-123	100.00	9.35e+07	1.62	y	41:21	-	0.95
204	Pent╗	13C-PCB-118	100.00	9.95e+07	1.59	y	41:32	-	1.01
205	Pent╗	13C-PCB-114	100.00	1.08e+08	1.58	y	42:12	-	1.25
206	Pent╗	13C-PCB-105	100.00	1.12e+08	1.60	y	43:04	-	1.29
207	Pent╗	13C-PCB-127	100.00	1.18e+08	1.58	y	43:23	-	1.36
208	Pent╗	13C-PCB-126	100.00	1.03e+08	1.56	y	45:18	-	1.19
209	Hexa╗	13C-PCB-155	100.00	7.98e+07	1.30	y	37:03	-	0.81
210	Hexa╗	13C-PCB-153	100.00	9.94e+07	1.27	y	43:12	-	1.15
211	Hexa╗	13C-PCB-141	100.00	9.18e+07	1.28	y	43:57	-	1.06
212	Hexa	13C-PCB-138	100.00	9.22e+07	1.27	y	44:48	-	1.06
213	Hexa╗	13C-PCB-159	100.00	1.06e+08	1.27	y	46:04	-	1.22
214	Hexa╗	13C-PCB-167	100.00	1.14e+08	1.27	y	46:45	-	1.32
215	Hexa╗	13C-PCB-156	100.00	1.09e+08	1.27	y	48:03	-	1.26
216	Hexa╗	13C-PCB-157	100.00	1.15e+08	1.31	y	48:19	-	1.33
217	Hexa╗	13C-PCB-169	100.00	1.06e+08	1.26	y	50:23	-	1.22
218	Hept╗	13C-PCB-188	100.00	8.49e+07	0.47	y	42:50	-	0.98
219	Hept╗	13C-PCB-180	100.00	5.82e+07	0.47	y	49:20	-	0.67
220	Hept╗	13C-PCB-170	100.00	4.66e+07	0.46	y	50:44	-	0.54
221	Hept╗	13C-PCB-189	100.00	6.18e+07	0.46	y	52:11	-	0.71
222	Octa╗	13C-PCB-202	100.00	7.25e+07	0.90	y	48:16	-	0.84

223	Octa╗	13C-PCB-194	100.00	6.13e+07	0.91 y	53:40	-	0.81
224	Nona╗	13C-PCB-208	100.00	8.58e+07	0.78 y	52:56	-	1.14
225	Nona╗	13C-PCB-206	100.00	4.92e+07	0.81 y	55:20	-	0.65
226	Deca╗	13C-PCB-209	100.00	4.62e+07	1.22 y	56:37	-	0.61
227	DI-RS	13C-PCB-15	100.00	1.89e+08	1.58 y	25:58	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.61e+08	1.07 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.57e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	9.86e+07	1.61 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	8.68e+07	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	7.56e+07	0.92 y	53:57	-	1.00

233	CRS		13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	0.99
234	CRS		13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.62
235	PS		13C-PCB-79	100.00	1.55e+08	0.79 y	37:49	-	1.15
236	PS		13C-PCB-178	100.00	5.41e+07	0.47 y	45:38	-	0.93

Filename: 140620E1 S: 6 Acquired: 20-JUN-14 14:51:49
Run: 140620E1 Analyte: ICal: PCBVG8-6-20-14 Results:
Sample text: ST140620E1-6 PCB CS5 13H1207

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	750.00	1.43e+09	2.96 y	16:15	-	1.27
2	Mono	PCB-2	750.00	1.51e+09	2.98 y	18:36	-	1.18
3	Mono	PCB-3	750.00	1.54e+09	2.98 y	18:50	-	1.20
4	Di	PCB-4/10	3000.00	4.71e+09	1.64 y	20:12	-	1.54
5	Di	PCB-7/9	3000.00	5.85e+09	1.64 y	21:57	-	1.25
6	Di	PCB-6	1500.00	2.81e+09	1.64 y	22:36	-	1.20
7	Di	PCB-5/8	3000.00	5.77e+09	1.64 y	23:01	-	1.23
8	Di	PCB-14	1500.00	3.24e+09	1.64 y	24:06	-	1.20
9	Di	PCB-11	1500.00	3.05e+09	1.65 y	25:17	-	1.13
10	Di	PCB-12/13	3000.00	5.91e+09	1.64 y	25:41	-	1.09
11	Di	PCB-15	1500.00	3.20e+09	1.64 y	26:00	-	1.18
12	Tri	PCB-19	750.00	9.08e+08	1.05 y	24:17	-	1.23
13	Tri	PCB-30	750.00	1.34e+09	1.06 y	25:10	-	1.82
14	Tri	PCB-18	750.00	9.50e+08	1.05 y	25:55	-	0.81
15	Tri	PCB-17	750.00	1.00e+09	1.05 y	26:05	-	0.86
16	Tri	PCB-24/27	1500.00	2.69e+09	1.05 y	26:40	-	1.15
17	Tri	PCB-16/32	1500.00	2.29e+09	1.06 y	27:10	-	0.98
18	Tri	PCB-34	750.00	1.45e+09	1.09 y	27:57	-	1.16
19	Tri	PCB-23	750.00	1.49e+09	1.09 y	28:03	-	1.19
20	Tri	PCB-29	750.00	1.47e+09	1.09 y	28:18	-	1.18
21	Tri	PCB-26	750.00	1.45e+09	1.10 y	28:30	-	1.16
22	Tri	PCB-25	750.00	1.51e+09	1.09 y	28:40	-	1.21
23	Tri	PCB-31	750.00	1.64e+09	1.06 y	29:01	-	1.32
24	Tri	PCB-28	750.00	1.49e+09	1.12 y	29:08	-	1.20
25	Tri	PCB-20/21/33	2250.00	4.54e+09	1.09 y	29:44	-	1.21
26	Tri	PCB-22	750.00	1.53e+09	1.09 y	30:11	-	1.23
27	Tri	PCB-36	750.00	1.49e+09	1.09 y	30:47	-	1.32
28	Tri	PCB-39	750.00	1.57e+09	1.09 y	31:15	-	1.39
29	Tri	PCB-38	750.00	1.52e+09	1.09 y	32:03	-	1.35
30	Tri	PCB-35	750.00	1.55e+09	1.09 y	32:33	-	1.38
31	Tri	PCB-37	750.00	1.56e+09	1.09 y	32:59	-	1.39
32	Tetra	PCB-54	750.00	1.18e+09	0.78 y	28:01	-	1.18
33	Tetra	PCB-50	750.00	9.47e+08	0.78 y	29:11	-	0.95
34	Tetra	PCB-53	750.00	9.66e+08	0.78 y	29:49	-	1.14
35	Tetra	PCB-51	750.00	9.67e+08	0.77 y	30:10	-	1.14
36	Tetra	PCB-45	750.00	7.90e+08	0.77 y	30:35	-	0.93
37	Tetra	PCB-46	750.00	7.50e+08	0.77 y	31:05	-	0.88
38	Tetra	PCB-52/69	1500.00	2.10e+09	0.77 y	31:33	-	1.23
39	Tetra	PCB-73	750.00	1.23e+09	0.78 y	31:40	-	1.45
40	Tetra	PCB-43/49	1500.00	1.83e+09	0.78 y	31:50	-	1.08
41	Tetra	PCB-47	750.00	9.58e+08	0.77 y	32:02	-	1.07

42	Tetra	PCB-48/75	1500.00	2.33e+09	0.78 y	32:09	-	1.30
43	Tetra	PCB-65	750.00	1.16e+09	0.77 y	32:25	-	1.30
44	Tetra	PCB-62	750.00	1.12e+09	0.78 y	32:32	-	1.25
45	Tetra	PCB-44	750.00	8.19e+08	0.78 y	32:49	-	0.92
46	Tetra	PCB-42/59	1500.00	2.16e+09	0.77 y	33:03	-	1.21
47	Tetra	PCB-41/64/71/72	3000.00	4.74e+09	0.78 y	33:38	-	1.33
48	Tetra	PCB-68	750.00	1.31e+09	0.78 y	33:54	-	1.46
49	Tetra	PCB-40	750.00	6.99e+08	0.78 y	34:07	-	0.78
50	Tetra	PCB-57	750.00	1.25e+09	0.77 y	34:28	-	1.07
51	Tetra	PCB-67	750.00	1.21e+09	0.77 y	34:46	-	1.03
52	Tetra	PCB-58	750.00	1.25e+09	0.78 y	34:53	-	1.07

53	Tetra	PCB-63	750.00	1.31e+09	0.77 y	35:03	-	1.12
54	Tetra	PCB-74	750.00	1.38e+09	0.81 y	35:20	-	1.18
55	Tetra	PCB-61/70	1500.00	2.48e+09	0.75 y	35:31	-	1.06
56	Tetra	PCB-76/66	1500.00	2.59e+09	0.78 y	35:44	-	1.10
57	Tetra	PCB-80	750.00	1.47e+09	0.78 y	35:57	-	1.24
58	Tetra	PCB-55	750.00	1.33e+09	0.78 y	36:17	-	1.12
59	Tetra	PCB-56/60	1500.00	2.53e+09	0.78 y	36:47	-	1.07
60	Tetra	PCB-79	750.00	1.34e+09	0.78 y	37:50	-	1.13
61	Tetra	PCB-78	750.00	1.30e+09	0.78 y	38:32	-	1.18
62	Tetra	PCB-81	750.00	1.44e+09	0.77 y	39:04	-	1.31
63	Tetra	PCB-77	750.00	1.37e+09	0.79 y	39:39	-	1.17
64	Penta	PCB-104	750.00	8.87e+08	1.60 y	32:41	-	1.22
65	Penta	PCB-96	750.00	7.97e+08	1.60 y	33:56	-	1.10
66	Penta	PCB-103	750.00	7.09e+08	1.60 y	34:28	-	0.98
67	Penta	PCB-100	750.00	7.64e+08	1.60 y	34:50	-	1.05
68	Penta	PCB-94	750.00	6.22e+08	1.59 y	35:18	-	1.08
69	Penta	PCB-95/98/102	2250.00	2.03e+09	1.58 y	35:47	-	1.17
70	Penta	PCB-93	750.00	6.23e+08	1.66 y	35:56	-	1.08
71	Penta	PCB-88/91	1500.00	1.15e+09	1.55 y	36:12	-	1.00
72	Penta	PCB-121	750.00	1.07e+09	1.65 y	36:18	-	1.85
73	Penta	PCB-84/92	1500.00	1.26e+09	1.59 y	37:08	-	1.02
74	Penta	PCB-89	750.00	6.06e+08	1.66 y	37:20	-	0.98
75	Penta	PCB-90/101	1500.00	1.42e+09	1.58 y	37:30	-	1.15
76	Penta	PCB-113	750.00	8.20e+08	1.61 y	37:45	-	1.33
77	Penta	PCB-99	750.00	7.64e+08	1.59 y	37:50	-	1.24
78	Penta	PCB-119	750.00	9.38e+08	1.60 y	38:18	-	1.73
79	Penta	PCB-108/112	1500.00	1.41e+09	1.59 y	38:28	-	1.30
80	Penta	PCB-83	750.00	8.35e+08	1.61 y	38:37	-	1.54
81	Penta	PCB-97	750.00	6.67e+08	1.59 y	38:49	-	1.23
82	Penta	PCB-86	750.00	5.75e+08	1.59 y	38:57	-	1.06
83	Penta	PCB-87/117/125	2250.00	2.55e+09	1.60 y	39:05	-	1.57
84	Penta	PCB-111/115	1500.00	1.80e+09	1.61 y	39:14	-	1.66
85	Penta	PCB-85/116	1500.00	1.47e+09	1.60 y	39:22	-	1.35
86	Penta	PCB-120	750.00	9.60e+08	1.60 y	39:36	-	1.77
87	Penta	PCB-110	750.00	8.91e+08	1.60 y	39:45	-	1.64
88	Penta	PCB-82	750.00	5.54e+08	1.60 y	40:23	-	0.71
89	Penta	PCB-124	750.00	1.04e+09	1.59 y	41:04	-	1.33
90	Penta	PCB-107/109	1500.00	1.83e+09	1.60 y	41:12	-	1.17
91	Penta	PCB-123	750.00	9.32e+08	1.60 y	41:23	-	1.20
92	Penta	PCB-106/118	1500.00	1.91e+09	1.60 y	41:34	-	1.19
93	Penta	PCB-114	750.00	1.21e+09	1.60 y	42:13	-	1.35
94	Penta	PCB-122	750.00	1.09e+09	1.62 y	42:22	-	1.22
95	Penta	PCB-105	750.00	1.17e+09	1.61 y	43:05	-	1.28
96	Penta	PCB-127	750.00	1.10e+09	1.63 y	43:25	-	1.09
97	Penta	PCB-126	750.00	1.11e+09	1.70 y	45:18	-	1.27
98	Hexa	PCB-155	750.00	7.23e+08	1.27 y	37:04	-	1.15
99	Hexa	PCB-150	750.00	6.95e+08	1.28 y	38:19	-	1.10
100	Hexa	PCB-152	750.00	6.85e+08	1.28 y	38:48	-	1.09
101	Hexa	PCB-145	750.00	6.77e+08	1.27 y	39:14	-	1.08
102	Hexa	PCB-136	750.00	7.15e+08	1.29 y	39:34	-	1.14

103	Hexa	PCB-148	750.00	4.56e+08	1.26 y	39:41	-	0.72
104	Hexa	PCB-154	750.00	5.75e+08	1.28 y	40:09	-	0.91
105	Hexa	PCB-151	750.00	5.08e+08	1.28 y	40:48	-	0.81
106	Hexa	PCB-135	750.00	5.16e+08	1.27 y	41:00	-	0.82
107	Hexa	PCB-144	750.00	5.14e+08	1.29 y	41:07	-	0.82
108	Hexa	PCB-147	750.00	5.36e+08	1.28 y	41:15	-	0.85
109	Hexa	PCB-139/149	1500.00	1.09e+09	1.28 y	41:31	-	0.86
110	Hexa	PCB-140	750.00	5.03e+08	1.28 y	41:42	-	0.80
111	Hexa	PCB-134/143	1500.00	1.43e+09	1.24 y	42:09	-	0.87
112	Hexa	PCB-133/142	1500.00	1.48e+09	1.23 y	42:26	-	0.90
113	Hexa	PCB-131	750.00	7.12e+08	1.24 y	42:36	-	0.87

114	Hexa	PCB-146/165	1500.00	1.86e+09	1.24 y	42:49	-	1.13
115	Hexa	PCB-132/161	1500.00	1.76e+09	1.23 y	43:04	-	1.07
116	Hexa	PCB-153	750.00	9.65e+08	1.23 y	43:14	-	1.18
117	Hexa	PCB-168	750.00	1.10e+09	1.23 y	43:27	-	1.35
118	Hexa	PCB-141	750.00	7.68e+08	1.23 y	43:58	-	0.99
119	Hexa	PCB-137	750.00	8.69e+08	1.22 y	44:21	-	1.11
120	Hexa	PCB-130	750.00	6.96e+08	1.25 y	44:28	-	0.89
121	Hexa	PCB-138/163/164	2250.00	2.89e+09	1.23 y	44:50	-	1.24
122	Hexa	PCB-158/160	1500.00	2.02e+09	1.23 y	45:05	-	1.29
123	Hexa	PCB-129	750.00	6.88e+08	1.23 y	45:19	-	0.88
124	Hexa	PCB-166	750.00	1.04e+09	1.22 y	45:46	-	1.13
125	Hexa	PCB-159	750.00	1.10e+09	1.22 y	46:05	-	1.20
126	Hexa	PCB-128/162	1500.00	1.89e+09	1.23 y	46:23	-	1.03
127	Hexa	PCB-167	750.00	1.07e+09	1.23 y	46:47	-	1.05
128	Hexa	PCB-156	750.00	1.08e+09	1.23 y	48:04	-	1.12
129	Hexa	PCB-157	750.00	1.06e+09	1.24 y	48:21	-	1.06
130	Hexa	PCB-169	750.00	1.01e+09	1.24 y	50:24	-	1.09
131	Hepta	PCB-188	750.00	9.34e+08	1.05 y	42:52	-	1.37
132	Hepta	PCB-184	750.00	8.40e+08	1.05 y	43:19	-	1.23
133	Hepta	PCB-179	750.00	8.75e+08	1.05 y	44:05	-	1.28
134	Hepta	PCB-176	750.00	9.17e+08	1.06 y	44:33	-	1.34
135	Hepta	PCB-186	750.00	8.77e+08	1.05 y	45:10	-	1.29
136	Hepta	PCB-178	750.00	6.27e+08	1.05 y	45:39	-	0.92
137	Hepta	PCB-175	750.00	6.73e+08	1.05 y	45:60	-	0.99
138	Hepta	PCB-182/187	1500.00	1.46e+09	1.05 y	46:10	-	1.07
139	Hepta	PCB-183	750.00	7.62e+08	1.05 y	46:29	-	1.12
140	Hepta	PCB-185	750.00	6.80e+08	1.05 y	47:09	-	1.35
141	Hepta	PCB-174	750.00	7.07e+08	1.04 y	47:31	-	1.40
142	Hepta	PCB-181	750.00	6.72e+08	1.06 y	47:38	-	1.33
143	Hepta	PCB-177	750.00	6.12e+08	1.05 y	47:47	-	1.21
144	Hepta	PCB-171	750.00	6.44e+08	1.05 y	48:05	-	1.28
145	Hepta	PCB-173	750.00	5.59e+08	1.05 y	48:31	-	1.11
146	Hepta	PCB-172	750.00	5.96e+08	1.04 y	48:57	-	1.18
147	Hepta	PCB-192	750.00	7.62e+08	1.05 y	49:09	-	1.51
148	Hepta	PCB-180	750.00	6.75e+08	1.05 y	49:21	-	1.34
149	Hepta	PCB-193	750.00	8.02e+08	1.05 y	49:32	-	1.59
150	Hepta	PCB-191	750.00	8.11e+08	1.05 y	49:46	-	1.61
151	Hepta	PCB-170	750.00	5.79e+08	1.05 y	50:45	-	1.44
152	Hepta	PCB-190	750.00	7.99e+08	1.05 y	50:55	-	1.98
153	Hepta	PCB-189	750.00	8.34e+08	1.05 y	52:11	-	1.54
154	Octa	PCB-202	750.00	6.16e+08	0.91 y	48:17	-	0.99
155	Octa	PCB-201	750.00	6.74e+08	0.90 y	48:46	-	1.09
156	Octa	PCB-204	750.00	6.20e+08	0.90 y	48:55	-	1.00
157	Octa	PCB-197	750.00	6.60e+08	0.90 y	49:13	-	1.06
158	Octa	PCB-200	750.00	6.36e+08	0.90 y	50:03	-	1.02
159	Octa	PCB-198	750.00	4.35e+08	0.90 y	51:19	-	0.70
160	Octa	PCB-199	750.00	4.62e+08	0.92 y	51:25	-	0.74
161	Octa	PCB-196/203	1500.00	9.78e+08	0.91 y	51:41	-	0.79
162	Octa	PCB-195	750.00	6.36e+08	0.92 y	52:48	-	1.19
163	Octa	PCB-194	750.00	6.26e+08	0.92 y	53:40	-	1.17

164	Octa		PCB-205	750.00	7.28e+08	0.91	y	53:57	- 1.36
165	Nona		PCB-208	750.00	6.70e+08	1.33	y	52:57	- 0.91
166	Nona		PCB-207	750.00	6.71e+08	1.33	y	53:15	- 0.91
167	Nona		PCB-206	750.00	4.30e+08	1.34	y	55:19	- 0.98
168	Deca		PCB-209	750.00	4.91e+08	1.19	y	56:35	- 1.16
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.22
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.19
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 1.12

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.26
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.15
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.21
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.24
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.93
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.07
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.26
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.91
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.24
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.93
182	Tot ╗	Total Deca-PCB	750.00	4.91e+08	1.19	y	56:35	-	1.16
183	Mono╗	13C-PCB-1	100.00	1.50e+08	3.31	y	16:14	-	0.76
184	Mono╗	13C-PCB-3	100.00	1.70e+08	3.29	y	18:49	-	0.86
185	Di-IS	13C-PCB-4	100.00	1.02e+08	1.58	y	20:08	-	0.52
186	Di-IS	13C-PCB-9	100.00	1.56e+08	1.60	y	21:55	-	0.79
187	Di-IS	13C-PCB-11	100.00	1.80e+08	1.58	y	25:16	-	0.91
188	Tri-╗	13C-PCB-19	100.00	9.83e+07	1.04	y	24:16	-	0.50
189	Tri-╗	13C-PCB-32	100.00	1.56e+08	1.07	y	27:10	-	0.79
190	Tri-╗	13C-PCB-28	100.00	1.66e+08	1.06	y	29:07	-	0.98
191	Tri-╗	13C-PCB-37	100.00	1.50e+08	1.08	y	32:58	-	0.89
192	Tetr╗	13C-PCB-54	100.00	1.33e+08	0.80	y	27:59	-	0.77
193	Tetr╗	13C-PCB-52	100.00	1.13e+08	0.80	y	31:31	-	0.66
194	Tetr╗	13C-PCB-47	100.00	1.19e+08	0.80	y	32:01	-	0.70
195	Tetr╗	13C-PCB-70	100.00	1.56e+08	0.81	y	35:31	-	0.91
196	Tetr╗	13C-PCB-80	100.00	1.58e+08	0.80	y	35:56	-	0.92
197	Tetr╗	13C-PCB-81	100.00	1.47e+08	0.81	y	39:03	-	0.86
198	Tetr╗	13C-PCB-77	100.00	1.56e+08	0.81	y	39:38	-	0.91
199	Pent╗	13C-PCB-104	100.00	9.67e+07	1.59	y	32:40	-	0.90
200	Pent╗	13C-PCB-95	100.00	7.69e+07	1.59	y	35:49	-	0.72
201	Pent╗	13C-PCB-101	100.00	8.24e+07	1.61	y	37:30	-	0.77
202	Pent╗	13C-PCB-97	100.00	7.23e+07	1.63	y	38:48	-	0.67
203	Pent╗	13C-PCB-123	100.00	1.04e+08	1.60	y	41:22	-	0.97
204	Pent╗	13C-PCB-118	100.00	1.07e+08	1.61	y	41:33	-	0.99
205	Pent╗	13C-PCB-114	100.00	1.19e+08	1.61	y	42:12	-	1.15
206	Pent╗	13C-PCB-105	100.00	1.23e+08	1.59	y	43:04	-	1.19
207	Pent╗	13C-PCB-127	100.00	1.34e+08	1.58	y	43:23	-	1.30
208	Pent╗	13C-PCB-126	100.00	1.17e+08	1.57	y	45:18	-	1.14
209	Hexa╗	13C-PCB-155	100.00	8.39e+07	1.28	y	37:03	-	0.78
210	Hexa╗	13C-PCB-153	100.00	1.09e+08	1.28	y	43:13	-	1.06
211	Hexa╗	13C-PCB-141	100.00	1.04e+08	1.29	y	43:57	-	1.01
212	Hexa	13C-PCB-138	100.00	1.04e+08	1.28	y	44:48	-	1.01
213	Hexa╗	13C-PCB-159	100.00	1.22e+08	1.26	y	46:04	-	1.19
214	Hexa╗	13C-PCB-167	100.00	1.35e+08	1.27	y	46:45	-	1.31
215	Hexa╗	13C-PCB-156	100.00	1.28e+08	1.27	y	48:03	-	1.24
216	Hexa╗	13C-PCB-157	100.00	1.33e+08	1.28	y	48:19	-	1.29
217	Hexa╗	13C-PCB-169	100.00	1.24e+08	1.28	y	50:23	-	1.20
218	Hept╗	13C-PCB-188	100.00	9.09e+07	0.46	y	42:51	-	0.88
219	Hept╗	13C-PCB-180	100.00	6.73e+07	0.47	y	49:20	-	0.65
220	Hept╗	13C-PCB-170	100.00	5.38e+07	0.46	y	50:44	-	0.52
221	Hept╗	13C-PCB-189	100.00	7.24e+07	0.47	y	52:11	-	0.70
222	Octa╗	13C-PCB-202	100.00	8.28e+07	0.92	y	48:16	-	0.80

223	Octa╗	13C-PCB-194	100.00	7.14e+07	0.92 y	53:39	-	0.79
224	Nona╗	13C-PCB-208	100.00	9.82e+07	0.76 y	52:56	-	1.09
225	Nona╗	13C-PCB-206	100.00	5.84e+07	0.80 y	55:19	-	0.65
226	Deca╗	13C-PCB-209	100.00	5.63e+07	1.21 y	56:35	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.97e+08	1.56 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.69e+08	1.06 y	28:60	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.71e+08	0.80 y	36:46	-	1.00
230	Penta	13C-PCB-111	100.00	1.07e+08	1.60 y	39:13	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.03e+08	1.28 y	46:21	-	1.00
232	Octa╗	13C-PCB-205	100.00	9.02e+07	0.91 y	53:56	-	1.00

233	CRS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.02
234	CRS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.62
235	PS		13C-PCB-79	100.00	1.75e+08	0.80 y	37:49	-	1.19
236	PS		13C-PCB-178	100.00	6.43e+07	0.47 y	45:38	-	0.96

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.96	2.66-3.60	y	52.3	37.5-62.5
PCB-2	2.98	2.66-3.60	y	52.3	37.5-62.5
PCB-3	2.98	2.66-3.60	y	51.7	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	206.7	150-250
PCB-7/9	1.64	1.33-1.79	y	204.6	150-250
PCB-6	1.64	1.33-1.79	y	99.9	75.0-125
PCB-5/8	1.64	1.33-1.79	y	206.9	150-250
PCB-14	1.65	1.33-1.79	y	102.3	75.0-125
PCB-11	1.66	1.33-1.79	y	101.6	75.0-125
PCB-12/13	1.63	1.33-1.79	y	205.7	150-250
PCB-15	1.66	1.33-1.79	y	101.1	75.0-125
PCB-19	1.05	0.88-1.20	y	49.4	37.5-62.5
PCB-30	1.06	0.88-1.20	y	51.2	37.5-62.5
PCB-18	1.05	0.88-1.20	y	50.4	37.5-62.5
PCB-17	1.05	0.88-1.20	y	51.0	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	103.5	75.0-125
PCB-16/32	1.05	0.88-1.20	y	100.5	75.0-125
PCB-34	1.08	0.88-1.20	y	57.4	37.5-62.5
PCB-23	1.11	0.88-1.20	y	46.4	37.5-62.5
PCB-29	1.09	0.88-1.20	y	51.1	37.5-62.5
PCB-26	1.08	0.88-1.20	y	50.7	37.5-62.5
PCB-25	1.09	0.88-1.20	y	51.5	37.5-62.5
PCB-31	1.08	0.88-1.20	y	49.7	37.5-62.5
PCB-28	1.11	0.88-1.20	y	52.5	37.5-62.5
PCB-20/21/33	1.09	0.88-1.20	y	152.7	112.5-225
PCB-22	1.08	0.88-1.20	y	52.6	37.5-62.5
PCB-36	1.09	0.88-1.20	y	52.3	37.5-62.5
PCB-39	1.08	0.88-1.20	y	51.7	37.5-62.5
PCB-38	1.10	0.88-1.20	y	52.4	37.5-62.5
PCB-35	1.11	0.88-1.20	y	52.7	37.5-62.5
PCB-37	1.09	0.88-1.20	y	51.2	37.5-62.5
PCB-54	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-50	0.77	0.65-0.89	y	51.4	37.5-62.5
PCB-53	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-51	0.78	0.65-0.89	y	53.2	37.5-62.5
PCB-45	0.78	0.65-0.89	y	52.8	37.5-62.5
PCB-46	0.76	0.65-0.89	y	50.1	37.5-62.5
PCB-52/69	0.77	0.65-0.89	y	105.4	75.0-125
PCB-73	0.77	0.65-0.89	y	52.2	37.5-62.5
PCB-43/49	0.77	0.65-0.89	y	101.6	75.0-125
PCB-47	0.76	0.65-0.89	y	53.7	37.5-62.5
PCB-48/75	0.77	0.65-0.89	y	99.8	75.0-125
PCB-65	0.77	0.65-0.89	y	49.4	37.5-62.5
PCB-62	0.77	0.65-0.89	y	53.4	37.5-62.5
PCB-44	0.78	0.65-0.89	y	51.3	37.5-62.5
PCB-42/59	0.77	0.65-0.89	y	103.4	75.0-125
PCB-41/64/71/72	0.78	0.65-0.89	y	205.8	150-250
PCB-68	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-40	0.77	0.65-0.89	y	50.7	37.5-62.5
PCB-57	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-67	0.77	0.65-0.89	y	53.3	37.5-62.5
PCB-58	0.78	0.65-0.89	y	49.3	37.5-62.5
PCB-63	0.76	0.65-0.89	y	51.7	37.5-62.5
PCB-74	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-61/70	0.78	0.65-0.89	y	101.8	75.0-125
PCB-76/66	0.77	0.65-0.89	y	103.1	75.0-125
PCB-80	0.78	0.65-0.89	y	50.2	37.5-62.5
PCB-55	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-56/60	0.77	0.65-0.89	y	100.3	75.0-125
PCB-79	0.78	0.65-0.89	y	51.2	37.5-62.5
PCB-78	0.78	0.65-0.89	y	51.1	37.5-62.5
PCB-81	0.78	0.65-0.89	y	50.9	37.5-62.5
PCB-77	0.79	0.65-0.89	y	52.0	37.5-62.5
PCB-104	1.61	1.32-1.78	y	50.4	37.5-62.5
PCB-96	1.59	1.32-1.78	y	50.5	37.5-62.5
PCB-103	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-100	1.61	1.32-1.78	y	50.5	37.5-62.5
PCB-94	1.58	1.32-1.78	y	50.8	37.5-62.5
PCB-95/98/102	1.60	1.32-1.78	y	160.1	112.5-225
PCB-93	1.63	1.32-1.78	y	42.1	37.5-62.5
PCB-88/91	1.59	1.32-1.78	y	114.0	75.0-125
PCB-121	1.59	1.32-1.78	y	43.7	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.59	1.32-1.78	y	103.4	75.0-125	PCB-140	1.28	1.05-1.43	y	54.6	37.5-62.5
PCB-89	1.61	1.32-1.78	y	53.1	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	102.9	75.0-125
PCB-90/101	1.60	1.32-1.78	y	102.1	75.0-125	PCB-133/142	1.23	1.05-1.43	y	102.0	75.0-125
PCB-113	1.58	1.32-1.78	y	56.1	37.5-62.5	PCB-131	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-99	1.64	1.32-1.78	y	46.1	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	100.9	75.0-125
PCB-119	1.61	1.32-1.78	y	50.3	37.5-62.5	PCB-132/161	1.22	1.05-1.43	y	102.0	75.0-125
PCB-108/112	1.63	1.32-1.78	y	103.0	75.0-125	PCB-153	1.22	1.05-1.43	y	50.2	37.5-62.5
PCB-83	1.62	1.32-1.78	y	52.1	37.5-62.5	PCB-168	1.21	1.05-1.43	y	50.2	37.5-62.5
PCB-97	1.60	1.32-1.78	y	52.6	37.5-62.5	PCB-141	1.21	1.05-1.43	y	50.4	37.5-62.5
PCB-86	1.58	1.32-1.78	y	48.0	37.5-62.5	PCB-137	1.24	1.05-1.43	y	48.3	37.5-62.5
PCB-87/117/125	1.60	1.32-1.78	y	154.2	112.5-225	PCB-130	1.26	1.05-1.43	y	54.3	37.5-62.5
PCB-111/115	1.68	1.32-1.78	y	102.0	75.0-125	PCB-138/163/164	1.23	1.05-1.43	y	154.4	112.5-225
PCB-85/116	1.48	1.32-1.78	y	101.9	75.0-125	PCB-158/160	1.23	1.05-1.43	y	104.2	75.0-125
PCB-120	1.57	1.32-1.78	y	49.2	37.5-62.5	PCB-129	1.25	1.05-1.43	y	50.6	37.5-62.5
PCB-110	1.61	1.32-1.78	y	51.1	37.5-62.5	PCB-166	1.22	1.05-1.43	y	51.1	37.5-62.5
PCB-82	1.59	1.32-1.78	y	49.3	37.5-62.5	PCB-159	1.23	1.05-1.43	y	52.7	37.5-62.5
PCB-124	1.60	1.32-1.78	y	49.9	37.5-62.5	PCB-128/162	1.22	1.05-1.43	y	104.6	75.0-125
PCB-107/109	1.59	1.32-1.78	y	101.7	75.0-125	PCB-167	1.21	1.05-1.43	y	51.6	37.5-62.5
PCB-123	1.59	1.32-1.78	y	52.4	37.5-62.5	PCB-156	1.22	1.05-1.43	y	49.4	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	104.7	75.0-125	PCB-157	1.22	1.05-1.43	y	51.2	37.5-62.5
PCB-114	1.64	1.32-1.78	y	50.7	37.5-62.5	PCB-169	1.22	1.05-1.43	y	49.9	37.5-62.5
PCB-122	1.64	1.32-1.78	y	51.0	37.5-62.5	PCB-188	1.02	0.89-1.21	y	50.8	37.5-62.5
PCB-105	1.62	1.32-1.78	y	51.4	37.5-62.5	PCB-184	1.04	0.89-1.21	y	51.3	37.5-62.5
PCB-127	1.64	1.32-1.78	y	51.1	37.5-62.5	PCB-179	1.04	0.89-1.21	y	50.2	37.5-62.5
PCB-126	1.62	1.32-1.78	y	51.1	37.5-62.5	PCB-176	1.04	0.89-1.21	y	50.5	37.5-62.5
PCB-155	1.27	1.05-1.43	y	52.7	37.5-62.5	PCB-186	1.04	0.89-1.21	y	51.2	37.5-62.5
PCB-150	1.28	1.05-1.43	y	51.9	37.5-62.5	PCB-178	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-152	1.27	1.05-1.43	y	51.1	37.5-62.5	PCB-175	1.04	0.89-1.21	y	52.7	37.5-62.5
PCB-145	1.26	1.05-1.43	y	50.6	37.5-62.5	PCB-182/187	1.04	0.89-1.21	y	104.2	75.0-125
PCB-136	1.27	1.05-1.43	y	52.1	37.5-62.5	PCB-183	1.04	0.89-1.21	y	50.9	37.5-62.5
PCB-148	1.30	1.05-1.43	y	51.3	37.5-62.5	PCB-185	1.04	0.89-1.21	y	50.3	37.5-62.5
PCB-154	1.25	1.05-1.43	y	52.4	37.5-62.5	PCB-174	1.03	0.89-1.21	y	49.1	37.5-62.5
PCB-151	1.30	1.05-1.43	y	52.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	52.4	37.5-62.5
PCB-135	1.28	1.05-1.43	y	51.8	37.5-62.5	PCB-177	1.05	0.89-1.21	y	51.2	37.5-62.5
PCB-144	1.36	1.05-1.43	y	55.0	37.5-62.5	PCB-171	1.04	0.89-1.21	y	49.7	37.5-62.5
PCB-147	1.18	1.05-1.43	y	52.9	37.5-62.5	PCB-173	1.05	0.89-1.21	y	49.7	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	107.6	75.0-125	PCB-172	1.02	0.89-1.21	y	49.8	37.5-62.5

Analyst: DMS

Date: 6/23/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST140620E1-4 Instrument ID: VG-8

Initial Calibration Date: 6-20-14 ICal ID: PCBVG8-6-20-14 GC Column ID: ZB-1

VER Data Filename: 140620E1 S#4 Analysis Date: 20-JUN-14 Time: 12:43:46

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	50.5	37.5-62.5
PCB-180	1.04	0.89-1.21	y	49.1	37.5-62.5
PCB-193	1.05	0.89-1.21	y	50.4	37.5-62.5
PCB-191	1.06	0.89-1.21	y	50.0	37.5-62.5
PCB-170	1.03	0.89-1.21	y	49.6	37.5-62.5
PCB-190	1.02	0.89-1.21	y	50.5	37.5-62.5
PCB-189	1.04	0.89-1.21	y	51.7	37.5-62.5
PCB-202	0.91	0.76-1.02	y	50.0	37.5-62.5
PCB-201	0.93	0.76-1.02	y	50.4	37.5-62.5
PCB-204	0.88	0.76-1.02	y	52.0	37.5-62.5
PCB-197	0.91	0.76-1.02	y	52.0	37.5-62.5
PCB-200	0.91	0.76-1.02	y	52.4	37.5-62.5
PCB-198	0.90	0.76-1.02	y	51.5	37.5-62.5
PCB-199	0.89	0.76-1.02	y	52.5	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	104.9	75.0-125
PCB-195	0.90	0.76-1.02	y	51.9	37.5-62.5
PCB-194	0.90	0.76-1.02	y	49.9	37.5-62.5
PCB-205	0.91	0.76-1.02	y	49.6	37.5-62.5
PCB-208	1.33	1.14-1.54	y	49.5	37.5-62.5
PCB-207	1.32	1.14-1.54	y	50.8	37.5-62.5
PCB-206	1.33	1.14-1.54	y	49.7	37.5-62.5
PCB-209	1.19	0.99-1.33	y	52.5	37.5-62.5

Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	7.79e+07	2.96 y	1.25	16:15	1.001	0.996	1.006	52.3077
PCB-2	7.75e+07	2.98 y	1.18	18:36	0.988	0.983	0.993	52.2846
PCB-3	7.90e+07	2.98 y	1.22	18:50	1.001	0.996	1.006	51.6788
PCB-4/10	2.37e+08	1.64 y	1.55	20:12	1.003	0.998	1.008	206.748
PCB-7/9	2.89e+08	1.64 y	1.27	21:57	0.869	0.865	0.873	204.628
PCB-6	1.40e+08	1.64 y	1.26	22:36	0.894	0.890	0.899	99.9095
PCB-5/8	2.84e+08	1.64 y	1.23	23:01	0.911	0.906	0.916	206.862
PCB-14	1.57e+08	1.65 y	1.23	24:06	0.954	0.949	0.959	102.294
PCB-11	1.47e+08	1.66 y	1.16	25:17	1.000	0.996	1.006	101.627
PCB-12/13	2.82e+08	1.63 y	1.10	25:41	1.016	1.010	1.020	205.694
PCB-15	1.52e+08	1.66 y	1.21	26:00	1.029	1.024	1.034	101.148
PCB-19	4.60e+07	1.05 y	1.30	24:17	1.001	0.996	1.006	49.3886
PCB-30	6.73e+07	1.06 y	1.83	25:10	1.037	1.032	1.042	51.1589
PCB-18	4.72e+07	1.05 y	0.86	25:55	0.954	0.949	0.959	50.4475
PCB-17	5.00e+07	1.05 y	0.90	26:05	0.960	0.955	0.965	50.9703
PCB-24/27	1.33e+08	1.06 y	1.18	26:40	0.981	0.976	0.986	103.472
- PCB-16/32	1.13e+08	1.05 y	1.03	27:10	1.000	0.995	1.005	100.505
- PCB-34	7.74e+07	1.08 y	1.26	27:58	0.961	0.956	0.966	57.3995
PCB-23	6.51e+07	1.11 y	1.31	28:04	0.964	0.959	0.969	46.4036
PCB-29	7.26e+07	1.09 y	1.33	28:18	0.972	0.967	0.977	51.0903
PCB-26	7.01e+07	1.08 y	1.29	28:30	0.979	0.974	0.984	50.7150
PCB-25	7.40e+07	1.09 y	1.34	28:40	0.985	0.980	0.990	51.5314
PCB-31	7.55e+07	1.08 y	1.42	29:02	0.997	0.992	1.002	49.7377
PCB-28	7.73e+07	1.11 y	1.38	29:07	1.000	0.996	1.006	52.4521
PCB-20/21/33	2.14e+08	1.09 y	1.31	29:45	1.022	1.017	1.027	152.731
PCB-22	7.44e+07	1.08 y	1.32	30:11	1.037	1.032	1.042	52.6344
PCB-36	7.16e+07	1.09 y	1.38	30:47	0.933	0.929	0.939	52.3141
PCB-39	7.29e+07	1.08 y	1.42	31:16	0.948	0.943	0.953	51.6606
PCB-38	7.06e+07	1.10 y	1.35	32:02	0.971	0.967	0.976	52.4183
PCB-35	7.21e+07	1.11 y	1.38	32:33	0.987	0.982	0.992	52.6668
PCB-37	7.08e+07	1.09 y	1.39	32:59	1.000	0.996	1.006	51.1869
PCB-54	5.75e+07	0.76 y	1.20	28:01	1.001	0.996	1.006	51.7229
PCB-50	4.61e+07	0.77 y	0.97	29:11	1.042	1.037	1.047	51.4094
PCB-53	4.59e+07	0.78 y	1.19	29:49	0.946	0.941	0.951	50.2276
PCB-51	4.72e+07	0.78 y	1.15	30:10	0.957	0.952	0.962	53.1558
PCB-45	3.92e+07	0.78 y	0.97	30:35	0.971	0.966	0.976	52.7585
PCB-46	3.67e+07	0.76 y	0.95	31:04	0.986	0.982	0.992	50.0611

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.04e+08	0.77 y	1.28	31:33	1.001	0.996	1.006	105.426
PCB-73	5.51e+07	0.77 y	1.37	31:39	1.005	1.000	1.010	52.1810
PCB-43/49	8.70e+07	0.77 y	1.11	31:50	1.010	1.005	1.015	101.562
PCB-47	4.93e+07	0.76 y	1.13	32:02	1.000	0.996	1.006	53.6979
PCB-48/75	1.06e+08	0.77 y	1.30	32:09	1.004	0.999	1.009	99.7567
PCB-65	5.34e+07	0.77 y	1.33	32:25	1.012	1.007	1.017	49.3948
PCB-62	5.60e+07	0.77 y	1.29	32:32	1.016	1.011	1.021	53.4188
PCB-44	3.91e+07	0.78 y	0.94	32:50	1.025	1.020	1.030	51.2578
PCB-42/59	1.02e+08	0.77 y	1.22	33:02	1.032	1.028	1.038	103.394
PCB-41/64/71/72	2.19e+08	0.78 y	1.31	33:38	1.050	1.046	1.056	205.816
PCB-68	6.14e+07	0.78 y	1.49	33:54	1.059	1.054	1.064	50.9457
PCB-40	3.37e+07	0.77 y	0.82	34:06	1.065	1.061	1.071	50.7163
PCB-57	5.90e+07	0.77 y	1.11	34:28	0.970	0.965	0.975	51.7966
PCB-67	5.86e+07	0.77 y	1.07	34:46	0.979	0.974	0.984	53.3170
PCB-58	5.56e+07	0.78 y	1.10	34:53	0.982	0.977	0.987	49.2975
PCB-63	5.91e+07	0.76 y	1.12	35:03	0.987	0.982	0.992	51.7181
PCB-74	6.38e+07	0.77 y	1.20	35:20	0.995	0.990	1.000	51.8367
PCB-61/70	1.12e+08	0.78 y	1.08	35:30	0.999	0.994	1.004	101.842
PCB-76/66	1.20e+08	0.77 y	1.14	35:43	1.005	1.001	1.011	103.088
PCB-80	6.74e+07	0.78 y	1.28	35:56	1.000	0.996	1.006	50.2410
PCB-55	6.01e+07	0.77 y	1.11	36:17	1.010	1.005	1.015	51.5207
PCB-56/60	1.15e+08	0.77 y	1.09	36:46	1.023	1.018	1.028	100.313
PCB-79	6.04e+07	0.78 y	1.12	37:50	1.053	1.048	1.058	51.1728
PCB-78	5.76e+07	0.78 y	1.24	38:32	0.987	0.982	0.992	51.0794
PCB-81	6.41e+07	0.78 y	1.38	39:03	1.000	0.995	1.005	50.9258
PCB-77	6.12e+07	0.79 y	1.21	39:39	1.000	0.995	1.005	51.9669
PCB-104	4.41e+07	1.61 y	1.26	32:41	1.000	0.996	1.006	50.3835
PCB-96	3.84e+07	1.59 y	1.09	33:57	1.039	1.034	1.044	50.4976
PCB-103	3.30e+07	1.58 y	0.93	34:29	1.055	1.050	1.060	50.7622
PCB-100	3.52e+07	1.61 y	1.00	34:49	1.066	1.061	1.071	50.4670
PCB-94	2.91e+07	1.58 y	1.11	35:18	0.985	0.981	0.991	50.7908
PCB-95/98/102	1.01e+08	1.60 y	1.21	35:47	0.999	0.994	1.004	160.143
PCB-93	2.46e+07	1.63 y	1.13	35:56	1.003	0.998	1.008	42.0683
PCB-88/91	6.02e+07	1.59 y	1.02	36:12	1.010	1.006	1.016	114.032
PCB-121	4.31e+07	1.59 y	1.90	36:19	1.014	1.009	1.019	43.6820
PCB-84/92	5.90e+07	1.59 y	1.05	37:08	0.990	0.986	0.996	103.399
PCB-89	2.93e+07	1.61 y	1.02	37:19	0.995	0.991	1.001	53.0820

RL: MONO, TRI - DECA: —

RL: DI : —

Integrations by Analyst: DMS Date: 6/23/14

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	6.59e+07	1.60	y	1.19	37:31	1.001	0.996	1.006	102.056
	PCB-113	4.11e+07	1.58	y	1.35	37:45	1.007	1.002	1.012	56.0520
	PCB-99	3.22e+07	1.64	y	1.29	37:51	1.010	1.005	1.015	46.1415
	PCB-119	4.21e+07	1.61	y	1.72	38:18	0.987	0.982	0.992	50.2990
	PCB-108/112	6.45e+07	1.63	y	1.29	38:27	0.991	0.986	0.996	102.978
	PCB-83	3.85e+07	1.62	y	1.52	38:38	0.996	0.991	1.001	52.0737
	PCB-97	3.19e+07	1.60	y	1.25	38:49	1.000	0.996	1.006	52.5654
	PCB-86	2.39e+07	1.58	y	1.02	38:58	1.004	1.000	1.010	48.0340
	B-87/117/125	1.17e+08	1.60	y	1.56	39:05	1.007	1.002	1.012	154.194
	PCB-111/115	8.69e+07	1.68	y	1.75	39:15	1.012	1.007	1.017	101.981
	PCB-85/116	6.45e+07	1.48	y	1.30	39:23	1.015	1.010	1.020	101.910
	PCB-120	4.26e+07	1.57	y	1.78	39:37	1.021	1.016	1.026	49.1740
	PCB-110	4.18e+07	1.61	y	1.68	39:46	1.025	1.020	1.030	51.1450
	PCB-82	2.58e+07	1.59	y	0.74	40:23	0.976	0.972	0.982	49.2945
	PCB-124	4.68e+07	1.60	y	1.32	41:03	0.993	0.988	0.998	49.9220
	PCB-107/109	8.79e+07	1.59	y	1.22	41:12	0.996	0.991	1.001	101.669
	PCB-123	4.52e+07	1.59	y	1.22	41:22	1.000	0.995	1.005	52.4448
-	PCB-106/118	9.37e+07	1.62	y	1.22	41:35	1.001	0.996	1.006	104.679
-	PCB-114	5.41e+07	1.64	y	1.36	42:13	1.000	0.995	1.005	50.6622
	PCB-122	4.97e+07	1.64	y	1.24	42:21	1.004	0.999	1.009	50.9693
	PCB-105	5.28e+07	1.62	y	1.28	43:05	1.001	0.995	1.005	51.3611
	PCB-127	5.04e+07	1.64	y	1.14	43:24	1.000	0.995	1.005	51.1125
	PCB-126	4.91e+07	1.62	y	1.28	45:19	1.001	0.995	1.005	51.0683
	PCB-155	3.50e+07	1.27	y	1.14	37:04	1.001	0.966	1.006	52.6727
	PCB-150	3.23e+07	1.28	y	1.06	38:20	1.035	1.030	1.040	51.8920
	PCB-152	3.28e+07	1.27	y	1.10	38:49	1.048	1.043	1.053	51.0615
	PCB-145	3.24e+07	1.26	y	1.09	39:15	1.060	1.055	1.065	50.6281
	PCB-136	3.31e+07	1.27	y	1.08	39:35	1.069	1.064	1.074	52.0720
	PCB-148	2.22e+07	1.30	y	0.74	39:40	1.071	1.066	1.076	51.2670
	PCB-154	2.71e+07	1.25	y	0.88	40:10	1.084	1.079	1.089	52.4052
	PCB-151	2.51e+07	1.30	y	0.81	40:48	1.102	1.097	1.107	52.9183
	PCB-135	2.36e+07	1.28	y	0.78	41:01	1.107	1.101	1.113	51.8361
	PCB-144	2.64e+07	1.36	y	0.82	41:08	1.110	1.105	1.116	54.9912
	PCB-147	2.56e+07	1.18	y	0.83	41:16	1.114	1.011	1.120	52.8823
	PCB-139/149	5.32e+07	1.27	y	0.84	41:31	1.121	1.115	1.127	107.613
-	PCB-140	2.51e+07	1.28	y	0.79	41:43	1.126	1.120	1.132	54.6052
-	PCB-134/143	7.01e+07	1.24	y	0.93	42:08	0.975	0.970	0.980	102.949

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	7.08e+07	1.23	y	0.95	42:26	0.982	0.977	0.987	102.037
PCB-131	3.32e+07	1.22	y	0.91	42:36	0.986	0.981	0.991	49.4221
PCB-146/165	8.56e+07	1.24	y	1.16	42:48	0.991	0.986	0.996	100.884
PCB-132/161	8.34e+07	1.22	y	1.11	43:03	0.996	0.992	1.002	102.031
PCB-153	4.34e+07	1.22	y	1.18	43:14	1.001	0.995	1.005	50.1872
PCB-168	5.04e+07	1.21	y	1.37	43:27	1.006	1.000	1.010	50.1556
PCB-141	3.48e+07	1.21	y	0.97	43:58	1.001	0.996	1.005	50.4291
PCB-137	3.66e+07	1.24	y	1.07	44:21	1.009	1.004	1.014	48.2814
PCB-130	3.25e+07	1.26	y	0.85	44:27	1.012	1.007	1.017	54.2556
PCB-138/163/164	1.29e+08	1.23	y	1.23	44:50	1.001	0.996	1.006	154.435
PCB-158/160	9.17e+07	1.23	y	1.29	45:05	1.007	1.001	1.011	104.238
PCB-129	3.19e+07	1.25	y	0.92	45:19	1.012	1.007	1.017	50.5660
PCB-166	4.45e+07	1.22	y	1.12	45:46	0.993	0.988	0.998	51.1070
PCB-159	4.79e+07	1.23	y	1.16	46:05	1.000	0.995	1.005	52.6640
PCB-128/162	8.32e+07	1.22	y	1.02	46:22	1.006	1.002	1.012	104.591
PCB-167	4.69e+07	1.21	y	1.06	46:47	1.001	0.995	1.005	51.5594
PCB-156	4.73e+07	1.22	y	1.18	48:04	1.000	0.995	1.005	49.4312
PCB-157	4.74e+07	1.22	y	1.08	48:20	1.000	0.995	1.005	51.2216
PCB-169	4.38e+07	1.22	y	1.11	50:24	1.000	0.995	1.005	49.8867
PCB-188	4.41e+07	1.02	y	1.40	42:52	1.000	0.995	1.005	50.7803
PCB-184	3.92e+07	1.04	y	1.24	43:18	1.011	1.006	1.016	51.2869
PCB-179	4.05e+07	1.04	y	1.30	44:06	1.029	1.024	1.034	50.2126
PCB-176	4.26e+07	1.04	y	1.36	44:34	1.040	1.035	1.045	50.5434
PCB-186	4.04e+07	1.04	y	1.28	45:10	1.054	1.049	1.059	51.1676
PCB-178	2.94e+07	1.04	y	0.94	45:39	1.066	1.061	1.071	50.8281
PCB-175	3.16e+07	1.04	y	0.97	46:00	1.074	1.069	1.079	52.7165
PCB-182/187	6.54e+07	1.04	y	1.01	46:11	1.078	1.073	1.083	104.234
PCB-183	3.41e+07	1.04	y	1.08	46:29	1.085	1.080	1.090	50.9232
PCB-185	3.03e+07	1.04	y	1.34	47:09	0.956	0.951	0.961	50.2993
PCB-174	2.95e+07	1.03	y	1.34	47:31	0.963	0.958	0.968	49.0649
PCB-181	3.20e+07	1.06	y	1.36	47:37	0.966	0.961	0.971	52.3684
PCB-177	2.85e+07	1.05	y	1.24	47:48	0.969	0.964	0.974	51.2147
PCB-171	2.93e+07	1.04	y	1.31	48:05	0.975	0.970	0.980	49.7433
PCB-173	2.59e+07	1.05	y	1.16	48:31	0.984	0.979	0.989	49.7232
PCB-172	2.73e+07	1.02	y	1.22	48:57	0.993	0.988	0.998	49.7746
PCB-192	3.46e+07	1.05	y	1.53	49:09	0.996	0.991	1.001	50.4921
PCB-180	3.15e+07	1.04	y	1.43	49:20	1.000	0.995	1.005	49.0865

RL: MONO, TRI - DECA: ———

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.0000 EndCAL: ST140620E1-8

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.74e+07	1.05	y	1.65	49:32	1.004	0.999	1.009	50.3769
	PCB-191	3.75e+07	1.06	y	1.67	49:47	1.009	1.004	1.014	49.9945
	PCB-170	2.66e+07	1.03	y	1.50	50:46	1.000	0.995	1.005	49.6074
	PCB-190	3.64e+07	1.02	y	2.02	50:55	1.003	0.998	1.008	50.4804
	PCB-189	3.90e+07	1.04	y	1.54	52:12	1.000	0.995	1.005	51.6684
	PCB-202	2.92e+07	0.91	y	1.04	48:17	1.000	0.995	1.005	49.9695
	PCB-201	3.12e+07	0.93	y	1.10	48:46	1.011	1.006	1.016	50.3688
	PCB-204	2.91e+07	0.88	y	0.99	48:56	1.014	1.009	1.019	52.0459
	PCB-197	3.14e+07	0.91	y	1.07	49:13	1.020	1.015	1.025	51.9828
	PCB-200	3.00e+07	0.91	y	1.02	50:03	1.037	1.032	1.044	52.4432
	PCB-198	2.15e+07	0.90	y	0.74	51:20	1.063	1.058	1.068	51.5297
	PCB-199	2.15e+07	0.89	y	0.73	51:25	1.065	1.060	1.070	52.5143
-	PCB-196/203	4.56e+07	0.90	y	0.77	51:41	1.071	1.066	1.076	104.918
-	PCB-195	2.91e+07	0.90	y	1.20	52:49	0.984	0.979	0.989	51.8965
	PCB-194	2.91e+07	0.90	y	1.25	53:41	1.000	0.995	1.005	49.8808
	PCB-205	3.28e+07	0.91	y	1.41	53:58	1.006	1.001	1.011	49.5944
	PCB-208	3.18e+07	1.33	y	0.96	52:57	1.000	0.995	1.005	49.4830
	PCB-207	3.10e+07	1.32	y	0.92	53:16	1.006	1.001	1.011	50.7809
	PCB-206	2.07e+07	1.33	y	1.03	55:21	1.000	0.995	1.005	49.7349
	PCB-209	2.28e+07	1.19	y	1.18	56:38	1.000	0.995	1.005	52.4674

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.34e+08	2.96	y	16:15	1.22	156.271	
Total Di-PCB	1.69e+09	1.64	y	20:12	1.21	1228.91	
Total Tri-PCB	4.56e+08	1.05	y	24:17	1.16	405.942	
Total Tri-PCB	1.17e+09	1.08	y	27:58	1.35	834.371	Sum:1240.31
Total Tetra-PCB	2.26e+09	0.76	y	28:01	1.17	2169.09	
Total Penta-PCB	1.49e+09	1.61	y	32:41	1.21	2099.97	
Total Penta-PCB	2.69e+08	1.64	y	42:13	1.26	267.736	Sum:2367.71
Total Hexa-PCB	3.94e+08	1.27	y	37:04	0.92	736.844	
Total Hexa-PCB	1.17e+09	1.24	y	42:08	1.08	1448.04	Sum:2184.88
Total Hepta-PCB	8.19e+08	1.02	y	42:52	1.27	1225.74	
Total Octa-PCB	2.40e+08	0.91	y	48:17	0.92	465.773	
Total Octa-PCB	9.28e+07	0.90	y	52:49	1.29	154.410	Sum:620.183
Total Nona-PCB	8.35e+07	1.33	y	52:57	0.96	149.999	
Total Deca-PCB	2.28e+07	1.19	y	56:38	1.18	52.4674	

Total PCB Conc:11327.5526340

RL: MONO, TRI - DECA: —

Integrations by Analyst: DMS

Date: 6/23/14

Client ID: PCB CS3 14F1901 Filename: 140620E1 S:4 Acq:20-JUN-14 12:43:46 ConCal: ST140620E1-4

Lab ID: ST140620E1-4 GC Column ID: ZB-1 ICal: PCBVG8-6-20-14 wt/vol: 1.000 EndCAL: ST140620E1-8

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.19e+08	3.24 y	0.89	16:14	0.625	0.622	0.628	98.9	98.9
13C-PCB-3	1.25e+08	3.32 y	0.93	18:49	0.725	0.721	0.729	100	100
13C-PCB-4	7.38e+07	1.60 y	0.55	20:09	0.776	0.772	0.780	99.9	99.9
13C-PCB-9	1.11e+08	1.59 y	0.83	21:55	0.844	0.840	0.848	100.0	100.0
13C-PCB-11	1.25e+08	1.58 y	0.94	25:16	0.973	0.968	0.978	98.6	98.6
13C-PCB-19	7.19e+07	1.04 y	0.53	24:16	0.934	0.929	0.939	100	100
13C-PCB-28	1.07e+08	1.05 y	0.89	29:07	1.004	0.999	1.009	96.1	96.1
13C-PCB-32	1.09e+08	1.07 y	0.81	27:10	1.046	1.041	1.051	99.3	99.3
13C-PCB-37	9.94e+07	1.06 y	0.83	32:59	1.137	1.131	1.143	95.3	95.3
13C-PCB-47	8.11e+07	0.81 y	0.74	32:01	0.871	0.867	0.875	98.7	98.7
13C-PCB-52	7.70e+07	0.79 y	0.71	31:30	0.857	0.853	0.861	98.5	98.5
13C-PCB-54	9.29e+07	0.81 y	0.85	28:00	0.762	0.758	0.766	99.0	99.0
13C-PCB-70	1.02e+08	0.79 y	0.94	35:31	0.966	0.961	0.971	98.1	98.1
13C-PCB-77	9.74e+07	0.81 y	0.89	39:38	1.078	1.073	1.083	98.7	98.7
13C-PCB-80	1.05e+08	0.80 y	0.96	35:56	0.977	0.972	0.982	99.0	99.0
13C-PCB-81	9.10e+07	0.80 y	0.84	39:03	1.062	1.057	1.067	98.4	98.4
13C-PCB-95	5.18e+07	1.63 y	0.74	35:49	0.913	0.908	0.918	98.4	98.4
13C-PCB-97	4.86e+07	1.60 y	0.69	38:48	0.989	0.984	0.994	99.7	99.7
13C-PCB-101	5.42e+07	1.60 y	0.79	37:30	0.956	0.951	0.961	97.6	97.6
13C-PCB-104	6.97e+07	1.58 y	1.00	32:40	0.833	0.829	0.837	99.0	99.0
13C-PCB-105	8.01e+07	1.61 y	1.24	43:03	0.929	0.924	0.934	96.7	96.7
13C-PCB-114	7.88e+07	1.61 y	1.21	42:12	0.910	0.905	0.915	97.6	97.6
13C-PCB-118	7.31e+07	1.59 y	0.98	41:32	1.059	1.054	1.064	105	105
13C-PCB-123	7.08e+07	1.58 y	0.95	41:21	1.054	1.049	1.059	105	105
13C-PCB-126	7.48e+07	1.61 y	1.16	45:18	0.977	0.972	0.982	96.2	96.2
13C-PCB-127	8.64e+07	1.59 y	1.34	43:23	0.936	0.931	0.941	96.3	96.3
13C-PCB-138	6.82e+07	1.26 y	1.04	44:48	0.966	0.961	0.971	97.7	97.7
13C-PCB-141	7.08e+07	1.28 y	1.07	43:57	0.948	0.943	0.953	98.8	98.8
13C-PCB-153	7.34e+07	1.25 y	1.11	43:13	0.932	0.927	0.937	98.6	98.6
13C-PCB-155	5.85e+07	1.27 y	0.83	37:02	0.944	0.939	0.949	99.4	99.4
13C-PCB-156	8.09e+07	1.27 y	1.24	48:03	1.037	1.032	1.042	97.2	97.2
13C-PCB-157	8.55e+07	1.28 y	1.31	48:19	1.042	1.037	1.047	97.5	97.5
13C-PCB-159	7.80e+07	1.30 y	1.20	46:05	0.994	0.989	0.999	97.3	97.3
13C-PCB-167	8.57e+07	1.25 y	1.32	46:45	1.009	1.004	1.014	97.0	97.0
13C-PCB-169	7.92e+07	1.27 y	1.22	50:24	1.087	1.082	1.092	97.5	97.5
13C-PCB-170	3.58e+07	0.46 y	0.54	50:45	1.095	1.089	1.101	99.9	99.9
13C-PCB-180	4.49e+07	0.47 y	0.67	49:19	1.064	1.059	1.069	99.6	99.6
13C-PCB-188	6.18e+07	0.46 y	0.94	42:51	0.924	0.919	0.929	98.8	98.8
13C-PCB-189	4.90e+07	0.46 y	0.72	52:11	1.126	1.120	1.132	102	102
13C-PCB-194	4.68e+07	0.91 y	0.81	53:40	0.995	0.990	1.000	99.2	99.2
13C-PCB-202	5.62e+07	0.92 y	0.83	48:16	1.041	1.036	1.046	101	101
13C-PCB-206	4.05e+07	0.78 y	0.66	55:20	1.026	1.021	1.031	106	106
13C-PCB-208	6.67e+07	0.78 y	1.12	52:56	0.981	0.976	0.986	102	102
13C-PCB-209	3.70e+07	1.21 y	0.61	56:37	1.049	1.044	1.054	103	103

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.01	37:49	1.028	1.023	1.033	109	109
13C-PCB-178	4.58e+07	0.46 y	0.63	45:38	0.984	0.979	0.989	109	109

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.21e+08	0.80 y	1.20	37:49	0.968	0.963	0.973	110	110
13C-PCB-178	4.58e+07	0.46 y	0.94	45:38	0.925	0.920	0.930	109	109

RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	1.35e+08	1.56 y	1.00	25:58	100
13C-PCB-31	1.25e+08	1.07 y	1.00	29:00	100
13C-PCB-60	1.10e+08	0.80 y	1.00	36:46	100
13C-PCB-111	7.08e+07	1.59 y	1.00	39:14	100
13C-PCB-128	6.69e+07	1.27 y	1.00	46:21	100
13C-PCB-205	5.82e+07	0.91 y	1.00	53:57	100

Analyst: DMS

Date: 6/23/14

Vista Analytical Laboratory - Injection Log Run file: 140620E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
140620E1	1	ST140620E1-1	DMS	20-JUN-14	09:31:44	NA	NA
140620E1	2	ST140620E1-2	DMS	20-JUN-14	10:35:42	NA	NA
140620E1	3	ST140620E1-3	DMS	20-JUN-14	11:39:47	NA	NA
140620E1	4	ST140620E1-4	DMS	20-JUN-14	12:43:46	ST140620E1-4	ST140620E1-8
140620E1	5	ST140620E1-5	DMS	20-JUN-14	13:47:50	NA	NA
140620E1	6	ST140620E1-6	DMS	20-JUN-14	14:51:49	NA	NA
140620E1	8	ST140620E1-7	DMS	20-JUN-14	15:57:15	NA	NA
140620E1	9	B4F0047-BS1	DMS	20-JUN-14	17:01:12	ST140620E1-4	ST140620E1-8
140620E1	10	SOLVENT BLANK	DMS	20-JUN-14	18:05:10	NA	NA
140620E1	11	B4F0047-BLK1	DMS	20-JUN-14	19:09:06	ST140620E1-4	ST140620E1-8
140620E1	12	1400406-01	DMS	20-JUN-14	20:13:09	ST140620E1-4	ST140620E1-8
140620E1	13	1400434-01	DMS	20-JUN-14	21:17:10	ST140620E1-4	NA
140620E1	14	1400434-02	DMS	20-JUN-14	22:21:13	ST140620E1-4	NA
140620E1	15	1400434-03	DMS	20-JUN-14	23:25:09	ST140620E1-4	NA
140620E1	16	SOLVENT BLANK	DMS	21-JUN-14	00:29:07	ST140620E1-4	NA
140620E1	17	ST140620E1-8	DMS	21-JUN-14	01:33:10	ST140620E1-4	ST140620E1-8

March 27, 2015

Vista Project I.D.: 1400984

Ms. Christine Nancarrow
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 23, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '1400647'. The work was authorized under your Purchase Order No. PO10163569.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1400984
Case Narrative

Sample Condition on Receipt:

Four effluent samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The three "BD" samples, which were originally placed on hold, were authorized for analysis on March 9, 2015.

Analytical Notes:

EPA Method 1613

The three samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

EPA Method 1668C

The three samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. PCB-11 was detected at 5.62 pg/L in the Method Blank, which is above the sample quantitation limit. No other analytes were detected above the sample quantitation limit in the Method Blank.

The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400984-01	BD-OWS-14-20141222-W	22-Dec-14 08:40	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-02	BD-MH-12.56-20141222-W	22-Dec-14 10:10	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-03	BD-MH-1.32-20141222-W	22-Dec-14 11:40	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1400984-04	QC-EB-02-20141222-W	22-Dec-14 14:50	23-Dec-14 10:15	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L

Vista Project: 1400984

Client Project: 1400647

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0037
Date Extracted: 10-Mar-2015 8:22

Lab Sample: B5C0037-BLK1
Date Analyzed : 11-Mar-15 18:55 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	1.40		0.943	
1,2,3,7,8-PeCDD	ND	25.0	1.26		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	2.02		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	2.09		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	2.20		2.02	
1,2,3,4,6,7,8-HpCDD	ND	25.0	4.75		2.98	
OCDD	ND	50.0	2.97		3.57	
2,3,7,8-TCDF	ND	5.00	0.797		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.617		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.699		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	0.550		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	0.612		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.398		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	0.556		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	0.992		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.975		1.75	
OCDF	ND	50.0	3.47		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	65.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	66.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	63.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	62.2	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	62.5	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	57.7	23 - 140	
	13C-OCDD	44.6	17 - 157	
	13C-2,3,7,8-TCDF	70.0	24 - 169	
	13C-1,2,3,7,8-PeCDF	72.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	74.2	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	72.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	68.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	62.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	63.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	62.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	58.3	26 - 138	
	13C-OCDF	47.7	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	106	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	1.40
Total PeCDD	ND	1.26
Total HxCDD	ND	3.11
Total HpCDD	ND	4.75
Total TCDF	ND	0.797
Total PeCDF	ND	1.07
Total HxCDF	ND	0.694
Total HpCDF	ND	1.54

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR **EPA Method 1613B**

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0037
Date Extracted: 10-Mar-2015 8:22

Lab Sample: B5C0037-BS1
Date Analyzed: 11-Mar-15 17:17 Column: ZB-5MS Analyst: MAS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
2,3,7,8-TCDD	202	200	101	67 - 158
1,2,3,7,8-PeCDD	981	1000	98.1	70 - 142
1,2,3,4,7,8-HxCDD	1020	1000	102	70 - 164
1,2,3,6,7,8-HxCDD	989	1000	98.9	76 - 134
1,2,3,7,8,9-HxCDD	999	1000	99.9	64 - 162
1,2,3,4,6,7,8-HpCDD	996	1000	99.6	70 - 140
OCDD	1980	2000	98.9	78 - 144
2,3,7,8-TCDF	181	200	90.5	75 - 158
1,2,3,7,8-PeCDF	1060	1000	106	80 - 134
2,3,4,7,8-PeCDF	1060	1000	106	68 - 160
1,2,3,4,7,8-HxCDF	1000	1000	100	72 - 134
1,2,3,6,7,8-HxCDF	995	1000	99.5	84 - 130
2,3,4,6,7,8-HxCDF	998	1000	99.8	70 - 156
1,2,3,7,8,9-HxCDF	1010	1000	101	78 - 130
1,2,3,4,6,7,8-HpCDF	1000	1000	100	82 - 122
1,2,3,4,7,8,9-HpCDF	996	1000	99.6	78 - 138
OCDF	2040	2000	102	63 - 170

	Labeled Standard	%R	LCL-UCL
IS	13C-2,3,7,8-TCDD	69.5	20 - 175
	13C-1,2,3,7,8-PeCDD	69.8	21 - 227
	13C-1,2,3,4,7,8-HxCDD	62.4	21 - 193
	13C-1,2,3,6,7,8-HxCDD	64.3	25 - 163
	13C-1,2,3,7,8,9-HxCDD	62.5	21 - 193
	13C-1,2,3,4,6,7,8-HpCDD	57.0	26 - 166
	13C-OCDD	44.8	13 - 199
	13C-2,3,7,8-TCDF	75.2	22 - 152
	13C-1,2,3,7,8-PeCDF	74.7	21 - 192
	13C-2,3,4,7,8-PeCDF	76.8	13 - 328
	13C-1,2,3,4,7,8-HxCDF	71.9	19 - 202
	13C-1,2,3,6,7,8-HxCDF	69.4	21 - 159
	13C-2,3,4,6,7,8-HxCDF	65.9	22 - 176
	13C-1,2,3,7,8,9-HxCDF	62.3	17 - 205
	13C-1,2,3,4,6,7,8-HpCDF	55.7	21 - 158
	13C-1,2,3,4,7,8,9-HpCDF	56.3	20 - 186
	13C-OCDF	47.3	13 - 199
CRS	37Cl-2,3,7,8-TCDD	117	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-OWS-14-20141222-W

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 8:40

Sample Data
Matrix: Aqueous
Sample Size: 1.00 L

Laboratory Data
Lab Sample: 1400984-01 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0037 Date Extracted: 10-Mar-2015 8:22
Date Analyzed : 12-Mar-15 03:17 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	1.11		0.943	
1,2,3,7,8-PeCDD	ND	25.0	1.78		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	2.84		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	5.66		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	3.15		2.02	
1,2,3,4,6,7,8-HpCDD	8.54	25.0			2.98	J
OCDD	57.4	50.0			3.57	
2,3,7,8-TCDF	ND	5.00	0.731		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.784		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.893		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	1.31		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	1.40		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.983		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	1.39		1.34	
1,2,3,4,6,7,8-HpCDF	4.56	25.0			1.46	J
1,2,3,4,7,8,9-HpCDF	ND	25.0	1.61		1.75	
OCDF	12.7	50.0			2.98	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	66.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	61.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	60.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	58.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	58.5	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	58.7	23 - 140	
	13C-OCDD	50.9	17 - 157	
	13C-2,3,7,8-TCDF	72.9	24 - 169	
	13C-1,2,3,7,8-PeCDF	72.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	70.5	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	68.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	67.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	62.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	59.4	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	57.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	55.4	26 - 138	
	13C-OCDF	53.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	104	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.152

TOTALS

Total TCDD	ND	1.11
Total PeCDD	ND	1.78
Total HxCDD	ND	5.82
Total HpCDD	19.6	
Total TCDF	ND	0.983
Total PeCDF	ND	1.29
Total HxCDF	3.15	
Total HpCDF	11.4	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-MH-12.56-20141222-W

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 10:10

Sample Data
Matrix: Aqueous
Sample Size: 1.01 L

Laboratory Data
Lab Sample: 1400984-02 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0037 Date Extracted: 10-Mar-2015 8:22
Date Analyzed : 12-Mar-15 02:28 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	4.96	1.11		0.943	
1,2,3,7,8-PeCDD	ND	24.8	0.734		4.51	
1,2,3,4,7,8-HxCDD	ND	24.8	1.91		2.21	
1,2,3,6,7,8-HxCDD	ND	24.8	1.86		1.93	
1,2,3,7,8,9-HxCDD	ND	24.8	2.00		2.02	
1,2,3,4,6,7,8-HpCDD	ND	24.8	3.98		2.98	
OCDD	10.7	49.6			3.57	J
2,3,7,8-TCDF	ND	4.96	0.795		0.984	
1,2,3,7,8-PeCDF	ND	24.8	0.558		2.50	
2,3,4,7,8-PeCDF	ND	24.8	0.594		1.73	
1,2,3,4,7,8-HxCDF	ND	24.8	0.572		1.36	
1,2,3,6,7,8-HxCDF	ND	24.8	0.594		1.56	
2,3,4,6,7,8-HxCDF	ND	24.8	0.456		2.05	
1,2,3,7,8,9-HxCDF	ND	24.8	0.685		1.34	
1,2,3,4,6,7,8-HpCDF	ND	24.8	0.981		1.46	
1,2,3,4,7,8,9-HpCDF	ND	24.8	0.575		1.75	
OCDF	ND	49.6	1.19		2.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	87.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	77.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	74.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	74.6	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	74.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140	
	13C-OCDD	50.5	17 - 157	
	13C-2,3,7,8-TCDF	89.9	24 - 169	
	13C-1,2,3,7,8-PeCDF	93.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	90.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	85.8	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	84.2	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	79.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	63.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	65.6	26 - 138	
	13C-OCDF	55.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	113	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.00321

TOTALS

Total TCDD	ND	1.11
Total PeCDD	ND	1.13
Total HxCDD	ND	3.15
Total HpCDD	ND	3.98
Total TCDF	ND	0.795
Total PeCDF	ND	0.794
Total HxCDF	ND	0.691
Total HpCDF	ND	1.01

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: BD-MH-1.32-20141222-W

EPA Method 1613B

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 11:40

Sample Data
Matrix: Aqueous
Sample Size: 1.00 L

Laboratory Data
Lab Sample: 1400984-03 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0037 Date Extracted: 10-Mar-2015 8:22
Date Analyzed : 12-Mar-15 01:39 Column: ZB-5MS Analyst: MAS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
2,3,7,8-TCDD	ND	5.00	0.770		0.943	
1,2,3,7,8-PeCDD	ND	25.0	1.28		4.51	
1,2,3,4,7,8-HxCDD	ND	25.0	2.53		2.21	
1,2,3,6,7,8-HxCDD	ND	25.0	4.57		1.93	
1,2,3,7,8,9-HxCDD	ND	25.0	2.72		2.02	
1,2,3,4,6,7,8-HpCDD	3.84	25.0			2.98	J
OCDD	26.3	50.0			3.57	J
2,3,7,8-TCDF	ND	5.00	0.745		0.984	
1,2,3,7,8-PeCDF	ND	25.0	0.611		2.50	
2,3,4,7,8-PeCDF	ND	25.0	0.660		1.73	
1,2,3,4,7,8-HxCDF	ND	25.0	0.519		1.36	
1,2,3,6,7,8-HxCDF	ND	25.0	0.596		1.56	
2,3,4,6,7,8-HxCDF	ND	25.0	0.454		2.05	
1,2,3,7,8,9-HxCDF	ND	25.0	0.660		1.34	
1,2,3,4,6,7,8-HpCDF	ND	25.0	1.22		1.46	
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.976		1.75	
OCDF	1.99	50.0			2.98	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	76.7	25 - 164	
	13C-1,2,3,7,8-PeCDD	73.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	68.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	67.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	68.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	62.2	23 - 140	
	13C-OCDD	50.7	17 - 157	
	13C-2,3,7,8-TCDF	79.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	86.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	83.5	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	79.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	76.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	69.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	68.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	59.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	56.4	26 - 138	
	13C-OCDF	53.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	112	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.0469

TOTALS

Total TCDD	ND	0.770
Total PeCDD	ND	1.28
Total HxCDD	ND	4.58
Total HpCDD	9.77	
Total TCDF	ND	0.745
Total PeCDF	ND	1.01
Total HxCDF	ND	0.451
Total HpCDF	ND	1.73

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit
RL - Reporting limit
LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48
Lab Sample: B5C0088-BLK1
Date Analyzed: 20-Mar-15 00:49 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	5.00	2.04		1.21	
PCB-2	ND	5.00	2.10		1.75	
PCB-3	ND	5.00	2.10		1.49	
PCB-4/10	ND	10.0	3.96		5.64	
PCB-5/8	ND	10.0	3.07		3.59	
PCB-6	ND	5.00	3.16		3.10	
PCB-7/9	ND	10.0	3.12		6.22	
PCB-11	5.62	5.00			3.86	
PCB-12/13	ND	10.0	3.00		5.01	
PCB-14	ND	5.00	2.58		3.98	
PCB-15	ND	5.00	2.64		2.53	
PCB-16/32	ND	10.0	0.928		2.87	
PCB-17	ND	5.00	1.02		1.37	
PCB-18	ND	5.00	1.10		2.57	
PCB-19	ND	5.00	1.17		2.38	
PCB-20/21/33	ND	15.0	0.803		10.3	
PCB-22	ND	5.00	0.799		3.17	
PCB-23	ND	5.00	0.768		1.35	
PCB-24/27	ND	10.0	0.749		3.16	
PCB-25	ND	5.00	0.847		3.34	
PCB-26	ND	5.00	0.751		2.19	
PCB-28	ND	5.00	0.751		2.90	
PCB-29	ND	5.00	0.768		1.60	
PCB-30	ND	5.00	0.742		2.09	
PCB-31	ND	5.00	0.743		4.29	
PCB-34	ND	5.00	0.715		2.34	
PCB-35	ND	5.00	0.728		1.65	
PCB-36	ND	5.00	0.703		2.69	
PCB-37	ND	5.00	0.678		1.92	
PCB-38	ND	5.00	0.736		1.56	
PCB-39	ND	5.00	0.725		2.60	
PCB-40	ND	5.00	1.33		3.08	
PCB-41/64/71/72	ND	20.0	0.852		5.57	
PCB-42/59	ND	10.0	0.922		2.84	
PCB-43/49	ND	10.0	1.11		3.38	
PCB-44	ND	5.00	1.31		2.48	
PCB-45	ND	5.00	1.21		1.96	
PCB-46	ND	5.00	1.33		2.49	
PCB-47	2.86	5.00			4.42	J
PCB-48/75	ND	10.0	0.859		2.09	
PCB-50	ND	5.00	1.17		1.40	
PCB-51	ND	5.00	1.09		1.42	
PCB-52/69	ND	10.0	0.979		3.64	
PCB-53	ND	5.00	1.11		1.12	
PCB-54	ND	5.00	0.889		1.51	
PCB-55	ND	5.00	0.759		1.19	
PCB-56/60	ND	10.0	0.845		2.19	
PCB-57	ND	5.00	0.847		0.857	
PCB-58	ND	5.00	0.834		1.81	
PCB-61/70	ND	10.0	0.843		2.40	
PCB-62	ND	5.00	0.839		1.46	
PCB-63	ND	5.00	0.815		0.696	
PCB-65	ND	5.00	0.866		0.953	
PCB-66/76	ND	10.0	0.804		2.82	
PCB-67	ND	5.00	0.869		1.22	
PCB-68	ND	5.00	0.708		1.24	
PCB-73	ND	5.00	0.896		1.56	
PCB-74	ND	5.00	0.782		1.53	
PCB-77	ND	5.00	0.837		1.34	
PCB-78	ND	5.00	0.916		0.990	
PCB-79	ND	5.00	0.805		1.60	
PCB-80	ND	5.00	0.705		1.98	
PCB-81	ND	5.00	0.836		2.34	
PCB-82	ND	5.00	3.69		1.69	
PCB-83	ND	5.00	2.34		1.32	
PCB-84/92	ND	10.0	2.98		3.38	
PCB-85/116	ND	10.0	2.79		2.83	
PCB-86	ND	5.00	3.76		2.34	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48
Lab Sample: B5C0088-BLK1
Date Analyzed: 20-Mar-15 00:49 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	15.0	2.44		3.79	
PCB-88/91	ND	5.00	3.02		3.25	
PCB-89	ND	5.00	3.21		1.84	
PCB-90/101	ND	10.0	2.65		1.92	
PCB-93	ND	5.00	3.20		1.47	
PCB-94	ND	5.00	3.01		1.91	
PCB-95/98/102	ND	15.0	2.64		6.58	
PCB-96	ND	5.00	2.22		2.16	
PCB-97	ND	5.00	2.99		1.24	
PCB-99	ND	5.00	2.56		1.94	
PCB-100	ND	5.00	2.52		2.03	
PCB-103	ND	5.00	2.51		2.28	
PCB-104	ND	5.00	1.92		0.931	
PCB-105	ND	5.00	0.924		2.21	
PCB-106/118	ND	10.0	2.13		2.44	
PCB-107/109	ND	10.0	2.05		1.98	
PCB-108/112	ND	10.0	2.76		1.86	
PCB-110	ND	5.00	2.28		1.94	
PCB-111/115	ND	10.0	2.09		0.768	
PCB-113	ND	5.00	2.38		1.31	
PCB-114	ND	5.00	0.963		1.81	
PCB-119	ND	5.00	2.07		0.949	
PCB-120	ND	5.00	1.96		1.01	
PCB-121	ND	5.00	1.93		1.94	
PCB-122	ND	5.00	1.15		1.84	
PCB-123	ND	5.00	2.19		1.35	
PCB-124	ND	5.00	2.10		1.79	
PCB-126	ND	5.00	0.983		2.05	
PCB-127	ND	5.00	1.05		0.808	
PCB-128/162	ND	10.0	1.30		1.68	
PCB-129	ND	5.00	1.80		1.11	
PCB-130	ND	5.00	2.00		2.21	
PCB-131	ND	5.00	1.89		1.46	
PCB-132/161	ND	10.0	1.43		2.34	
PCB-133/142	ND	10.0	1.76		2.19	
PCB-134/143	ND	10.0	1.72		2.40	
PCB-135	ND	5.00	3.72		2.90	
PCB-136	ND	5.00	2.59		2.89	
PCB-137	ND	5.00	1.56		2.08	
PCB-138/163/164	ND	15.0	1.29		2.68	
PCB-139/149	ND	10.0	3.40		7.87	
PCB-140	ND	5.00	3.81		3.52	
PCB-141	ND	5.00	1.59		1.15	
PCB-144	ND	5.00	3.46		3.22	
PCB-145	ND	5.00	2.71		1.73	
PCB-146/165	ND	10.0	1.48		1.91	
PCB-147	ND	5.00	3.80		3.62	
PCB-148	ND	5.00	3.62		1.68	
PCB-150	ND	5.00	2.63		1.14	
PCB-151	ND	5.00	3.62		3.59	
PCB-152	ND	5.00	2.53		1.82	
PCB-153	ND	5.00	1.34		1.83	
PCB-154	ND	5.00	3.33		2.78	
PCB-155	ND	5.00	2.47		1.45	
PCB-156	ND	5.00	1.00		1.74	
PCB-157	ND	5.00	1.02		1.17	
PCB-158/160	ND	10.0	1.21		1.99	
PCB-159	ND	5.00	1.10		1.20	
PCB-166	ND	5.00	1.18		0.920	
PCB-167	ND	5.00	1.14		1.65	
PCB-168	ND	5.00	1.18		0.933	
PCB-169	ND	5.00	1.05		1.12	
PCB-170	ND	5.00	0.979		1.38	
PCB-171	ND	5.00	0.992		1.61	
PCB-172	ND	5.00	1.07		1.46	
PCB-173	ND	5.00	1.31		1.49	
PCB-174	ND	5.00	1.12		1.42	
PCB-175	ND	5.00	1.35		3.15	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank — EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L
QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48
Lab Sample: B5C0088-BLK1
Date Analyzed: 20-Mar-15 00:49 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	5.00	0.972		2.17	
PCB-177	ND	5.00	1.14		1.34	
PCB-178	ND	5.00	1.32		2.25	
PCB-179	ND	5.00	1.02		1.57	
PCB-180	ND	5.00	0.997		0.610	
PCB-181	ND	5.00	1.07		1.01	
PCB-182/187	ND	10.0	1.25		6.20	
PCB-183	ND	5.00	1.16		3.29	
PCB-184	ND	5.00	1.06		1.25	
PCB-185	ND	5.00	1.03		1.47	
PCB-186	ND	5.00	0.971		2.43	
PCB-188	ND	5.00	0.930		1.08	
PCB-189	ND	5.00	0.646		1.49	
PCB-190	ND	5.00	0.727		1.70	
PCB-191	ND	5.00	0.776		1.96	
PCB-192	ND	5.00	0.831		1.69	
PCB-193	ND	5.00	0.780		1.46	
PCB-194	ND	5.00		1.08	1.71	
PCB-195	ND	5.00	0.764		1.47	
PCB-196/203	ND	10.0	2.19		6.35	
PCB-197	ND	5.00	1.56		1.80	
PCB-198	ND	5.00	2.41		3.78	
PCB-199	ND	5.00	2.45		4.05	
PCB-200	ND	5.00	1.76		1.75	
PCB-201	ND	5.00	1.66		1.02	
PCB-202	ND	5.00	1.78		1.55	
PCB-204	ND	5.00	1.69		1.48	
PCB-205	ND	5.00	0.541		1.53	
PCB-206	ND	5.00	1.17		1.32	
PCB-207	ND	5.00	0.646		1.51	
PCB-208	ND	5.00	0.655		1.34	
PCB-209	ND	5.00	0.961		1.86	
Total monoCB	ND	5.00	2.10			
Total diCB	5.62	5.00				

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
Total triCB	ND	5.00	1.17			
Total tetraCB	2.86	5.00				J
Total pentaCB	ND	5.00	3.76			
Total hexaCB	ND	5.00	3.81			
Total heptaCB	ND	5.00	1.35			
Total octaCB	ND	5.00		1.08		
Total nonaCB	ND	5.00	1.17			
DecaCB	ND	5.00	0.961			
Total PCB	8.48	5.00				

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: Method Blank

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48

Lab Sample: B5C0088-BLK1
Date Analyzed: 20-Mar-15 00:49 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	75.4	5 - 145	
	13C-PCB-3	78.1	5 - 145	
	13C-PCB-4	74.3	5 - 145	
	13C-PCB-11	88.0	5 - 145	
	13C-PCB-9	80.8	5 - 145	
	13C-PCB-19	74.9	5 - 145	
	13C-PCB-28	82.5	5 - 145	
	13C-PCB-32	76.5	5 - 145	
	13C-PCB-37	101	5 - 145	
	13C-PCB-47	104	5 - 145	
	13C-PCB-52	103	5 - 145	
	13C-PCB-54	90.0	5 - 145	
	13C-PCB-70	103	5 - 145	
	13C-PCB-77	94.1	10 - 145	
	13C-PCB-80	102	10 - 145	
	13C-PCB-81	93.8	10 - 145	
	13C-PCB-95	110	10 - 145	
	13C-PCB-97	104	10 - 145	
	13C-PCB-101	105	10 - 145	
	13C-PCB-104	107	10 - 145	
	13C-PCB-105	118	10 - 145	
	13C-PCB-114	115	10 - 145	
	13C-PCB-118	101	10 - 145	
	13C-PCB-123	105	10 - 145	
	13C-PCB-126	132	10 - 145	
	13C-PCB-127	121	10 - 145	
	13C-PCB-138	92.3	10 - 145	
	13C-PCB-141	90.6	10 - 145	
	13C-PCB-153	90.0	10 - 145	
	13C-PCB-155	71.3	10 - 145	
	13C-PCB-156	104	10 - 145	
	13C-PCB-157	103	10 - 145	
	13C-PCB-159	98.9	10 - 145	
	13C-PCB-167	99.9	10 - 145	
	13C-PCB-169	107	10 - 145	
	13C-PCB-170	83.5	10 - 145	
	13C-PCB-180	82.6	10 - 145	
	13C-PCB-188	67.6	10 - 145	
	13C-PCB-189	88.9	10 - 145	
	13C-PCB-194	102	10 - 145	
	13C-PCB-202	64.7	10 - 145	
	13C-PCB-206	86.5	10 - 145	
	13C-PCB-208	78.1	10 - 145	
	13C-PCB-209	78.3	10 - 145	
CRS	13C-PCB-79	98.7	10 - 145	
	13C-PCB-178	79.6	10 - 145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48

Lab Sample: B5C0088-BS1
Date Analyzed: 19-Mar-15 22:40 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
PCB-1	794	1000	79.4	60 - 135
PCB-3	825	1000	82.5	60 - 135
PCB-4/10	1690	2000	84.7	60 - 135
PCB-15	866	1000	86.6	60 - 135
PCB-19	936	1000	93.6	60 - 135
PCB-37	979	1000	97.9	60 - 135
PCB-54	1060	1000	106	60 - 135
PCB-77	988	1000	98.8	60 - 135
PCB-81	1020	1000	102	60 - 135
PCB-104	1010	1000	101	60 - 135
PCB-105	895	1000	89.5	60 - 135
PCB-106/118	2010	2000	101	60 - 135
PCB-114	889	1000	88.9	60 - 135
PCB-123	1030	1000	103	60 - 135
PCB-126	883	1000	88.3	60 - 135
PCB-155	990	1000	99.0	60 - 135
PCB-156	1010	1000	101	60 - 135
PCB-157	1030	1000	103	60 - 135
PCB-167	990	1000	99.0	60 - 135
PCB-169	1060	1000	106	60 - 135
PCB-188	968	1000	96.8	60 - 135
PCB-189	1010	1000	101	60 - 135
PCB-202	995	1000	99.5	60 - 135
PCB-205	893	1000	89.3	60 - 135
PCB-206	975	1000	97.5	60 - 135
PCB-208	974	1000	97.4	60 - 135
PCB-209	964	1000	96.4	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	66.8	15 - 145
IS	13C-PCB-3	69.1	15 - 145
IS	13C-PCB-4	66.2	15 - 145
IS	13C-PCB-11	77.7	15 - 145
IS	13C-PCB-9	69.6	15 - 145
IS	13C-PCB-19	68.1	15 - 145
IS	13C-PCB-28	71.0	15 - 145
IS	13C-PCB-32	66.2	15 - 145
IS	13C-PCB-37	87.7	15 - 145
IS	13C-PCB-47	82.2	15 - 145
IS	13C-PCB-52	86.4	15 - 145
IS	13C-PCB-54	74.1	15 - 145
IS	13C-PCB-70	84.6	15 - 145
IS	13C-PCB-77	85.5	40 - 145
IS	13C-PCB-80	86.2	40 - 145
IS	13C-PCB-81	83.1	40 - 145
IS	13C-PCB-95	85.8	40 - 145
IS	13C-PCB-97	90.5	40 - 145
IS	13C-PCB-101	86.1	40 - 145
IS	13C-PCB-104	81.6	40 - 145
IS	13C-PCB-105	105	40 - 145
IS	13C-PCB-114	101	40 - 145
IS	13C-PCB-118	87.0	40 - 145
IS	13C-PCB-123	89.8	40 - 145
IS	13C-PCB-126	116	40 - 145
IS	13C-PCB-127	105	40 - 145
IS	13C-PCB-138	82.1	40 - 145
IS	13C-PCB-141	81.8	40 - 145
IS	13C-PCB-153	79.2	40 - 145
IS	13C-PCB-155	58.7	40 - 145
IS	13C-PCB-156	86.4	40 - 145
IS	13C-PCB-157	84.8	40 - 145
IS	13C-PCB-159	87.0	40 - 145
IS	13C-PCB-167	89.5	40 - 145
IS	13C-PCB-169	92.3	40 - 145
IS	13C-PCB-170	71.0	40 - 145
IS	13C-PCB-180	68.3	40 - 145
IS	13C-PCB-188	61.0	40 - 145
IS	13C-PCB-189	71.5	40 - 145
IS	13C-PCB-194	87.3	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B5C0088
Date Extracted: 19-Mar-2015 8:48

Lab Sample: B5C0088-BS1
Date Analyzed: 19-Mar-15 22:40 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	51.7	40 - 145
IS	13C-PCB-206	72.3	40 - 145
IS	13C-PCB-208	68.2	40 - 145
IS	13C-PCB-209	61.5	40 - 145
CRS	13C-PCB-79	89.7	40 - 145
CRS	13C-PCB-178	70.4	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: BD-OWS-14-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 8:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-01 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 02:58 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	4.85	1.83		1.21	
PCB-2	ND	4.85	1.84		1.75	
PCB-3	ND	4.85	1.84		1.49	
PCB-4/10	8.90	9.71			5.64	J
PCB-5/8	ND	9.71	3.56		3.59	
PCB-6	ND	4.85	3.66		3.10	
PCB-7/9	ND	9.71	3.61		6.22	
PCB-11	ND	4.85	3.51		3.86	
PCB-12/13	ND	9.71	3.56		5.01	
PCB-14	ND	4.85	3.07		3.98	
PCB-15	6.55	4.85			2.53	
PCB-16/32	15.2	9.71			2.87	
PCB-17	5.90	4.85			1.37	
PCB-18	18.0	4.85			2.57	
PCB-19	9.86	4.85			2.38	
PCB-20/21/33	ND	14.6		1.17	10.3	
PCB-22	ND	4.85	0.701		3.17	
PCB-23	ND	4.85	0.674		1.35	
PCB-24/27	ND	9.71		5.85	3.16	
PCB-25	ND	4.85	0.743		3.34	
PCB-26	3.30	4.85			2.19	J
PCB-28	ND	4.85		5.82	2.90	
PCB-29	ND	4.85	0.674		1.60	
PCB-30	ND	4.85	1.01		2.09	
PCB-31	4.40	4.85			4.29	J
PCB-34	ND	4.85	0.627		2.34	
PCB-35	ND	4.85	0.654		1.65	
PCB-36	ND	4.85	0.633		2.69	
PCB-37	1.75	4.85			1.92	J
PCB-38	ND	4.85	0.662		1.56	
PCB-39	ND	4.85	0.652		2.60	
PCB-40	ND	4.85		2.77	3.08	
PCB-41/64/71/72	16.1	19.4			5.57	J
PCB-42/59	5.34	9.71			2.84	J
PCB-43/49	18.9	9.71			3.38	
PCB-44	14.6	4.85			2.48	
PCB-45	3.89	4.85			1.96	J
PCB-46	2.38	4.85			2.49	J
PCB-47	7.66	4.85			4.42	B
PCB-48/75	ND	9.71		1.69	2.09	
PCB-50	ND	4.85	1.48		1.40	
PCB-51	2.75	4.85			1.42	J
PCB-52/69	31.2	9.71			3.64	
PCB-53	9.03	4.85			1.12	
PCB-54	ND	4.85	1.12		1.51	
PCB-55	ND	4.85	0.920		1.19	
PCB-56/60	ND	9.71		5.88	2.19	
PCB-57	ND	4.85	1.05		0.857	
PCB-58	ND	4.85	1.04		1.81	
PCB-61/70	9.10	9.71			2.40	J
PCB-62	ND	4.85	1.09		1.46	
PCB-63	ND	4.85	1.01		0.696	
PCB-65	ND	4.85	1.13		0.953	
PCB-66/76	9.20	9.71			2.82	J
PCB-67	ND	4.85	1.08		1.22	
PCB-68	ND	4.85	0.920		1.24	
PCB-73	ND	4.85	1.08		1.56	
PCB-74	ND	4.85		3.88	1.53	
PCB-77	ND	4.85	1.07		1.34	
PCB-78	ND	4.85	1.09		0.990	
PCB-79	ND	4.85	0.976		1.60	
PCB-80	ND	4.85	0.855		1.98	
PCB-81	ND	4.85	0.994		2.34	
PCB-82	3.00	4.85			1.69	J
PCB-83	ND	4.85	2.75		1.32	
PCB-84/92	13.2	9.71			3.38	
PCB-85/116	3.69	9.71			2.83	J
PCB-86	ND	4.85	4.42		2.34	
PCB-87/117/125	ND	14.6		8.32	3.79	
PCB-88/91	6.65	4.85			3.25	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-OWS-14-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 8:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-01 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 02:58 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	4.85	4.20		1.84	
PCB-90/101	26.9	9.71			1.92	
PCB-93	ND	4.85	4.32		1.47	
PCB-94	ND	4.85	4.05		1.91	
PCB-95/98/102	23.9	14.6			6.58	
PCB-96	ND	4.85	2.88		2.16	
PCB-97	9.61	4.85			1.24	
PCB-99	12.0	4.85			1.94	
PCB-100	ND	4.85	3.27		2.03	
PCB-103	ND	4.85	3.25		2.28	
PCB-104	ND	4.85	2.49		0.931	
PCB-105	8.07	4.85			2.21	
PCB-106/118	19.9	9.71			2.44	
PCB-107/109	1.55	9.71			1.98	J
PCB-108/112	ND	9.71		1.96	1.86	
PCB-110	32.5	4.85			1.94	
PCB-111/115	ND	9.71	2.46		0.768	
PCB-113	ND	4.85	3.12		1.31	
PCB-114	ND	4.85	1.29		1.81	
PCB-119	ND	4.85	2.43		0.949	
PCB-120	ND	4.85	2.30		1.01	
PCB-121	ND	4.85	2.60		1.94	
PCB-122	ND	4.85	1.53		1.84	
PCB-123	ND	4.85	2.87		1.35	
PCB-124	ND	4.85	2.75		1.79	
PCB-126	ND	4.85	1.35		2.05	
PCB-127	ND	4.85	1.36		0.808	
PCB-128/162	6.92	9.71			1.68	J
PCB-129	ND	4.85		2.27	1.11	
PCB-130	ND	4.85		2.69	2.21	
PCB-131	ND	4.85	2.50		1.46	
PCB-132/161	11.0	9.71			2.34	
PCB-133/142	1.90	9.71			2.19	J
PCB-134/143	2.90	9.71			2.40	J
PCB-135	ND	4.85	4.64		2.90	
PCB-136	3.87	4.85			2.89	J
PCB-137	ND	4.85		1.45	2.08	
PCB-138/163/164	38.6	14.6			2.68	
PCB-139/149	33.2	9.71			7.87	
PCB-140	ND	4.85	4.76		3.52	
PCB-141	7.56	4.85			1.15	
PCB-144	ND	4.85	4.32		3.22	
PCB-145	ND	4.85	3.38		1.73	
PCB-146/165	6.74	9.71			1.91	J
PCB-147	ND	4.85	4.75		3.62	
PCB-148	ND	4.85	4.52		1.68	
PCB-150	ND	4.85	3.28		1.14	
PCB-151	8.17	4.85			3.59	
PCB-152	ND	4.85	3.16		1.82	
PCB-153	33.4	4.85			1.83	
PCB-154	ND	4.85	4.15		2.78	
PCB-155	ND	4.85	3.09		1.45	
PCB-156	3.56	4.85			1.74	J
PCB-157	ND	4.85	1.51		1.17	
PCB-158/160	ND	9.71		3.87	1.99	
PCB-159	ND	4.85	1.50		1.20	
PCB-166	ND	4.85	1.60		0.920	
PCB-167	1.76	4.85			1.65	J
PCB-168	ND	4.85	1.56		0.933	
PCB-169	ND	4.85	1.59		1.12	
PCB-170	7.87	4.85			1.38	
PCB-171	2.91	4.85			1.61	J
PCB-172	2.43	4.85			1.46	J
PCB-173	ND	4.85	1.64		1.49	
PCB-174	13.3	4.85			1.42	
PCB-175	ND	4.85	1.54		3.15	
PCB-176	1.59	4.85			2.17	J
PCB-177	7.25	4.85			1.34	
PCB-178	3.17	4.85			2.25	J
PCB-179	5.97	4.85			1.57	

RL - Reporting limit
DL - Sample specifc estimated detection limit
LCL-UCL- Lower control limit - upper control limit
EMPC - Estimated maximum possible concentration
MDL - Method detection limit

Sample ID: BD-OWS-14-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 8:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-01 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 02:58 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	25.4	4.85			0.610	
PCB-181	ND	4.85	1.34		1.01	
PCB-182/187	17.4	9.71			6.20	
PCB-183	6.74	4.85			3.29	
PCB-184	ND	4.85	1.21		1.25	
PCB-185	ND	4.85	1.29		1.47	
PCB-186	ND	4.85	1.11		2.43	
PCB-188	ND	4.85	1.06		1.08	
PCB-189	ND	4.85	0.935		1.49	
PCB-190	2.07	4.85			1.70	J
PCB-191	ND	4.85	0.971		1.96	
PCB-192	ND	4.85	1.04		1.69	
PCB-193	ND	4.85	0.976		1.46	
PCB-194	5.06	4.85			1.71	
PCB-195	2.76	4.85			1.47	J
PCB-196/203	8.58	9.71			6.35	J
PCB-197	ND	4.85	2.28		1.80	
PCB-198	ND	4.85	3.53		3.78	
PCB-199	7.46	4.85			4.05	
PCB-200	ND	4.85	2.57		1.75	
PCB-201	ND	4.85	2.43		1.02	
PCB-202	ND	4.85	2.61		1.55	
PCB-204	ND	4.85	2.47		1.48	
PCB-205	ND	4.85	0.831		1.53	
PCB-206	3.25	4.85			1.32	J
PCB-207	ND	4.85	0.727		1.51	
PCB-208	1.10	4.85			1.34	J
PCB-209	ND	4.85		1.49	1.86	
Total monoCB	ND	4.85	1.84			
Total diCB	15.4	4.85				B
Total triCB	58.4	4.85		71.3		
Total tetraCB	130	4.85		144		B
Total pentaCB	161	4.85		171		
Total hexaCB	159	4.85		170		
Total heptaCB	96.1	4.85				
Total octaCB	23.9	4.85				
Total nonaCB	4.35	4.85				J
DecaCB	ND	4.85		1.49		J
Total PCB	649	4.85				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-OWS-14-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 8:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-01 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 02:58 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	69.3	5 -145	
	13C-PCB-3	74.2	5 -145	
	13C-PCB-4	77.1	5 -145	
	13C-PCB-11	87.7	5 -145	
	13C-PCB-9	82.0	5 -145	
	13C-PCB-19	73.7	5 -145	
	13C-PCB-28	77.3	5 -145	
	13C-PCB-32	76.7	5 -145	
	13C-PCB-37	99.6	5 -145	
	13C-PCB-47	90.7	5 -145	
	13C-PCB-52	93.6	5 -145	
	13C-PCB-54	80.7	5 -145	
	13C-PCB-70	92.0	5 -145	
	13C-PCB-77	83.9	10 -145	
	13C-PCB-80	93.4	10 -145	
	13C-PCB-81	84.9	10 -145	
	13C-PCB-95	98.2	10 -145	
	13C-PCB-97	104	10 -145	
	13C-PCB-101	100	10 -145	
	13C-PCB-104	97.6	10 -145	
	13C-PCB-105	114	10 -145	
	13C-PCB-114	113	10 -145	
	13C-PCB-118	96.4	10 -145	
	13C-PCB-123	100	10 -145	
	13C-PCB-126	120	10 -145	
	13C-PCB-127	118	10 -145	
	13C-PCB-138	89.1	10 -145	
	13C-PCB-141	88.7	10 -145	
	13C-PCB-153	86.8	10 -145	
	13C-PCB-155	69.0	10 -145	
	13C-PCB-156	97.0	10 -145	
	13C-PCB-157	93.0	10 -145	
	13C-PCB-159	95.1	10 -145	
	13C-PCB-167	94.9	10 -145	
	13C-PCB-169	92.1	10 -145	
	13C-PCB-170	77.1	10 -145	
	13C-PCB-180	75.1	10 -145	
	13C-PCB-188	66.9	10 -145	
	13C-PCB-189	74.5	10 -145	
	13C-PCB-194	92.9	10 -145	
	13C-PCB-202	59.1	10 -145	
	13C-PCB-206	78.9	10 -145	
	13C-PCB-208	79.9	10 -145	
	13C-PCB-209	68.5	10 -145	
CRS	13C-PCB-79	90.8	10 -145	
	13C-PCB-178	73.3	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-12.56-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 10:10

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-02 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 04:02 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	4.87	1.07		1.21	
PCB-2	ND	4.87	1.13		1.75	
PCB-3	ND	4.87	1.13		1.49	
PCB-4/10	ND	9.74		8.52	5.64	
PCB-5/8	ND	9.74	3.98		3.59	
PCB-6	ND	4.87	4.08		3.10	
PCB-7/9	ND	9.74	4.03		6.22	
PCB-11	7.78	4.87			3.86	B
PCB-12/13	ND	9.74	3.89		5.01	
PCB-14	ND	4.87	3.35		3.98	
PCB-15	4.01	4.87			2.53	J
PCB-16/32	9.03	9.74			2.87	J
PCB-17	5.50	4.87			1.37	
PCB-18	15.7	4.87			2.57	
PCB-19	3.94	4.87			2.38	J
PCB-20/21/33	2.82	14.6			10.3	J
PCB-22	2.19	4.87			3.17	J
PCB-23	ND	4.87	0.888		1.35	
PCB-24/27	3.39	9.74			3.16	J
PCB-25	ND	4.87		2.64	3.34	
PCB-26	4.75	4.87			2.19	J
PCB-28	7.08	4.87			2.90	
PCB-29	ND	4.87	0.888		1.60	
PCB-30	ND	4.87	0.927		2.09	
PCB-31	7.08	4.87			4.29	
PCB-34	ND	4.87	0.826		2.34	
PCB-35	ND	4.87	0.867		1.65	
PCB-36	ND	4.87	0.838		2.69	
PCB-37	ND	4.87	0.807		1.92	
PCB-38	ND	4.87	0.877		1.56	
PCB-39	ND	4.87	0.864		2.60	
PCB-40	ND	4.87	1.50		3.08	
PCB-41/64/71/72	6.44	19.5			5.57	J
PCB-42/59	2.39	9.74			2.84	J
PCB-43/49	10.3	9.74			3.38	
PCB-44	6.68	4.87			2.48	
PCB-45	ND	4.87		1.62	1.96	
PCB-46	ND	4.87	1.49		2.49	
PCB-47	17.5	4.87			4.42	B
PCB-48/75	1.06	9.74			2.09	J
PCB-50	ND	4.87	1.33		1.40	
PCB-51	5.31	4.87			1.42	
PCB-52/69	16.7	9.74			3.64	
PCB-53	ND	4.87		3.27	1.12	
PCB-54	ND	4.87	1.01		1.51	
PCB-55	ND	4.87	0.921		1.19	
PCB-56/60	ND	9.74		2.68	2.19	
PCB-57	ND	4.87	0.988		0.857	
PCB-58	ND	4.87	0.974		1.81	
PCB-61/70	6.54	9.74			2.40	J
PCB-62	ND	4.87	0.945		1.46	
PCB-63	ND	4.87	0.952		0.696	
PCB-65	ND	4.87	0.975		0.953	
PCB-66/76	3.91	9.74			2.82	J
PCB-67	ND	4.87	1.01		1.22	
PCB-68	4.24	4.87			1.24	J
PCB-73	ND	4.87	1.00		1.56	
PCB-74	2.57	4.87			1.53	J
PCB-77	ND	4.87	1.04		1.34	
PCB-78	ND	4.87	1.06		0.990	
PCB-79	ND	4.87	0.977		1.60	
PCB-80	ND	4.87	0.855		1.98	
PCB-81	ND	4.87	0.968		2.34	
PCB-82	ND	4.87	4.04		1.69	
PCB-83	ND	4.87	2.50		1.32	
PCB-84/92	5.49	9.74			3.38	J
PCB-85/116	ND	9.74	2.98		2.83	
PCB-86	ND	4.87	4.02		2.34	
PCB-87/117/125	4.15	14.6			3.79	J
PCB-88/91	ND	4.87	3.21		3.25	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-12.56-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 10:10

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-02 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 04:02 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	4.87	3.79		1.84	
PCB-90/101	10.6	9.74			1.92	
PCB-93	ND	4.87	3.40		1.47	
PCB-94	ND	4.87	3.19		1.91	
PCB-95/98/102	11.9	14.6			6.58	J
PCB-96	ND	4.87	2.30		2.16	
PCB-97	ND	4.87	3.20		1.24	
PCB-99	4.33	4.87			1.94	J
PCB-100	ND	4.87	2.61		2.03	
PCB-103	ND	4.87	2.60		2.28	
PCB-104	ND	4.87	1.99		0.931	
PCB-105	2.10	4.87			2.21	J
PCB-106/118	8.11	9.74			2.44	J
PCB-107/109	ND	9.74	2.24		1.98	
PCB-108/112	ND	9.74	2.95		1.86	
PCB-110	12.5	4.87			1.94	
PCB-111/115	ND	9.74	2.24		0.768	
PCB-113	ND	4.87	2.82		1.31	
PCB-114	ND	4.87	1.26		1.81	
PCB-119	ND	4.87	2.21		0.949	
PCB-120	ND	4.87	2.09		1.01	
PCB-121	ND	4.87	2.05		1.94	
PCB-122	ND	4.87	1.50		1.84	
PCB-123	ND	4.87	2.39		1.35	
PCB-124	ND	4.87	2.30		1.79	
PCB-126	ND	4.87	1.30		2.05	
PCB-127	ND	4.87	1.38		0.808	
PCB-128/162	2.38	9.74			1.68	J
PCB-129	ND	4.87	2.24		1.11	
PCB-130	ND	4.87	2.47		2.21	
PCB-131	ND	4.87	2.44		1.46	
PCB-132/161	ND	9.74	1.84		2.34	
PCB-133/142	ND	9.74	2.27		2.19	
PCB-134/143	ND	9.74	2.21		2.40	
PCB-135	ND	4.87	4.59		2.90	
PCB-136	ND	4.87	3.21		2.89	
PCB-137	ND	4.87	1.93		2.08	
PCB-138/163/164	10.7	14.6			2.68	J
PCB-139/149	ND	9.74		7.11	7.87	
PCB-140	ND	4.87	4.71		3.52	
PCB-141	ND	4.87	1.97		1.15	
PCB-144	ND	4.87	4.28		3.22	
PCB-145	ND	4.87	3.35		1.73	
PCB-146/165	ND	9.74	1.91		1.91	
PCB-147	ND	4.87	4.70		3.62	
PCB-148	ND	4.87	4.48		1.68	
PCB-150	ND	4.87	3.25		1.14	
PCB-151	ND	4.87	4.48		3.59	
PCB-152	ND	4.87	3.13		1.82	
PCB-153	10.2	4.87			1.83	
PCB-154	ND	4.87	4.11		2.78	
PCB-155	ND	4.87	3.06		1.45	
PCB-156	ND	4.87	1.26		1.74	
PCB-157	ND	4.87	1.34		1.17	
PCB-158/160	ND	9.74	1.50		1.99	
PCB-159	ND	4.87	1.42		1.20	
PCB-166	ND	4.87	1.52		0.920	
PCB-167	ND	4.87	1.36		1.65	
PCB-168	ND	4.87	1.52		0.933	
PCB-169	ND	4.87	1.40		1.12	
PCB-170	2.00	4.87			1.38	J
PCB-171	ND	4.87	1.54		1.61	
PCB-172	ND	4.87	1.66		1.46	
PCB-173	ND	4.87	2.04		1.49	
PCB-174	ND	4.87	1.74		1.42	
PCB-175	ND	4.87	2.10		3.15	
PCB-176	ND	4.87	1.51		2.17	
PCB-177	ND	4.87	1.77		1.34	
PCB-178	ND	4.87	2.04		2.25	
PCB-179	ND	4.87	1.58		1.57	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-12.56-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 10:10

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-02 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 04:02 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	5.36	4.87			0.610	
PCB-181	ND	4.87	1.67		1.01	
PCB-182/187	4.00	9.74			6.20	J
PCB-183	ND	4.87	1.80		3.29	
PCB-184	ND	4.87	1.64		1.25	
PCB-185	ND	4.87	1.60		1.47	
PCB-186	ND	4.87	1.51		2.43	
PCB-188	ND	4.87	1.44		1.08	
PCB-189	ND	4.87	1.21		1.49	
PCB-190	ND	4.87	1.16		1.70	
PCB-191	ND	4.87	1.21		1.96	
PCB-192	ND	4.87	1.29		1.69	
PCB-193	ND	4.87	1.21		1.46	
PCB-194	1.85	4.87			1.71	J
PCB-195	ND	4.87	1.24		1.47	
PCB-196/203	ND	9.74		2.93	6.35	
PCB-197	ND	4.87	2.30		1.80	
PCB-198	ND	4.87	3.56		3.78	
PCB-199	ND	4.87	3.62		4.05	
PCB-200	ND	4.87	2.60		1.75	
PCB-201	ND	4.87	2.45		1.02	
PCB-202	ND	4.87	2.64		1.55	
PCB-204	ND	4.87	2.50		1.48	
PCB-205	ND	4.87	0.877		1.53	
PCB-206	ND	4.87	1.71		1.32	
PCB-207	ND	4.87	0.902		1.51	
PCB-208	ND	4.87	0.915		1.34	
PCB-209	ND	4.87	1.35		1.86	
Total monoCB	ND	4.87	1.13			
Total diCB	11.8	4.87		20.3		B
Total triCB	61.5	4.87		64.1		
Total tetraCB	83.6	4.87		91.2		B
Total pentaCB	59.2	4.87				
Total hexaCB	23.3	4.87		30.4		
Total heptaCB	11.4	4.87				
Total octaCB	1.85	4.87		4.77		J
Total nonaCB	ND	4.87	1.71			
DecaCB	ND	4.87	1.35			
Total PCB	253	4.87				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-12.56-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 10:10

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-02 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 04:02 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	64.8	5 -145	
	13C-PCB-3	65.7	5 -145	
	13C-PCB-4	63.2	5 -145	
	13C-PCB-11	73.7	5 -145	
	13C-PCB-9	66.1	5 -145	
	13C-PCB-19	61.8	5 -145	
	13C-PCB-28	79.9	5 -145	
	13C-PCB-32	64.6	5 -145	
	13C-PCB-37	92.1	5 -145	
	13C-PCB-47	94.6	5 -145	
	13C-PCB-52	93.4	5 -145	
	13C-PCB-54	81.7	5 -145	
	13C-PCB-70	91.7	5 -145	
	13C-PCB-77	79.5	10 -145	
	13C-PCB-80	88.4	10 -145	
	13C-PCB-81	82.2	10 -145	
	13C-PCB-95	93.3	10 -145	
	13C-PCB-97	90.5	10 -145	
	13C-PCB-101	86.3	10 -145	
	13C-PCB-104	93.6	10 -145	
	13C-PCB-105	100	10 -145	
	13C-PCB-114	99.2	10 -145	
	13C-PCB-118	84.7	10 -145	
	13C-PCB-123	88.6	10 -145	
	13C-PCB-126	109	10 -145	
	13C-PCB-127	102	10 -145	
	13C-PCB-138	77.2	10 -145	
	13C-PCB-141	78.9	10 -145	
	13C-PCB-153	76.4	10 -145	
	13C-PCB-155	62.4	10 -145	
	13C-PCB-156	88.2	10 -145	
	13C-PCB-157	85.1	10 -145	
	13C-PCB-159	80.6	10 -145	
	13C-PCB-167	84.3	10 -145	
	13C-PCB-169	88.1	10 -145	
	13C-PCB-170	74.3	10 -145	
	13C-PCB-180	73.8	10 -145	
	13C-PCB-188	59.4	10 -145	
	13C-PCB-189	70.1	10 -145	
	13C-PCB-194	83.0	10 -145	
	13C-PCB-202	53.8	10 -145	
	13C-PCB-206	71.5	10 -145	
	13C-PCB-208	68.1	10 -145	
	13C-PCB-209	60.2	10 -145	
CRS	13C-PCB-79	81.2	10 -145	
	13C-PCB-178	64.6	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-1.32-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 11:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-03 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 05:07 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	4.87	0.871		1.21	
PCB-2	ND	4.87	0.882		1.75	
PCB-3	ND	4.87		0.452	1.49	
PCB-4/10	ND	9.74	4.22		5.64	
PCB-5/8	ND	9.74	3.51		3.59	
PCB-6	ND	4.87	3.60		3.10	
PCB-7/9	ND	9.74	3.55		6.22	
PCB-11	8.77	4.87			3.86	B
PCB-12/13	ND	9.74	3.23		5.01	
PCB-14	ND	4.87	2.79		3.98	
PCB-15	2.31	4.87			2.53	J
PCB-16/32	4.88	9.74			2.87	J
PCB-17	1.96	4.87			1.37	J
PCB-18	5.96	4.87			2.57	
PCB-19	ND	4.87	0.923		2.38	
PCB-20/21/33	ND	14.6		1.83	10.3	
PCB-22	ND	4.87		1.23	3.17	
PCB-23	ND	4.87	0.527		1.35	
PCB-24/27	ND	9.74	0.586		3.16	
PCB-25	ND	4.87	0.581		3.34	
PCB-26	ND	4.87	0.515		2.19	
PCB-28	6.39	4.87			2.90	
PCB-29	ND	4.87	0.527		1.60	
PCB-30	ND	4.87	0.583		2.09	
PCB-31	3.68	4.87			4.29	J
PCB-34	ND	4.87	0.490		2.34	
PCB-35	ND	4.87	0.550		1.65	
PCB-36	ND	4.87	0.531		2.69	
PCB-37	3.23	4.87			1.92	J
PCB-38	ND	4.87	0.556		1.56	
PCB-39	ND	4.87	0.547		2.60	
PCB-40	2.92	4.87			3.08	J
PCB-41/64/71/72	10.8	19.5			5.57	J
PCB-42/59	3.79	9.74			2.84	J
PCB-43/49	9.25	9.74			3.38	J
PCB-44	13.8	4.87			2.48	
PCB-45	1.74	4.87			1.96	J
PCB-46	ND	4.87	1.05		2.49	
PCB-47	15.5	4.87			4.42	B
PCB-48/75	1.57	9.74			2.09	J
PCB-50	ND	4.87	0.991		1.40	
PCB-51	3.49	4.87			1.42	J
PCB-52/69	21.8	9.74			3.64	
PCB-53	1.94	4.87			1.12	J
PCB-54	ND	4.87	0.753		1.51	
PCB-55	ND	4.87	0.743		1.19	
PCB-56/60	7.93	9.74			2.19	J
PCB-57	ND	4.87	0.748		0.857	
PCB-58	ND	4.87	0.737		1.81	
PCB-61/70	17.6	9.74			2.40	
PCB-62	ND	4.87	0.711		1.46	
PCB-63	ND	4.87	0.720		0.696	
PCB-65	ND	4.87	0.733		0.953	
PCB-66/76	10.0	9.74			2.82	
PCB-67	ND	4.87	0.767		1.22	
PCB-68	3.22	4.87			1.24	J
PCB-73	ND	4.87	0.704		1.56	
PCB-74	5.42	4.87			1.53	
PCB-77	3.65	4.87			1.34	J
PCB-78	ND	4.87	0.818		0.990	
PCB-79	ND	4.87	0.788		1.60	
PCB-80	ND	4.87	0.691		1.98	
PCB-81	ND	4.87	0.746		2.34	
PCB-82	7.94	4.87			1.69	
PCB-83	ND	4.87	1.71		1.32	
PCB-84/92	23.9	9.74			3.38	
PCB-85/116	ND	9.74		6.47	2.83	
PCB-86	ND	4.87	2.74		2.34	
PCB-87/117/125	20.7	14.6			3.79	
PCB-88/91	6.38	4.87			3.25	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-1.32-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 11:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-03 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 05:07 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	4.87	2.55		1.84	
PCB-90/101	50.9	9.74			1.92	
PCB-93	ND	4.87	2.32		1.47	
PCB-94	ND	4.87	2.18		1.91	
PCB-95/98/102	38.6	14.6			6.58	
PCB-96	ND	4.87	1.49		2.16	
PCB-97	14.3	4.87			1.24	
PCB-99	18.9	4.87			1.94	
PCB-100	ND	4.87	1.69		2.03	
PCB-103	ND	4.87	1.69		2.28	
PCB-104	ND	4.87	1.29		0.931	
PCB-105	18.7	4.87			2.21	
PCB-106/118	48.5	9.74			2.44	
PCB-107/109	4.00	9.74			1.98	J
PCB-108/112	2.38	9.74			1.86	J
PCB-110	64.4	4.87			1.94	
PCB-111/115	0.823	9.74			0.768	J
PCB-113	ND	4.87	1.90		1.31	
PCB-114	1.16	4.87			1.81	J
PCB-119	0.894	4.87			0.949	J
PCB-120	ND	4.87	1.43		1.01	
PCB-121	ND	4.87	1.40		1.94	
PCB-122	ND	4.87	1.44		1.84	
PCB-123	ND	4.87		1.00	1.35	
PCB-124	2.79	4.87			1.79	J
PCB-126	0.995	4.87			2.05	J
PCB-127	ND	4.87	1.31		0.808	
PCB-128/162	ND	9.74		12.8	1.68	
PCB-129	ND	4.87		3.98	1.11	
PCB-130	6.58	4.87			2.21	
PCB-131	ND	4.87	1.62		1.46	
PCB-132/161	23.3	9.74			2.34	
PCB-133/142	2.44	9.74			2.19	J
PCB-134/143	ND	9.74		3.77	2.40	
PCB-135	10.6	4.87			2.90	
PCB-136	9.68	4.87			2.89	
PCB-137	4.98	4.87			2.08	
PCB-138/163/164	89.9	14.6			2.68	
PCB-139/149	63.5	9.74			7.87	
PCB-140	ND	4.87	3.03		3.52	
PCB-141	17.4	4.87			1.15	
PCB-144	3.05	4.87			3.22	J
PCB-145	ND	4.87	2.15		1.73	
PCB-146/165	12.1	9.74			1.91	
PCB-147	ND	4.87	3.02		3.62	
PCB-148	ND	4.87	2.88		1.68	
PCB-150	ND	4.87	2.09		1.14	
PCB-151	15.4	4.87			3.59	
PCB-152	ND	4.87	2.02		1.82	
PCB-153	67.5	4.87			1.83	
PCB-154	ND	4.87	2.65		2.78	
PCB-155	ND	4.87	1.97		1.45	
PCB-156	8.45	4.87			1.74	
PCB-157	ND	4.87		1.57	1.17	
PCB-158/160	10.6	9.74			1.99	
PCB-159	ND	4.87	0.968		1.20	
PCB-166	ND	4.87	1.04		0.920	
PCB-167	3.93	4.87			1.65	J
PCB-168	ND	4.87	1.01		0.933	
PCB-169	ND	4.87	1.02		1.12	
PCB-170	25.4	4.87			1.38	
PCB-171	8.08	4.87			1.61	
PCB-172	5.25	4.87			1.46	
PCB-173	ND	4.87	1.27		1.49	
PCB-174	28.3	4.87			1.42	
PCB-175	ND	4.87	1.18		3.15	
PCB-176	3.14	4.87			2.17	J
PCB-177	17.5	4.87			1.34	
PCB-178	5.51	4.87			2.25	
PCB-179	10.0	4.87			1.57	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-1.32-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 11:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-03 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 05:07 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	59.8	4.87			0.610	
PCB-181	ND	4.87	1.04		1.01	
PCB-182/187	38.2	9.74			6.20	
PCB-183	15.0	4.87			3.29	
PCB-184	ND	4.87	0.926		1.25	
PCB-185	3.03	4.87			1.47	J
PCB-186	ND	4.87	0.850		2.43	
PCB-188	ND	4.87	0.814		1.08	
PCB-189	1.11	4.87			1.49	J
PCB-190	4.58	4.87			1.70	J
PCB-191	ND	4.87		1.30	1.96	
PCB-192	ND	4.87	0.807		1.69	
PCB-193	3.18	4.87			1.46	J
PCB-194	14.3	4.87			1.71	
PCB-195	5.71	4.87			1.47	
PCB-196/203	21.7	9.74			6.35	
PCB-197	ND	4.87	1.57		1.80	
PCB-198	ND	4.87	2.44		3.78	
PCB-199	21.8	4.87			4.05	
PCB-200	2.28	4.87			1.75	J
PCB-201	ND	4.87		1.96	1.02	
PCB-202	5.42	4.87			1.55	
PCB-204	ND	4.87	1.71		1.48	
PCB-205	0.736	4.87			1.53	J
PCB-206	ND	4.87		7.83	1.32	
PCB-207	1.20	4.87			1.51	J
PCB-208	2.11	4.87			1.34	J
PCB-209	1.47	4.87			1.86	J
Total monoCB	ND	4.87		0.452		J
Total diCB	11.1	4.87				B
Total triCB	26.1	4.87		29.2		
Total tetraCB	135	4.87				B
Total pentaCB	326	4.87		334		
Total hexaCB	349	4.87		372		
Total heptaCB	228	4.87		229		
Total octaCB	71.9	4.87		73.8		
Total nonaCB	3.31	4.87		11.1		
DecaCB	1.47	4.87				J
Total PCB	1150	4.87				B

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

Sample ID: BD-MH-1.32-20141222-W

EPA Method 1668C

Client Data
Name: Leidos
Project: 1400647
Date Collected: 22-Dec-2014 11:40

Sample Data
Matrix: Aqueous
Sample Size: 1.03 L

Laboratory Data
Lab Sample: 1400984-03 Date Received: 23-Dec-2014 10:15
QC Batch: B5C0088 Date Extracted: 19-Mar-2015 8:48
Date Analyzed : 20-Mar-15 05:07 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	79.7	5 -145	
	13C-PCB-3	83.5	5 -145	
	13C-PCB-4	80.2	5 -145	
	13C-PCB-11	93.8	5 -145	
	13C-PCB-9	81.8	5 -145	
	13C-PCB-19	76.4	5 -145	
	13C-PCB-28	96.5	5 -145	
	13C-PCB-32	79.5	5 -145	
	13C-PCB-37	107	5 -145	
	13C-PCB-47	113	5 -145	
	13C-PCB-52	117	5 -145	
	13C-PCB-54	99.6	5 -145	
	13C-PCB-70	105	5 -145	
	13C-PCB-77	97.9	10 -145	
	13C-PCB-80	98.6	10 -145	
	13C-PCB-81	96.2	10 -145	
	13C-PCB-95	110	10 -145	
	13C-PCB-97	105	10 -145	
	13C-PCB-101	103	10 -145	
	13C-PCB-104	113	10 -145	
	13C-PCB-105	116	10 -145	
	13C-PCB-114	120	10 -145	
	13C-PCB-118	104	10 -145	
	13C-PCB-123	110	10 -145	
	13C-PCB-126	127	10 -145	
	13C-PCB-127	120	10 -145	
	13C-PCB-138	95.6	10 -145	
	13C-PCB-141	93.8	10 -145	
	13C-PCB-153	94.0	10 -145	
	13C-PCB-155	74.8	10 -145	
	13C-PCB-156	100	10 -145	
	13C-PCB-157	96.7	10 -145	
	13C-PCB-159	97.3	10 -145	
	13C-PCB-167	99.9	10 -145	
	13C-PCB-169	100	10 -145	
	13C-PCB-170	82.6	10 -145	
	13C-PCB-180	81.9	10 -145	
	13C-PCB-188	72.8	10 -145	
	13C-PCB-189	79.6	10 -145	
	13C-PCB-194	99.2	10 -145	
	13C-PCB-202	63.3	10 -145	
	13C-PCB-206	89.7	10 -145	
	13C-PCB-208	78.5	10 -145	
	13C-PCB-209	82.0	10 -145	
CRS	13C-PCB-79	98.5	10 -145	
	13C-PCB-178	79.5	10 -145	

RL - Reporting limit
EMPC - Estimated maximum possible concentration
DL - Sample specifc estimated detection limit
MDL - Method detection limit
LCL-UCL- Lower control limit - upper control limit

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
H	**Recovery was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**Method Detection Limit as determined by 40 CFR 136, Appendix B.**
EMPC	**Estimated Maximum Possible Concentration**
M	**Estimated Maximum Possible Concentration (CA Region 2)**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

CHAIN OF CUSTODY

Vista

FOR LABORATORY USE ONLY
Laboratory Project ID: 1400984
Storage ID: WR-2
Storage Secured: Yes ☑ No ☐
Temp 2.0/2.2 °C

TAT: (Check One):
Standard: ● 21 Days
Rush (surcharge may apply):
○ 14 days ○ 7 days Specify:___

Project I.D.: 1400647 P.O.# P010163569 Sampler: M. Ivancevich, C. Wilson (Name)

Invoice to: Name: Christine Nancarrow Company: Leidos Address: 18912 N. Creek Pkwy Ste 101 City: Bothell State: WA Zip: 98011 Ph#: (206)300-2144 Fax#:

Relinquished by: (Signature and Printed Name) Melissa Ivancevich / Melissa Smith Date: 12/22/14 Time: 1532 Received by: (Signature and Printed Name) Bobbi Benedict / B. Benedict Date: 12/23/14 Time: 1022

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN:_____

Method of Shipment: FedEX

Tracking No.:_____

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCB's	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29
BD-OWS-14-2014\222-W	12/22/14	0840	BDC	4	A	EF	H									✓	✓				
BD-MH-12.56-2014\222-W	12/22/14	1010	BDC	4	A	EF	H									✓	✓				
BD-MH-1.32-2014\222-W	12/22/14	1140	BDC	4	A	EF	H									✓	✓				
QC-EB-02-2014\222-W	12/22/14	1450	Field office	4	A	EF	✓									✓	✓				

Special Instructions/Comments: H = hold for analysis

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company:_____
Address:_____
City:_____ State:_____ Zip:_____
Phone:_____ Fax:_____
Email: nancarrowc@leidos.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O= Other_____

*Bottle Preservative Type: T = Thiosulfate,
O = Other_____

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum AQ = Aqueous, O = Other_____

WHITE - ORIGINAL YELLOW - ARCHIVE PINK - COPY

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400984 **TAT** Std.

Samples Arrival:	**Date/Time** 12/23/14 1015	**Initials:** JBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/23/14 1245	**Initials:** JBB	**Location:** WR-2 **Shelf/Rack:** BA / A1

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 2.0 (uncorrected)	**Time:** 1022	**Thermometer ID:** IR-1	
Temp °C: 2.0 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill 1 of 2 Trk # 8070 5247 7142	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA	COC	Sample Container	None		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

Label ID: ~~EB~~ JBB QC-EB-02-20141222-W A,B,CD Containers

BD-MH-1.32-20141222-W

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1400984 **TAT** Std.

Samples Arrival:	**Date/Time** 12/23/14 1015	**Initials:** BLB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/23/14 1245	**Initials:** BLB	**Location:** WR-2 **Shelf/Rack:** B4/A1

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	

Temp °C: 2.2 (uncorrected)	**Time:** 1025	**Thermometer ID:** IR-1	
Temp °C: 2.2 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill 2 of 2 Trk # 7801 6370 6527	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented? NA		COC	Sample Container	None	
Shipping Container	(Vista)	Client	(Retain)	Return	Dispose

Comments:

Label ID: BD-MH-12.5G-20141222-W
BD-OWS-14-20141222-W

A, B, C, D Containers ↓

EXTRACTION INFORMATION

Process Sheet

Workorder: 1400984

March 30

Prep Expiration: 12/22/2015

Client: Leidos

~~**Workorder Due: 13-Jan-15 00:00**~~

TAT: 21

Method: **1613 Full List**

Matrix: **Aqueous**

Client Matrix: Aqueous

Percent Solids

Prep Batch: BSC0037

Prep Data Entered: M.T 3/11/15

Date and Initials

Initial Sequence: SSC0023

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400984-01 "C"	☒	BD-OWS-14-20141222-W	23-Dec-14 10:15	WR-2 C-6	
1400984-02 ↓	☒	BD-MH-12.56-20141222-W	23-Dec-14 10:15	WR-2 C-6	
1400984-03 ↓	☒	BD-MH-1.32-20141222-W	23-Dec-14 10:15	WR-2 C-6	
1400984-04	☐	~~QC-EB-02-20141222-W~~	23-Dec-14 10:15	WR-2 B-4	

Vista PM:Martha Maier

Vial Box ID: Heat

Sample Reconciled By: B. Smith 3/10/15

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0036

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 3/10/15 1229 Date/Time OUT 3/11/15 11:55

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 3/10/15	MJT 3/11/15			BMS 3/10/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	~~1400958-01RE1~~		Sample									
	1400958-02RE1		Sample									
	1400984-01		Sample									
	1400984-02		Sample									
	1400984-03		Sample									
	1500227-01		Sample									
	1500227-02		Sample									
	1500228-01		Sample									
	1500229-01		Sample									
	1500230-01		Sample									
	~~1500234-01~~		~~Sample~~			MJT 3/11/15						
	1500234-01		Sample	1.34	14.52	1.3536			7	NA	NA	0
	1500234-02		Sample	1.34	13.87	1.35			7	↓	↓	0

D2216-90 BATCH ID B5C0036

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN: 3/10/15 0937 Date/Time OUT 3/11/15 11:55

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 3/10/15	MJT 3/11/15			BMS 3/10/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400958-01RE1		Sample	1.35	11.73	1.37			7	MA	MA	0
	1400958-02RE1		Sample	1.27	14.04	1.27			7			
	1400984-01		Sample	1.29	13.04	1.29			7			
	1400984-02		Sample	1.29	13.01	1.30			7			
	1400984-03		Sample	1.35	12.57	1.34			6			
	1500227-01		Sample	1.29	11.99	1.29			7			
	1500227-02		Sample	1.31	17.50	1.32			7			
	1500228-01		Sample	1.26	11.42	1.27			8			
	1500229-01		Sample	1.28	12.32	1.29			7			
	1500230-01		Sample	1.35	14.26	1.36			7			
	1500231-01		Sample	1.30	15.47	1.33			7			

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0036

Analyst: B. Smith **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-4

Date/Time IN:	Date/Time OUT
3/10/15 9:37	3/11/15 11:55

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	BMS 3/10/2015	MJT 3/11/15			BMS 3/10/2015			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400958-01RE1		Sample	1.3500	11.7300	1.3700	0.0200	0.19	7	NA	NA	0
	1400958-02RE1		Sample	1.2700	14.0400	1.2700	0.0000	0.00	7	NA	NA	0
	1400984-01		Sample	1.2900	13.0400	1.2900	0.0000	0.00	7	NA	NA	0
	1400984-02		Sample	1.2900	13.0100	1.3000	0.0100	0.09	7	NA	NA	0
	1400984-03		Sample	1.3500	12.5700	1.3400	-0.0100	-0.09	6	NA	NA	0
	1500227-01		Sample	1.2900	11.9900	1.2900	0.0000	0.00	7	NA	NA	0
	1500227-02		Sample	1.3100	17.5000	1.3200	0.0100	0.06	7	NA	NA	0
	1500228-01		Sample	1.2600	11.4200	1.2700	0.0100	0.10	8	NA	NA	0
	1500229-01		Sample	1.2800	12.3200	1.2900	0.0100	0.09	7	NA	NA	0
	1500230-01		Sample	1.3500	14.2600	1.3600	0.0100	0.08	7	NA	NA	0
	1500231-01		Sample	1.3000	15.4700	1.3300	0.0300	0.21	7	NA	NA	0
	1500234-01		Sample	1.3400	14.5200	1.3600	0.0200	0.15	7	NA	NA	0
	1500234-02		Sample	1.3400	13.8700	1.3500	0.0100	0.08	7	NA	NA	0

PREPARATION BENCH SHEET

Matrix: Aqueous
Method: 1613 Full List
Method: 1613 TCDD Only

B5C0037

Chemist: B.Smith
Prep Date/Time: 10-Mar-15 08:22

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
							NA	C5C0046	C5C0046	C5C0047	
☐	B5C0037-BLK1										
☐	B5C0037-BS1										
☐	1400958-01										
☐	1400958-02										
☐	1400984-01										
☐	1400984-02										
☐	1400984-03										
☐	1500227-01										
☐	1500227-02										
☐	1500228-01										
☐	1500229-01										
☐	1500230-01										
☐	~~1500231-01~~	[redacted]									
☐	1500234-01	1[redacted]	506.06	1.05614	BMS 3/10/15	M.T 3/11/15	NA	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15
☐	1500234-02	1529.[redacted]	506.09	1.02337	↓	↓	↓	↓	↓	↓	↓

IS Name (V7)	NS Name	CRS Name (V8)	RS Name (V4)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: BMS 3/10/15
PCDD/F 14H2704, 10mL	PCDD/F NA	PCDD/F 14H2705, 10mL	PCDD/F 14H2706, 10mL	Start Date/Time 3/10/15 1639	SOLV: Tol	Check In: Chemist/Date: empty ↓
PCB	PCB	PCB	PCB	Other SPE		
PAH	PAH	PAH	PAH	Stop Date/Time 3/11/15	Final Volume(s) 20uL C4	Balance ID: MCMS-4

Comments:

PREPARATION BENCH SHEET

B5C0037

Matrix: Aqueous
Method: 1613 Full List
Method: 1613 TCDD Only

Chemist: B. Smith
Prep Date/Time: 10-Mar-15 08:22

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
							NA	C5C0046	C5C0046	C5C0047	
☐	B5C0037-BLK1	MT	MT	1.000	BMS BR 3/10/15	M.T V6 3/11/15	NA	M.T 3/11/15	M.T 3/11/15	M.T 3/11/15	M.T DE 3/11/15
☐	B5C0037-BS1	L	L	L							
☐	1400958-01	1506.02	502.49	1.00353							
☐	1400958-02	1508.42	502.23	1.00619							
☐	1400984-01	1499.77	499.05	1.00072							
☐	1400984-02	1512.30	504.66	1.00764							
☐	1400984-03	1506.59	506.14	1.00045							
☐	1500227-01	1511.42	504.87	1.00655							
☐	1500227-02	1518.64	504.18	1.01446							
☐	1500228-01	1523.63	502.38	1.02125							
☐	1500229-01	1517.57	499.35	1.01822							
☐	1500230-01	1520.60	504.20	1.0164							
☐	1500231-01	1519.16	502.16	1.017							

IS Name (V7)	NS Name (V12)	CRS Name (V8)	RS Name (V4)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out:
PCDD/F 14HI204, 10µL	PCDD/F 13L1101, 10µL	PCDD/F 14H2705, 10µL	PCDD/F 14H2706, 10µL	Start Date/Time 3/10/15 1639	SOLV: TO SPE	Chemist/Date: BMS 3/10/15
PCB	PCB	PCB	PCB	Stop Date/Time 3/11/15 0840	Other	Check In: Chemist/Date: empty
PAH	PAH	PAH	PAH		Final Volume(s) 20µL C4	Balance ID: HRMS-4

Comments:

Process Sheet

Workorder: 1400984

March 30

Prep Expiration: 12/22/2015
Client: Leidos

Workorder ~~Due: 13-Jan-15 00:00~~

TAT: 21

Method: **1668C Full List**
Matrix: **Aqueous**
Client Matrix: Aqueous

Prep Batch: BSC0088

Prep Data Entered: 3/20/15 SR
Date and Initials

Initial Sequence: SSC0247E

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400984-01 "A"	☒	BD-OWS-14-20141222-W	23-Dec-14 10:15	WR-2 C-6	
1400984-02 "A"	☒	BD-MH-12.56-20141222-W	23-Dec-14 10:15	WR-2 C-6	
1400984-03 "A"	☒	BD-MH-1.32-20141222-W	23-Dec-14 10:15	WR-2 C-6	
~~1400984-04~~	☐	~~QC-EB-02-20141222-W~~	23-Dec-14 10:15	WR-2 B-4	

Vista PM:Martha Maier

Vial Box ID: Soil-P

Sample Reconciled By: S. Roughton 3/19/2015

Page 2 of 2

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0087

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN: 3/19/15 0920 Date/Time OUT 3/20/15 1040

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 3/19/15	SR 3/20/15			SR 3/19/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400984-01RE1		Sample	1.29	20.83	1.30			6	2	10	0
	1400984-02RE1		Sample	1.28	21.62	1.31			6	2	10	0
	1400984-03RE1		Sample	1.29	22.58	1.29			5	2	10	0
	B5C0088 MB								5	2	10	0
	B5C0088 OPR								5	2	10	0

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B5C0087

Analyst: S.Roughton **Test Code:** %Moist/%Solids

Analyte: Dried at 110°C+/-5°C **Units:** %

HRMS-2

Date/Time IN:	Date/Time OUT
3/19/15 0920	3/20/15 1040

	B	C	D	E	F	G	H	K	M	N	O	P
				Intial and Date:	SR 3/19/15	SR 3/20/15			SR 3/19/15			
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
	1400984-01RE1		Sample	1.2900	20.8300	1.3000	0.0100	0.05	6	2	10	0
	1400984-02RE1		Sample	1.2800	21.6200	1.3100	0.0300	0.15	6	2	10	0
	1400984-03RE1		Sample	1.2900	22.5800	1.2900	0.0000	0.00	5	2	10	0
	B5C0088 MB								5	2	10	0
	B5C0088 OPR								5	2	10	0

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 1668C Full List

B5C0088

Chemist: S. Roughton

Prep Date/Time: 19-Mar-15 08:48

Prepared using: HRMS - Separatory Funnel

							N/A	C5C0088	N/A	N/A	
C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B5C0088-BLK1 (B)	N/A	N/A	(1.00)	SR 3/19/15	SR 3/19/15	N/A	SR 3/19/15	N/A	N/A	SR KB 3/19/15
☐	B5C0088-BS1 (B)	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	1400984-01 (A)	1531.94	501.89	1.03005							
☐	1400984-02	1530.57	504.10	1.02647							
☐	1400984-03 (B)	1531.09	504.01	1.02708	↓	↓	↓	↓	↓	↓	↓

(A) Small amount of sample lost during extraction due to glassware malfunction. SR 3/19/15

(B) Samples transferred to a beaker to help reduce emulsion on 140984-3 SR 3/19/15

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP (SEFUN) SOX SDS	Check Out: Chemist/Date: SR 3/19/15
PCDD/F ____ (V3)	PCDD/F ____ (V3)	PCDD/F ____ (V3)	PCDD/F ____ (V3)	Start Date/Time	SOLV: DCM	Check In: Chemist/Date: Empty ↓
PCB 14L2202, 10uL	PCB 14L2204, 10uL	PCB 14L2201, 10uL	PCB 14L2203, 10uL	N/A	Other N/A	
PAH ____	PAH ____	PAH ____	PAH ____	Stop Date/Time	Final Volume(s) 20uL	Balance ID: HRMS-2
____	____	____	____	N/A	Cq	

Comments:

SAMPLE DATA

EPA Method 1613

Client ID: Method Blank Filename: 150311D1 S:11 Acq:11-MAR-15 18:55:07 ConCal: ST150311D1-1
Lab ID: B5C0037-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	1.17	NotF╗	*	*		627	2.5	1.40
1,2,3,7,8-PeCDD	*	*	n	0.91	NotF╗	*	*		697	2.5	1.26
1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF╗	*	*		640	2.5	2.02
1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF╗	*	*		640	2.5	2.09
1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF╗	*	*		640	2.5	2.20
1,2,3,4,6,7,8-HpCDD	*	*	n	1.10	NotF╗	*	*		1360	2.5	4.75
OCDD	*	*	n	0.95	NotF╗	*	*		601	2.5	2.97
2,3,7,8-TCDF	*	*	n	1.07	NotF╗	*	*		515	2.5	0.797
1,2,3,7,8-PeCDF	*	*	n	1.07	NotF╗	*	*		407	2.5	0.617
2,3,4,7,8-PeCDF	*	*	n	1.03	NotF╗	*	*		407	2.5	0.699
1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF╗	*	*		549	2.5	0.550
1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF╗	*	*		549	2.5	0.612
2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF╗	*	*		306	2.5	0.398
1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF╗	*	*		306	2.5	0.556
1,2,3,4,6,7,8-HpCDF	*	*	n	1.61	NotF╗	*	*		567	2.5	0.992
1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF╗	*	*		567	2.5	0.975
OCDF	*	*	n	1.10	NotF╗	*	*		985	2.5	3.47

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		627	1.40
Total Penta-Dioxins	*	*		697	1.26
Total Hexa-Dioxins	*	*		946	3.11
Total Hepta-Dioxins	*	*		1360	4.75
Total Tetra-Furans	*	*		515	0.797
Total Penta-Furans	0.0000	0.0000		665	1.07
Total Hexa-Furans	*	*		549	0.694
Total Hepta-Furans	*	*		888	1.54

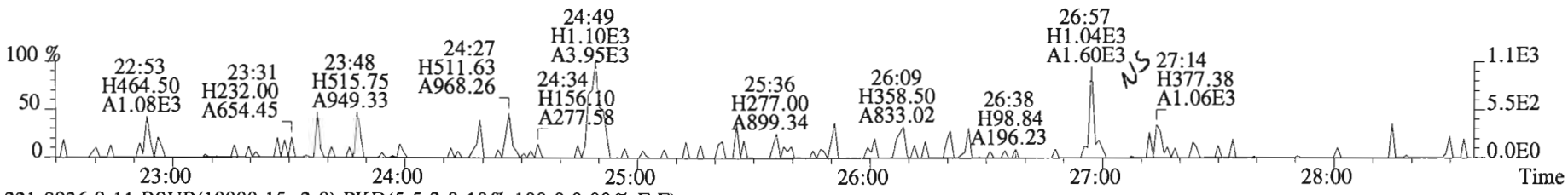
									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.33e+07	0.76	y	1.06	26:57	1.022	1308.2	65.4	
IS	13C-1,2,3,7,8-PeCDD	1.49e+07	0.63	y	1.18	31:38	1.200	1326.0	66.3	
IS	13C-1,2,3,4,7,8-HxCDD	1.11e+07	1.25	y	0.72	34:58	1.014	1274.0	63.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.11e+07	1.23	y	0.74	35:04	1.017	1243.9	62.2	
IS	13C-1,2,3,7,8,9-HxCDD	1.30e+07	1.29	y	0.85	35:22	1.025	1249.4	62.5	
IS	13C-1,2,3,4,6,7,8-HpCDD	9.15e+06	1.07	y	0.65	38:53	1.127	1153.2	57.7	
IS	13C-OCDD	1.66e+07	0.90	y	0.76	42:09	1.222	1784.1	44.6	
IS	13C-2,3,7,8-TCDF	2.17e+07	0.77	y	0.92	26:08	0.991	1399.2	70.0	
IS	13C-1,2,3,7,8-PeCDF	2.27e+07	1.59	y	0.92	30:25	1.154	1458.5	72.9	
IS	13C-2,3,4,7,8-PeCDF	2.34e+07	1.61	y	0.93	31:20	1.189	1483.6	74.2	
IS	13C-1,2,3,4,7,8-HxCDF	1.73e+07	0.51	y	0.98	34:04	0.988	1451.0	72.6	
IS	13C-1,2,3,6,7,8-HxCDF	1.81e+07	0.53	y	1.08	34:12	0.992	1378.6	68.9	
IS	13C-2,3,4,6,7,8-HxCDF	1.57e+07	0.51	y	1.03	34:47	1.009	1256.5	62.8	
IS	13C-1,2,3,7,8,9-HxCDF	1.33e+07	0.53	y	0.86	35:44	1.036	1269.4	63.5	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.09e+07	0.44	y	0.72	37:34	1.089	1239.9	62.0	
IS	13C-1,2,3,4,7,8,9-HpCDF	9.87e+06	0.46	y	0.70	39:25	1.143	1165.5	58.3	
IS	13C-OCDF	1.97e+07	0.89	y	0.85	42:22	1.229	1908.1	47.7	
C/Up	37Cl-2,3,7,8-TCDD	9.07e+06			1.12	26:58	1.023	848.55	106	
RS/RT	13C-1,2,3,4-TCDD	1.91e+07	0.81	y	1.00	26:22	*	2000.0		
RS	13C-1,2,3,4-TCDF	3.39e+07	0.76	y	1.00	24:50	*	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.43e+07	0.52	y	1.00	34:29	*	2000.0		

Integrations by Analyst: MJ Date: 3/12/15

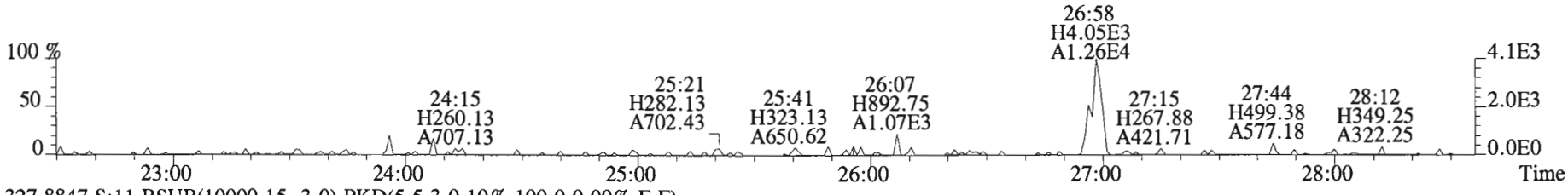
Reviewed by Analyst: [illegible] Date: 3/18/15

File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5

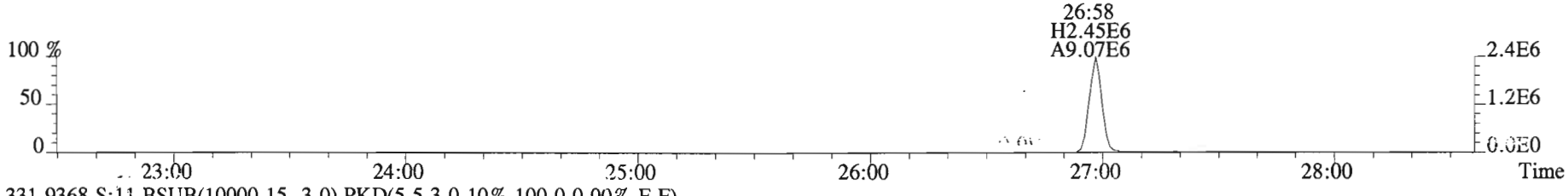
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



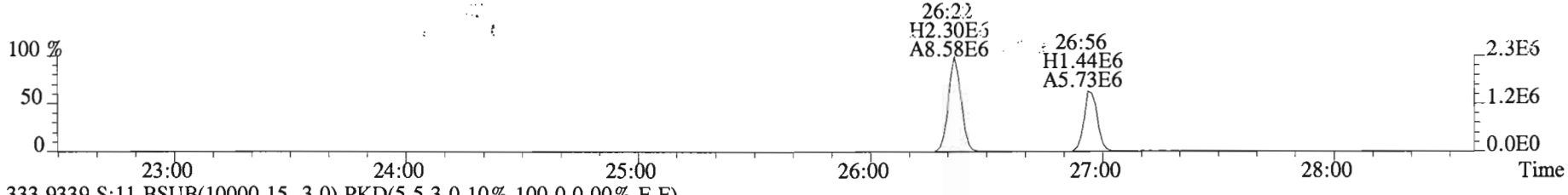
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



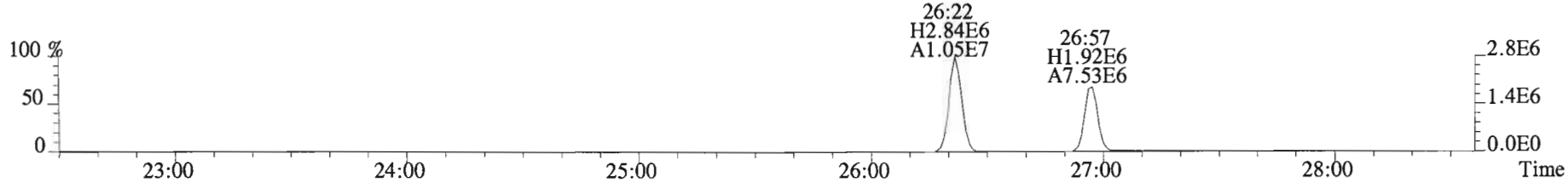
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



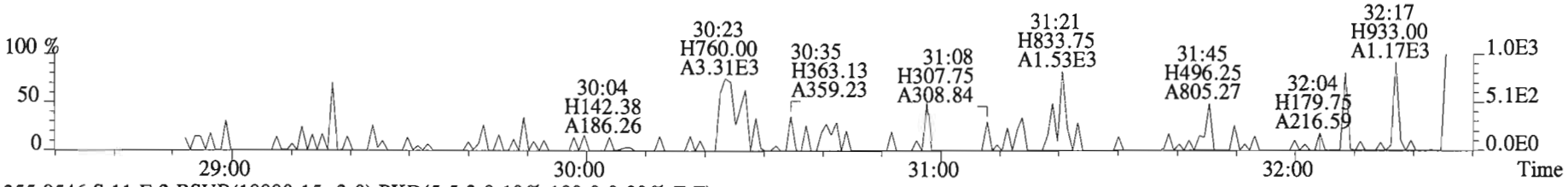
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



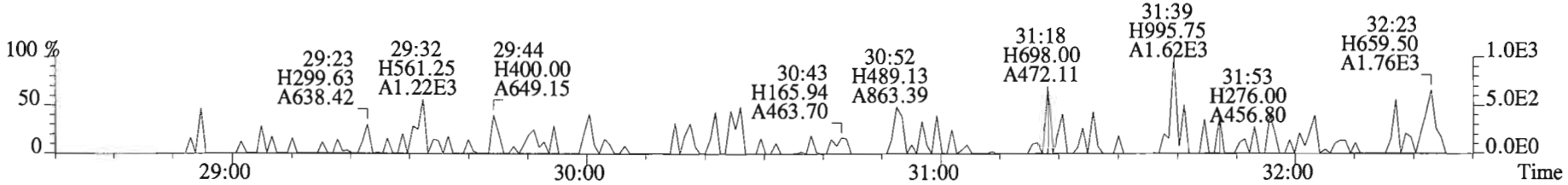
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



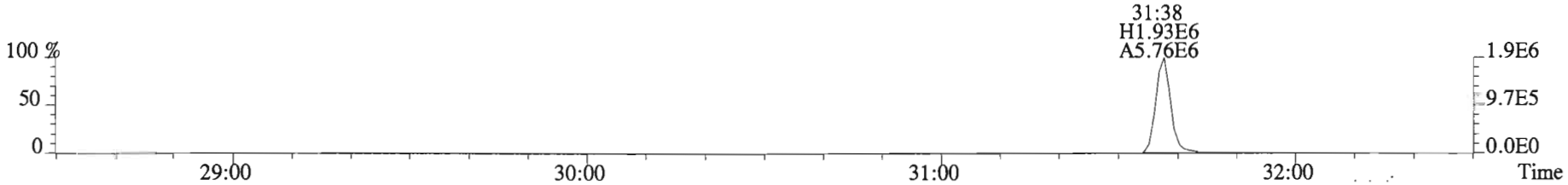
File:150311D1 #1-251 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



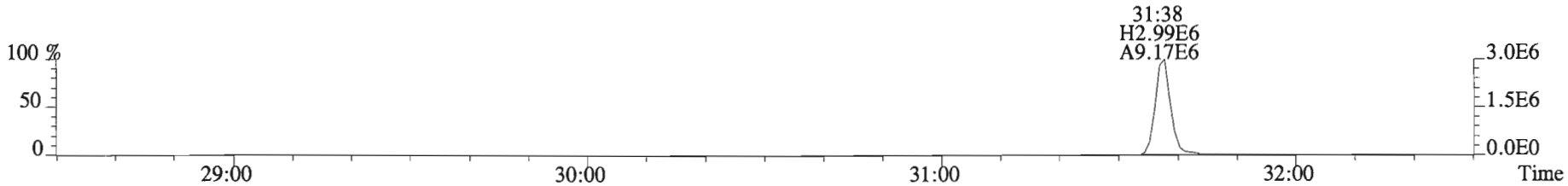
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



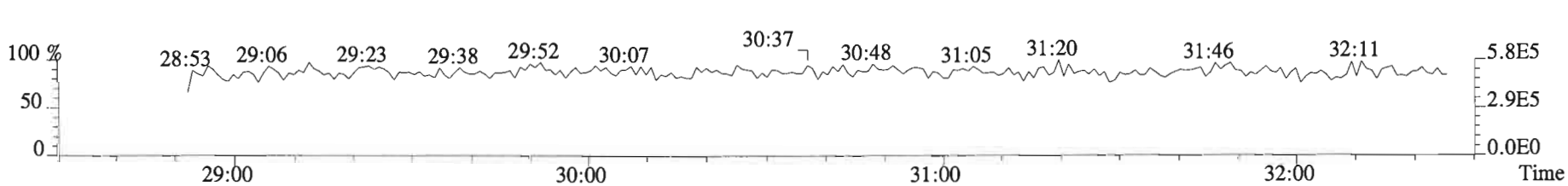
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



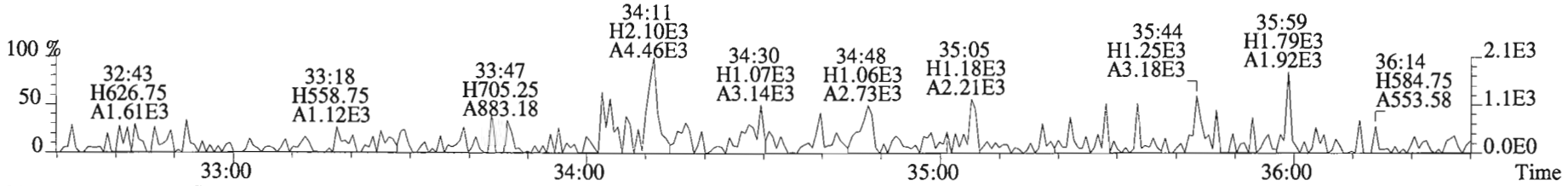
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



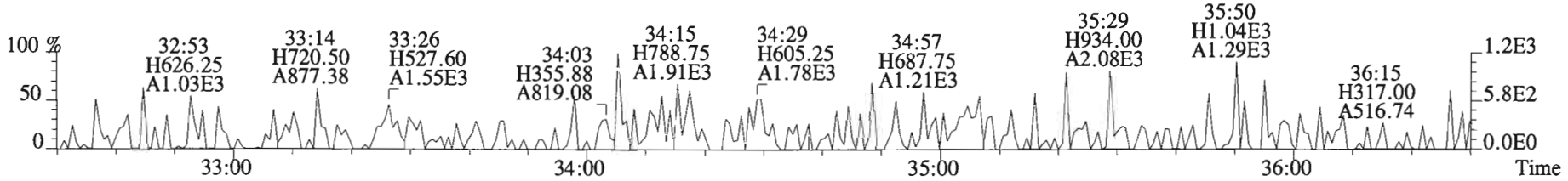
366.9792 S:11 F:2



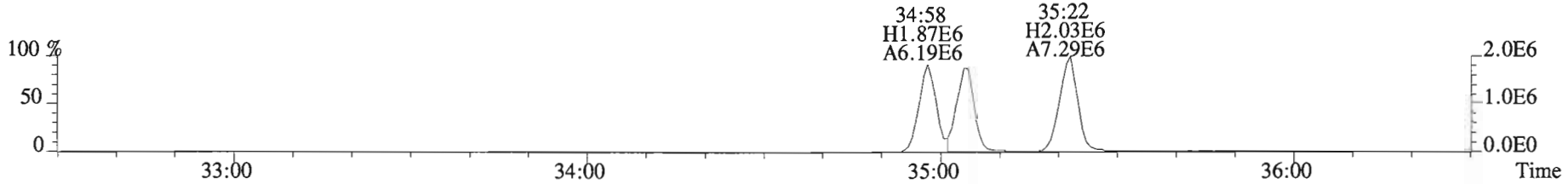
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



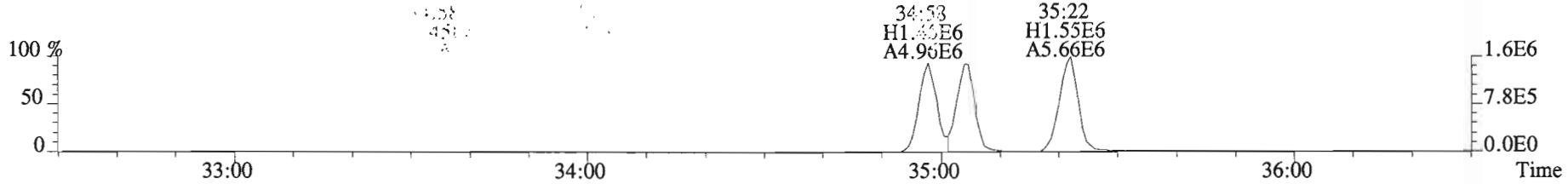
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



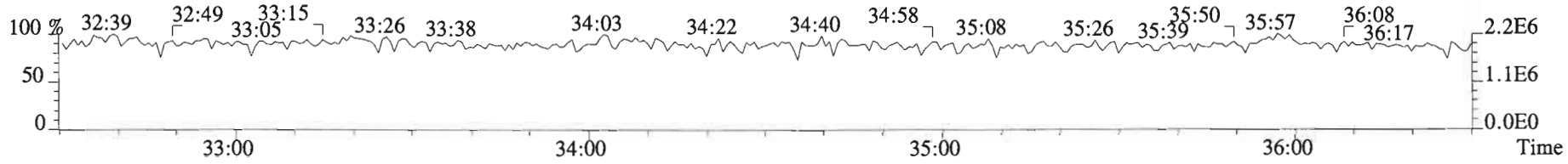
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



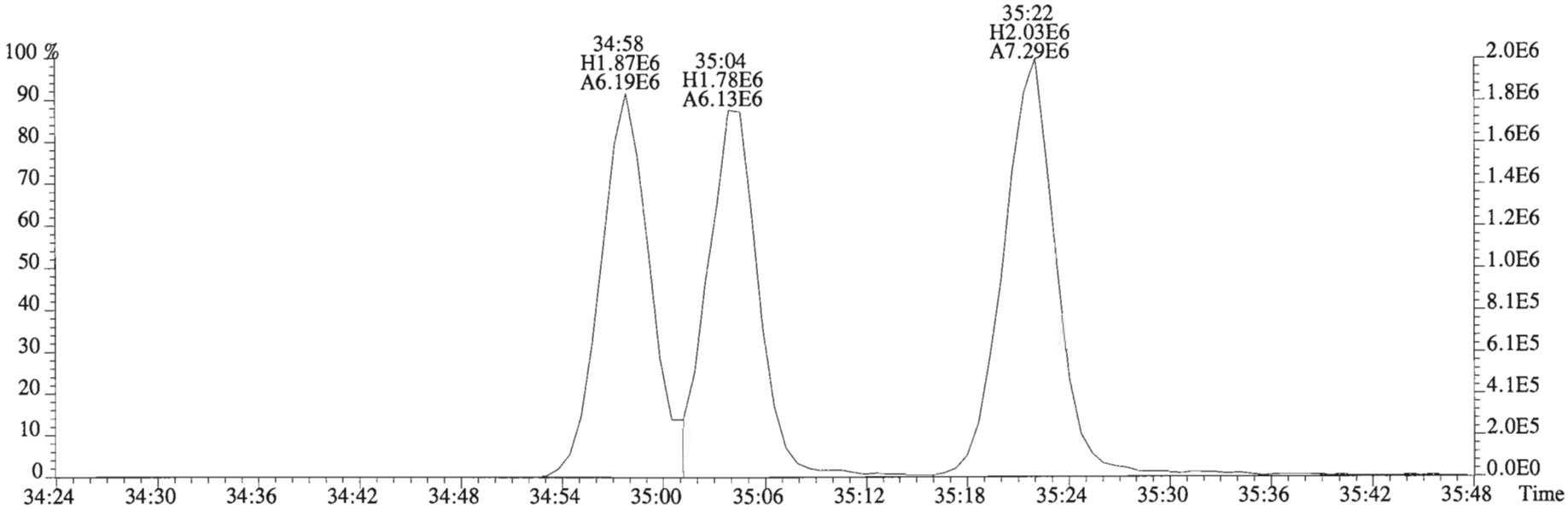
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



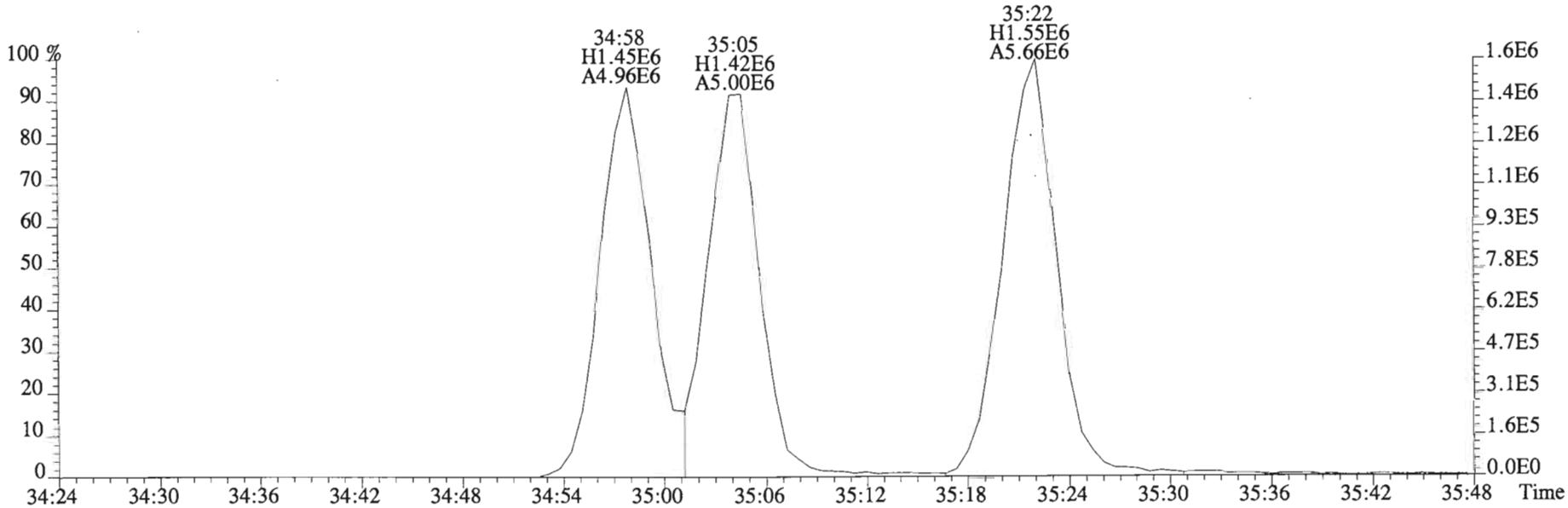
380.9760 S:11 F:3



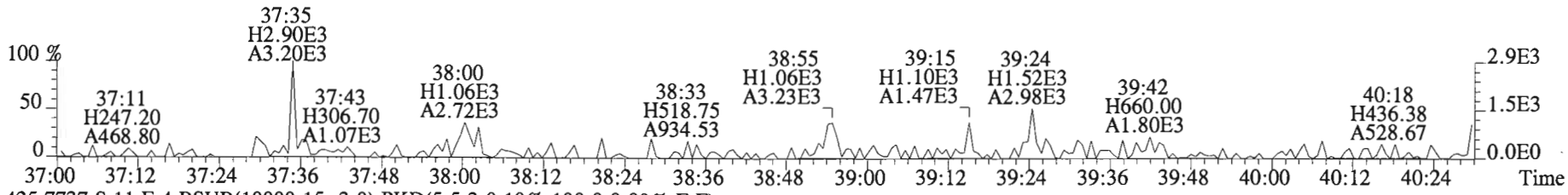
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



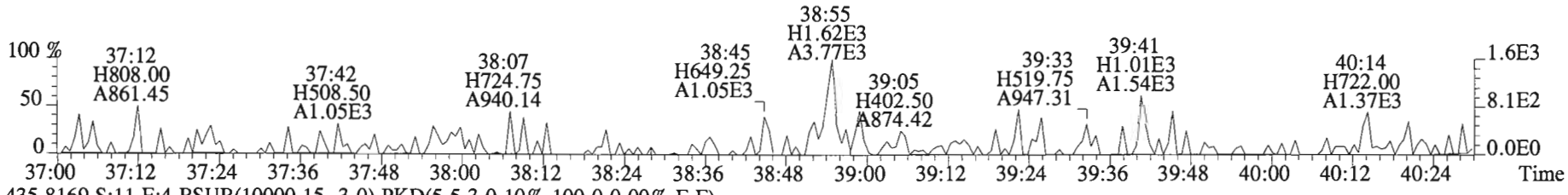
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



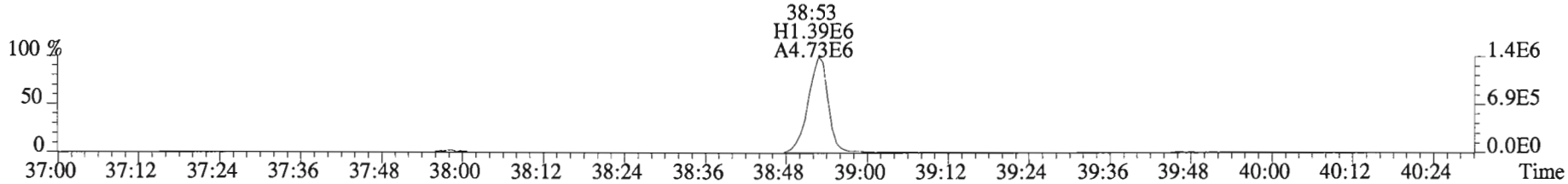
File:150311D1 #1-326 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



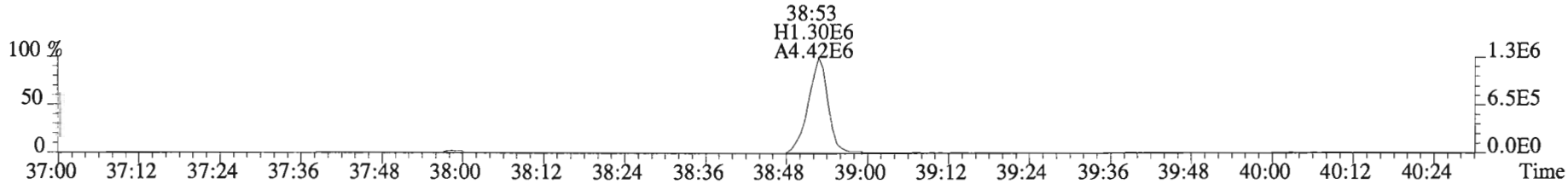
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



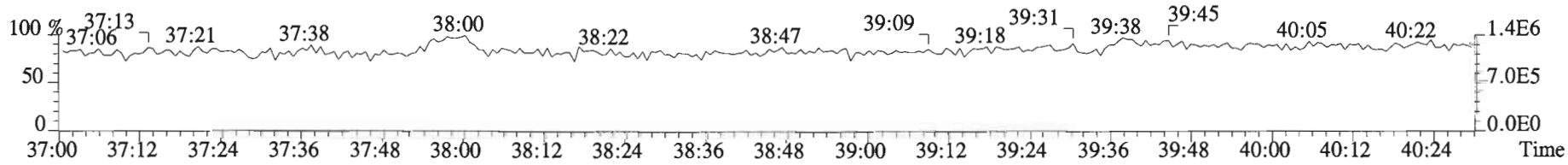
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



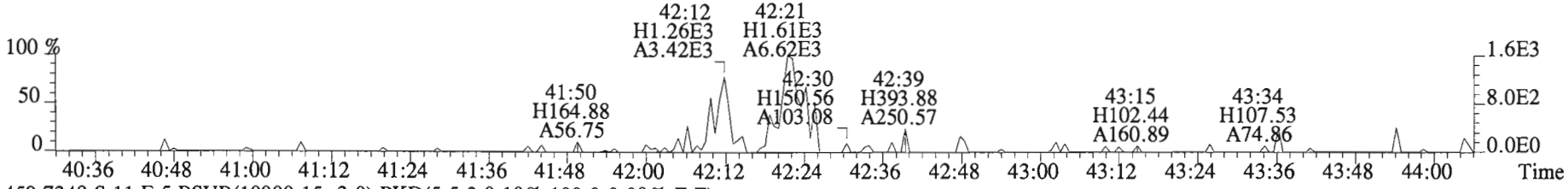
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



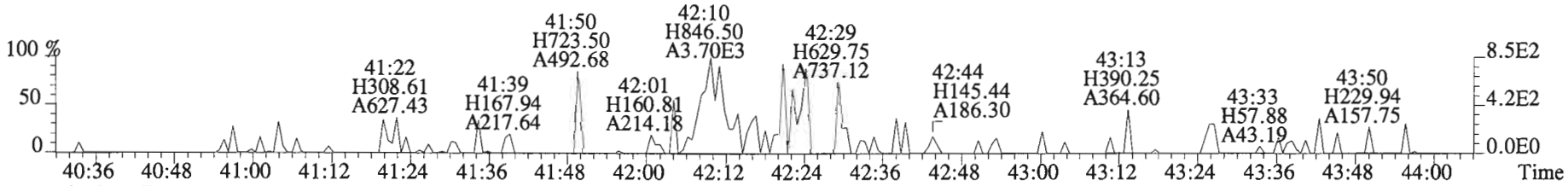
430.9728 S:11 F:4



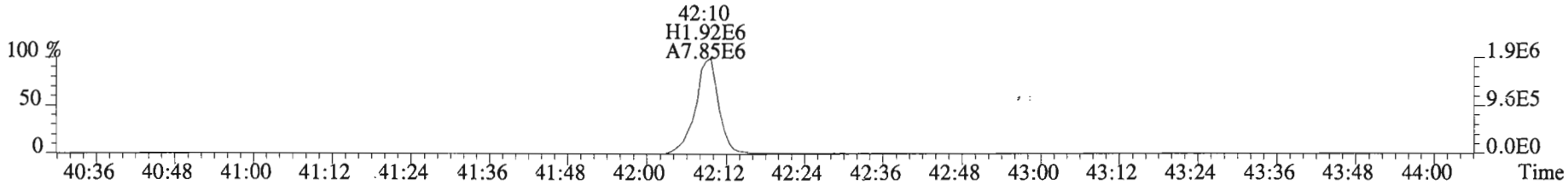
File:150311D1 #1-388 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



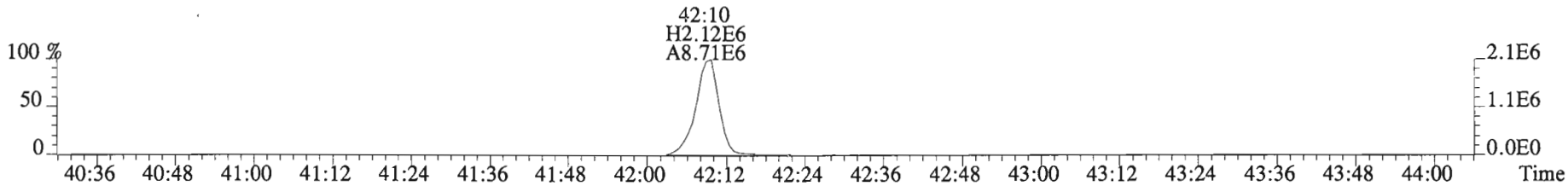
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



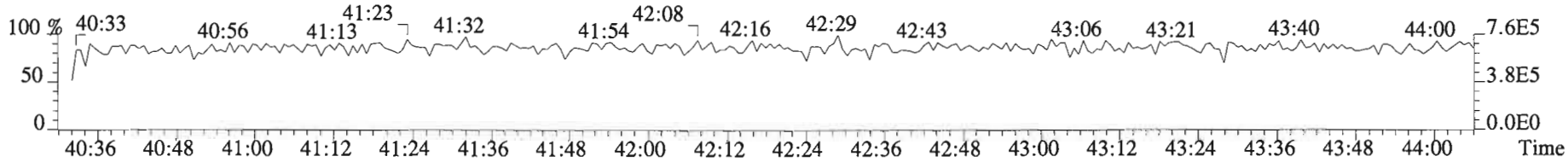
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



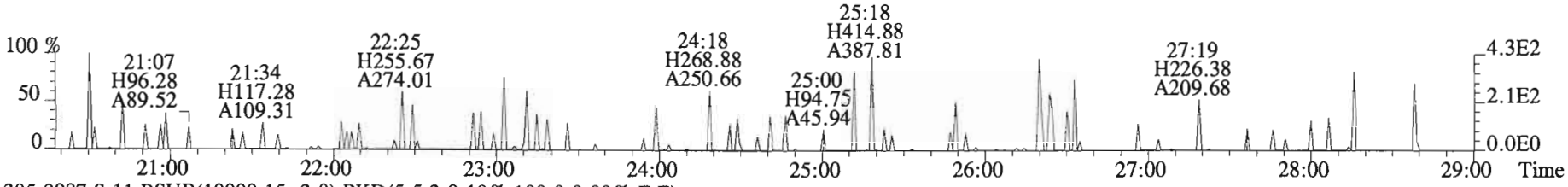
471.7750 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



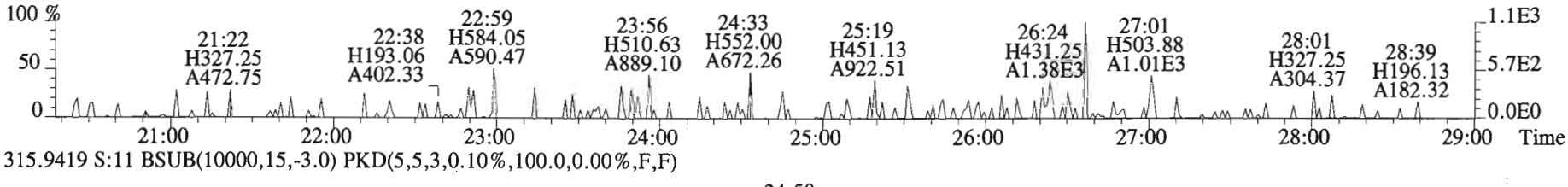
454.9728 S:11 F:5



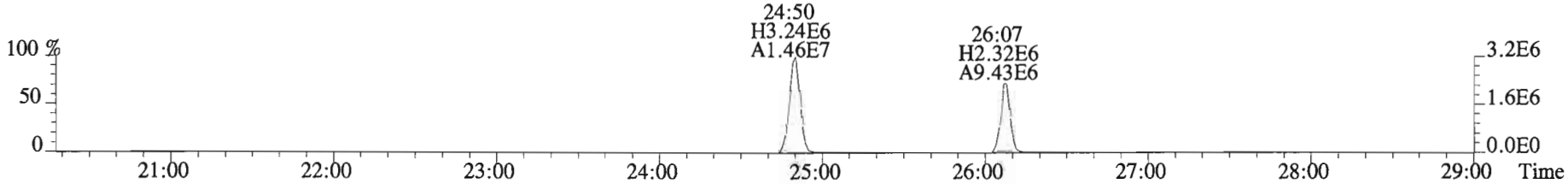
File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



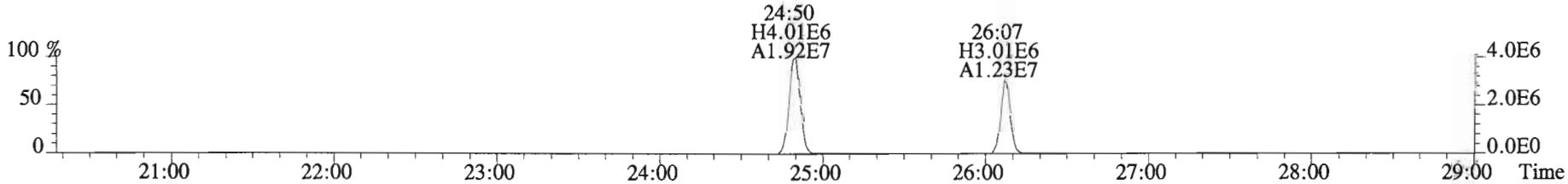
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



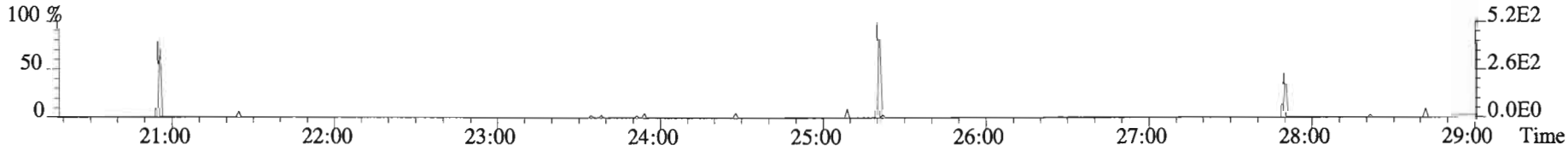
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



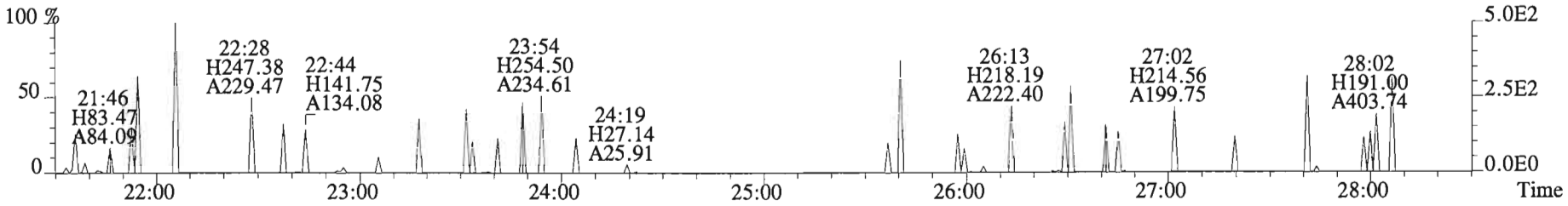
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



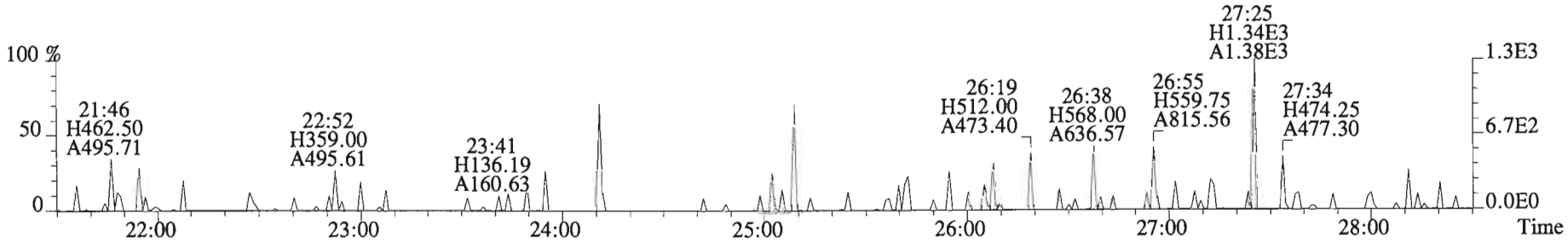
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



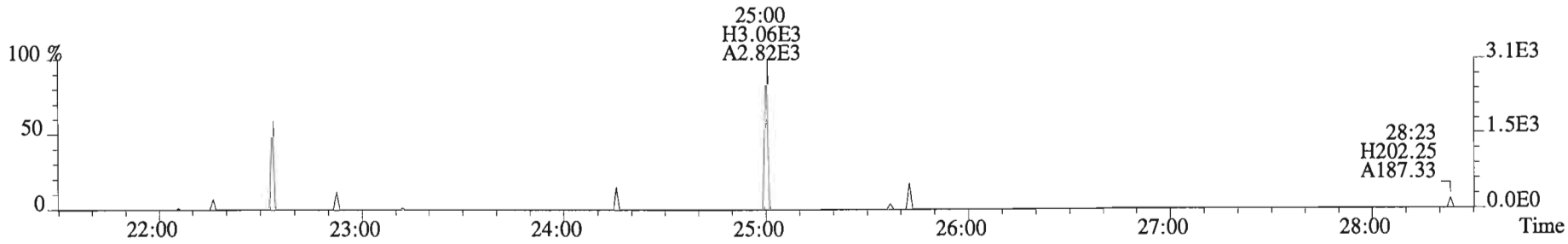
File:150311D1 #1-551 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



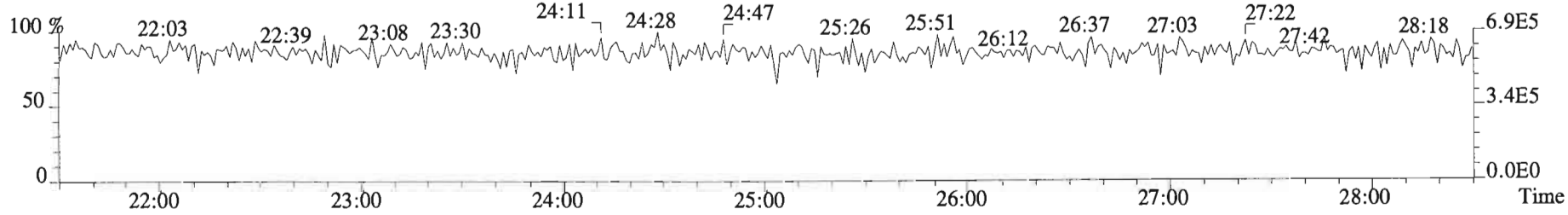
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



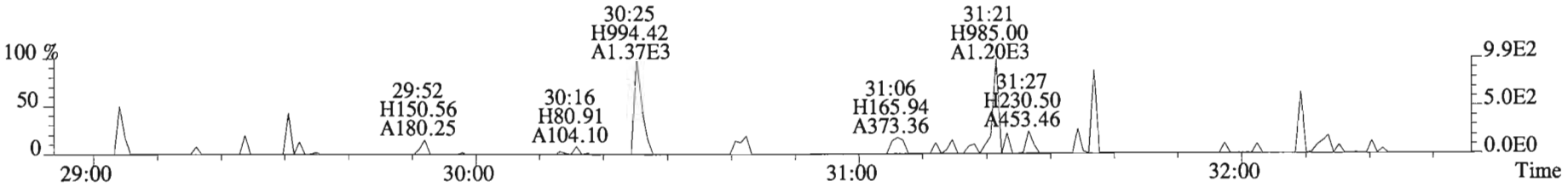
409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



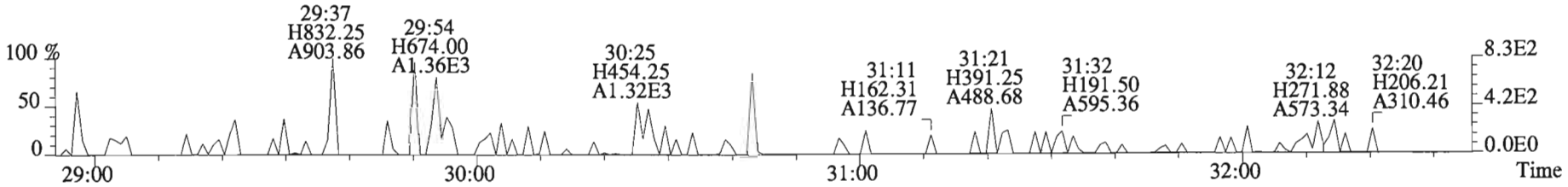
316.9824 S:11



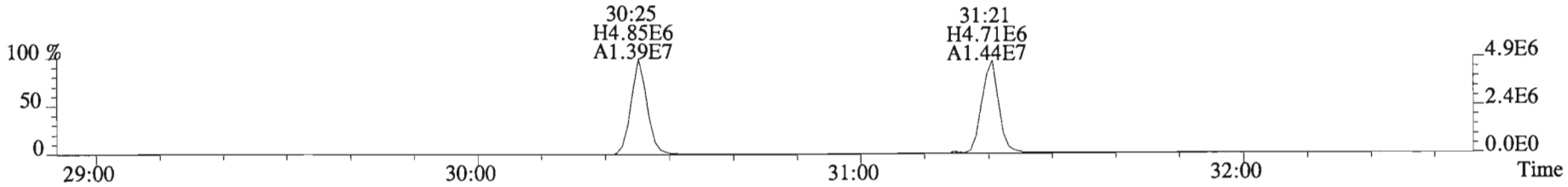
File:150311D1 #1-251 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



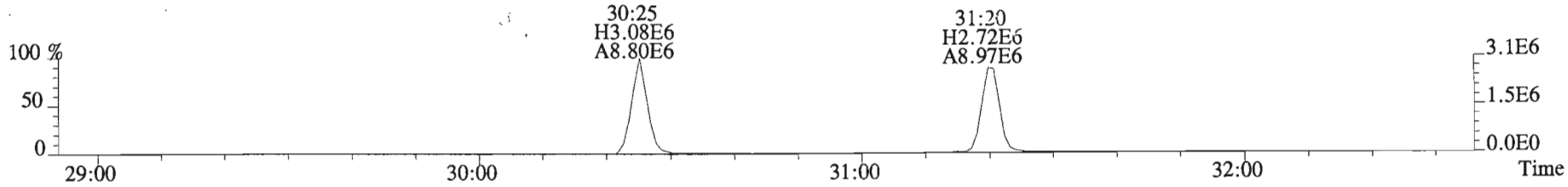
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



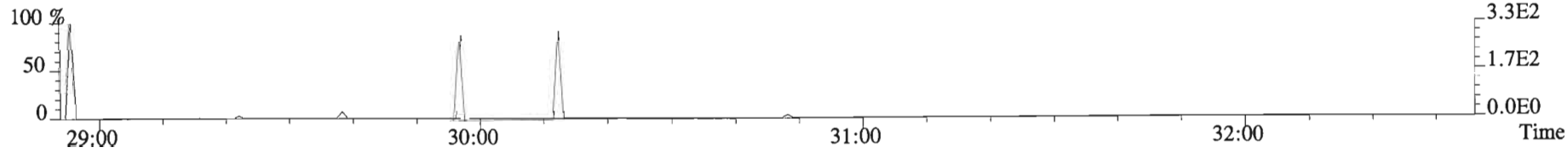
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

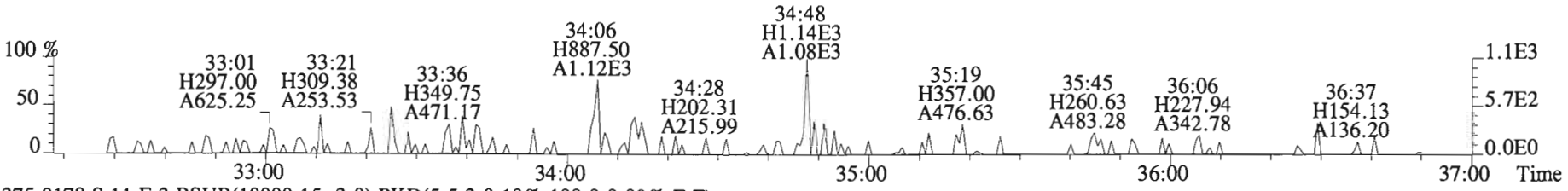


409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

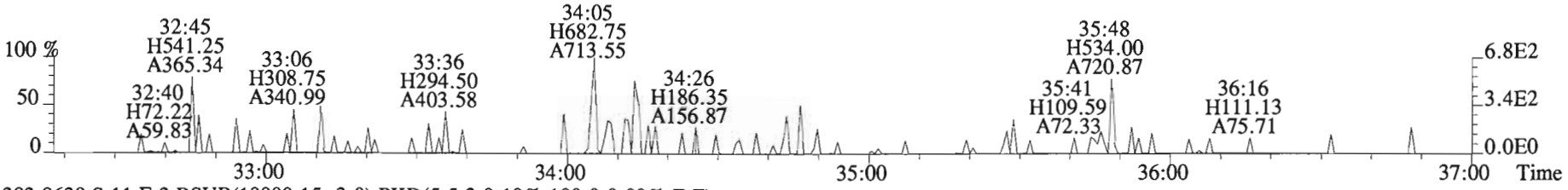


File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5

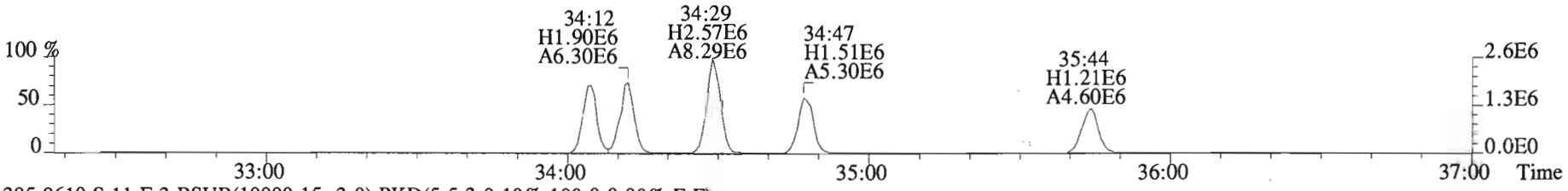
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



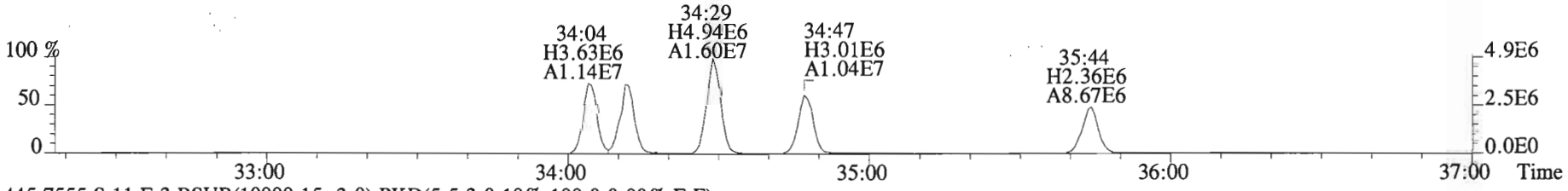
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



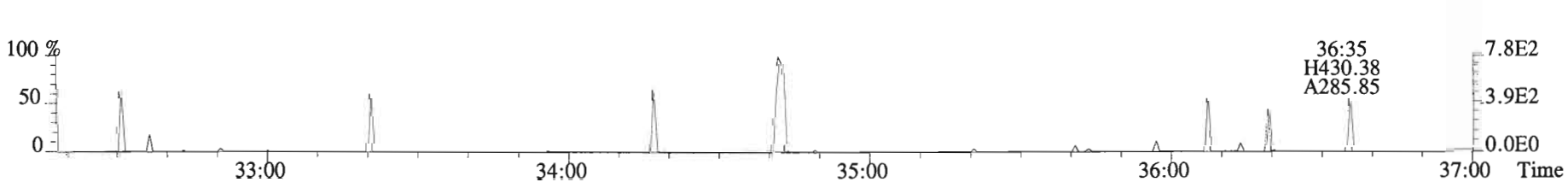
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



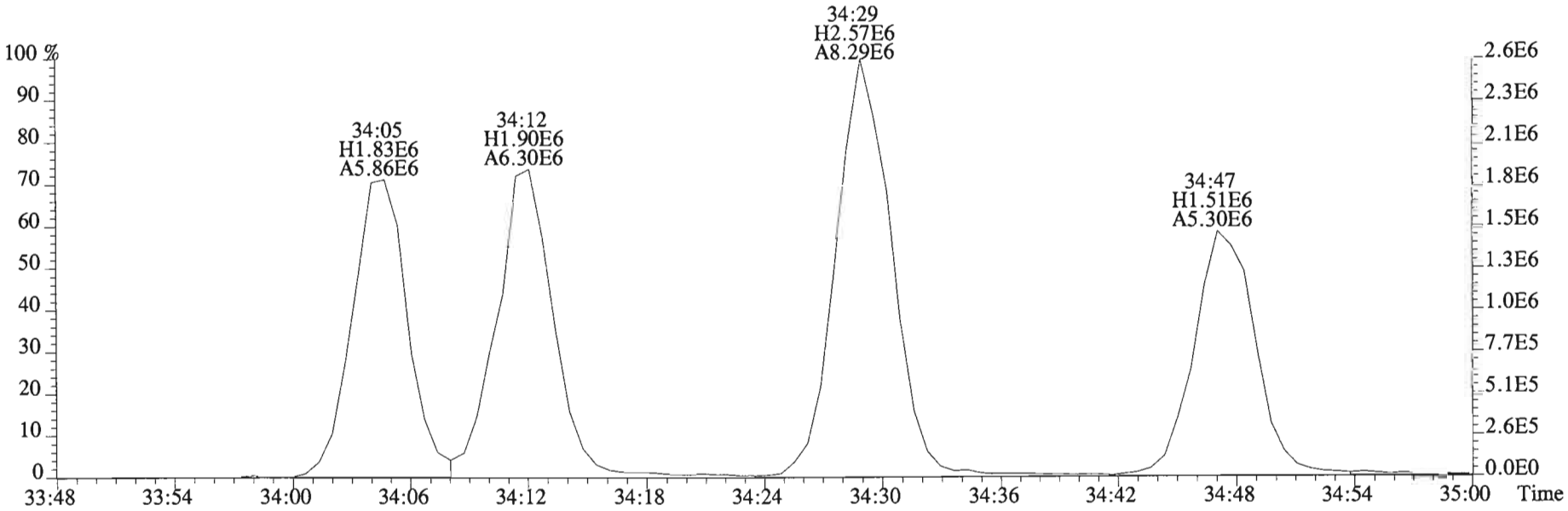
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



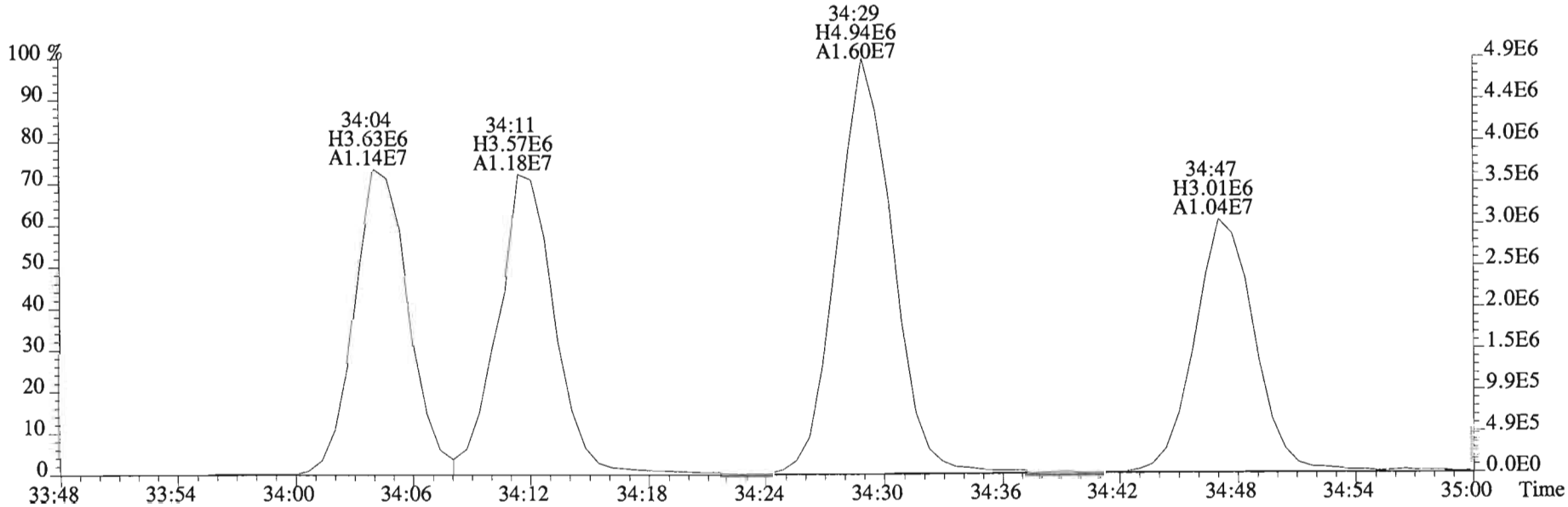
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



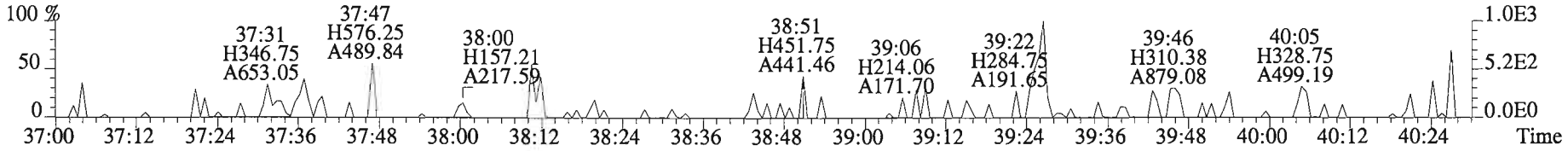
File:150311D1 #1-392 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



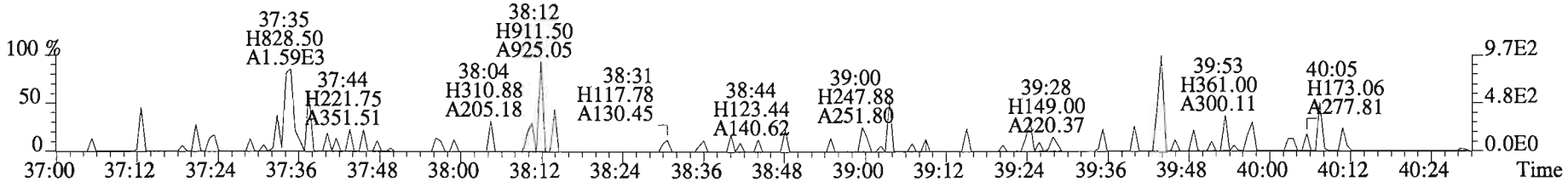
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



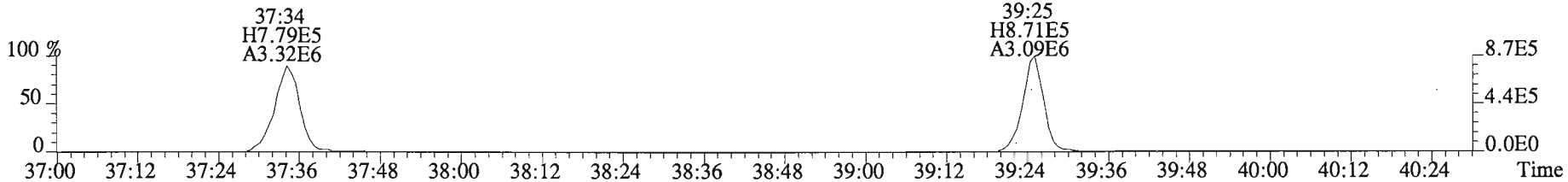
File:150311D1 #1-326 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



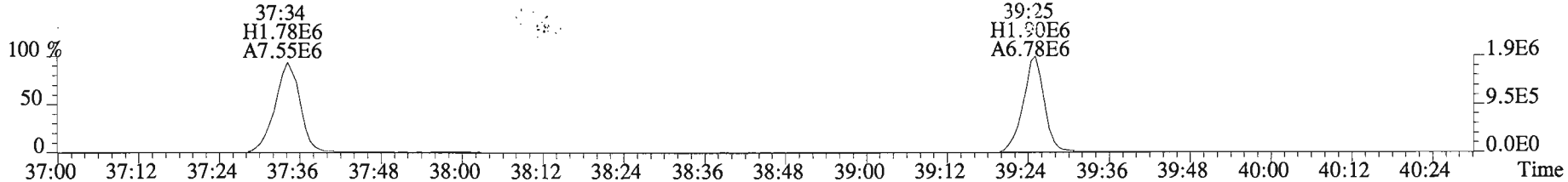
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



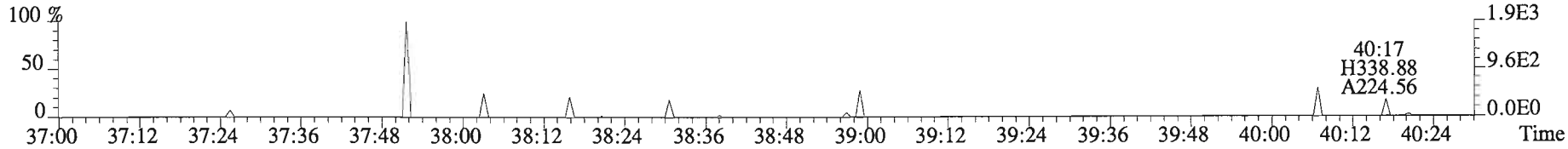
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



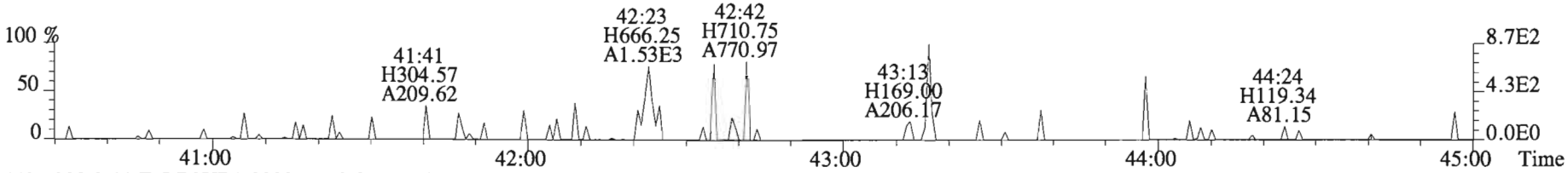
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



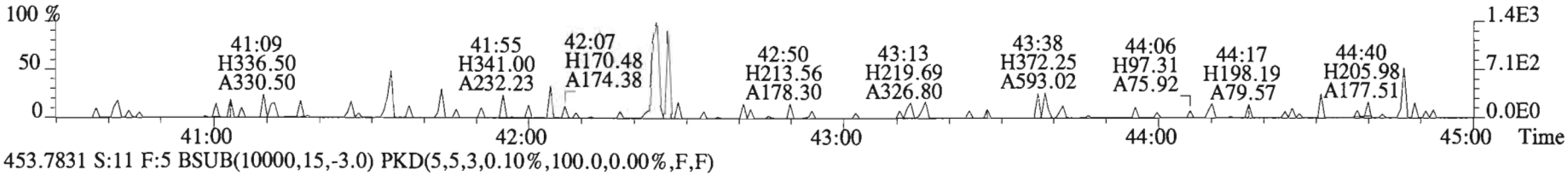
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



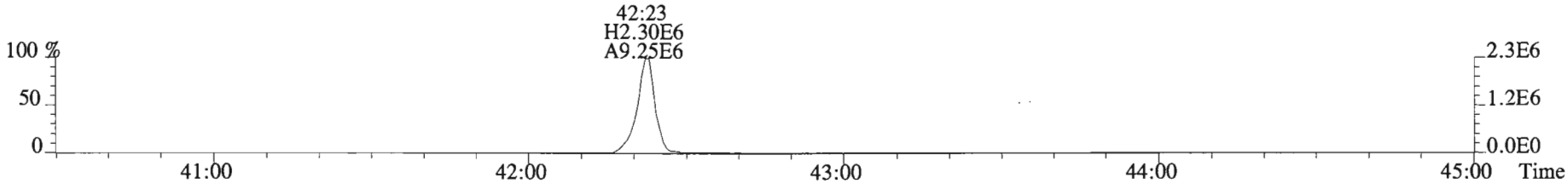
File:150311D1 #1-388 Acq:11-MAR-2015 18:55:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



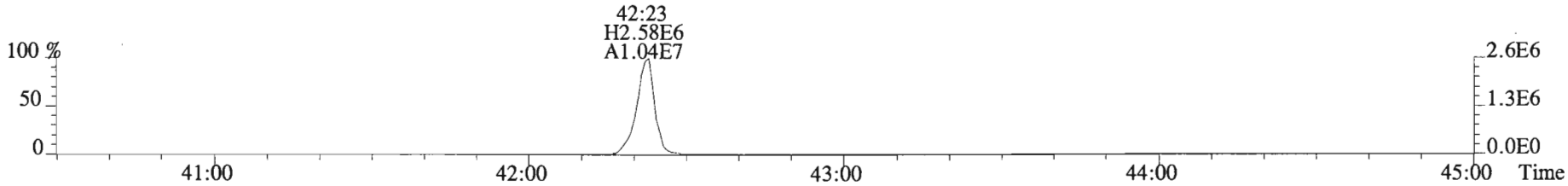
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



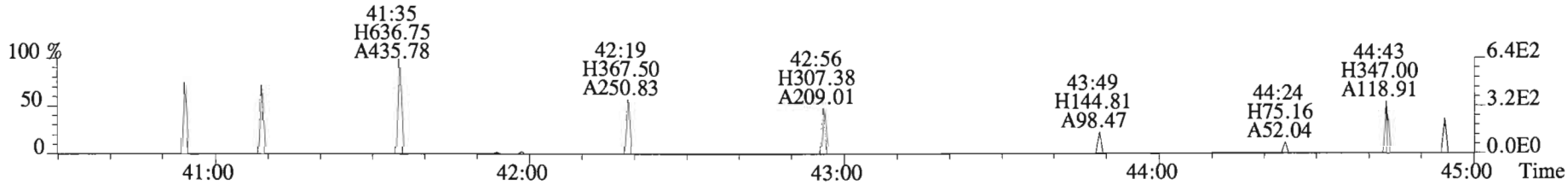
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0037-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150311D1-9

Ext. Date: 3-10-15 Shift: Day Analysis Date: 11-MAR-15 Time: 17:17:25

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	10.1	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	49.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	51.0	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	49.5	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.9	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.8	35.0 - 70.0
OCDD	100	98.9	78.0 - 144.0
2,3,7,8-TCDF	10	9.05	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	53.1	40.0 - 67.0
2,3,4,7,8-PeCDF	50	53.2	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	50.1	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	49.8	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.9	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.3	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	50.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	49.8	39.0 - 69.0
OCDF	100	102	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: MJ

Date: 3/12/15

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B5C0037-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 150311D1-9

Ext. Date: 3-10-15 Shift: Day Analysis Date: 11-MAR-15 Time: 17:17:25

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	69.5	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	69.8	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	62.4	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	64.3	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	62.5	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	57.0	26.0 - 166.0
13C-OCDD	200	89.5	26.0 - 397.0
13C-2,3,7,8-TCDF	100	75.2	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	74.7	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	76.8	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	71.9	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	69.4	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	65.9	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	62.3	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	55.7	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	56.3	20.0 - 186.0
13C-OCDF	200	94.6	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	47.0	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: [signature]

Date: 3/12/15

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.72e+06	0.75 y	1.17	26:59	1.001	10.115		*	2.5	*
	1,2,3,7,8-PeCDD	7.20e+06	0.60 y	0.91	31:39	1.000	49.032		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.44e+06	1.25 y	1.08	34:59	1.000	51.044		*	2.5	*
	1,2,3,6,7,8-HxCDD	6.49e+06	1.28 y	1.06	35:06	1.000	49.457		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.46e+06	1.26 y	0.93	35:23	1.000	49.929		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	5.34e+06	1.04 y	1.10	38:54	1.000	49.805		*	2.5	*
	OCDD	8.36e+06	0.88 y	0.95	42:11	1.000	98.918		*	2.5	*
	2,3,7,8-TCDF	2.36e+06	0.81 y	1.07	26:09	1.001	9.0476		*	2.5	*
	1,2,3,7,8-PeCDF	1.38e+07	1.61 y	1.07	30:27	1.000	53.088		*	2.5	*
	2,3,4,7,8-PeCDF	1.39e+07	1.60 y	1.03	31:22	1.001	53.236		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.27e+07	1.27 y	1.38	34:06	1.000	50.111		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.23e+07	1.28 y	1.26	34:13	1.000	49.757		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.13e+07	1.30 y	1.29	34:49	1.000	49.884		*	2.5	*
	1,2,3,7,8,9-HxCDF	8.33e+06	1.31 y	1.19	35:46	1.001	50.330		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.44e+06	1.09 y	1.61	37:36	1.000	50.003		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	7.77e+06	1.06 y	1.53	39:26	1.000	49.823		*	2.5	*
	OCDF	1.17e+07	0.94 y	1.10	42:24	1.000	102.04		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.45e+07	0.81 y	1.06	26:58	1.022	69.494				
IS	13C-1,2,3,7,8-PeCDD	1.62e+07	0.64 y	1.18	31:38	1.200	69.772				
IS	13C-1,2,3,4,7,8-HxCDD	1.17e+07	1.27 y	0.72	34:58	1.014	62.373				
IS	13C-1,2,3,6,7,8-HxCDD	1.23e+07	1.26 y	0.74	35:05	1.017	64.293				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.26 y	0.85	35:23	1.026	62.836				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.70e+06	1.03 y	0.65	38:53	1.128	56.975				
IS	13C-OCDD	1.78e+07	0.86 y	0.76	42:10	1.222	89.532				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.74 y	0.92	26:08	0.991	75.184				
IS	13C-1,2,3,7,8-PeCDF	2.43e+07	1.60 y	0.92	30:26	1.154	74.692				
IS	13C-2,3,4,7,8-PeCDF	2.52e+07	1.58 y	0.93	31:21	1.188	76.751				
IS	13C-1,2,3,4,7,8-HxCDF	1.84e+07	0.52 y	0.98	34:05	0.988	71.911				
IS	13C-1,2,3,6,7,8-HxCDF	1.96e+07	0.52 y	1.08	34:13	0.992	69.446				
IS	13C-2,3,4,6,7,8-HxCDF	1.76e+07	0.52 y	1.03	34:48	1.009	65.901				
IS	13C-1,2,3,7,8,9-HxCDF	1.40e+07	0.52 y	0.86	35:45	1.036	62.266				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.05e+07	0.44 y	0.72	37:35	1.090	55.717				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.02e+07	0.45 y	0.70	39:26	1.143	56.263				
IS	13C-OCDF	2.09e+07	0.91 y	0.85	42:23	1.229	94.574				
C/Up	37Cl-2,3,7,8-TCDD	1.03e+07		1.12	26:59	1.023	46.989				
RS/RT	13C-1,2,3,4-TCDD	1.97e+07	0.79 y	1.00	26:23	*	100.00				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.75 y	1.00	24:51	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.61e+07	0.51 y	1.00	34:30	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.4	10.5		*	*
Total Penta-Dioxins	49.3	49.4		*	*
Total Hexa-Dioxins	150	151		*	*
Total Hepta-Dioxins	49.9	51.3		*	*
Total Tetra-Furans	9.06	9.24		*	*
Total Penta-Furans	107.36	107.86		*	*
Total Hexa-Furans	200	201		*	*
Total Hepta-Furans	101	102		*	*

		Rec	Qual
IS	13C-2,3,7,8-TCDD	69.5	
IS	13C-1,2,3,7,8-PeCDD	69.8	
IS	13C-1,2,3,4,7,8-HxCDD	62.4	
IS	13C-1,2,3,6,7,8-HxCDD	64.3	
IS	13C-1,2,3,7,8,9-HxCDD	62.5	
IS	13C-1,2,3,4,6,7,8-HpCDD	57.0	
IS	13C-OCDD	44.8	
IS	13C-2,3,7,8-TCDF	75.2	
IS	13C-1,2,3,7,8-PeCDF	74.7	
IS	13C-2,3,4,7,8-PeCDF	76.8	
IS	13C-1,2,3,4,7,8-HxCDF	71.9	
IS	13C-1,2,3,6,7,8-HxCDF	69.4	
IS	13C-2,3,4,6,7,8-HxCDF	65.9	
IS	13C-1,2,3,7,8,9-HxCDF	62.3	
IS	13C-1,2,3,4,6,7,8-HpCDF	55.7	
IS	13C-1,2,3,4,7,8,9-HpCDF	56.3	
IS	13C-OCDF	47.3	
C/Up	37Cl-2,3,7,8-TCDD	117	

Integrations by Analyst:_____

Reviewed by Analyst:_____

Date:_____

Date:_____

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	1.72e+06	0.75 y	1.17	26:59	1.001	202.31		*	2.5	*
	1,2,3,7,8-PeCDD	7.20e+06	0.60 y	0.91	31:39	1.000	980.64		*	2.5	*
	1,2,3,4,7,8-HxCDD	6.44e+06	1.25 y	1.08	34:59	1.000	1020.9		*	2.5	*
	1,2,3,6,7,8-HxCDD	6.49e+06	1.28 y	1.06	35:06	1.000	989.14		*	2.5	*
	1,2,3,7,8,9-HxCDD	6.46e+06	1.26 y	0.93	35:23	1.000	998.59		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	5.34e+06	1.04 y	1.10	38:54	1.000	996.11		*	2.5	*
	OCDD	8.36e+06	0.88 y	0.95	42:11	1.000	1978.4		*	2.5	*
	2,3,7,8-TCDF	2.36e+06	0.81 y	1.07	26:09	1.001	180.95		*	2.5	*
	1,2,3,7,8-PeCDF	1.38e+07	1.61 y	1.07	30:27	1.000	1061.8		*	2.5	*
	2,3,4,7,8-PeCDF	1.39e+07	1.60 y	1.03	31:22	1.001	1064.7		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.27e+07	1.27 y	1.38	34:06	1.000	1002.2		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.23e+07	1.28 y	1.26	34:13	1.000	995.14		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.13e+07	1.30 y	1.29	34:49	1.000	997.67		*	2.5	*
	1,2,3,7,8,9-HxCDF	8.33e+06	1.31 y	1.19	35:46	1.001	1006.6		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.44e+06	1.09 y	1.61	37:36	1.000	1000.1		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	7.77e+06	1.06 y	1.53	39:26	1.000	996.47		*	2.5	*
	OCDF	1.17e+07	0.94 y	1.10	42:24	1.000	2040.8		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.45e+07	0.81 y	1.06	26:58	1.022	1389.9				
IS	13C-1,2,3,7,8-PeCDD	1.62e+07	0.64 y	1.18	31:38	1.200	1395.4				
IS	13C-1,2,3,4,7,8-HxCDD	1.17e+07	1.27 y	0.72	34:58	1.014	1247.5				
IS	13C-1,2,3,6,7,8-HxCDD	1.23e+07	1.26 y	0.74	35:05	1.017	1285.9				
IS	13C-1,2,3,7,8,9-HxCDD	1.39e+07	1.26 y	0.85	35:23	1.026	1250.7				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.70e+06	1.03 y	0.65	38:53	1.128	1139.5				
IS	13C-OCDD	1.78e+07	0.86 y	0.76	42:10	1.222	1790.6				
IS	13C-2,3,7,8-TCDF	2.43e+07	0.74 y	0.92	26:08	0.991	1503.7				
IS	13C-1,2,3,7,8-PeCDF	2.43e+07	1.60 y	0.92	30:26	1.154	1493.8				
IS	13C-2,3,4,7,8-PeCDF	2.52e+07	1.58 y	0.93	31:21	1.188	1535.0				
IS	13C-1,2,3,4,7,8-HxCDF	1.84e+07	0.52 y	0.98	34:05	0.988	1438.2				
IS	13C-1,2,3,6,7,8-HxCDF	1.96e+07	0.52 y	1.08	34:13	0.992	1388.9				
IS	13C-2,3,4,6,7,8-HxCDF	1.76e+07	0.52 y	1.03	34:48	1.009	1318.0				
IS	13C-1,2,3,7,8,9-HxCDF	1.40e+07	0.52 y	0.86	35:45	1.036	1245.3				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.05e+07	0.44 y	0.72	37:35	1.090	1114.3				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.02e+07	0.45 y	0.70	39:26	1.143	1125.3				
IS	13C-OCDF	2.09e+07	0.91 y	0.85	42:23	1.229	1891.5				
C/Up	37Cl-2,3,7,8-TCDD	1.03e+07		1.12	26:59	1.023	939.77				
RS/RT	13C-1,2,3,4-TCDD	1.97e+07	0.79 y	1.00	26:23	*	2000.0				
RS	13C-1,2,3,4-TCDF	3.53e+07	0.75 y	1.00	24:51	*	2000.0				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.61e+07	0.51 y	1.00	34:30	*	2000.0				

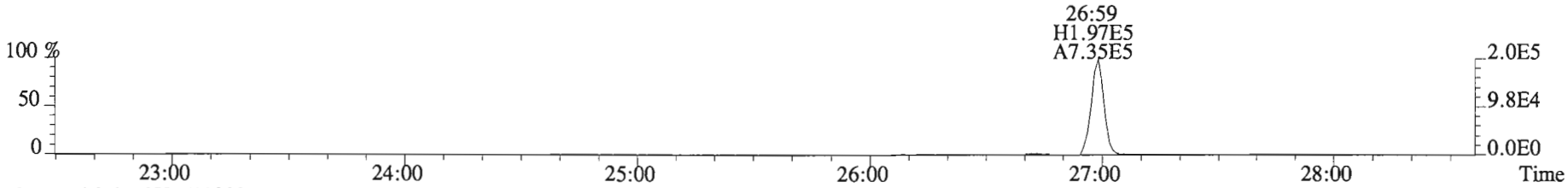
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	208	211		*	*
Total Penta-Dioxins	986	987		*	*
Total Hexa-Dioxins	3010	3020		*	*
Total Hepta-Dioxins	998	1030		*	*
Total Tetra-Furans	181	185		*	*
Total Penta-Furans	2147.1	2157.2		*	*
Total Hexa-Furans	4010	4030		*	*
Total Hepta-Furans	2010	2030		*	*

	Rec	Qual
IS	69.5	
IS	69.8	
IS	62.4	
IS	64.3	
IS	62.5	
IS	57.0	
IS	44.8	
IS	75.2	
IS	74.7	
IS	76.8	
IS	71.9	
IS	69.4	
IS	65.9	
IS	62.3	
IS	55.7	
IS	56.3	
IS	47.3	
C/Up	117	

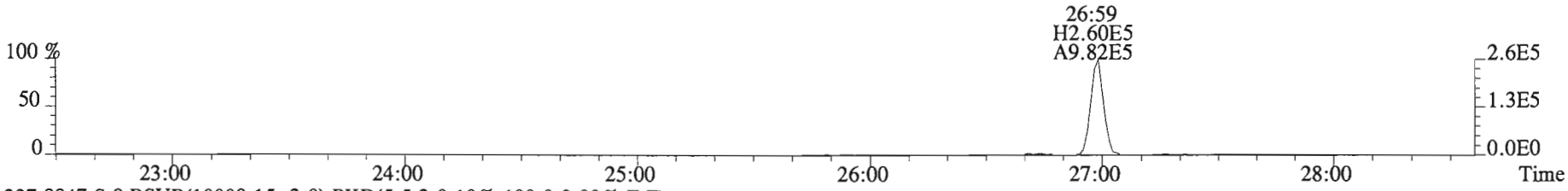
Integrations by Analyst: M1 Date: 3/12/15

Reviewed by Analyst: [signature] Date: 3/12/15

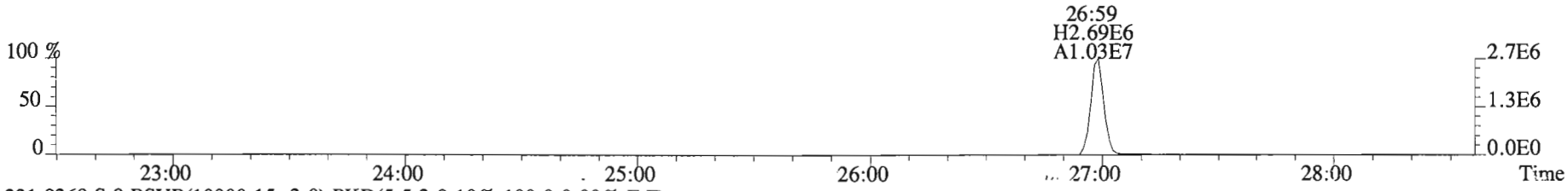
File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



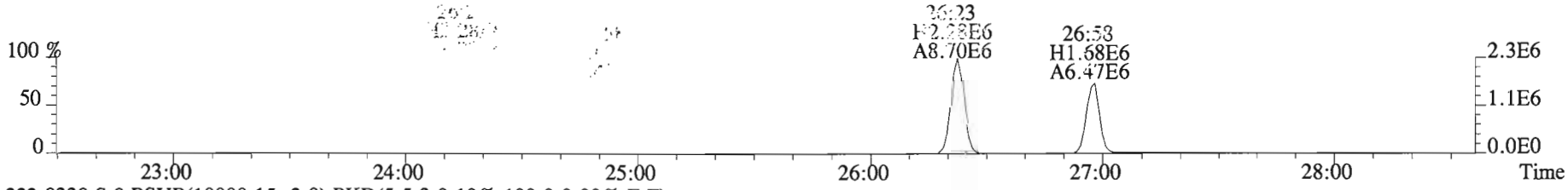
321.8936 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



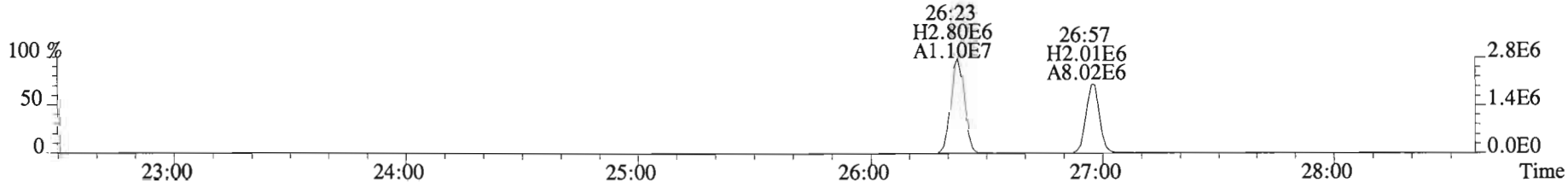
327.8847 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



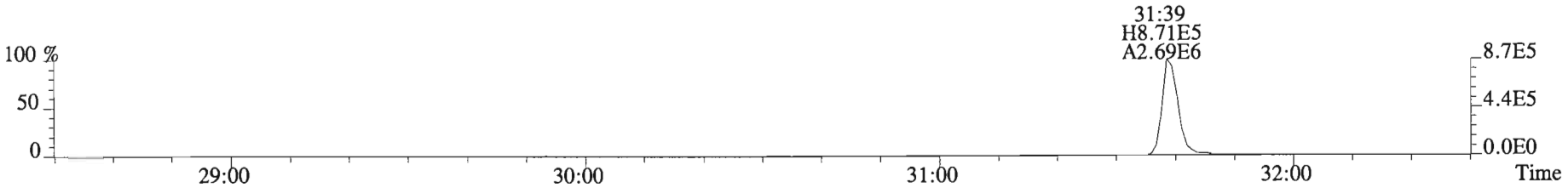
331.9368 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



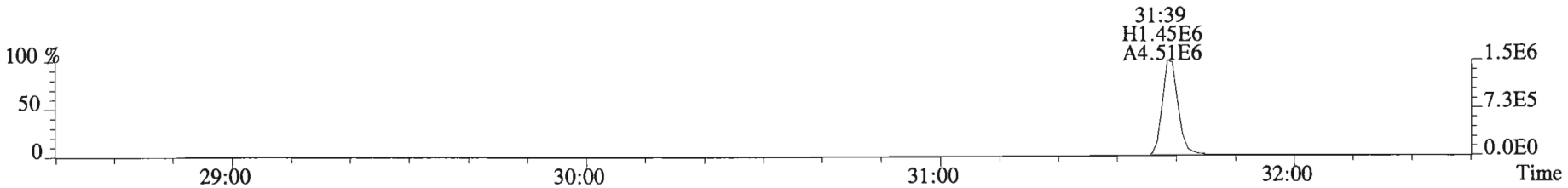
333.9339 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



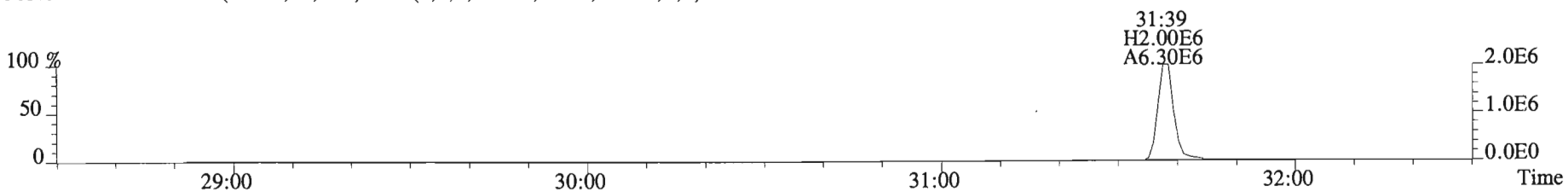
File:150311D1 #1-251 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



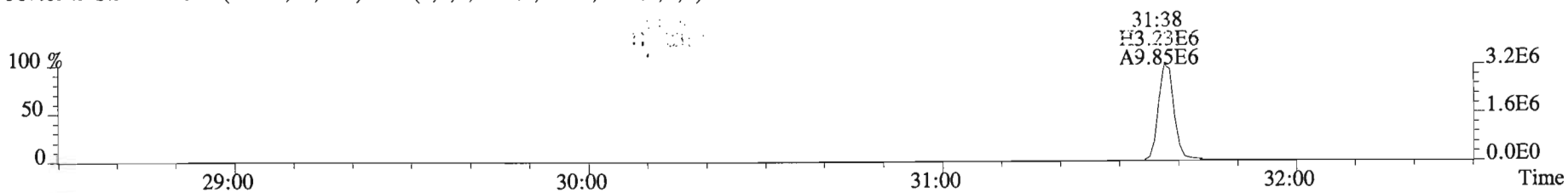
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



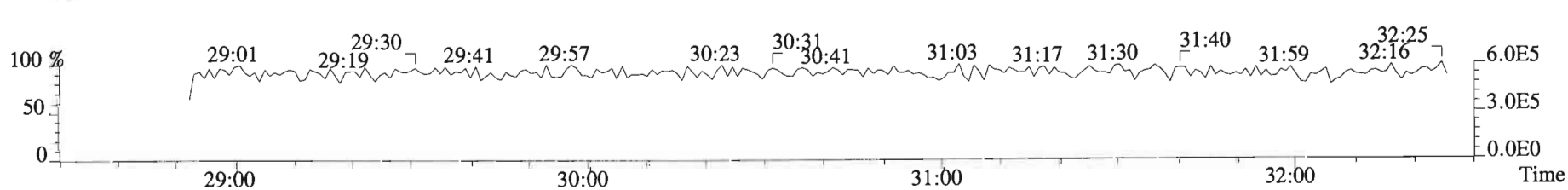
365.8978 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



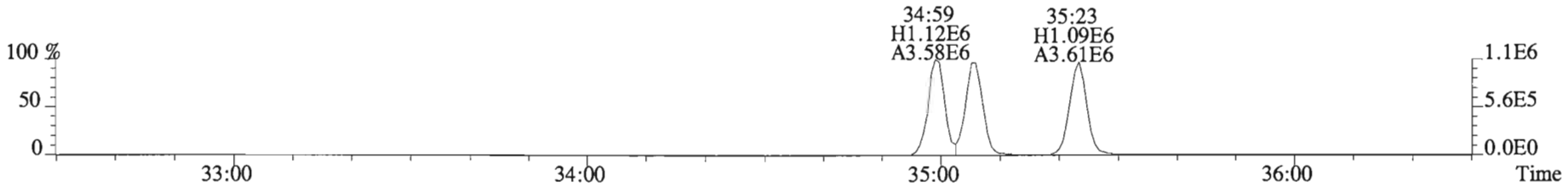
367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



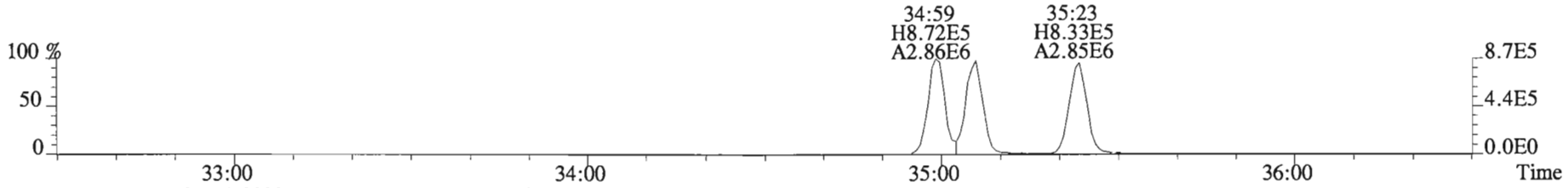
366.9792 S:9 F:2



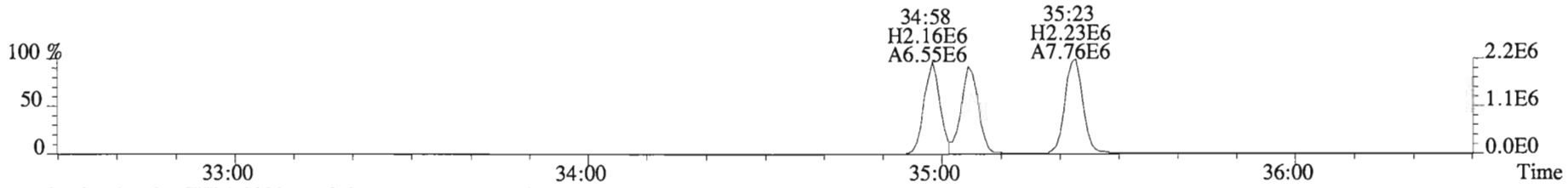
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



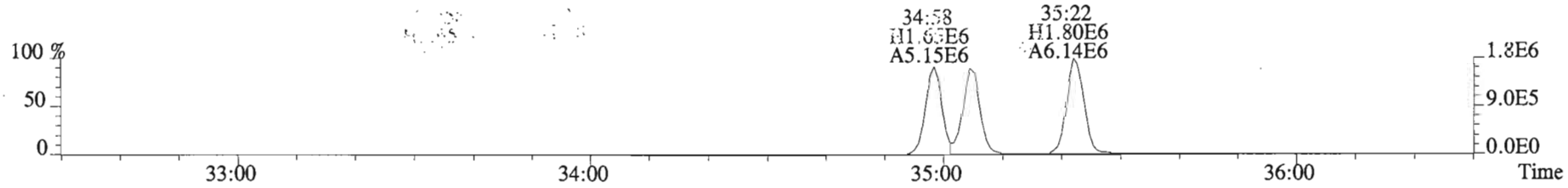
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



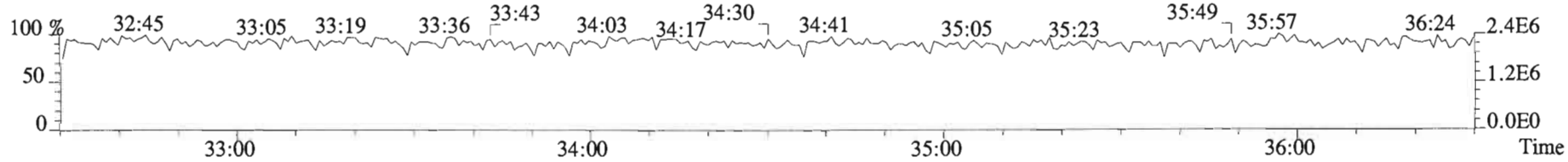
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



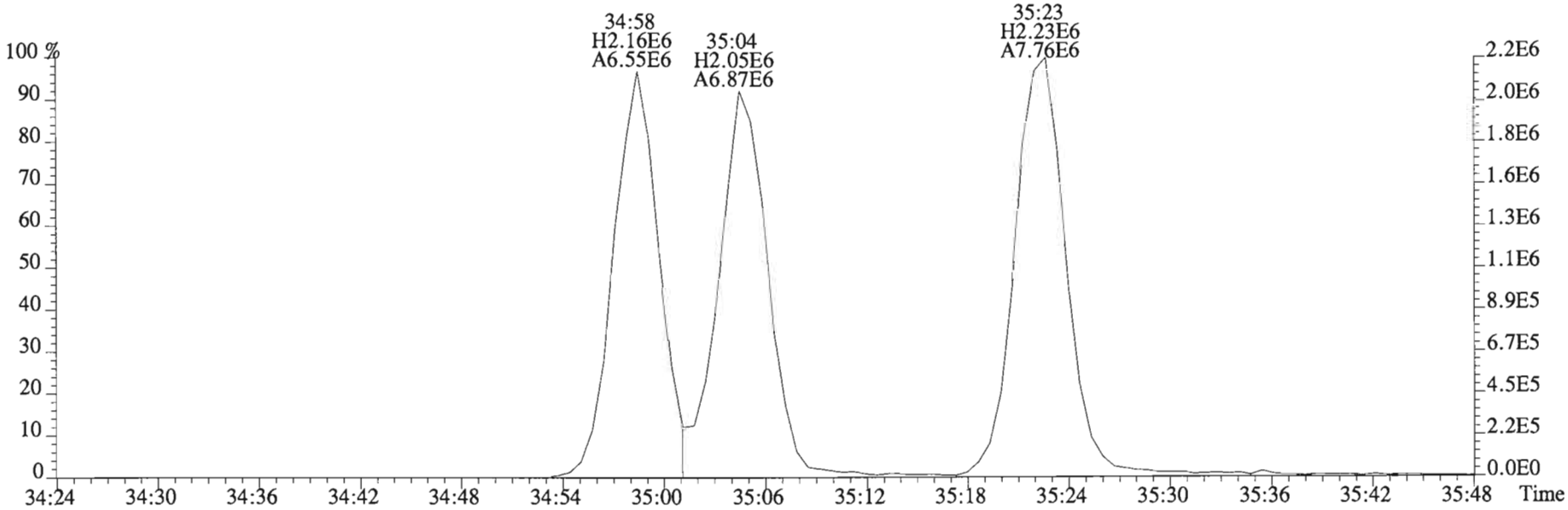
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



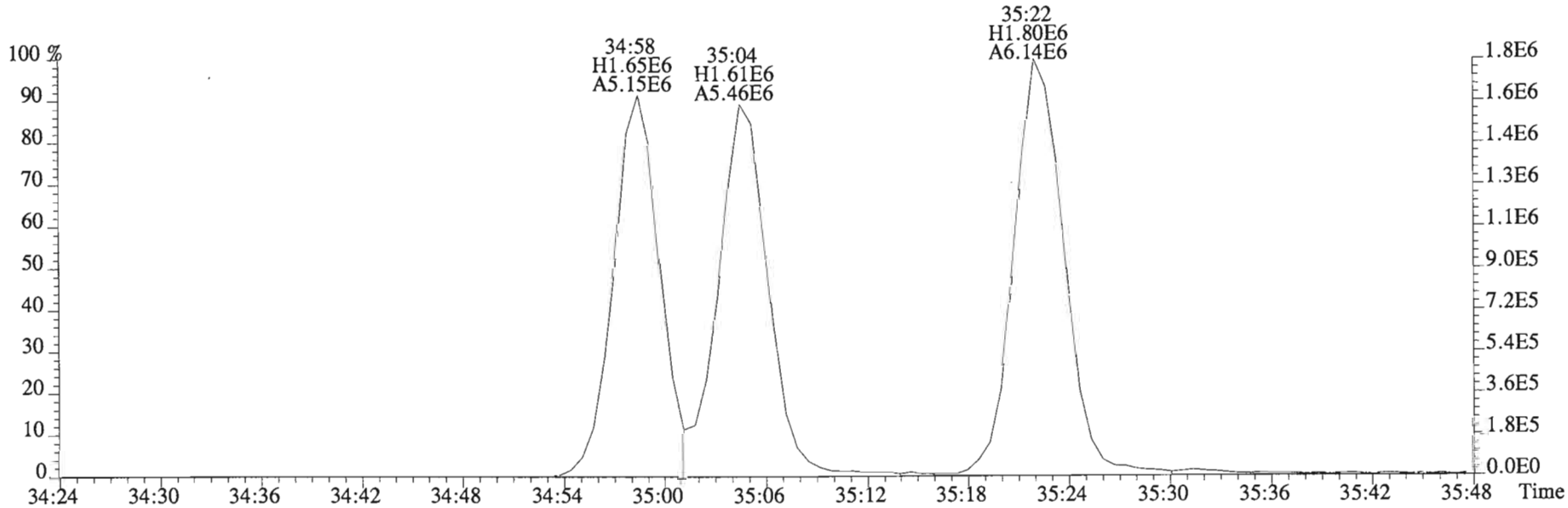
380.9760 S:9 F:3



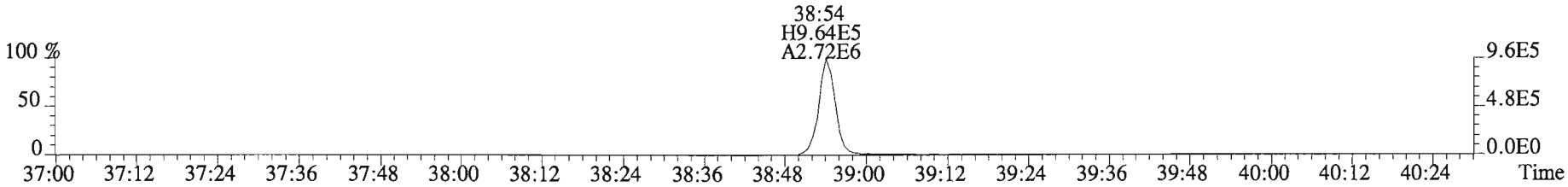
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



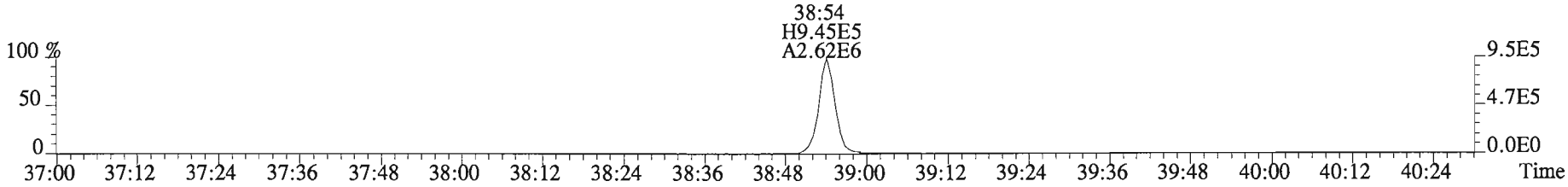
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



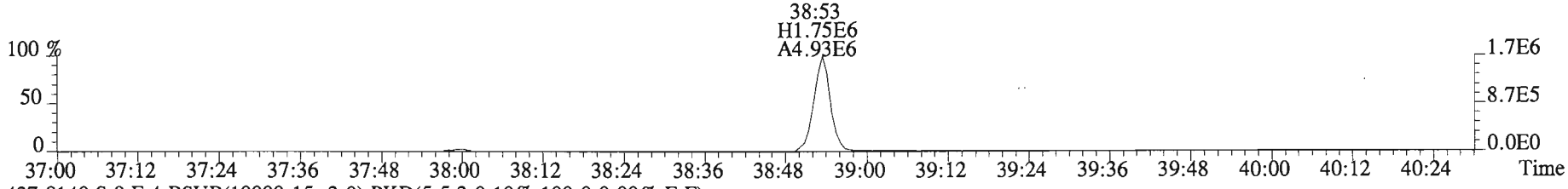
File:150311D1 #1-326 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



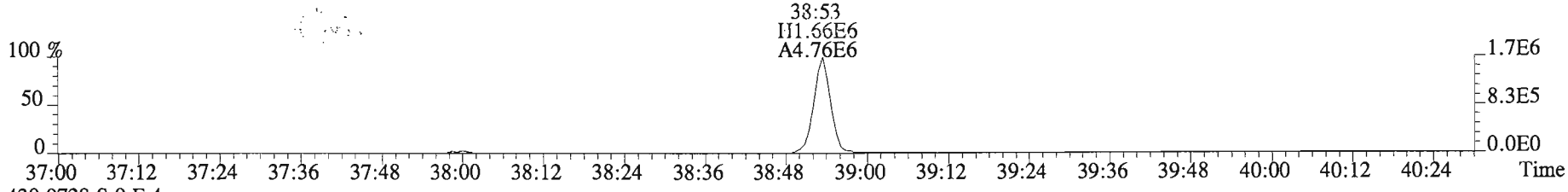
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



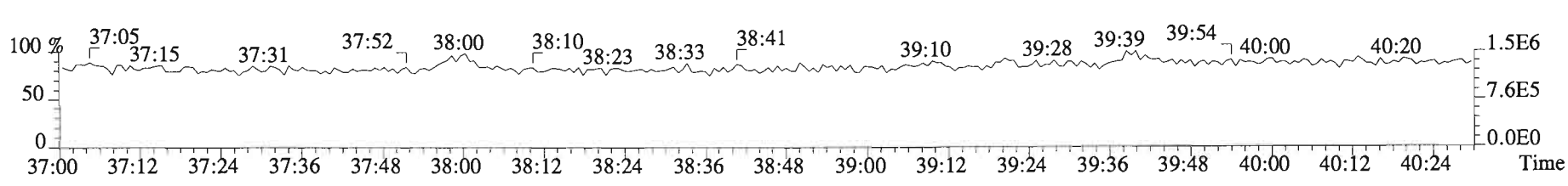
435.8169 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



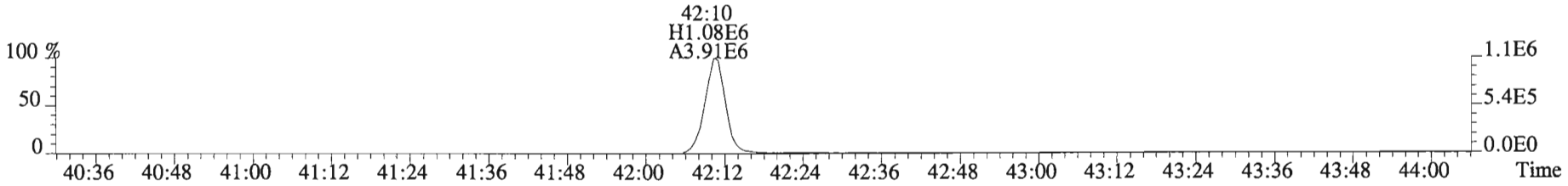
437.8140 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



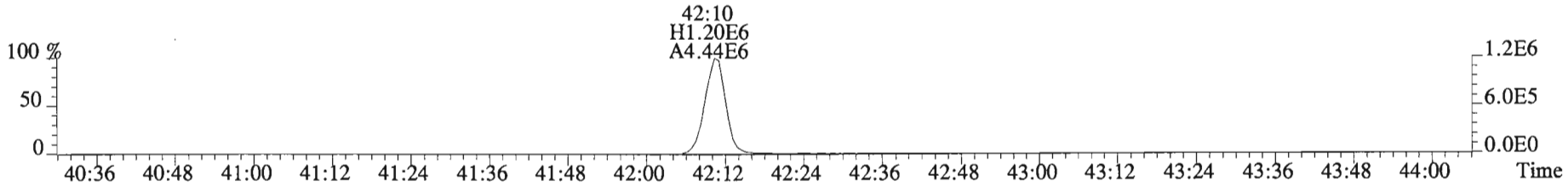
430.9728 S:9 F:4



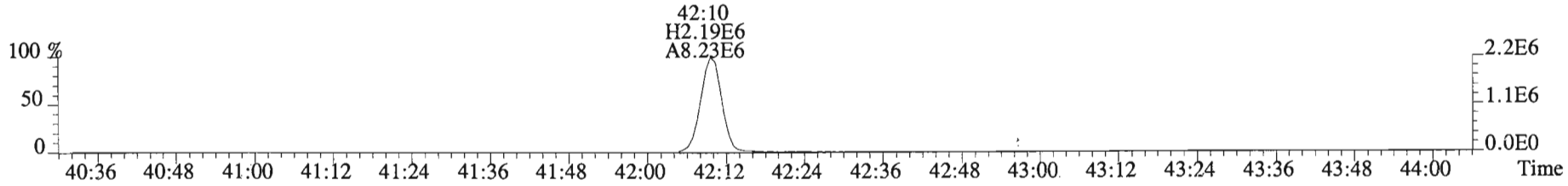
File:150311D1 #1-389 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



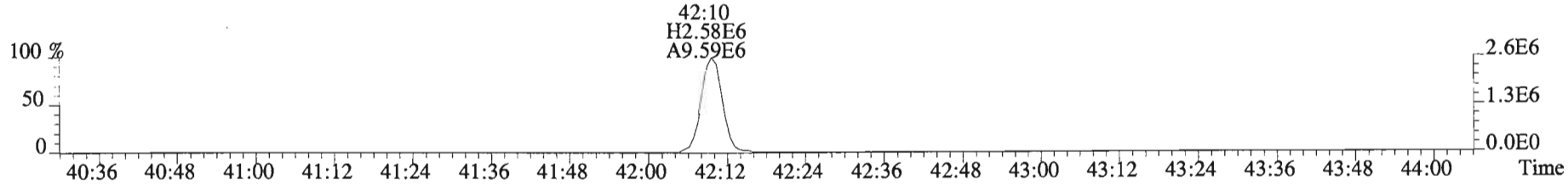
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



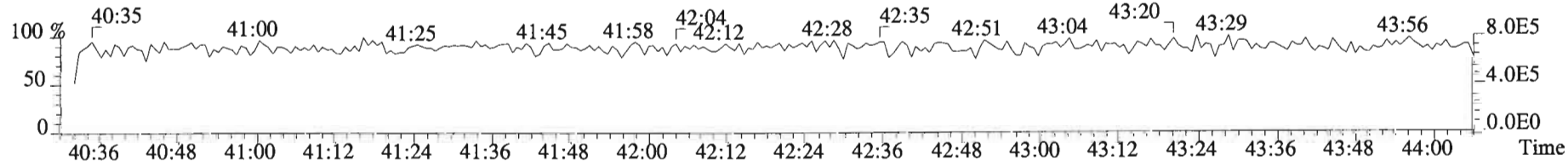
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



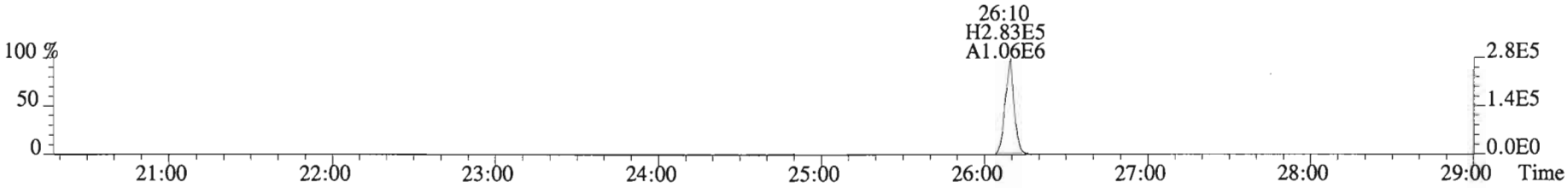
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



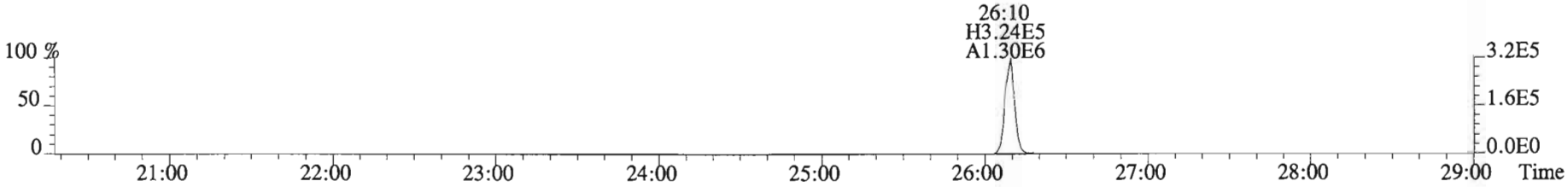
454.9728 S:9 F:5



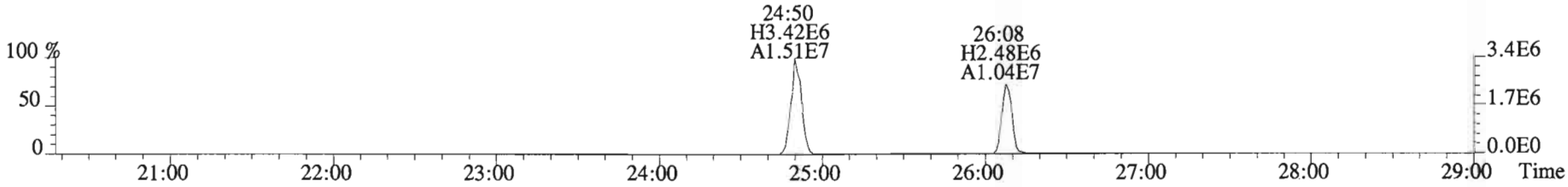
File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



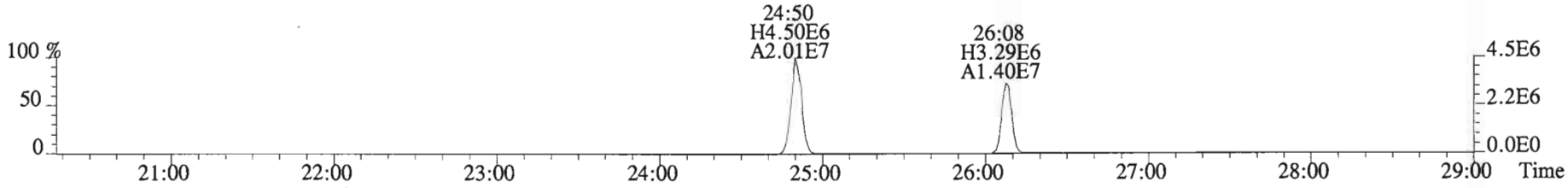
305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



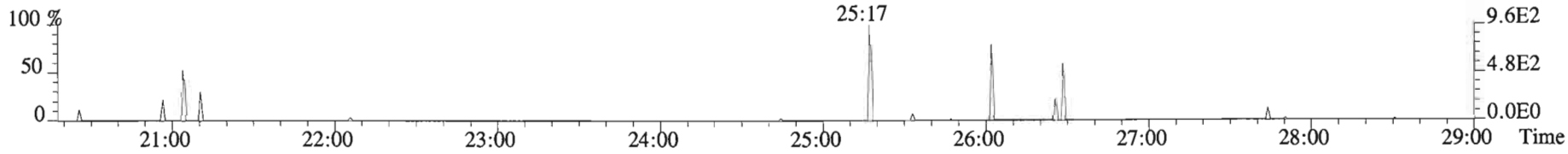
315.9419 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



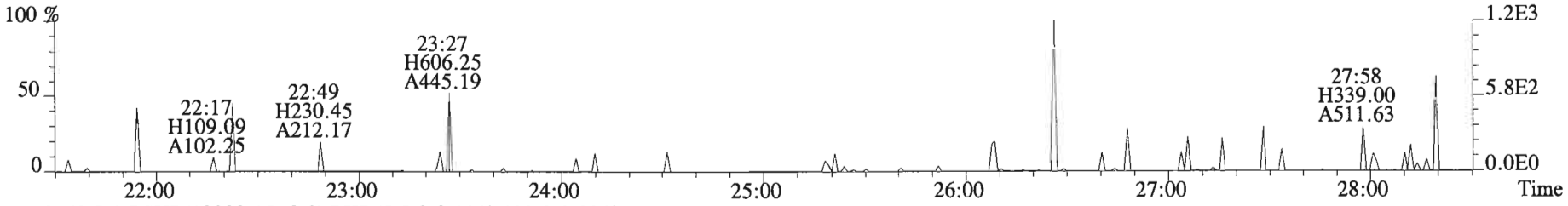
317.9389 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



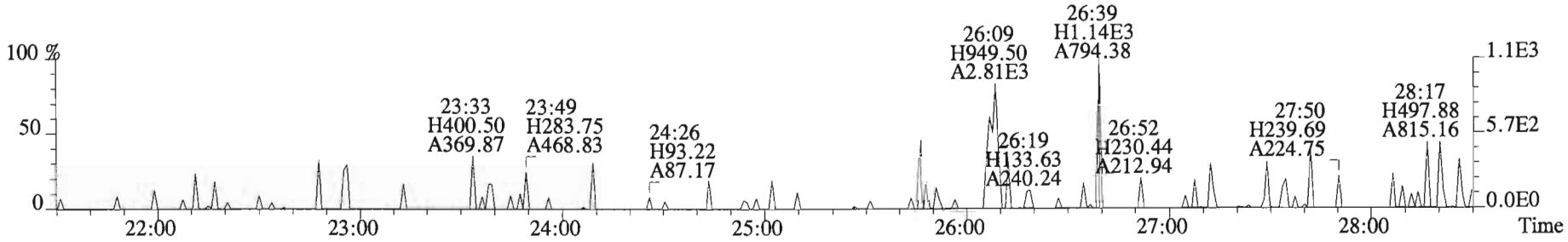
375.8364 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



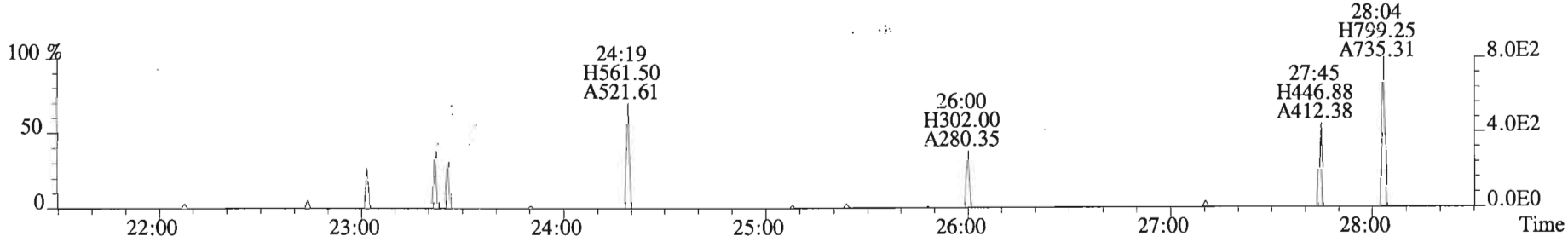
File:150311D1 #1-551 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



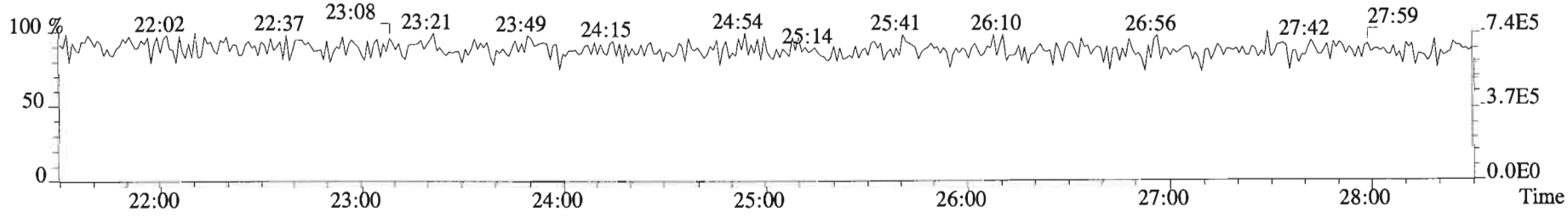
341.8568 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



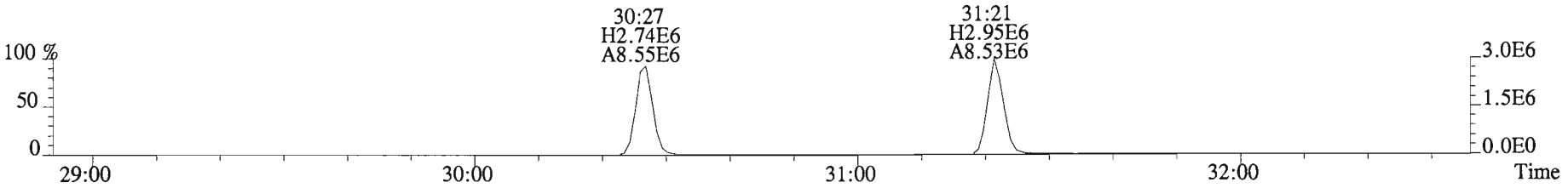
409.7974 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



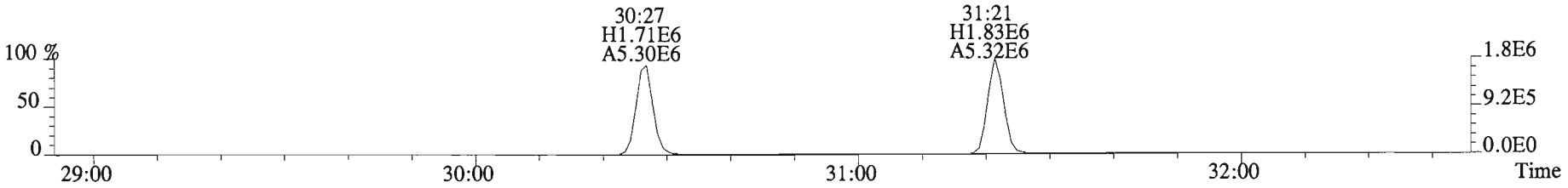
316.9824 S:9



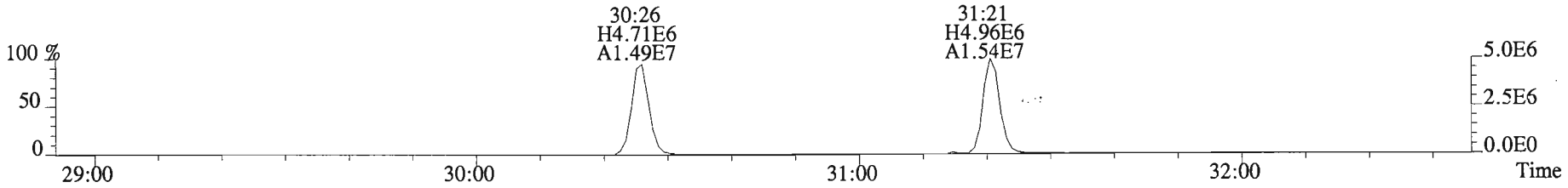
File:150311D1 #1-251 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



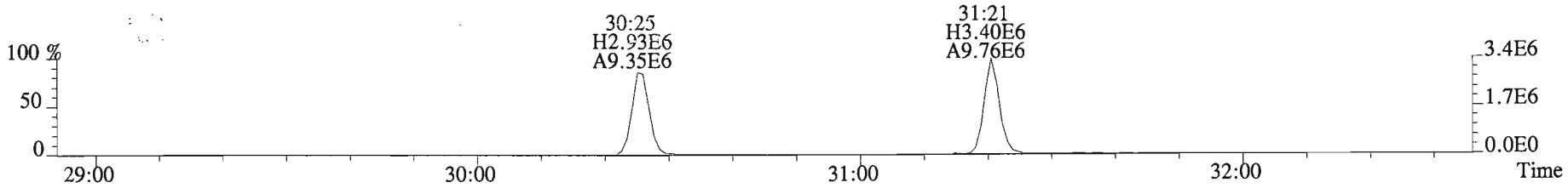
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



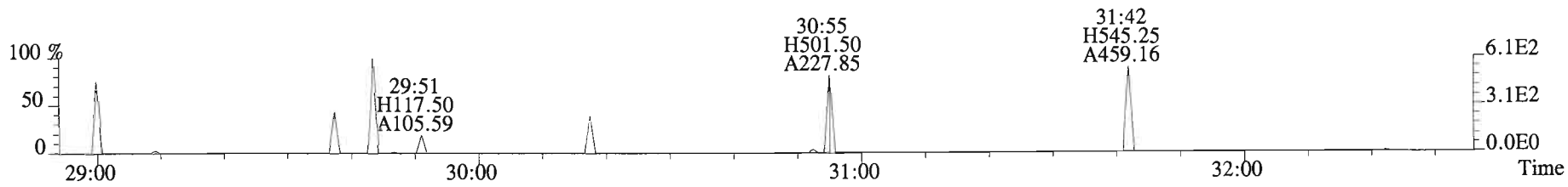
351.9000 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

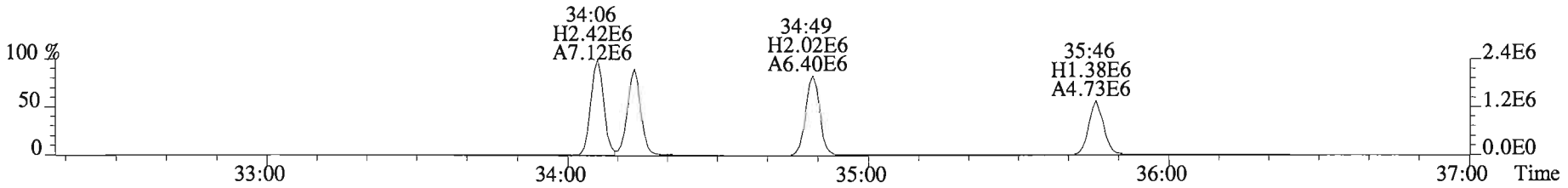


409.7974 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

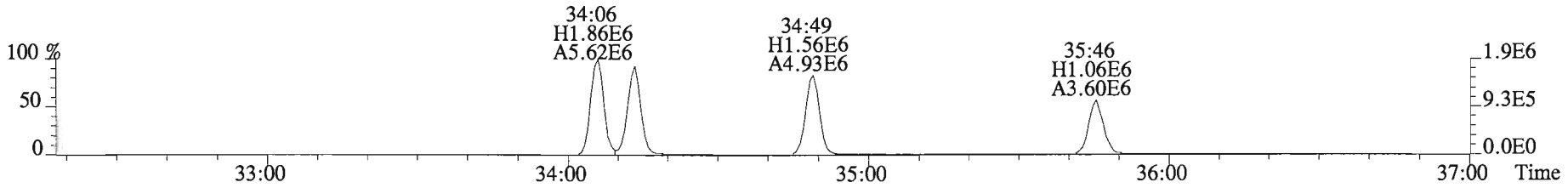


File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5

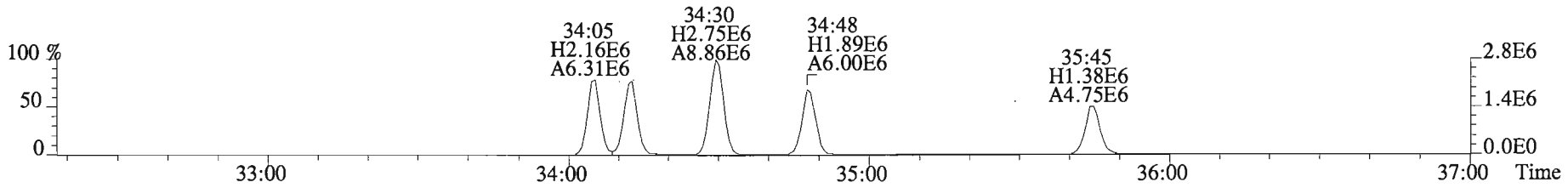
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



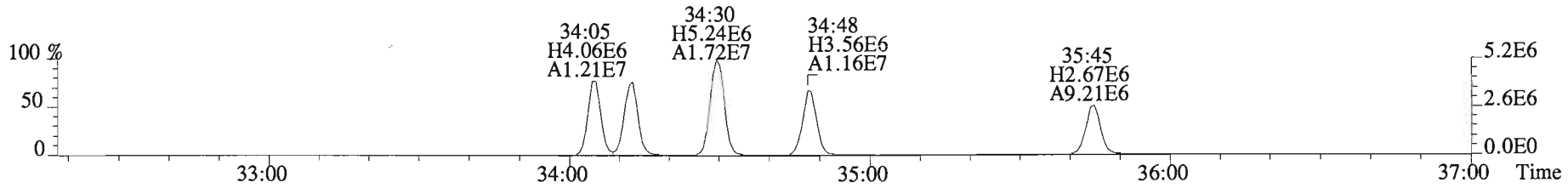
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



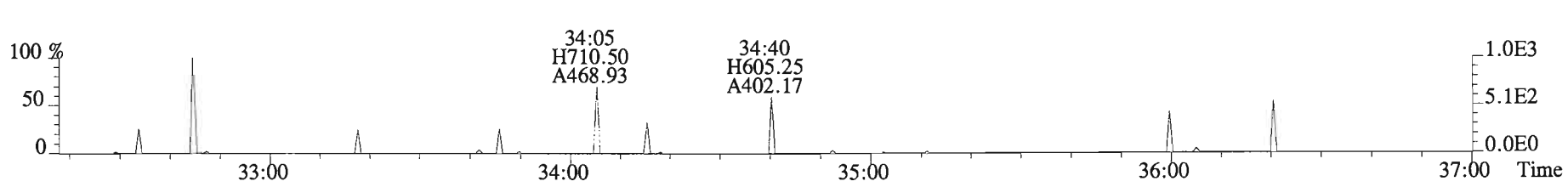
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



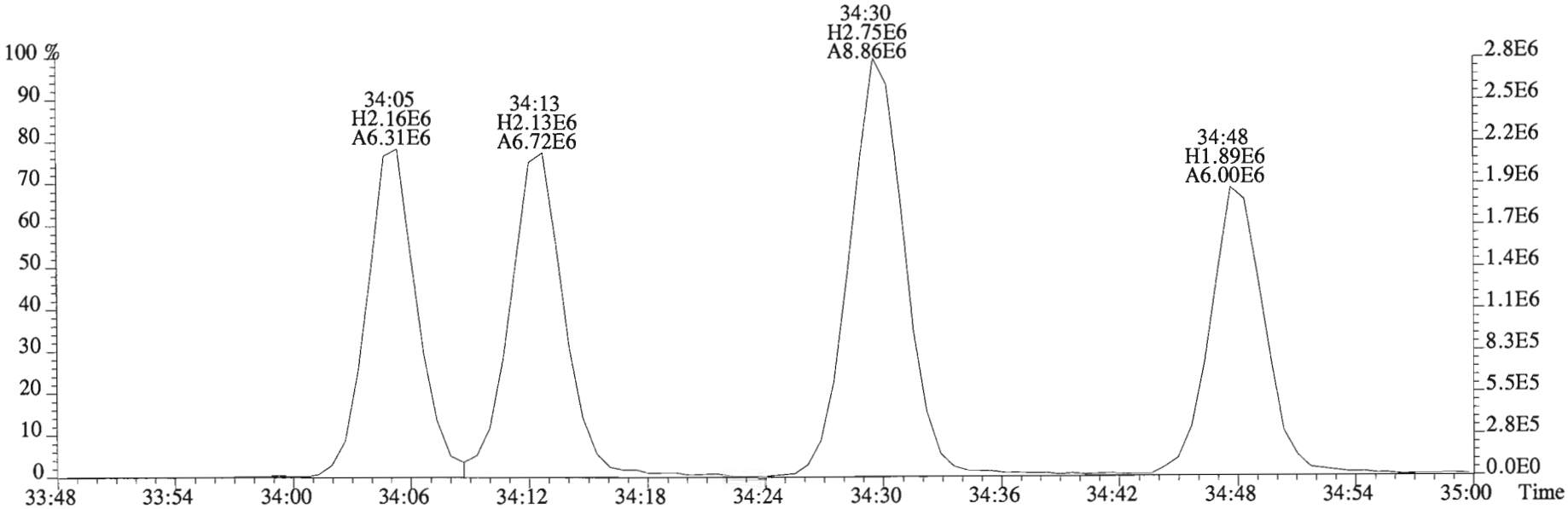
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



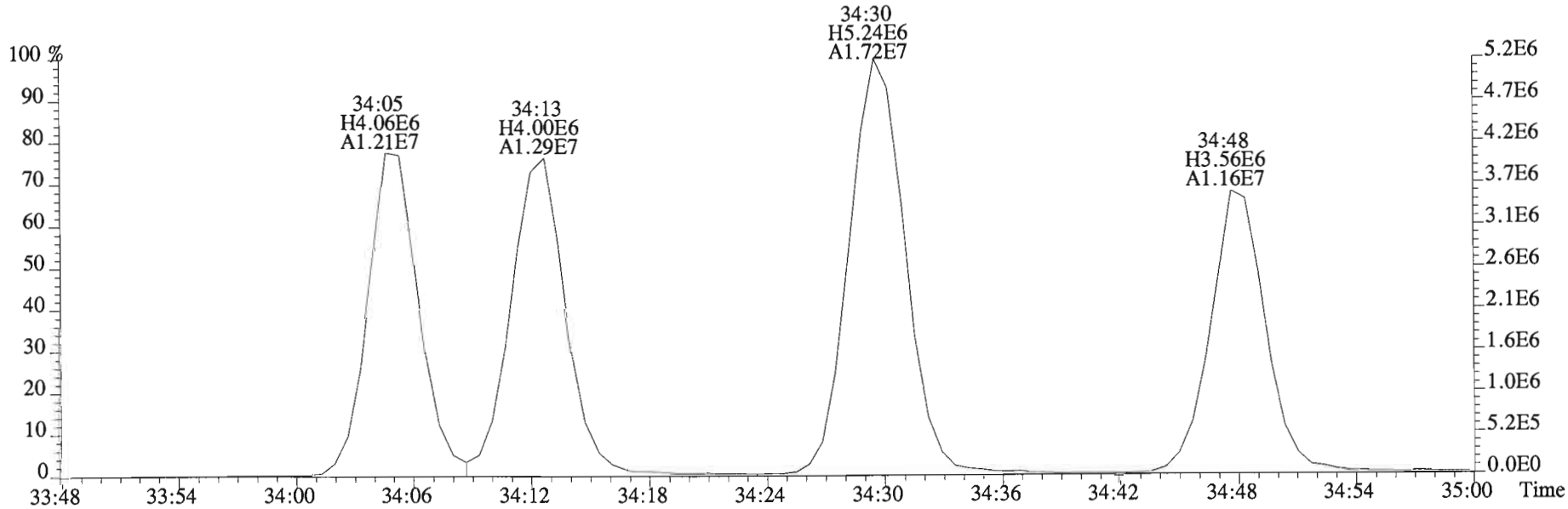
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



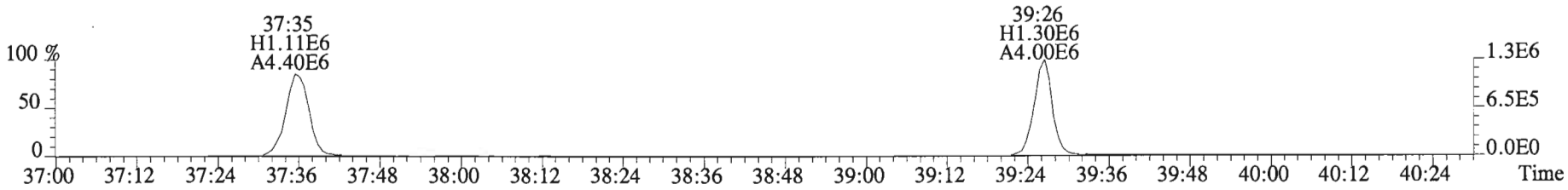
File:150311D1 #1-392 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



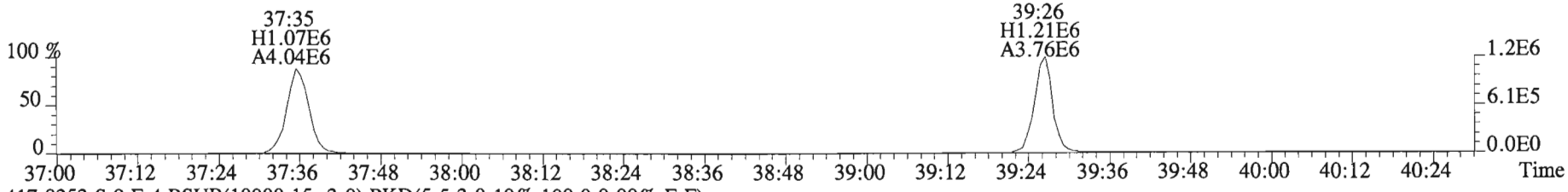
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



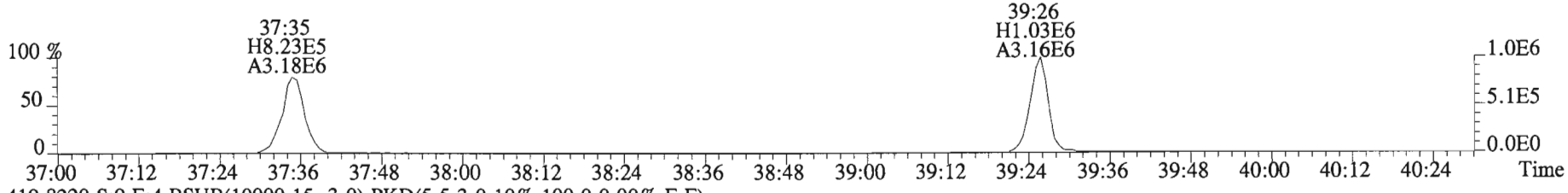
File:150311D1 #1-326 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



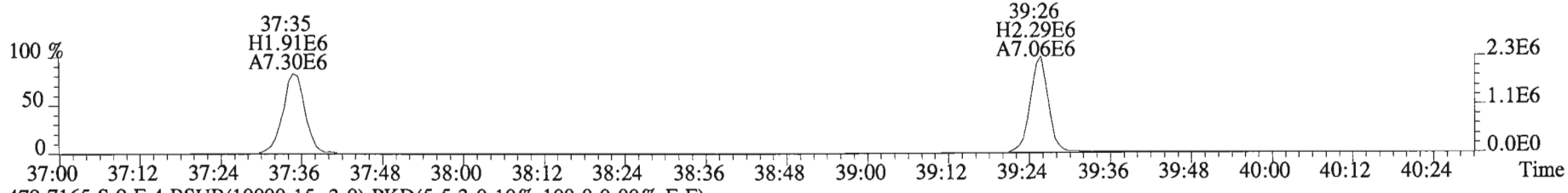
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



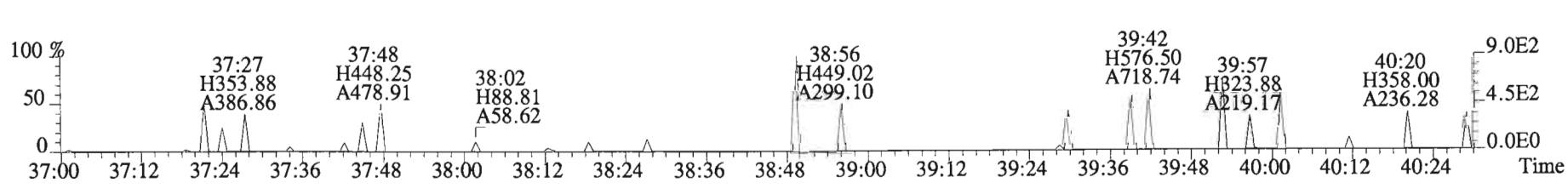
417.8253 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



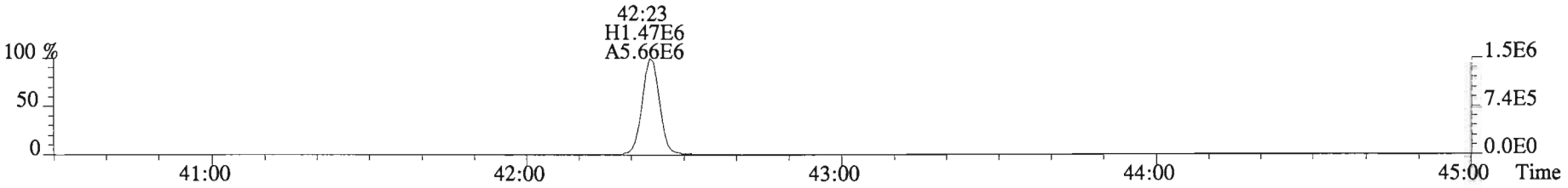
419.8220 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



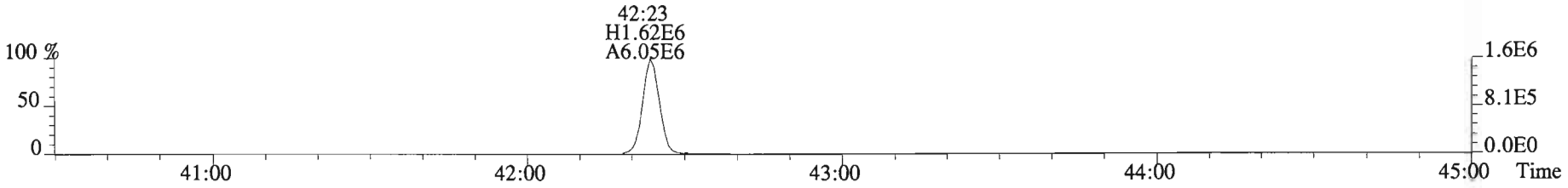
479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



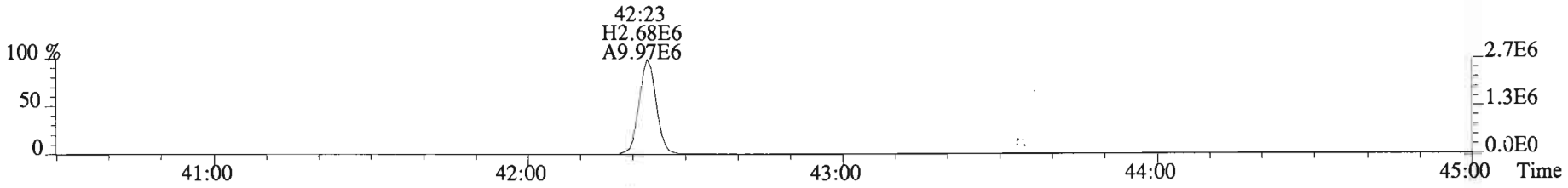
File:150311D1 #1-389 Acq:11-MAR-2015 17:17:25 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:B5C0037-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



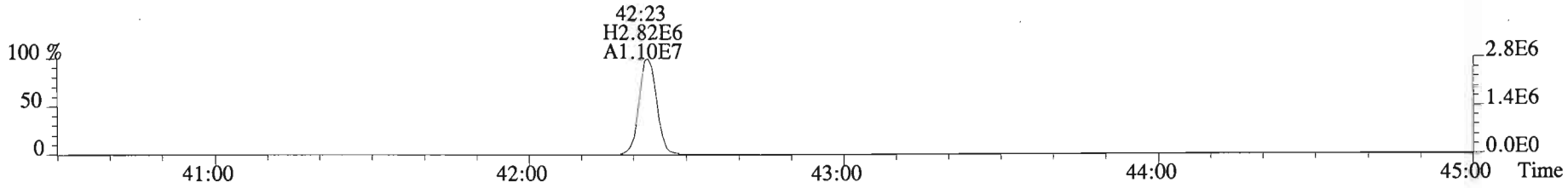
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



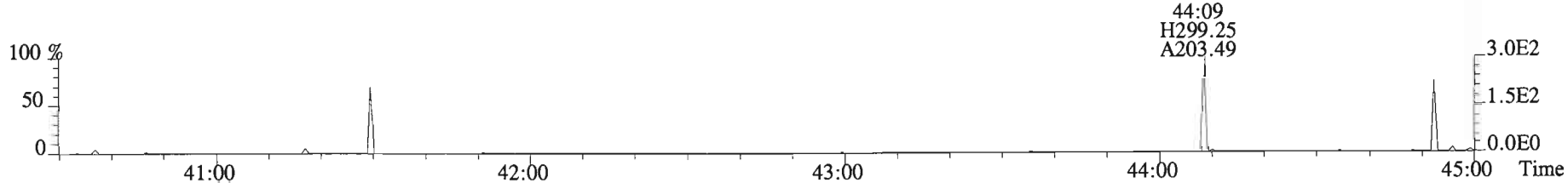
453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotF	*	*		545	2.5	1.11
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotF	*	*		925	2.5	1.78
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF	*	*		883	2.5	2.84
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF	*	*		1740	2.5	5.66
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		883	2.5	3.15
	1,2,3,4,6,7,8-HpCDD	4.43e+04	1.17	y	1.10	38:54	1.000	8.5370		*	2.5	*
	OCDD	2.59e+05	0.96	y	0.95	42:10	1.000	57.400		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotF	*	*		492	2.5	0.731
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotF	*	*		461	2.5	0.784
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotF	*	*		461	2.5	0.893
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF	*	*		1340	2.5	1.31
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		1340	2.5	1.40
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF	*	*		729	2.5	0.983
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		729	2.5	1.39
	1,2,3,4,6,7,8-HpCDF	3.75e+04	1.04	y	1.61	37:35	1.000	4.5614		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		1030	2.5	1.61
	OCDF	7.81e+04	0.99	y	1.10	42:24	1.000	12.748		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.33e+07	0.79	y	1.06	26:57	1.022	1323.3				
IS	13C-1,2,3,7,8-PeCDD	1.36e+07	0.63	y	1.18	31:38	1.200	1219.3				
IS	13C-1,2,3,4,7,8-HxCDD	1.06e+07	1.22	y	0.72	35:05	1.017	1200.3				
IS	13C-1,2,3,6,7,8-HxCDD	1.06e+07	1.22	y	0.74	35:05	1.017	1173.8				
IS	13C-1,2,3,7,8,9-HxCDD	1.22e+07	1.27	y	0.85	35:22	1.025	1169.6				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.39e+06	1.04	y	0.65	38:53	1.127	1172.3				
IS	13C-OCDD	1.90e+07	0.89	y	0.76	42:10	1.222	2032.7				
IS	13C-2,3,7,8-TCDF	2.16e+07	0.76	y	0.92	26:08	0.991	1457.1				
IS	13C-1,2,3,7,8-PeCDF	2.14e+07	1.60	y	0.92	30:25	1.154	1439.5				
IS	13C-2,3,4,7,8-PeCDF	2.12e+07	1.65	y	0.93	31:21	1.189	1409.6				
IS	13C-1,2,3,4,7,8-HxCDF	1.65e+07	0.53	y	0.98	34:05	0.988	1371.0				
IS	13C-1,2,3,6,7,8-HxCDF	1.78e+07	0.51	y	1.08	34:12	0.992	1338.5				
IS	13C-2,3,4,6,7,8-HxCDF	1.56e+07	0.53	y	1.03	34:48	1.009	1240.6				
IS	13C-1,2,3,7,8,9-HxCDF	1.25e+07	0.50	y	0.86	35:45	1.036	1186.9				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.02e+07	0.43	y	0.72	37:35	1.089	1152.1				
IS	13C-1,2,3,4,7,8,9-HpCDF	9.47e+06	0.42	y	0.70	39:25	1.143	1107.6				
IS	13C-OCDF	2.23e+07	0.90	y	0.85	42:23	1.229	2142.0				
C/Up	37Cl-2,3,7,8-TCDD	8.82e+06			1.12	26:58	1.023	833.18				
RS/RT	13C-1,2,3,4-TCDD	1.89e+07	0.79	y	1.00	26:22	*	1998.6				
RS	13C-1,2,3,4-TCDF	3.23e+07	0.76	y	1.00	24:50	*	1998.6				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.45e+07	0.52	y	1.00	34:30	*	1998.6				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		545	1.11
Total Penta-Dioxins	*	*		925	1.78
Total Hexa-Dioxins	*	*		1740	5.82
Total Hepta-Dioxins	19.6	19.6		*	*
Total Tetra-Furans	*	*		662	0.983
Total Penta-Furans	0.0000	0.0000		709	1.29
Total Hexa-Furans	3.15	3.15		*	*
Total Hepta-Furans	11.4	11.4		*	*

	Rec	Qual
IS	66.2	
IS	61.0	
IS	60.1	
IS	58.7	
IS	58.5	
IS	58.7	
IS	50.9	
IS	72.9	
IS	72.0	
IS	70.5	
IS	68.6	
IS	67.0	
IS	62.1	
IS	59.4	
IS	57.6	
IS	55.4	
IS	53.6	
C/Up	104	

Integrations by Analyst: MJ Date: 3/12/15

Reviewed by Analyst: CT Date: 3/16/15

Totals class: HpCDD EMPC Entry #: 25

Run: 10 File: 150311D2 S: 5 I: 1 F: 4
Acquired: 12-MAR-15 03:17:23 Processed: 12-MAR-15 09:17:32

Total Concentration: 19.566 Unnamed Concentration: 11.029

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:59	2.920e+04	2.806e+04	1.04 y	5.727e+04	11.029	
38:54	2.387e+04	2.046e+04	1.17 y	4.433e+04	8.5370	1,2,3,4,6,7,8-HpCDD

Totals class: HxCDF EMPC Entry #: 33

Run: 10 File: 150311D2 S: 5 I: 1 F: 3
Acquired: 12-MAR-15 03:17:23 Processed: 12-MAR-15 09:17:32

Total Concentration: 3.1504 Unnamed Concentration: 3.150

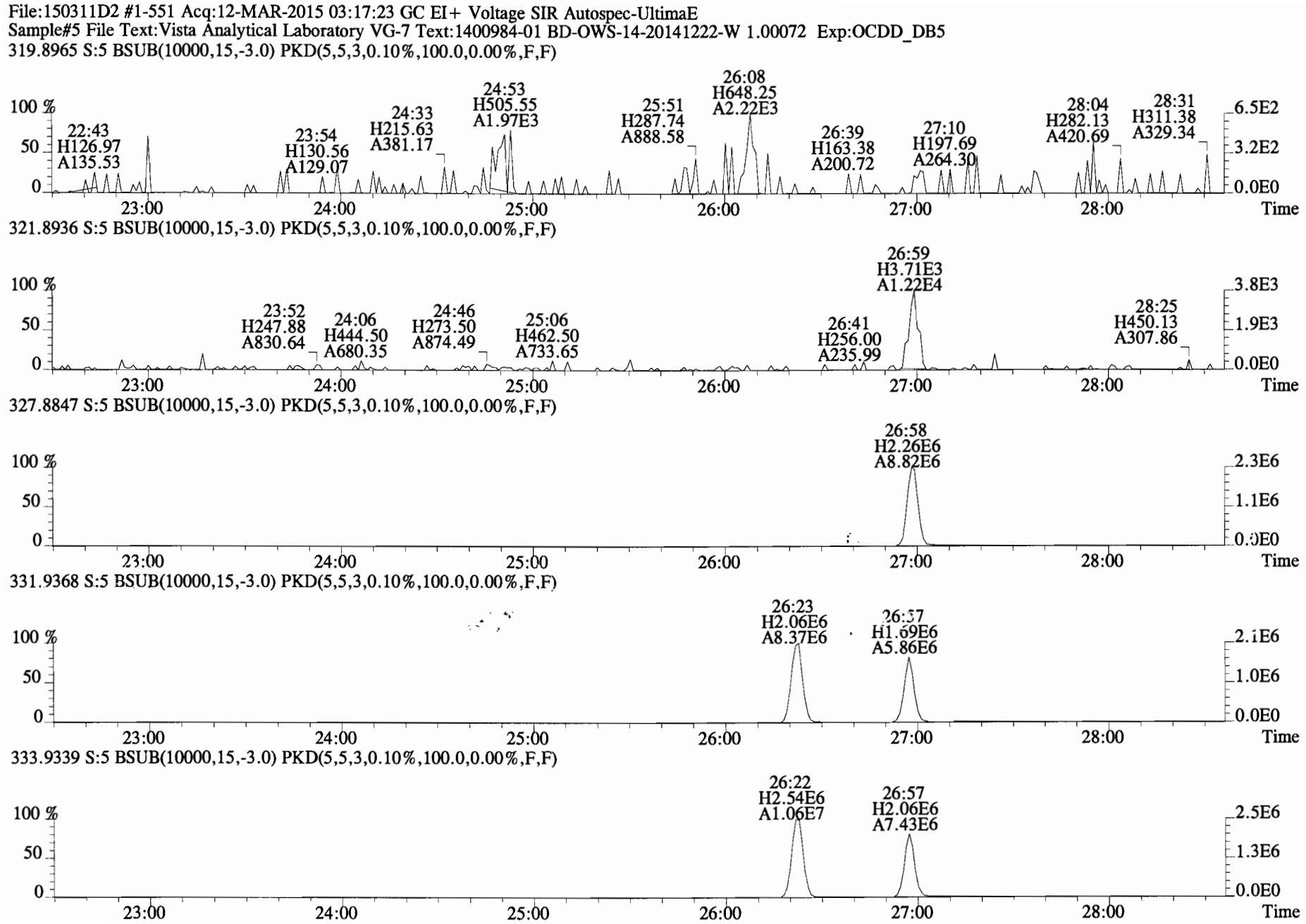
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:04	1.037e+04	9.749e+03	1.06 y	2.012e+04	2.0113	
33:37	6.510e+03	4.884e+03	1.33 y	1.139e+04	1.1391	

Totals class: HpCDF EMPC Entry #: 35

Run: 10 File: 150311D2 S: 5 I: 1 F: 4
Acquired: 12-MAR-15 03:17:23 Processed: 12-MAR-15 09:17:32

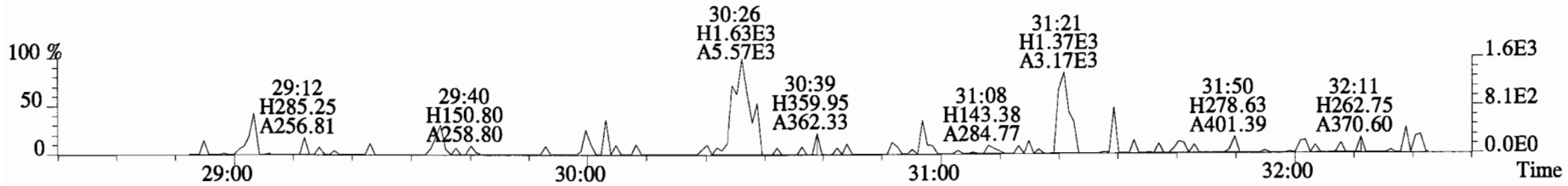
Total Concentration: 11.390 Unnamed Concentration: 6.828

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:35	1.909e+04	1.842e+04	1.04 y	3.751e+04	4.5614	1,2,3,4,6,7,8-HpCDF
38:12	2.814e+04	2.458e+04	1.14 y	5.272e+04	6.8283	

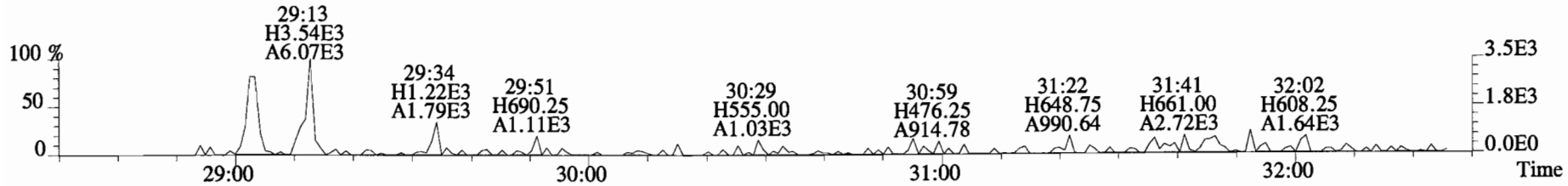

File:150311D2 #1-551 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:43 H126.97 A135.53
23:54 H130.56 A129.07
24:33 H215.63 A381.17
24:53 H505.55 A1.97E3
25:51 H287.74 A888.58
26:08 H648.25 A2.22E3
26:39 H163.38 A200.72
27:10 H197.69 A264.30
28:04 H282.13 A420.69
28:31 H311.38 A329.34
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:52 H247.88 A830.64
24:06 H444.50 A680.35
24:46 H273.50 A874.49
25:06 H462.50 A733.65
26:41 H256.00 A235.99
26:59 H3.71E3 A1.22E4
28:25 H450.13 A307.86
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:58 H2.26E6 A8.82E6
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:23 H2.06E6 A8.37E6
26:37 H1.69E6 A5.86E6
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:22 H2.54E6 A1.06E7
26:57 H2.06E6 A7.43E6
100 %
50
0
23:00
24:00
25:00
26:00
27:00
28:00
Time
6.5E2
3.2E2
0.0E0
3.8E3
1.9E3
2.3E6
1.1E6
2.1E6
1.0E6
2.5E6
1.3E6

File:150311D2 #1-251 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5

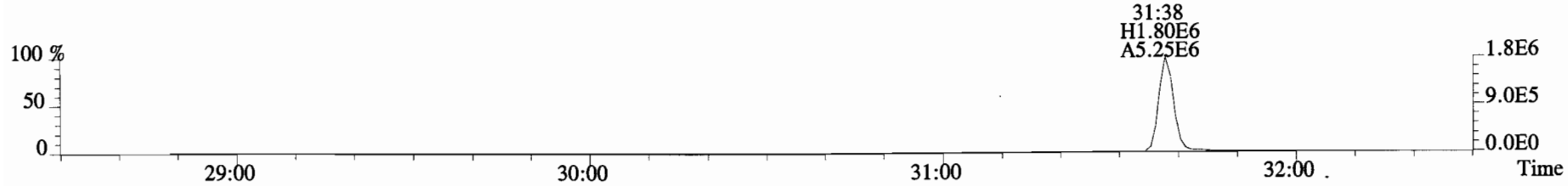
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



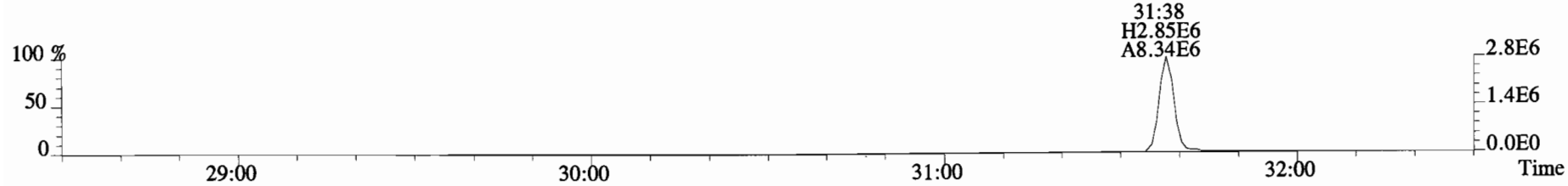
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



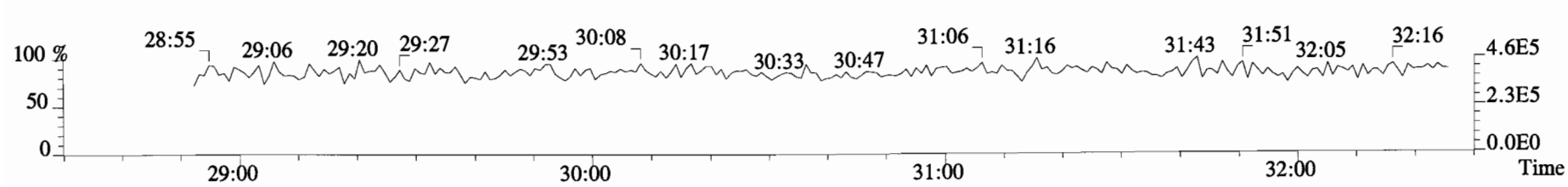
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



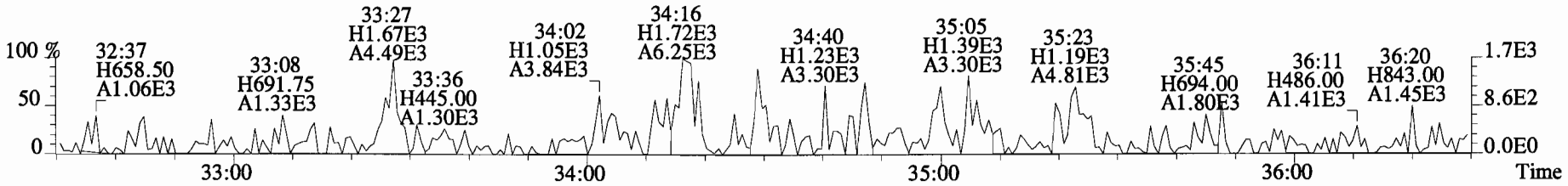
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



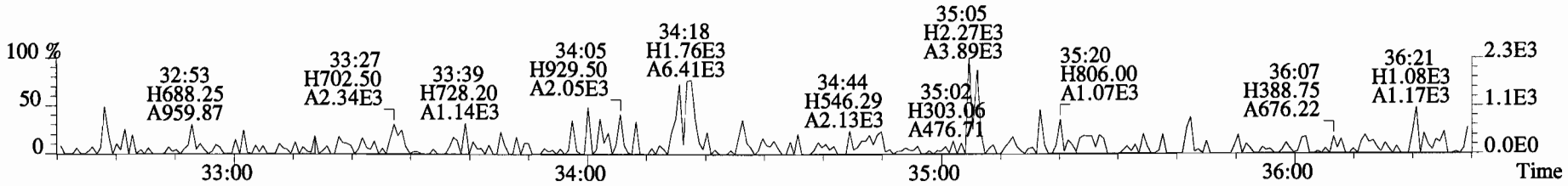
366.9792 S:5 F:2



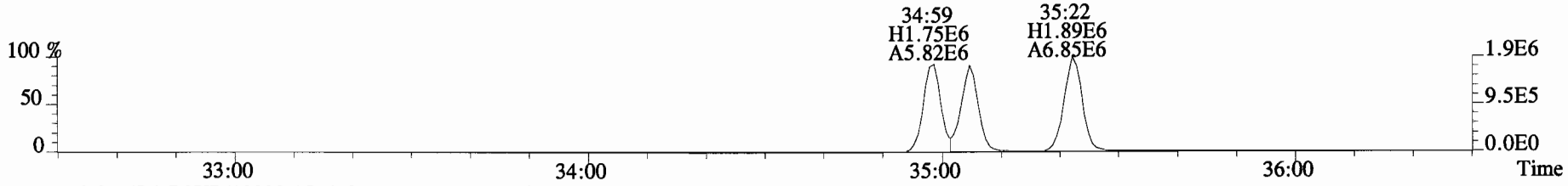
File:150311D2 #1-392 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



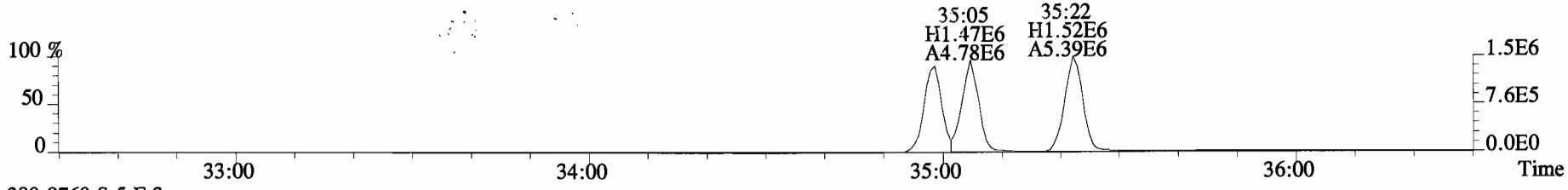
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



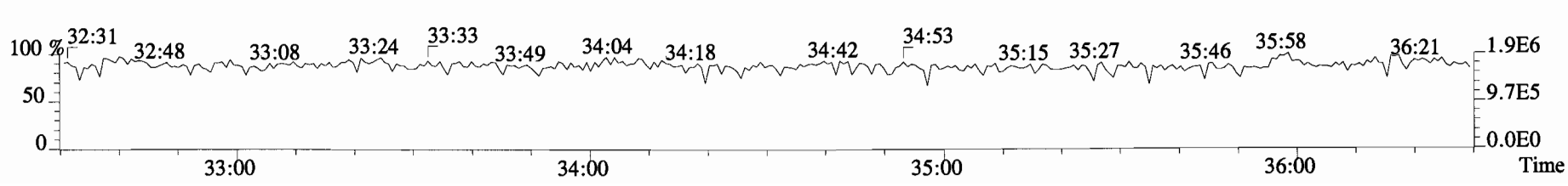
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



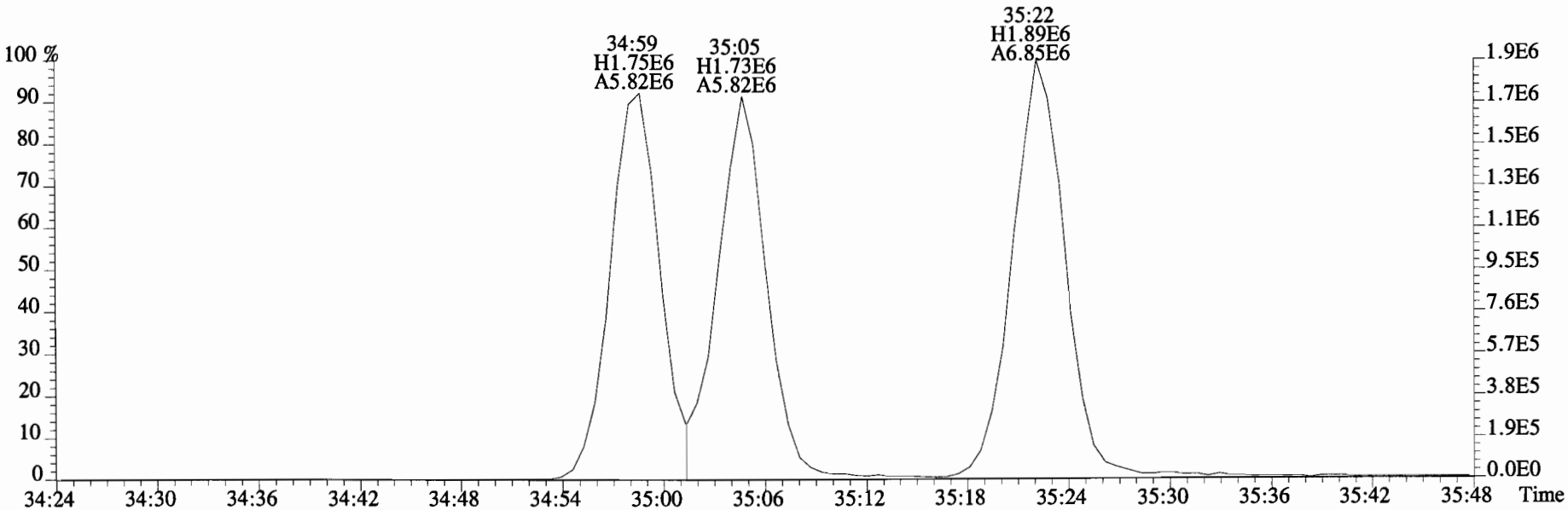
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



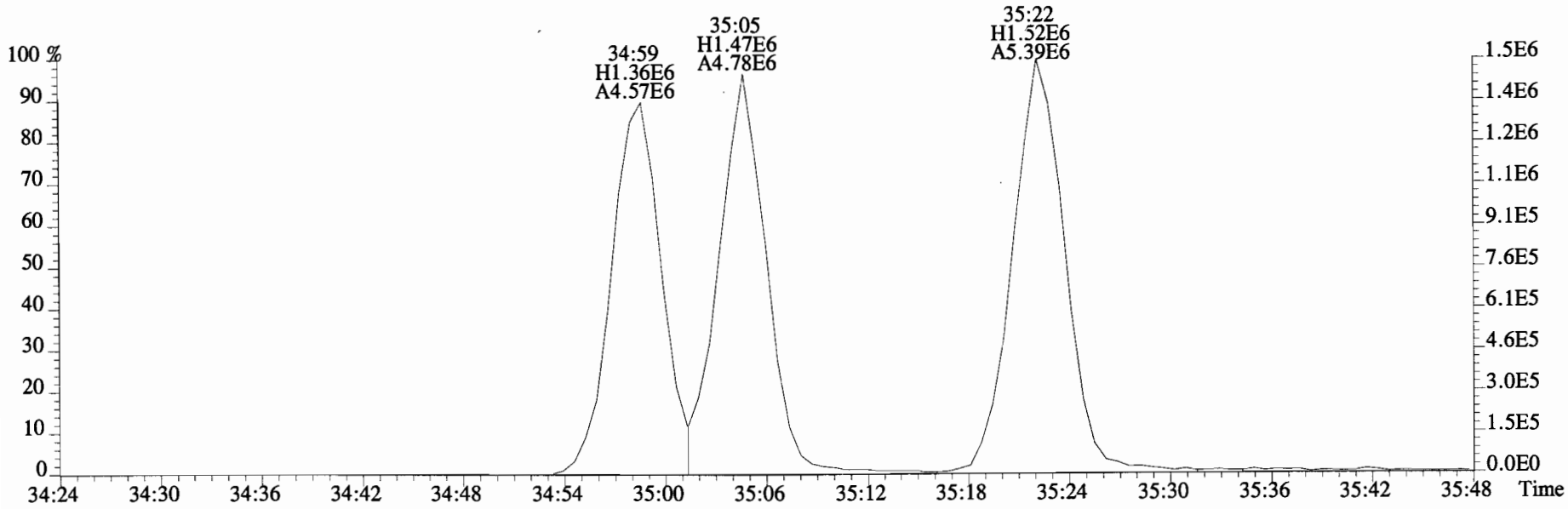
380.9760 S:5 F:3



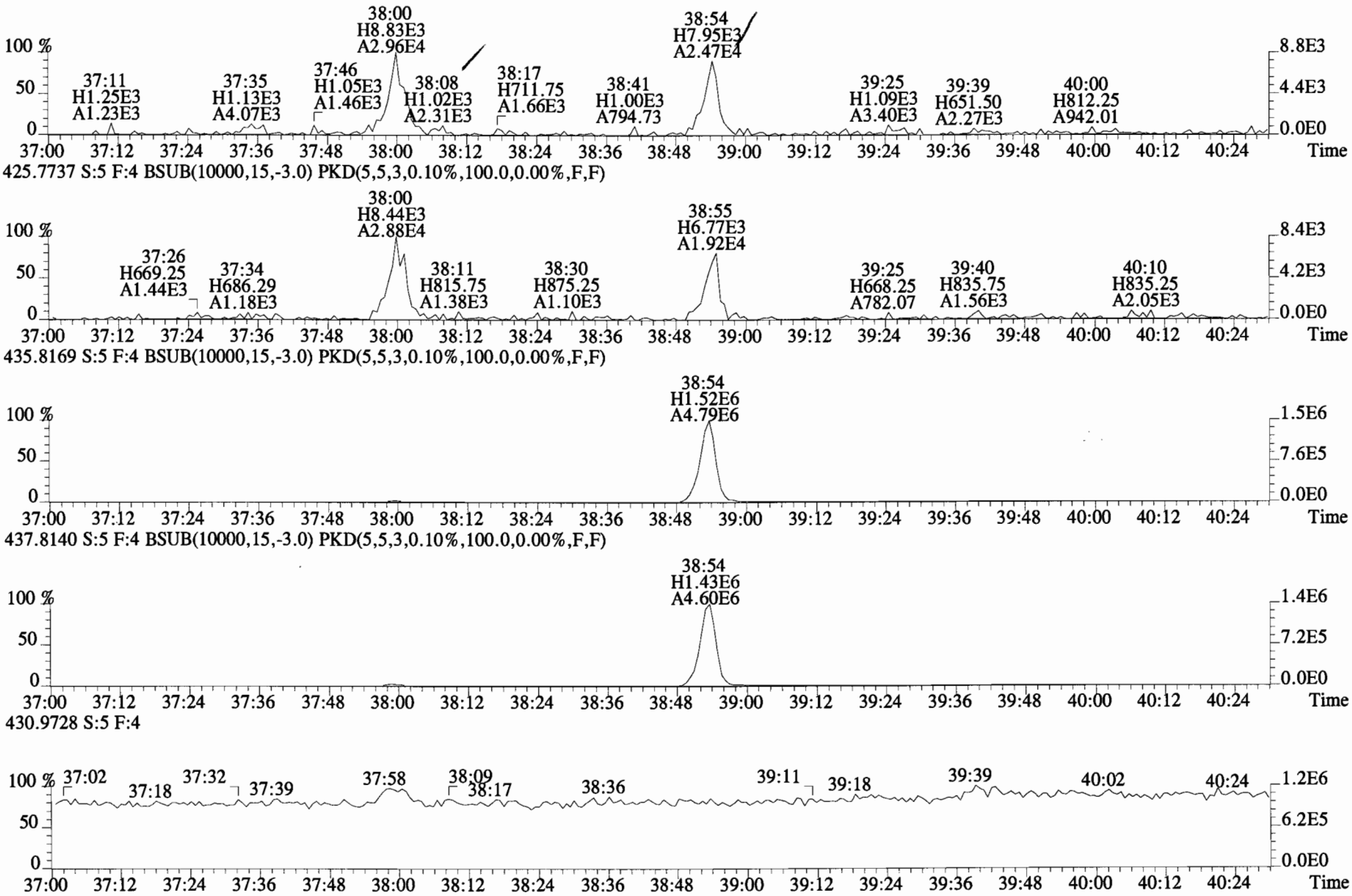
File:150311D2 #1-392 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



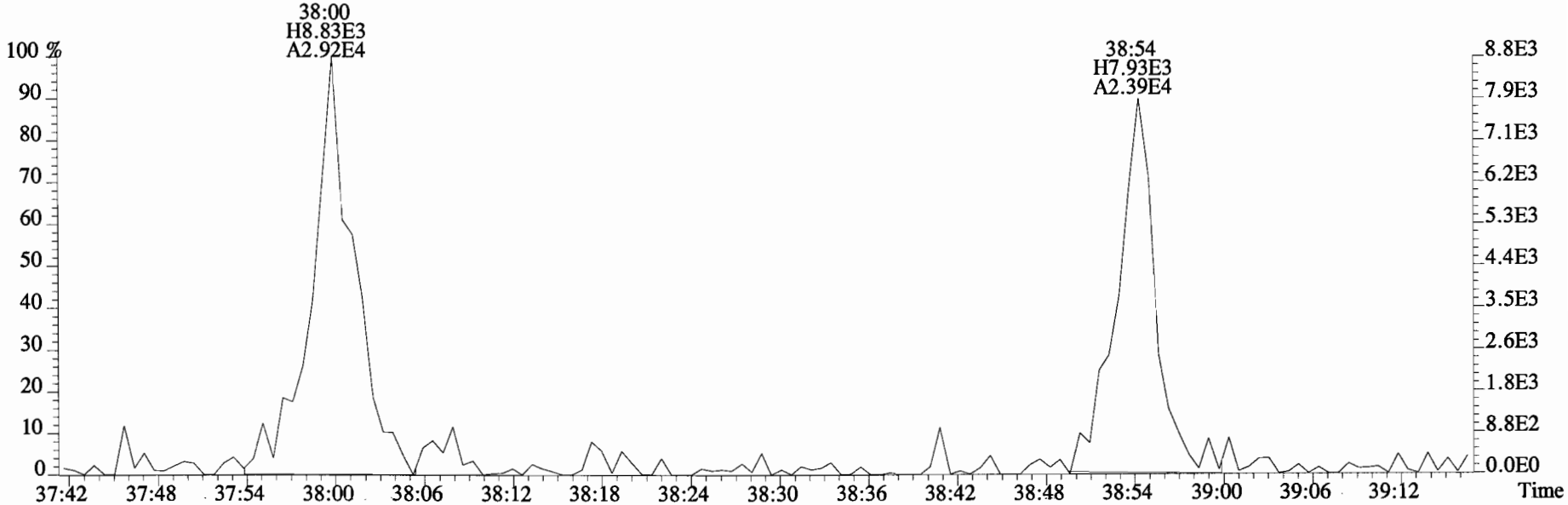
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



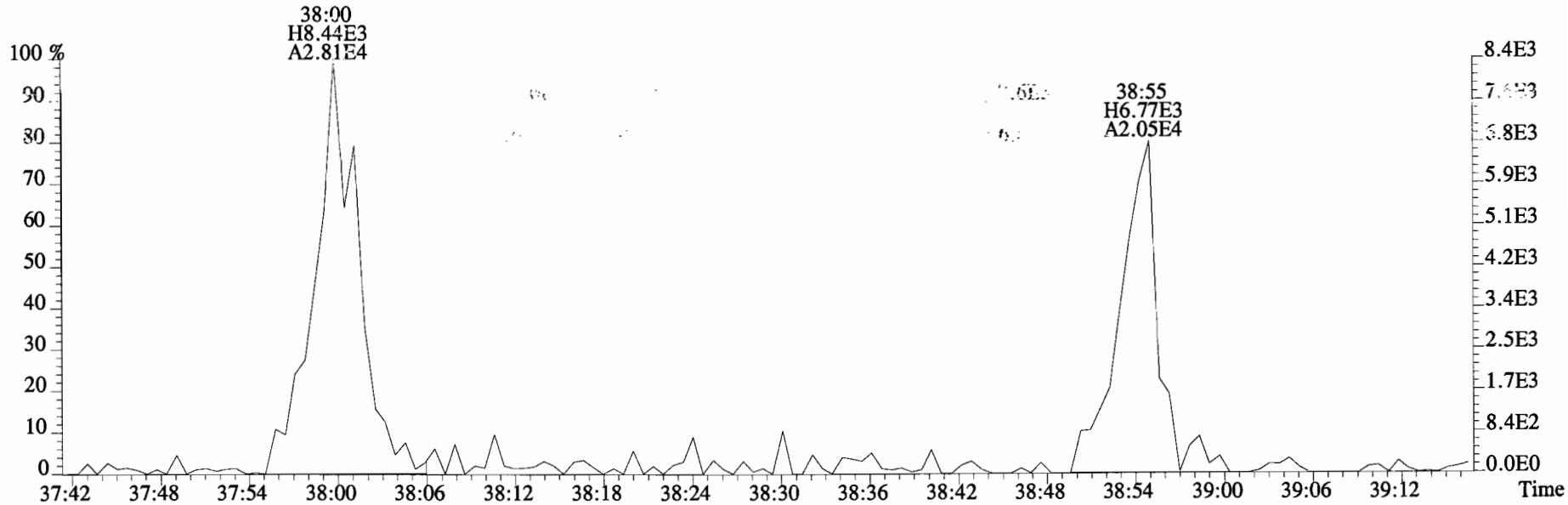
File:150311D2 #1-326 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5



File:150311D2 #1-326 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

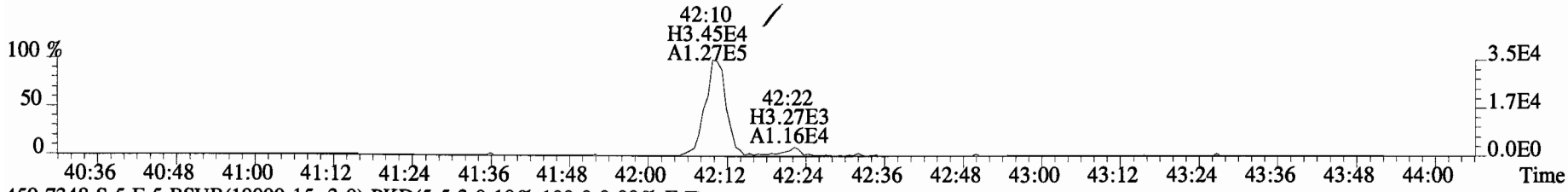


425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

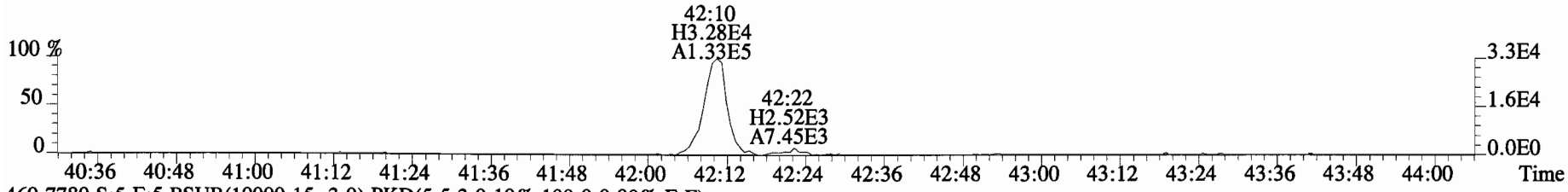


File:150311D2 #1-388 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5

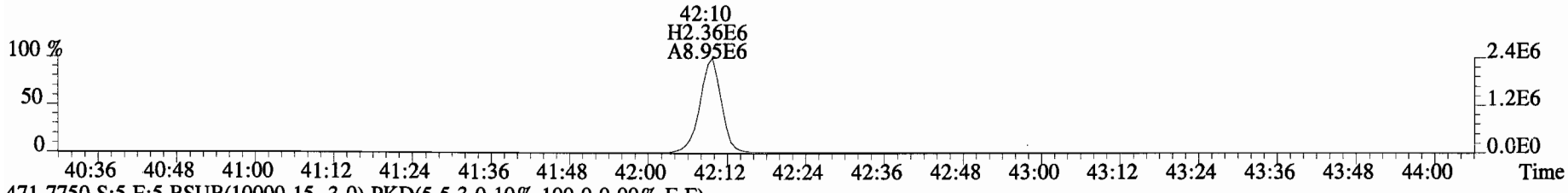
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



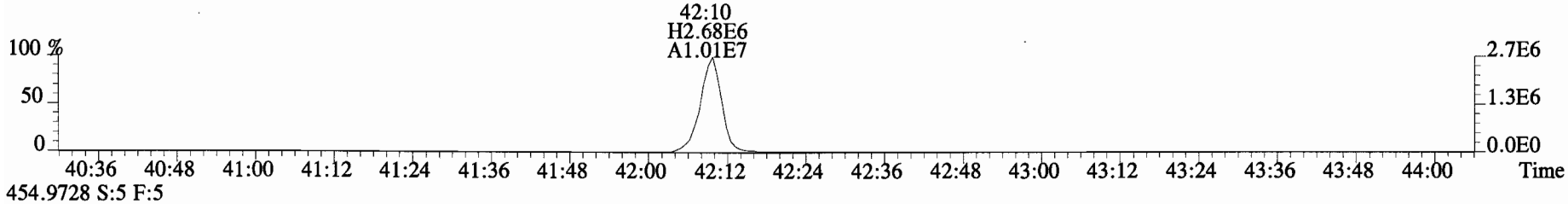
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



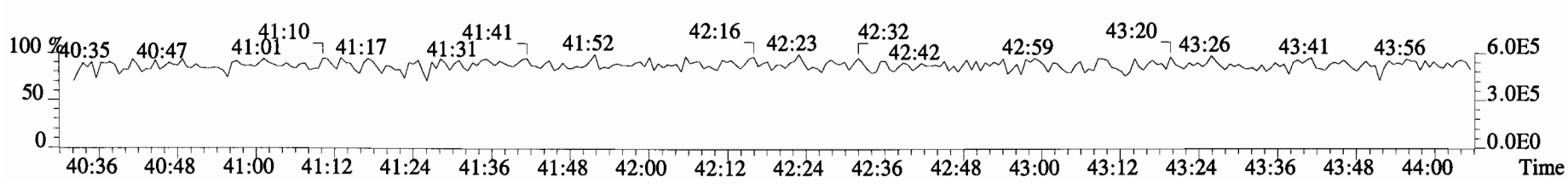
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

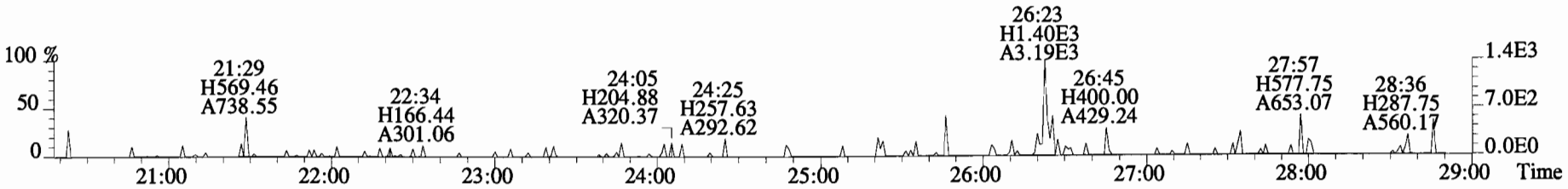


454.9728 S:5 F:5

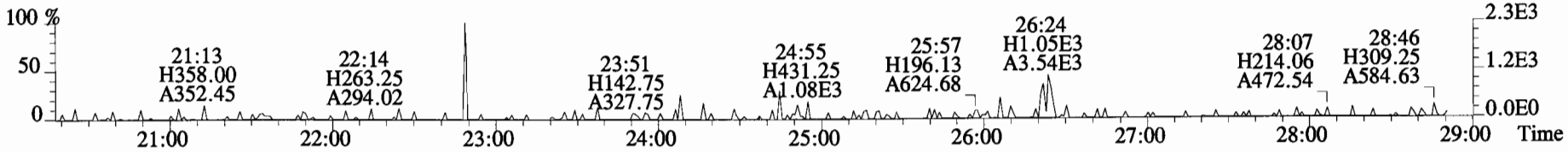


File:150311D2 #1-551 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5

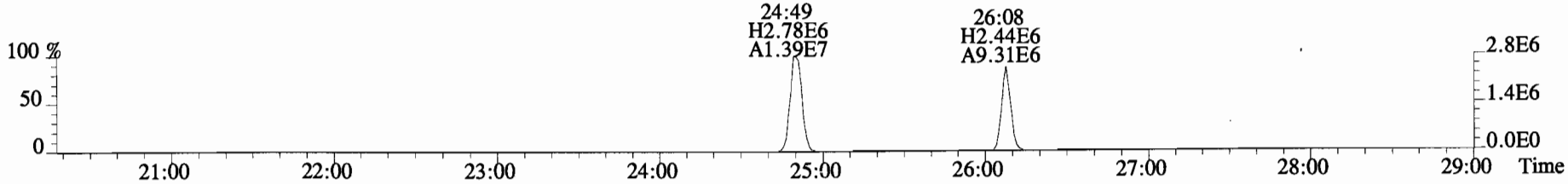
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



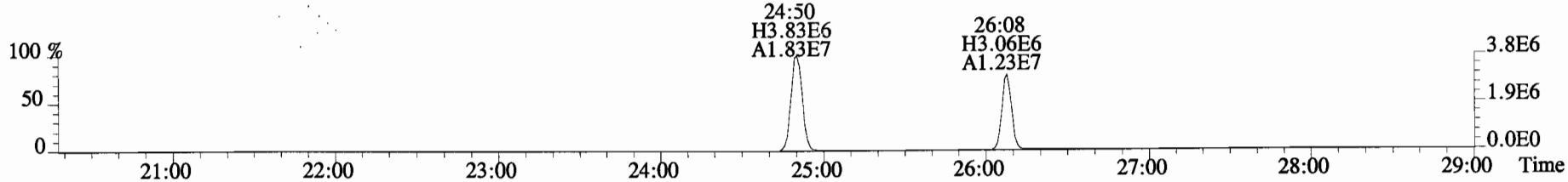
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



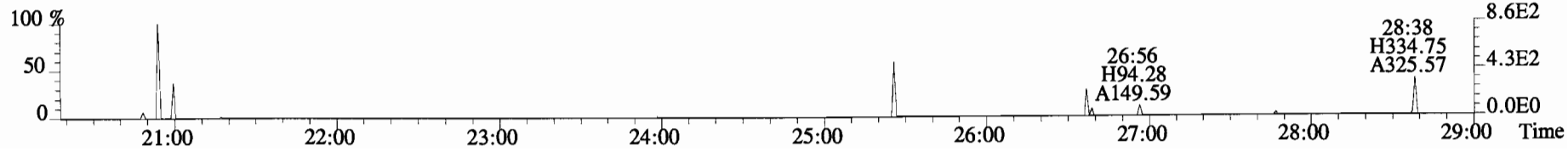
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



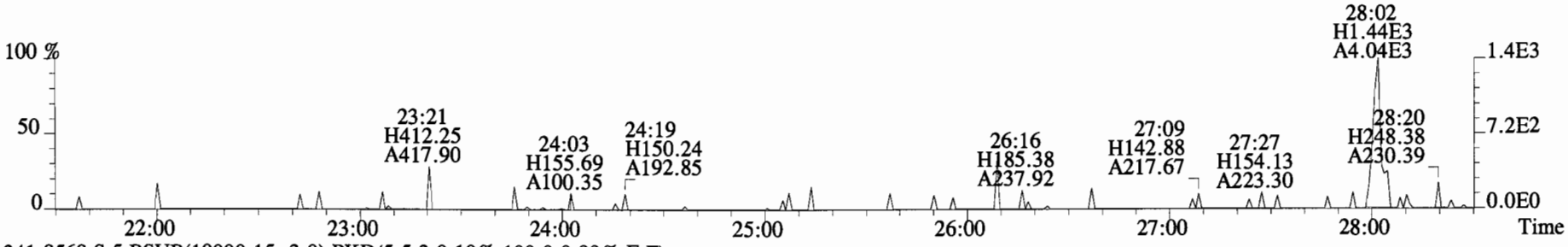
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



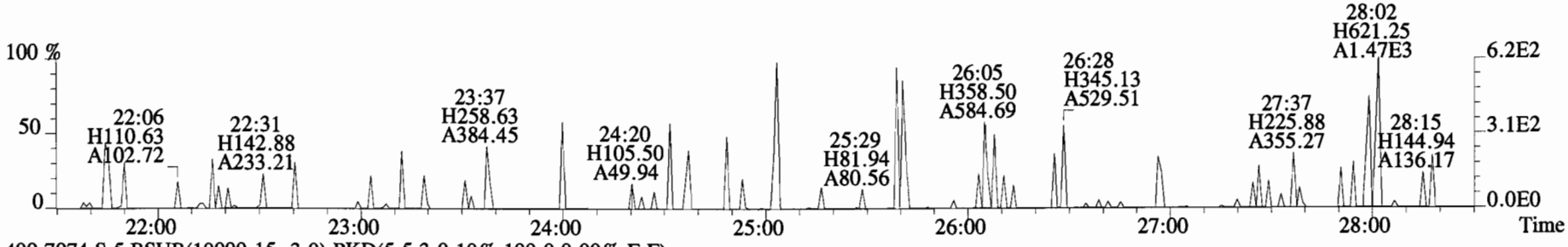
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



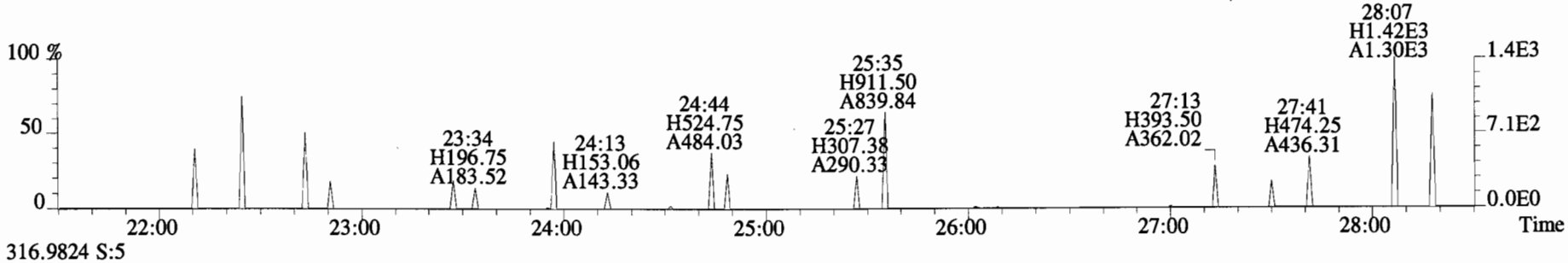
File:150311D2 #1-551 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



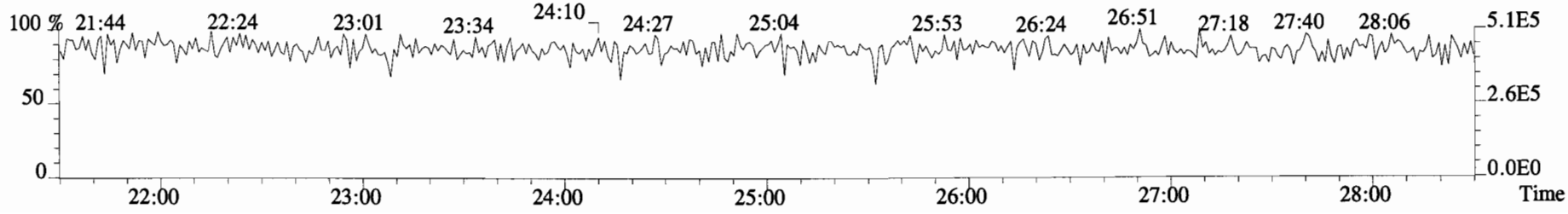
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



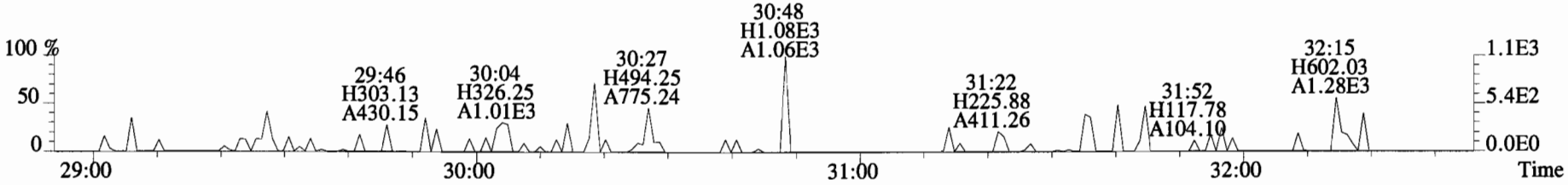
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



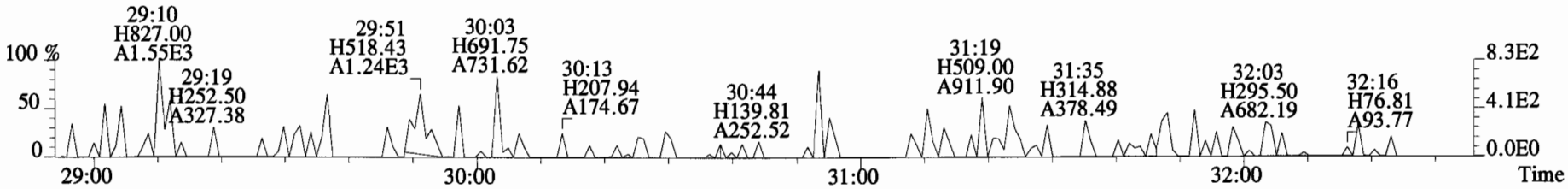
316.9824 S:5



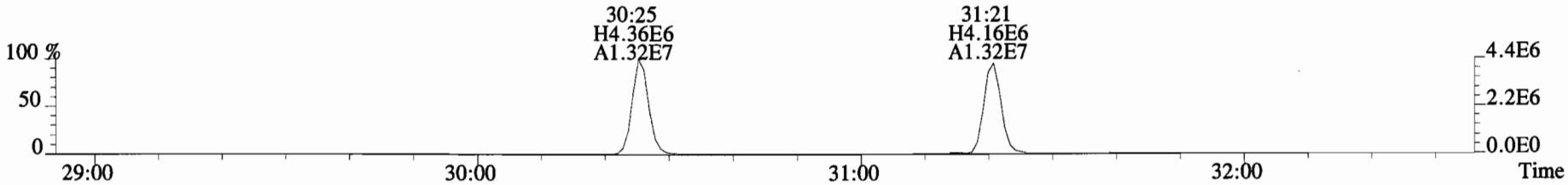
File:150311D2 #1-251 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



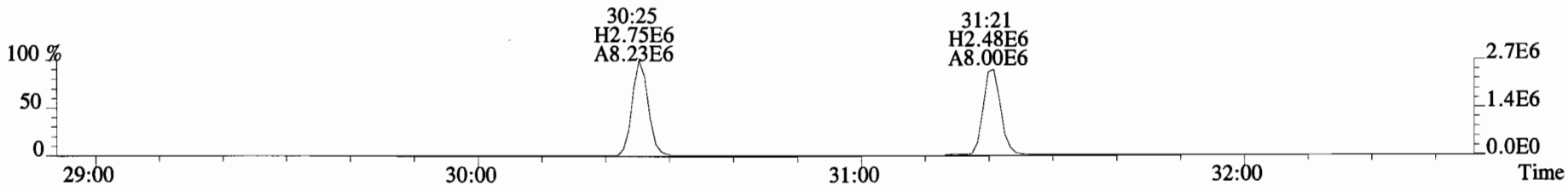
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



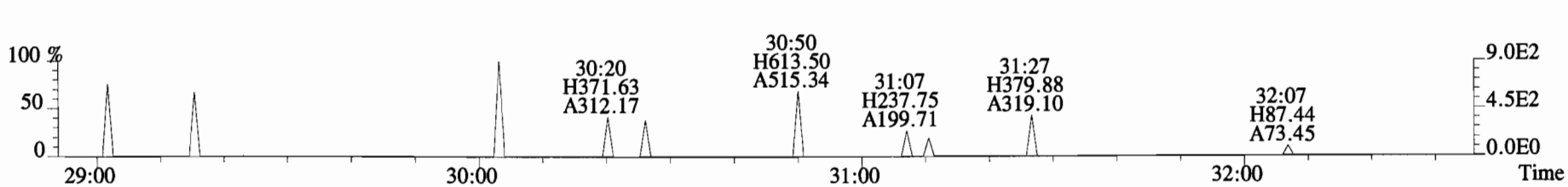
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



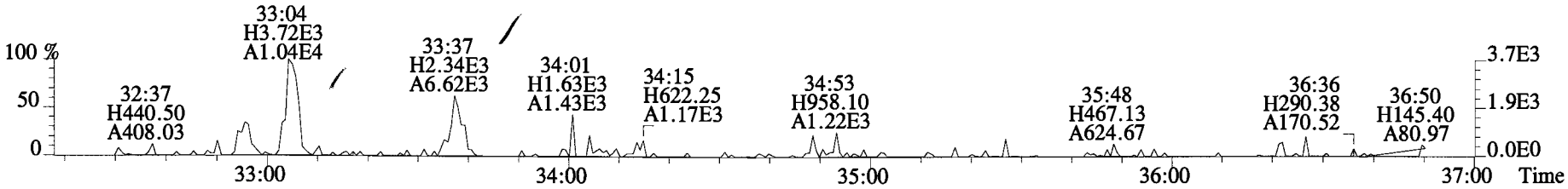
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



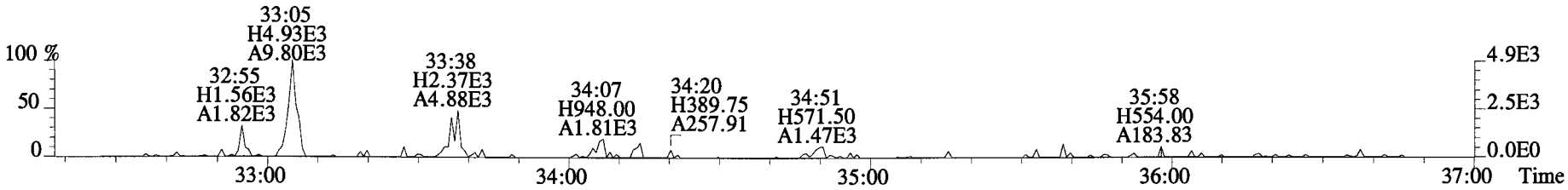
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



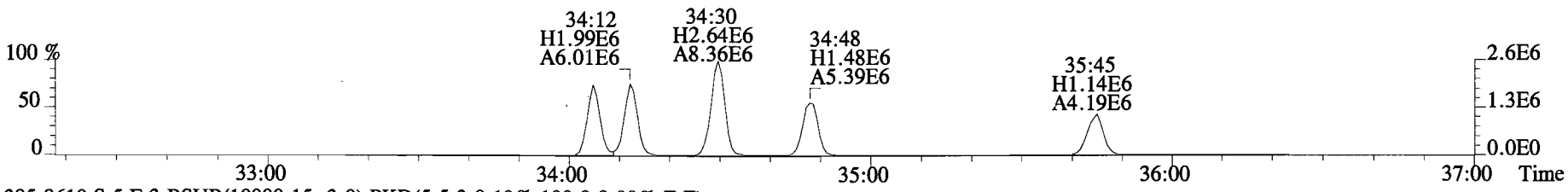
File:150311D2 #1-392 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



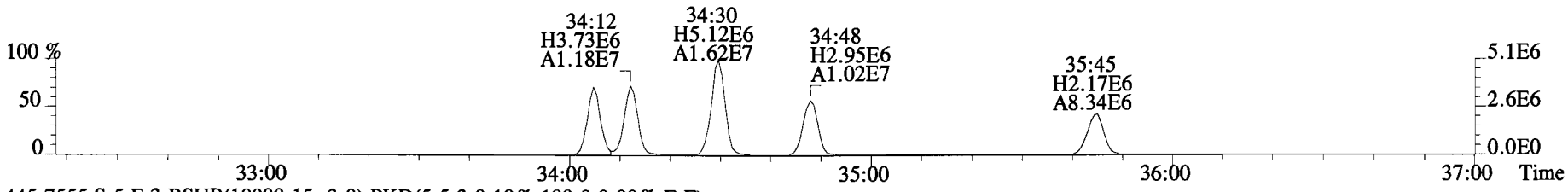
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



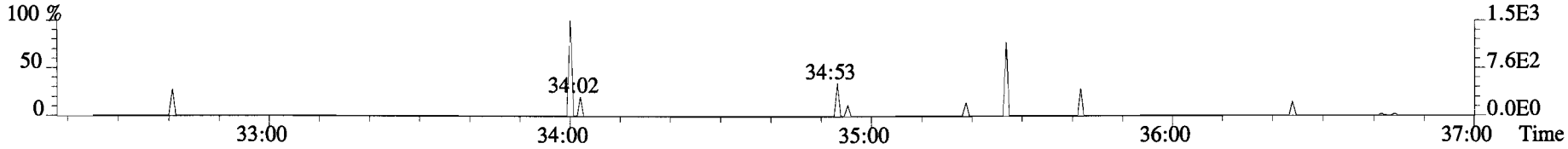
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



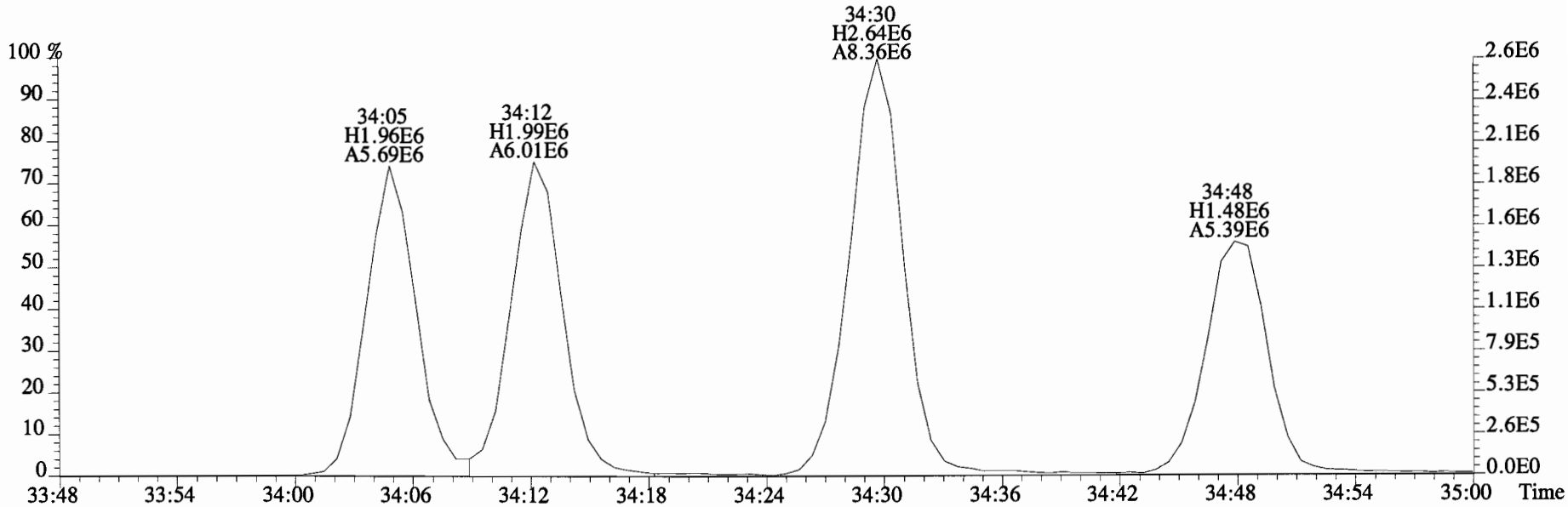
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



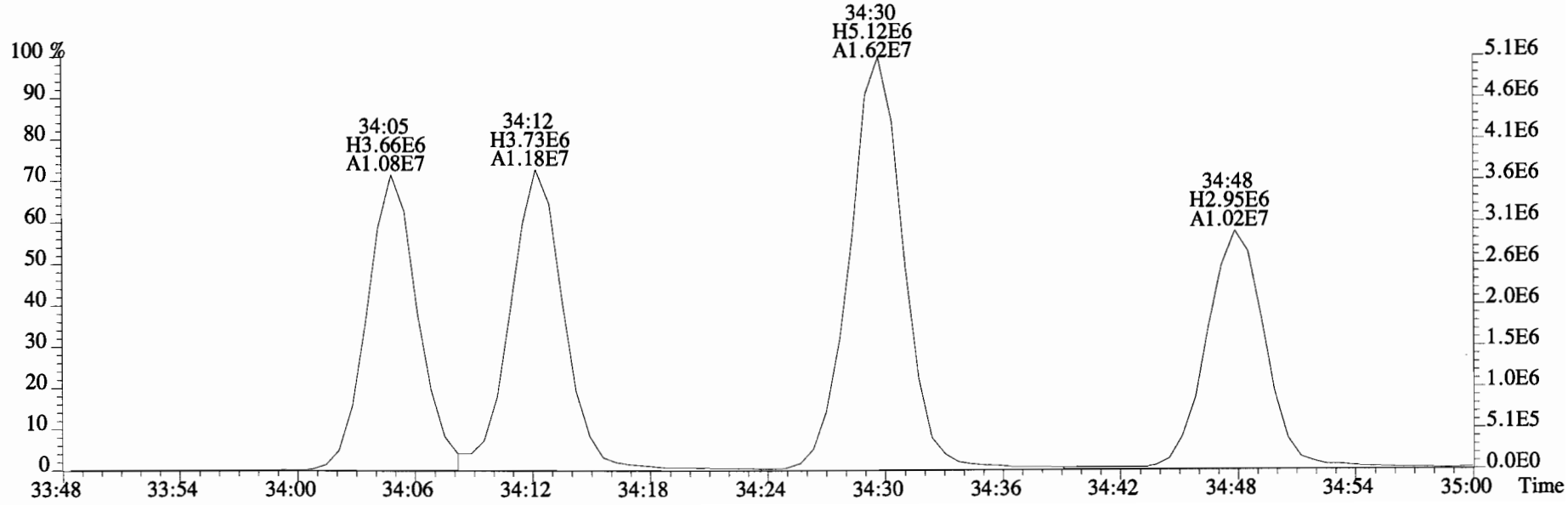
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



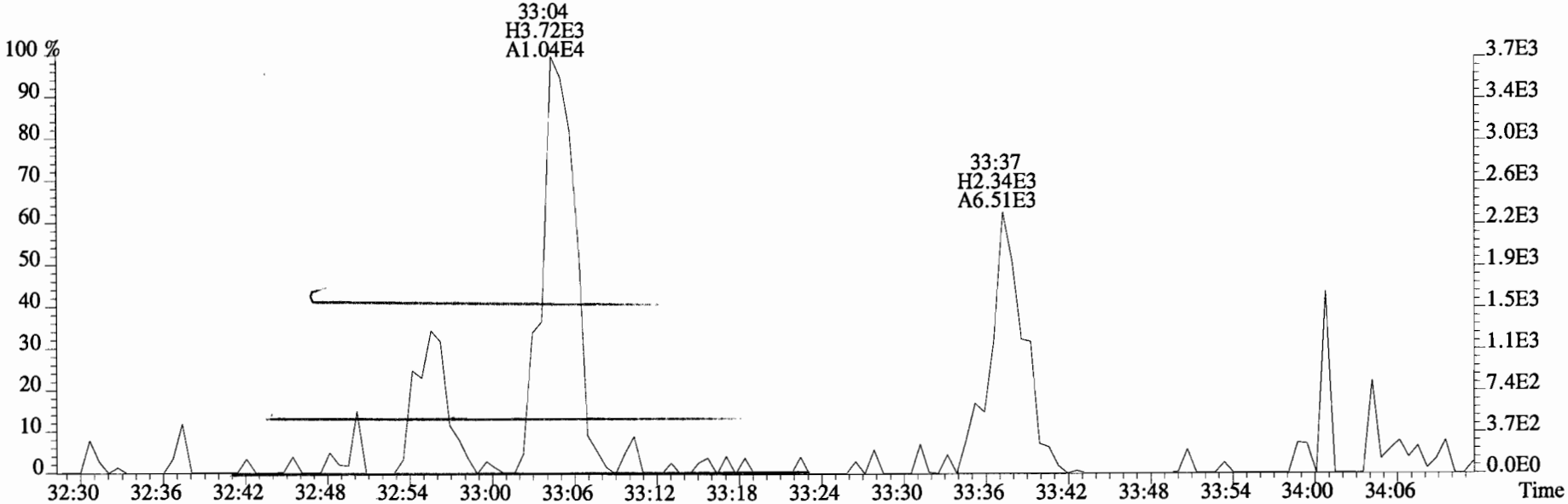
File:150311D2 #1-392 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



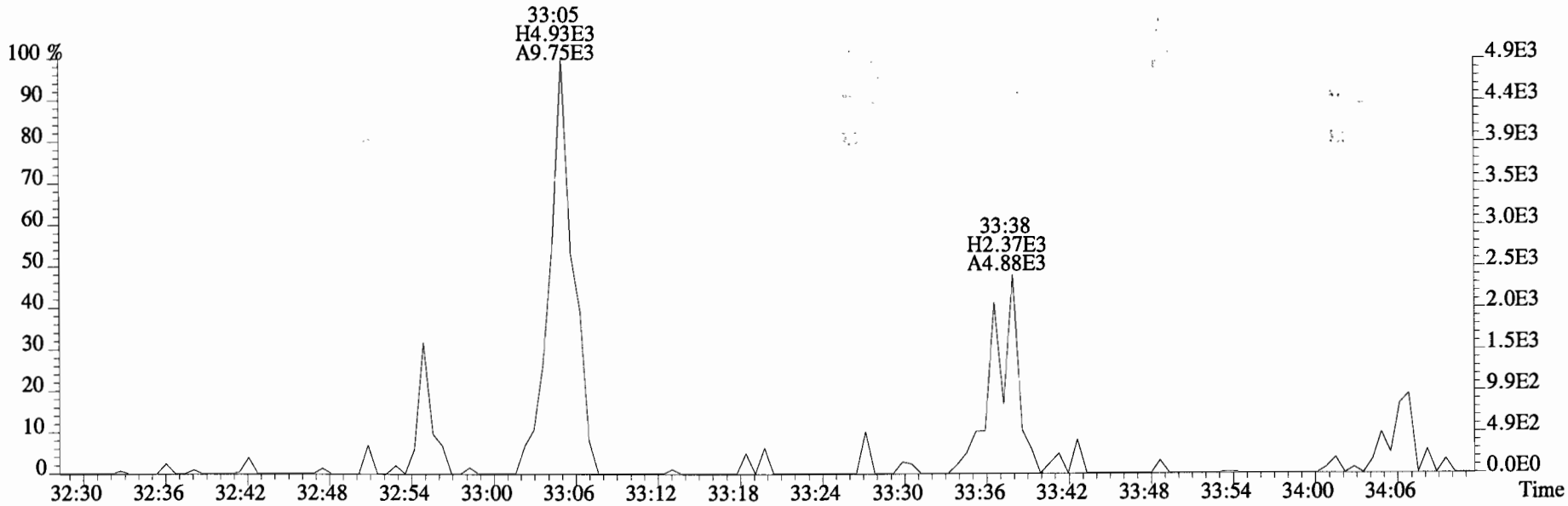
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



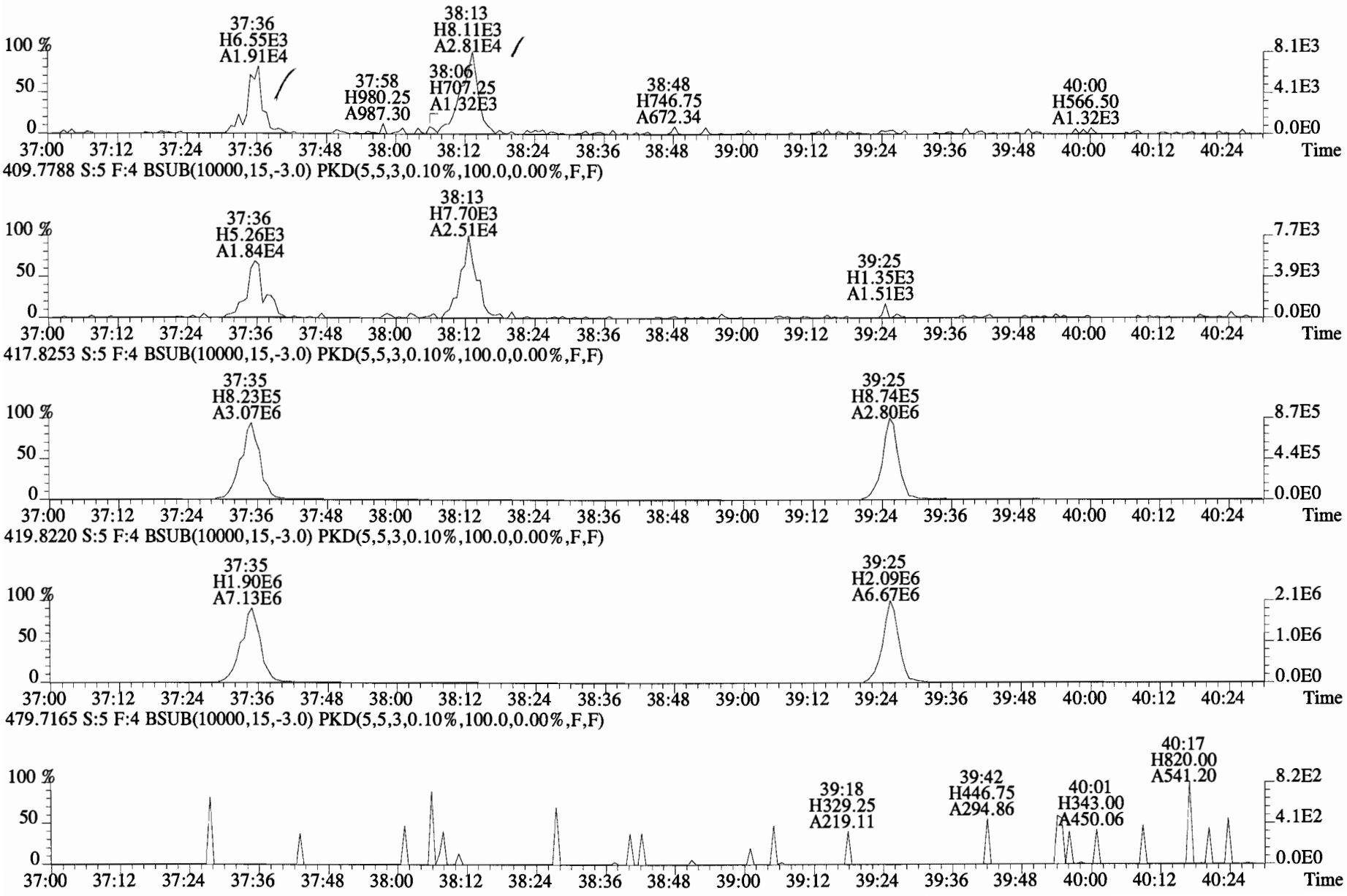
File:150311D2 #1-392 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



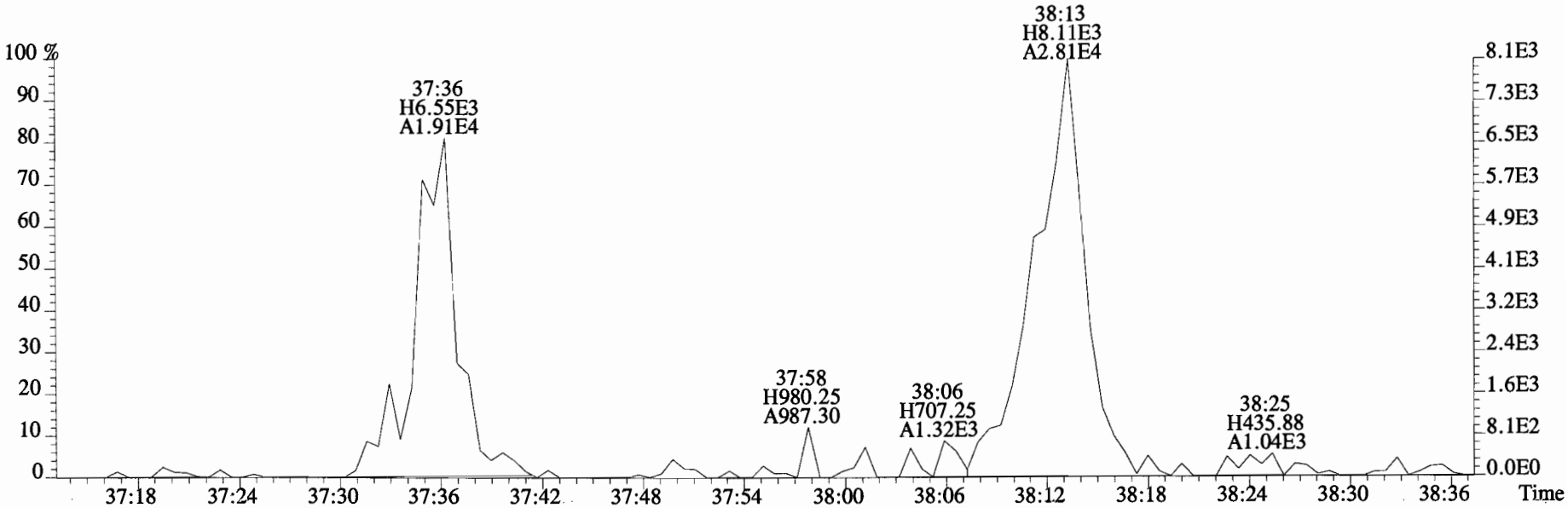
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



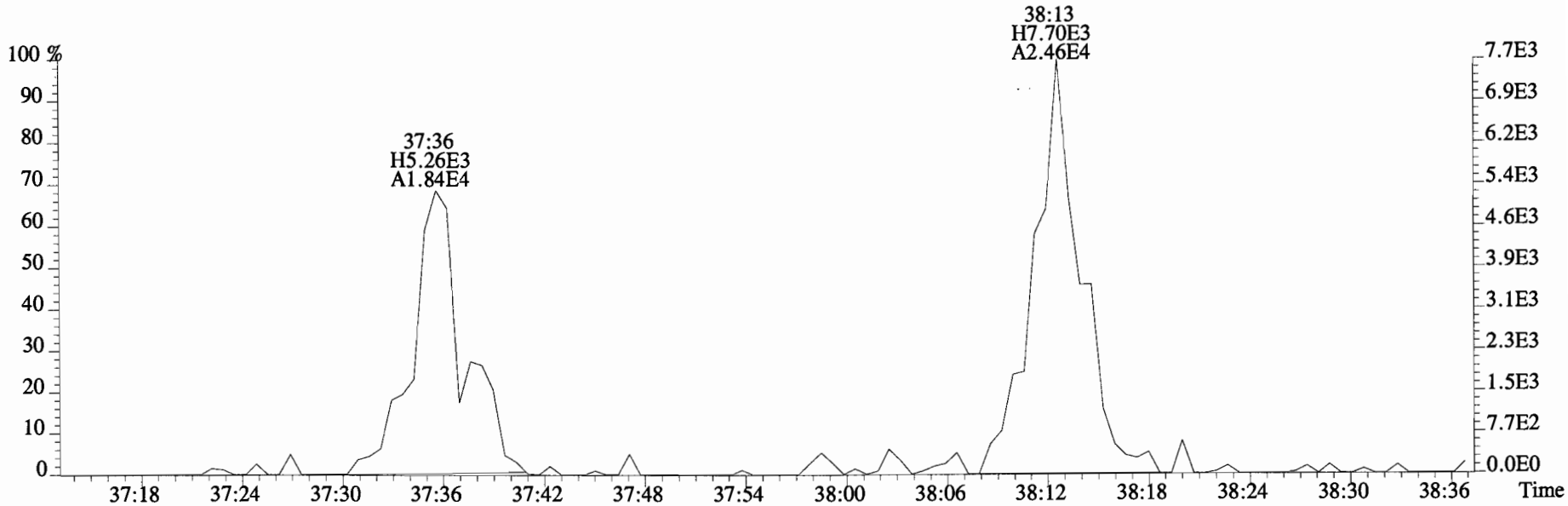
File:150311D2 #1-326 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5



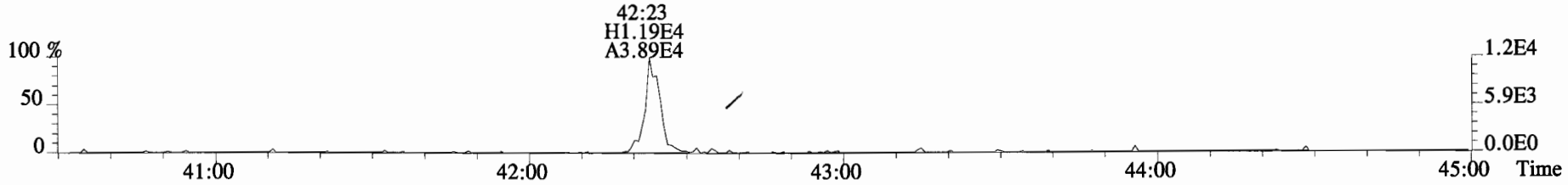
File:150311D2 #1-326 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



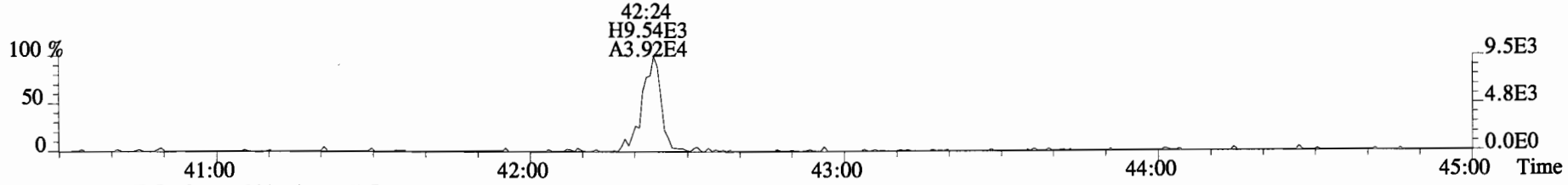
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



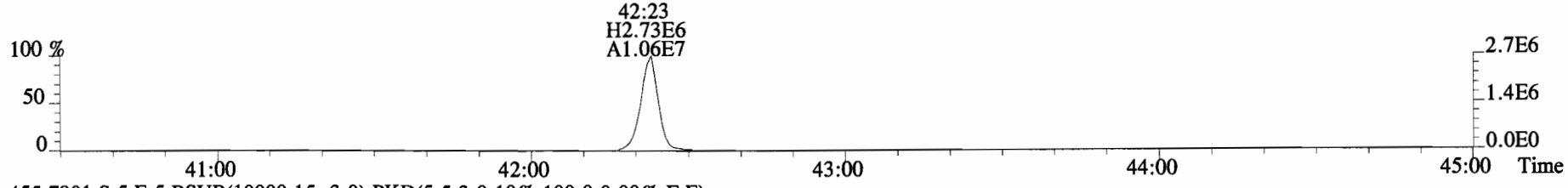
File:150311D2 #1-388 Acq:12-MAR-2015 03:17:23 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:1400984-01 BD-OWS-14-20141222-W 1.00072 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



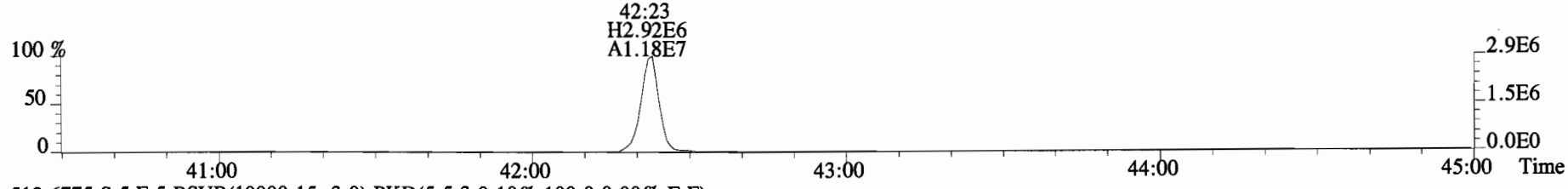
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



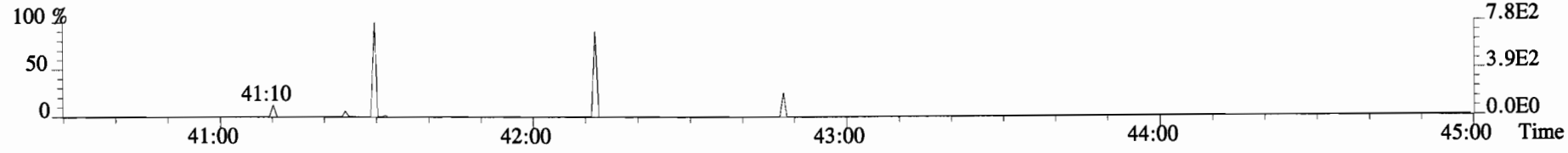
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotFd	*	*		647	2.5	1.11
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotFd	*	*		472	2.5	0.734
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotFd	*	*		690	2.5	1.91
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotFd	*	*		690	2.5	1.86
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotFd	*	*		690	2.5	2.00
	1,2,3,4,6,7,8-HpCDD	*	*	n	1.10	NotFd	*	*		1440	2.5	3.98
	OCDD	4.88e+04	0.95	y	0.95	42:10	1.000	10.742		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotFd	*	*		627	2.5	0.795
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotFd	*	*		408	2.5	0.558
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotFd	*	*		408	2.5	0.594
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotFd	*	*		703	2.5	0.572
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotFd	*	*		703	2.5	0.594
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotFd	*	*		473	2.5	0.456
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotFd	*	*		473	2.5	0.685
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.61	NotFd	*	*		611	2.5	0.981
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotFd	*	*		430	2.5	0.575
	OCDF	*	*	n	1.10	NotFd	*	*		961	1.0	1.19

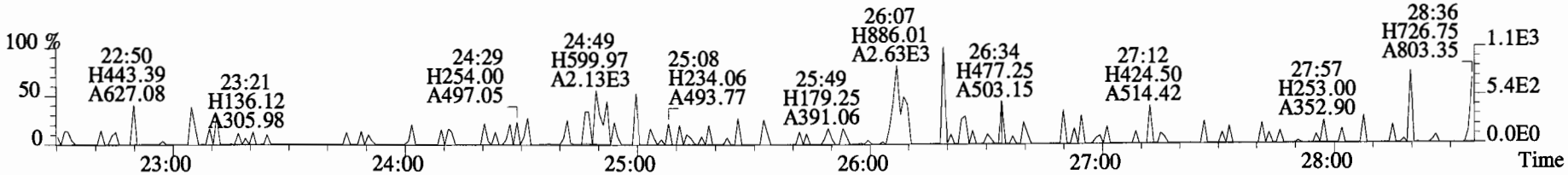
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		647	1.11
Total Penta-Dioxins	*	*		729	1.13
Total Hexa-Dioxins	*	*		1130	3.15
Total Hepta-Dioxins	*	*		1440	3.98
Total Tetra-Furans	*	*		627	0.795
Total Penta-Furans	0.0000	0.0000		563	0.794
Total Hexa-Furans	*	*		703	0.691
Total Hepta-Furans	*	*		686	1.01

									Rec	Qual
IS	13C-2,3,7,8-TCDD	1.73e+07	0.80	y	1.06	26:57	1.022	1730.3	87.2	
IS	13C-1,2,3,7,8-PeCDD	1.72e+07	0.64	y	1.18	31:38	1.200	1544.3	77.8	
IS	13C-1,2,3,4,7,8-HxCDD	1.33e+07	1.24	y	0.72	34:58	1.014	1483.6	74.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.35e+07	1.24	y	0.74	35:05	1.017	1481.4	74.6	
IS	13C-1,2,3,7,8,9-HxCDD	1.56e+07	1.26	y	0.85	35:22	1.025	1470.2	74.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.14e+07	1.06	y	0.65	38:53	1.127	1401.0	70.6	
IS	13C-OCDD	1.90e+07	0.89	y	0.76	42:09	1.222	2006.2	50.5	
IS	13C-2,3,7,8-TCDF	2.70e+07	0.76	y	0.92	26:08	0.991	1783.9	89.9	
IS	13C-1,2,3,7,8-PeCDF	2.82e+07	1.61	y	0.92	30:25	1.154	1852.8	93.3	
IS	13C-2,3,4,7,8-PeCDF	2.74e+07	1.61	y	0.93	31:21	1.189	1785.9	90.0	
IS	13C-1,2,3,4,7,8-HxCDF	2.07e+07	0.52	y	0.98	34:05	0.988	1702.6	85.8	
IS	13C-1,2,3,6,7,8-HxCDF	2.25e+07	0.53	y	1.08	34:12	0.992	1671.4	84.2	
IS	13C-2,3,4,6,7,8-HxCDF	2.00e+07	0.53	y	1.03	34:48	1.009	1572.8	79.2	
IS	13C-1,2,3,7,8,9-HxCDF	1.63e+07	0.52	y	0.86	35:44	1.036	1524.1	76.8	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.13e+07	0.42	y	0.72	37:34	1.089	1261.1	63.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.13e+07	0.43	y	0.70	39:25	1.143	1301.3	65.6	
IS	13C-OCDF	2.32e+07	0.89	y	0.85	42:22	1.228	2205.5	55.6	
C/Up	37Cl-2,3,7,8-TCDD	9.47e+06			1.12	26:58	1.023	897.59	113	
RS/RT	13C-1,2,3,4-TCDD	1.87e+07	0.82	y	1.00	26:22	*	1984.8		
RS	13C-1,2,3,4-TCDF	3.27e+07	0.75	y	1.00	24:50	*	1984.8		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.46e+07	0.51	y	1.00	34:30	*	1984.8		

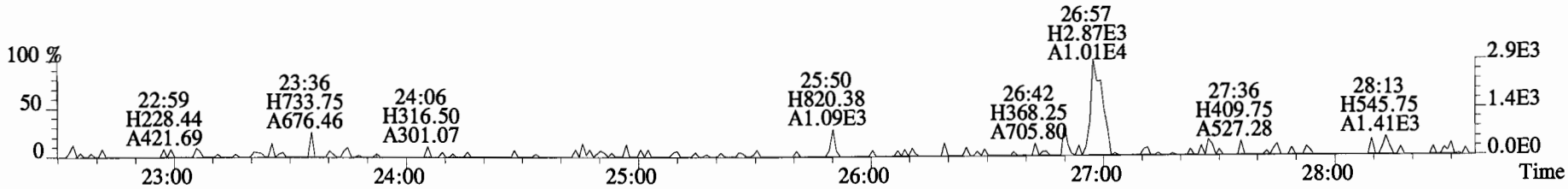
Integrations by Analyst: MD Date: 3/12/15

Reviewed by Analyst: CT Date: 3/16/15

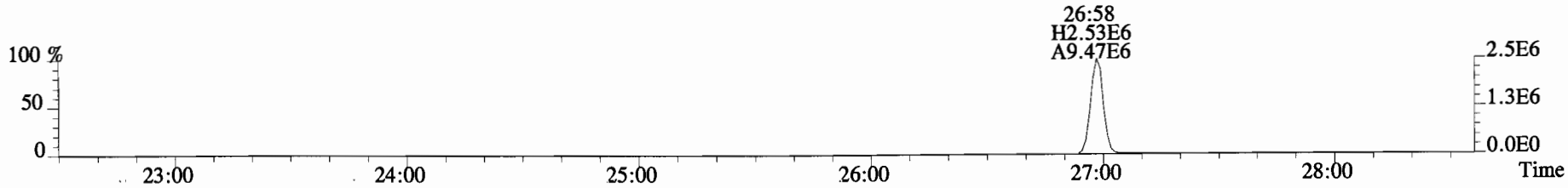
File:150311D2 #1-551 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



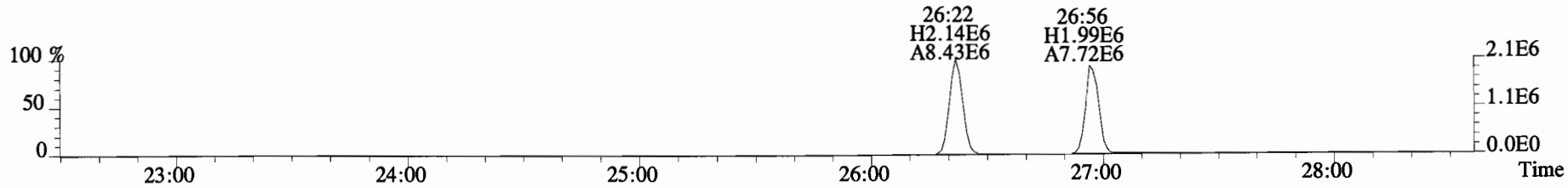
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



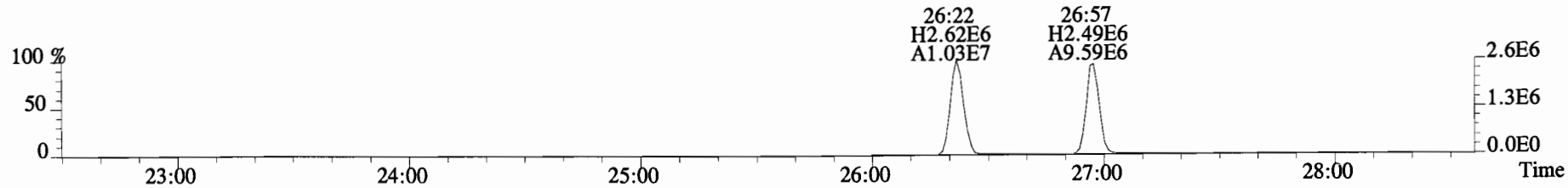
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

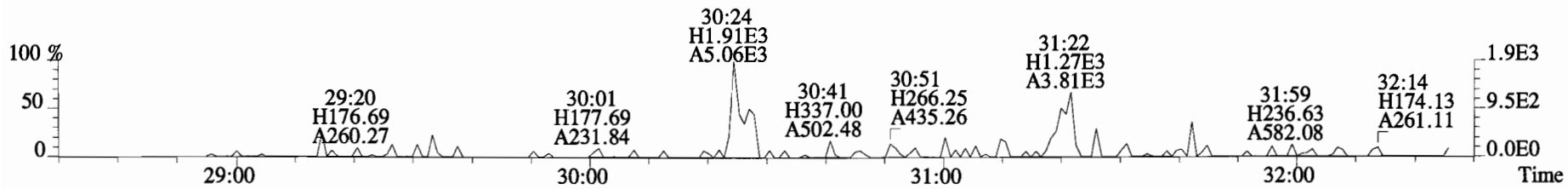


333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

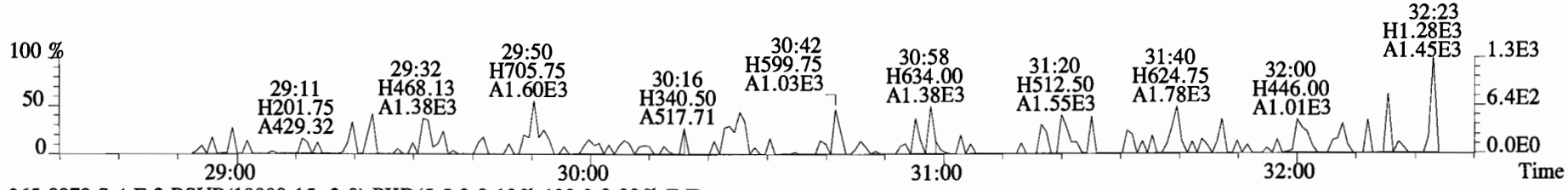


File:150311D2 #1-251 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

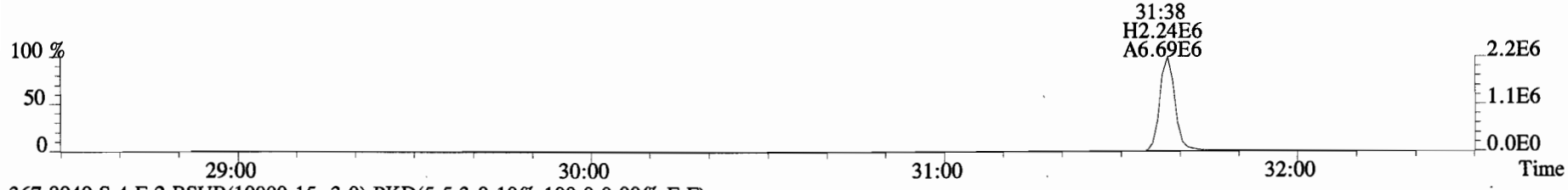
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



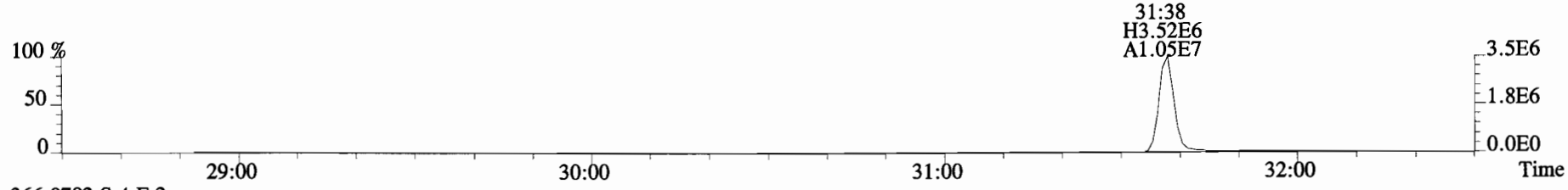
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



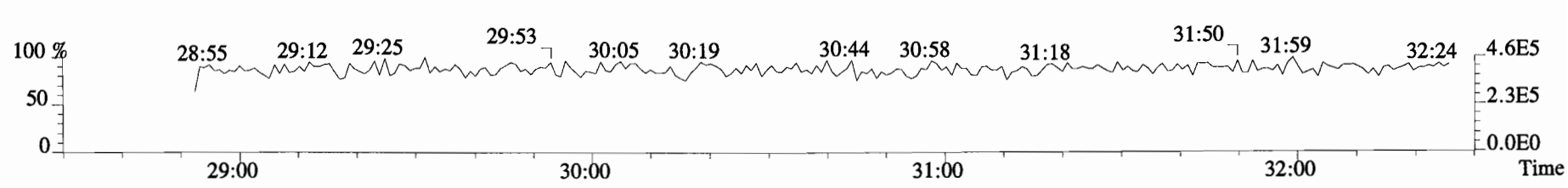
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

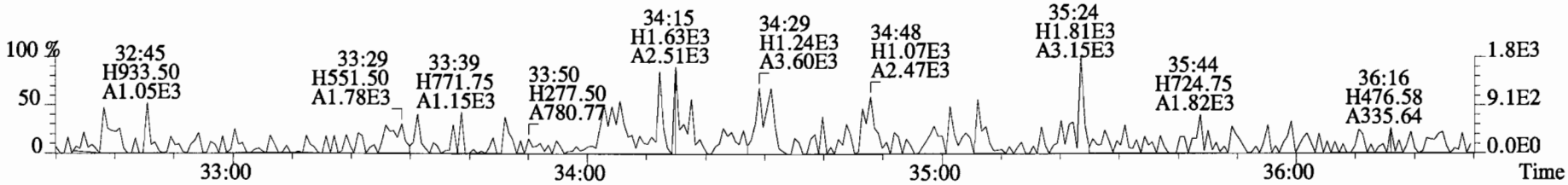


366.9792 S:4 F:2

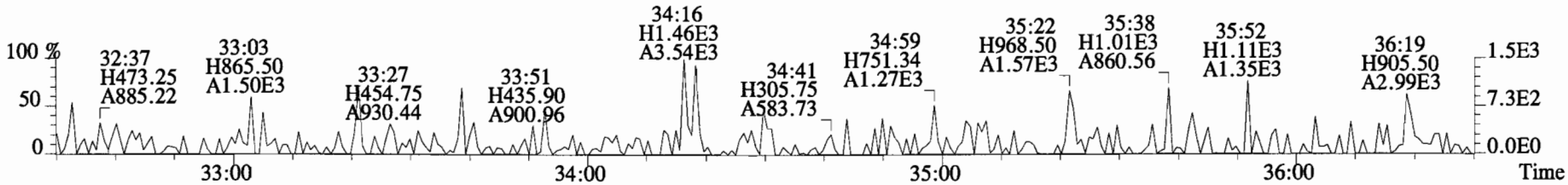


File:150311D2 #1-392 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

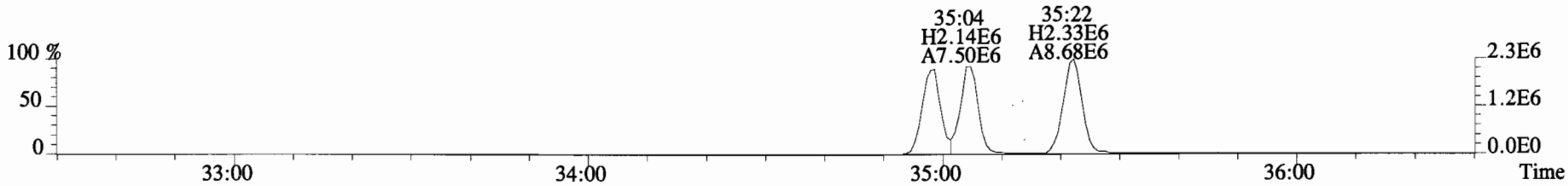
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



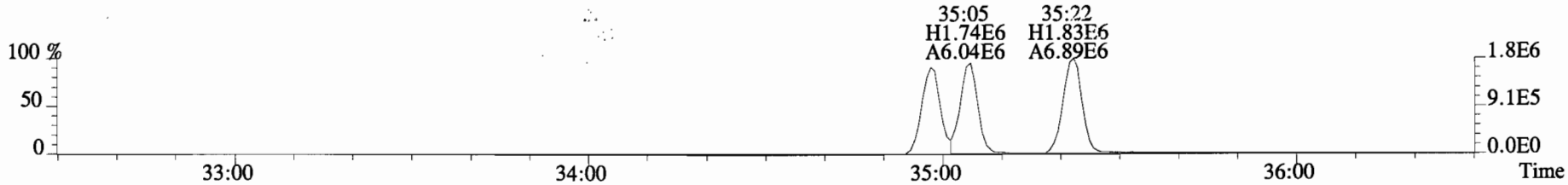
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



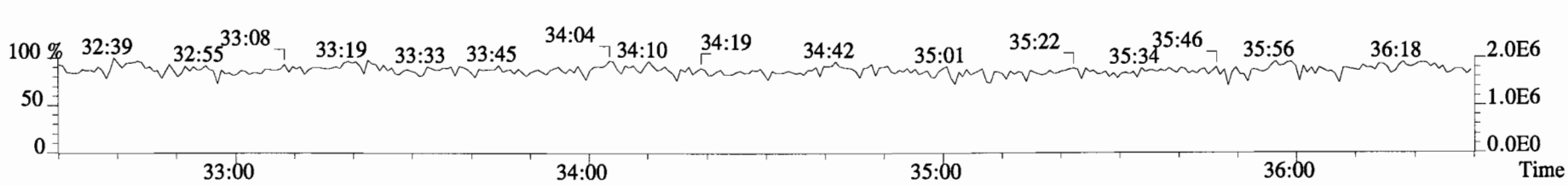
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



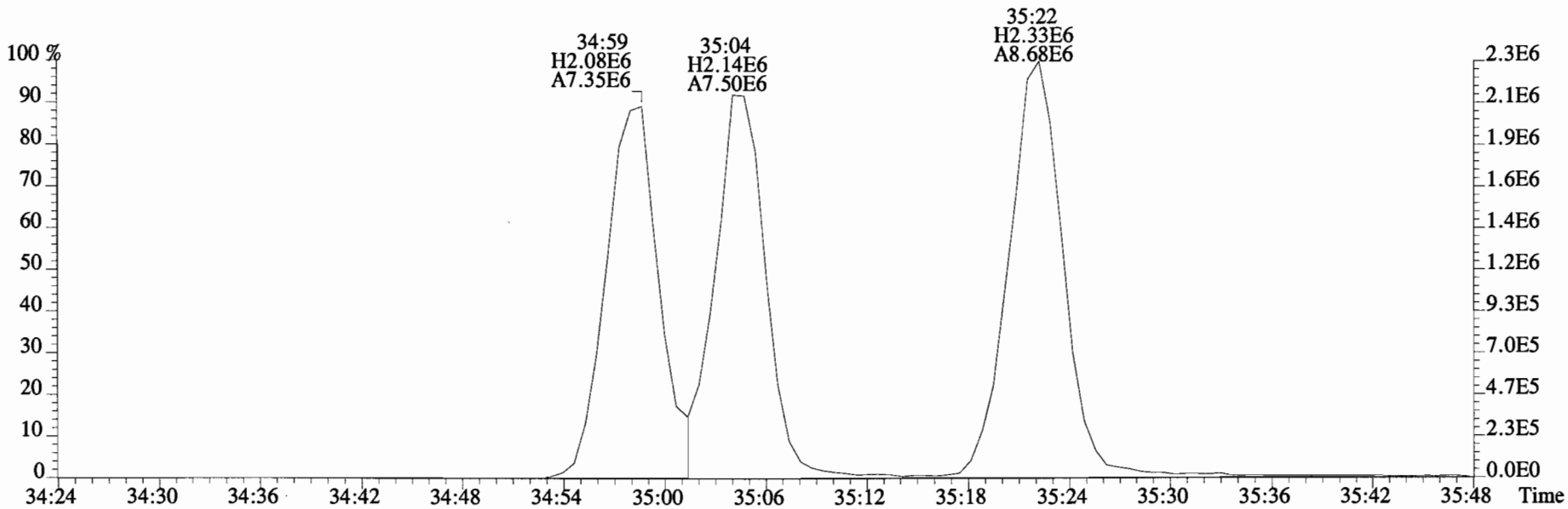
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



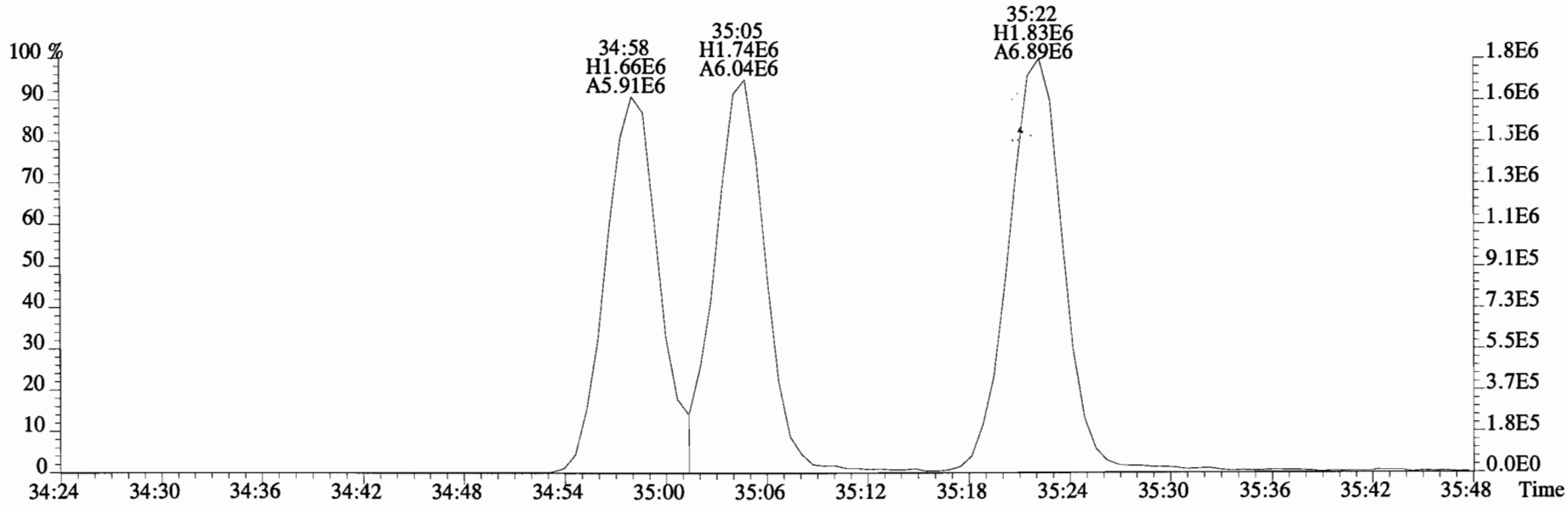
380.9760 S:4 F:3



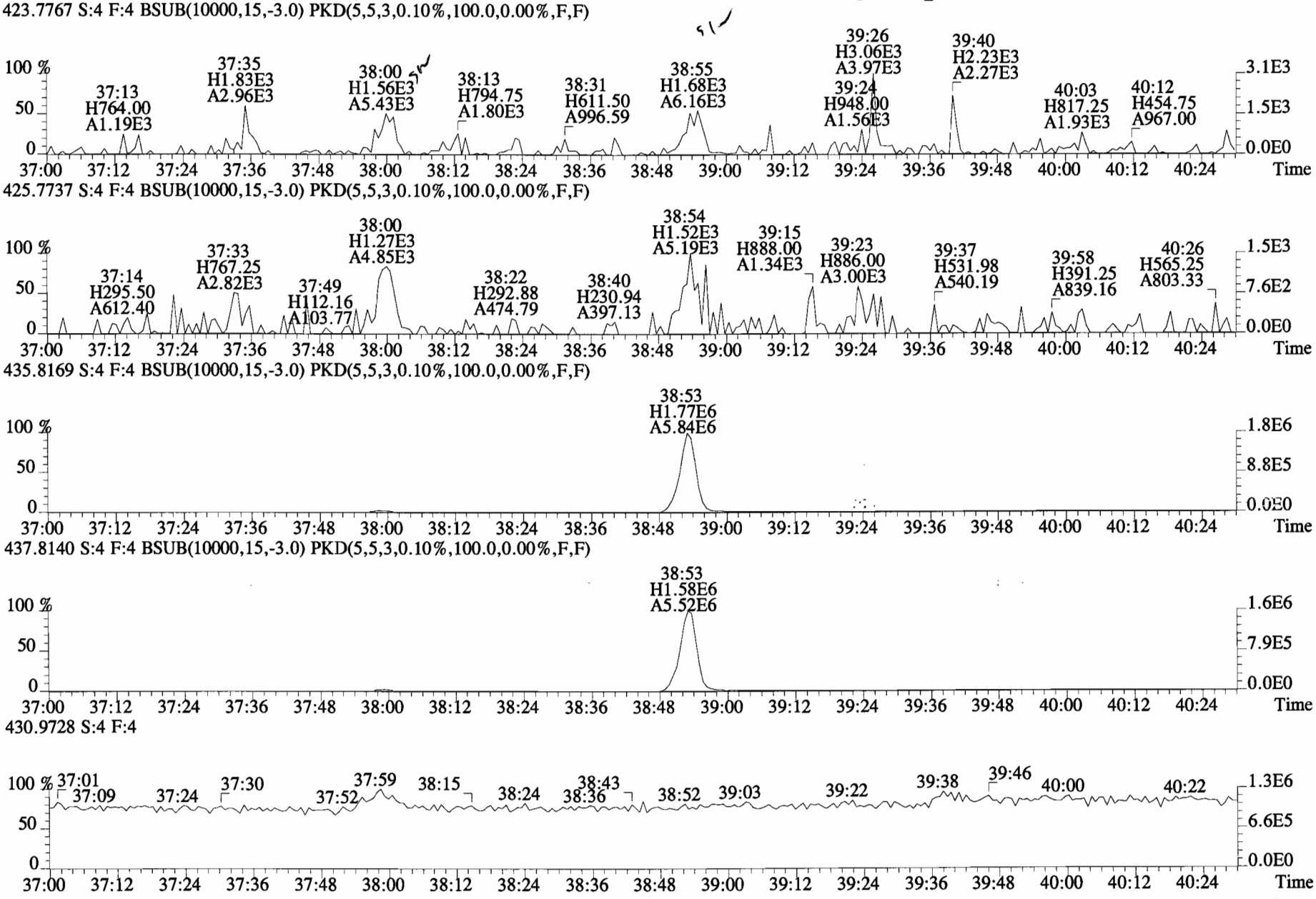
File:150311D2 #1-392 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



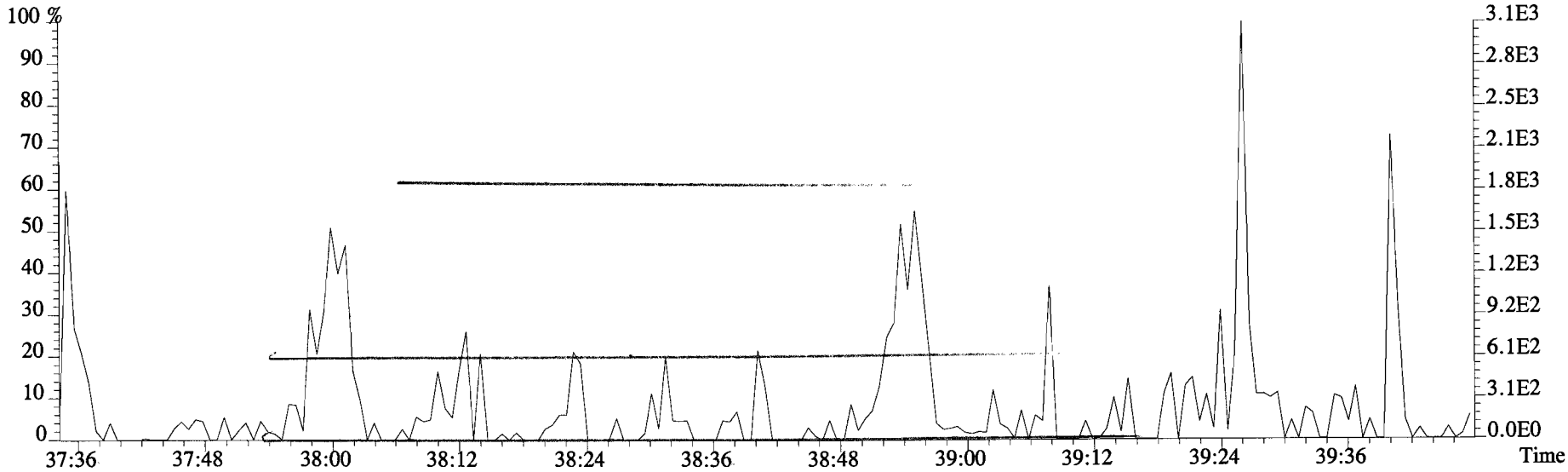
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



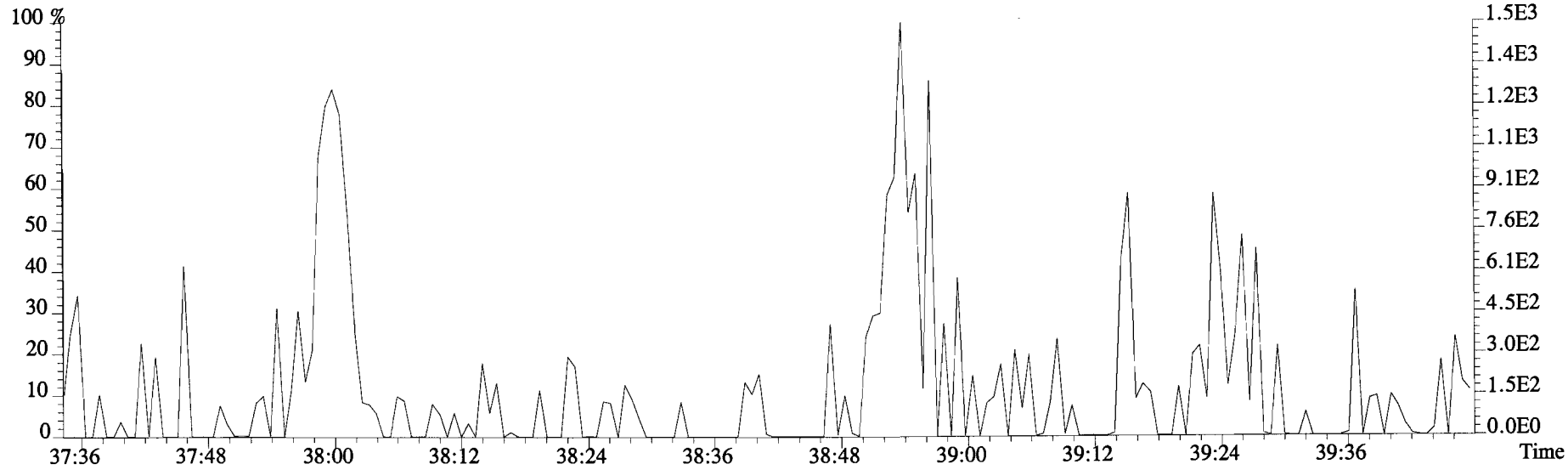
File:150311D2 #1-326 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5



File:150311D2 #1-326 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

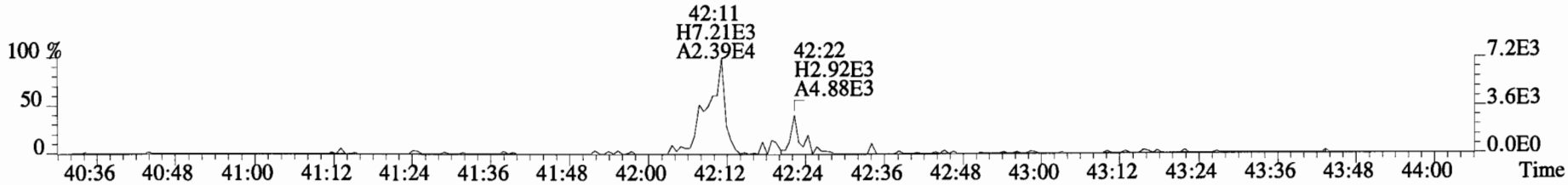


425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

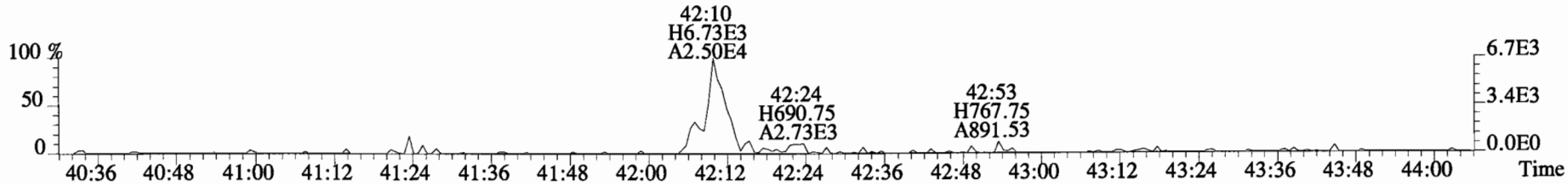


File:150311D2 #1-388 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

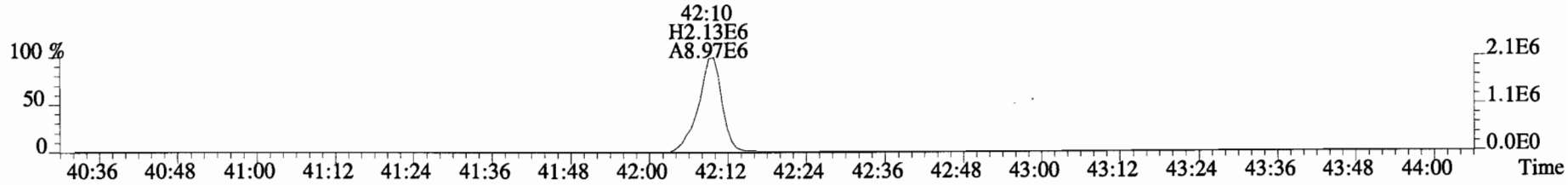
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



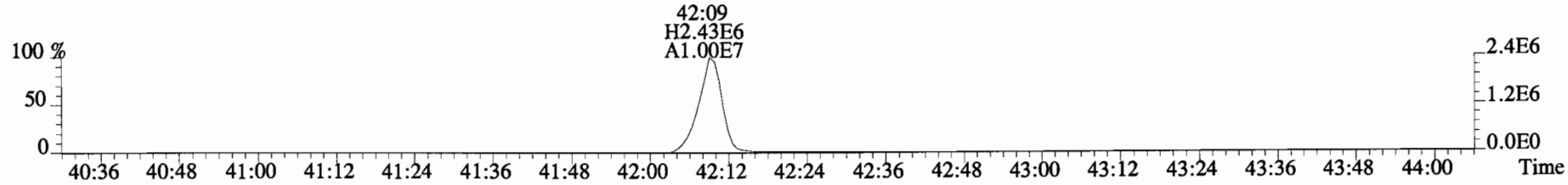
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



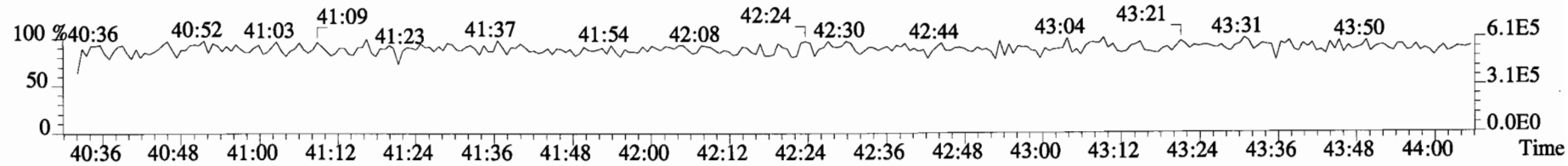
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



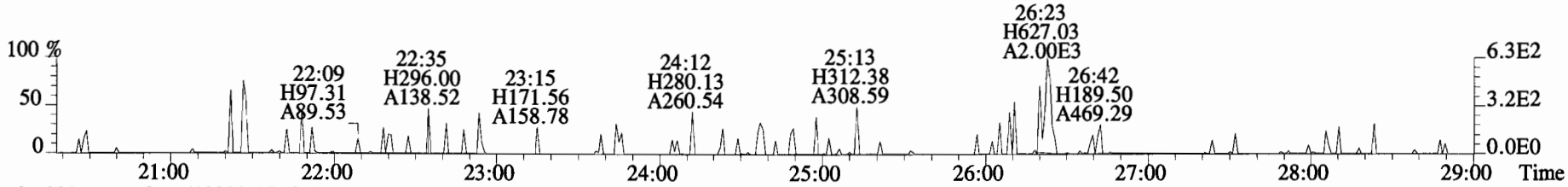
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



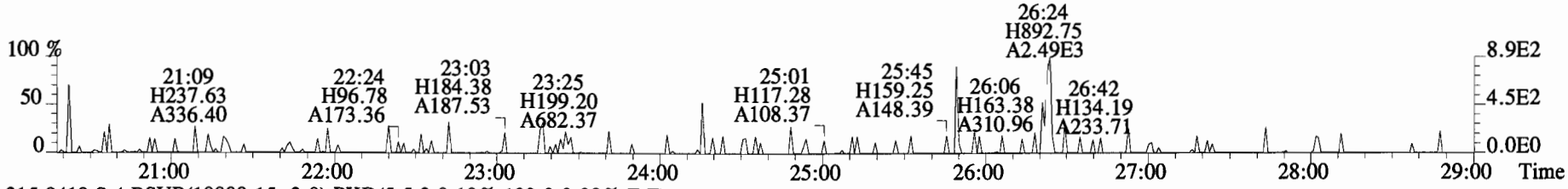
454.9728 S:4 F:5



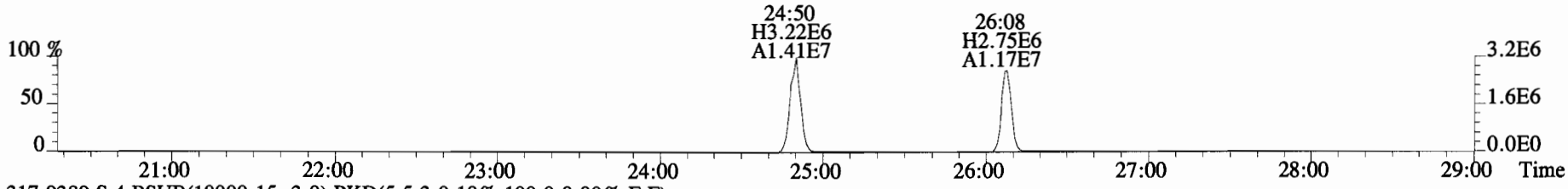
File:150311D2 #1-551 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



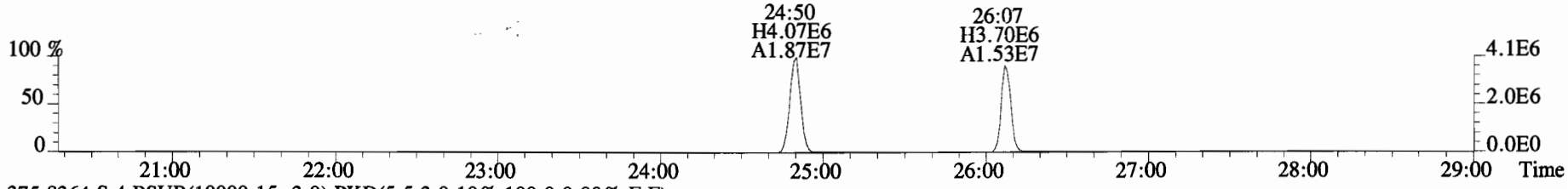
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



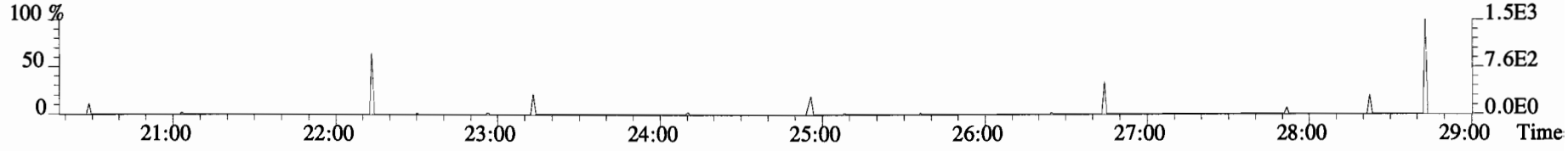
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



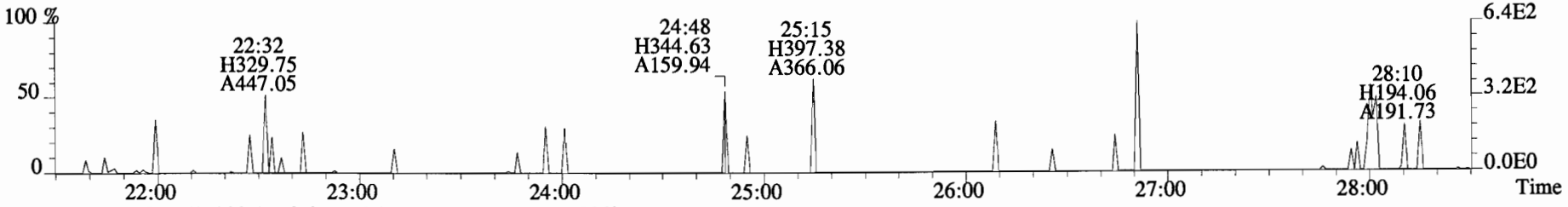
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



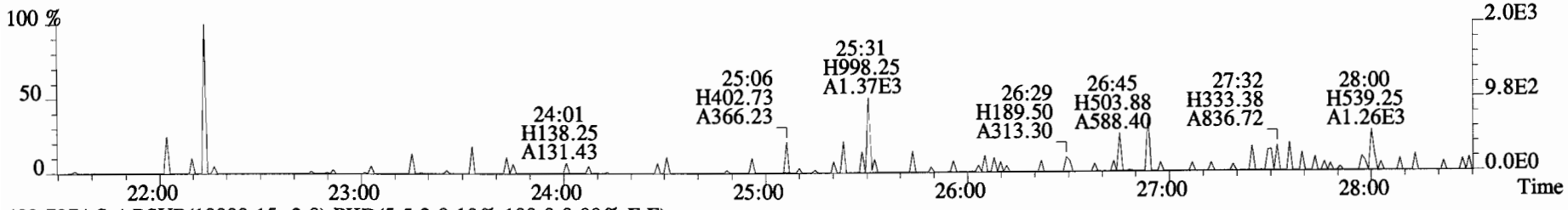
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



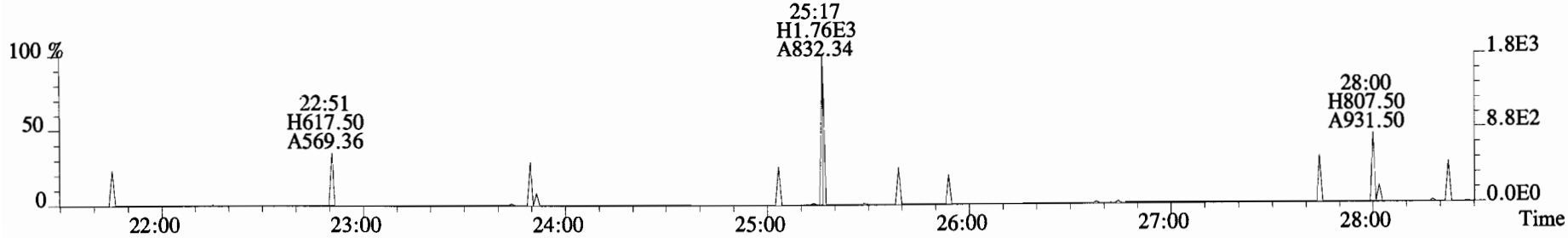
File:150311D2 #1-551 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



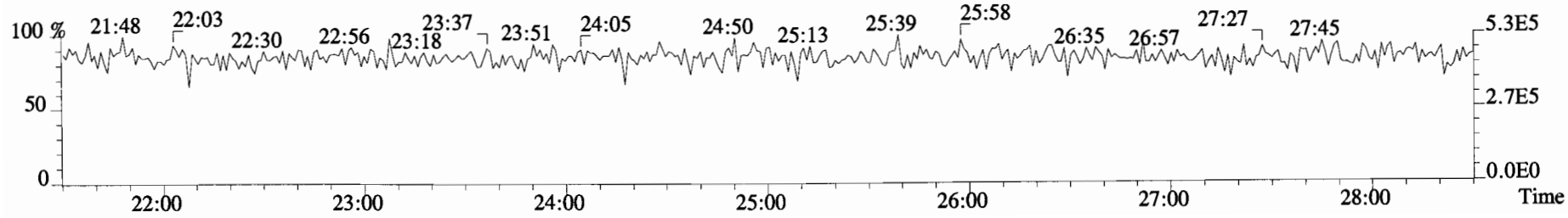
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

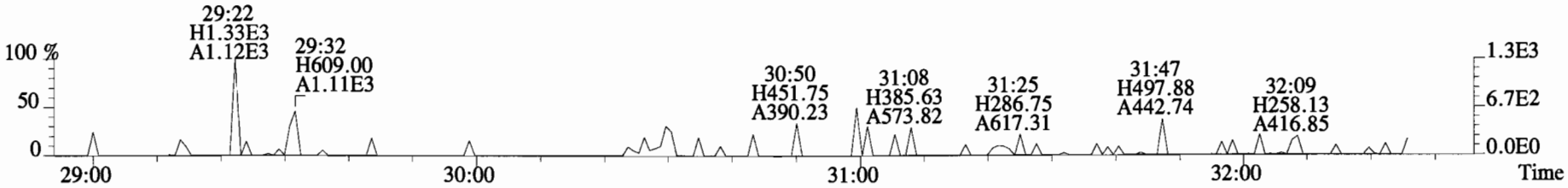


316.9824 S:4

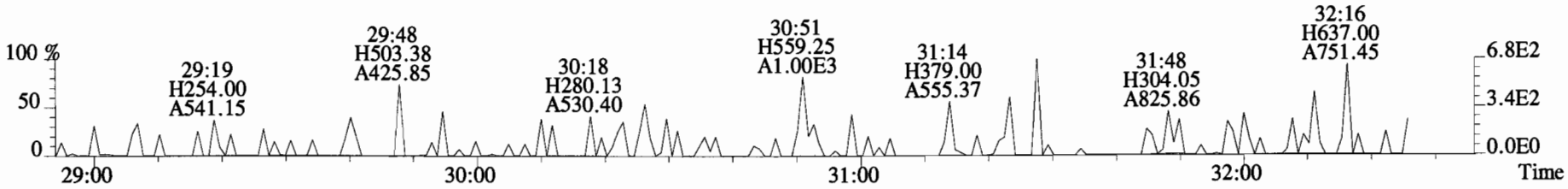


File:150311D2 #1-251 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

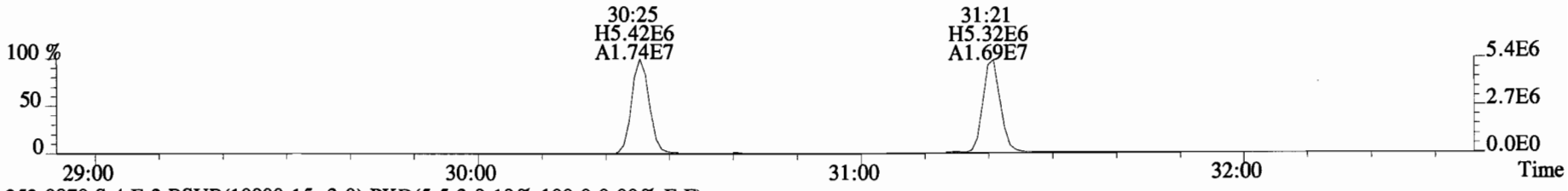
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



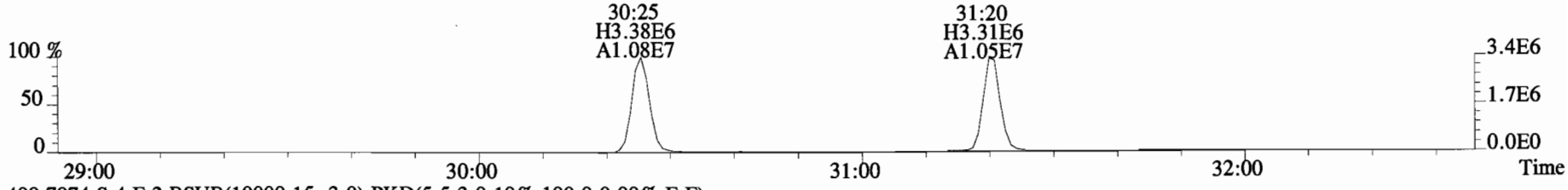
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



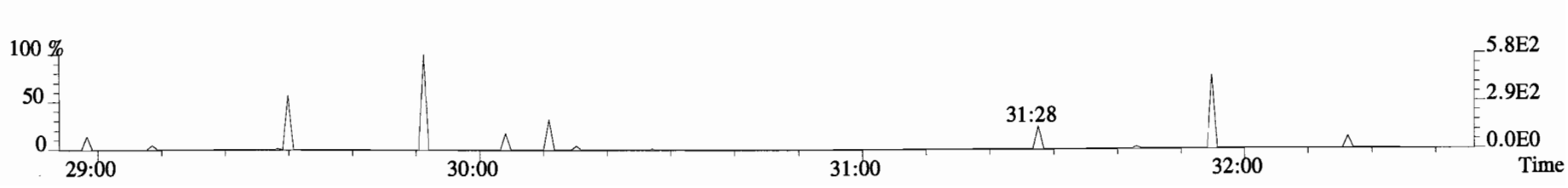
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

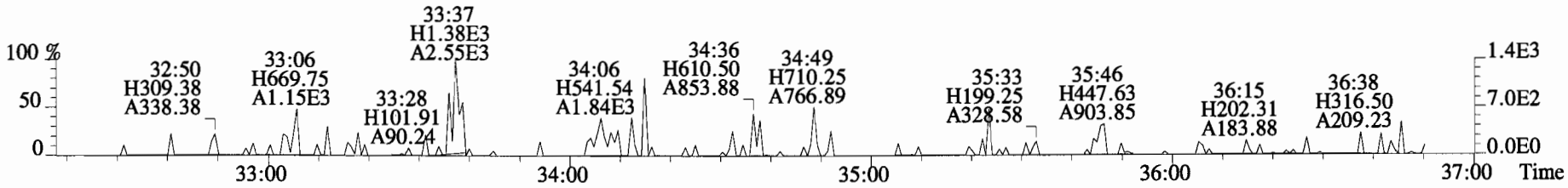


409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

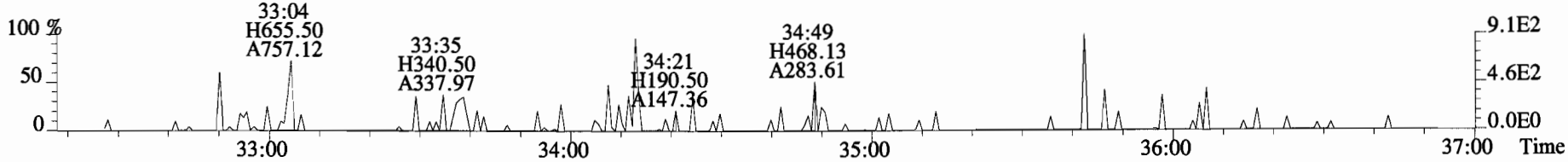


File:150311D2 #1-392 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

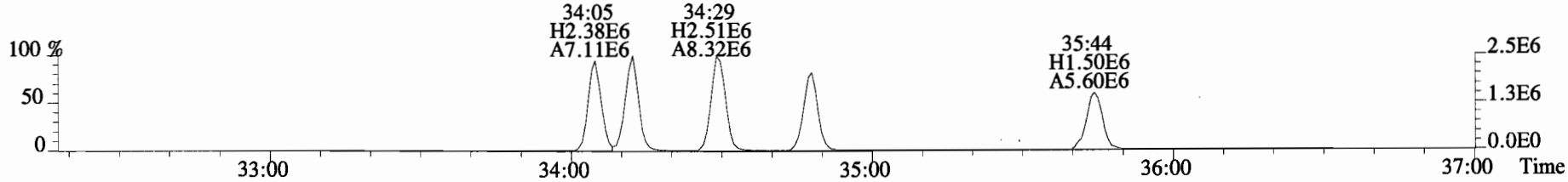
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



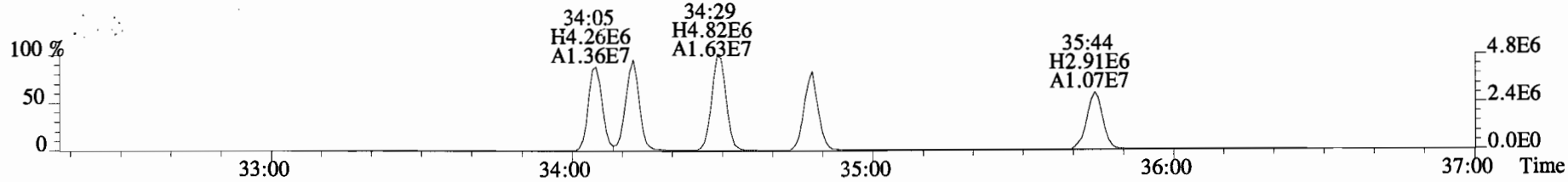
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



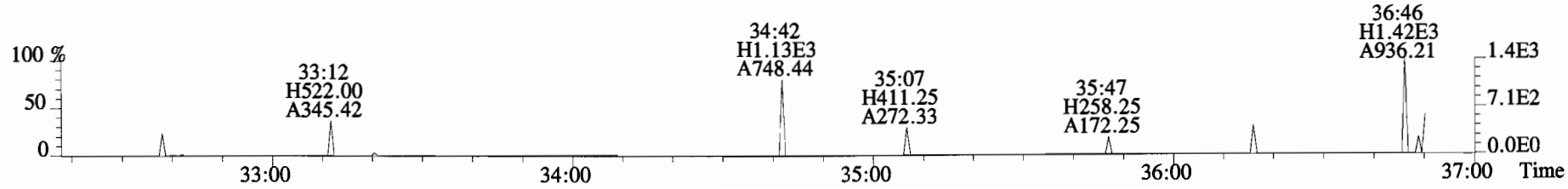
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



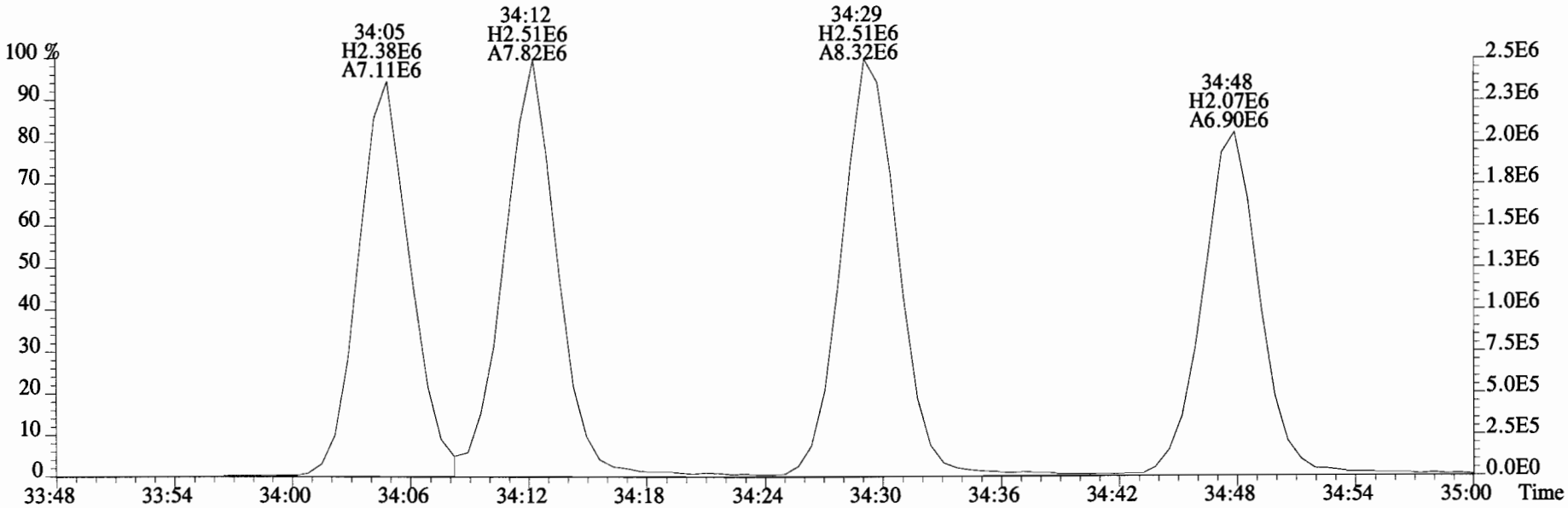
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



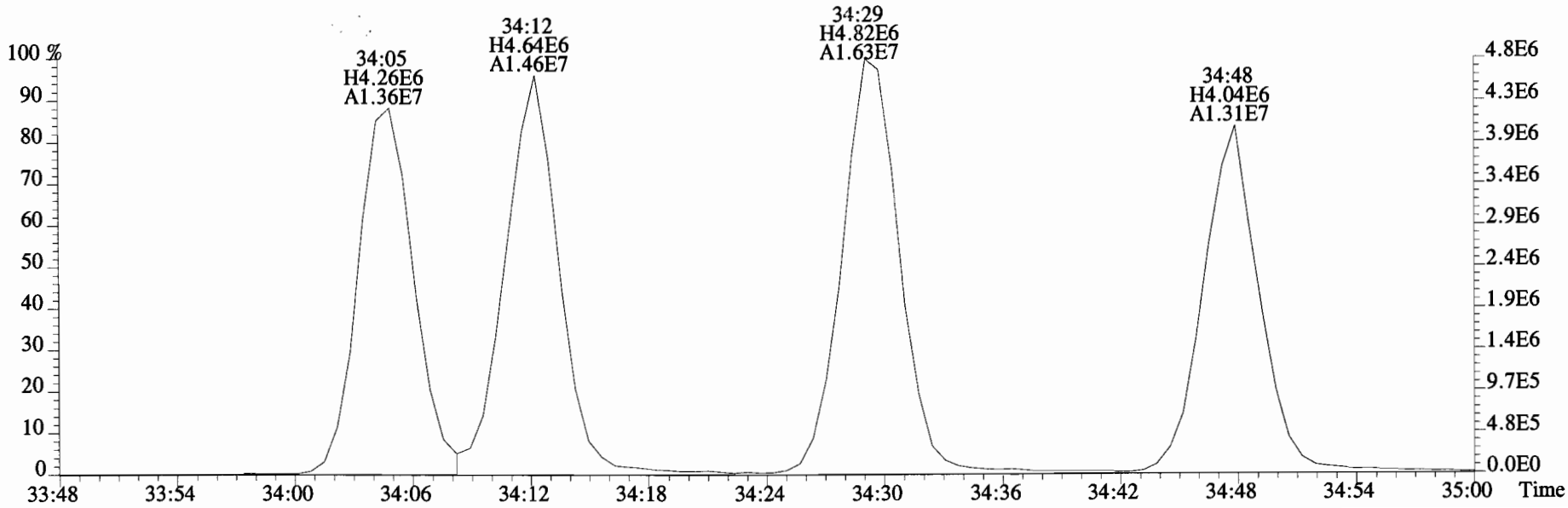
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



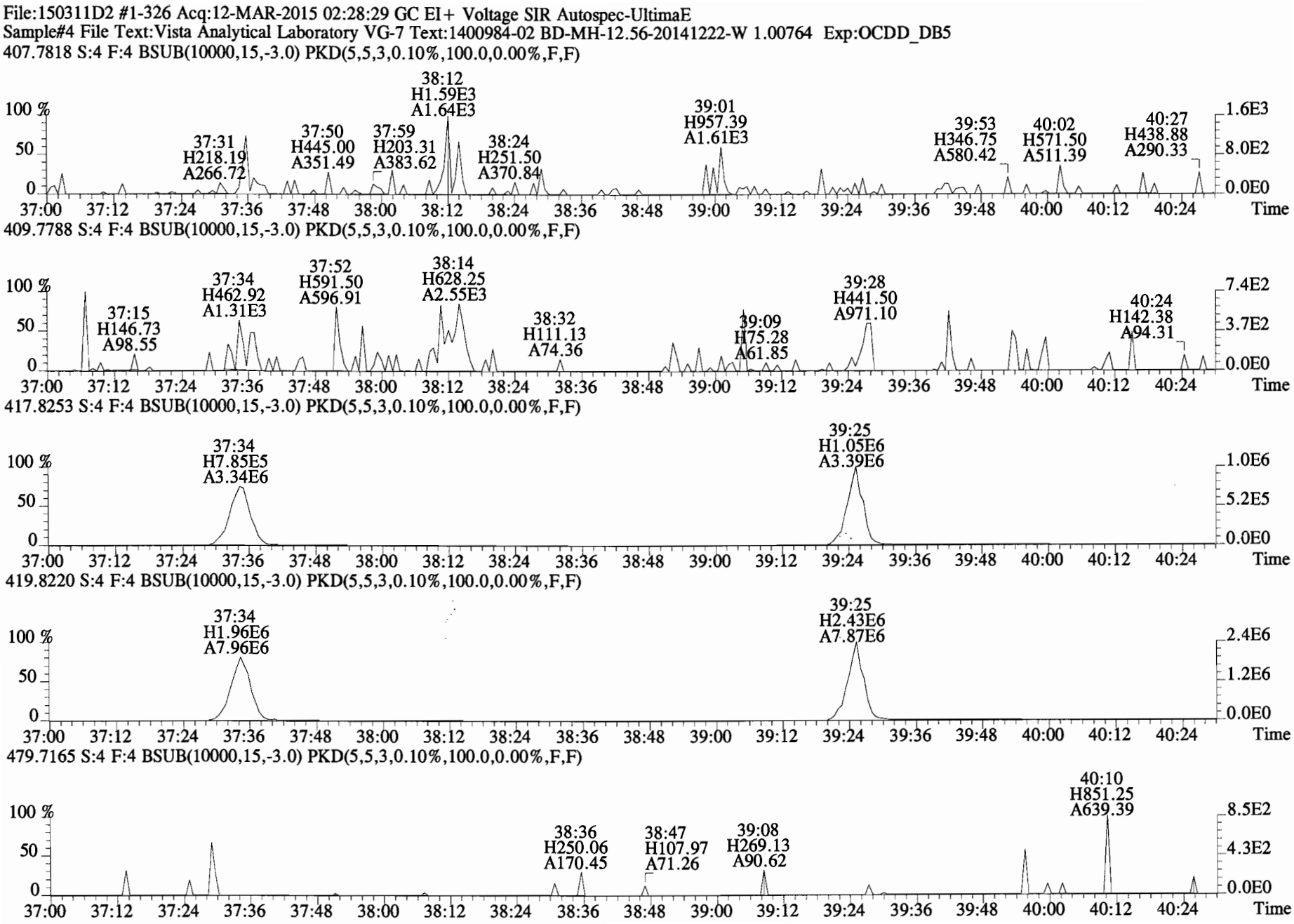
File:150311D2 #1-392 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

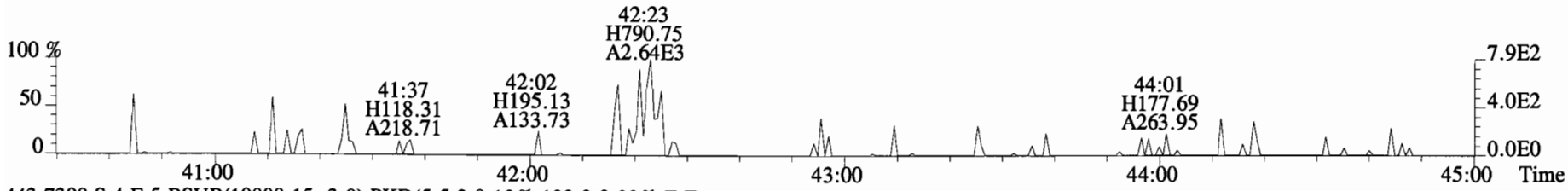


File:150311D2 #1-326 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

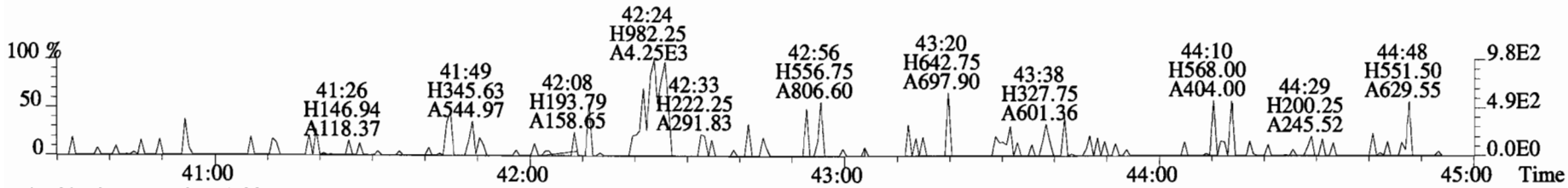


File:150311D2 #1-388 Acq:12-MAR-2015 02:28:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:1400984-02 BD-MH-12.56-20141222-W 1.00764 Exp:OCDD_DB5

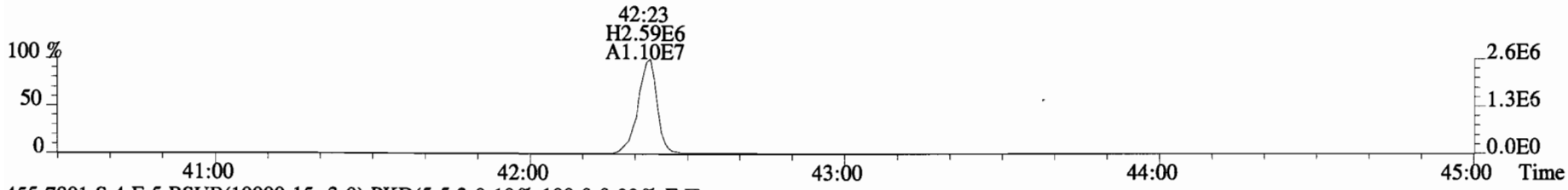
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



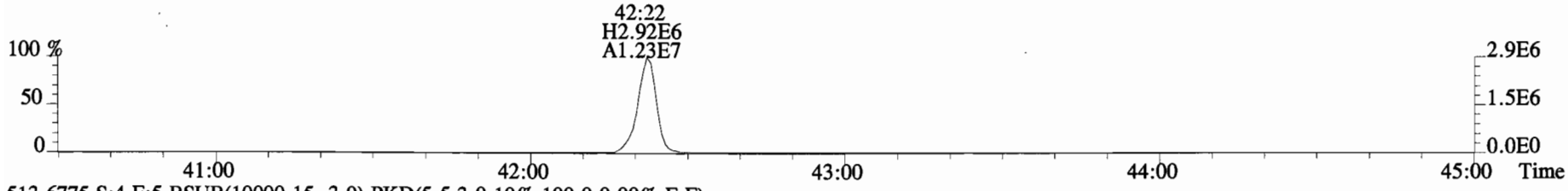
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



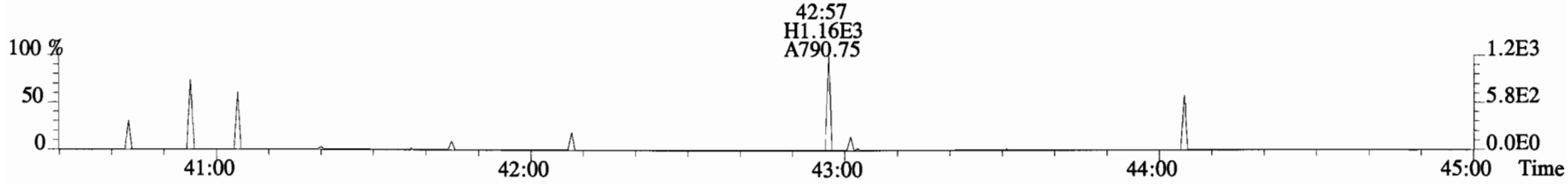
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: BD-MH-1.32-20141222-W Filename: 150311D2 S:3 Acq:12-MAR-15 01:39:40 ConCal: ST150311D2-1

Lab ID: 1400984-03 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	1.17	NotF	*	*		413	2.5	0.770
	1,2,3,7,8-PeCDD	*	*	n	0.91	NotF	*	*		799	2.5	1.28
	1,2,3,4,7,8-HxCDD	*	*	n	1.08	NotF	*	*		993	2.5	2.53
	1,2,3,6,7,8-HxCDD	*	*	n	1.06	NotF	*	*		1740	2.5	4.57
	1,2,3,7,8,9-HxCDD	*	*	n	0.93	NotF	*	*		993	2.5	2.72
	1,2,3,4,6,7,8-HpCDD	2.13e+04	1.12	y	1.10	38:54	1.000	3.8413		*	2.5	*
	OCDD	1.19e+05	0.91	y	0.95	42:11	1.000	26.297		*	2.5	*
	2,3,7,8-TCDF	*	*	n	1.07	NotF	*	*		535	2.5	0.745
	1,2,3,7,8-PeCDF	*	*	n	1.07	NotF	*	*		435	2.5	0.611
	2,3,4,7,8-PeCDF	*	*	n	1.03	NotF	*	*		435	2.5	0.660
	1,2,3,4,7,8-HxCDF	*	*	n	1.38	NotF	*	*		634	2.5	0.519
	1,2,3,6,7,8-HxCDF	*	*	n	1.26	NotF	*	*		634	2.5	0.596
	2,3,4,6,7,8-HxCDF	*	*	n	1.29	NotF	*	*		432	2.5	0.454
	1,2,3,7,8,9-HxCDF	*	*	n	1.19	NotF	*	*		432	2.5	0.660
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.61	NotF	*	*		2050	1.0	1.22
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.53	NotF	*	*		672	2.5	0.976
	OCDF	1.23e+04	0.96	y	1.10	42:24	1.000	1.9927		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.52e+07	0.78	y	1.06	26:57	1.022	1534.2				
IS	13C-1,2,3,7,8-PeCDD	1.62e+07	0.62	y	1.18	31:38	1.200	1464.9				
IS	13C-1,2,3,4,7,8-HxCDD	1.21e+07	1.26	y	0.72	34:59	1.014	1366.5				
IS	13C-1,2,3,6,7,8-HxCDD	1.23e+07	1.23	y	0.74	35:05	1.017	1353.7				
IS	13C-1,2,3,7,8,9-HxCDD	1.43e+07	1.23	y	0.85	35:23	1.026	1359.7				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.00e+07	1.04	y	0.65	38:54	1.127	1242.4				
IS	13C-OCDD	1.91e+07	0.90	y	0.76	42:10	1.222	2027.0				
IS	13C-2,3,7,8-TCDF	2.38e+07	0.77	y	0.92	26:08	0.991	1588.4				
IS	13C-1,2,3,7,8-PeCDF	2.61e+07	1.58	y	0.92	30:26	1.154	1734.8				
IS	13C-2,3,4,7,8-PeCDF	2.53e+07	1.59	y	0.93	31:21	1.189	1668.5				
IS	13C-1,2,3,4,7,8-HxCDF	1.92e+07	0.52	y	0.98	34:05	0.988	1590.4				
IS	13C-1,2,3,6,7,8-HxCDF	2.04e+07	0.51	y	1.08	34:13	0.992	1529.2				
IS	13C-2,3,4,6,7,8-HxCDF	1.75e+07	0.52	y	1.03	34:48	1.009	1385.2				
IS	13C-1,2,3,7,8,9-HxCDF	1.45e+07	0.52	y	0.86	35:45	1.036	1363.3				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.06e+07	0.42	y	0.72	37:35	1.090	1189.2				
IS	13C-1,2,3,4,7,8,9-HpCDF	9.69e+06	0.42	y	0.70	39:25	1.143	1126.5				
IS	13C-OCDF	2.25e+07	0.90	y	0.85	42:23	1.229	2144.7				
C/Up	37Cl-2,3,7,8-TCDD	9.37e+06			1.12	26:59	1.023	894.52				
RS/RT	13C-1,2,3,4-TCDD	1.87e+07	0.78	y	1.00	26:22	*	1999.1				
RS	13C-1,2,3,4-TCDF	3.26e+07	0.75	y	1.00	24:50	*	1999.1				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.47e+07	0.52	y	1.00	34:30	*	1999.1				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		413	0.770
Total Penta-Dioxins	*	*		799	1.28
Total Hexa-Dioxins	*	*		1740	4.58
Total Hepta-Dioxins	9.77	9.77		*	*
Total Tetra-Furans	*	*		535	0.745
Total Penta-Furans	0.0000	0.0000		691	1.01
Total Hexa-Furans	*	*		432	0.451
Total Hepta-Furans	*	*		1170	1.73

	Rec	Qual
IS	76.7	
IS	73.3	
IS	68.4	
IS	67.7	
IS	68.0	
IS	62.2	
IS	50.7	
IS	79.5	
IS	86.8	
IS	83.5	
IS	79.6	
IS	76.5	
IS	69.3	
IS	68.2	
IS	59.5	
IS	56.4	
IS	53.6	
C/Up	112	

Integrations by Analyst: M Date: 3/12/15

Reviewed by Analyst: CT Date: 3/16/15

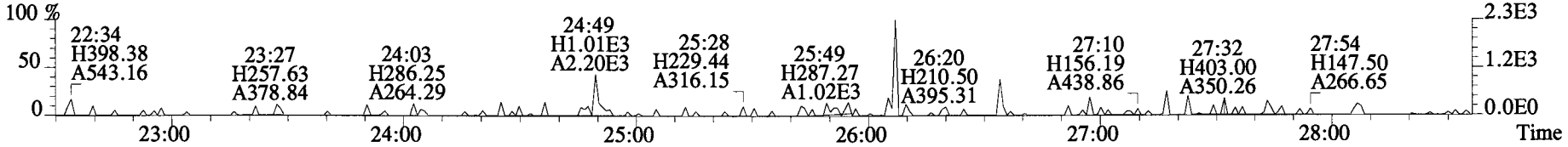
Totals class: HpCDD EMPC Entry #: 25

Run: 8 File: 150311D2 S: 3 I: 1 F: 4
Acquired: 12-MAR-15 01:39:40 Processed: 12-MAR-15 09:17:17

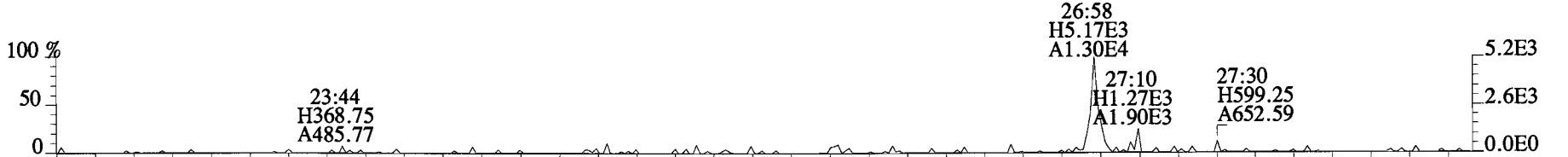
Total Concentration: 9.7655 Unnamed Concentration: 5.924

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
38:00	1.706e+04	1.572e+04	1.09 y	3.278e+04	5.9242	
38:54	1.124e+04	1.001e+04	1.12 y	2.125e+04	3.8413	1,2,3,4,6,7,8-HpCDD

File:150311D2 #1-551 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



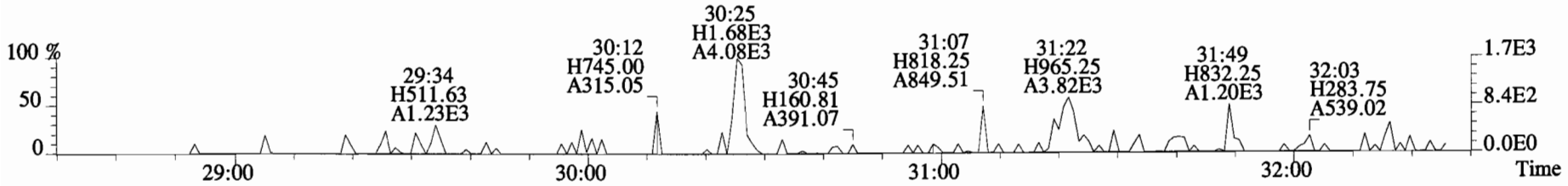
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

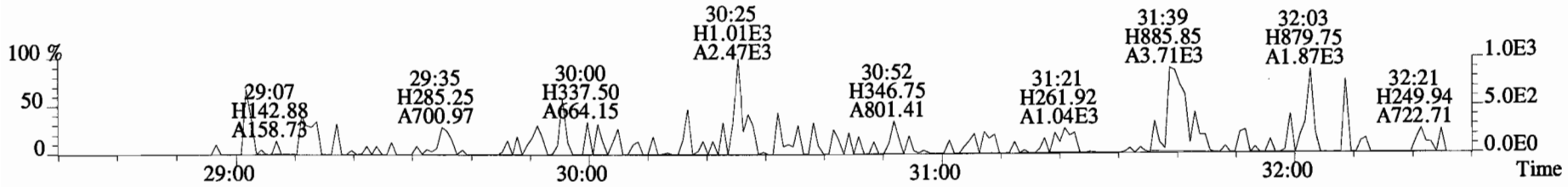
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

File:150311D2 #1-251 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5

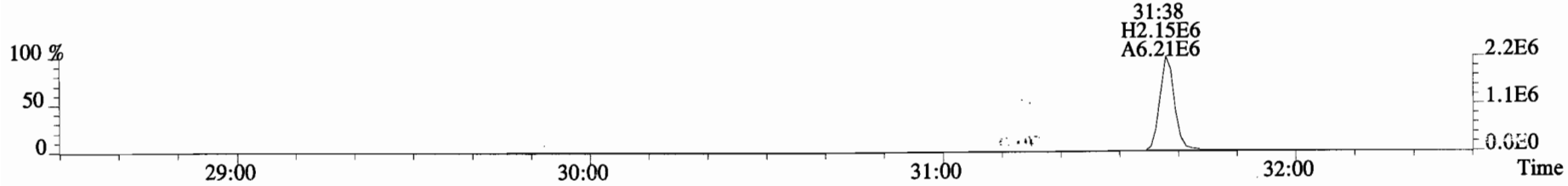
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



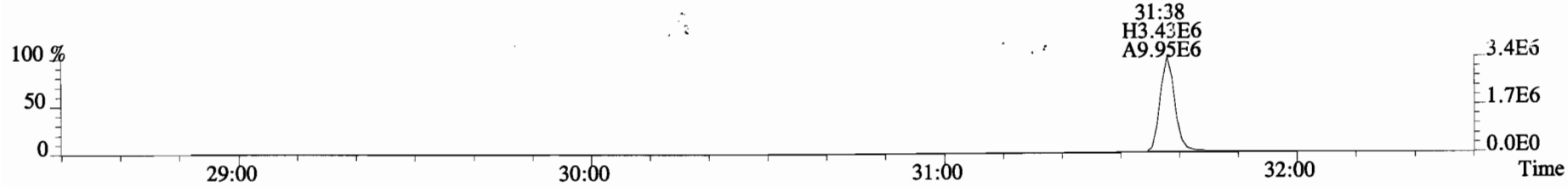
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



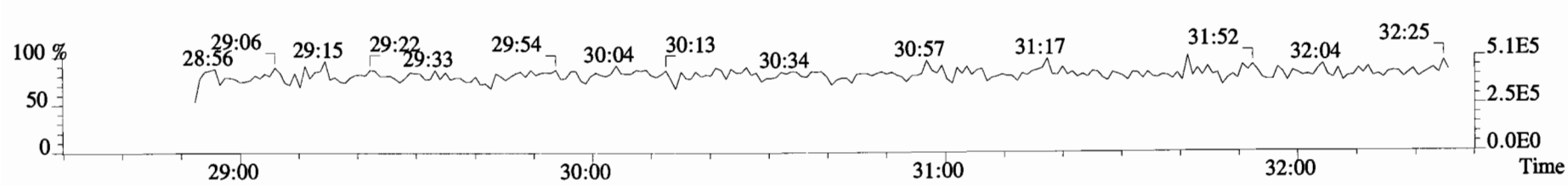
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



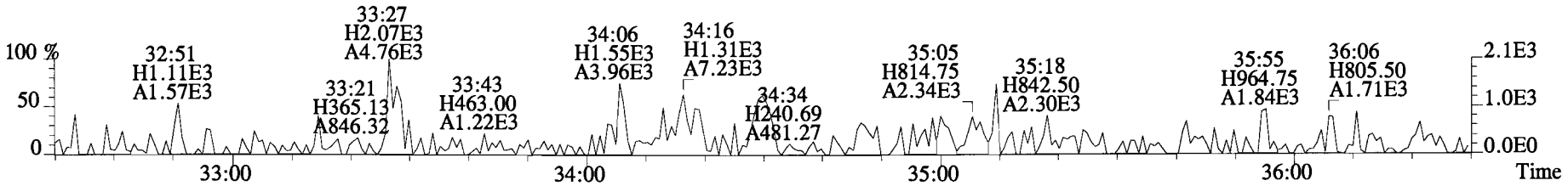
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



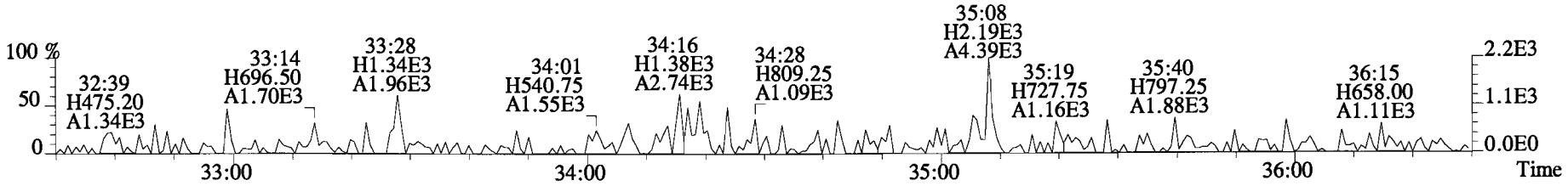
366.9792 S:3 F:2



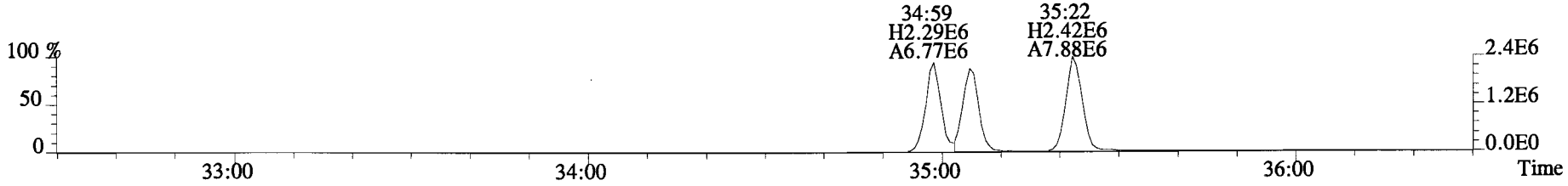
File:150311D2 #1-392 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



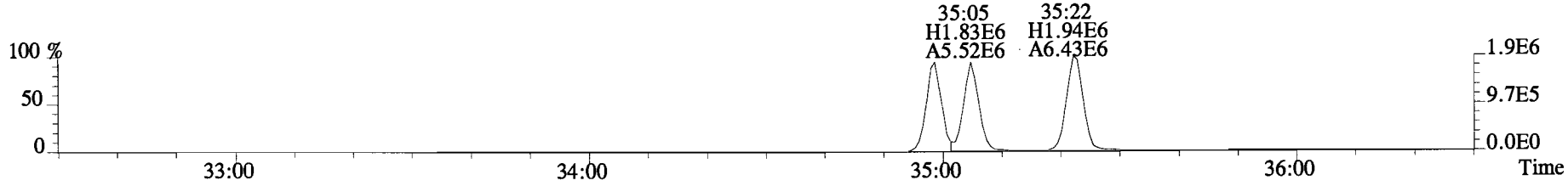
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



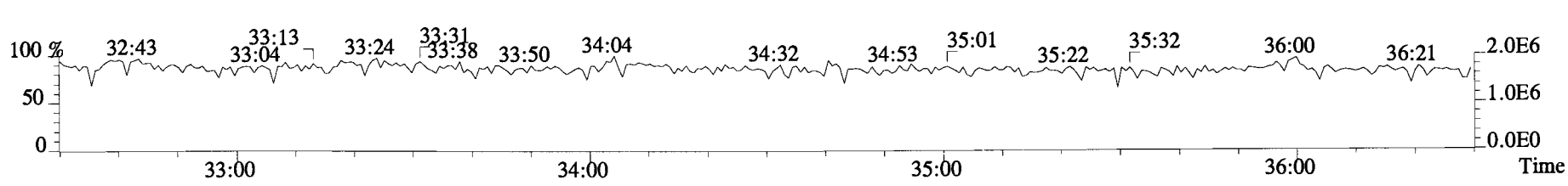
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



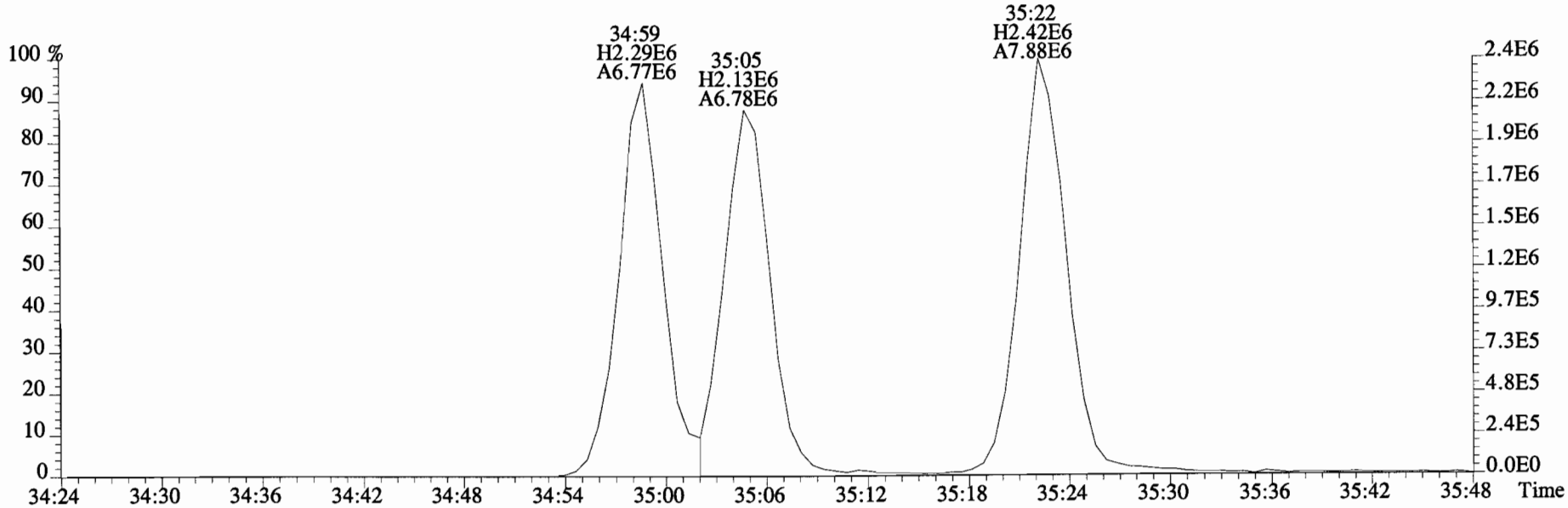
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



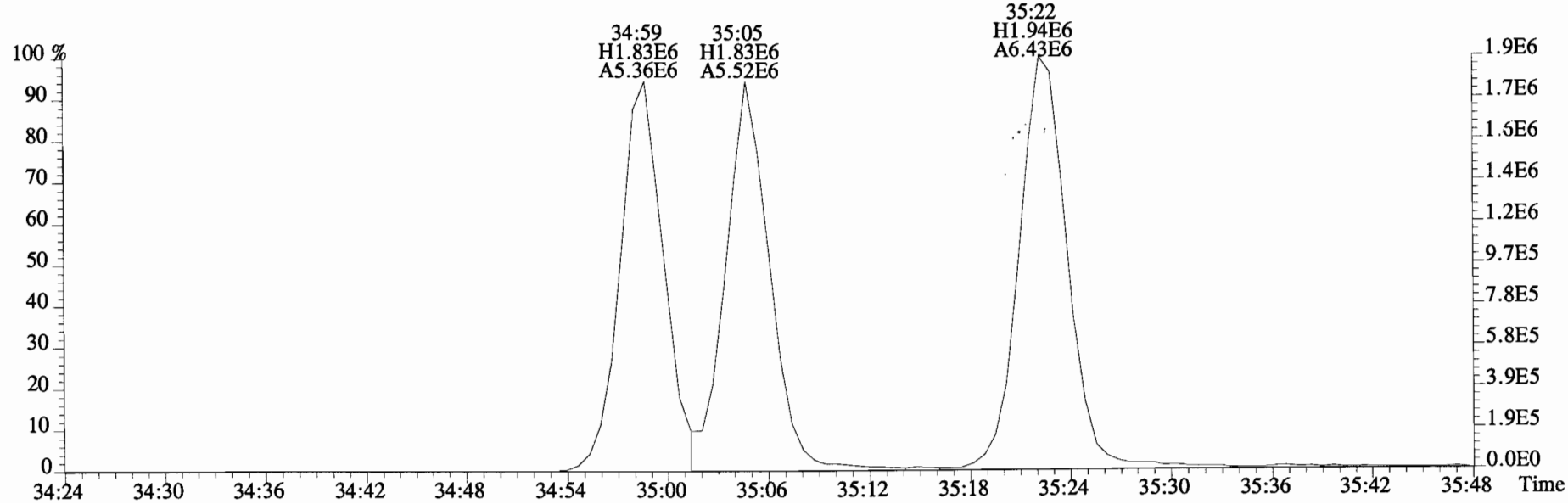
380.9760 S:3 F:3



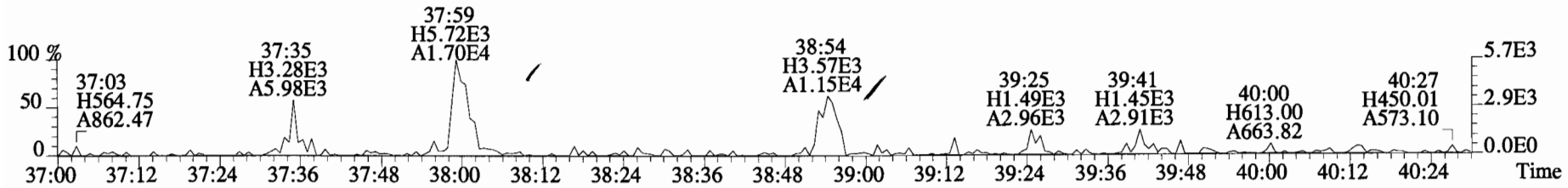
File:150311D2 #1-392 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



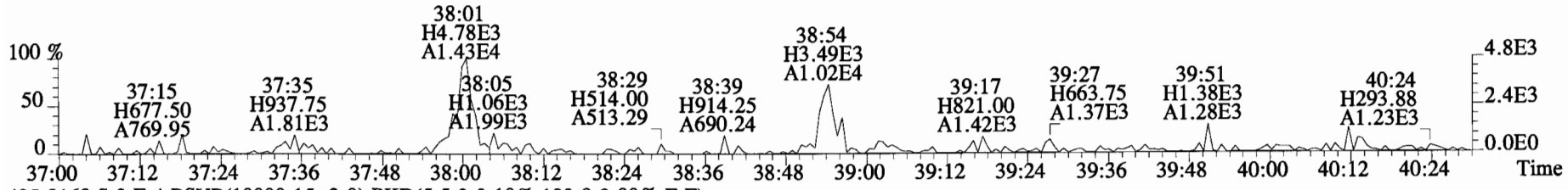
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



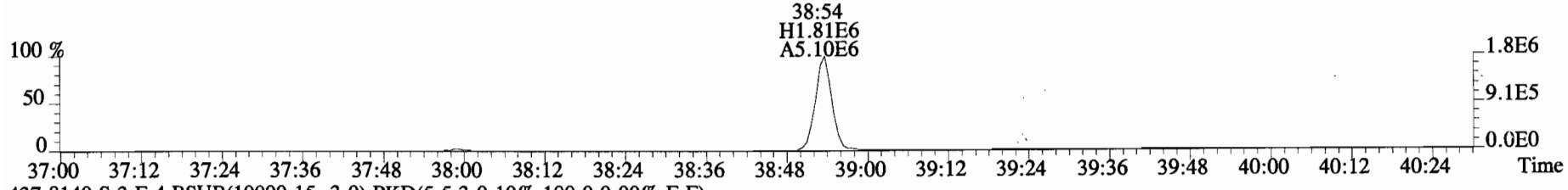
File:150311D2 #1-326 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



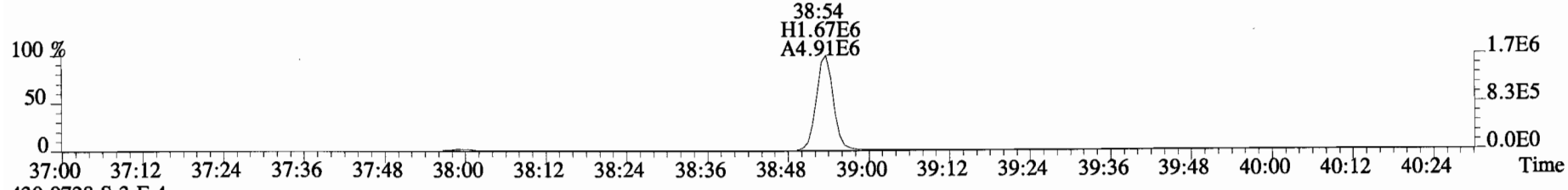
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



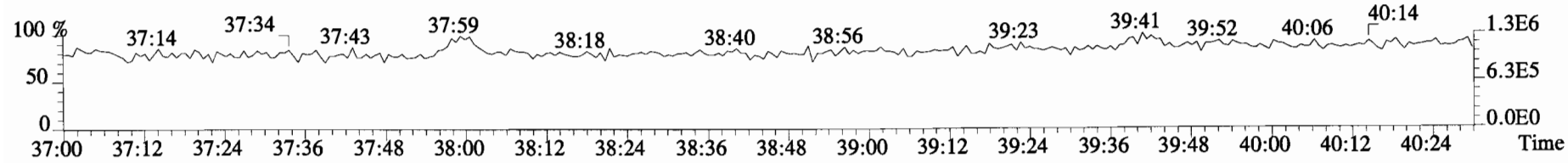
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



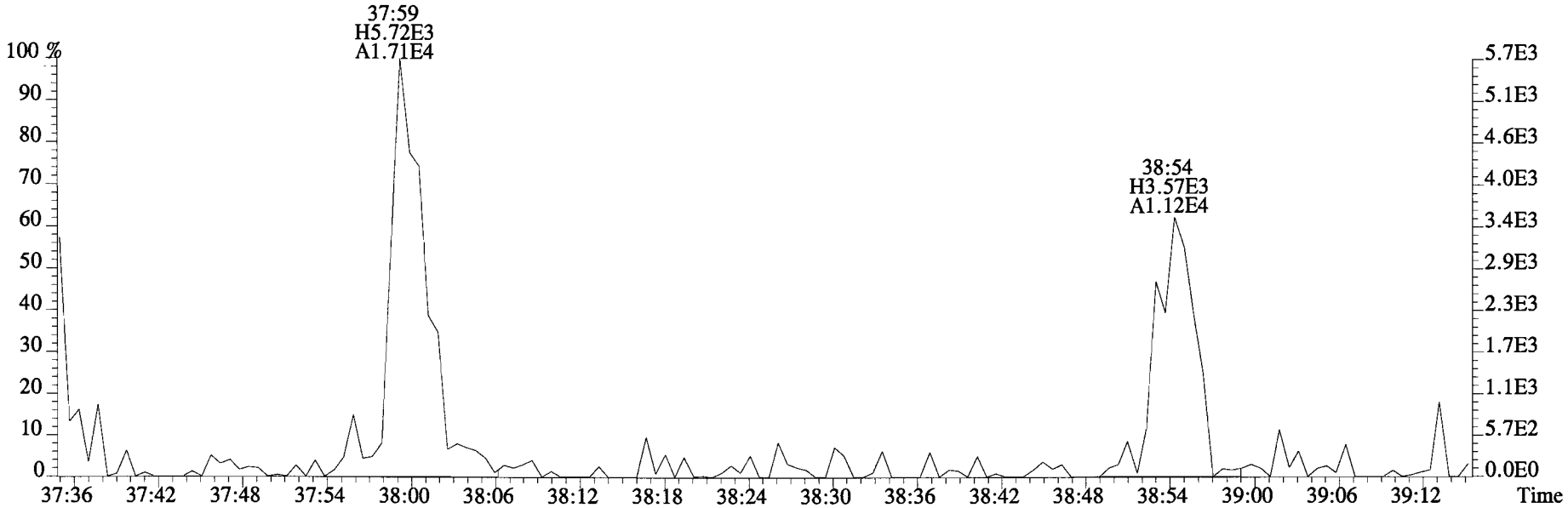
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



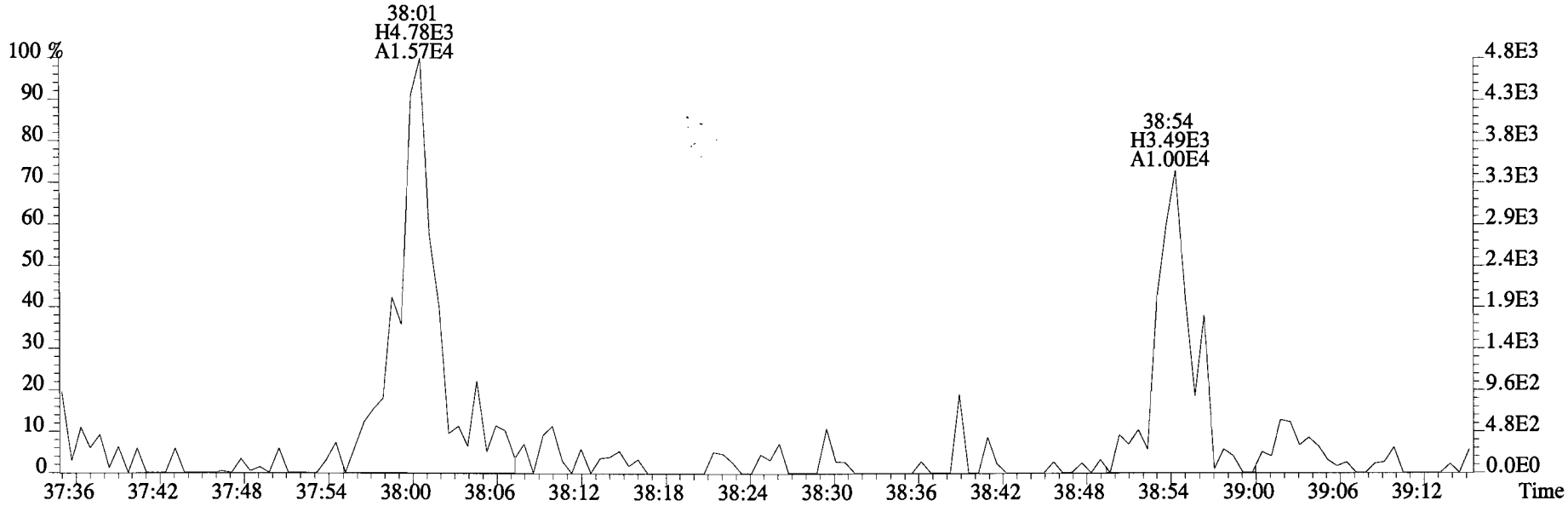
430.9728 S:3 F:4



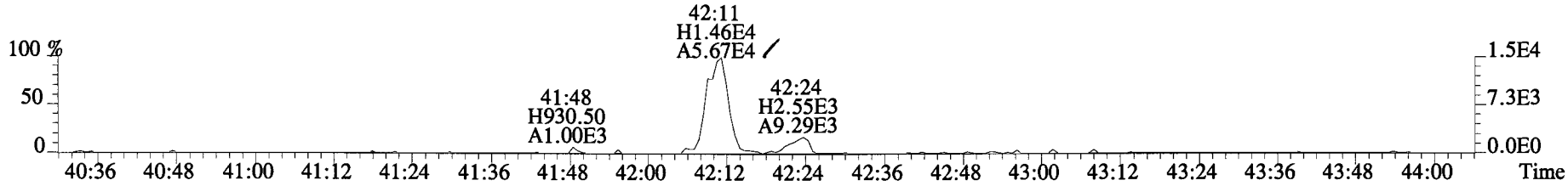
File:150311D2 #1-326 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0)



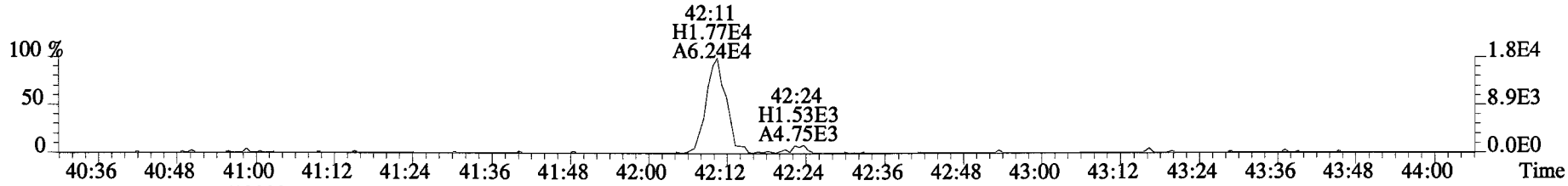
425.7737 S:3 F:4 BSUB(10000,15,-3.0)



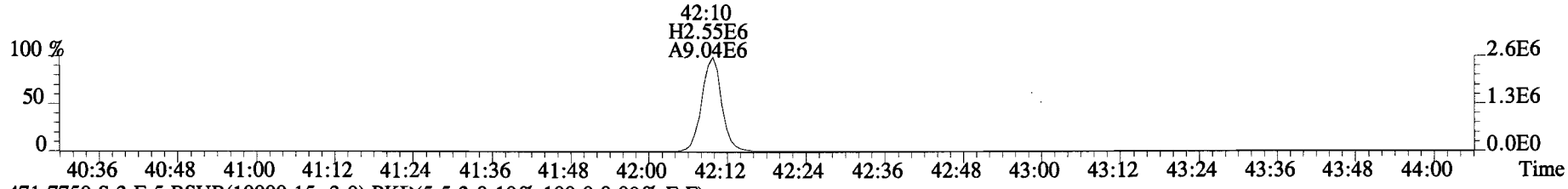
File:150311D2 #1-388 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



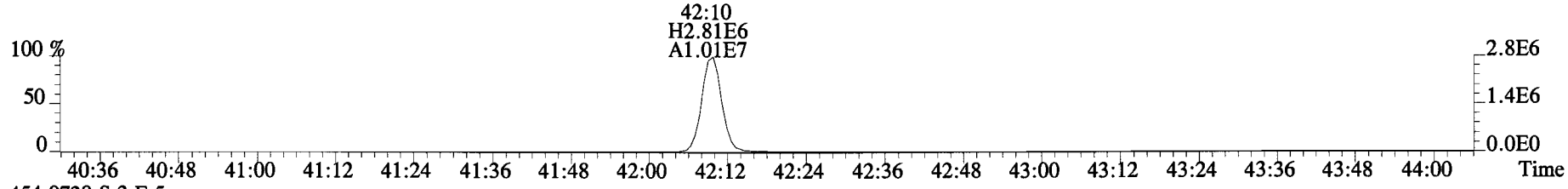
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



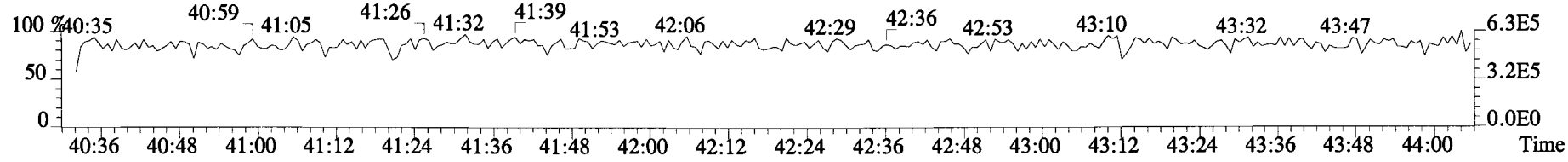
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

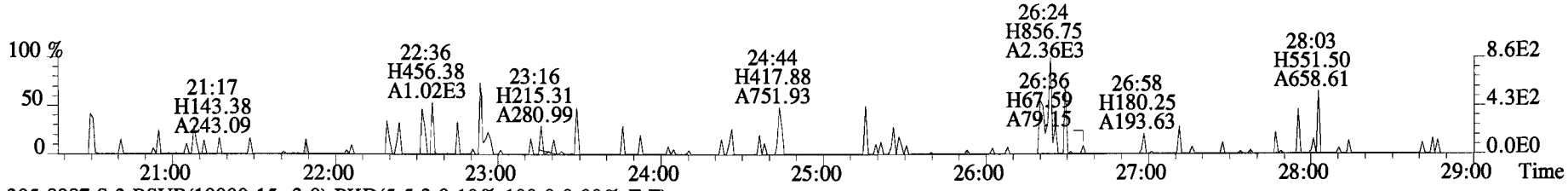


454.9728 S:3 F:5

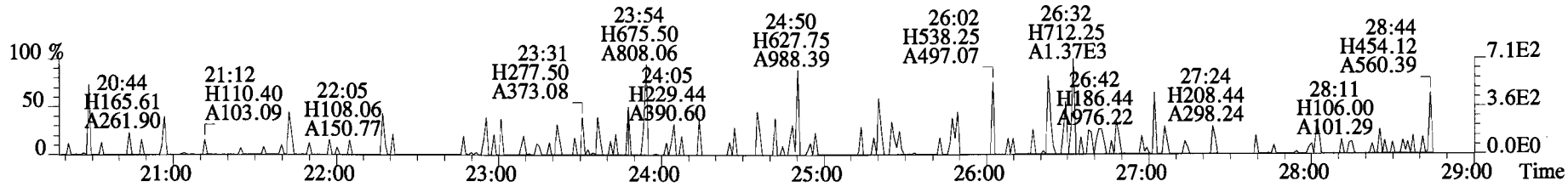


File:150311D2 #1-551 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5

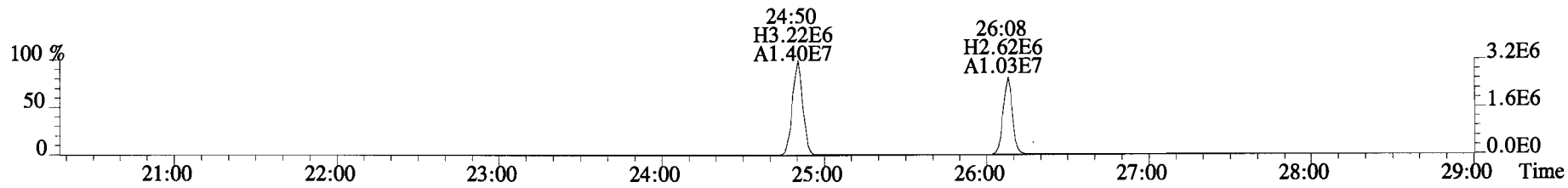
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



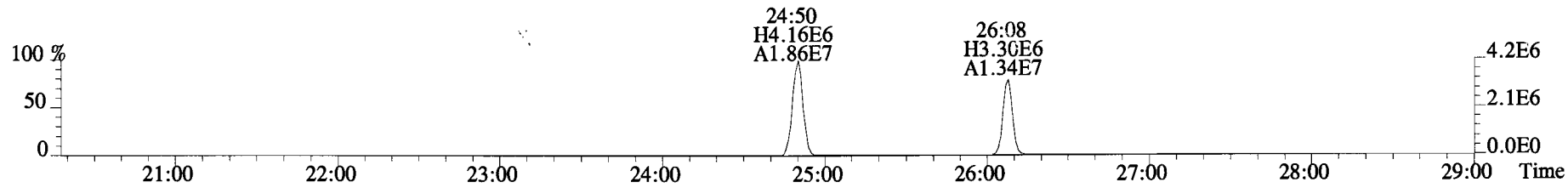
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



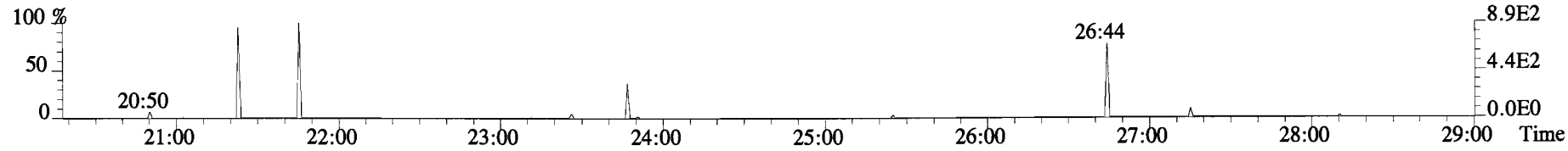
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



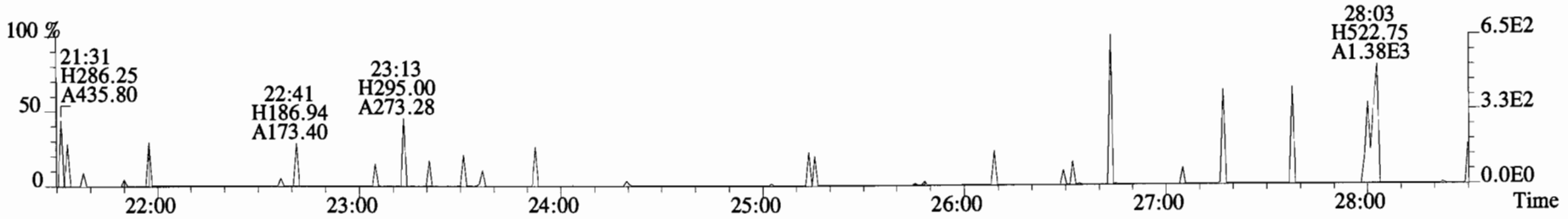
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



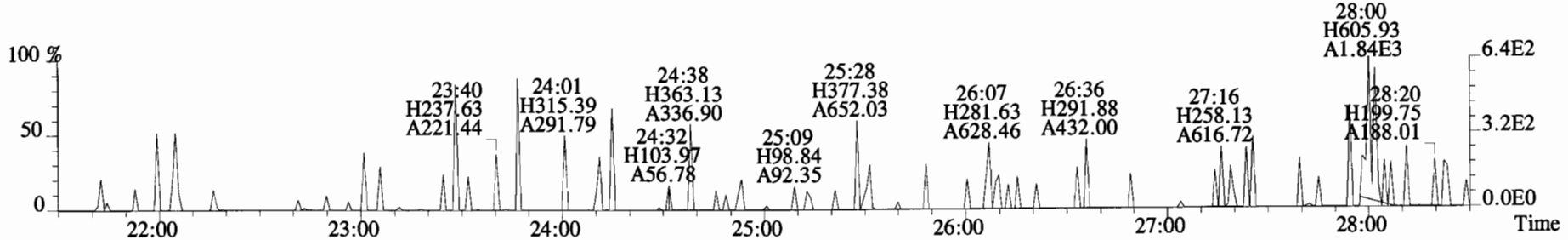
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



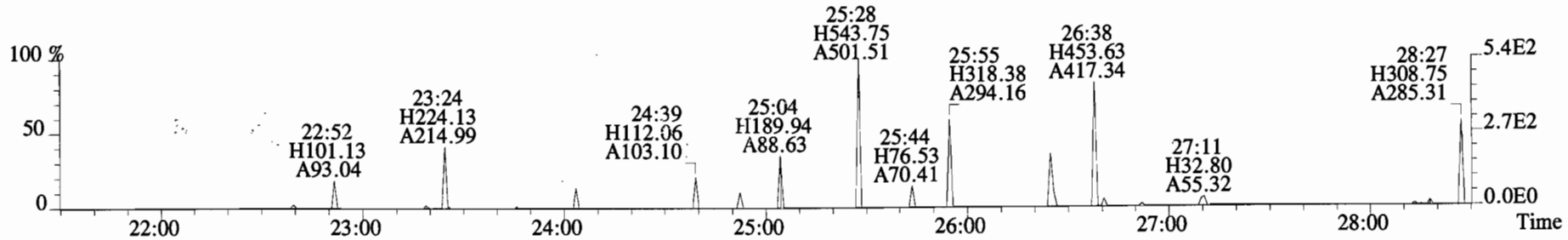
File:150311D2 #1-551 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



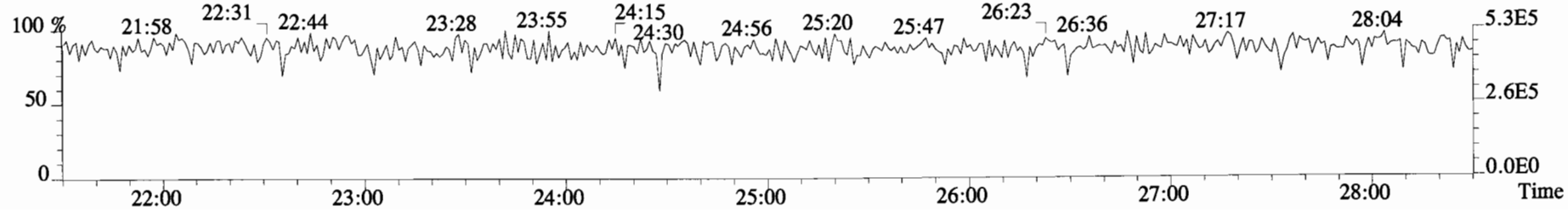
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

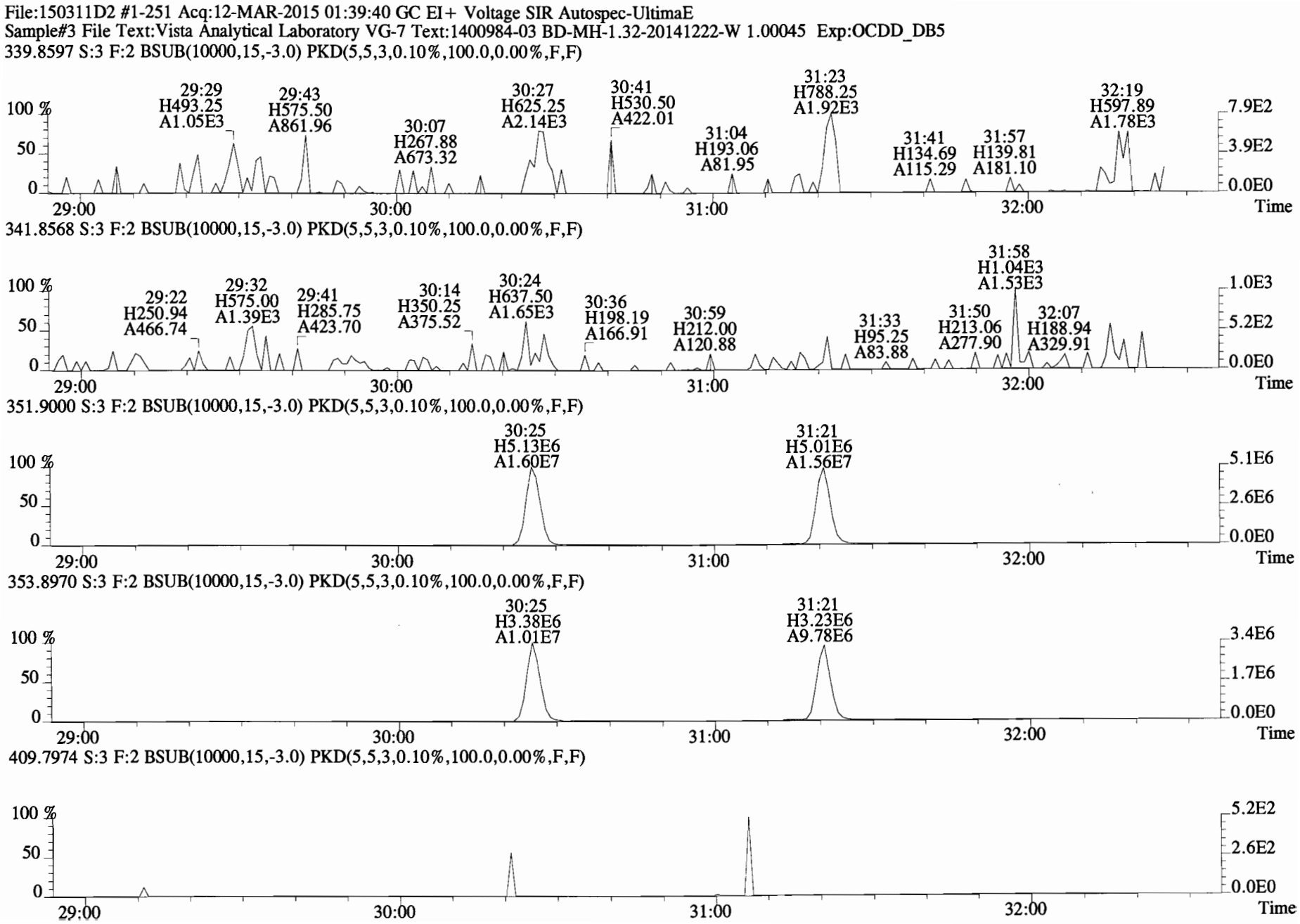


409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



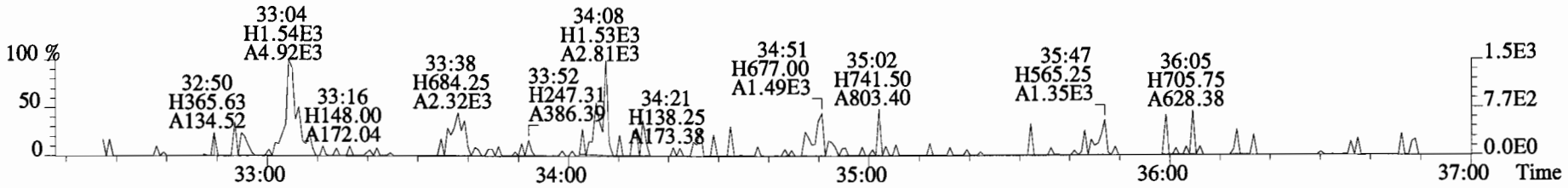
316.9824 S:3



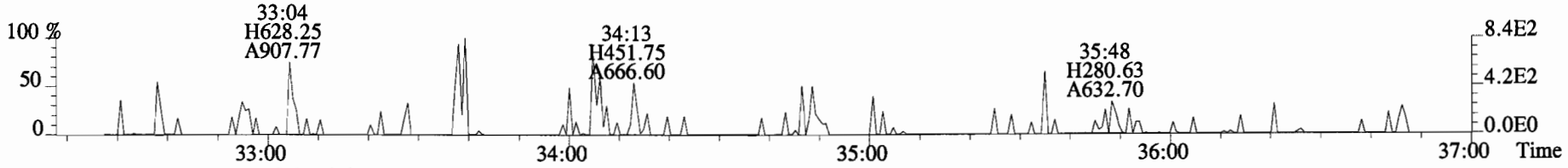

File:150311D2 #1-251 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:29 H493.25 A1.05E3
29:43 H575.50 A861.96
30:07 H267.88 A673.32
30:27 H625.25 A2.14E3
30:41 H530.50 A422.01
31:04 H193.06 A81.95
31:23 H788.25 A1.92E3
31:41 H134.69 A115.29
31:57 H139.81 A181.10
32:19 H597.89 A1.78E3
100 %
50
0
7.9E2
3.9E2
0.0E0
29:00
30:00
31:00
32:00
Time
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:22 H250.94 A466.74
29:32 H575.00 A1.39E3
29:41 H285.75 A423.70
30:14 H350.25 A375.52
30:24 H637.50 A1.65E3
30:36 H198.19 A166.91
30:59 H212.00 A120.88
31:33 H95.25 A83.88
31:50 H213.06 A277.90
31:58 H1.04E3 A1.53E3
32:07 H188.94 A329.91
100 %
50
0
1.0E3
5.2E2
0.0E0
29:00
30:00
31:00
32:00
Time
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:25 H5.13E6 A1.60E7
31:21 H5.01E6 A1.56E7
100 %
50
0
5.1E6
2.6E6
0.0E0
29:00
30:00
31:00
32:00
Time
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:25 H3.38E6 A1.01E7
31:21 H3.23E6 A9.78E6
100 %
50
0
3.4E6
1.7E6
0.0E0
29:00
30:00
31:00
32:00
Time
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
5.2E2
2.6E2
0.0E0
29:00
30:00
31:00
32:00
Time

File:150311D2 #1-392 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5

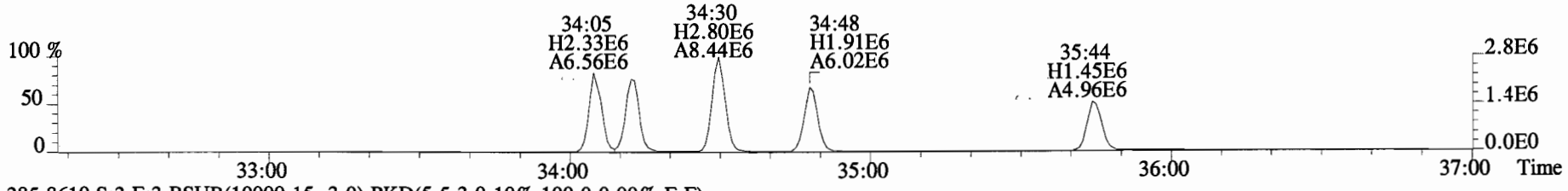
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



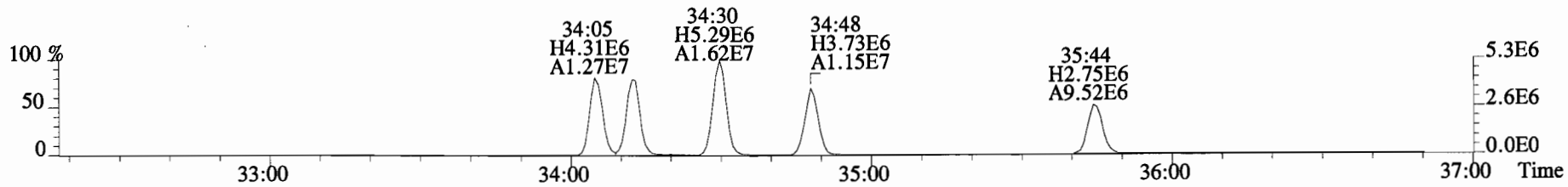
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



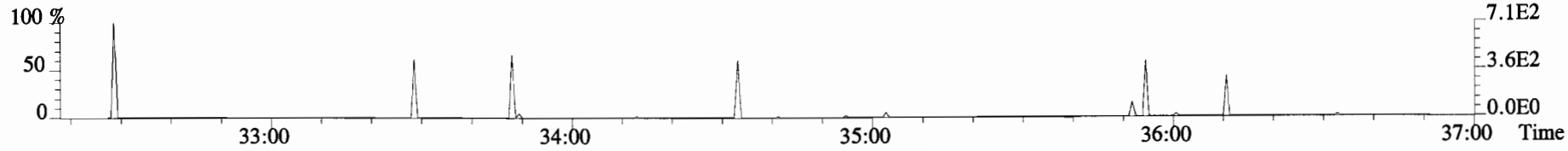
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



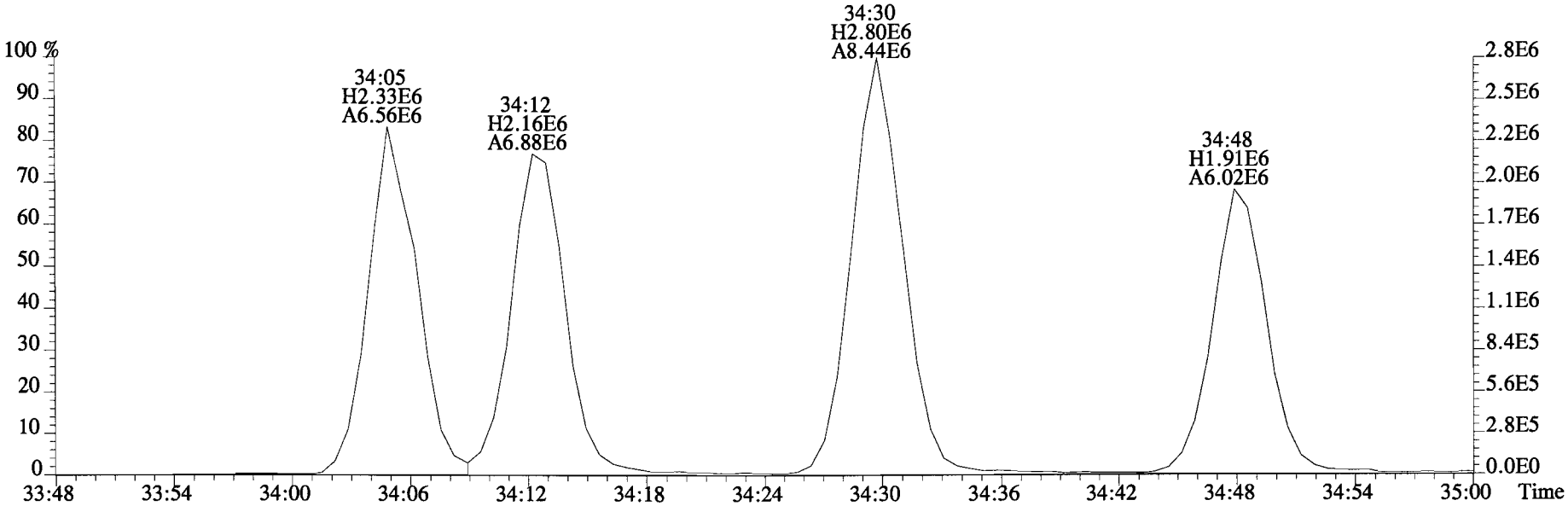
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



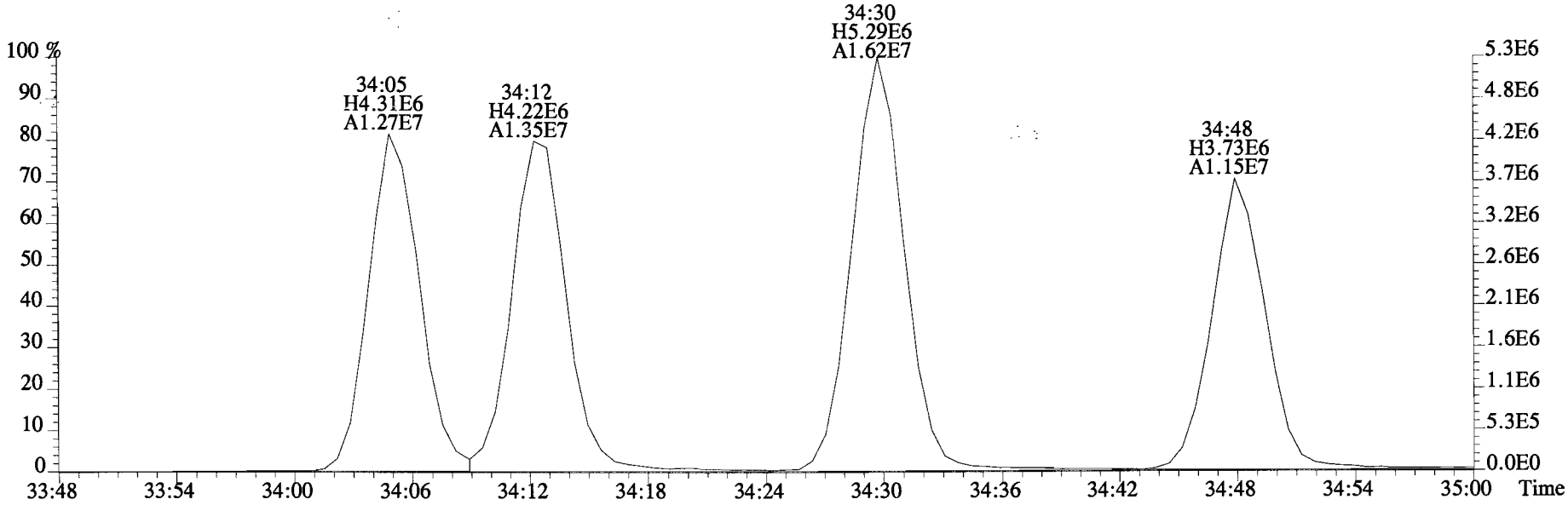
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



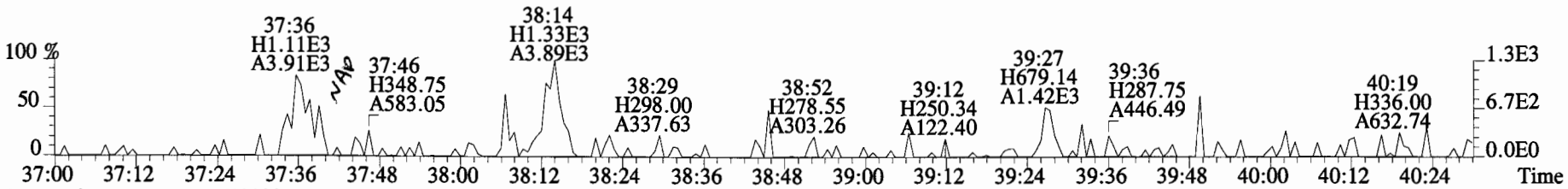
File:150311D2 #1-392 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



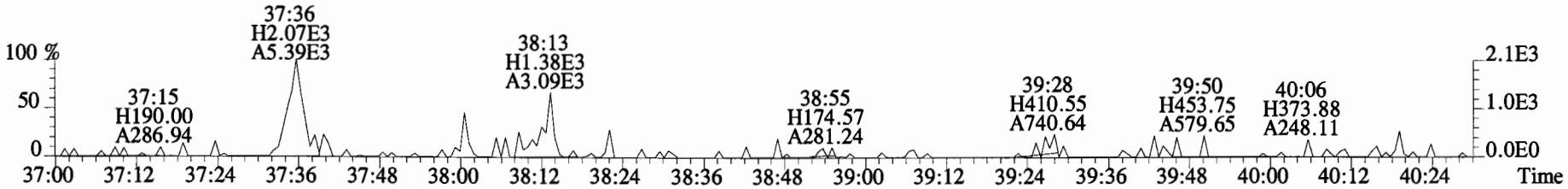
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



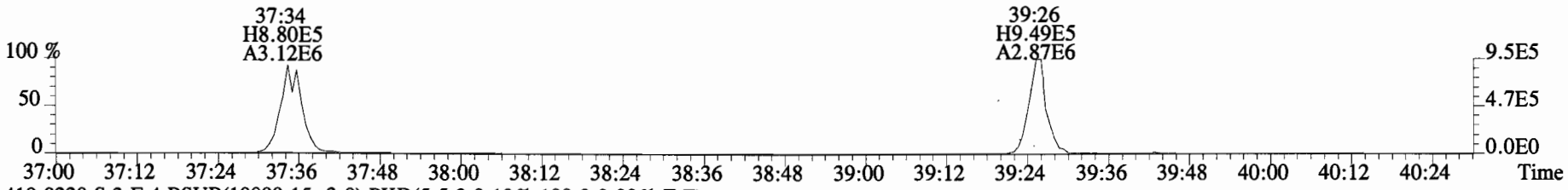
File:150311D2 #1-326 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



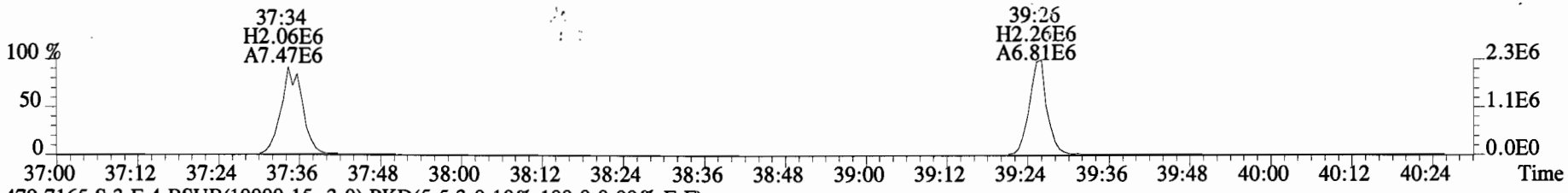
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



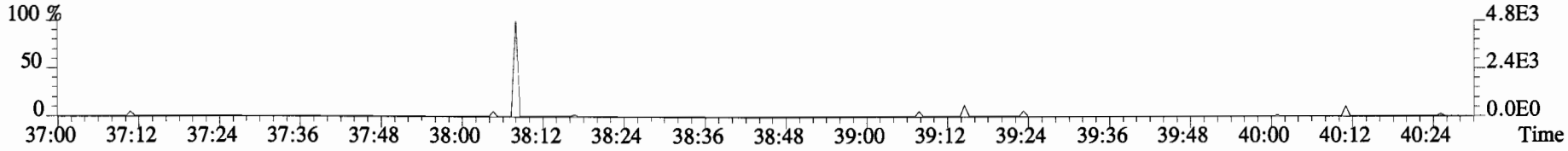
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



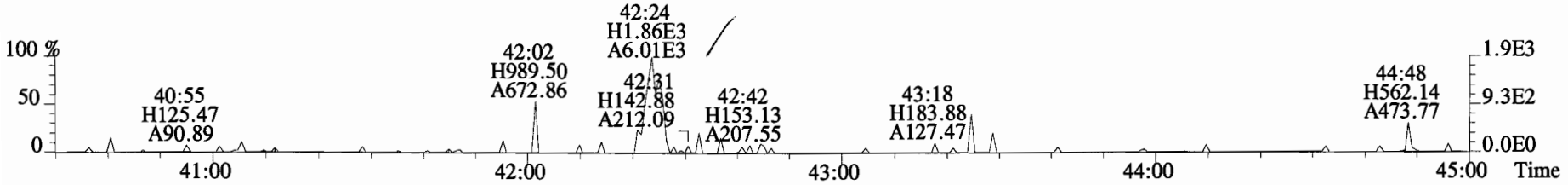
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



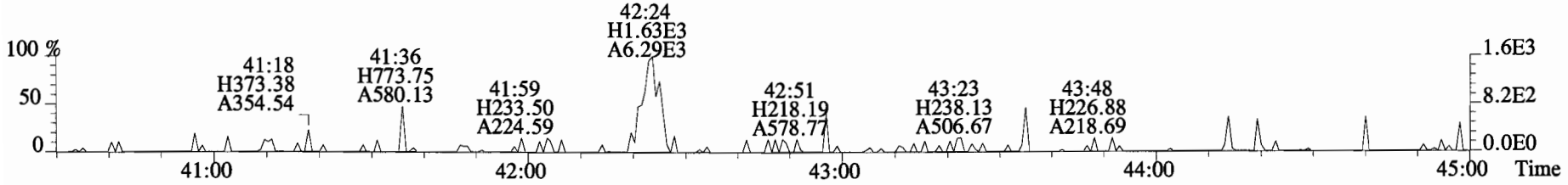
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



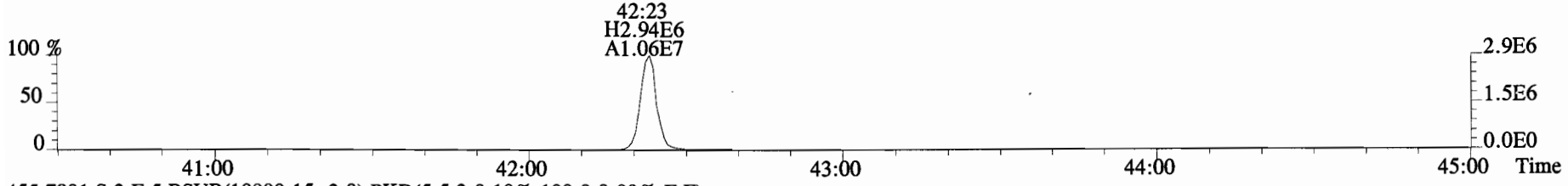
File:150311D2 #1-388 Acq:12-MAR-2015 01:39:40 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG-7 Text:1400984-03 BD-MH-1.32-20141222-W 1.00045 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



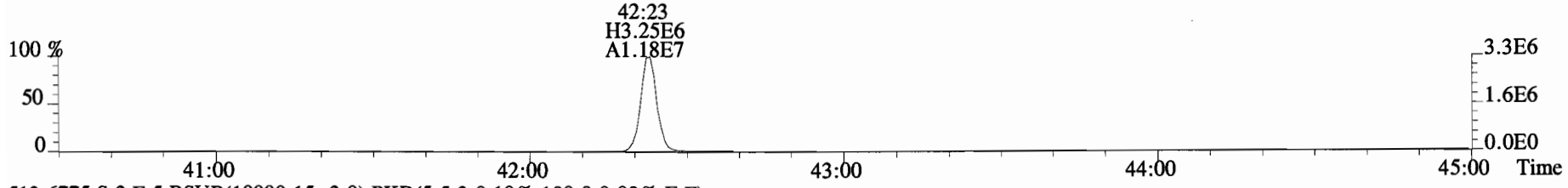
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



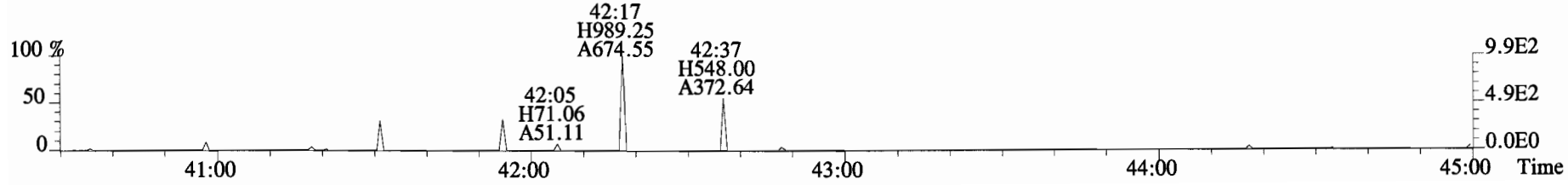
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



SAMPLE DATA

EPA Method 1668C

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF¶	1.33	*		4520	2.5	2.04	*	0.997	1.007
Mono	PCB-2	*	*	n	NotF¶	1.30	*		4520	2.5	2.10	*	0.983	0.993
Mono	PCB-3	*	*	n	NotF¶	1.30	*		4520	2.5	2.10	*	0.996	1.006
Di	PCB-4/10	*	*	n	NotF¶	1.67	*		9910	2.5	3.96	*	0.997	1.007
Di	PCB-7/9	*	*	n	NotF¶	1.25	*		9910	2.5	3.12	*	0.864	0.872
Di	PCB-6	*	*	n	NotF¶	1.24	*		9910	2.5	3.16	*	0.888	0.897
Di	PCB-5/8	*	*	n	NotF¶	1.27	*		9910	2.5	3.07	*	0.905	0.915
Di	PCB-14	*	*	n	NotF¶	1.47	*		9910	2.5	2.58	*	0.948	0.958
Di	PCB-11	4.77e+05	1.66	y	25:18	1.28	5.62		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	*	*	n	NotF¶	1.27	*		9910	2.5	3.00	*	1.011	1.021
Di	PCB-15	*	*	n	NotF¶	1.44	*		9910	2.5	2.64	*	1.023	1.031
Tri	PCB-19	*	*	n	NotF¶	1.18	*		2290	2.5	1.17	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF¶	1.87	*		2290	2.5	0.742	*	1.033	1.043
Tri	PCB-18	*	*	n	NotF¶	0.89	*		2290	2.5	1.10	*	0.949	0.959
Tri	PCB-17	*	*	n	NotF¶	0.96	*		2290	2.5	1.02	*	0.956	0.966
Tri	PCB-24/27	*	*	n	NotF¶	1.30	*		2290	2.5	0.749	*	0.977	0.987
Tri	PCB-16/32	*	*	n	NotF¶	1.05	*		2290	2.5	0.928	*	0.996	1.006
Tri	PCB-34	*	*	n	NotF¶	1.30	*		2440	2.5	0.715	*	0.955	0.965
Tri	PCB-23	*	*	n	NotF¶	1.21	*		2440	2.5	0.768	*	0.958	0.968
Tri	PCB-29	*	*	n	NotF¶	1.21	*		2440	2.5	0.768	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF¶	1.24	*		2440	2.5	0.751	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF¶	1.10	*		2440	2.5	0.847	*	0.980	0.990
Tri	PCB-31	*	*	n	NotF¶	1.25	*		2440	2.5	0.743	*	0.992	1.002
Tri	PCB-28	*	*	n	NotF¶	1.24	*		2440	2.5	0.751	*	0.996	1.006
Tri	PCB-20/21/33	*	*	n	NotF¶	1.16	*		2440	2.5	0.803	*	1.016	1.026
Tri	PCB-22	*	*	n	NotF¶	1.16	*		2440	2.5	0.799	*	1.032	1.042
Tri	PCB-36	*	*	n	NotF¶	1.30	*		2440	2.5	0.703	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF¶	1.26	*		2440	2.5	0.725	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF¶	1.24	*		2440	2.5	0.736	*	0.967	0.977
Tri	PCB-35	*	*	n	NotF¶	1.26	*		2440	2.5	0.728	*	0.982	0.992
Tri	PCB-37	*	*	n	NotF¶	1.35	*		2440	2.5	0.678	*	0.996	1.006
Tetra	PCB-54	*	*	n	NotF¶	1.02	*		2020	2.5	0.889	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF¶	0.78	*		2020	2.5	1.17	*	1.037	1.047
Tetra	PCB-53	*	*	n	NotF¶	1.14	*		2020	2.5	1.11	*	0.941	0.951
Tetra	PCB-51	*	*	n	NotF¶	1.16	*		2020	2.5	1.09	*	0.952	0.962
Tetra	PCB-45	*	*	n	NotF¶	1.04	*		2020	2.5	1.21	*	0.965	0.975
Tetra	PCB-46	*	*	n	NotF¶	0.95	*		2020	2.5	1.33	*	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/24/15

Reviewed by: [signature] Date: 3/26/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1

Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	*	n NotF¶	1.29	*		2020	2.5	0.979	*	0.996	1.006
Tetra	PCB-73	*	*	n NotF¶	1.41	*		2020	2.5	0.896	*	0.999	1.009
Tetra	PCB-43/49	*	*	n NotF¶	1.14	*		2020	2.5	1.11	*	1.005	1.015
Tetra	PCB-47	1.31e+05	0.76	y 32:03	1.20	2.86		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	*	*	n NotF¶	1.33	*		2020	2.5	0.859	*	0.999	1.009
Tetra	PCB-65	*	*	n NotF¶	1.32	*		2020	2.5	0.866	*	1.007	1.017
Tetra	PCB-62	*	*	n NotF¶	1.36	*		2020	2.5	0.839	*	1.011	1.021
Tetra	PCB-44	*	*	n NotF¶	0.87	*		2020	2.5	1.31	*	1.020	1.030
Tetra	PCB-42/59	*	*	n NotF¶	1.24	*		2020	2.5	0.922	*	1.027	1.037
Tetra	PCB-41/64/71/72	*	*	n NotF¶	1.34	*		2020	2.5	0.852	*	1.045	1.055
Tetra	PCB-68	*	*	n NotF¶	1.61	*		2020	2.5	0.708	*	1.053	1.063
Tetra	PCB-40	*	*	n NotF¶	0.86	*		2020	2.5	1.33	*	1.061	1.071
Tetra	PCB-57	*	*	n NotF¶	1.12	*		2020	2.5	0.847	*	0.965	0.975
Tetra	PCB-67	*	*	n NotF¶	1.09	*		2020	2.5	0.869	*	0.974	0.984
Tetra	PCB-58	*	*	n NotF¶	1.14	*		2020	2.5	0.834	*	0.977	0.987
Tetra	PCB-63	*	*	n NotF¶	1.16	*		2020	2.5	0.815	*	0.981	0.991
Tetra	PCB-74	*	*	n NotF¶	1.21	*		2020	2.5	0.782	*	0.989	0.999
Tetra	PCB-61/70	*	*	n NotF¶	1.13	*		2020	2.5	0.843	*	0.995	1.005
Tetra	PCB-76/66	*	*	n NotF¶	1.18	*		2020	2.5	0.804	*	1.000	1.010
Tetra	PCB-80	*	*	n NotF¶	1.32	*		2020	2.5	0.705	*	0.995	1.005
Tetra	PCB-55	*	*	n NotF¶	1.23	*		2020	2.5	0.759	*	1.004	1.014
Tetra	PCB-56/60	*	*	n NotF¶	1.11	*		2020	2.5	0.845	*	1.018	1.028
Tetra	PCB-79	*	*	n NotF¶	1.16	*		2020	2.5	0.805	*	1.048	1.058
Tetra	PCB-78	*	*	n NotF¶	1.18	*		2020	2.5	0.916	*	0.982	0.992
Tetra	PCB-81	*	*	n NotF¶	1.29	*		2020	2.5	0.836	*	0.995	1.005
Tetra	PCB-77	*	*	n NotF¶	1.29	*		2020	2.5	0.837	*	0.995	1.005
Penta	PCB-104	*	*	n NotF¶	1.26	*		1920	2.5	1.92	*	0.996	1.006
Penta	PCB-96	*	*	n NotF¶	1.09	*		1920	2.5	2.22	*	1.034	1.044
Penta	PCB-103	*	*	n NotF¶	0.97	*		1920	2.5	2.51	*	1.051	1.061
Penta	PCB-100	*	*	n NotF¶	0.96	*		1920	2.5	2.52	*	1.061	1.071
Penta	PCB-94	*	*	n NotF¶	1.13	*		1920	2.5	3.01	*	0.980	0.990
Penta	PCB-95/98/102	*	*	n NotF¶	1.29	*		1920	2.5	2.64	*	0.994	1.004
Penta	PCB-93	*	*	n NotF¶	1.06	*		1920	2.5	3.20	*	0.998	1.008
Penta	PCB-88/91	*	*	n NotF¶	1.12	*		1920	2.5	3.02	*	1.006	1.016
Penta	PCB-121	*	*	n NotF¶	1.76	*		1920	2.5	1.93	*	1.009	1.019
Penta	PCB-84/92	*	*	n NotF¶	1.07	*		1920	2.5	2.98	*	0.985	0.995
Penta	PCB-89	*	*	n NotF¶	1.00	*		1920	2.5	3.21	*	0.990	1.000

Analyst: DMS

Date: 3/24/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Penta	PCB-90/101	*	*	n NotF	1.21	*		1920	2.5	2.65	*	0.995-1.005
Penta	PCB-113	*	*	n NotF	1.34	*		1920	2.5	2.38	*	1.002-1.012
Penta	PCB-99	*	*	n NotF	1.25	*		1920	2.5	2.56	*	1.004-1.014
Penta	PCB-119	*	*	n NotF	1.88	*		1920	2.5	2.07	*	0.982-0.992
Penta	PCB-108/112	*	*	n NotF	1.41	*		1920	2.5	2.76	*	0.986-0.996
Penta	PCB-83	*	*	n NotF	1.66	*		1920	2.5	2.34	*	0.990-1.000
Penta	PCB-97	*	*	n NotF	1.30	*		1920	2.5	2.99	*	0.995-1.005
Penta	PCB-86	*	*	n NotF	1.03	*		1920	2.5	3.76	*	0.999-1.009
Penta	PCB-87/117/125	*	*	n NotF	1.59	*		1920	2.5	2.44	*	1.002-1.012
Penta	PCB-111/115	*	*	n NotF	1.86	*		1920	2.5	2.09	*	1.006-1.016
Penta	PCB-85/116	*	*	n NotF	1.39	*		1920	2.5	2.79	*	1.010-1.020
Penta	PCB-120	*	*	n NotF	1.99	*		1920	2.5	1.96	*	1.016-1.026
Penta	PCB-110	*	*	n NotF	1.70	*		1920	2.5	2.28	*	1.019-1.029
Penta	PCB-82	*	*	n NotF	0.74	*		1920	2.5	3.69	*	0.971-0.981
Penta	PCB-124	*	*	n NotF	1.30	*		1920	2.5	2.10	*	0.988-0.998
Penta	PCB-107/109	*	*	n NotF	1.34	*		1920	2.5	2.05	*	0.991-1.001
Penta	PCB-123	*	*	n NotF	1.25	*		1920	2.5	2.19	*	0.995-1.005
Penta	PCB-106/118	*	*	n NotF	1.29	*		1920	2.5	2.13	*	0.996-1.006
Penta	PCB-114	*	*	n NotF	1.45	*		1660	2.5	0.963	*	0.995-1.005
Penta	PCB-122	*	*	n NotF	1.22	*		1660	2.5	1.15	*	0.999-1.009
Penta	PCB-105	*	*	n NotF	1.56	*		1660	2.5	0.924	*	0.995-1.005
Penta	PCB-127	*	*	n NotF	1.31	*		1660	2.5	1.05	*	0.995-1.005
Penta	PCB-126	*	*	n NotF	1.41	*		1660	2.5	0.983	*	0.995-1.005
Hexa	PCB-155	*	*	n NotF	1.20	*		1560	2.5	2.47	*	0.966-1.006
Hexa	PCB-150	*	*	n NotF	1.13	*		1560	2.5	2.63	*	1.030-1.040
Hexa	PCB-152	*	*	n NotF	1.17	*		1560	2.5	2.53	*	1.043-1.053
Hexa	PCB-145	*	*	n NotF	1.09	*		1560	2.5	2.71	*	1.055-1.065
Hexa	PCB-136	*	*	n NotF	1.14	*		1560	2.5	2.59	*	1.063-1.073
Hexa	PCB-148	*	*	n NotF	0.82	*		1560	2.5	3.62	*	1.066-1.076
Hexa	PCB-154	*	*	n NotF	0.89	*		1560	2.5	3.33	*	1.079-1.089
Hexa	PCB-151	*	*	n NotF	0.82	*		1560	2.5	3.62	*	1.097-1.107
Hexa	PCB-135	*	*	n NotF	0.80	*		1560	2.5	3.72	*	1.101-1.113
Hexa	PCB-144	*	*	n NotF	0.86	*		1560	2.5	3.46	*	1.105-1.116
Hexa	PCB-147	*	*	n NotF	0.78	*		1560	2.5	3.80	*	1.108-1.120
Hexa	PCB-139/149	*	*	n NotF	0.87	*		1560	2.5	3.40	*	1.115-1.127
Hexa	PCB-140	*	*	n NotF	0.78	*		1560	2.5	3.81	*	1.120-1.132
Hexa	PCB-134/143	*	*	n NotF	0.93	*		1760	2.5	1.72	*	0.970-0.980

Analyst: DMS

Date: 3/24/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hexa	PCB-133/142	*	*	n NotF	0.91	*		1760	2.5	1.76	*	0.977-0.987
Hexa	PCB-131	*	*	n NotF	0.85	*		1760	2.5	1.89	*	0.981-0.991
Hexa	PCB-146/165	*	*	n NotF	1.08	*		1760	2.5	1.48	*	0.986-0.996
Hexa	PCB-132/161	*	*	n NotF	1.12	*		1760	2.5	1.43	*	0.992-1.002
Hexa	PCB-153	*	*	n NotF	1.20	*		1760	2.5	1.34	*	0.996-1.006
Hexa	PCB-168	*	*	n NotF	1.36	*		1760	2.5	1.18	*	1.000-1.010
Hexa	PCB-141	*	*	n NotF	1.16	*		1760	2.5	1.59	*	0.995-1.005
Hexa	PCB-137	*	*	n NotF	1.18	*		1760	2.5	1.56	*	1.004-1.014
Hexa	PCB-130	*	*	n NotF	0.92	*		1760	2.5	2.00	*	1.006-1.016
Hexa	PCB-138/163/164	*	*	n NotF	1.38	*		1760	2.5	1.29	*	0.996-1.006
Hexa	PCB-158/160	*	*	n NotF	1.48	*		1760	2.5	1.21	*	1.001-1.011
Hexa	PCB-129	*	*	n NotF	0.99	*		1760	2.5	1.80	*	1.007-1.017
Hexa	PCB-166	*	*	n NotF	1.14	*		1760	2.5	1.18	*	0.988-0.998
Hexa	PCB-159	*	*	n NotF	1.22	*		1760	2.5	1.10	*	0.995-1.005
Hexa	PCB-128/162	*	*	n NotF	1.03	*		1760	2.5	1.30	*	1.002-1.012
Hexa	PCB-167	*	*	n NotF	1.18	*		1760	2.5	1.14	*	0.995-1.005
Hexa	PCB-156	*	*	n NotF	1.27	*		1760	2.5	1.00	*	0.995-1.005
Hexa	PCB-157	*	*	n NotF	1.22	*		1760	2.5	1.02	*	0.995-1.005
Hexa	PCB-169	*	*	n NotF	1.07	*		1760	2.5	1.05	*	0.995-1.005
Hepta	PCB-188	*	*	n NotF	1.52	*		1400	2.5	0.930	*	0.996-1.006
Hepta	PCB-184	*	*	n NotF	1.34	*		1400	2.5	1.06	*	1.006-1.016
Hepta	PCB-179	*	*	n NotF	1.39	*		1400	2.5	1.02	*	1.024-1.034
Hepta	PCB-176	*	*	n NotF	1.45	*		1400	2.5	0.972	*	1.035-1.045
Hepta	PCB-186	*	*	n NotF	1.46	*		1400	2.5	0.971	*	1.049-1.059
Hepta	PCB-178	*	*	n NotF	1.07	*		1400	2.5	1.32	*	1.061-1.071
Hepta	PCB-175	*	*	n NotF	1.05	*		1400	2.5	1.35	*	1.069-1.079
Hepta	PCB-182/187	*	*	n NotF	1.14	*		1400	2.5	1.25	*	1.073-1.083
Hepta	PCB-183	*	*	n NotF	1.22	*		1400	2.5	1.16	*	1.080-1.090
Hepta	PCB-185	*	*	n NotF	1.40	*		1400	2.5	1.03	*	0.950-0.960
Hepta	PCB-174	*	*	n NotF	1.29	*		1400	2.5	1.12	*	0.958-0.968
Hepta	PCB-181	*	*	n NotF	1.35	*		1400	2.5	1.07	*	0.960-0.970
Hepta	PCB-177	*	*	n NotF	1.27	*		1400	2.5	1.14	*	0.963-0.973
Hepta	PCB-171	*	*	n NotF	1.46	*		1400	2.5	0.992	*	0.969-0.979
Hepta	PCB-173	*	*	n NotF	1.10	*		1400	2.5	1.31	*	0.978-0.988
Hepta	PCB-172	*	*	n NotF	1.35	*		1400	2.5	1.07	*	0.987-0.997
Hepta	PCB-192	*	*	n NotF	1.74	*		1400	2.5	0.831	*	0.991-1.001
Hepta	PCB-180	*	*	n NotF	1.45	*		1400	2.5	0.997	*	0.995-1.005

Analyst: DMS

Date: 3/24/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n NotF¶	1.85	*		1400	2.5	0.780	*	0.999	1.009
Hepta	PCB-191	*	*	n NotF¶	1.86	*		1400	2.5	0.776	*	1.005	1.015
Hepta	PCB-170	*	*	n NotF¶	1.67	*		1400	2.5	0.979	*	0.995	1.005
Hepta	PCB-190	*	*	n NotF¶	2.25	*		1400	2.5	0.727	*	0.999	1.009
Hepta	PCB-189	*	*	n NotF¶	1.67	*		1400	2.5	0.646	*	0.995	1.005
Octa	PCB-202	*	*	n NotF¶	1.02	*		1350	2.5	1.78	*	0.995	1.005
Octa	PCB-201	*	*	n NotF¶	1.10	*		1350	2.5	1.66	*	1.005	1.015
Octa	PCB-204	*	*	n NotF¶	1.07	*		1350	2.5	1.69	*	1.009	1.019
Octa	PCB-197	*	*	n NotF¶	1.17	*		1350	2.5	1.56	*	1.015	1.025
Octa	PCB-200	*	*	n NotF¶	1.03	*		1350	2.5	1.76	*	1.034	1.044
Octa	PCB-198	*	*	n NotF¶	0.75	*		1350	2.5	2.41	*	1.062	1.072
Octa	PCB-199	*	*	n NotF¶	0.74	*		1350	2.5	2.45	*	1.064	1.074
Octa	PCB-196/203	*	*	n NotF¶	0.83	*		1350	2.5	2.19	*	1.070	1.080
Octa	PCB-195	*	*	n NotF¶	1.14	*		1340	2.5	0.764	*	0.979	0.989
Octa	PCB-194	3.83e+04	1.06	n 53:52	1.29	1.08	R	*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	*	*	n NotF¶	1.61	*		1340	2.5	0.541	*	1.001	1.010
Nona	PCB-208	*	*	n NotF¶	1.01	*		1290	2.5	0.655	*	0.995	1.005
Nona	PCB-207	*	*	n NotF¶	1.03	*		1290	2.5	0.646	*	1.001	1.011
Nona	PCB-206	*	*	n NotF¶	0.88	*		1290	2.5	1.17	*	0.995	1.005
Deca	PCB-209	*	*	n NotF¶	1.35	*		1140	2.5	0.961	*	0.995	1.005

Analyst: DMS

Date: 3/24/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.31	*	
Total Di-PCB	4.77e+05	1.66	y	25:18	1.32	5.62167	
Total Tri-PCB	*	*	n	NotFnd	1.20	*	
Total Tri-PCB	*	*	n	NotFnd	1.23	*	Sum:0.00000
Total Tetra-PCB	1.31e+05	0.76	y	32:03	1.17	2.85759	
Total Penta-PCB	*	*	n	NotFnd	1.24	*	
Total Penta-PCB	*	*	n	NotFnd	1.39	*	Sum:0.00000
Total Hexa-PCB	*	*	n	NotFnd	0.94	*	
Total Hexa-PCB	*	*	n	NotFnd	1.13	*	Sum:0.00000
Total Hepta-PCB	*	*	n	NotFnd	1.37	*	
Total Octa-PCB	*	*	n	NotFnd	0.95	*	
Total Octa-PCB	*	*	n	NotFnd	1.35	*	Sum:0.00000
Total Nona-PCB	*	*	n	NotFnd	0.99	*	
Total Deca-PCB	*	*	n	NotFnd	1.35	*	

Total PCB Conc:9.55461400000

Integrations by Analyst: DMS

Date: 3/24/15

Client ID: Method Blank Filename: 150319E2 S:4 Acq:20-MAR-15 00:49:09 ConCal: ST150319E2-1
Lab ID: B5C0088-BLK1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.08e+08	3.21 y	0.91	16:11	0.623	0.619	0.625	1510	75.4
13C-PCB-3	1.16e+08	3.22 y	0.94	18:47	0.723	0.718	0.726	1560	78.1
13C-PCB-4	6.99e+07	1.59 y	0.60	20:07	0.774	0.770	0.778	1490	74.3
13C-PCB-9	1.22e+08	1.60 y	0.96	21:54	0.843	0.839	0.847	1620	80.8
13C-PCB-11	1.32e+08	1.60 y	0.95	25:16	0.972	0.968	0.978	1760	88.0
13C-PCB-19	6.62e+07	1.08 y	0.56	24:15	0.933	0.929	0.939	1500	74.9
13C-PCB-28	1.22e+08	1.06 y	1.07	29:08	1.004	0.999	1.009	1650	82.5
13C-PCB-32	9.96e+07	1.09 y	0.83	27:10	1.046	1.041	1.051	1530	76.5
13C-PCB-37	1.35e+08	1.06 y	0.96	33:00	1.137	1.131	1.143	2030	101
13C-PCB-47	7.68e+07	0.79 y	0.77	32:02	0.870	0.867	0.875	2080	104
13C-PCB-52	7.08e+07	0.79 y	0.71	31:32	0.857	0.853	0.861	2070	103
13C-PCB-54	9.18e+07	0.81 y	1.06	28:00	0.761	0.757	0.765	1800	90.0
13C-PCB-70	9.80e+07	0.82 y	0.99	35:33	0.966	0.961	0.971	2050	103
13C-PCB-77	8.73e+07	0.81 y	0.96	39:41	1.078	1.073	1.083	1880	94.1
13C-PCB-80	1.00e+08	0.80 y	1.02	35:59	0.978	0.973	0.983	2040	102
13C-PCB-81	9.01e+07	0.80 y	1.00	39:05	1.062	1.057	1.067	1880	93.8
13C-PCB-95	3.84e+07	1.64 y	0.70	35:50	0.912	0.908	0.918	2210	110
13C-PCB-97	3.41e+07	1.66 y	0.66	38:51	0.989	0.984	0.994	2080	104
13C-PCB-101	4.02e+07	1.65 y	0.77	37:33	0.956	0.951	0.961	2100	105
13C-PCB-104	5.17e+07	1.65 y	0.97	32:41	0.832	0.828	0.836	2150	107
13C-PCB-105	7.82e+07	1.58 y	1.20	43:06	0.929	0.924	0.934	2360	118
13C-PCB-114	7.96e+07	1.61 y	1.26	42:15	0.911	0.905	0.915	2290	115
13C-PCB-118	4.69e+07	1.63 y	0.94	41:36	1.059	1.054	1.064	2010	101
13C-PCB-123	4.61e+07	1.63 y	0.88	41:25	1.054	1.049	1.059	2100	105
13C-PCB-126	8.19e+07	1.60 y	1.13	45:20	0.977	0.972	0.982	2630	132
13C-PCB-127	8.40e+07	1.62 y	1.26	43:26	0.936	0.931	0.941	2420	121
13C-PCB-138	5.70e+07	1.30 y	1.12	44:50	0.967	0.961	0.971	1850	92.3
13C-PCB-141	5.46e+07	1.29 y	1.09	44:00	0.949	0.943	0.953	1810	90.6
13C-PCB-153	6.33e+07	1.28 y	1.27	43:16	0.933	0.927	0.937	1800	90.0
13C-PCB-155	3.09e+07	1.32 y	0.87	37:05	0.944	0.939	0.949	1430	71.3
13C-PCB-156	7.75e+07	1.30 y	1.35	48:05	1.037	1.032	1.042	2080	104
13C-PCB-157	8.09e+07	1.29 y	1.42	48:21	1.042	1.037	1.047	2070	103
13C-PCB-159	7.48e+07	1.28 y	1.37	46:07	0.994	0.989	0.999	1980	98.9
13C-PCB-167	7.62e+07	1.31 y	1.38	46:48	1.009	1.004	1.014	2000	99.9
13C-PCB-169	8.15e+07	1.28 y	1.38	50:30	1.089	1.084	1.094	2140	107
13C-PCB-170	2.78e+07	0.47 y	0.60	50:52	1.097	1.091	1.103	1670	83.5
13C-PCB-180	3.45e+07	0.47 y	0.76	49:21	1.064	1.059	1.069	1650	82.6
13C-PCB-188	3.79e+07	0.47 y	1.01	42:53	0.925	0.919	0.929	1350	67.6
13C-PCB-189	3.93e+07	0.49 y	0.80	52:21	1.129	1.124	1.136	1780	88.9
13C-PCB-194	5.51e+07	0.92 y	0.75	53:52	0.995	0.990	1.000	2040	102
13C-PCB-202	3.53e+07	0.92 y	0.99	48:17	1.041	1.036	1.046	1290	64.7
13C-PCB-206	4.60e+07	0.78 y	0.73	55:29	1.025	1.020	1.301	1730	86.5
13C-PCB-208	6.13e+07	0.79 y	1.08	53:08	0.982	0.977	0.987	1560	78.1
13C-PCB-209	4.03e+07	1.20 y	0.71	56:50	1.050	1.045	1.055	1570	78.3

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	9.70e+07	0.79 y	1.02	37:52	1.029	1.024	1.033	1970	98.7
13C-PCB-178	2.80e+07	0.47 y	0.64	45:40	0.985	0.980	0.989	1590	79.6

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	9.70e+07	0.79 y	1.02	37:52	0.969	0.963	0.973	2100	105
13C-PCB-178	2.80e+07	0.47 y	0.84	45:40	0.925	0.920	0.930	1920	96.2

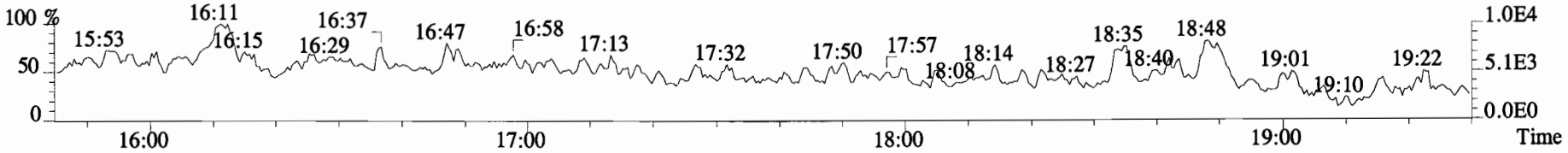
RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	1.58e+08	1.56 y	1.00	25:59	2000
13C-PCB-31	1.38e+08	1.06 y	1.00	29:01	2000
13C-PCB-60	9.62e+07	0.79 y	1.00	36:48	2000
13C-PCB-111	4.99e+07	1.62 y	1.00	39:17	2000
13C-PCB-128	5.52e+07	1.30 y	1.00	46:23	2000
13C-PCB-205	7.25e+07	0.89 y	1.00	54:08	2000

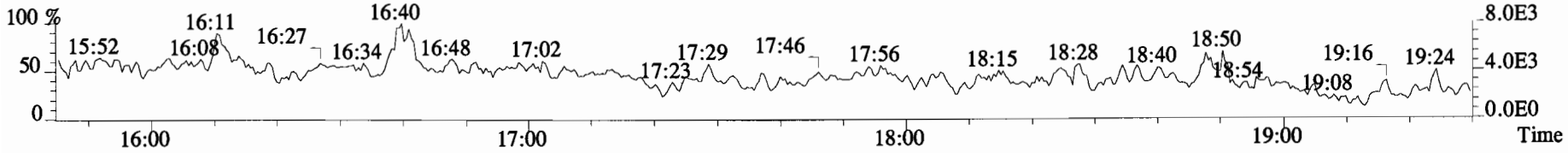
Analyst: DMS

Date: 3/24/15

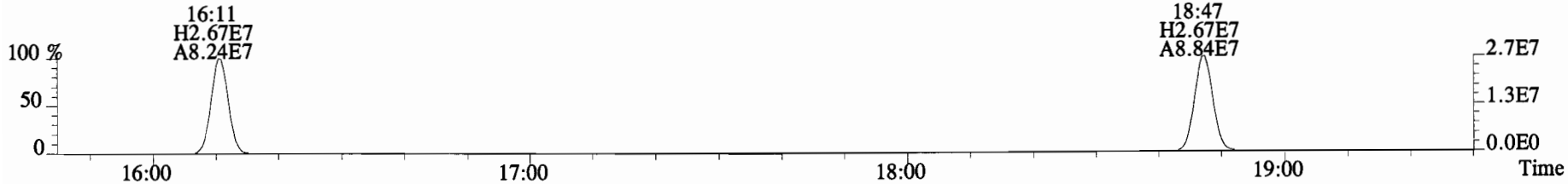
File:150319E2 #1-866 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6392.0,0.00%,F,F)



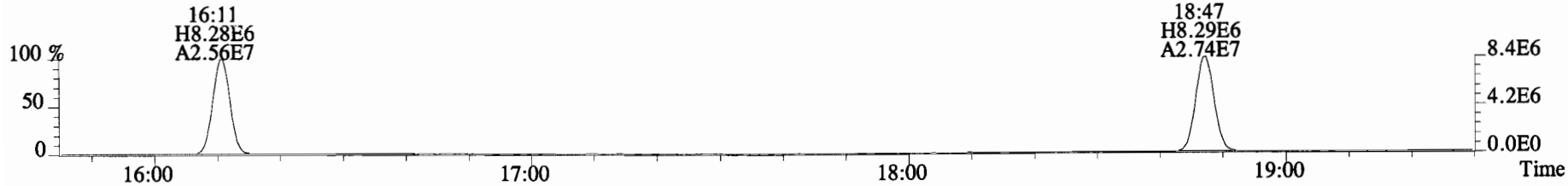
190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4516.0,0.00%,F,F)



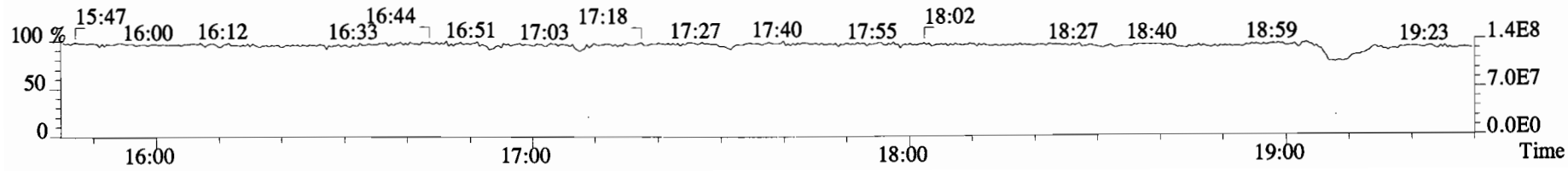
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5880.0,0.00%,F,F)



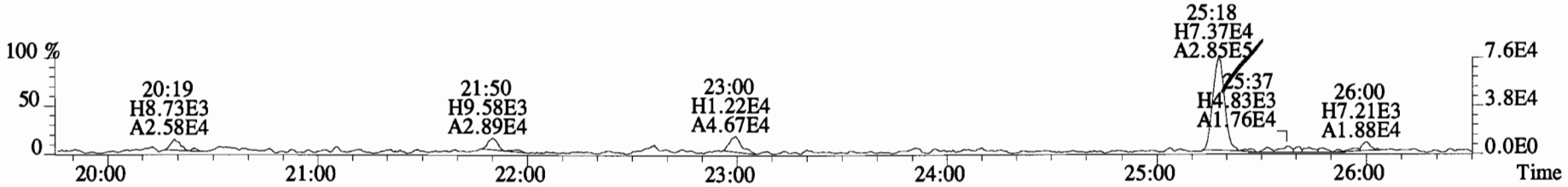
202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,104792.0,0.00%,F,F)



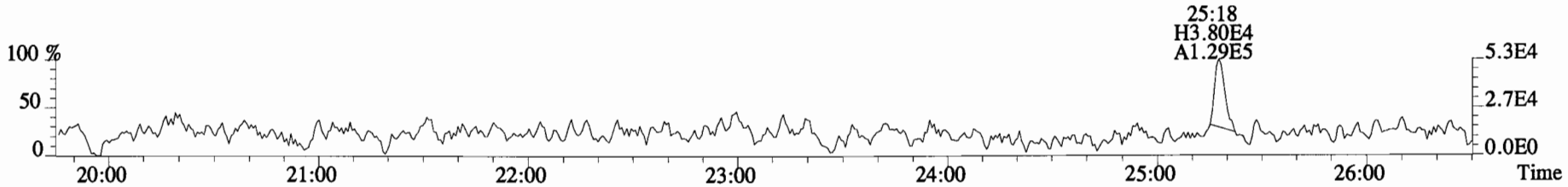
180.9880 S:4



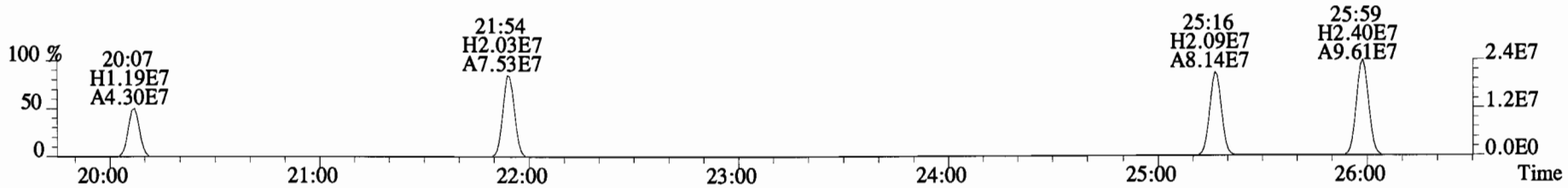
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3344.0,0.00%,F,F)



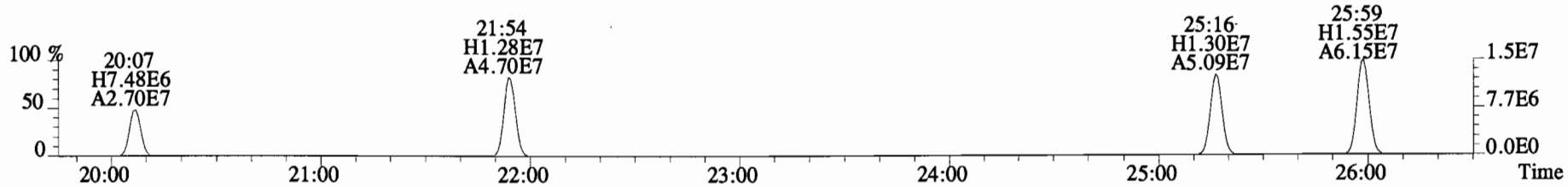
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16376.0,0.00%,F,F)



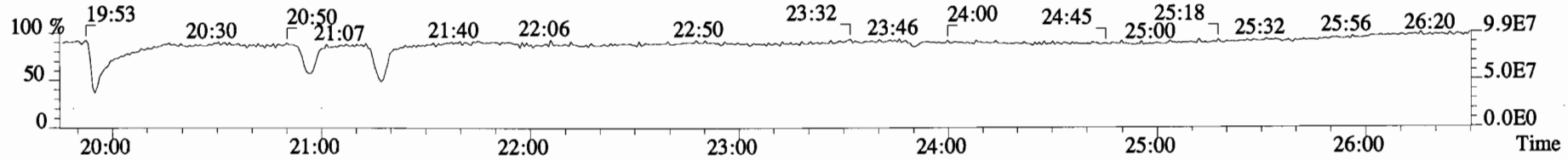
234.0406 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4504.0,0.00%,F,F)



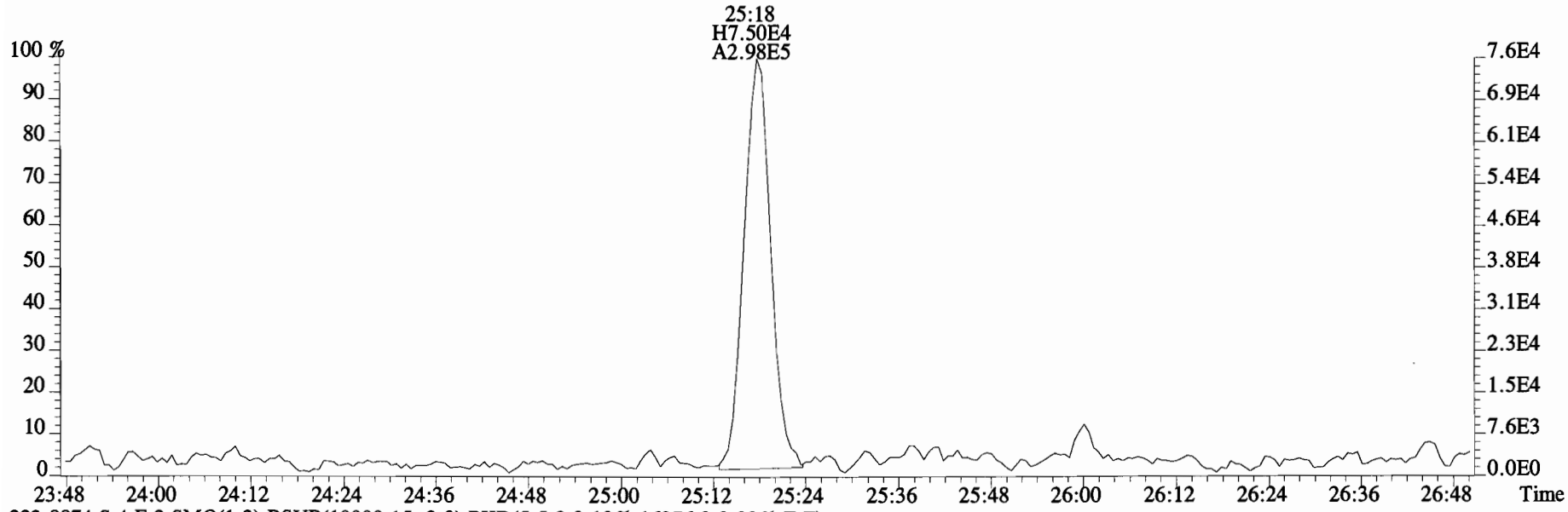
236.0376 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3680.0,0.00%,F,F)



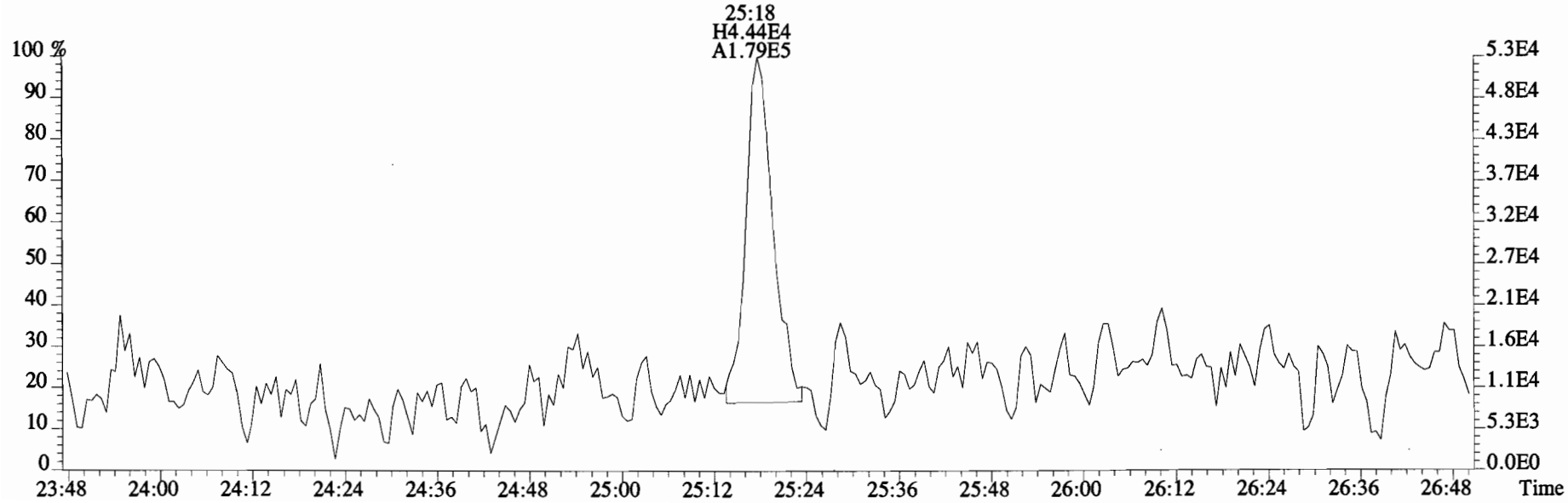
230.9856 S:4 F:2



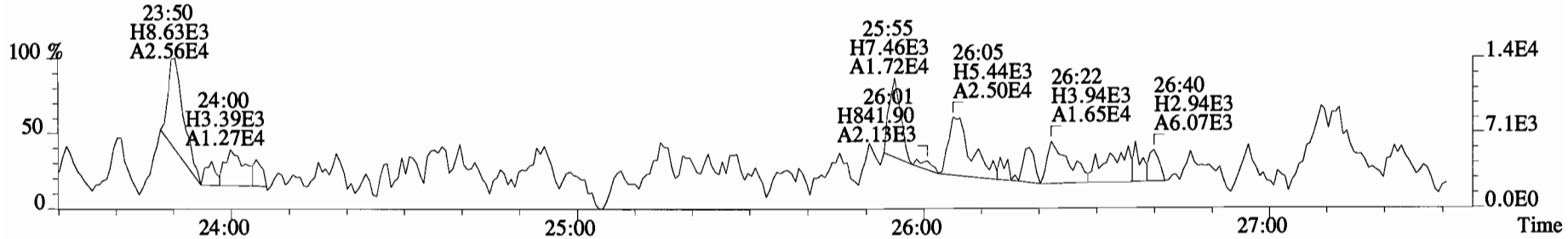
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0)



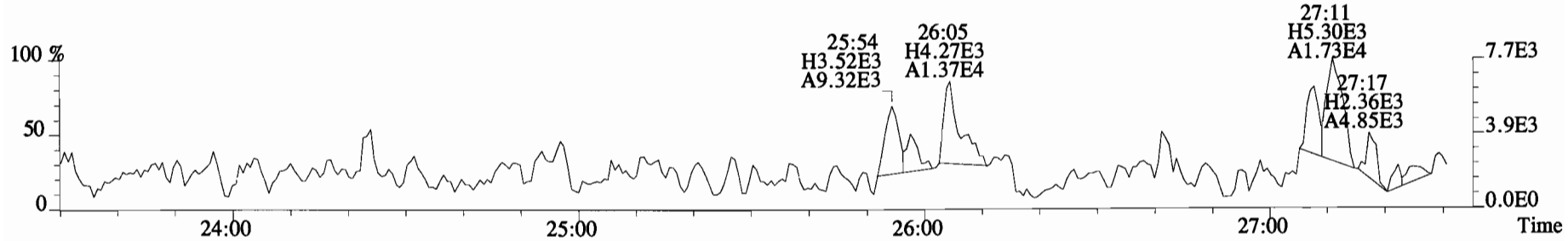
223.9974 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16376.0,0.00%,F,F)



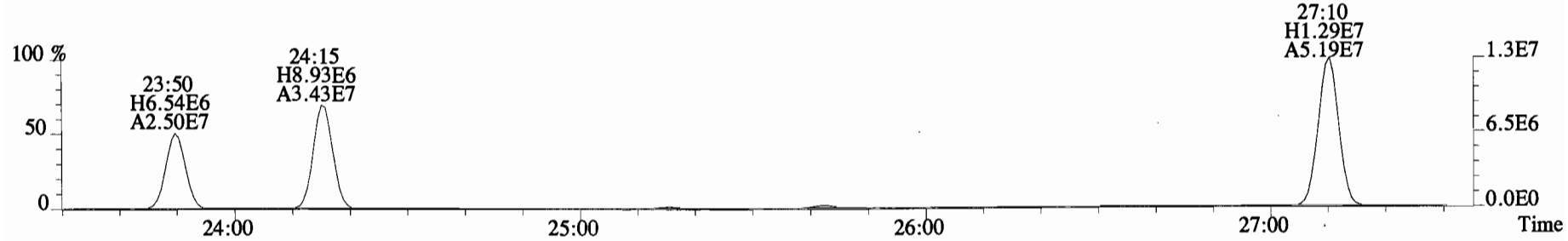
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4880.0,0.00%,F,F)



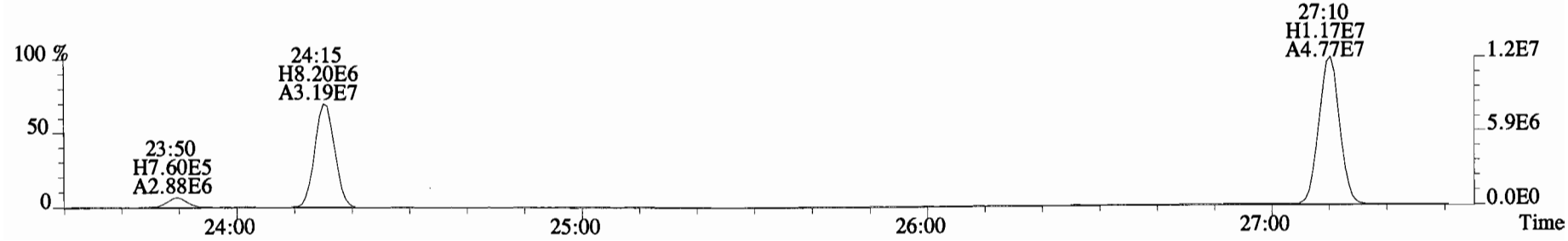
257.9584 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2292.0,0.00%,F,F)



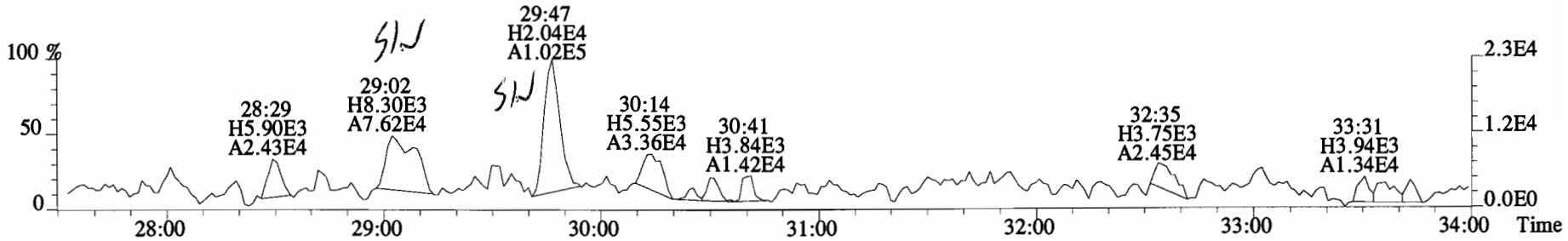
268.0016 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,76252.0,0.00%,F,F)



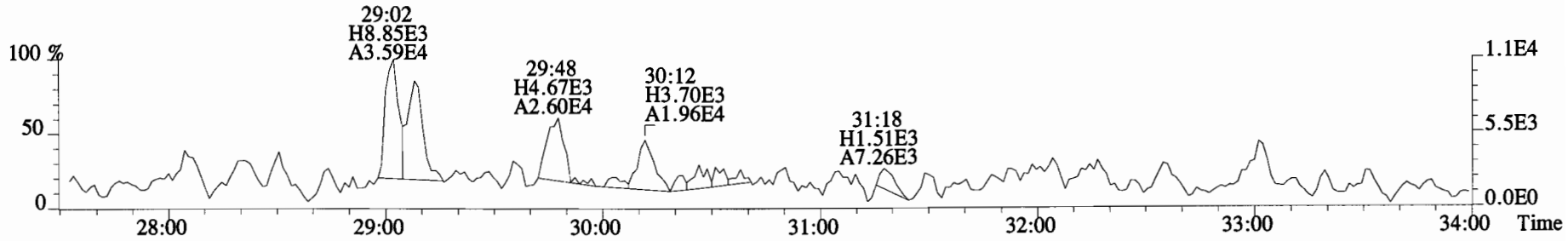
269.9986 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36748.0,0.00%,F,F)



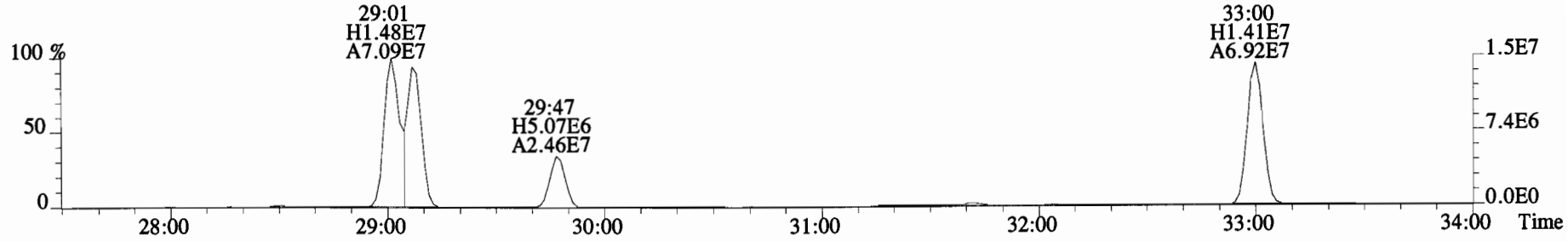
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3844.0,0.00%,F,F)



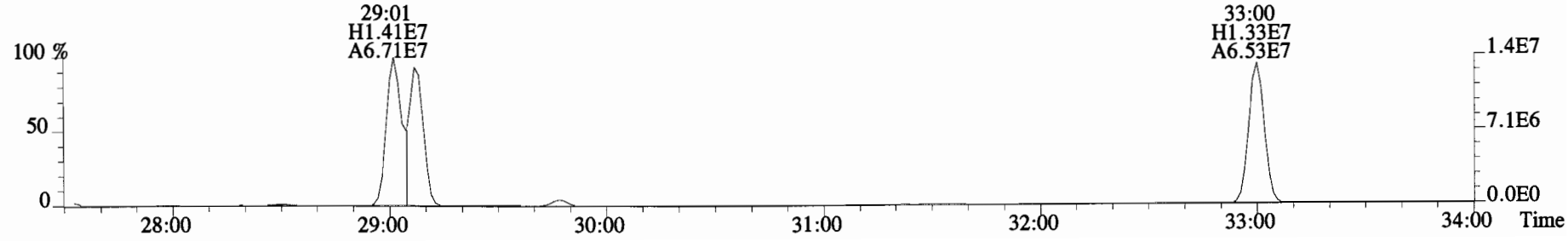
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2440.0,0.00%,F,F)



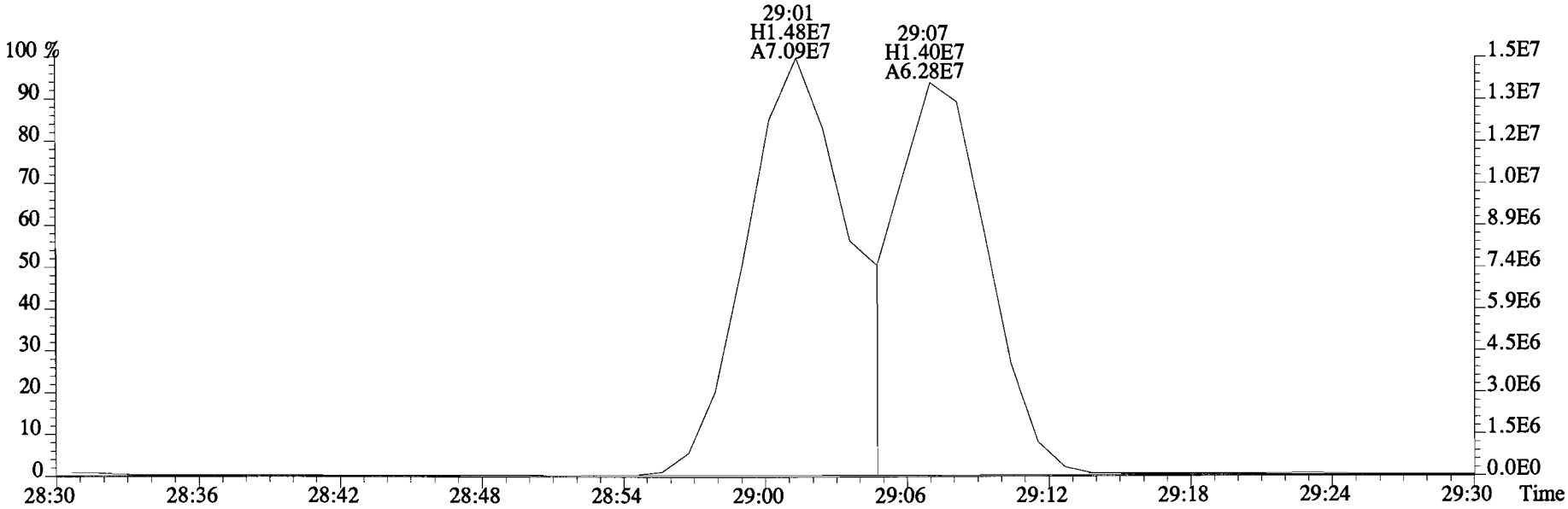
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,38516.0,0.00%,F,F)



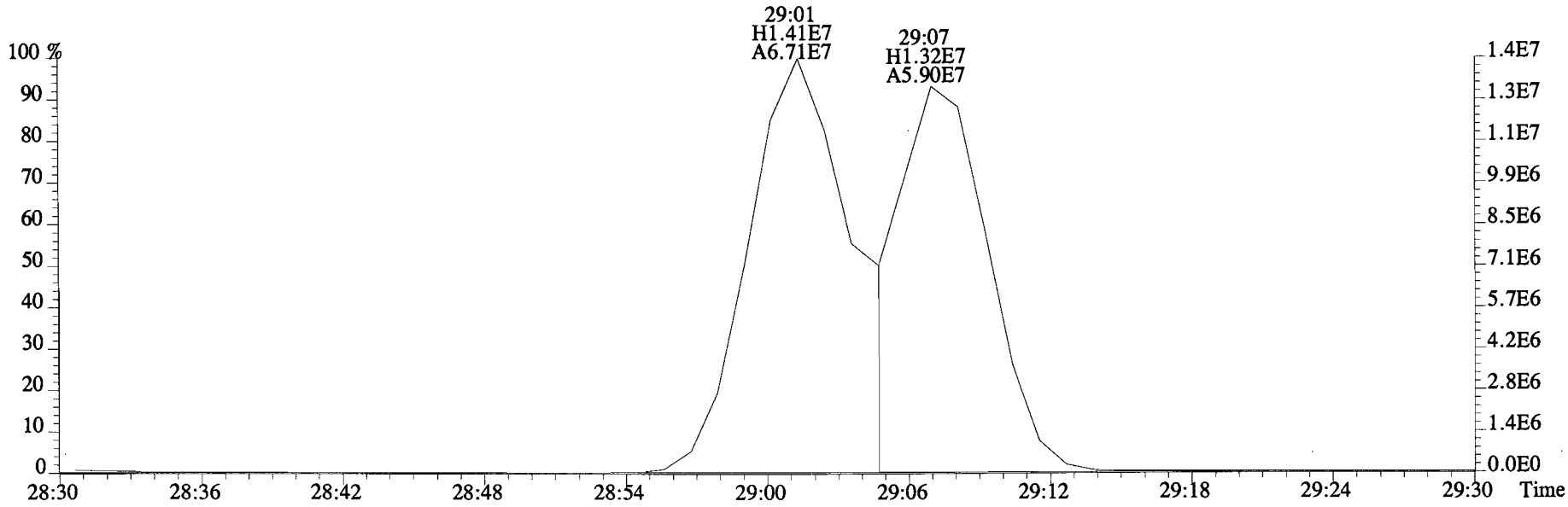
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27624.0,0.00%,F,F)



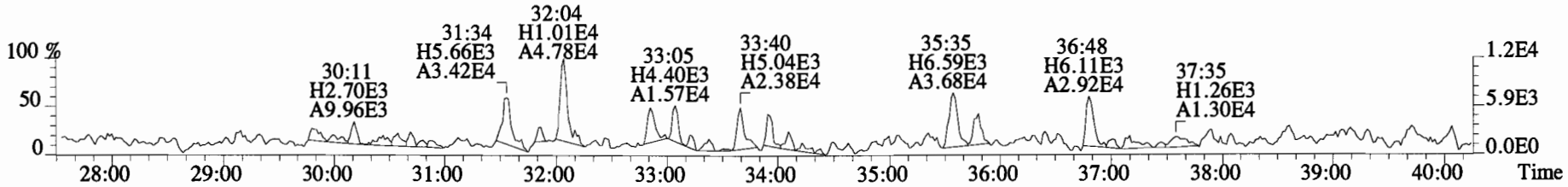
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,38516.0,0.00%,F,F)



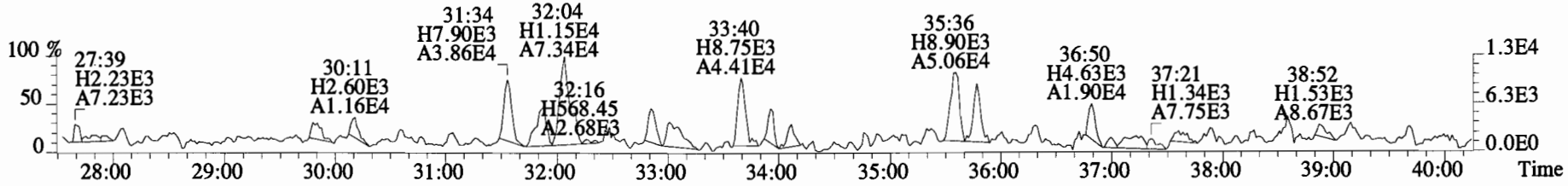
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27624.0,0.00%,F,F)



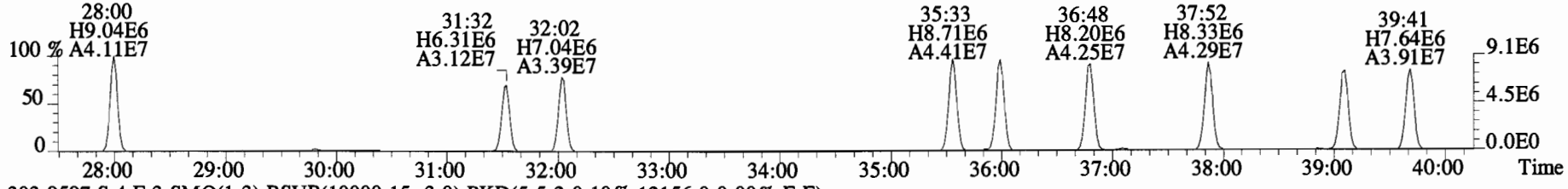
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



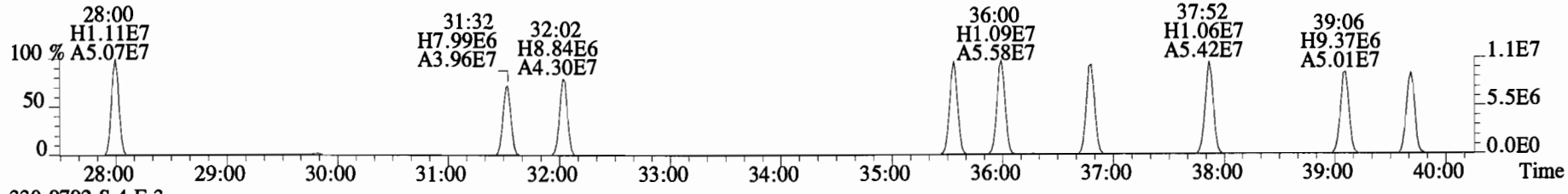
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2024.0,0.00%,F,F)



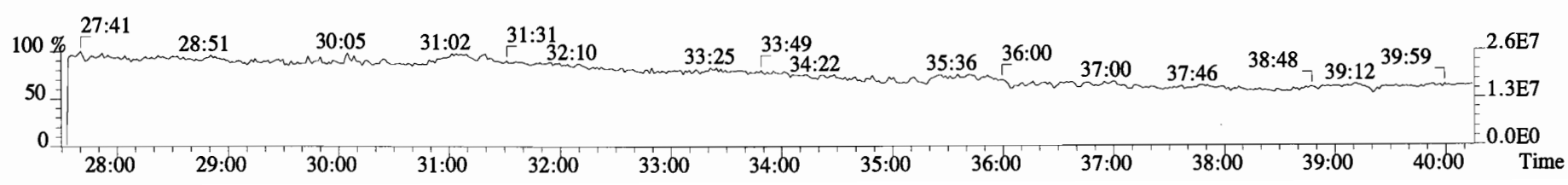
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27168.0,0.00%,F,F)



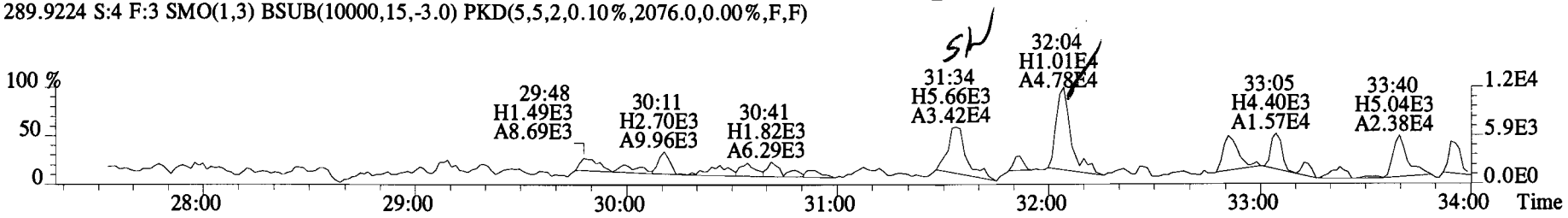
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12156.0,0.00%,F,F)



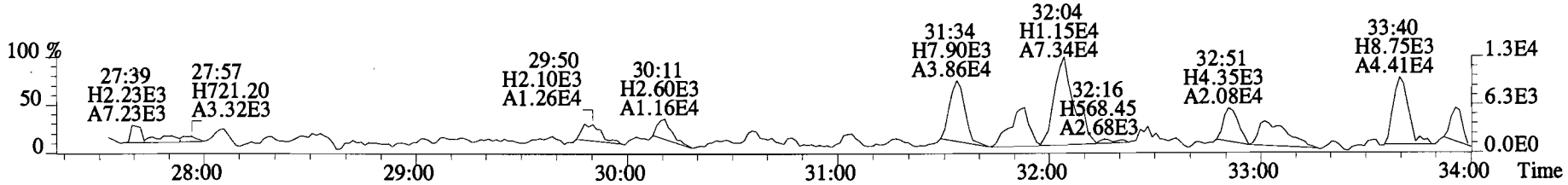
330.9792 S:4 F:3



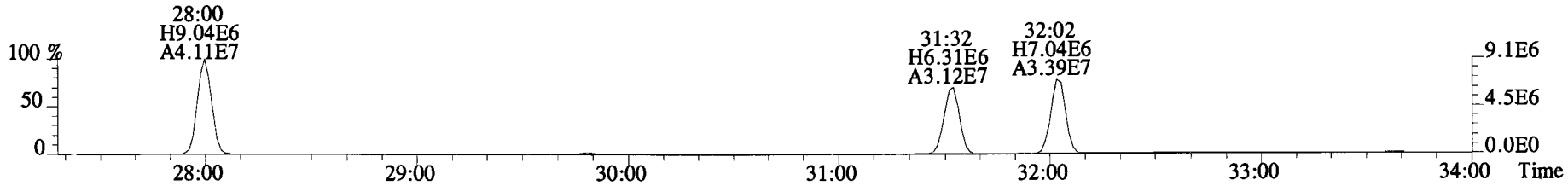
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



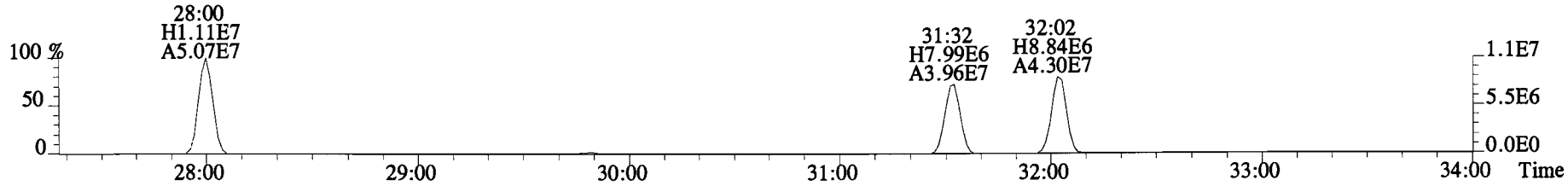
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2024.0,0.00%,F,F)



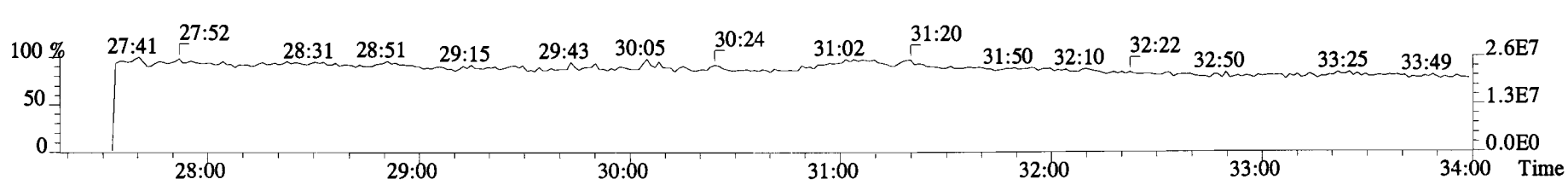
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27168.0,0.00%,F,F)



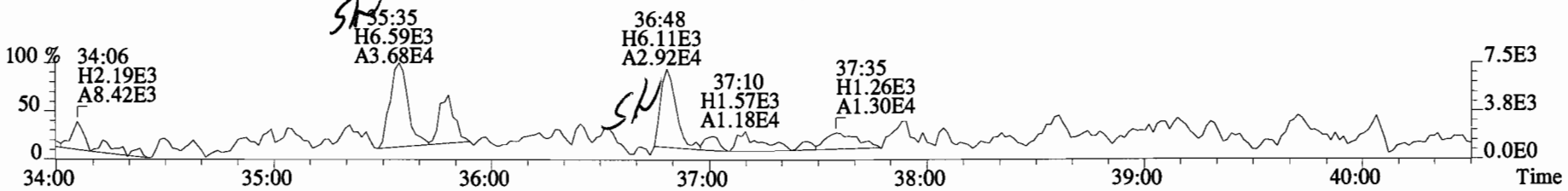
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12156.0,0.00%,F,F)



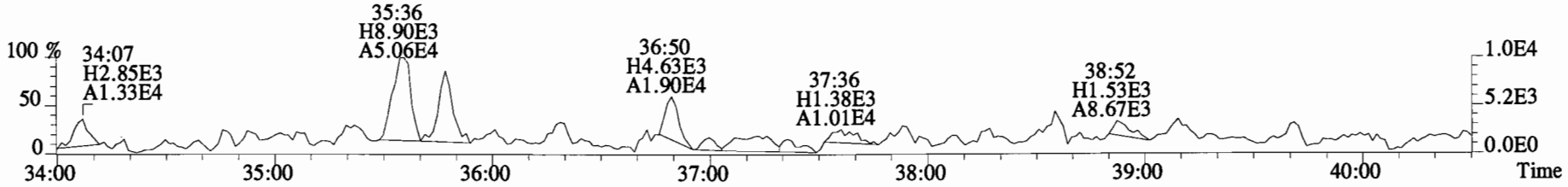
330.9792 S:4 F:3



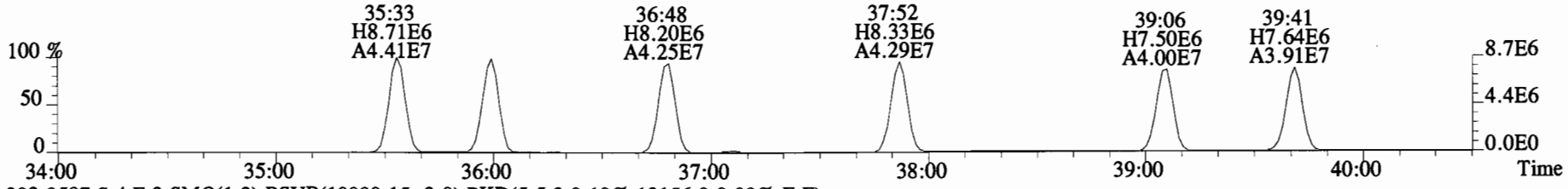
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



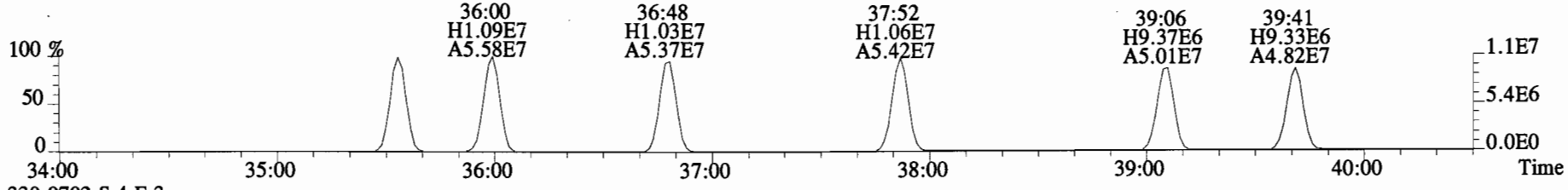
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2024.0,0.00%,F,F)



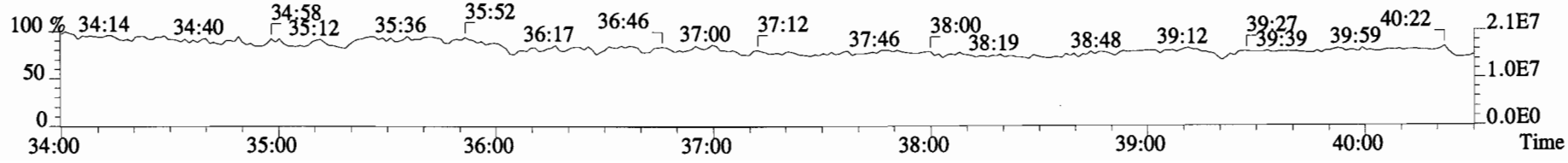
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27168.0,0.00%,F,F)



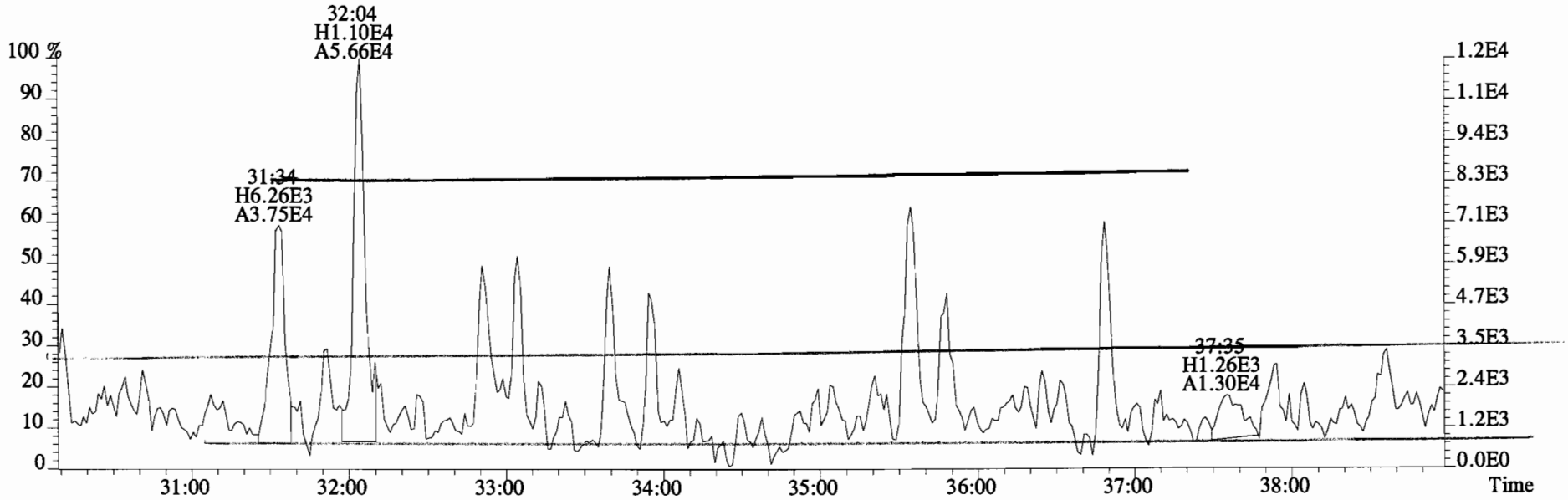
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12156.0,0.00%,F,F)



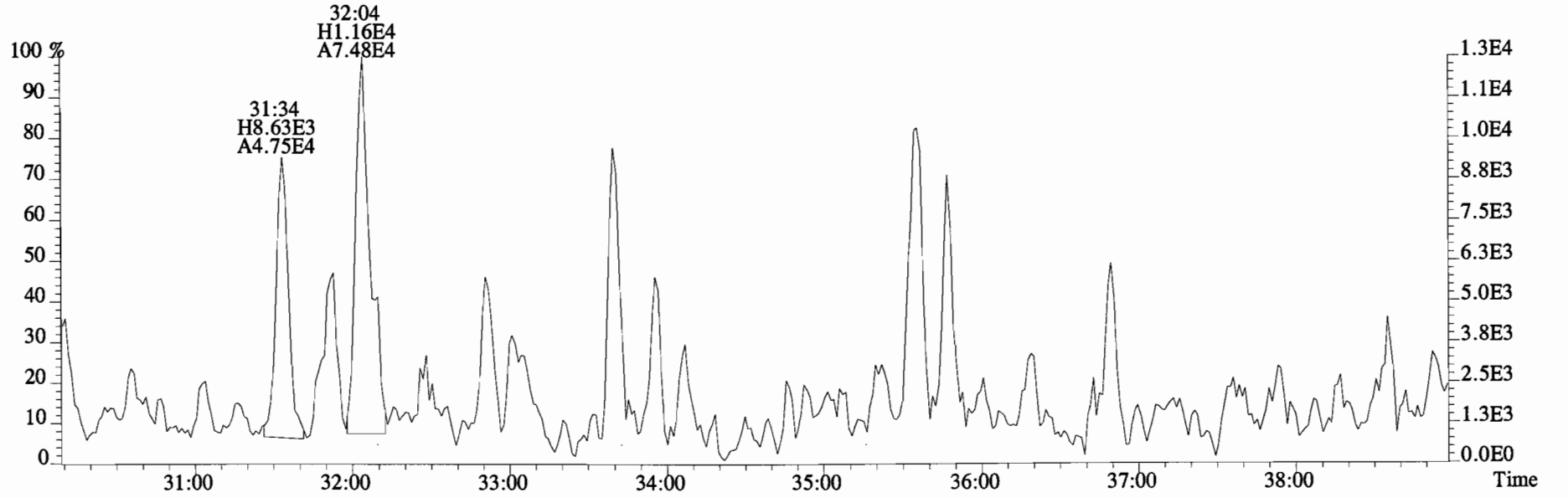
330.9792 S:4 F:3

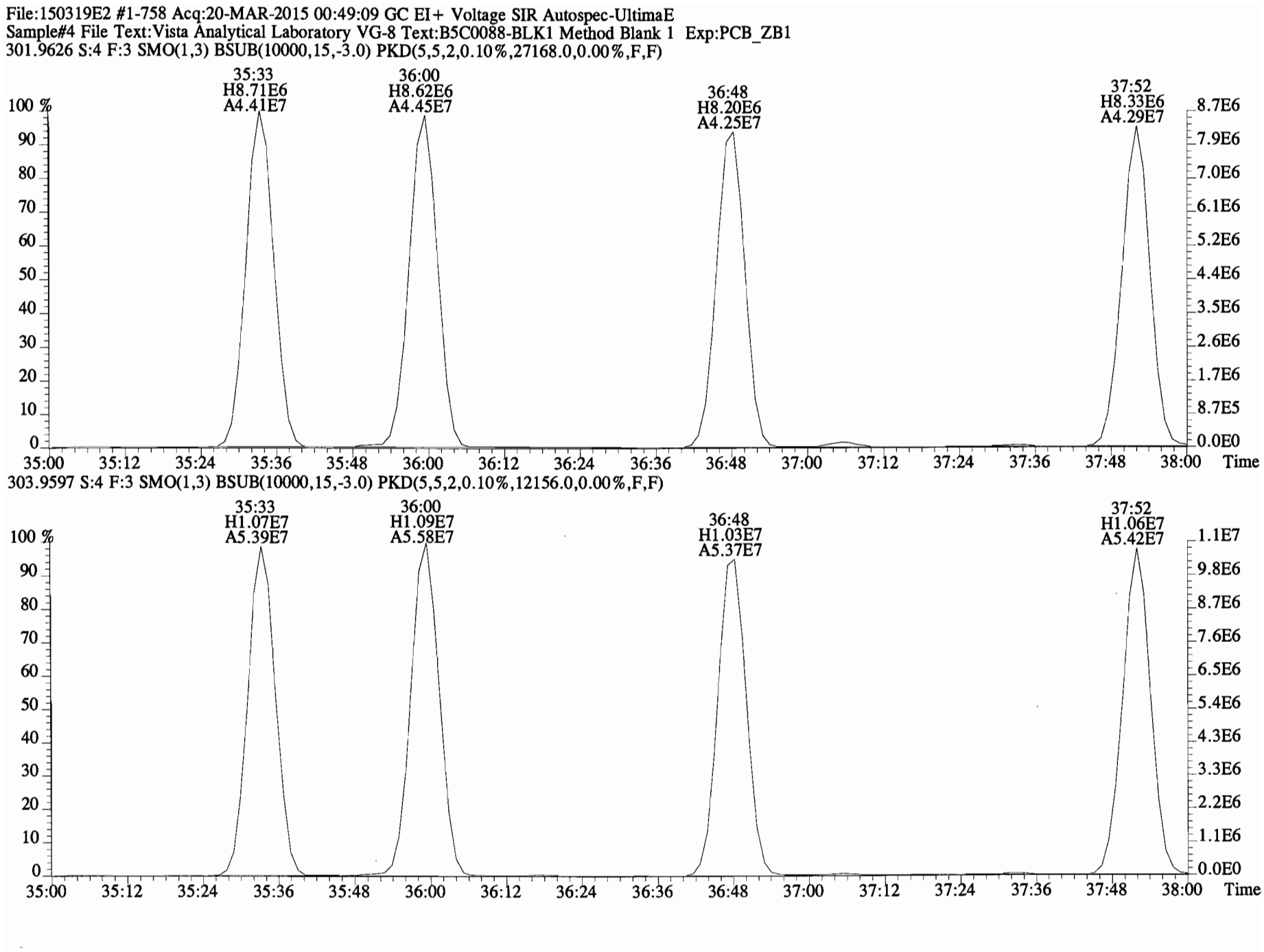


File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)

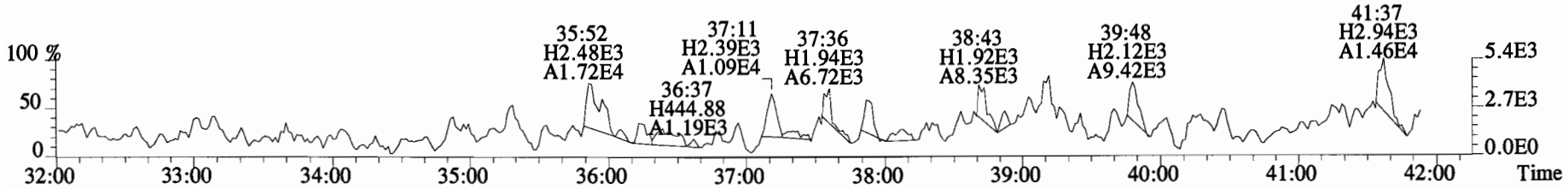


291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2024.0,0.00%,F,F)

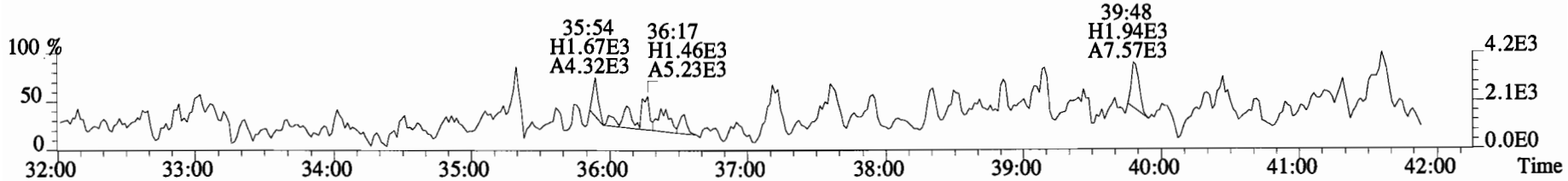



File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27168.0,0.00%,F,F)
35:33 H8.71E6 A4.41E7
36:00 H8.62E6 A4.45E7
36:48 H8.20E6 A4.25E7
37:52 H8.33E6 A4.29E7
100 %
90
80
70
60
50
40
30
20
10
0
8.7E6
7.9E6
7.0E6
6.1E6
5.2E6
4.4E6
3.5E6
2.6E6
1.7E6
8.7E5
0.0E0
35:00 35:12 35:24 35:36 35:48 36:00 36:12 36:24 36:36 36:48 37:00 37:12 37:24 37:36 37:48 38:00 Time
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12156.0,0.00%,F,F)
35:33 H1.07E7 A5.39E7
36:00 H1.09E7 A5.58E7
36:48 H1.03E7 A5.37E7
37:52 H1.06E7 A5.42E7
100 %
90
80
70
60
50
40
30
20
10
0
1.1E7
9.8E6
8.7E6
7.6E6
6.5E6
5.4E6
4.3E6
3.3E6
2.2E6
1.1E6
0.0E0
35:00 35:12 35:24 35:36 35:48 36:00 36:12 36:24 36:36 36:48 37:00 37:12 37:24 37:36 37:48 38:00 Time

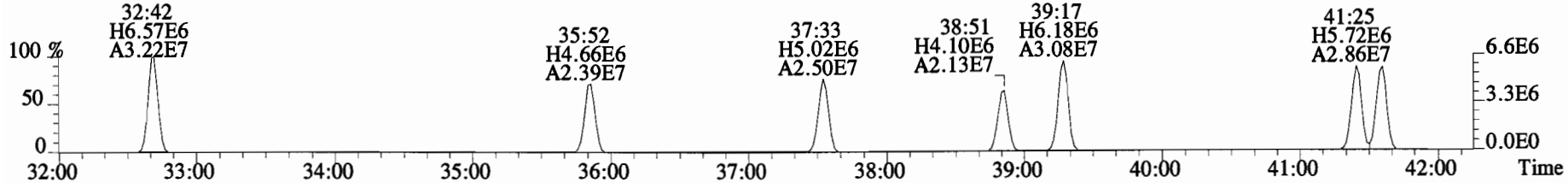
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1820.0,0.00%,F,F)



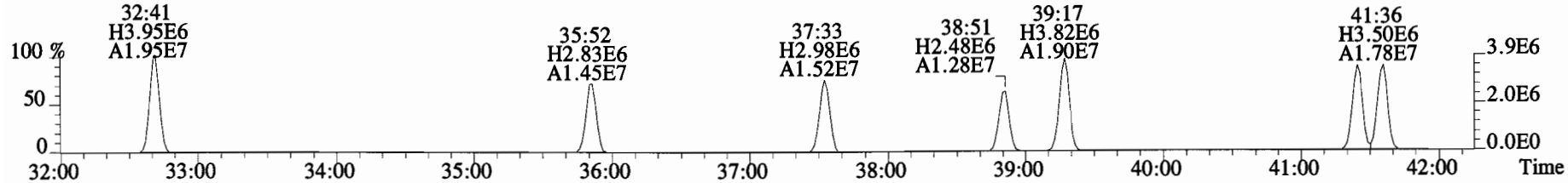
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1924.0,0.00%,F,F)



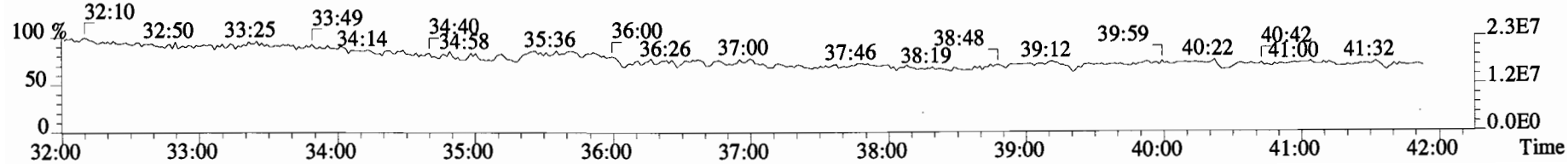
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2532.0,0.00%,F,F)



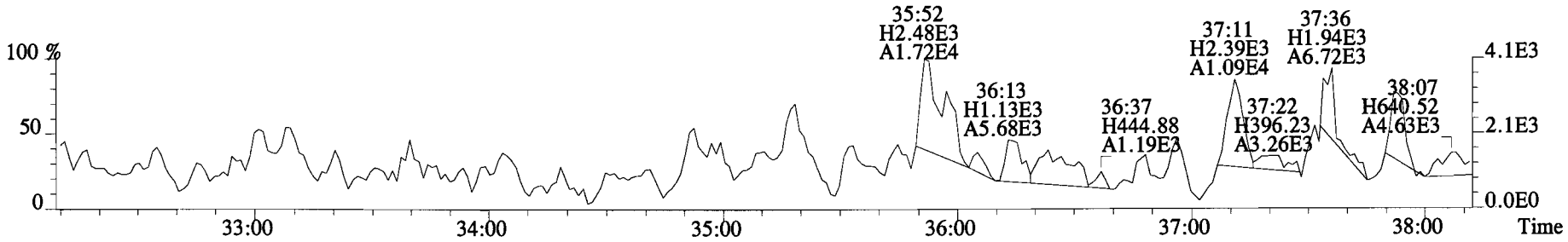
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2364.0,0.00%,F,F)



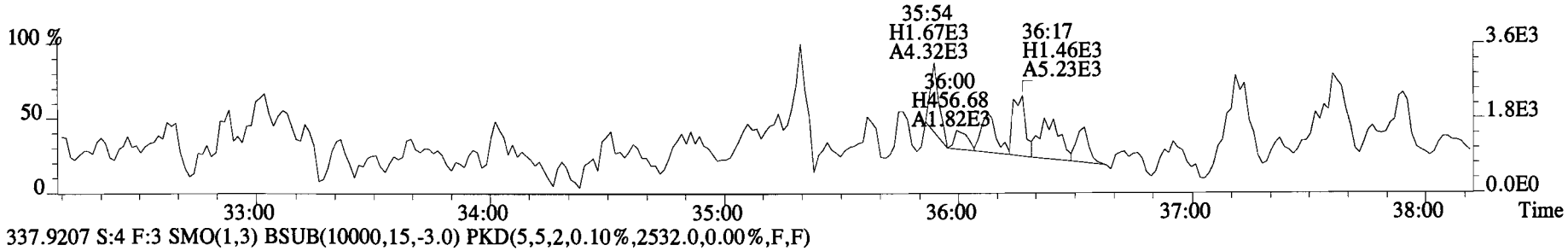
330.9792 S:4 F:3



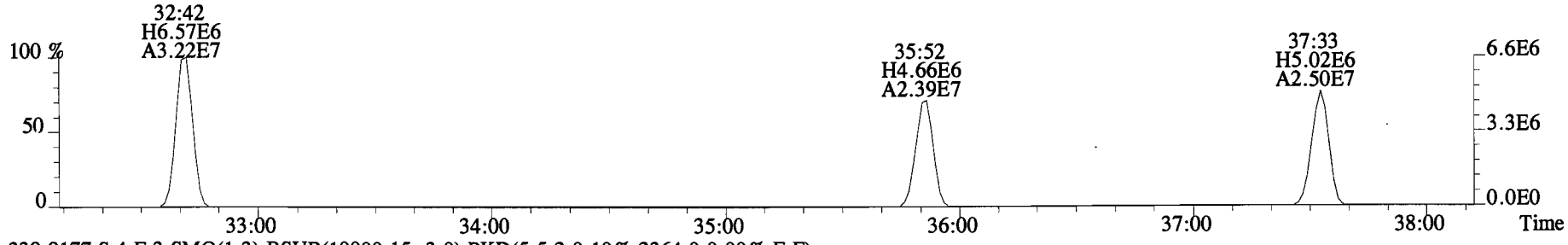
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1820.0,0.00%,F,F)



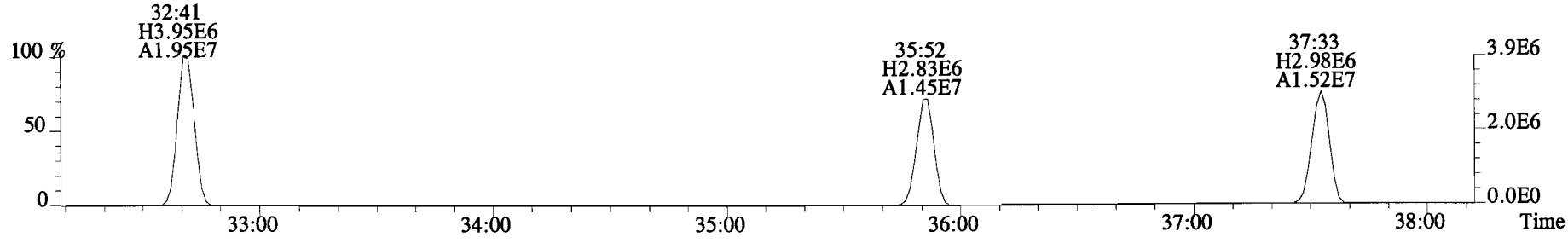
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1924.0,0.00%,F,F)



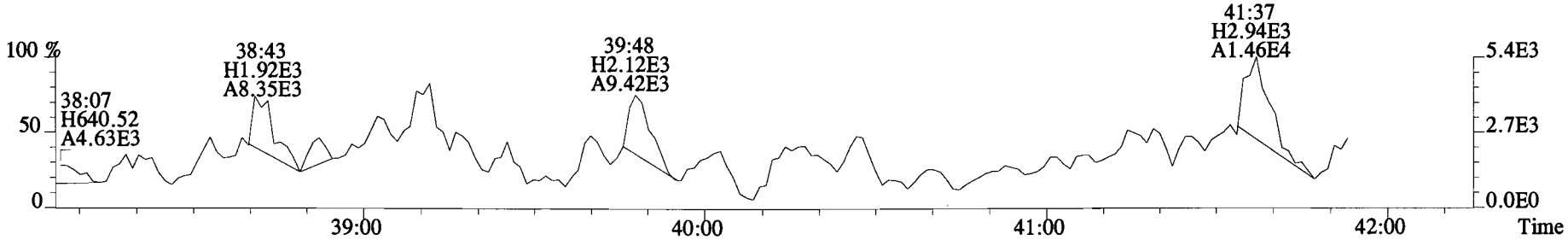
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2532.0,0.00%,F,F)



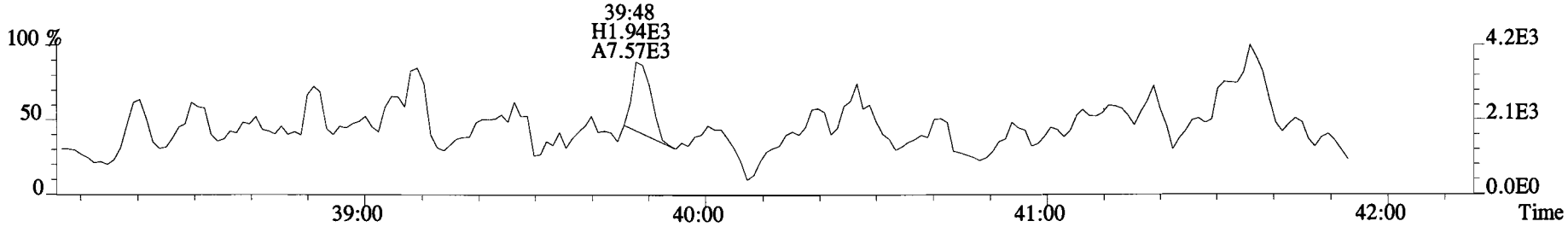
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2364.0,0.00%,F,F)



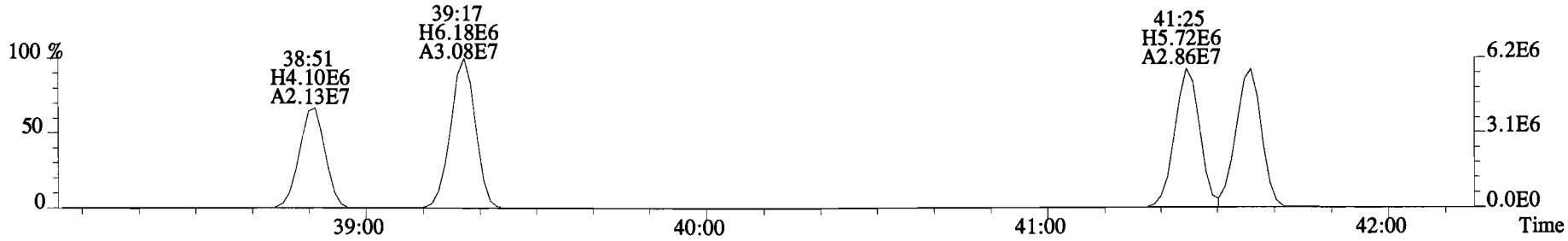
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1820.0,0.00%,F,F)



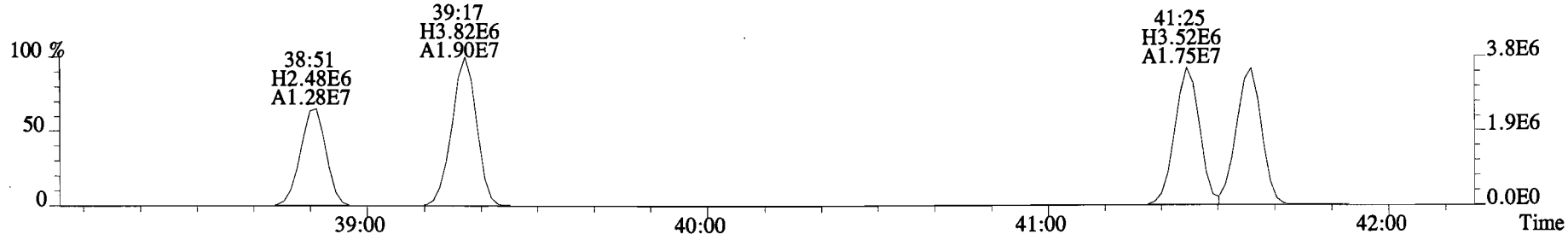
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1924.0,0.00%,F,F)



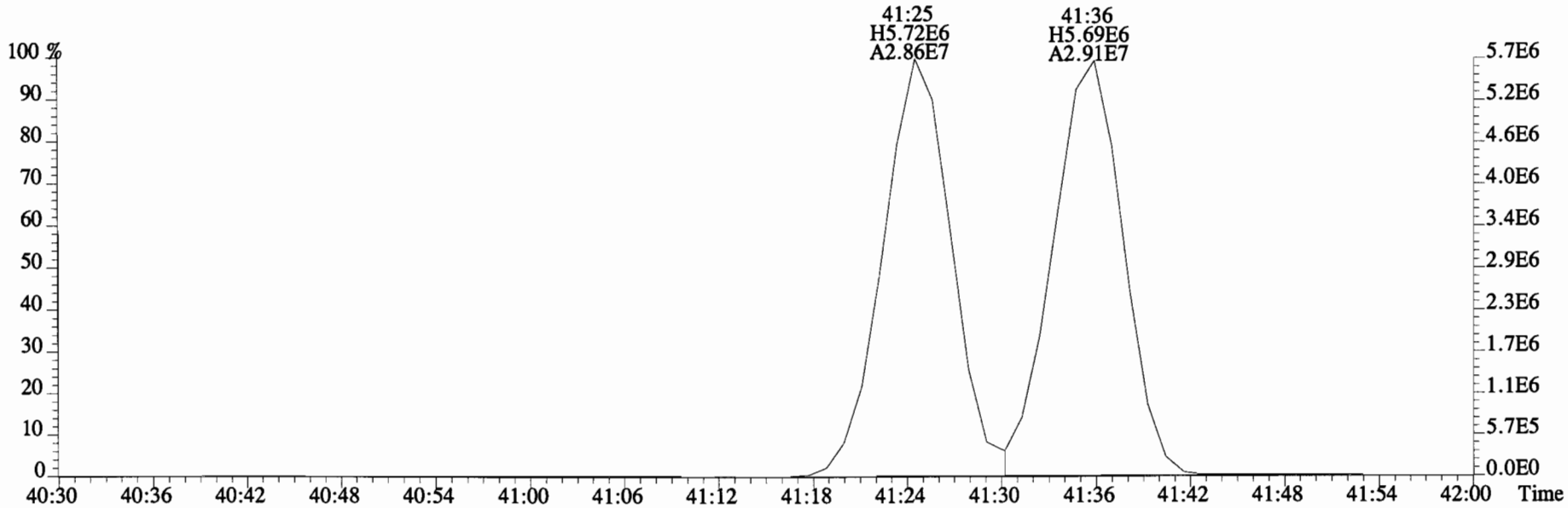
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2532.0,0.00%,F,F)



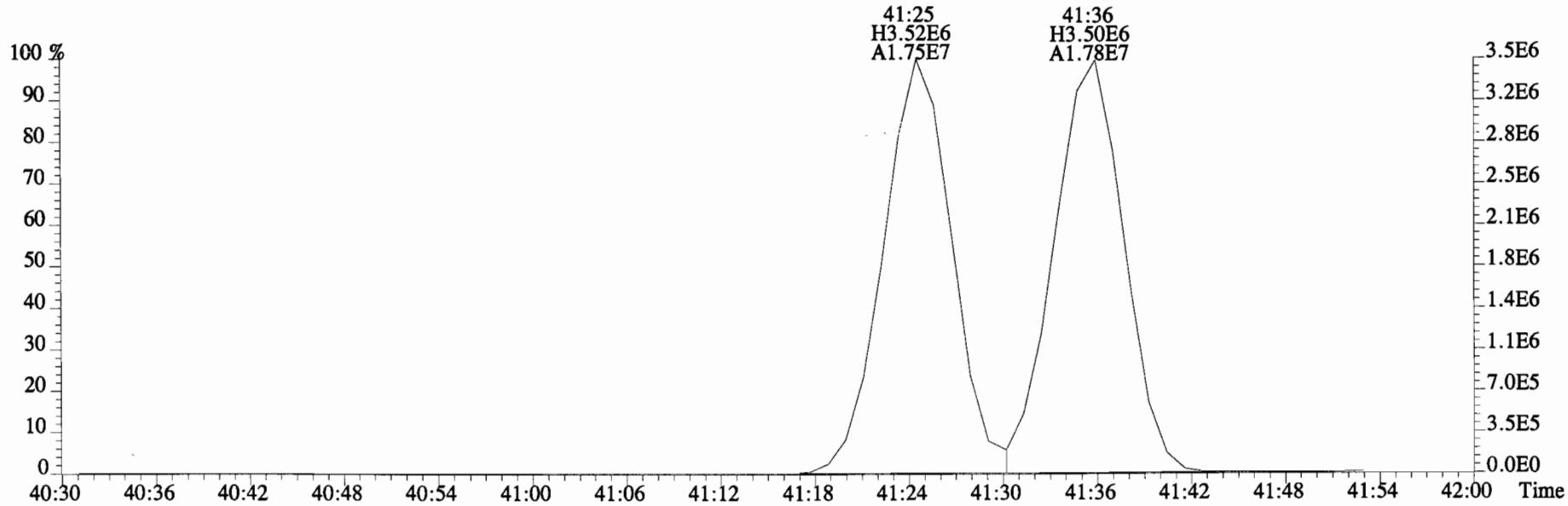
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2364.0,0.00%,F,F)



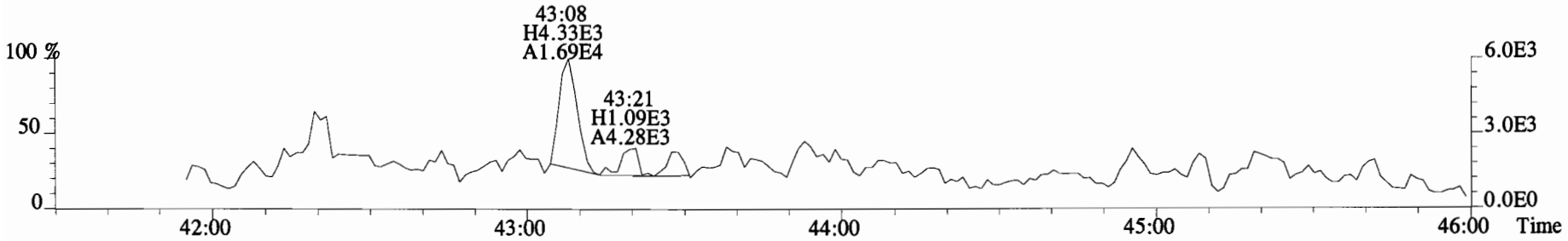
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2532.0,0.00%,F,F)



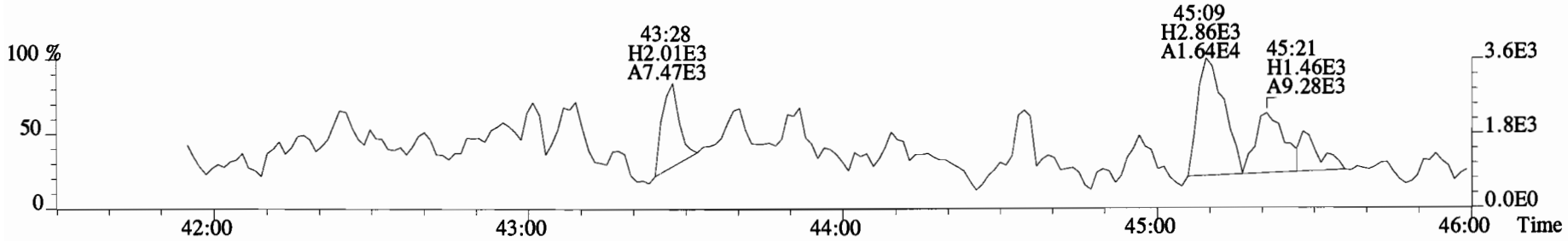
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2364.0,0.00%,F,F)



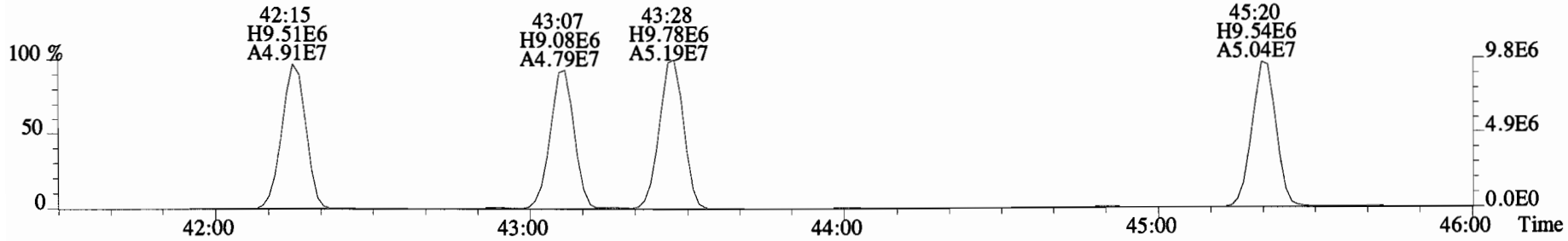
File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1936.0,0.00%,F,F)



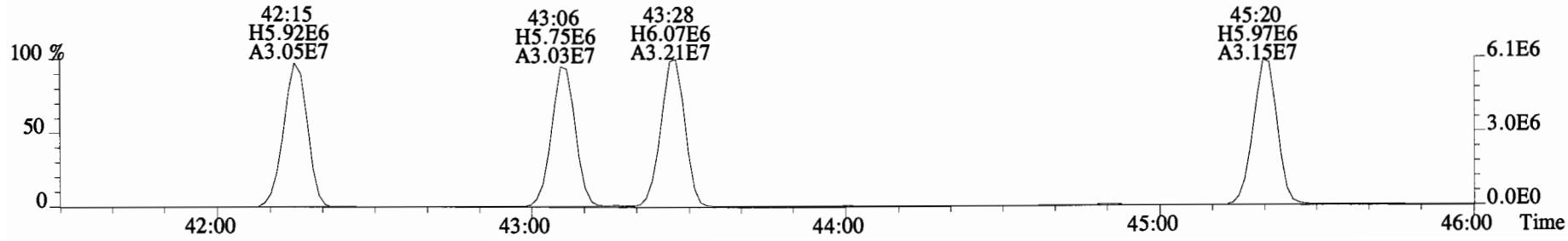
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1656.0,0.00%,F,F)



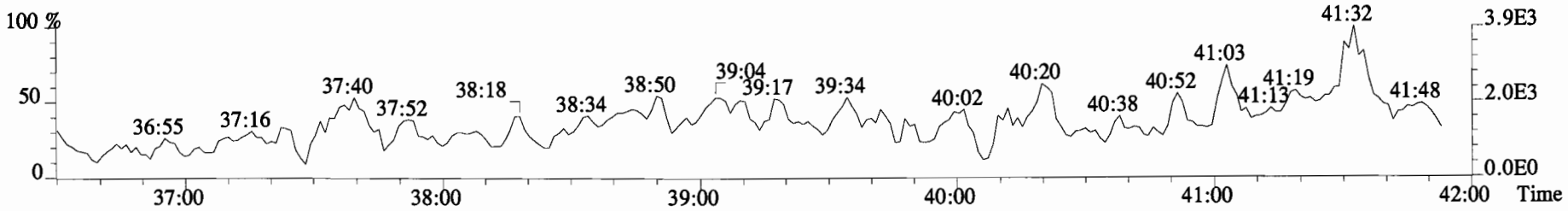
337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5536.0,0.00%,F,F)



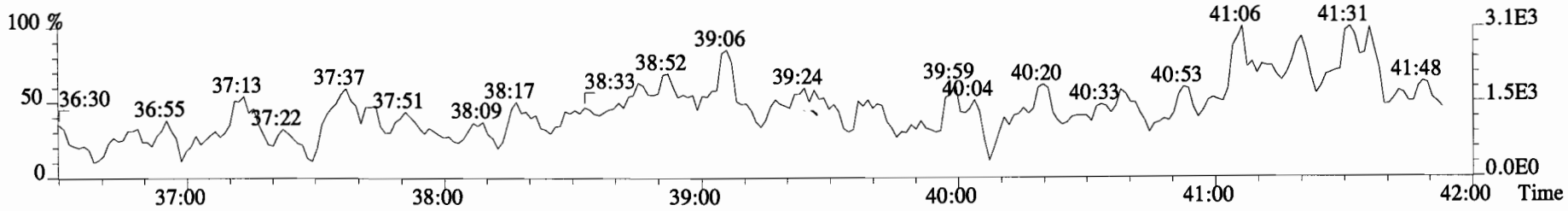
339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5668.0,0.00%,F,F)



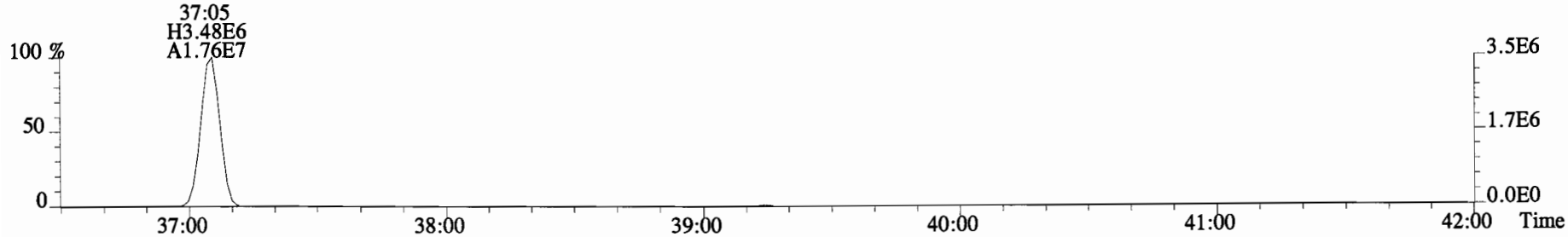
File:150319E2 #1-758 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1636.0,0.00%,F,F)



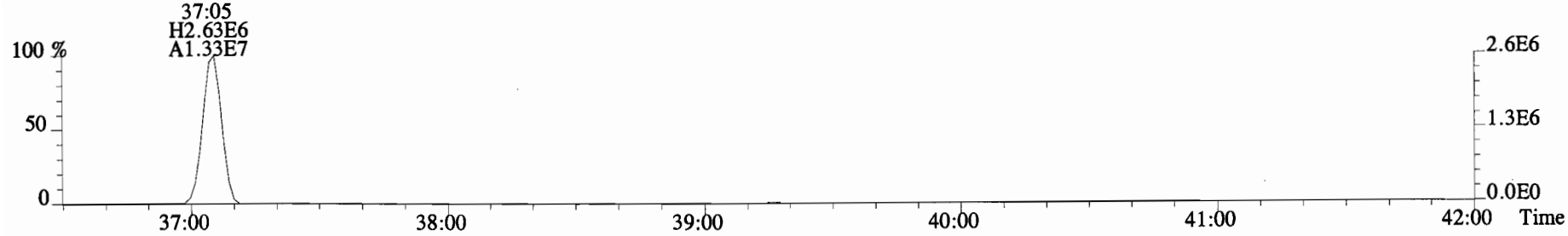
361.8385 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1560.0,0.00%,F,F)



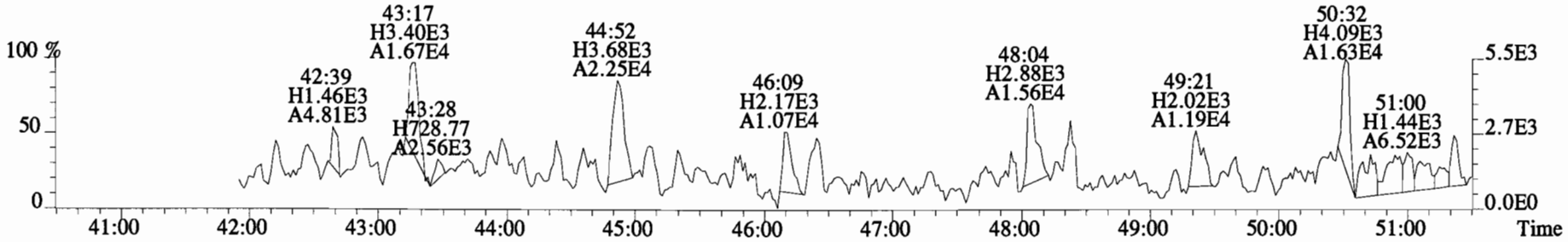
371.8817 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1712.0,0.00%,F,F)



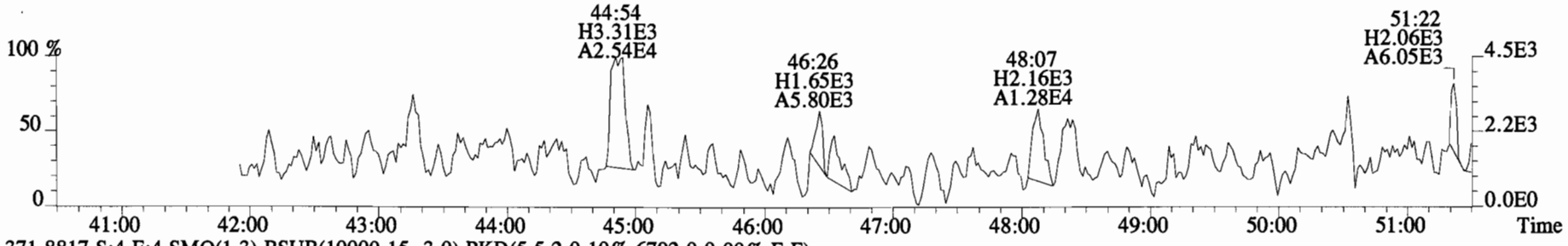
373.8788 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1744.0,0.00%,F,F)



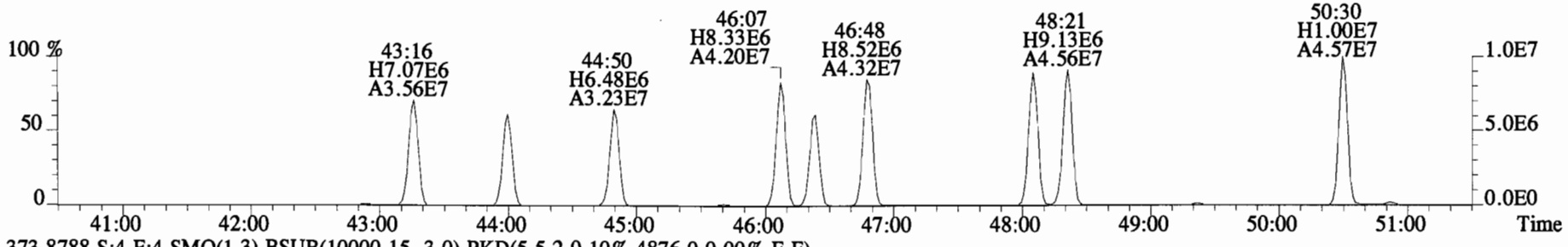
File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1672.0,0.00%,F,F)



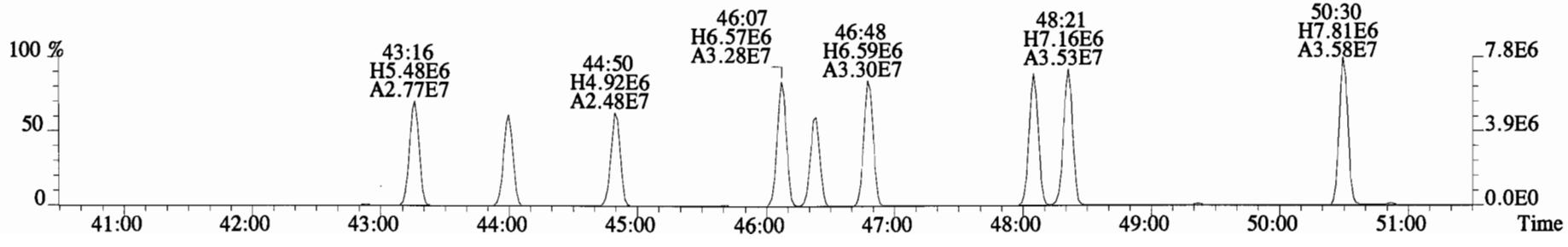
361.8385 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1760.0,0.00%,F,F)

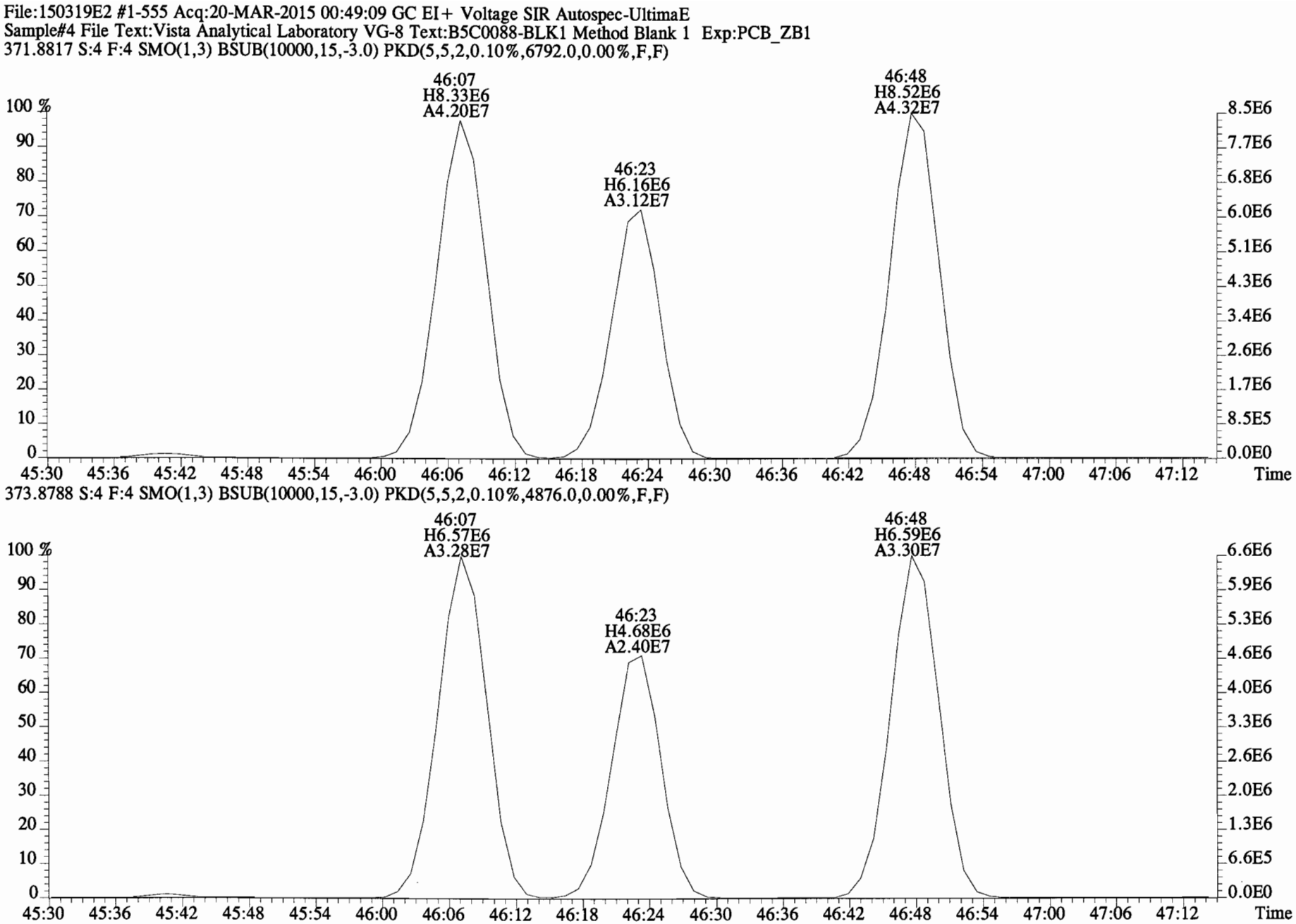


371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6792.0,0.00%,F,F)

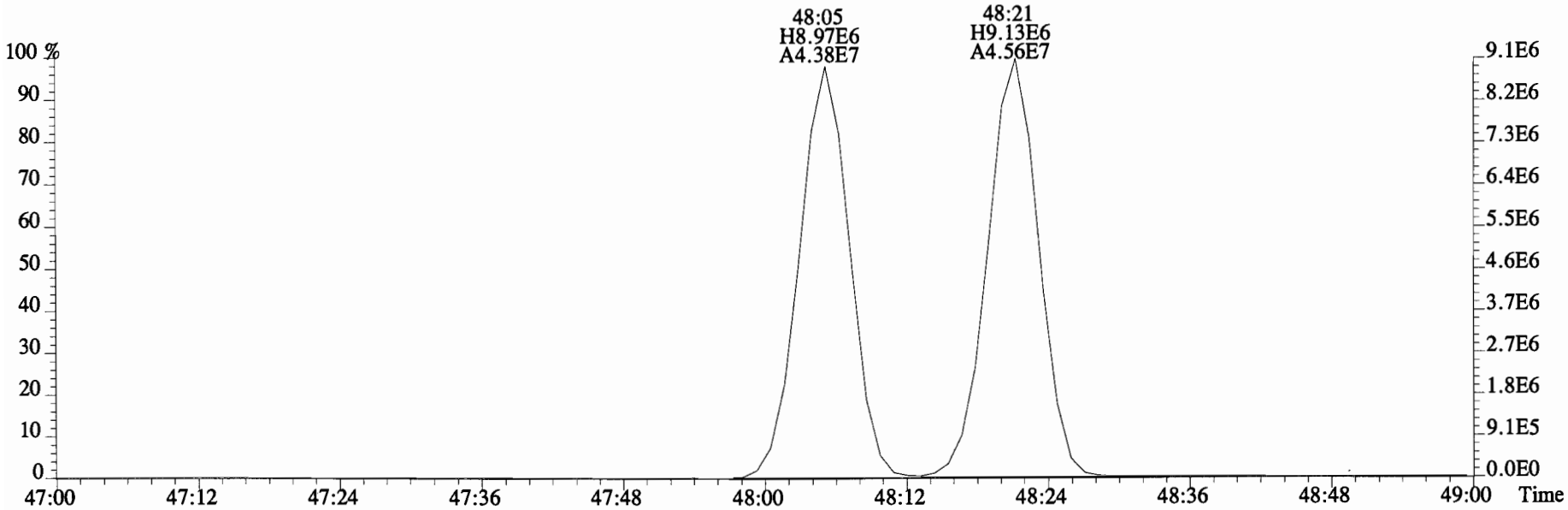


373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4876.0,0.00%,F,F)

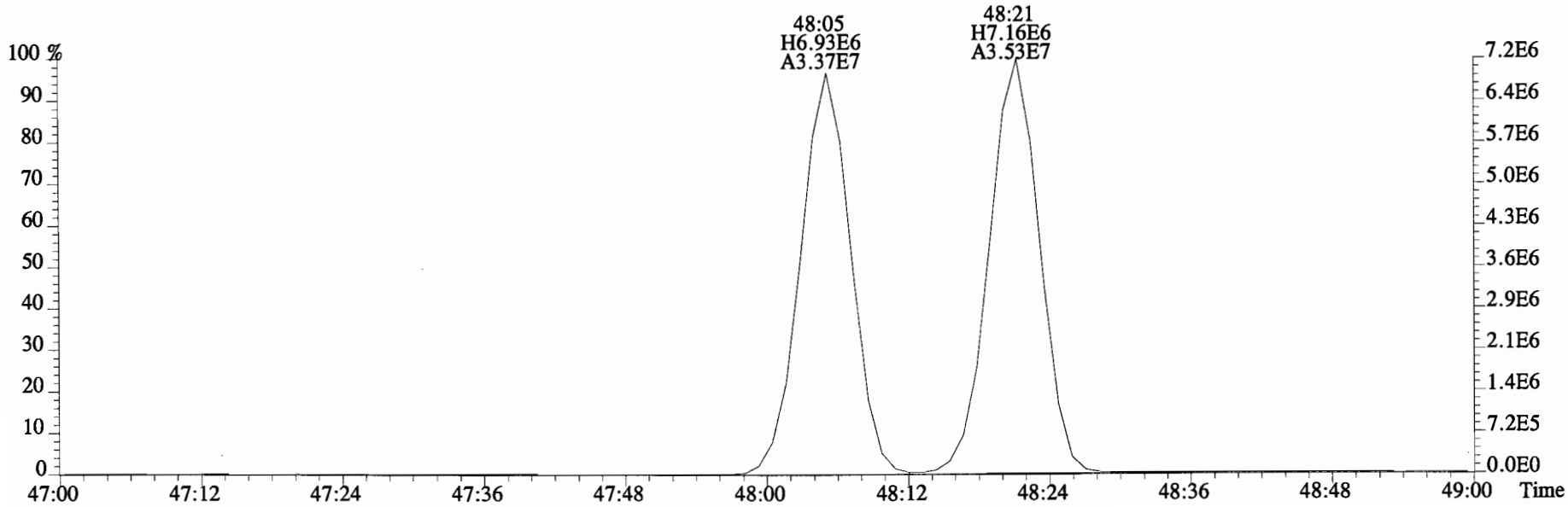



File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6792.0,0.00%,F,F)
46:07
H8.33E6
A4.20E7
46:23
H6.16E6
A3.12E7
46:48
H8.52E6
A4.32E7
100 %
90
80
70
60
50
40
30
20
10
0
8.5E6
7.7E6
6.8E6
6.0E6
5.1E6
4.3E6
3.4E6
2.6E6
1.7E6
8.5E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4876.0,0.00%,F,F)
46:07
H6.57E6
A3.28E7
46:23
H4.68E6
A2.40E7
46:48
H6.59E6
A3.30E7
100 %
90
80
70
60
50
40
30
20
10
0
6.6E6
5.9E6
5.3E6
4.6E6
4.0E6
3.3E6
2.6E6
2.0E6
1.3E6
6.6E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time

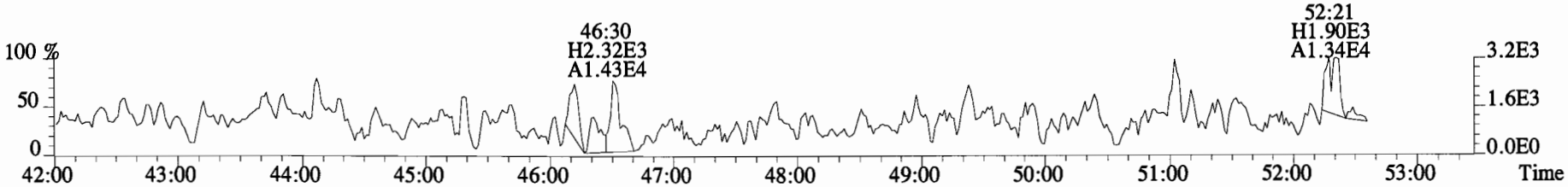
File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6792.0,0.00%,F,F)



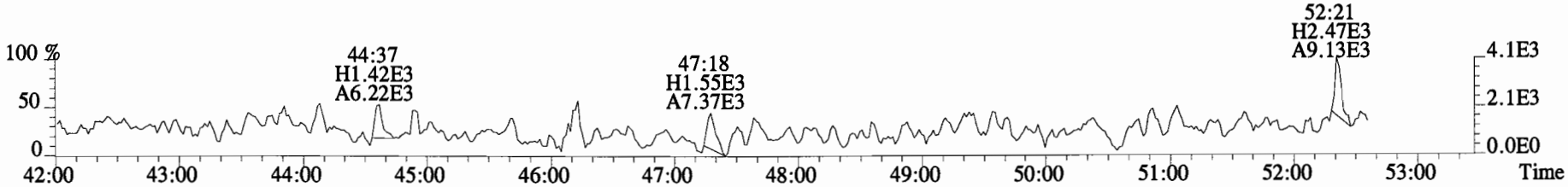
373.8788 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4876.0,0.00%,F,F)



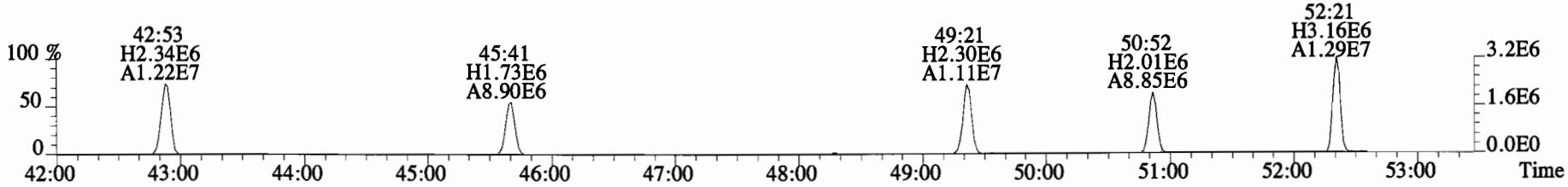
File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1444.0,0.00%,F,F)



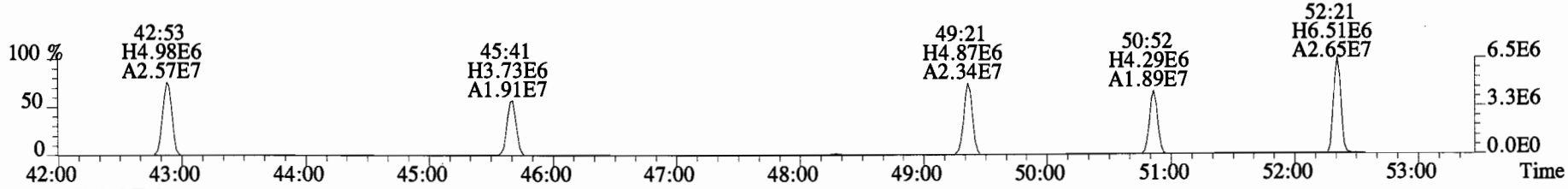
395.7995 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1404.0,0.00%,F,F)



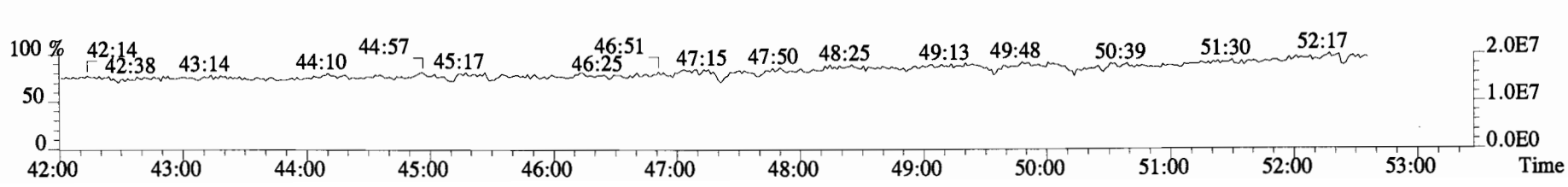
403.8457 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1576.0,0.00%,F,F)



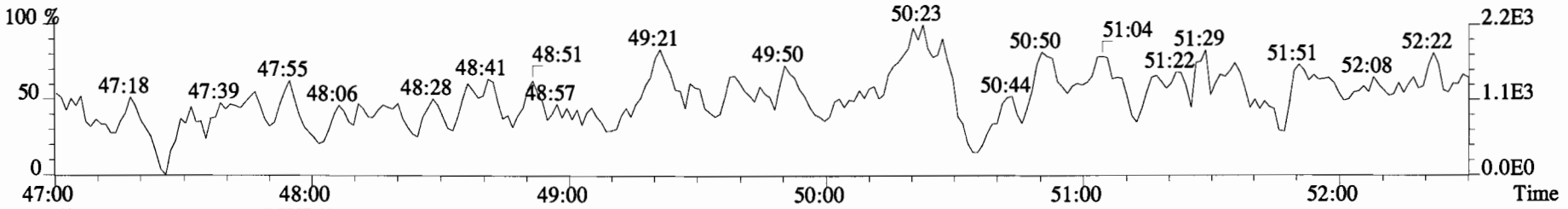
405.8428 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3224.0,0.00%,F,F)



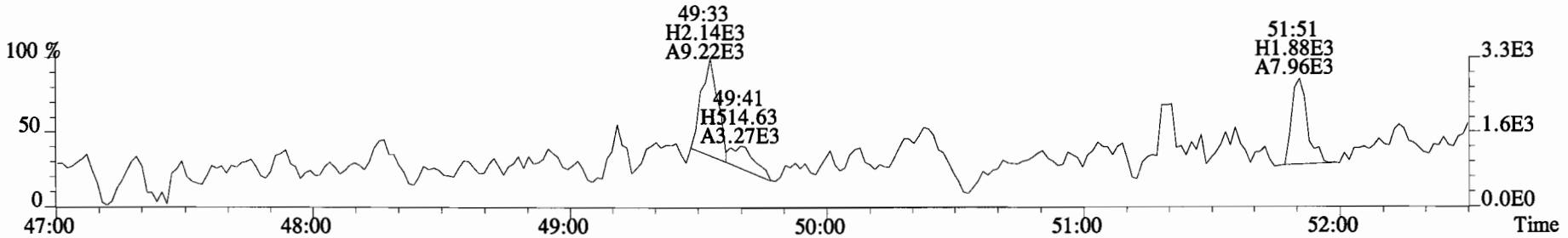
380.9760 S:4 F:4



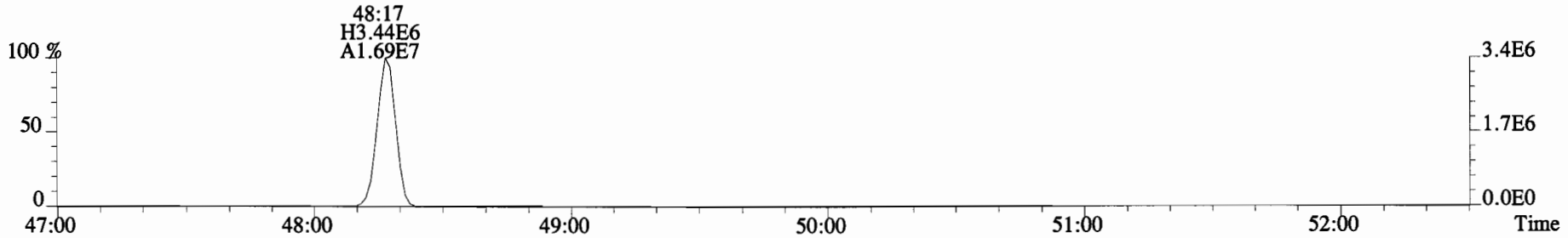
File:150319E2 #1-555 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1520.0,0.00%,F,F)



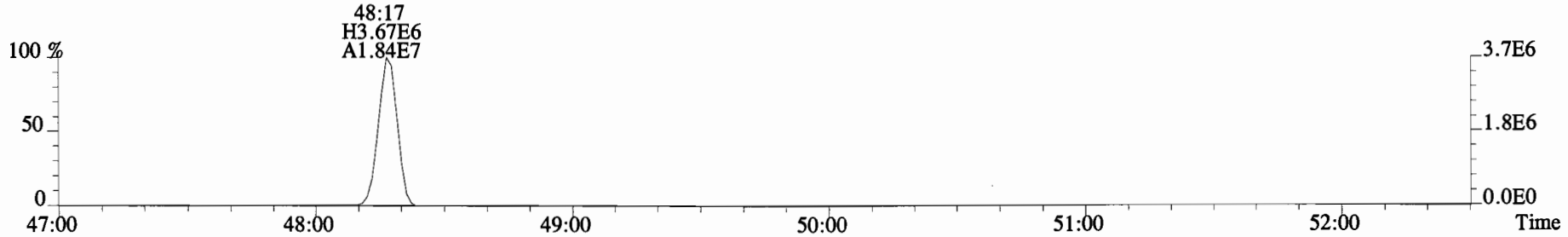
429.7606 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1348.0,0.00%,F,F)



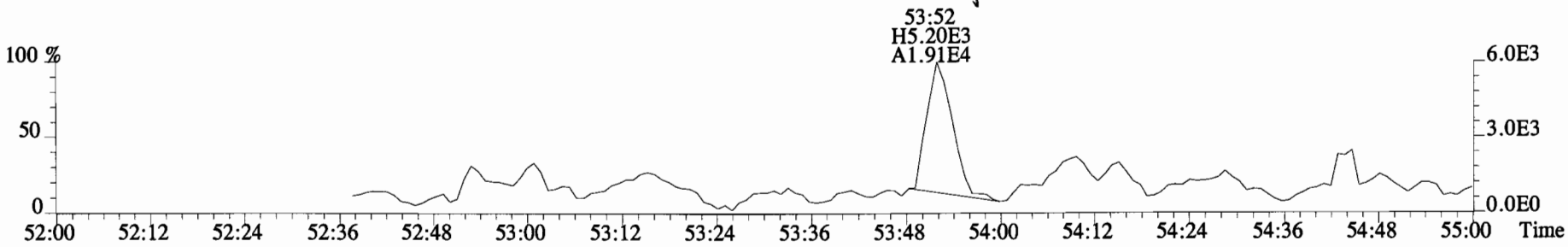
439.8038 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1680.0,0.00%,F,F)



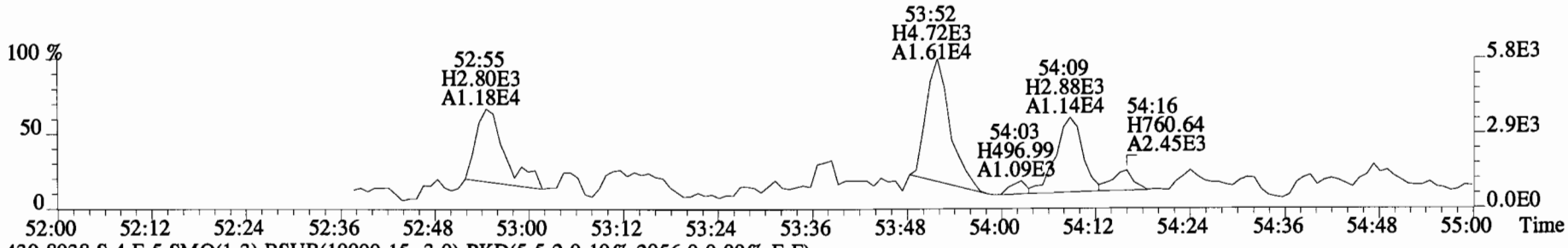
441.8008 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2148.0,0.00%,F,F)



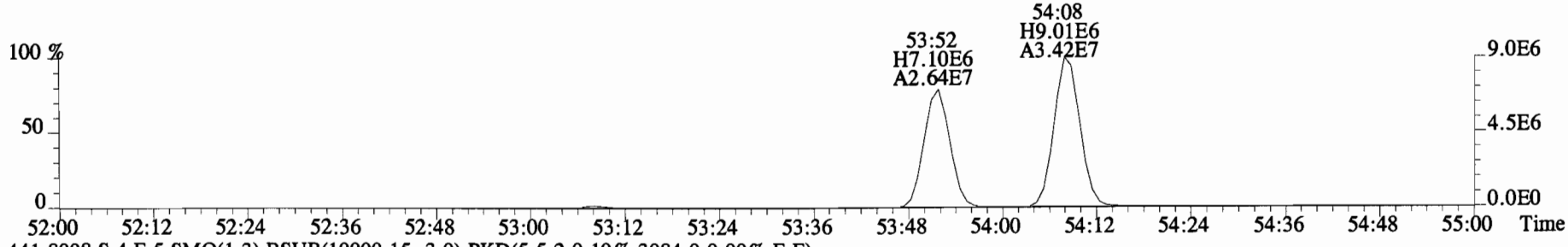
File:150319E2 #1-429 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1 RD
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1356.0,0.00%,F,F)



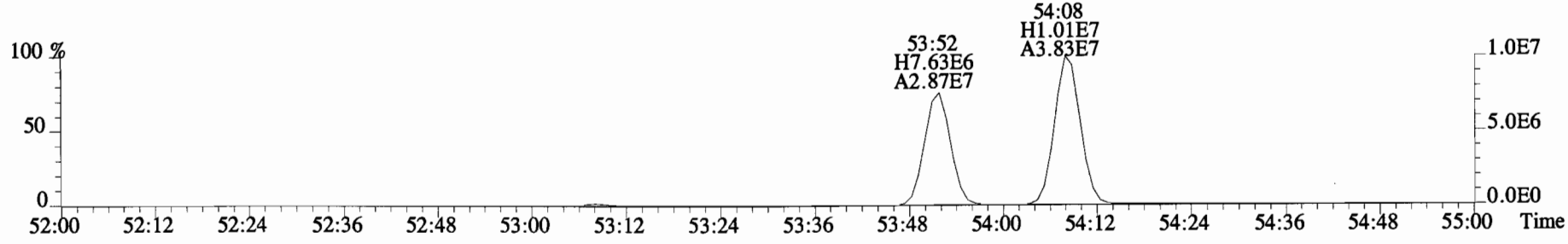
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1336.0,0.00%,F,F)



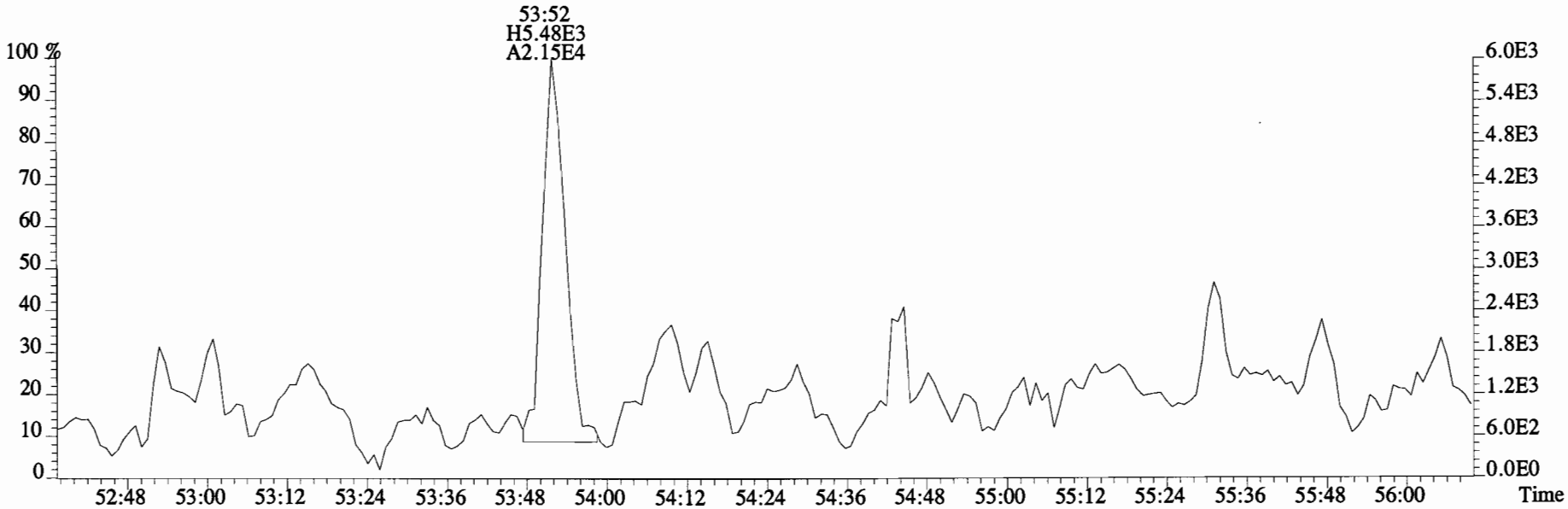
439.8038 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2056.0,0.00%,F,F)



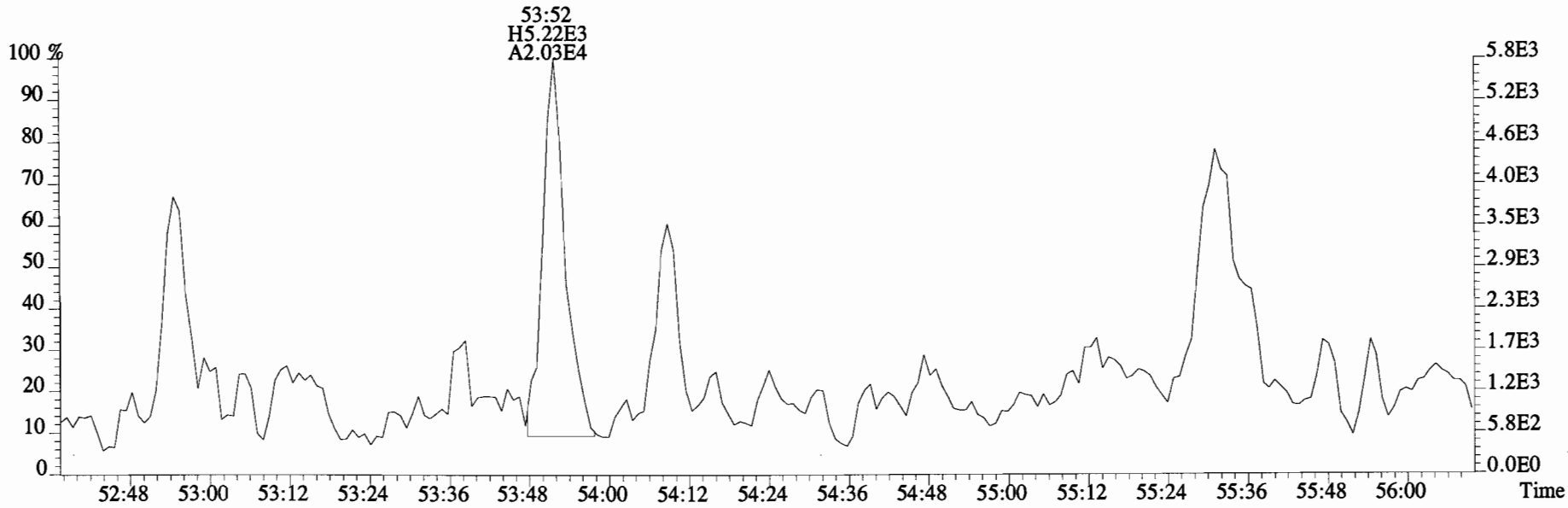
441.8008 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3084.0,0.00%,F,F)



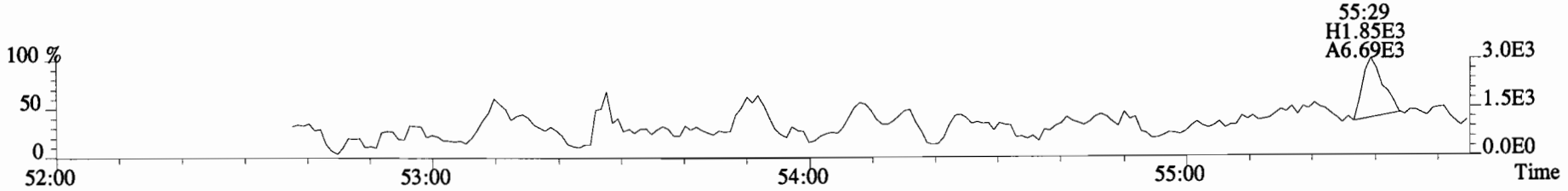
File:150319E2 #1-429 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0)



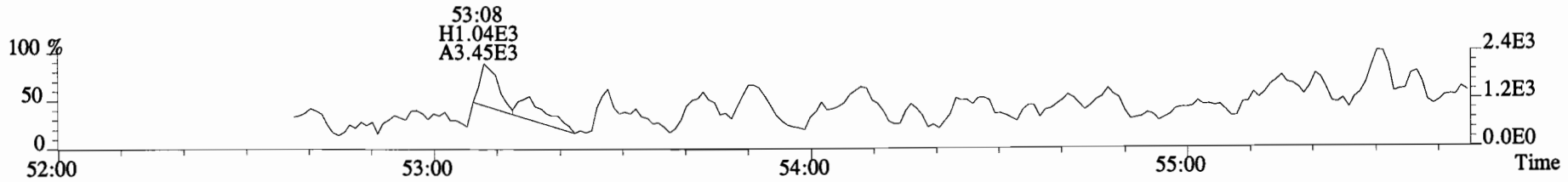
429.7606 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0)



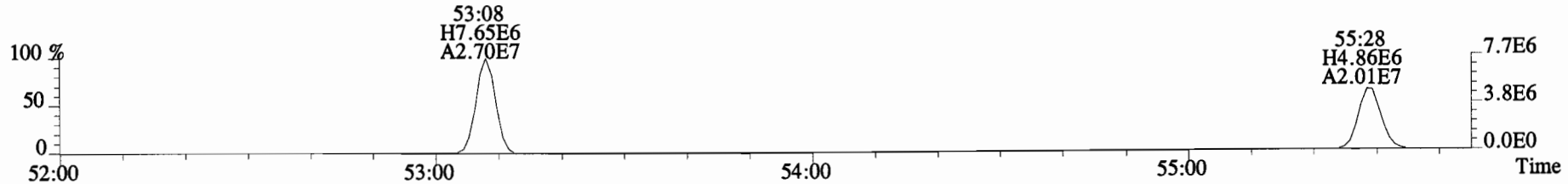
File:150319E2 #1-429 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1232.0,0.00%,F,F)



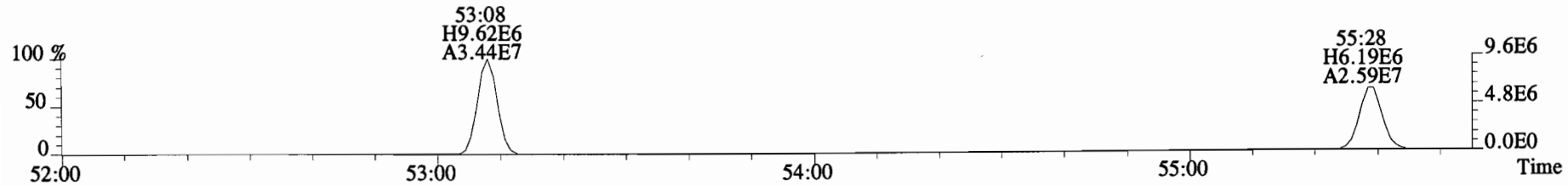
465.7186 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1288.0,0.00%,F,F)



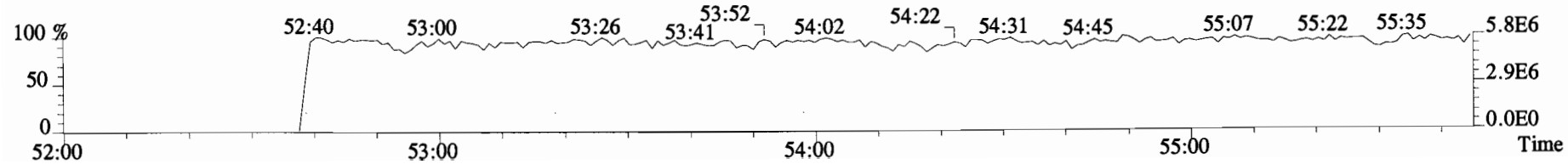
473.7648 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5868.0,0.00%,F,F)



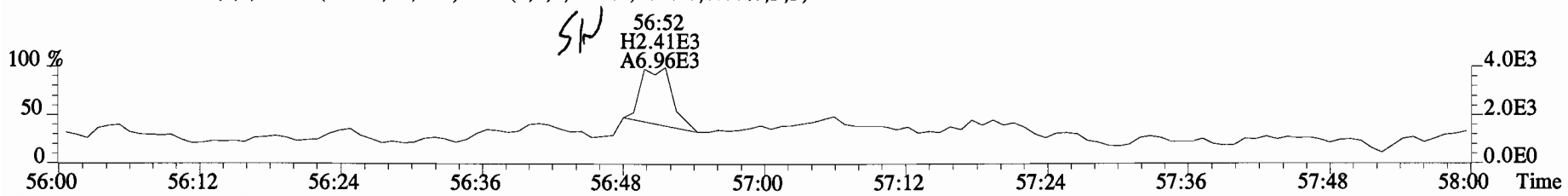
475.7619 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7268.0,0.00%,F,F)



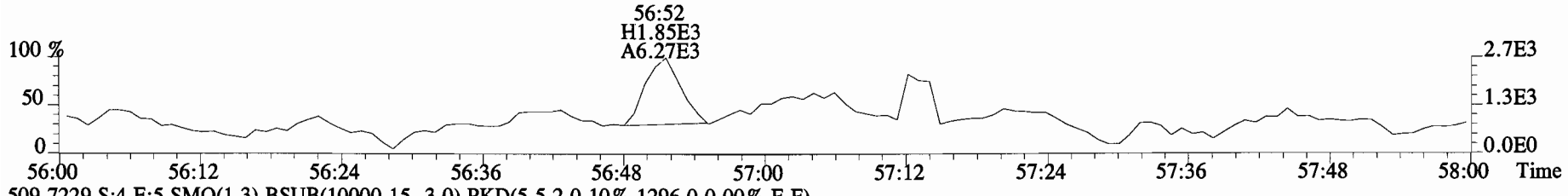
492.9697 S:4 F:5



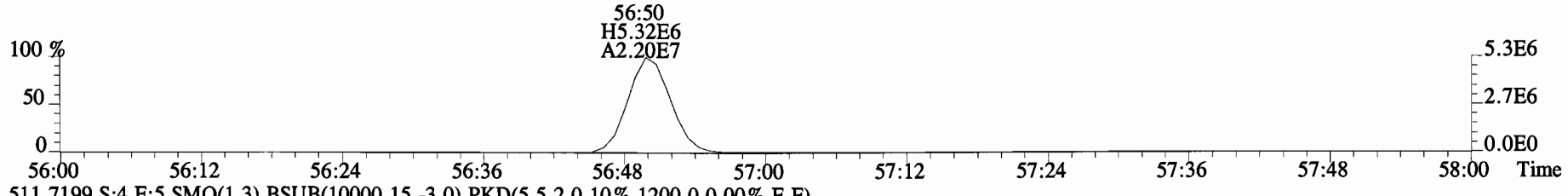
File:150319E2 #1-429 Acq:20-MAR-2015 00:49:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BLK1 Method Blank 1 Exp:PCB_ZB1
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1636.0,0.00%,F,F)



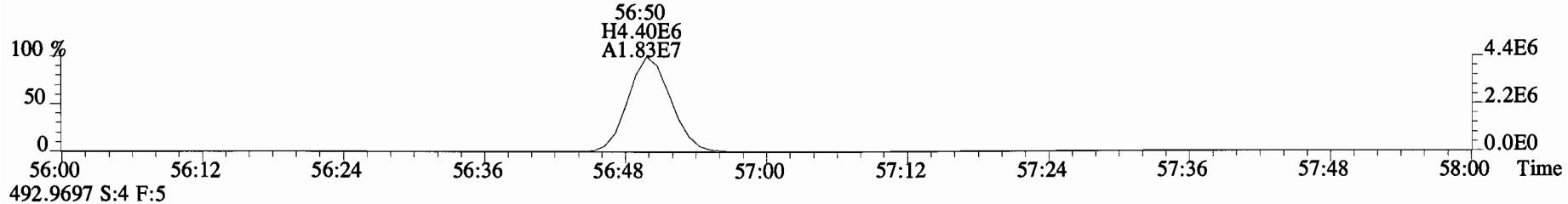
499.6797 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1152.0,0.00%,F,F)



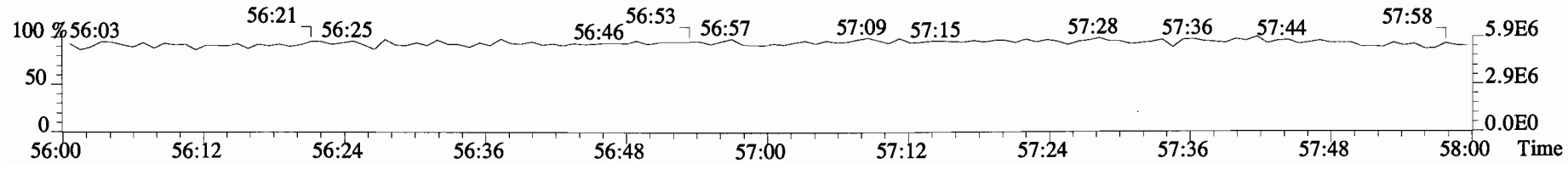
509.7229 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1296.0,0.00%,F,F)



511.7199 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1200.0,0.00%,F,F)



492.9697 S:4 F:5



EPA METHOD 1668C PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory OPR Data Filename: B5C0088-BS1

Matrix : AQUEOUS Ext. Date: 3-19-15 Analysis Date: 19-MAR-15 Time: 22:40:17

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	CLEAN UP STANDARD	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
PCB-1	50	39.7	30.0-67.5	13C-PCB-1	100	66.8	15-145	13C-PCB-79	100	89.7	40-145
PCB-3	50	41.2	30.0-67.5	13C-PCB-3	100	69.1	15-145	13C-PCB-178	100	70.4	40-145
PCB-4/10	100	84.7	60.0-135	13C-PCB-4	100	66.2	15-145				
PCB-15	50	43.3	30.0-67.5	13C-PCB-11	100	77.7	15-145				
PCB-19	50	46.8	30.0-67.5	13C-PCB-19	100	68.1	15-145				
PCB-37	50	48.9	30.0-67.5	13C-PCB-37	100	87.7	15-145				
PCB-54	50	53.2	30.0-67.5	13C-PCB-54	100	74.1	15-145				
PCB-81	50	50.9	30.0-67.5	13C-PCB-81	100	83.1	40-145				
PCB-77	50	49.4	30.0-67.5	13C-PCB-77	100	85.5	40-145				
PCB-104	50	50.6	30.0-67.5	13C-PCB-104	100	81.6	40-145				
PCB-123	50	51.3	30.0-67.5	13C-PCB-123	100	89.8	40-145				
PCB-106/118	100	100.5	60.0-135	13C-PCB-118	100	87.0	40-145				
PCB-114	50	44.5	30.0-67.5	13C-PCB-114	100	101.0	40-145				
PCB-105	50	44.8	30.0-67.5	13C-PCB-105	100	104.7	40-145				
PCB-126	50	44.2	30.0-67.5	13C-PCB-126	100	116.4	40-145				
PCB-155	50	49.5	30.0-67.5	13C-PCB-155	100	58.7	40-145				
PCB-167	50	49.5	30.0-67.5	13C-PCB-167	100	89.5	40-145				
PCB-156	50	50.7	30.0-67.5	13C-PCB-156	100	86.4	40-145				
PCB-157	50	51.3	30.0-67.5	13C-PCB-157	100	84.8	40-145				
PCB-169	50	52.9	30.0-67.5	13C-PCB-169	100	92.3	40-145				
PCB-188	50	48.4	30.0-67.5	13C-PCB-188	100	61.0	40-145				
PCB-189	50	50.3	30.0-67.5	13C-PCB-189	100	71.5	40-145				
PCB-202	50	49.7	30.0-67.5	13C-PCB-202	100	51.7	40-145				
PCB-205	50	44.6	30.0-67.5	13C-PCB-194	100	87.3	40-145				
PCB-208	50	48.7	30.0-67.5	13C-PCB-208	100	68.2	40-145				
PCB-206	50	48.8	30.0-67.5	13C-PCB-206	100	72.3	40-145				
PCB-209	50	48.2	30.0-67.5	13C-PCB-209	100	61.5	40-145				

Analyst: DMS

Date: 3/24/15

Client ID: OPR Filename: 150319E2 S:2 Acq:19-MAR-15 22:40:17 ConCal: ST150319E2-1

Lab ID: B5C0088-BS1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	4.57e+07	2.90	y	1.33	16:12	1.001	0.997	1.007	39.7013
	PCB-2	5.00e+07	2.92	y	1.30	18:34	0.988	0.983	0.993	41.7227
	PCB-3	4.96e+07	2.90	y	1.30	18:48	1.001	0.996	1.006	41.2427
	PCB-4/10	7.98e+07	1.59	y	1.67	20:10	1.002	0.997	1.007	84.7331
	PCB-7/9	1.03e+08	1.60	y	1.25	21:57	0.869	0.864	0.872	86.9052
	PCB-6	5.27e+07	1.57	y	1.24	22:36	0.894	0.888	0.897	44.8792
	PCB-5/8	1.08e+08	1.58	y	1.27	23:00	0.910	0.905	0.915	89.5462
	PCB-14	6.49e+07	1.58	y	1.47	24:06	0.954	0.948	0.958	41.8977
	PCB-11	6.03e+07	1.62	y	1.28	25:18	1.001	0.995	1.005	44.6019
	PCB-12/13	1.18e+08	1.61	y	1.27	25:41	1.016	1.011	1.021	88.7469
	PCB-15	6.57e+07	1.62	y	1.44	26:00	1.029	1.023	1.031	43.2915
	PCB-19	3.02e+07	1.07	y	1.18	24:16	1.001	0.996	1.006	46.8247
	PCB-30	5.10e+07	1.06	y	1.87	25:10	1.038	1.033	1.043	50.0577
	PCB-18	3.49e+07	1.06	y	0.89	25:55	0.954	0.949	0.959	50.6217
	PCB-17	3.81e+07	1.07	y	0.96	26:06	0.961	0.956	0.966	51.2179
	PCB-24/27	1.03e+08	1.07	y	1.30	26:40	0.982	0.977	0.987	102.280
-	PCB-16/32	8.39e+07	1.07	y	1.05	27:10	1.000	0.996	1.006	103.077
-	PCB-34	5.46e+07	1.11	y	1.30	27:58	0.960	0.955	0.965	44.4176
	PCB-23	5.82e+07	1.07	y	1.21	28:03	0.963	0.958	0.968	50.8933
	PCB-29	6.06e+07	1.09	y	1.21	28:18	0.971	0.967	0.977	52.9845
	PCB-26	5.72e+07	1.10	y	1.24	28:31	0.979	0.974	0.984	48.8682
	PCB-25	5.44e+07	1.09	y	1.10	28:41	0.985	0.980	0.990	52.4569
	PCB-31	6.37e+07	1.07	y	1.25	29:03	0.997	0.992	1.002	53.8278
	PCB-28	5.49e+07	1.09	y	1.24	29:08	1.000	0.996	1.006	46.9431
	PCB-20/21/33	1.73e+08	1.10	y	1.16	29:45	1.021	1.016	1.026	157.920
	PCB-22	5.77e+07	1.07	y	1.16	30:12	1.037	1.032	1.042	52.4763
	PCB-36	6.21e+07	1.10	y	1.30	30:48	0.933	0.929	0.939	45.3998
	PCB-39	6.51e+07	1.11	y	1.26	31:17	0.948	0.943	0.953	48.9951
	PCB-38	5.99e+07	1.09	y	1.24	32:03	0.971	0.967	0.977	45.7838
	PCB-35	6.24e+07	1.08	y	1.26	32:34	0.987	0.982	0.992	47.1818
	PCB-37	6.95e+07	1.08	y	1.35	33:00	1.000	0.996	1.006	48.9295
	PCB-54	3.86e+07	0.79	y	1.02	28:01	1.001	0.996	1.006	53.1831
	PCB-50	3.25e+07	0.78	y	0.78	29:10	1.042	1.037	1.047	58.9226
	PCB-53	3.30e+07	0.78	y	1.14	29:49	0.946	0.941	0.951	52.1345
	PCB-51	3.36e+07	0.77	y	1.16	30:10	0.957	0.952	0.962	52.0462
	PCB-45	3.07e+07	0.80	y	1.04	30:36	0.971	0.965	0.975	53.0660
	PCB-46	2.87e+07	0.79	y	0.95	31:05	0.986	0.981	0.991	54.2699

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	7.94e+07	0.78	y	1.29	31:34	1.002	0.996	1.006	110.521
	PCB-73	4.22e+07	0.78	y	1.41	31:40	1.005	0.999	1.009	53.7602
	PCB-43/49	6.82e+07	0.79	y	1.14	31:51	1.011	1.005	1.015	107.641
	PCB-47	3.83e+07	0.78	y	1.20	32:03	1.001	0.996	1.006	56.0159
	PCB-48/75	8.10e+07	0.80	y	1.33	32:10	1.004	0.999	1.009	107.120
	PCB-65	4.18e+07	0.78	y	1.32	32:26	1.012	1.007	1.017	55.6545
	PCB-62	4.38e+07	0.80	y	1.36	32:32	1.016	1.011	1.021	56.5522
	PCB-44	2.91e+07	0.79	y	0.87	32:50	1.025	1.020	1.030	58.6330
	PCB-42/59	7.76e+07	0.79	y	1.24	33:03	1.032	1.027	1.037	110.081
	PCB-41/64/71/72	1.70e+08	0.78	y	1.34	33:39	1.050	1.045	1.055	222.410
	PCB-68	5.05e+07	0.77	y	1.61	33:55	1.059	1.053	1.063	55.0664
	PCB-40	2.90e+07	0.78	y	0.86	34:07	1.065	1.061	1.071	59.3647
	PCB-57	4.95e+07	0.79	y	1.12	34:30	0.970	0.965	0.975	58.0899
	PCB-67	4.39e+07	0.78	y	1.09	34:48	0.979	0.974	0.984	52.9502
	PCB-58	4.71e+07	0.79	y	1.14	34:55	0.982	0.977	0.987	54.4755
	PCB-63	4.82e+07	0.77	y	1.16	35:04	0.986	0.981	0.991	54.5670
	PCB-74	4.68e+07	0.78	y	1.21	35:21	0.994	0.989	0.999	50.7419
	PCB-61/70	9.16e+07	0.78	y	1.13	35:31	0.999	0.995	1.005	107.031
	PCB-76/66	9.30e+07	0.78	y	1.18	35:45	1.006	1.000	1.010	103.684
	PCB-80	5.33e+07	0.79	y	1.32	36:00	1.001	0.995	1.005	50.5145
	PCB-55	4.98e+07	0.78	y	1.23	36:18	1.009	1.004	1.014	50.8363
	PCB-56/60	8.91e+07	0.78	y	1.11	36:47	1.023	1.018	1.028	101.186
	PCB-79	4.84e+07	0.79	y	1.16	37:52	1.053	1.048	1.058	52.4194
	PCB-78	4.60e+07	0.79	y	1.18	38:33	0.987	0.982	0.992	52.1495
	PCB-81	4.93e+07	0.79	y	1.29	39:05	1.000	0.995	1.005	50.9471
	PCB-77	4.75e+07	0.80	y	1.29	39:41	1.000	0.995	1.005	49.3856
	PCB-104	2.52e+07	1.59	y	1.26	32:42	1.001	0.996	1.006	50.5744
	PCB-96	2.28e+07	1.58	y	1.09	33:57	1.039	1.034	1.044	52.7404
	PCB-103	2.08e+07	1.59	y	0.97	34:30	1.056	1.051	1.061	54.3645
	PCB-100	2.00e+07	1.62	y	0.96	34:51	1.066	1.061	1.071	52.6106
	PCB-94	1.70e+07	1.62	y	1.13	35:20	0.986	0.980	0.990	49.9082
	PCB-95/98/102	5.69e+07	1.60	y	1.29	35:48	0.999	0.994	1.004	146.775
	PCB-93	1.83e+07	1.66	y	1.06	35:56	1.003	0.998	1.008	57.3118
	PCB-88/91	3.65e+07	1.60	y	1.12	36:13	1.011	1.006	1.016	108.196
	PCB-121	2.57e+07	1.59	y	1.76	36:21	1.014	1.009	1.019	48.5066
	PCB-84/92	3.61e+07	1.58	y	1.07	37:10	0.990	0.985	0.995	102.022
	PCB-89	1.71e+07	1.57	y	1.00	37:20	0.995	0.990	1.000	51.9229

Integrations by Analyst: DMS Date: 3/24/15

Reviewed by Analyst: [signature] Date: 3/29/15

Client ID: OPR Filename: 150319E2 S:2 Acq:19-MAR-15 22:40:17 ConCal: ST150319E2-1
Lab ID: B5C0088-BS1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	3.99e+07	1.58	y	1.21	37:32	1.000	0.995	1.005	100.094
	PCB-113	2.25e+07	1.53	y	1.34	37:46	1.006	1.002	1.012	50.7151
	PCB-99	2.07e+07	1.64	y	1.25	37:52	1.009	1.004	1.014	50.2376
	PCB-119	2.77e+07	1.56	y	1.88	38:19	0.987	0.982	0.992	49.4098
	PCB-108/112	4.13e+07	1.60	y	1.41	38:30	0.991	0.986	0.996	98.3176
	PCB-83	2.55e+07	1.57	y	1.66	38:39	0.995	0.990	1.000	51.3227
	PCB-97	1.97e+07	1.61	y	1.30	38:50	1.000	0.995	1.005	50.8391
	PCB-86	1.67e+07	1.49	y	1.03	38:59	1.004	0.999	1.009	54.1069
	B-87/117/125	6.90e+07	1.63	y	1.59	39:07	1.007	1.002	1.012	145.323
	PCB-111/115	5.02e+07	1.59	y	1.86	39:16	1.011	1.006	1.016	90.5869
	PCB-85/116	4.05e+07	1.62	y	1.39	39:24	1.015	1.010	1.020	97.3780
	PCB-120	2.76e+07	1.63	y	1.99	39:39	1.021	1.016	1.026	46.5711
	PCB-110	2.40e+07	1.60	y	1.70	39:47	1.024	1.019	1.029	47.2269
	PCB-82	1.54e+07	1.60	y	0.74	40:24	0.976	0.971	0.981	52.2714
	PCB-124	2.68e+07	1.59	y	1.30	41:05	0.993	0.988	0.998	51.8435
	PCB-107/109	5.08e+07	1.62	y	1.34	41:14	0.996	0.991	1.001	95.9915
	PCB-123	2.55e+07	1.60	y	1.25	41:25	1.001	0.995	1.005	51.3488
-	PCB-106/118	5.30e+07	1.60	y	1.29	41:36	1.001	0.996	1.006	100.549
-	PCB-114	4.21e+07	1.60	y	1.45	42:15	1.000	0.995	1.005	44.4633
	PCB-122	3.81e+07	1.66	y	1.22	42:22	1.003	0.999	1.009	47.9403
	PCB-105	4.50e+07	1.63	y	1.56	43:06	1.000	0.995	1.005	44.7521
	PCB-127	3.96e+07	1.64	y	1.31	43:27	1.001	0.995	1.005	44.8875
	PCB-126	4.19e+07	1.58	y	1.41	45:20	1.000	0.995	1.005	44.1539
	PCB-155	1.52e+07	1.27	y	1.20	37:05	1.000	0.966	1.006	49.4966
	PCB-150	1.49e+07	1.30	y	1.13	38:21	1.035	1.030	1.040	51.4245
	PCB-152	1.47e+07	1.28	y	1.17	38:50	1.048	1.043	1.053	49.0841
	PCB-145	1.41e+07	1.29	y	1.09	39:16	1.059	1.055	1.065	50.4823
	PCB-136	1.50e+07	1.30	y	1.14	39:35	1.068	1.063	1.073	51.2221
	PCB-148	1.10e+07	1.30	y	0.82	39:42	1.071	1.066	1.076	52.3107
	PCB-154	1.21e+07	1.32	y	0.89	40:12	1.085	1.079	1.089	53.1054
	PCB-151	1.20e+07	1.31	y	0.82	40:49	1.101	1.097	1.107	57.3711
	PCB-135	1.20e+07	1.30	y	0.80	41:03	1.107	1.101	1.113	58.9563
	PCB-144	1.17e+07	1.30	y	0.86	41:10	1.111	1.105	1.116	53.1785
	PCB-147	1.06e+07	1.28	y	0.78	41:17	1.114	1.108	1.120	53.3084
	PCB-139/149	2.42e+07	1.32	y	0.87	41:33	1.121	1.115	1.127	108.387
-	PCB-140	1.09e+07	1.28	y	0.78	41:44	1.126	1.120	1.132	54.6471
-	PCB-134/143	4.76e+07	1.24	y	0.93	42:10	0.975	0.970	0.980	98.9786
	PCB-133/142	4.72e+07	1.25	y	0.91	42:28	0.982	0.977	0.987	100.497
	PCB-131	2.34e+07	1.25	y	0.85	42:37	0.985	0.981	0.991	53.6055
	PCB-146/165	5.63e+07	1.25	y	1.08	42:51	0.991	0.986	0.996	100.697
	PCB-132/161	5.73e+07	1.26	y	1.12	43:06	0.997	0.992	1.002	99.0409
	PCB-153	2.88e+07	1.25	y	1.20	43:15	1.000	0.996	1.006	46.4681
	PCB-168	3.41e+07	1.26	y	1.36	43:28	1.005	1.000	1.010	48.5591
	PCB-141	2.63e+07	1.27	y	1.16	43:59	1.000	0.995	1.005	49.5536
	PCB-137	2.83e+07	1.24	y	1.18	44:22	1.009	1.004	1.014	52.4466
	PCB-130	2.27e+07	1.26	y	0.92	44:29	1.011	1.006	1.016	53.7849
	PCB-138/163/164	9.49e+07	1.24	y	1.38	44:51	1.001	0.996	1.006	145.928
	PCB-158/160	7.07e+07	1.25	y	1.48	45:06	1.006	1.001	1.011	101.630
	PCB-129	2.39e+07	1.27	y	0.99	45:20	1.012	1.007	1.017	51.3657
	PCB-166	3.64e+07	1.27	y	1.14	45:48	0.993	0.988	0.998	52.1242
	PCB-159	3.78e+07	1.23	y	1.22	46:07	1.000	0.995	1.005	50.6159
	PCB-128/162	6.37e+07	1.25	y	1.03	46:23	1.006	1.002	1.012	100.802
	PCB-167	3.71e+07	1.23	y	1.18	46:48	1.000	0.995	1.005	49.5107
	PCB-156	3.85e+07	1.24	y	1.27	48:05	1.000	0.995	1.005	50.7347
	PCB-157	3.85e+07	1.24	y	1.22	48:21	1.000	0.995	1.005	51.3403
	PCB-169	3.72e+07	1.31	y	1.07	50:30	1.000	0.995	1.005	52.8780
	PCB-188	2.34e+07	1.05	y	1.52	42:53	1.000	0.996	1.006	48.4248
	PCB-184	2.23e+07	1.04	y	1.34	43:20	1.011	1.006	1.016	52.5822
	PCB-179	2.34e+07	1.06	y	1.39	44:07	1.029	1.024	1.034	52.9593
	PCB-176	2.44e+07	1.08	y	1.45	44:34	1.040	1.035	1.045	52.8076
	PCB-186	2.43e+07	1.06	y	1.46	45:11	1.054	1.049	1.059	52.6755
	PCB-178	1.84e+07	1.07	y	1.07	45:41	1.066	1.061	1.071	54.1422
	PCB-175	1.83e+07	1.06	y	1.05	46:01	1.073	1.069	1.079	55.0788
	PCB-182/187	3.88e+07	1.05	y	1.14	46:12	1.078	1.073	1.083	107.621
	PCB-183	2.08e+07	1.07	y	1.22	46:30	1.085	1.080	1.090	53.5966
	PCB-185	1.92e+07	1.07	y	1.40	47:10	0.956	0.950	0.960	51.5036
	PCB-174	1.78e+07	1.06	y	1.29	47:32	0.963	0.958	0.968	52.1227
	PCB-181	1.81e+07	1.07	y	1.35	47:38	0.965	0.960	0.970	50.5551
	PCB-177	1.66e+07	1.07	y	1.27	47:48	0.969	0.963	0.973	49.5883
	PCB-171	1.88e+07	1.04	y	1.46	48:05	0.974	0.969	0.979	48.7223
	PCB-173	1.59e+07	1.05	y	1.10	48:31	0.983	0.978	0.988	54.4191
	PCB-172	1.77e+07	1.07	y	1.35	48:58	0.992	0.987	0.997	49.3814
	PCB-192	2.32e+07	1.04	y	1.74	49:10	0.996	0.991	1.001	50.4802
	PCB-180	1.81e+07	1.09	y	1.45	49:22	1.000	0.995	1.005	47.0582

Integrations by Analyst: DMS

Date: 3/24/15

Client ID: OPR Filename: 150319E2 S:2 Acq:19-MAR-15 22:40:17 ConCal: ST150319E2-1

Lab ID: B5C0088-BS1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	2.44e+07	1.08	y	1.85	49:34	1.004	0.999	1.009	49.7074
	PCB-191	2.47e+07	1.08	y	1.86	49:49	1.009	1.005	1.015	50.1461
	PCB-170	1.76e+07	1.08	y	1.67	50:52	1.000	0.995	1.005	48.1263
	PCB-190	2.52e+07	1.07	y	2.25	51:02	1.004	0.999	1.009	51.0595
	PCB-189	2.47e+07	1.09	y	1.67	52:22	1.000	0.995	1.005	50.2546
	PCB-202	1.33e+07	0.90	y	1.02	48:18	1.001	0.995	1.005	49.7263
	PCB-201	1.52e+07	0.91	y	1.10	48:47	1.011	1.005	1.015	52.9912
	PCB-204	1.43e+07	0.91	y	1.07	48:56	1.014	1.009	1.019	50.6620
	PCB-197	1.59e+07	0.93	y	1.17	49:14	1.020	1.015	1.025	51.8716
	PCB-200	1.48e+07	0.92	y	1.03	50:07	1.038	1.034	1.044	54.4937
	PCB-198	1.16e+07	0.92	y	0.75	51:28	1.066	1.062	1.072	58.8171
	PCB-199	1.08e+07	0.91	y	0.74	51:34	1.068	1.064	1.074	55.6610
-	PCB-196/203	2.37e+07	0.92	y	0.83	51:50	1.074	1.070	1.080	109.368
-	PCB-195	2.22e+07	0.94	y	1.14	53:00	0.984	0.979	0.989	45.6738
	PCB-194	2.36e+07	0.92	y	1.29	53:52	1.000	0.995	1.005	42.9321
	PCB-205	3.06e+07	0.91	y	1.61	54:09	1.005	1.001	1.010	44.6464
	PCB-208	2.39e+07	1.32	y	1.01	53:09	1.000	0.995	1.005	48.6801
	PCB-207	2.44e+07	1.35	y	1.03	53:26	1.006	1.001	1.011	48.8575
	PCB-206	1.49e+07	1.33	y	0.88	55:28	1.000	0.995	1.005	48.7677
	PCB-209	1.86e+07	1.21	y	1.35	56:52	1.000	0.995	1.005	48.2211

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	1.45e+08	2.90	y	16:12	1.31	122.667	
Total Di-PCB	6.56e+08	1.59	y	20:10	1.32	526.824	
Total Tri-PCB	3.41e+08	1.07	y	24:16	1.20	404.105	
Total Tri-PCB	9.61e+08	1.11	y	27:58	1.23	803.318	Sum:1207.42
Total Tetra-PCB	1.76e+09	0.79	y	28:01	1.17	2284.80	
Total Penta-PCB	8.95e+08	1.59	y	32:42	1.24	2063.52	
Total Penta-PCB	2.18e+08	1.60	y	42:15	1.39	238.611	Sum:2302.13
Total Hexa-PCB	1.78e+08	1.27	y	37:05	0.94	742.975	
Total Hexa-PCB	8.66e+08	1.24	y	42:10	1.13	1435.19	Sum:2178.16
Total Hepta-PCB	5.01e+08	1.05	y	42:53	1.37	1245.62	
Total Octa-PCB	1.20e+08	0.90	y	48:18	0.95	483.591	
Total Octa-PCB	7.88e+07	0.94	y	53:00	1.35	137.272	Sum:620.863
Total Nona-PCB	6.36e+07	1.32	y	53:09	0.99	147.060	
Total Deca-PCB	1.86e+07	1.21	y	56:52	1.35	48.2211	

Total PCB Conc:10597.0259810

Integrations by Analyst: DMS

Date: 3/24/15

Client ID: OPR Filename: 150319E2 S:2 Acq:19-MAR-15 22:40:17 ConCal: ST150319E2-1
Lab ID: B5C0088-BS1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	8.63e+07	3.23 y	0.91	16:11	0.623	0.619	0.625	66.8	66.8
13C-PCB-3	9.26e+07	3.28 y	0.94	18:47	0.723	0.718	0.726	69.1	69.1
13C-PCB-4	5.63e+07	1.61 y	0.60	20:07	0.774	0.770	0.778	66.2	66.2
13C-PCB-9	9.51e+07	1.58 y	0.96	21:54	0.843	0.839	0.847	69.6	69.6
13C-PCB-11	1.05e+08	1.57 y	0.95	25:16	0.972	0.968	0.978	77.7	77.7
13C-PCB-19	5.44e+07	1.09 y	0.56	24:15	0.933	0.929	0.939	68.1	68.1
13C-PCB-28	9.47e+07	1.06 y	1.07	29:08	1.004	0.999	1.009	71.0	71.0
13C-PCB-32	7.78e+07	1.08 y	0.83	27:10	1.046	1.041	1.051	66.2	66.2
13C-PCB-37	1.05e+08	1.06 y	0.96	33:00	1.137	1.131	1.143	87.7	87.7
13C-PCB-47	5.71e+07	0.81 y	0.77	32:02	0.871	0.867	0.875	82.2	82.2
13C-PCB-52	5.56e+07	0.82 y	0.71	31:31	0.857	0.853	0.861	86.4	86.4
13C-PCB-54	7.10e+07	0.80 y	1.06	28:00	0.761	0.757	0.765	74.1	74.1
13C-PCB-70	7.61e+07	0.81 y	0.99	35:33	0.966	0.961	0.971	84.6	84.6
13C-PCB-77	7.45e+07	0.80 y	0.96	39:40	1.078	1.073	1.083	85.5	85.5
13C-PCB-80	7.97e+07	0.80 y	1.02	35:58	0.978	0.973	0.983	86.2	86.2
13C-PCB-81	7.50e+07	0.82 y	1.00	39:04	1.062	1.057	1.067	83.1	83.1
13C-PCB-95	3.00e+07	1.67 y	0.70	35:50	0.913	0.908	0.918	85.8	85.8
13C-PCB-97	2.98e+07	1.65 y	0.66	38:50	0.989	0.984	0.994	90.5	90.5
13C-PCB-101	3.31e+07	1.67 y	0.77	37:32	0.956	0.951	0.961	86.1	86.1
13C-PCB-104	3.95e+07	1.65 y	0.97	32:41	0.832	0.828	0.836	81.6	81.6
13C-PCB-105	6.45e+07	1.63 y	1.20	43:05	0.929	0.924	0.934	105	105
13C-PCB-114	6.51e+07	1.59 y	1.26	42:14	0.911	0.905	0.915	101	101
13C-PCB-118	4.08e+07	1.63 y	0.94	41:34	1.059	1.054	1.064	87.0	87.0
13C-PCB-123	3.96e+07	1.61 y	0.88	41:23	1.054	1.049	1.059	89.8	89.8
13C-PCB-126	6.72e+07	1.60 y	1.13	45:19	0.977	0.972	0.982	116	116
13C-PCB-127	6.76e+07	1.58 y	1.26	43:25	0.936	0.931	0.941	105	105
13C-PCB-138	4.71e+07	1.29 y	1.12	44:49	0.967	0.961	0.971	82.1	82.1
13C-PCB-141	4.58e+07	1.29 y	1.09	43:59	0.949	0.943	0.953	81.8	81.8
13C-PCB-153	5.17e+07	1.28 y	1.27	43:15	0.933	0.927	0.937	79.2	79.2
13C-PCB-155	2.56e+07	1.33 y	0.87	37:04	0.944	0.939	0.949	58.7	58.7
13C-PCB-156	5.98e+07	1.31 y	1.35	48:04	1.037	1.032	1.042	86.4	86.4
13C-PCB-157	6.16e+07	1.33 y	1.42	48:20	1.042	1.037	1.047	84.8	84.8
13C-PCB-159	6.11e+07	1.28 y	1.37	46:06	0.994	0.989	0.999	87.0	87.0
13C-PCB-167	6.34e+07	1.29 y	1.38	46:47	1.009	1.004	1.014	89.5	89.5
13C-PCB-169	6.54e+07	1.31 y	1.38	50:29	1.089	1.084	1.094	92.3	92.3
13C-PCB-170	2.20e+07	0.46 y	0.60	50:51	1.097	1.091	1.103	71.0	71.0
13C-PCB-180	2.65e+07	0.45 y	0.76	49:21	1.064	1.059	1.069	68.3	68.3
13C-PCB-188	3.17e+07	0.48 y	1.01	42:52	0.925	0.919	0.929	61.0	61.0
13C-PCB-189	2.94e+07	0.45 y	0.80	52:21	1.129	1.124	1.136	71.5	71.5
13C-PCB-194	4.26e+07	0.91 y	0.75	53:52	0.995	0.990	1.000	87.3	87.3
13C-PCB-202	2.62e+07	0.93 y	0.99	48:16	1.041	1.036	1.046	51.7	51.7
13C-PCB-206	3.48e+07	0.80 y	0.73	55:27	1.024	1.020	1.301	72.3	72.3
13C-PCB-208	4.84e+07	0.79 y	1.08	53:08	0.982	0.977	0.987	68.2	68.2
13C-PCB-209	2.86e+07	1.23 y	0.71	56:51	1.050	1.045	1.055	61.5	61.5

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.29e+07	0.79 y	1.02	37:51	1.029	1.024	1.033	89.7	89.7
13C-PCB-178	2.30e+07	0.44 y	0.64	45:39	0.985	0.980	0.989	70.4	70.4

PS vs. IS

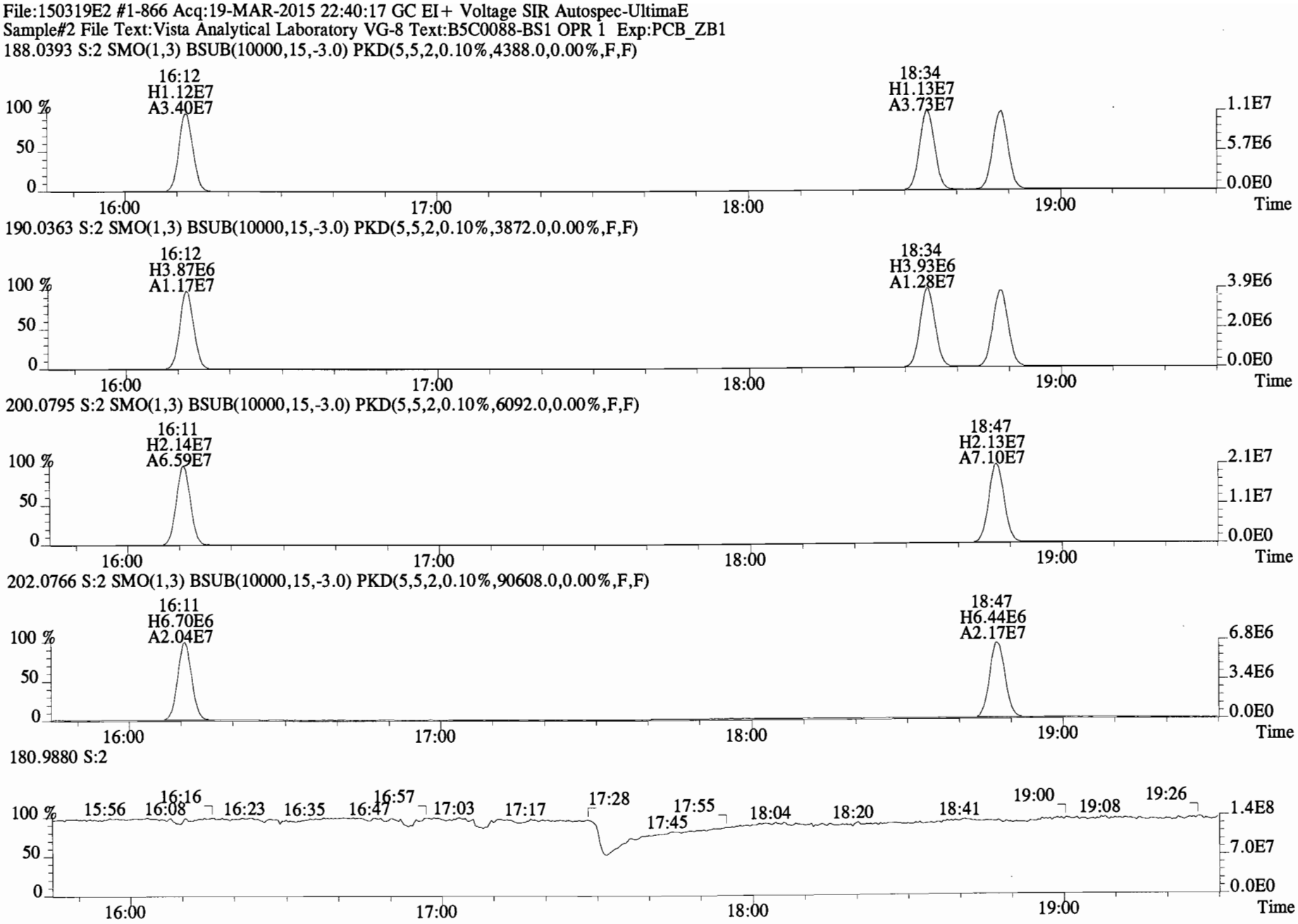
Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.29e+07	0.79 y	1.02	37:51	0.969	0.963	0.973	108	108
13C-PCB-178	2.30e+07	0.44 y	0.84	45:39	0.925	0.920	0.930	103	103

RS

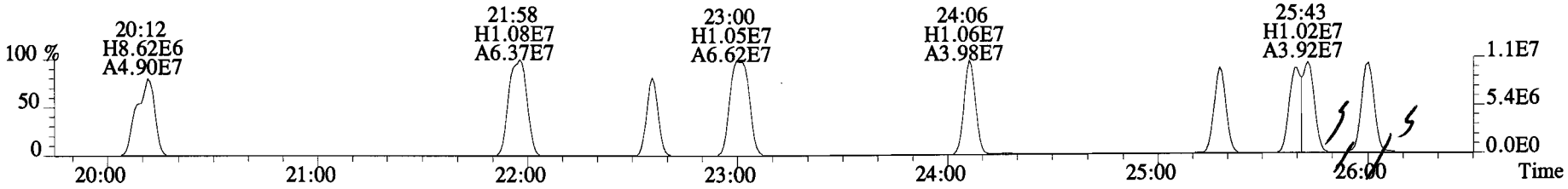
Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.42e+08	1.60	y	1.00	25:59	100
13C-PCB-31	1.25e+08	1.06	y	1.00	29:01	100
13C-PCB-60	9.04e+07	0.79	y	1.00	36:47	100
13C-PCB-111	5.01e+07	1.63	y	1.00	39:16	100
13C-PCB-128	5.13e+07	1.26	y	1.00	46:22	100
13C-PCB-205	6.55e+07	0.90	y	1.00	54:08	100

Analyst: DMS

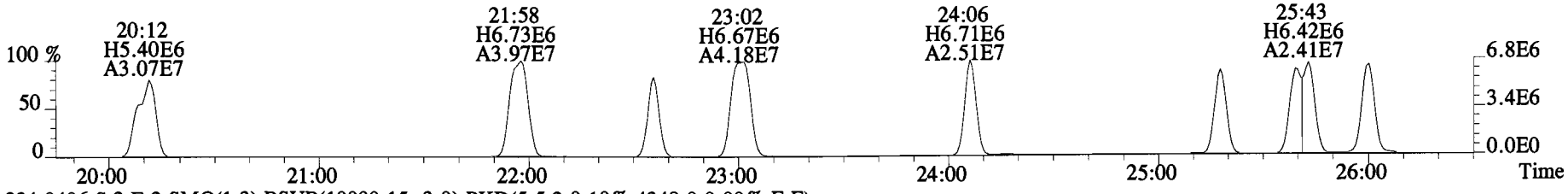
Date: 3/24/15


File:150319E2 #1-866 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4388.0,0.00%,F,F)
16:12
H1.12E7
A3.40E7
18:34
H1.13E7
A3.73E7
100 %
50
0
1.1E7
5.7E6
0.0E0
16:00
17:00
18:00
19:00
Time
190.0363 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3872.0,0.00%,F,F)
16:12
H3.87E6
A1.17E7
18:34
H3.93E6
A1.28E7
3.9E6
2.0E6
0.0E0
200.0795 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,6092.0,0.00%,F,F)
16:11
H2.14E7
A6.59E7
18:47
H2.13E7
A7.10E7
2.1E7
1.1E7
0.0E0
202.0766 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,90608.0,0.00%,F,F)
16:11
H6.70E6
A2.04E7
18:47
H6.44E6
A2.17E7
6.8E6
3.4E6
0.0E0
180.9880 S:2
15:56
16:08
16:16
16:23
16:35
16:47
16:57
17:03
17:17
17:28
17:45
17:55
18:04
18:20
18:41
19:00
19:08
19:26
1.4E8
7.0E7
0.0E0

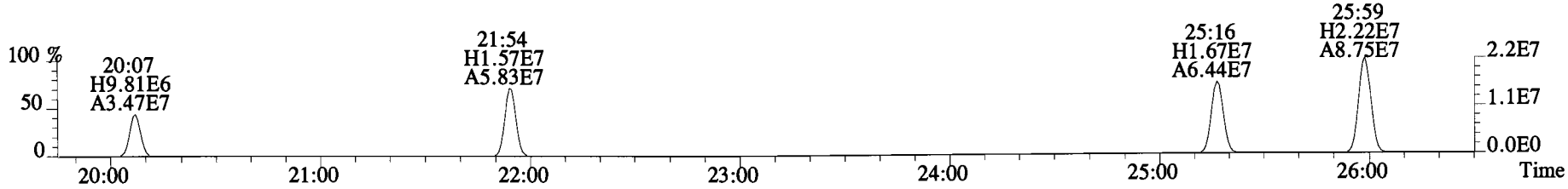
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5332.0,0.00%,F,F)



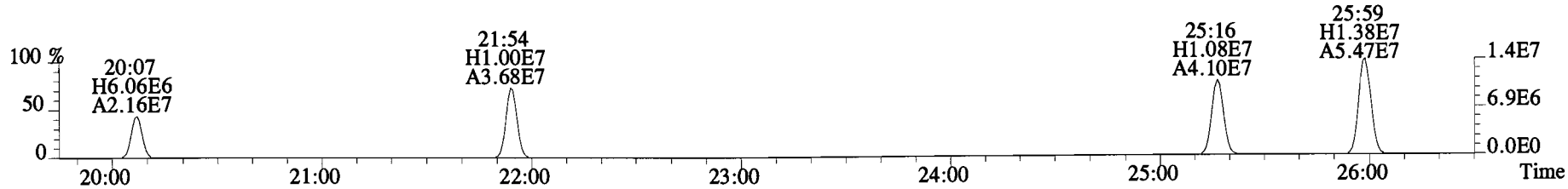
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16140.0,0.00%,F,F)



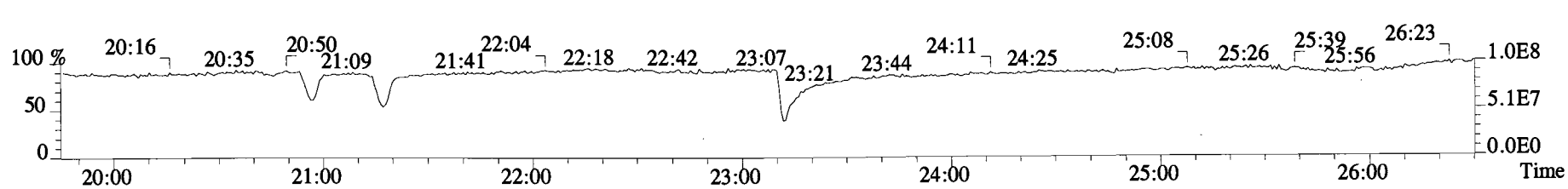
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4348.0,0.00%,F,F)



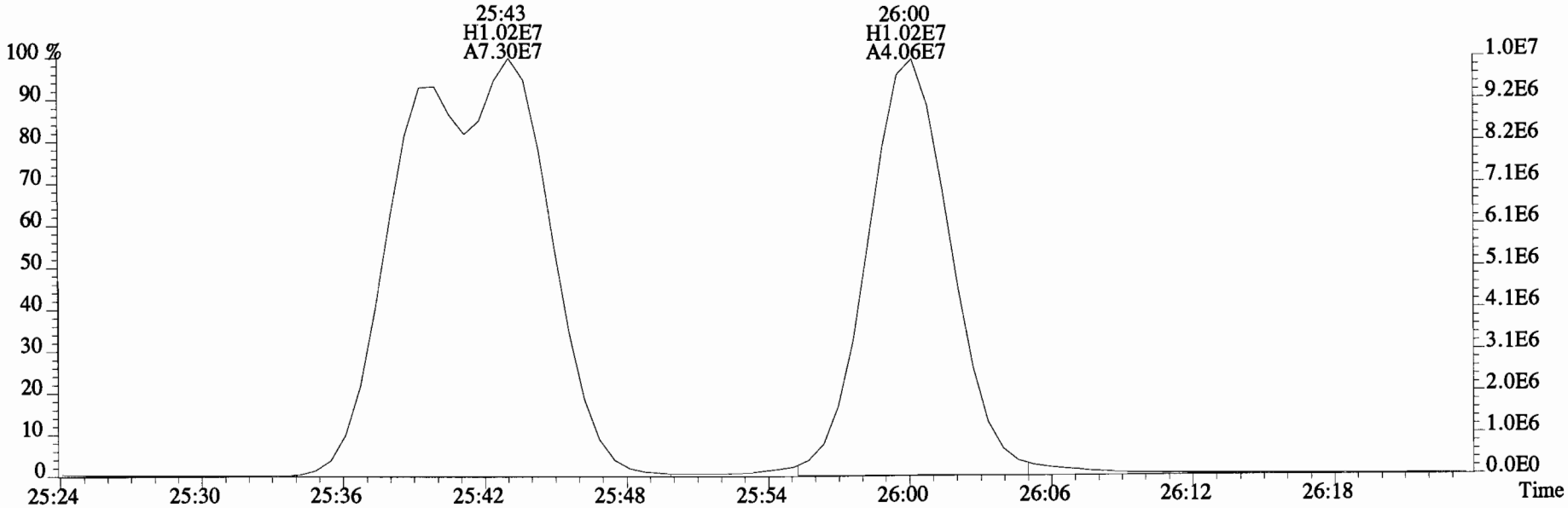
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3668.0,0.00%,F,F)



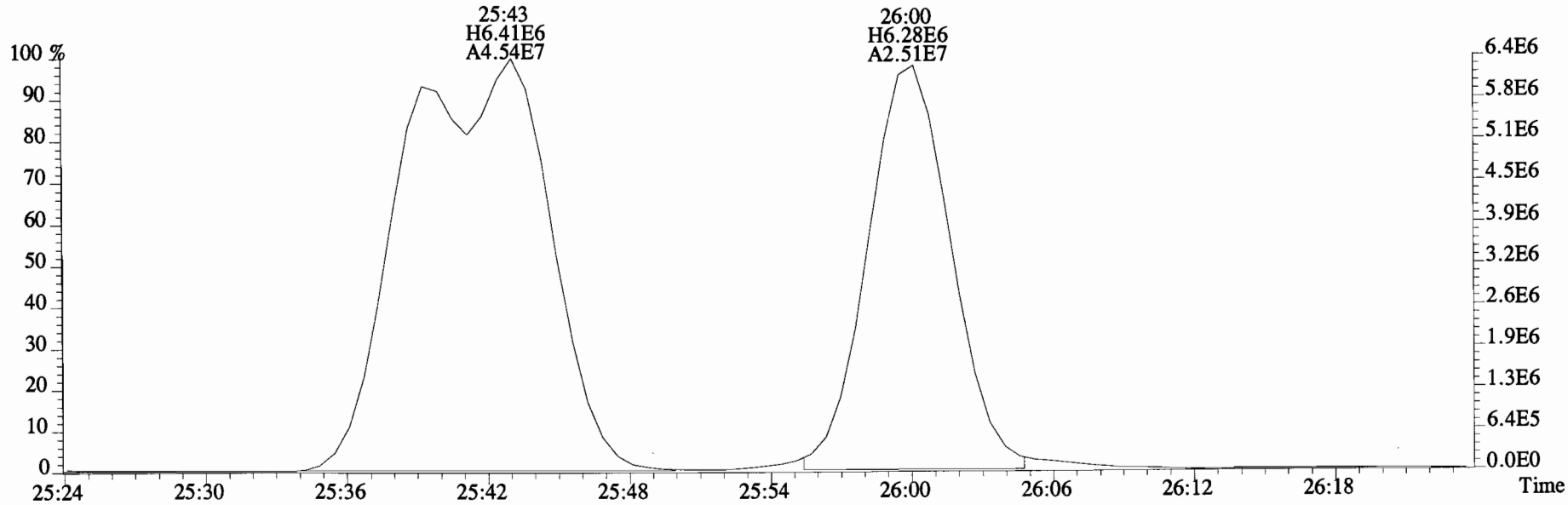
230.9856 S:2 F:2



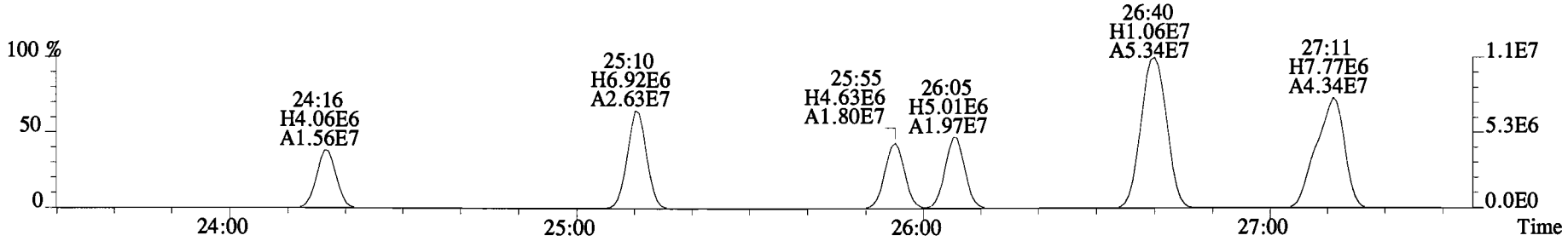
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5332.0,0.00%,F,F)



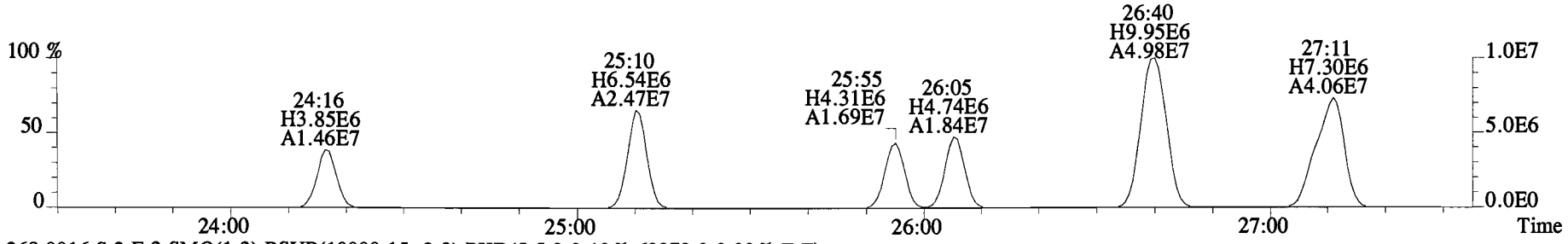
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,16140.0,0.00%,F,F)



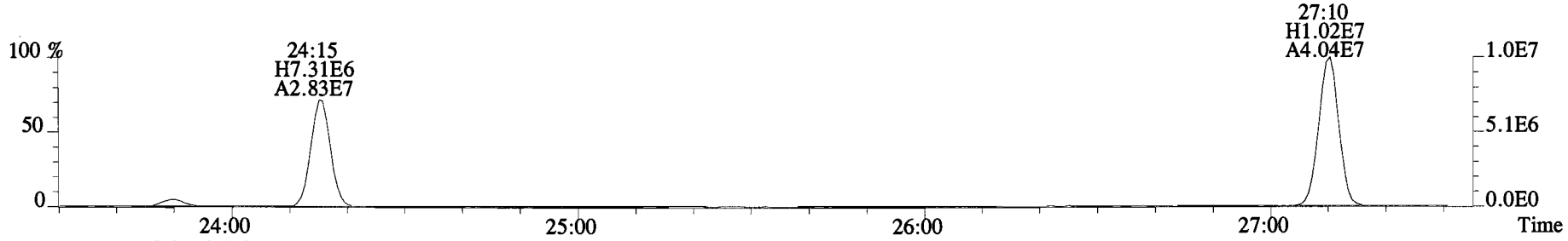
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5908.0,0.00%,F,F)



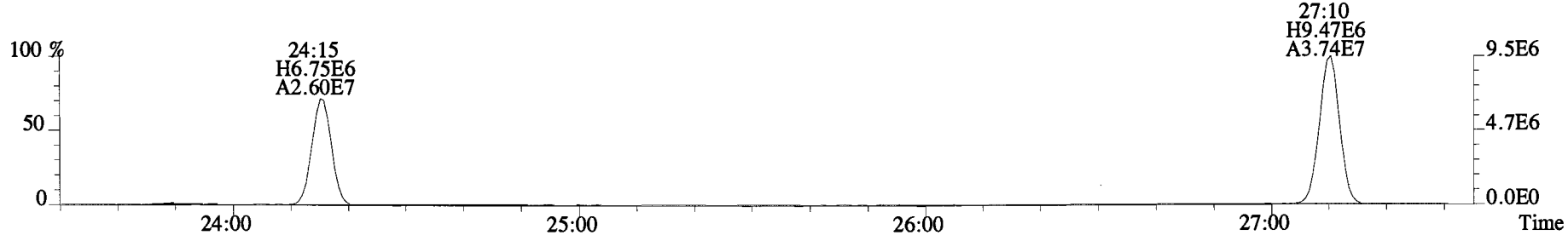
257.9584 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2592.0,0.00%,F,F)

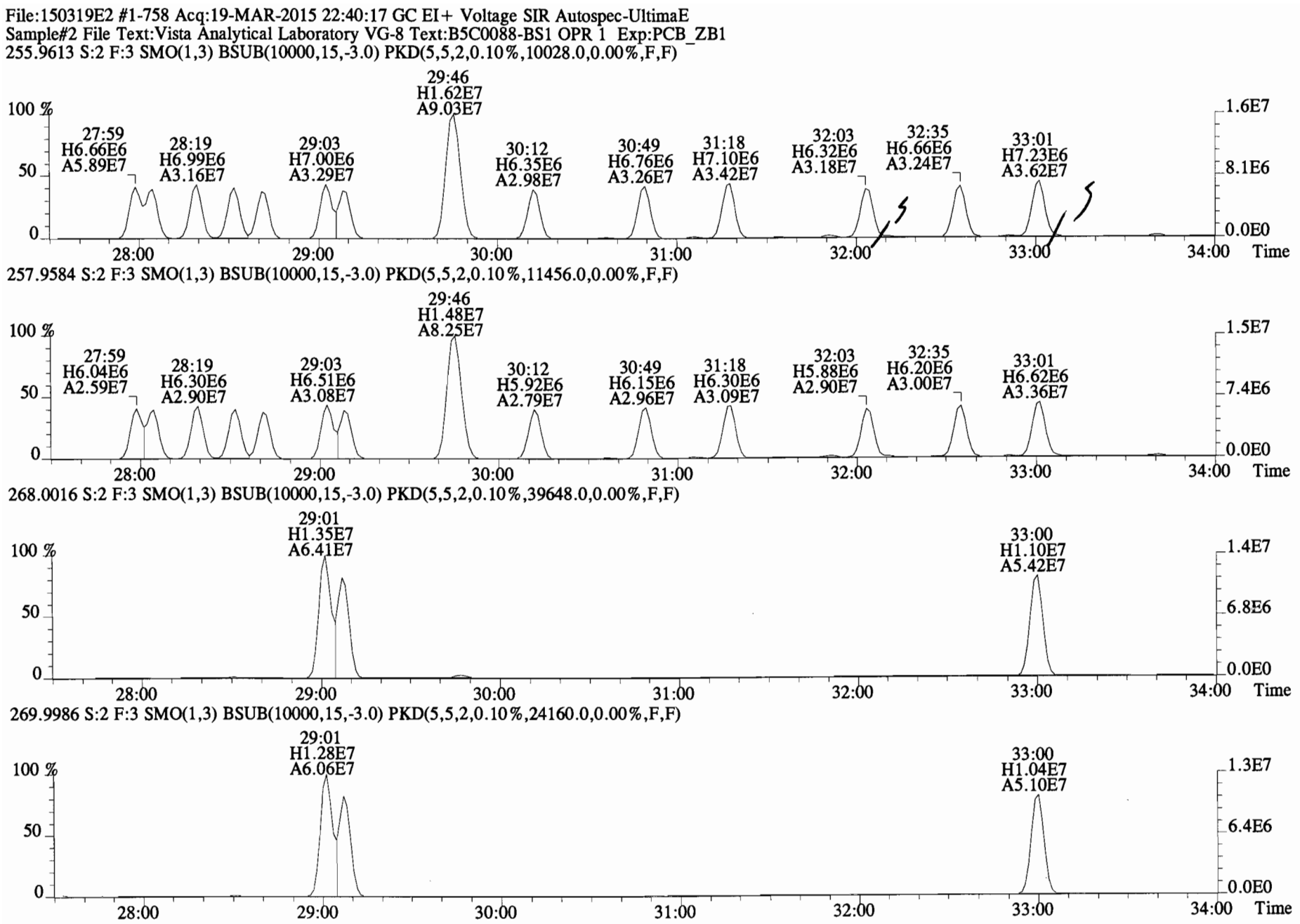


268.0016 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,62972.0,0.00%,F,F)

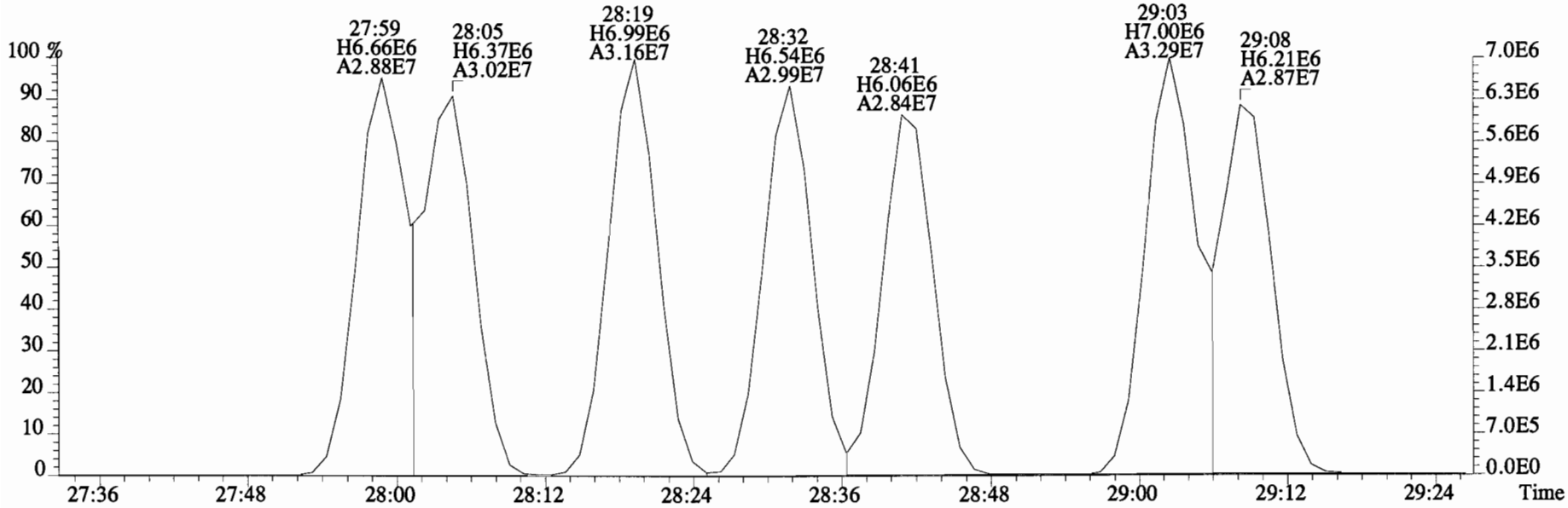


269.9986 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,29212.0,0.00%,F,F)

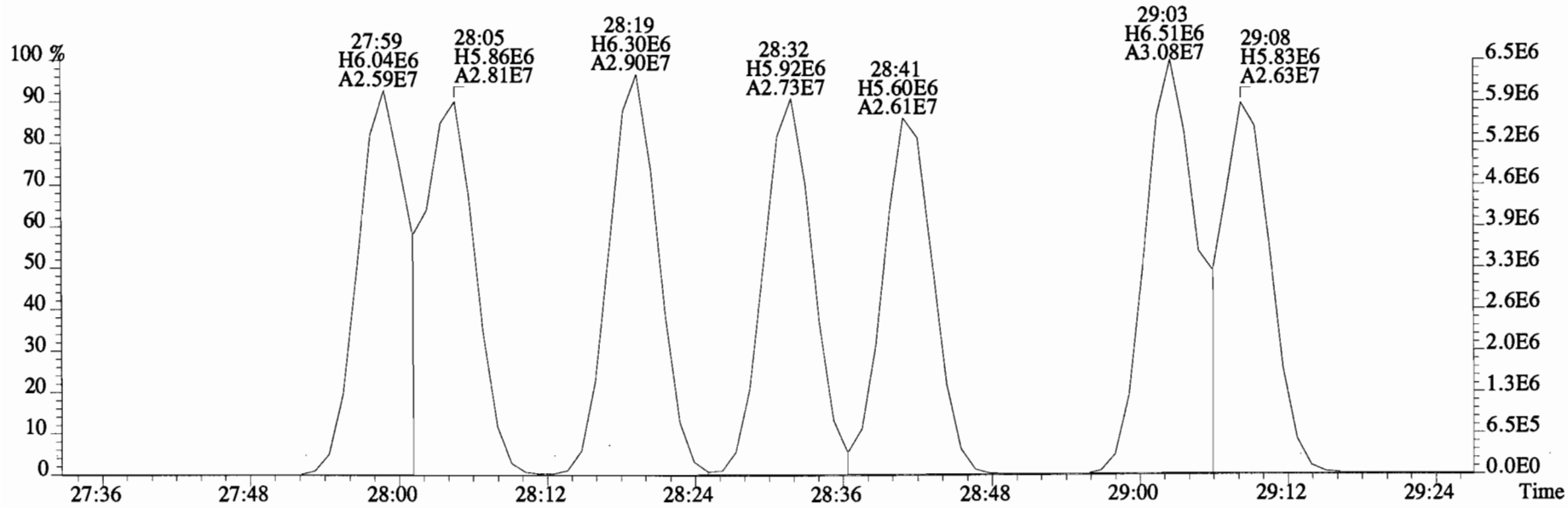



File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,10028.0,0.00%,F,F)
27:59 H6.66E6 A5.89E7
28:19 H6.99E6 A3.16E7
29:03 H7.00E6 A3.29E7
29:46 H1.62E7 A9.03E7
30:12 H6.35E6 A2.98E7
30:49 H6.76E6 A3.26E7
31:18 H7.10E6 A3.42E7
32:03 H6.32E6 A3.18E7
32:35 H6.66E6 A3.24E7
33:01 H7.23E6 A3.62E7
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11456.0,0.00%,F,F)
27:59 H6.04E6 A2.59E7
28:19 H6.30E6 A2.90E7
29:03 H6.51E6 A3.08E7
29:46 H1.48E7 A8.25E7
30:12 H5.92E6 A2.79E7
30:49 H6.15E6 A2.96E7
31:18 H6.30E6 A3.09E7
32:03 H5.88E6 A2.90E7
32:35 H6.20E6 A3.00E7
33:01 H6.62E6 A3.36E7
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,39648.0,0.00%,F,F)
29:01 H1.35E7 A6.41E7
33:00 H1.10E7 A5.42E7
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24160.0,0.00%,F,F)
29:01 H1.28E7 A6.06E7
33:00 H1.04E7 A5.10E7
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
1.6E7
8.1E6
0.0E0
1.5E7
7.4E6
1.4E7
6.8E6
1.3E7
6.4E6

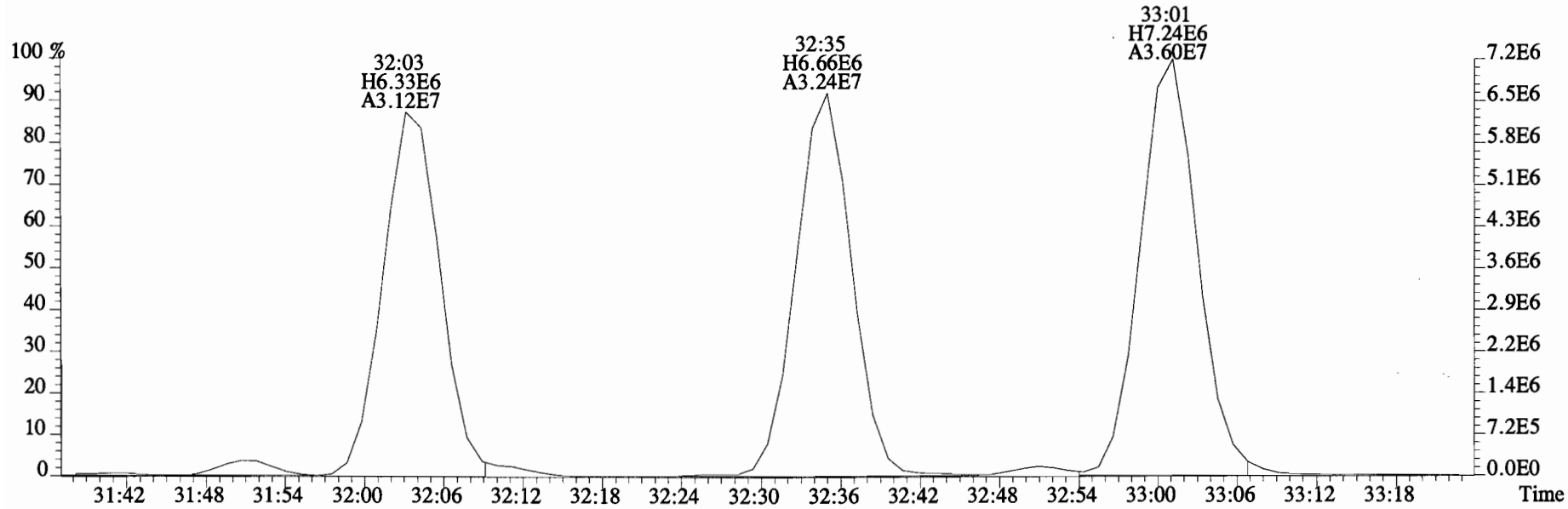
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,10028.0,0.00%,F,F)



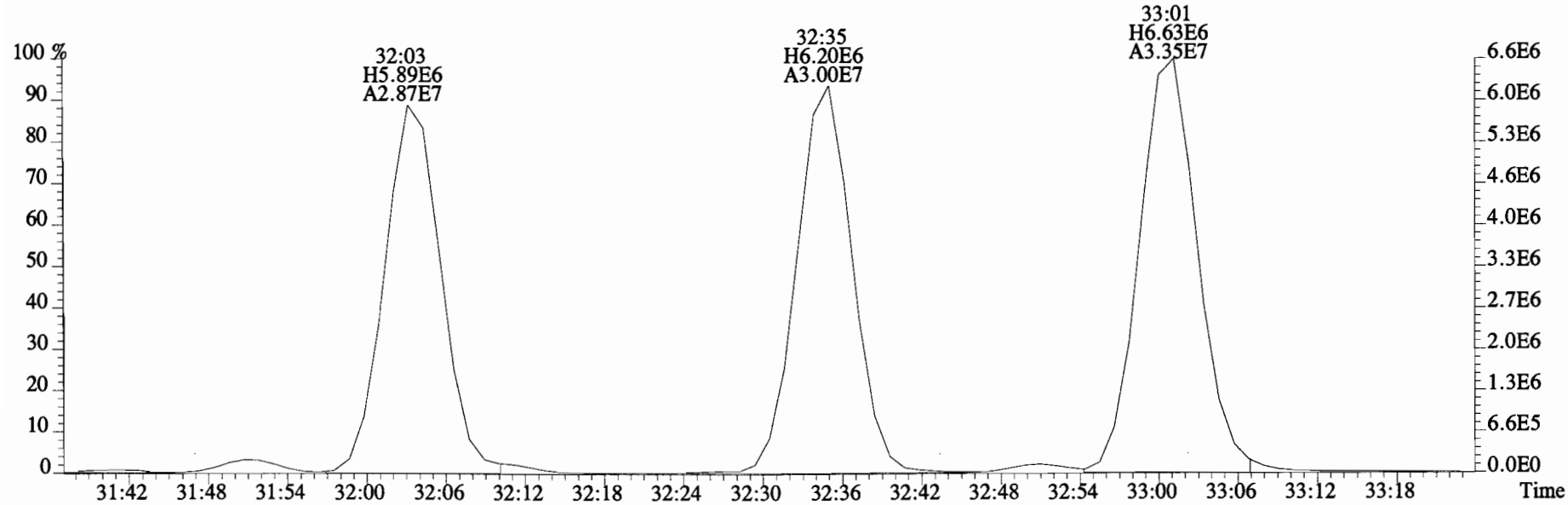
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11456.0,0.00%,F,F)



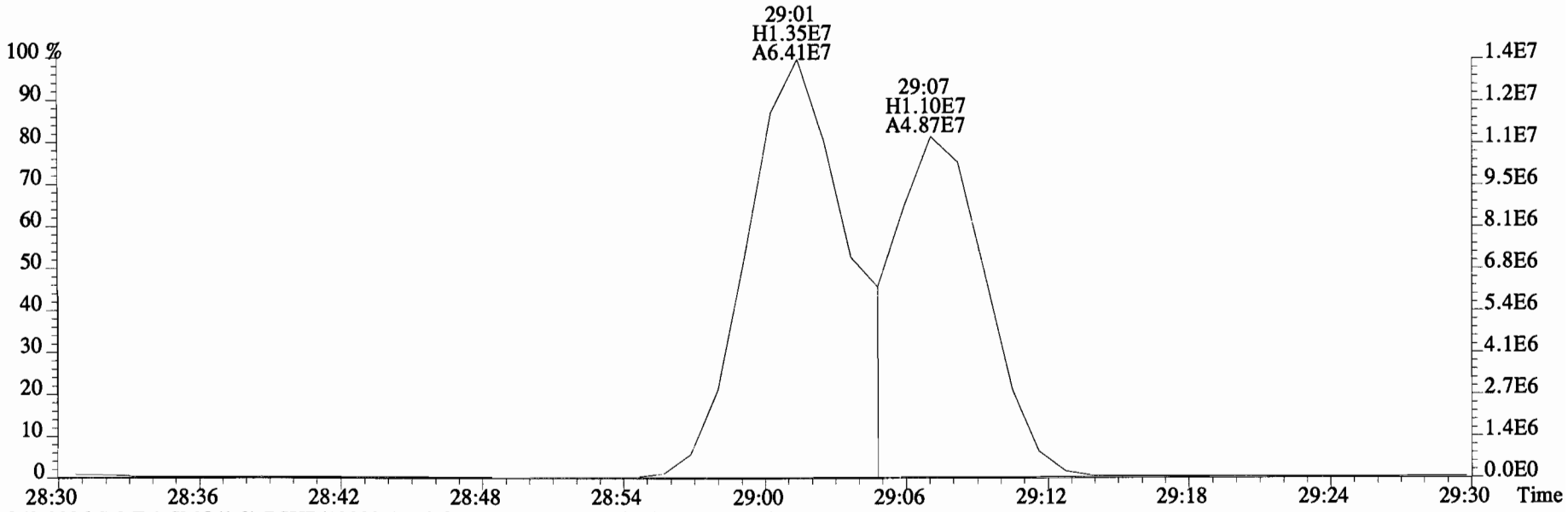
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,10028.0,0.00%,F,F)



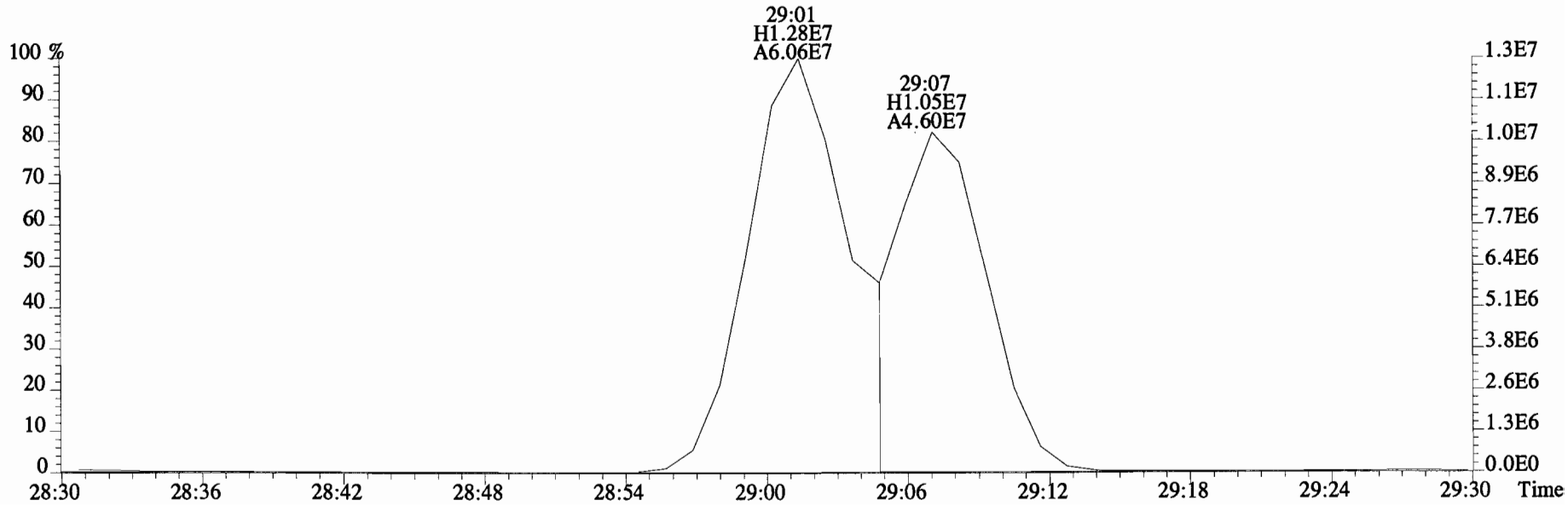
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11456.0,0.00%,F,F)



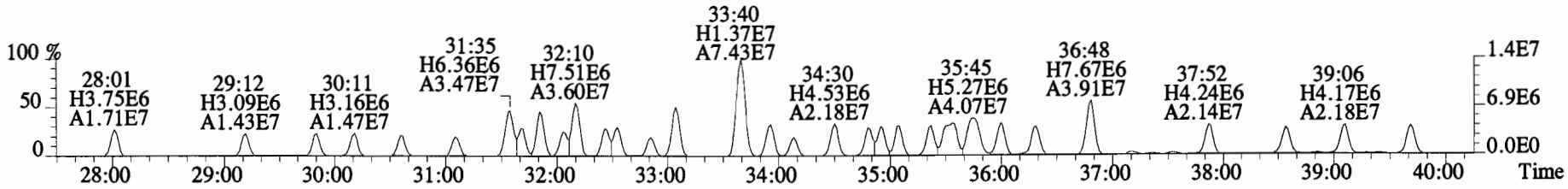
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,39648.0,0.00%,F,F)



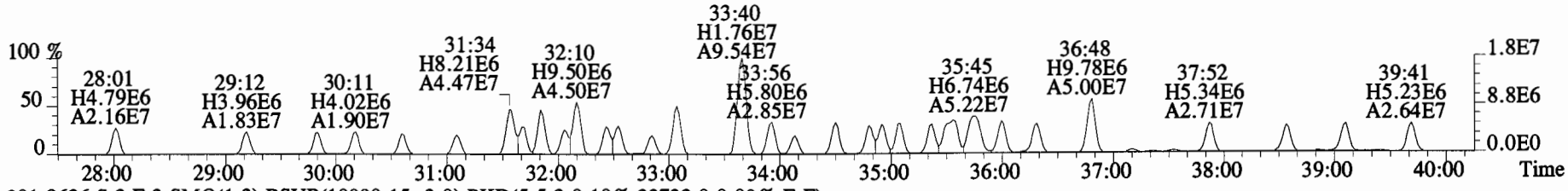
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24160.0,0.00%,F,F)



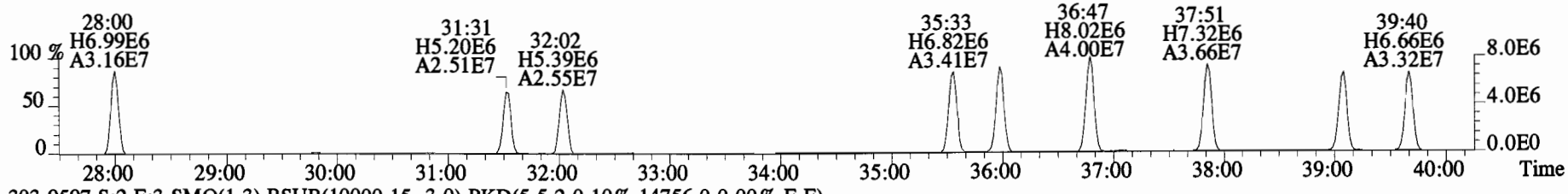
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,9620.0,0.00%,F,F)



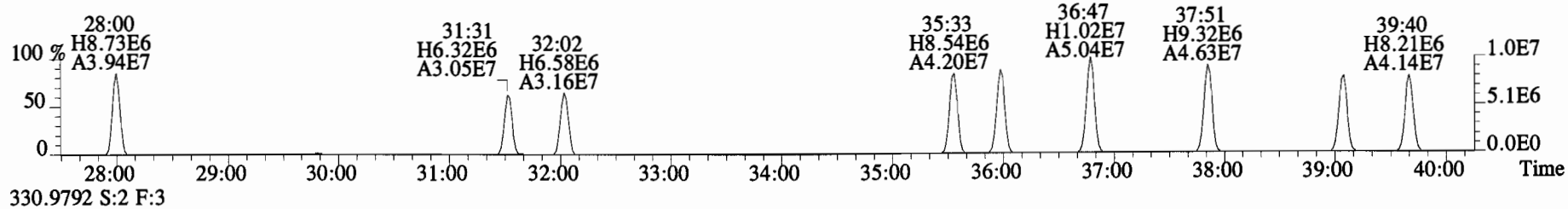
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7048.0,0.00%,F,F)



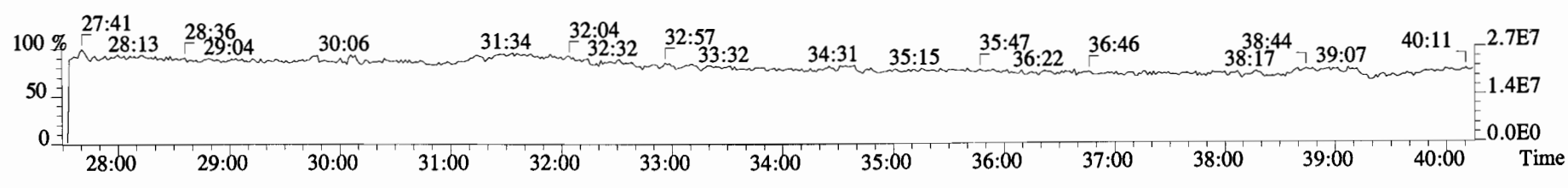
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23732.0,0.00%,F,F)



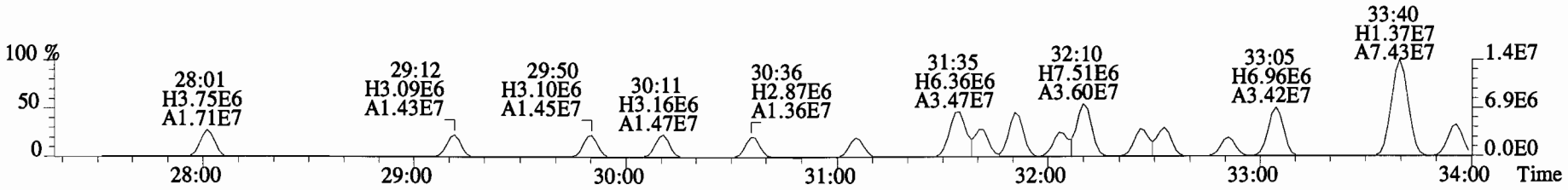
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14756.0,0.00%,F,F)



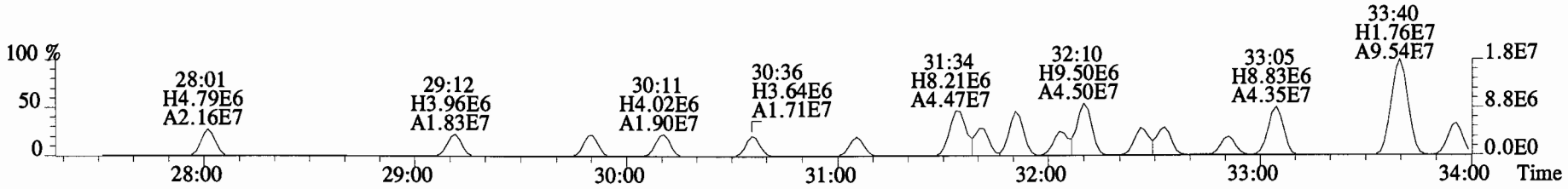
330.9792 S:2 F:3



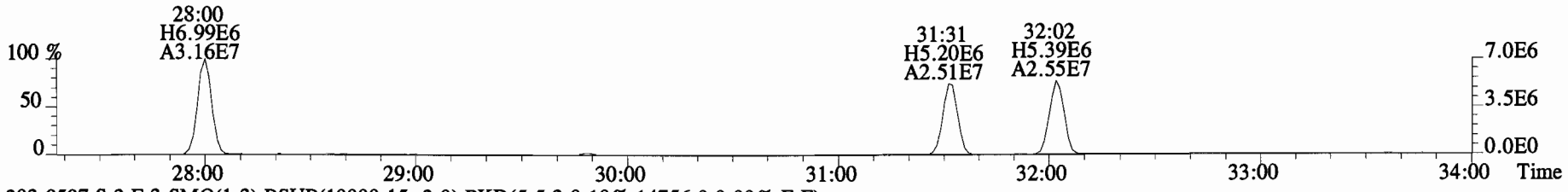
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,9620.0,0.00%,F,F)



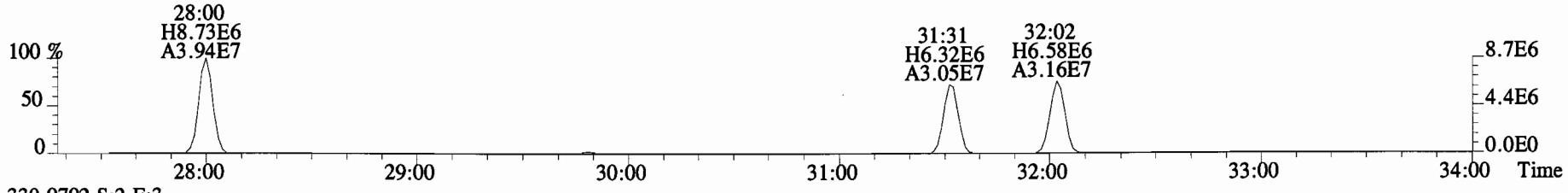
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7048.0,0.00%,F,F)



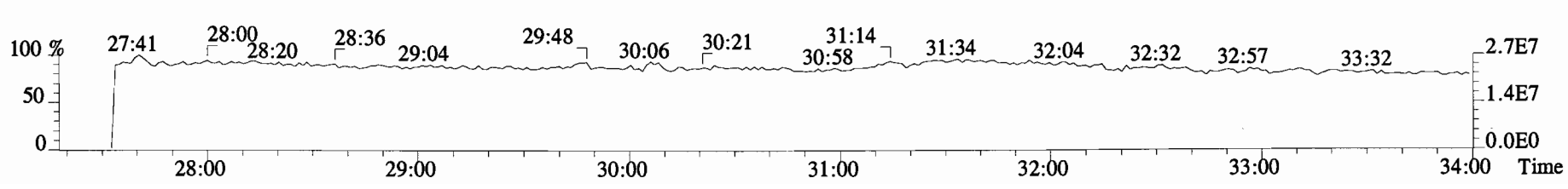
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23732.0,0.00%,F,F)



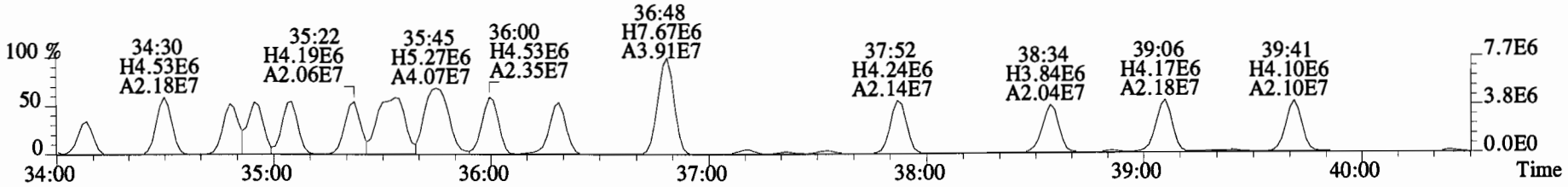
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14756.0,0.00%,F,F)



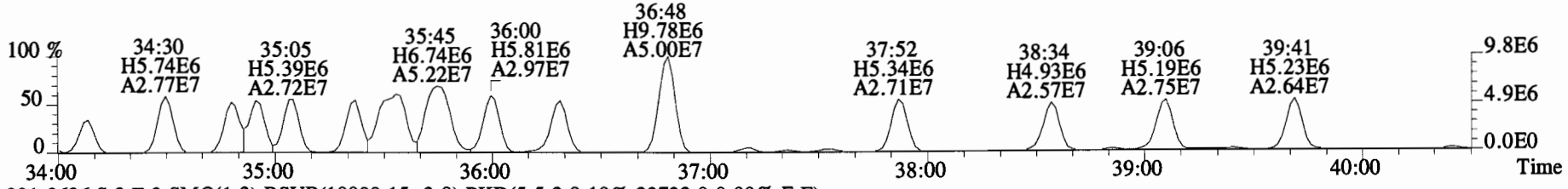
330.9792 S:2 F:3



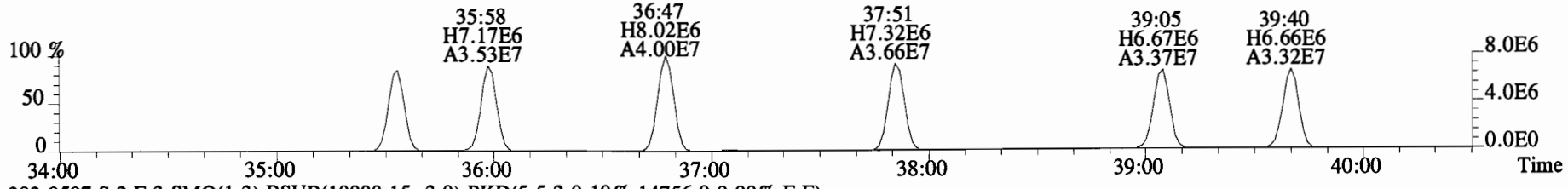
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,9620.0,0.00%,F,F)



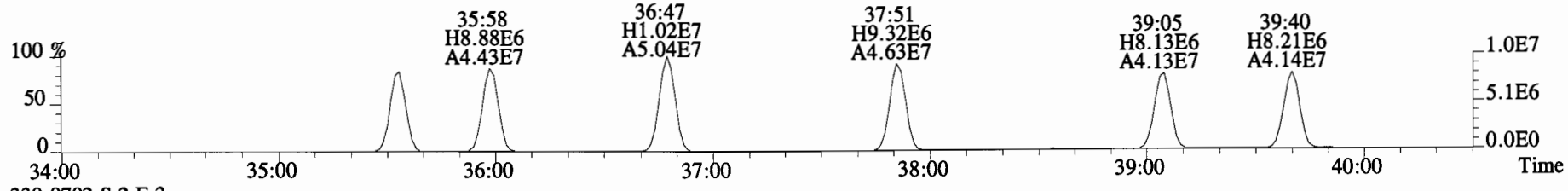
291.9194 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7048.0,0.00%,F,F)



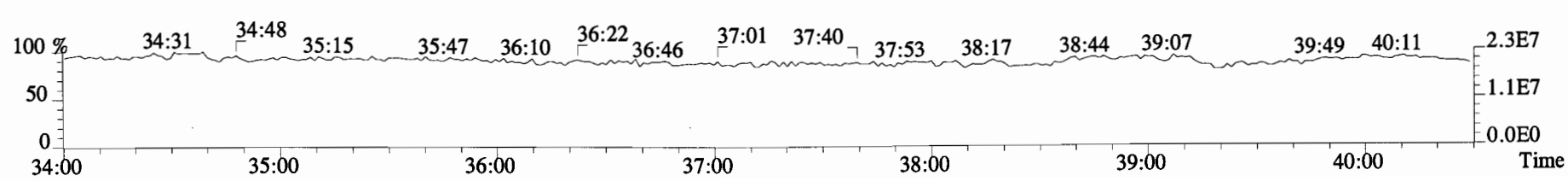
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23732.0,0.00%,F,F)



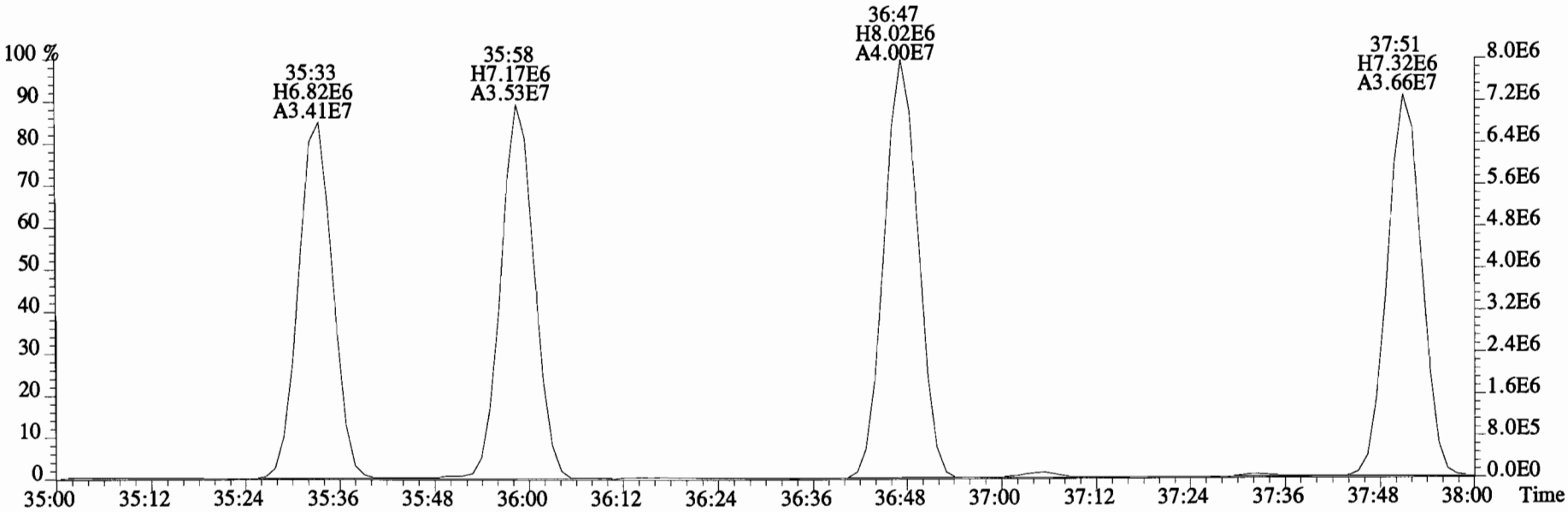
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14756.0,0.00%,F,F)



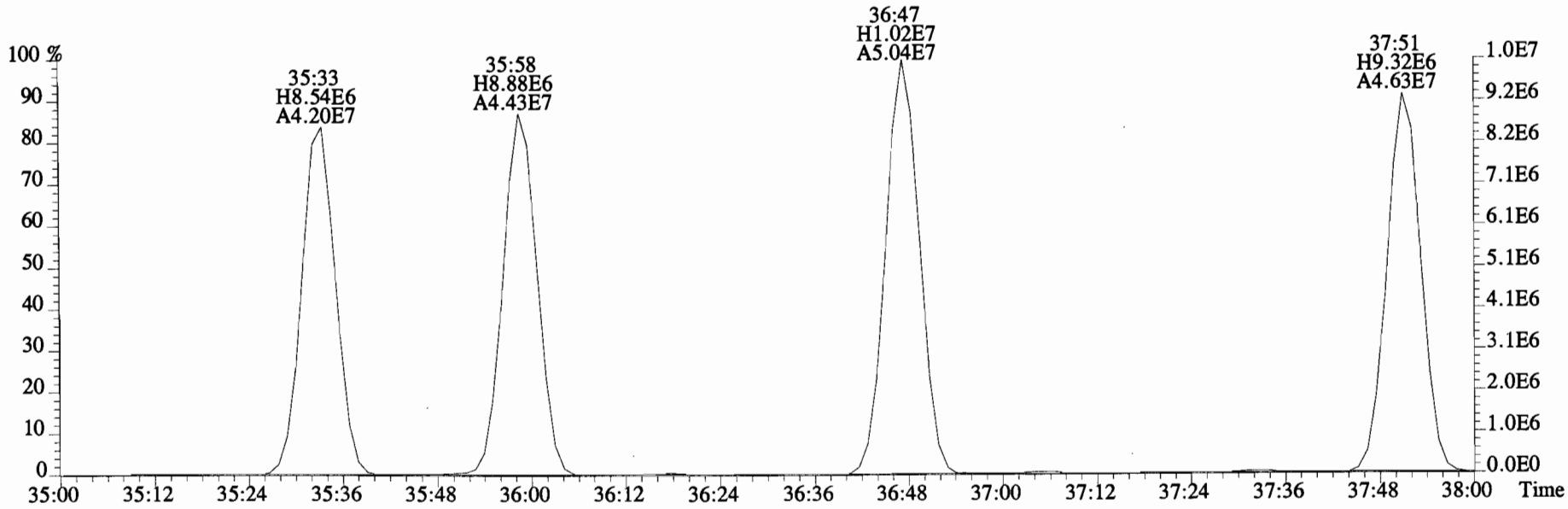
330.9792 S:2 F:3



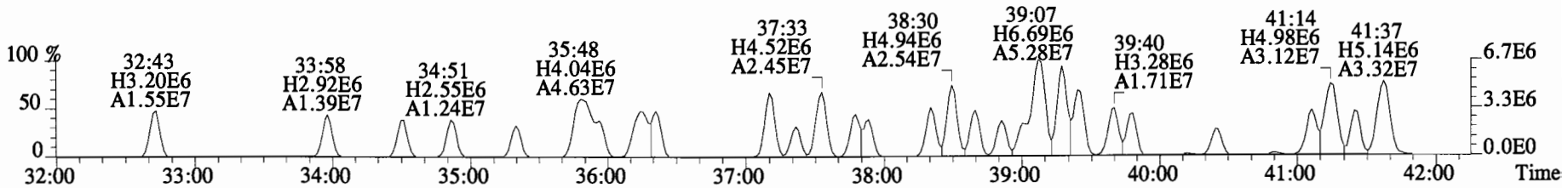
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23732.0,0.00%,F,F)



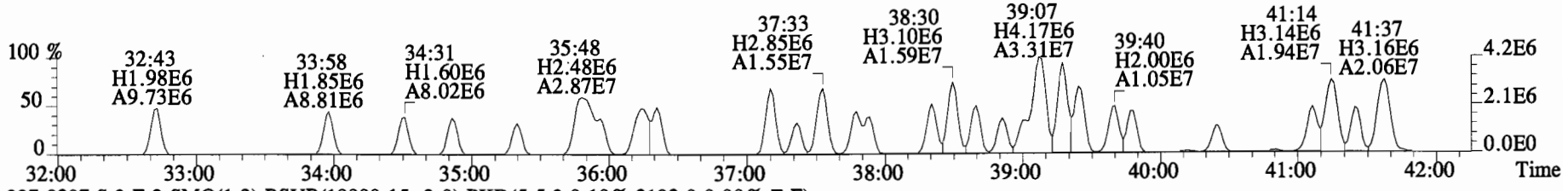
303.9597 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14756.0,0.00%,F,F)



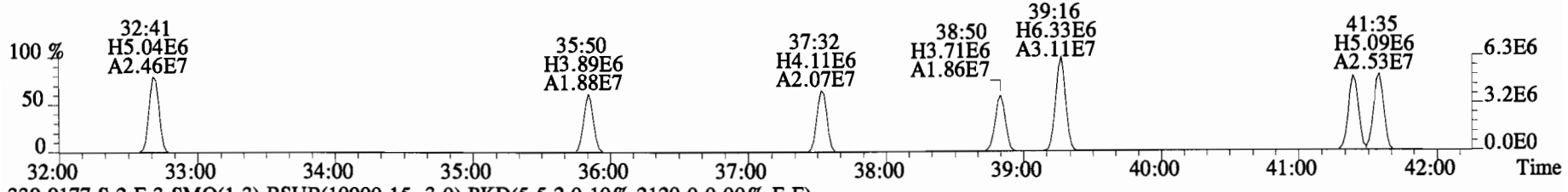
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



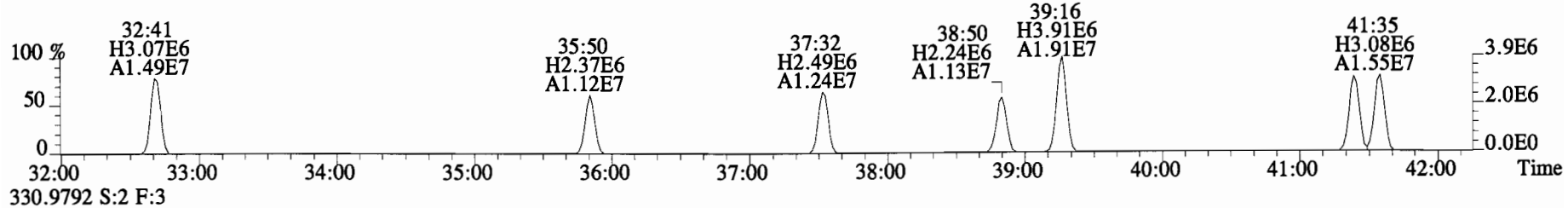
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1784.0,0.00%,F,F)



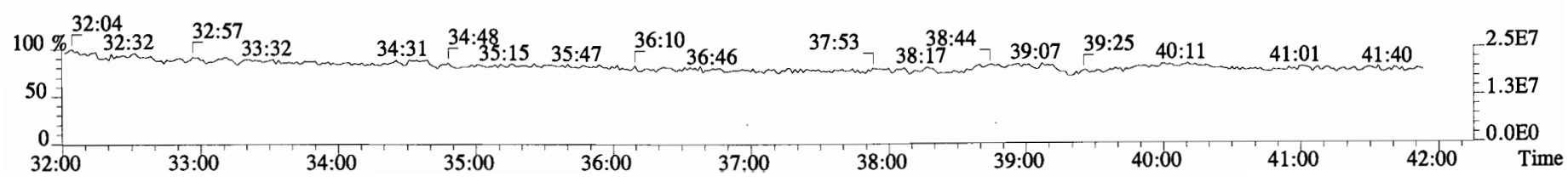
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2192.0,0.00%,F,F)



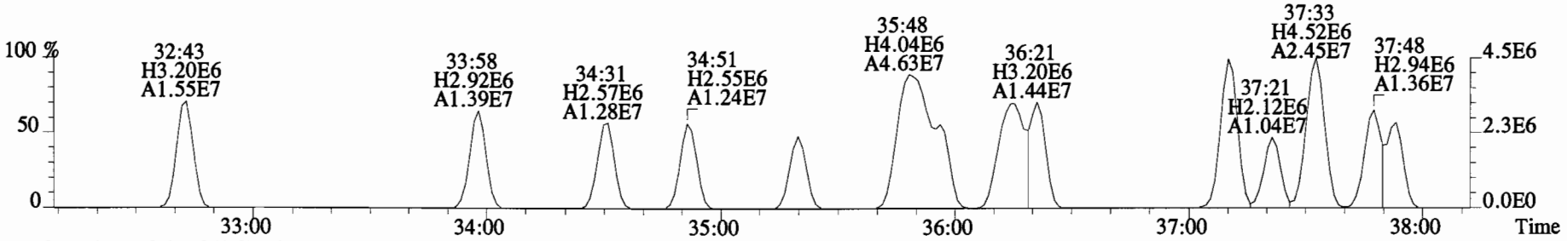
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2120.0,0.00%,F,F)



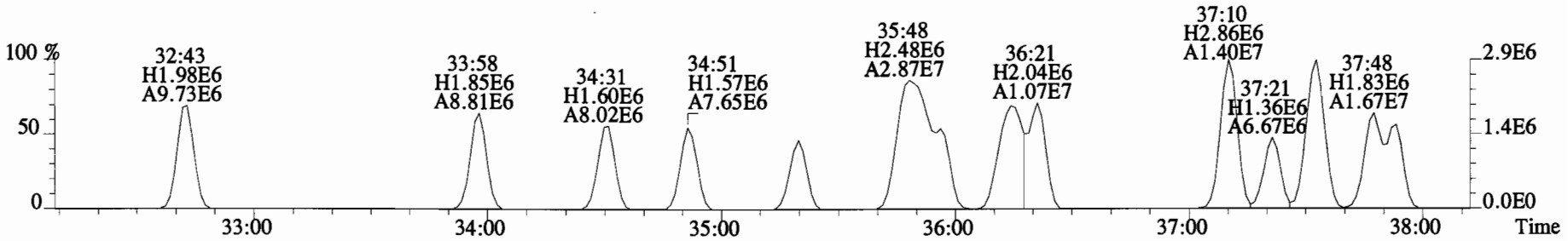
330.9792 S:2 F:3



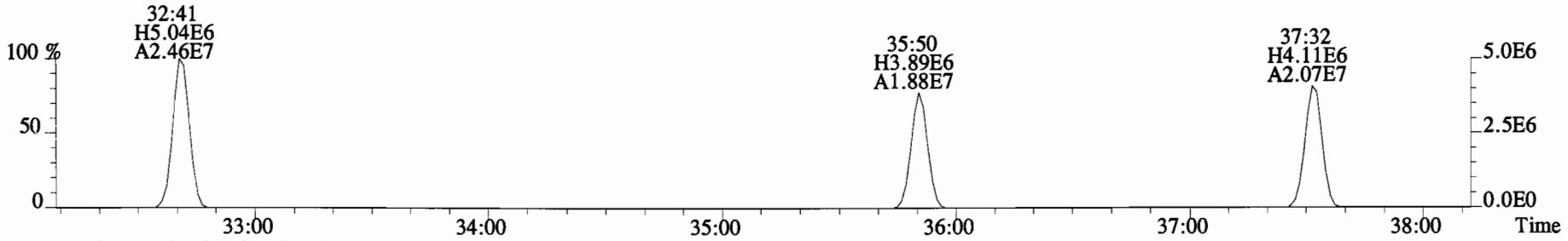
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



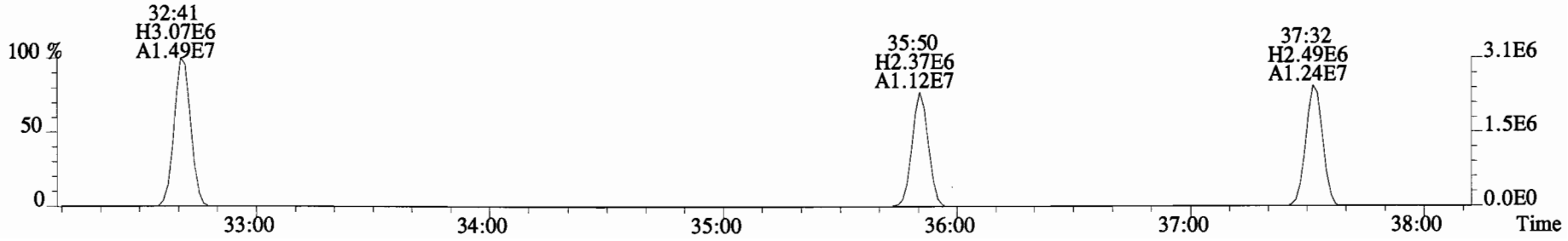
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1784.0,0.00%,F,F)



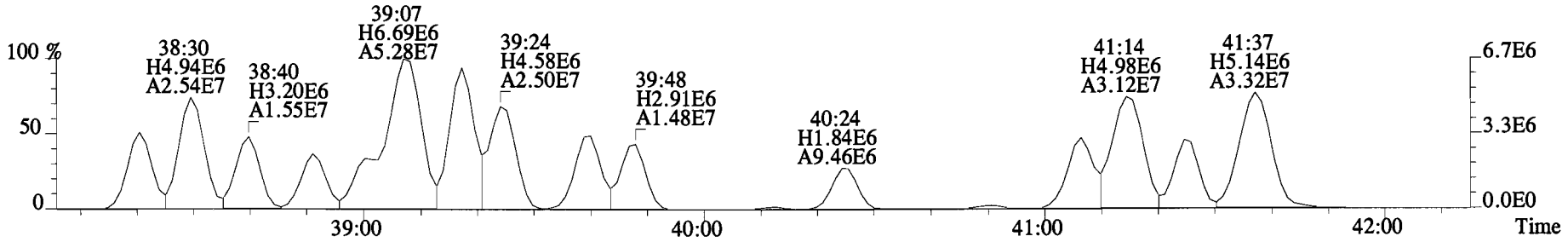
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2192.0,0.00%,F,F)



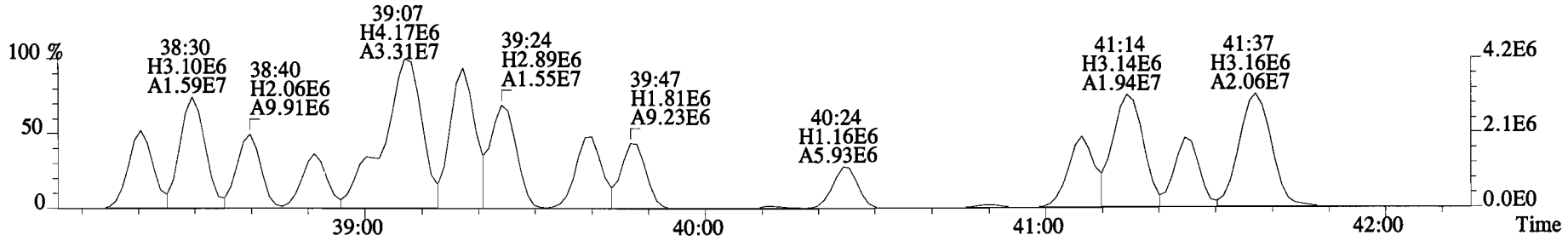
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2120.0,0.00%,F,F)



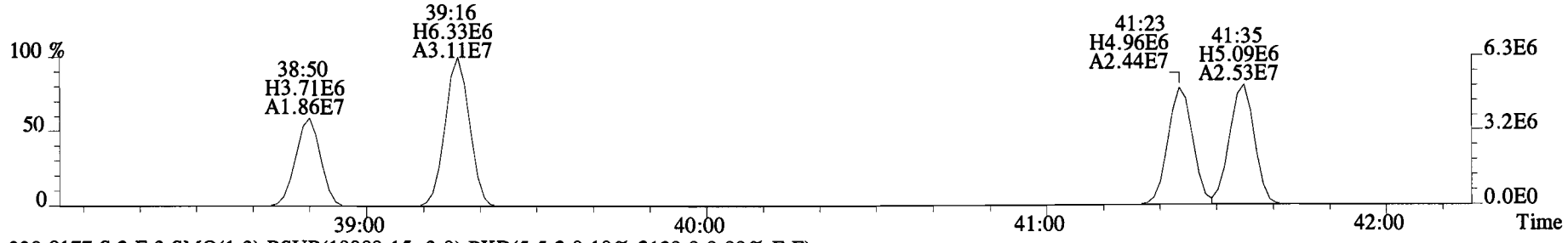
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



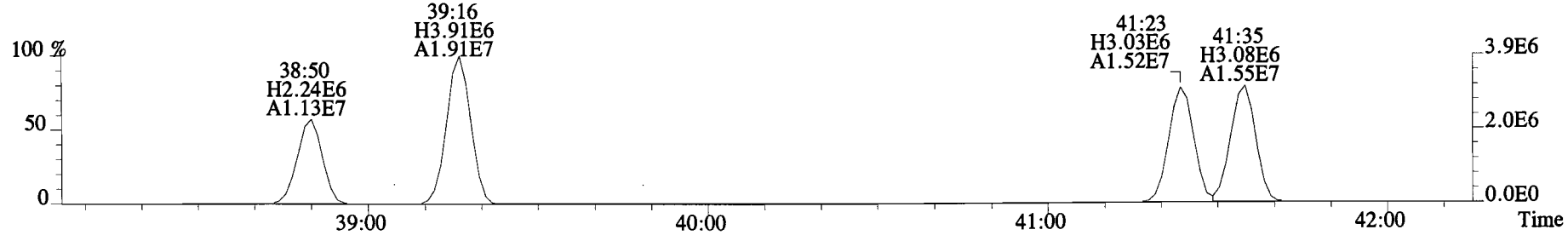
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1784.0,0.00%,F,F)



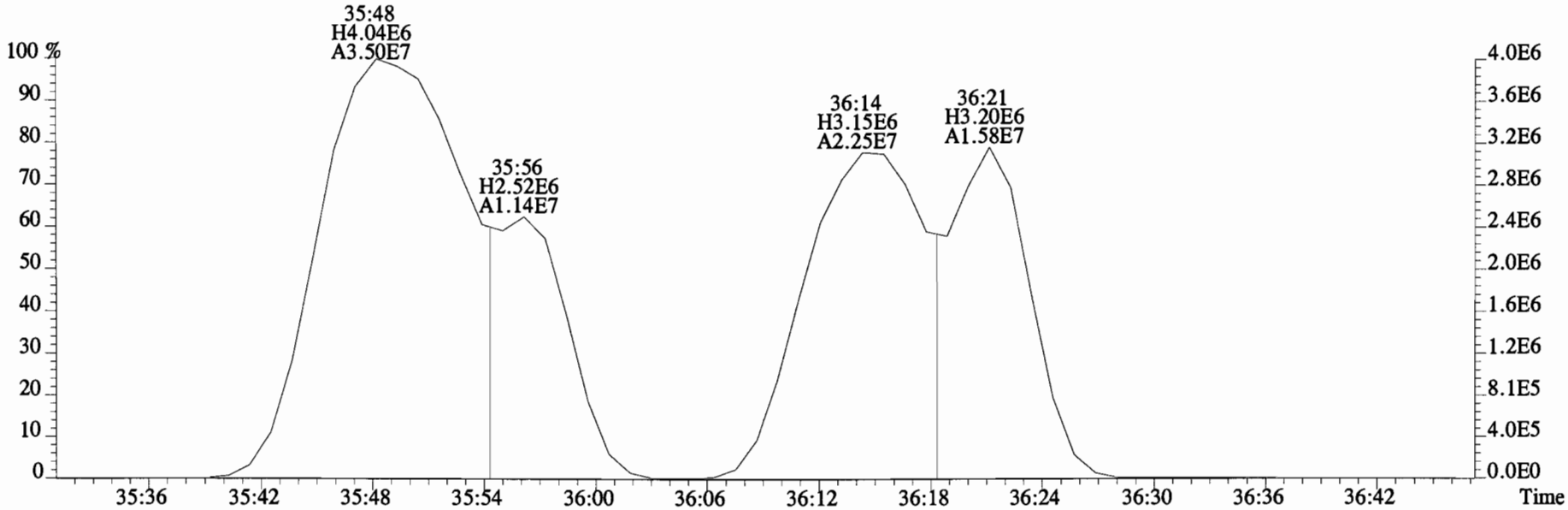
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2192.0,0.00%,F,F)



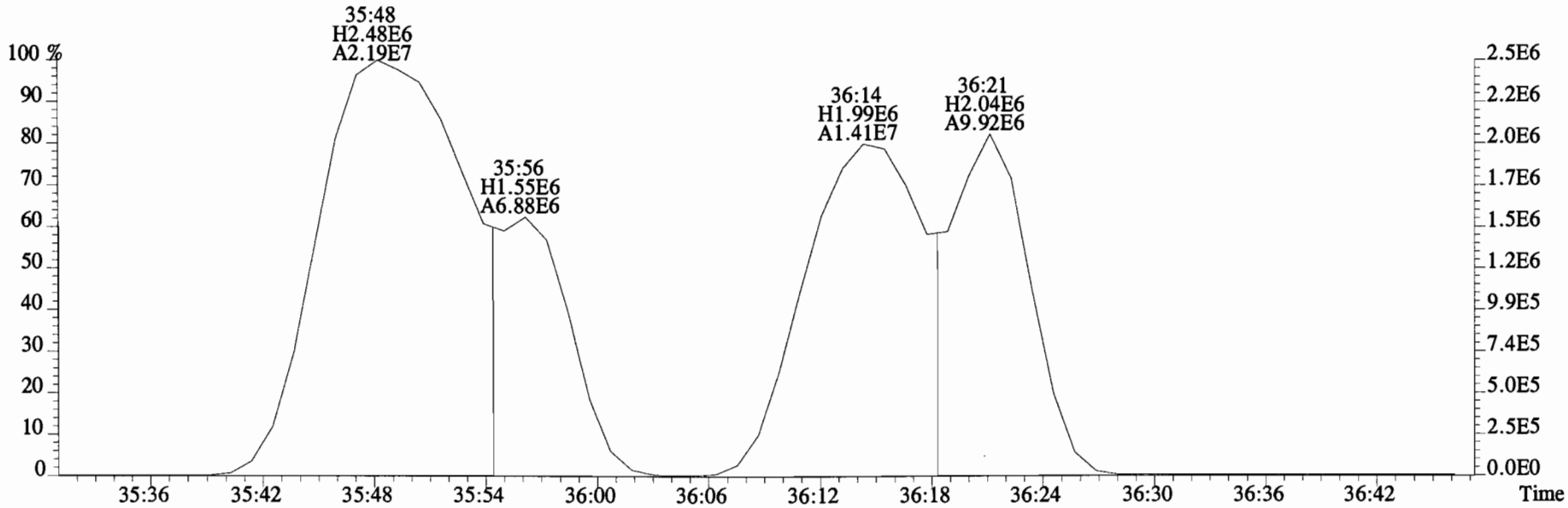
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2120.0,0.00%,F,F)



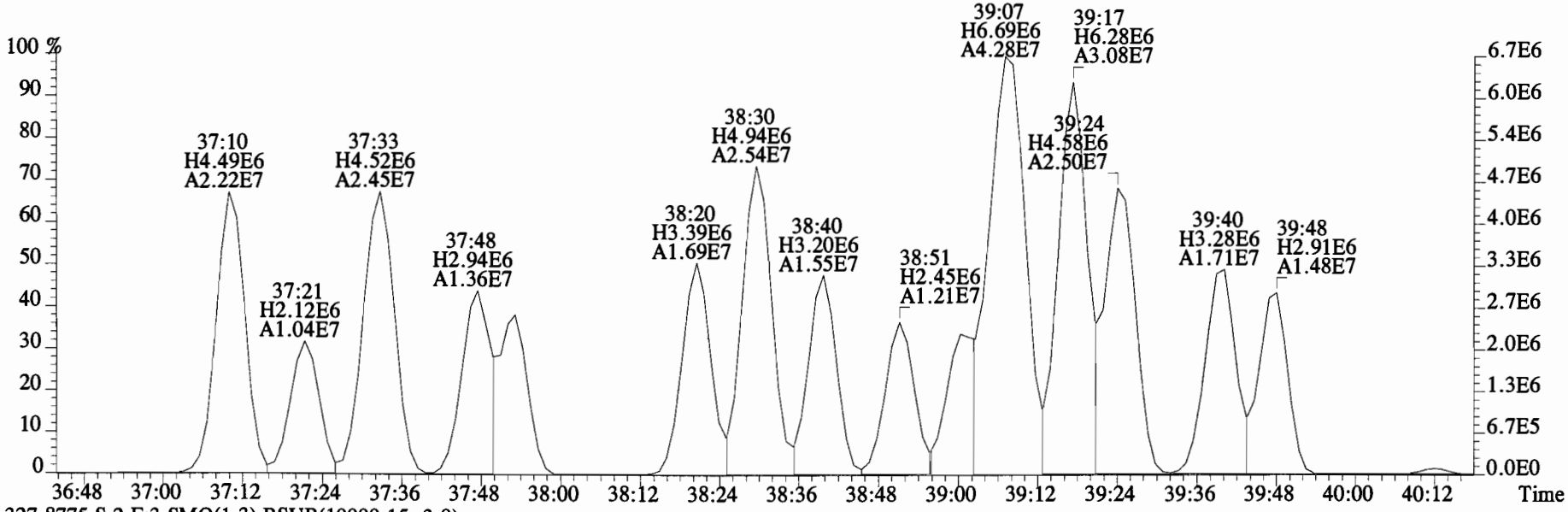
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



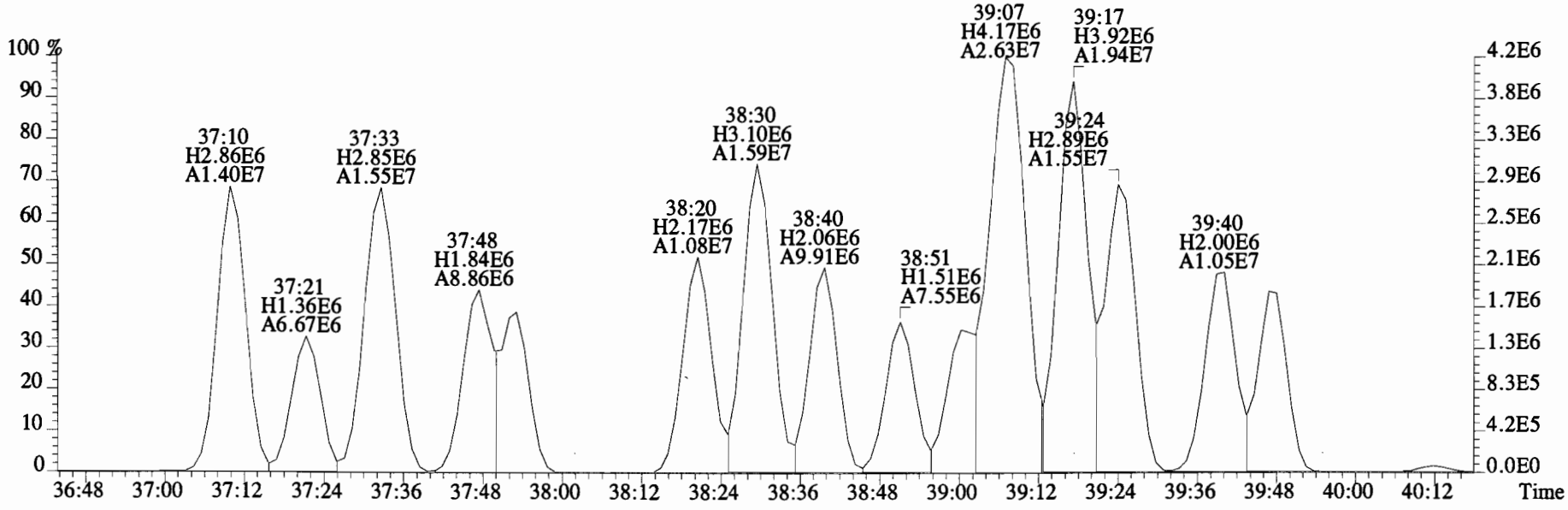
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



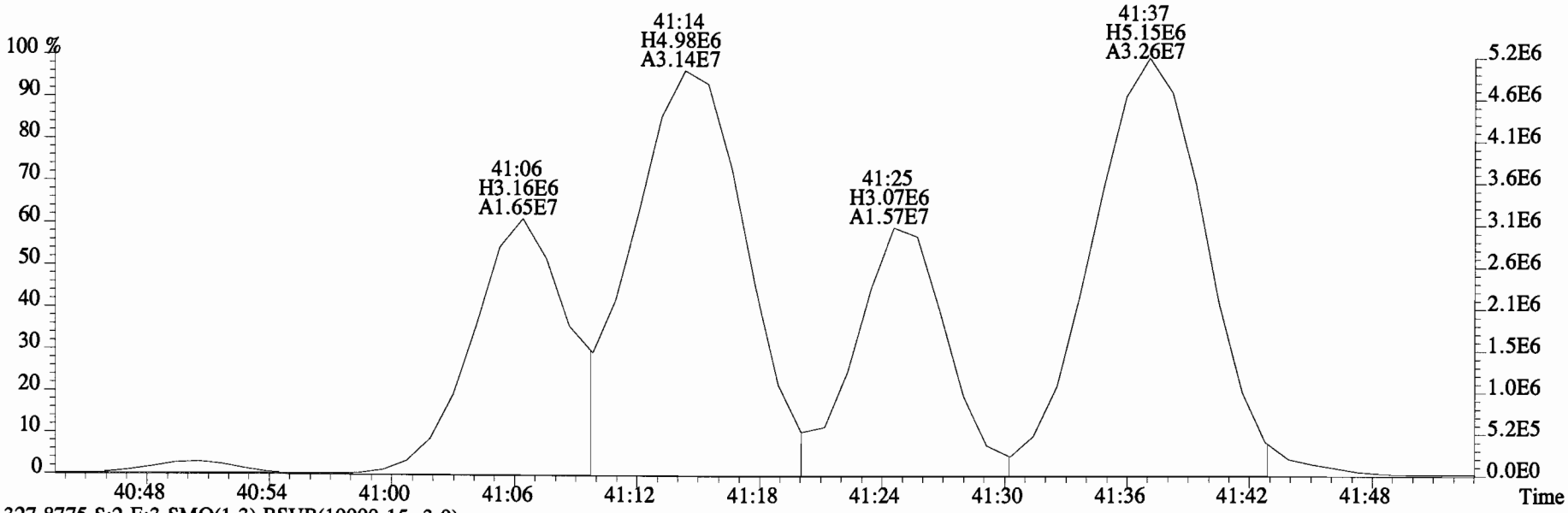
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



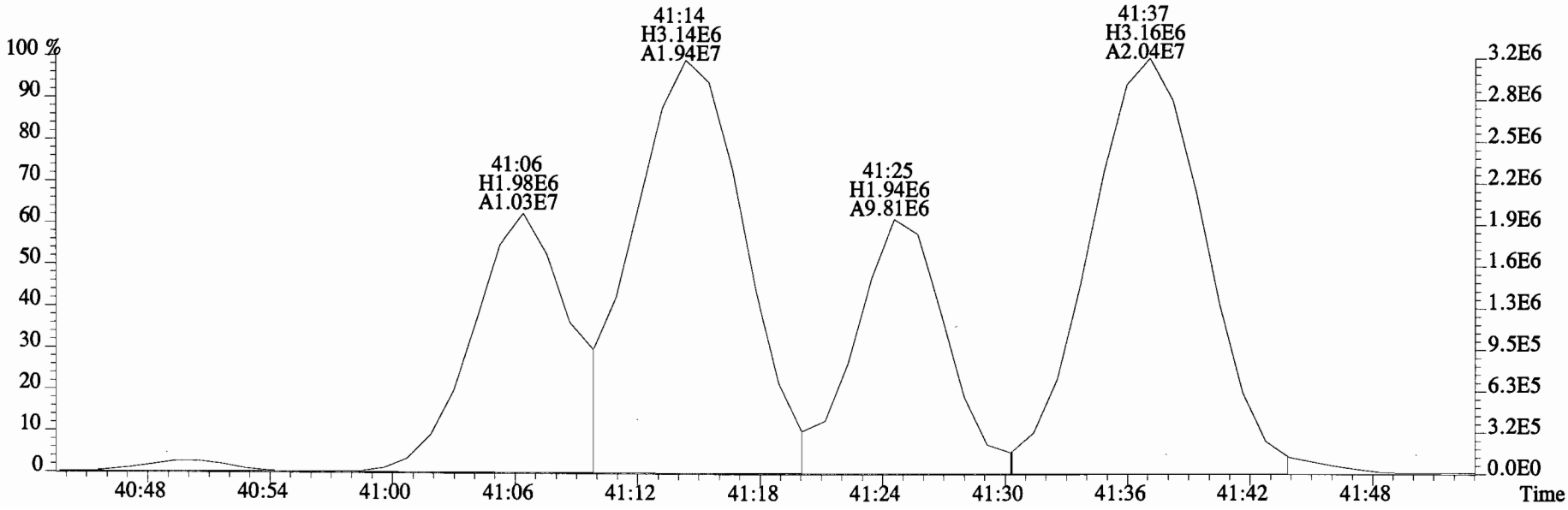
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



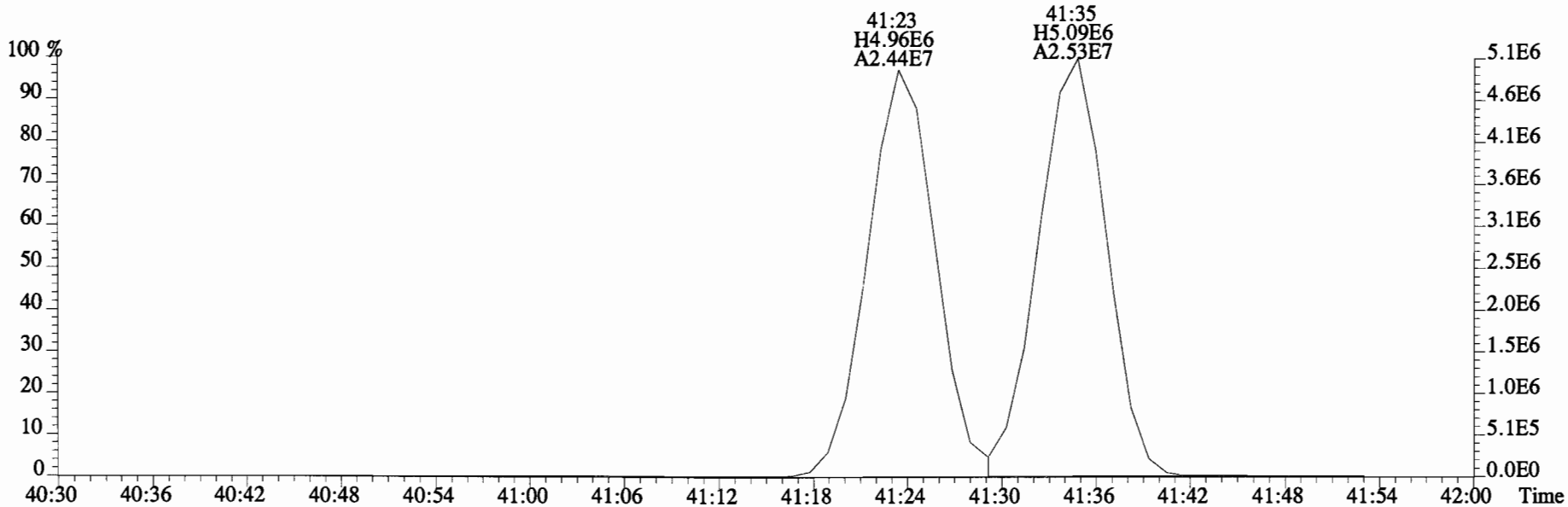
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



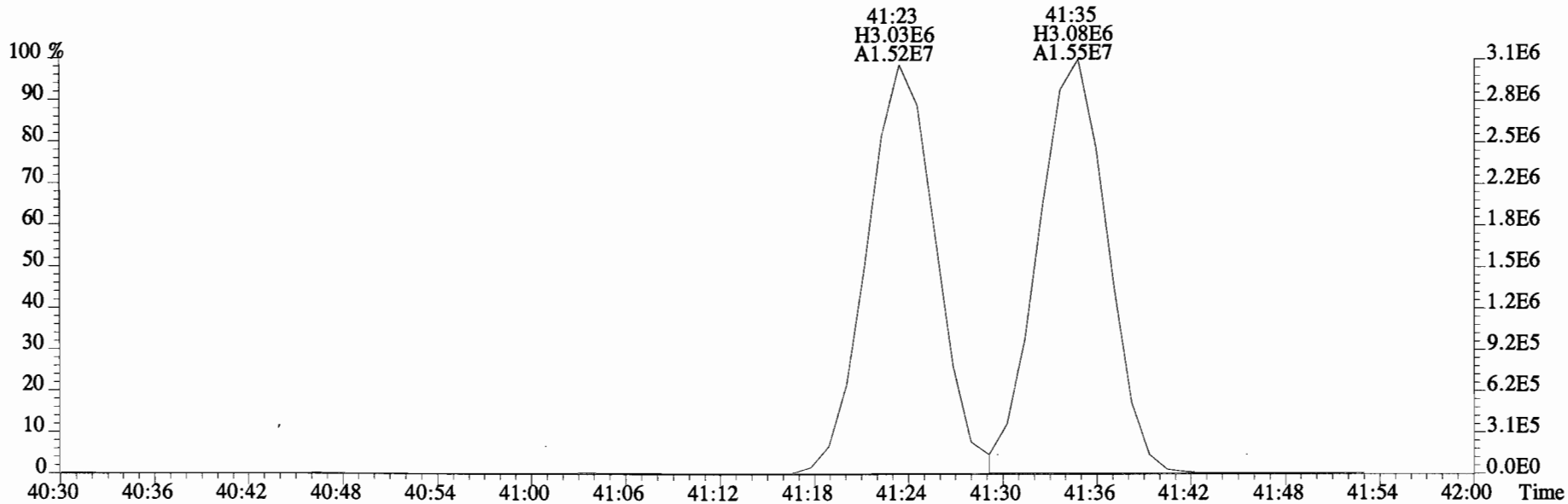
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0)



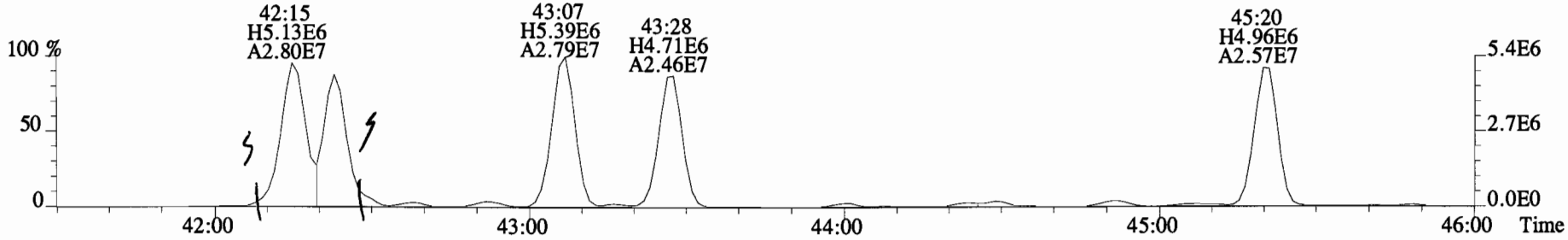
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2192.0,0.00%,F,F)



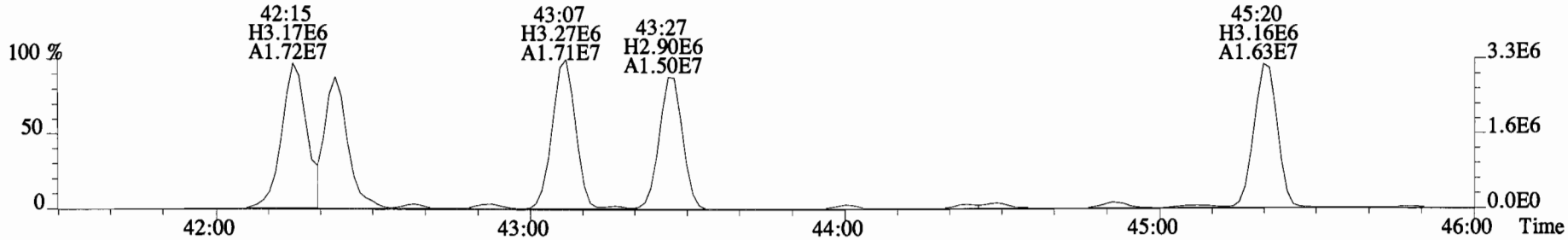
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2120.0,0.00%,F,F)



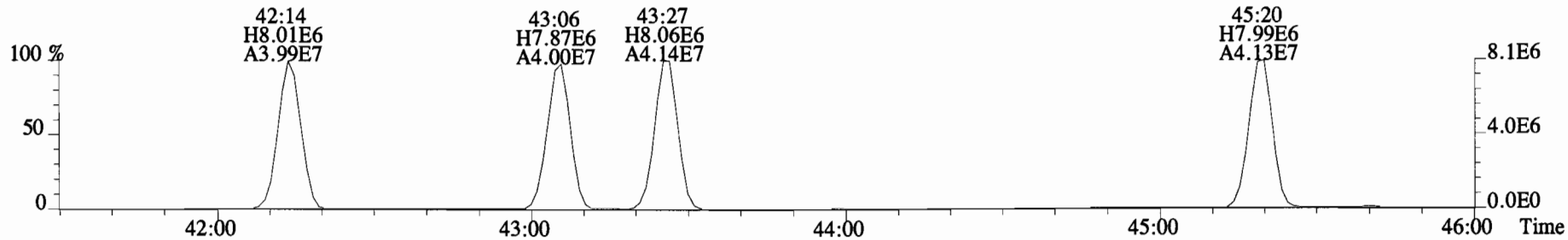
File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5240.0,0.00%,F,F)



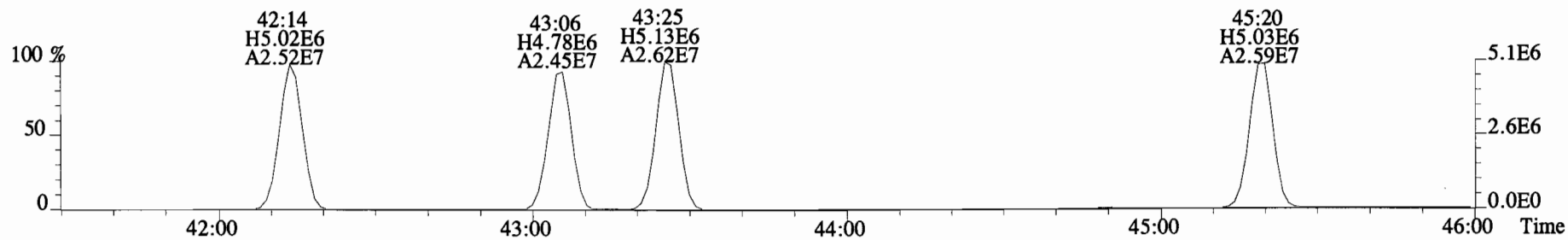
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5620.0,0.00%,F,F)



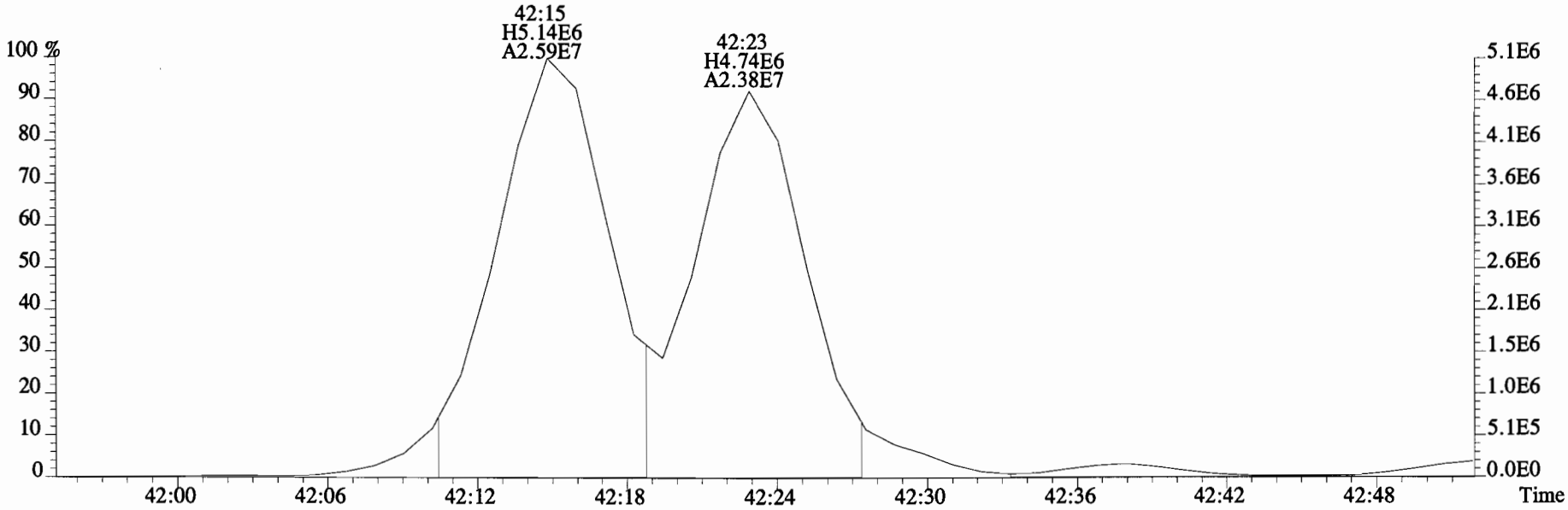
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4876.0,0.00%,F,F)



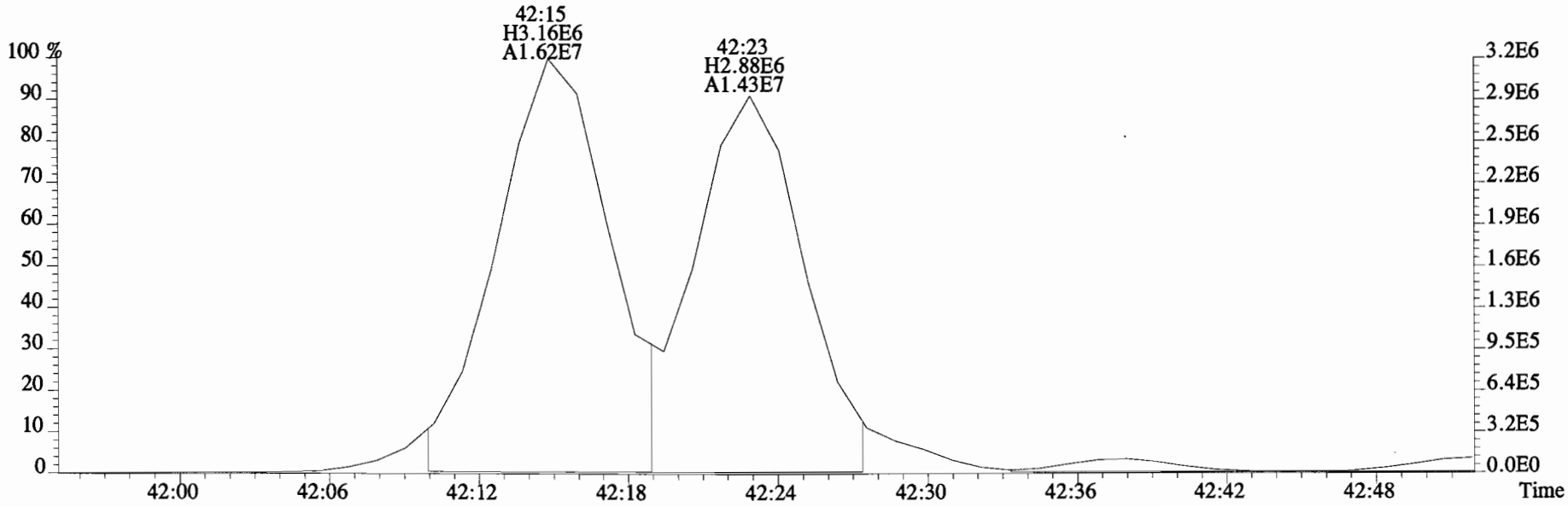
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3608.0,0.00%,F,F)



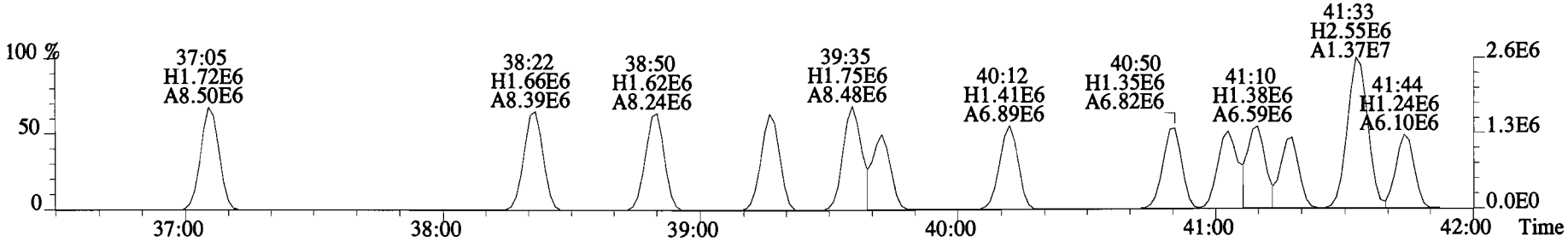
File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5240.0,0.00%,F,F)



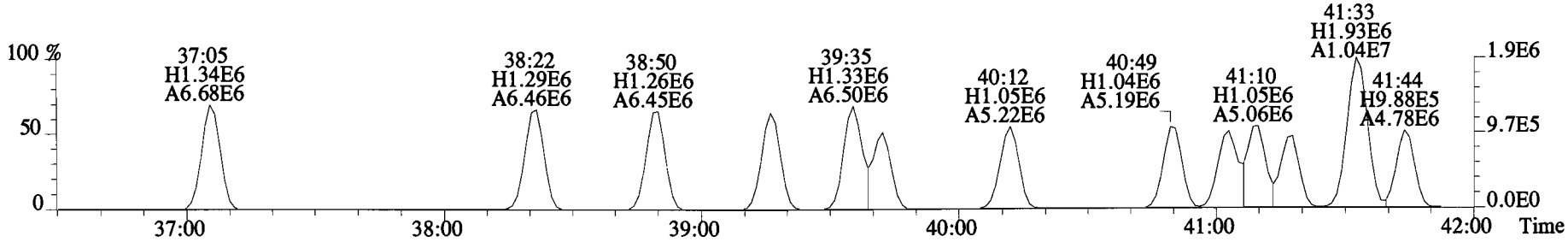
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5620.0,0.00%,F,F)



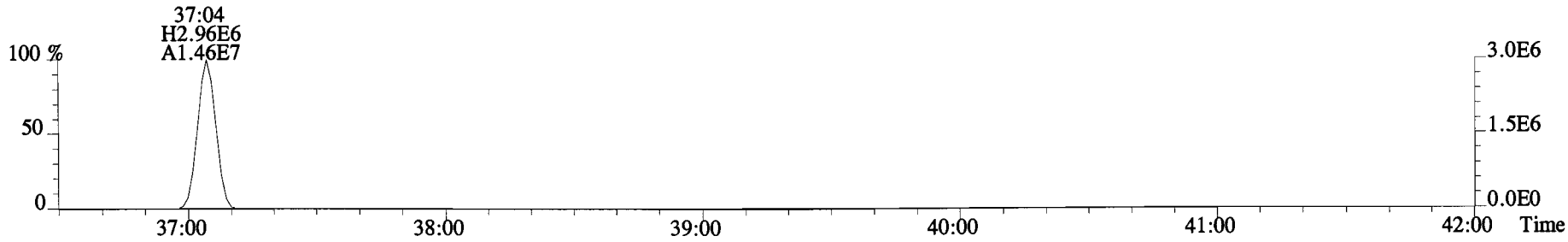
File:150319E2 #1-758 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1404.0,0.00%,F,F)



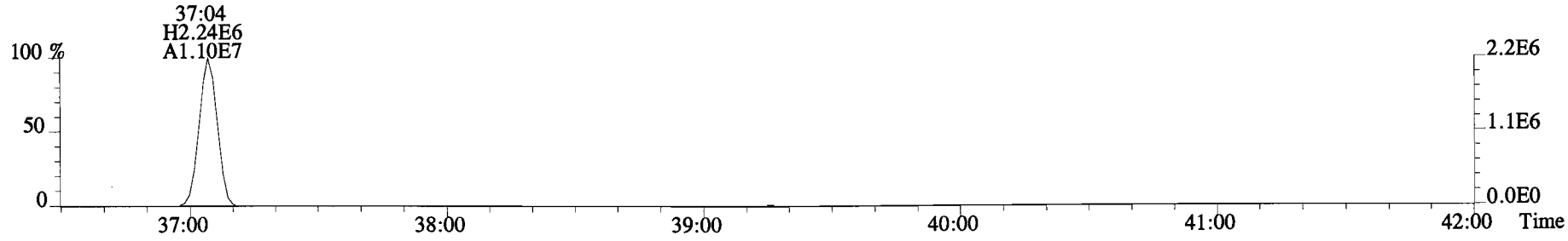
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1284.0,0.00%,F,F)



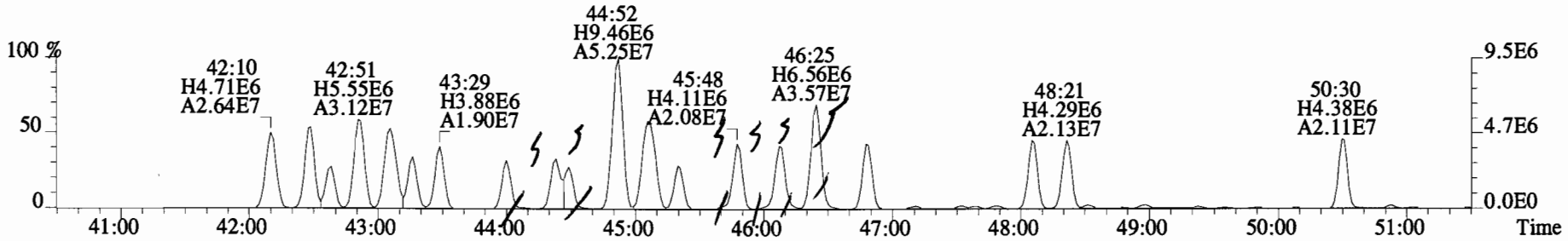
371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1740.0,0.00%,F,F)



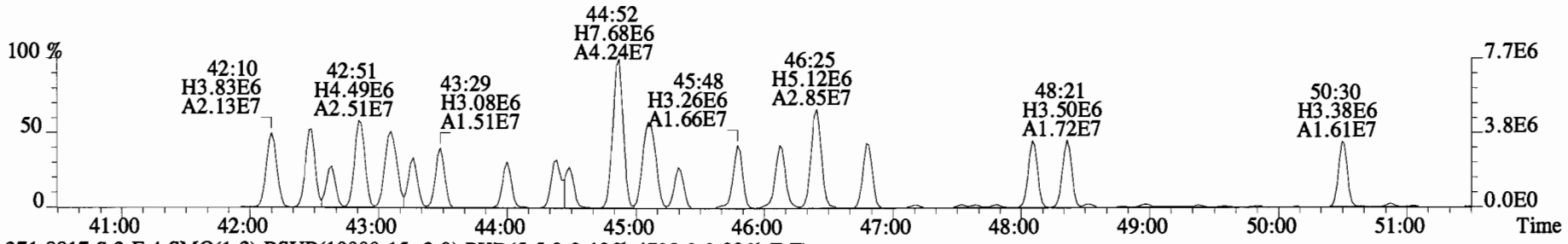
373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1728.0,0.00%,F,F)



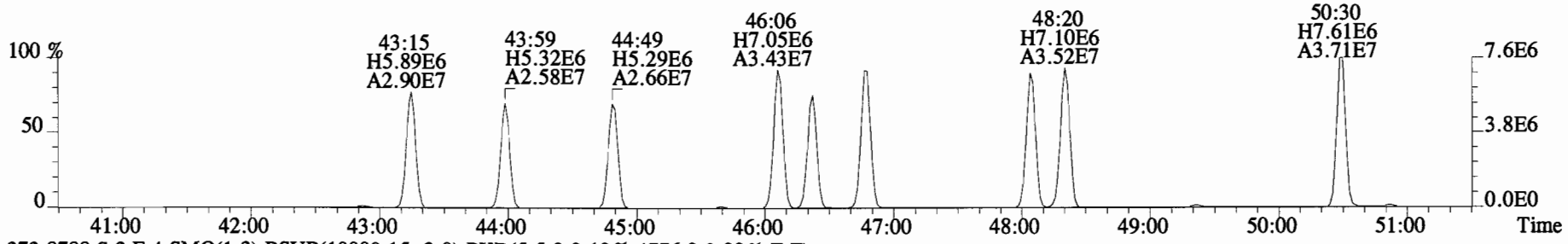
File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8640.0,0.00%,F,F)



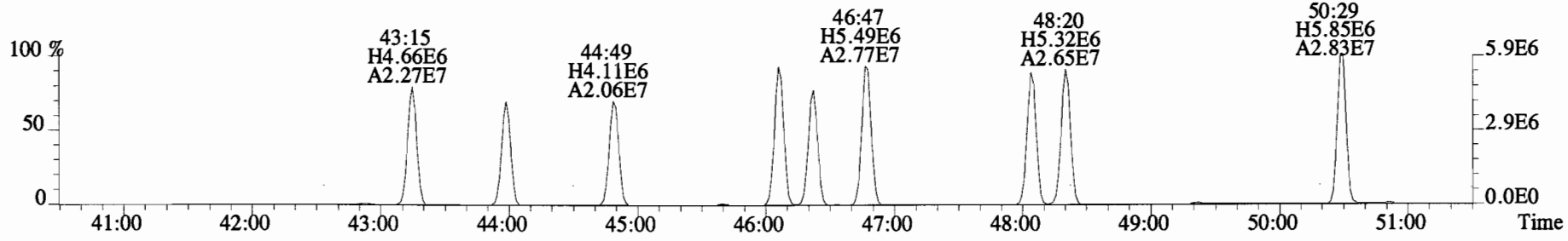
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)



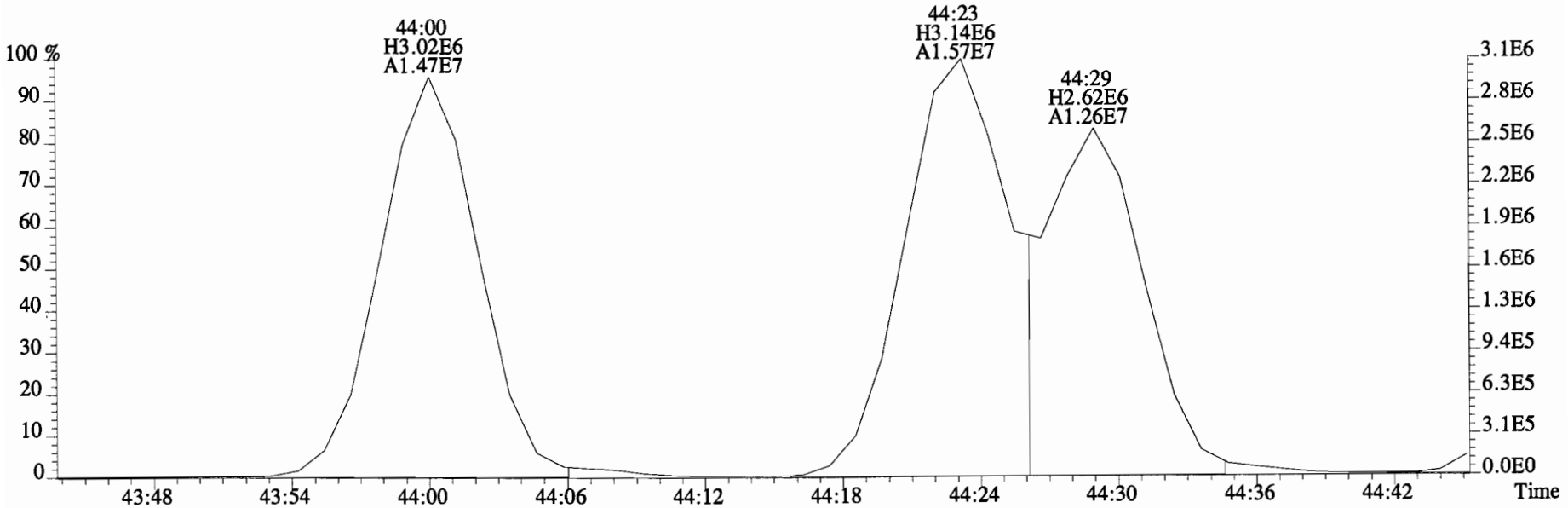
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4708.0,0.00%,F,F)



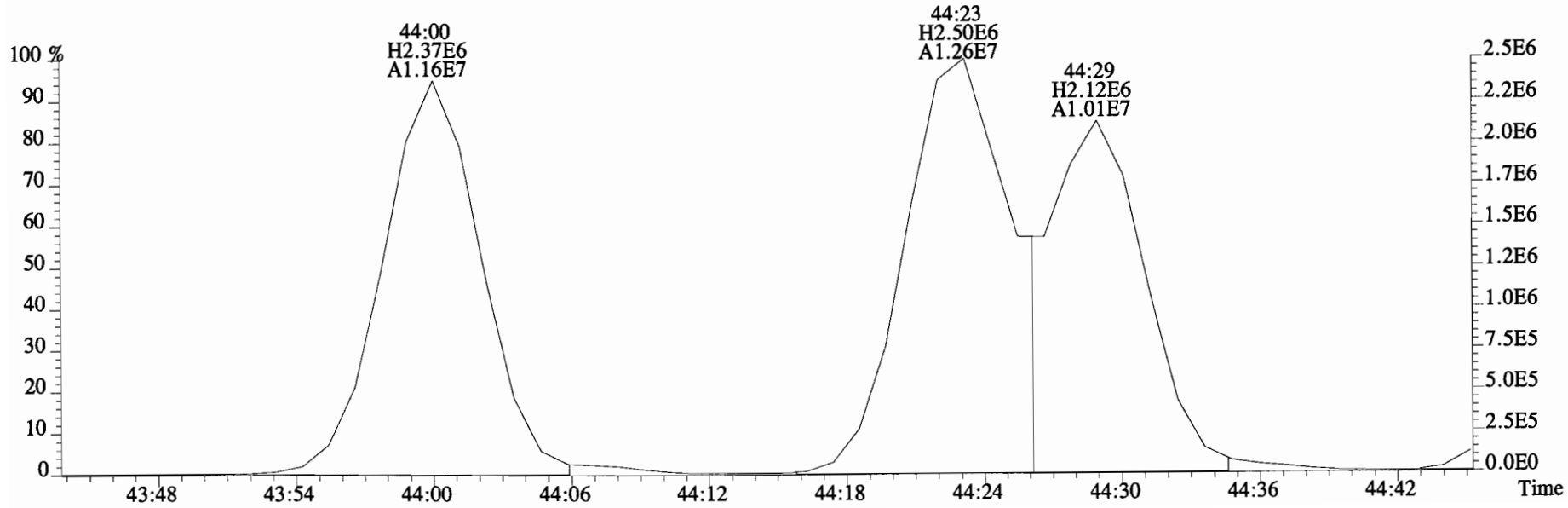
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4776.0,0.00%,F,F)



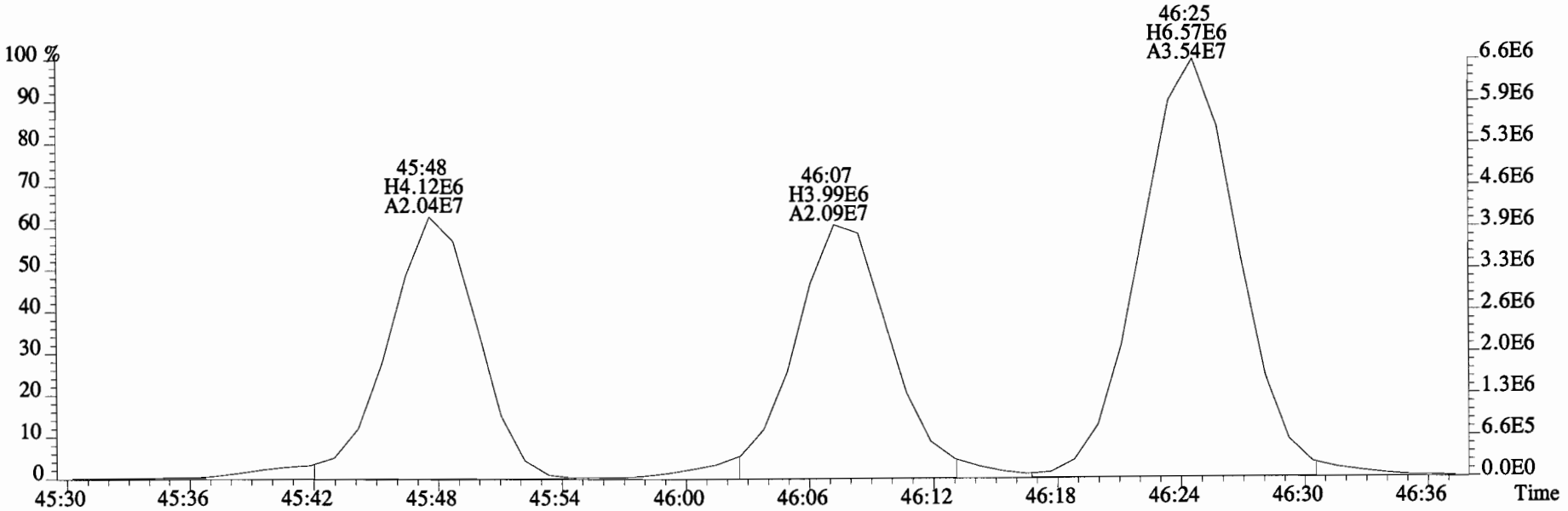
File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8640.0,0.00%,F,F)



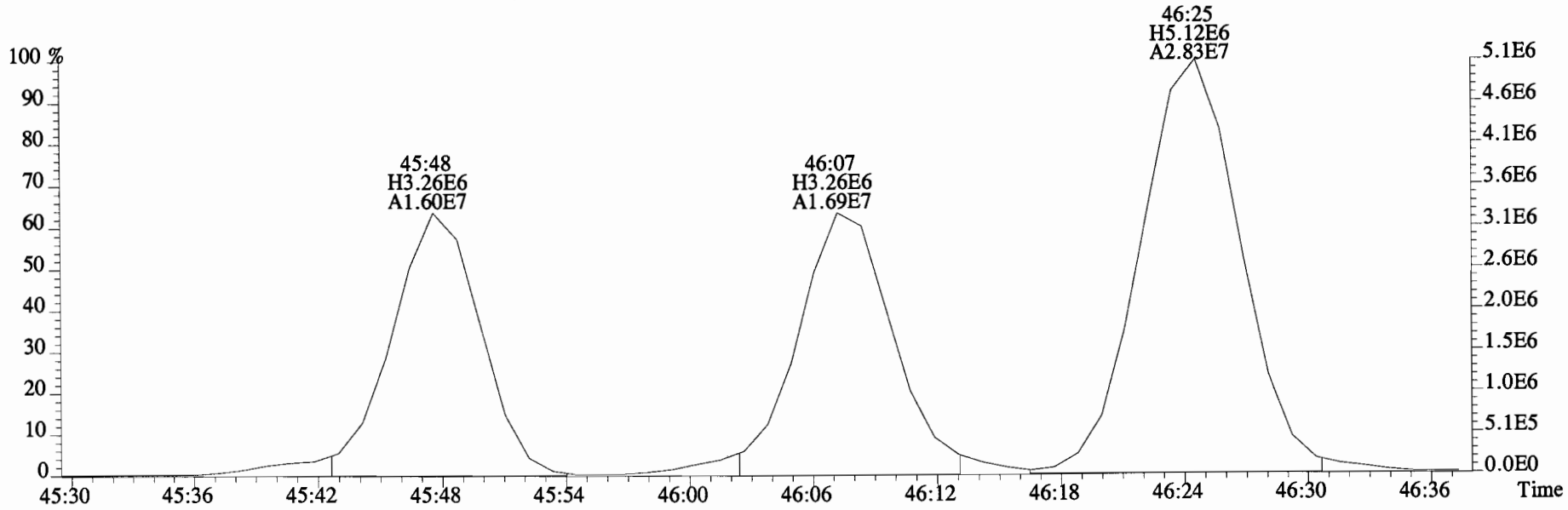
361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)

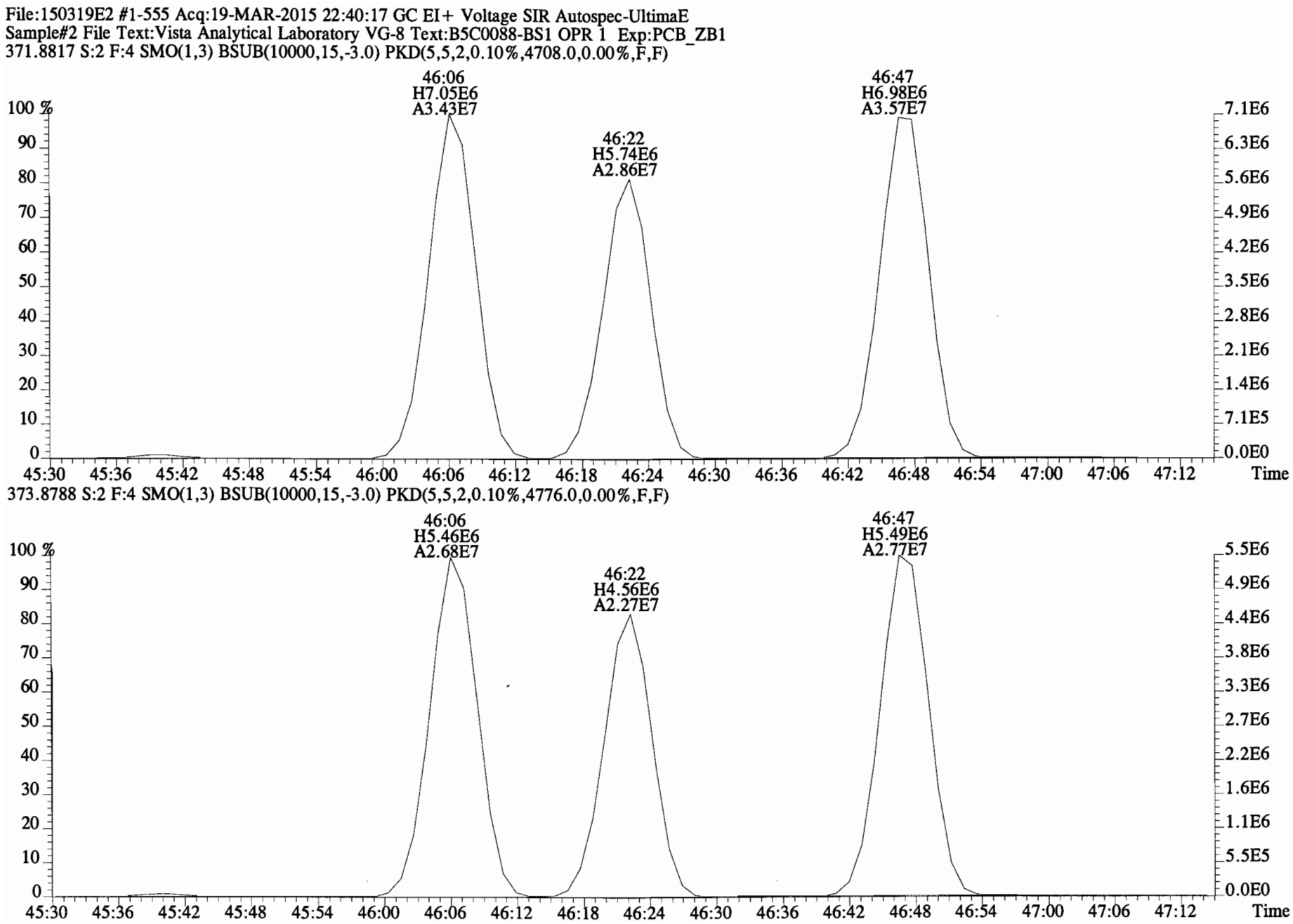


File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,8640.0,0.00%,F,F)

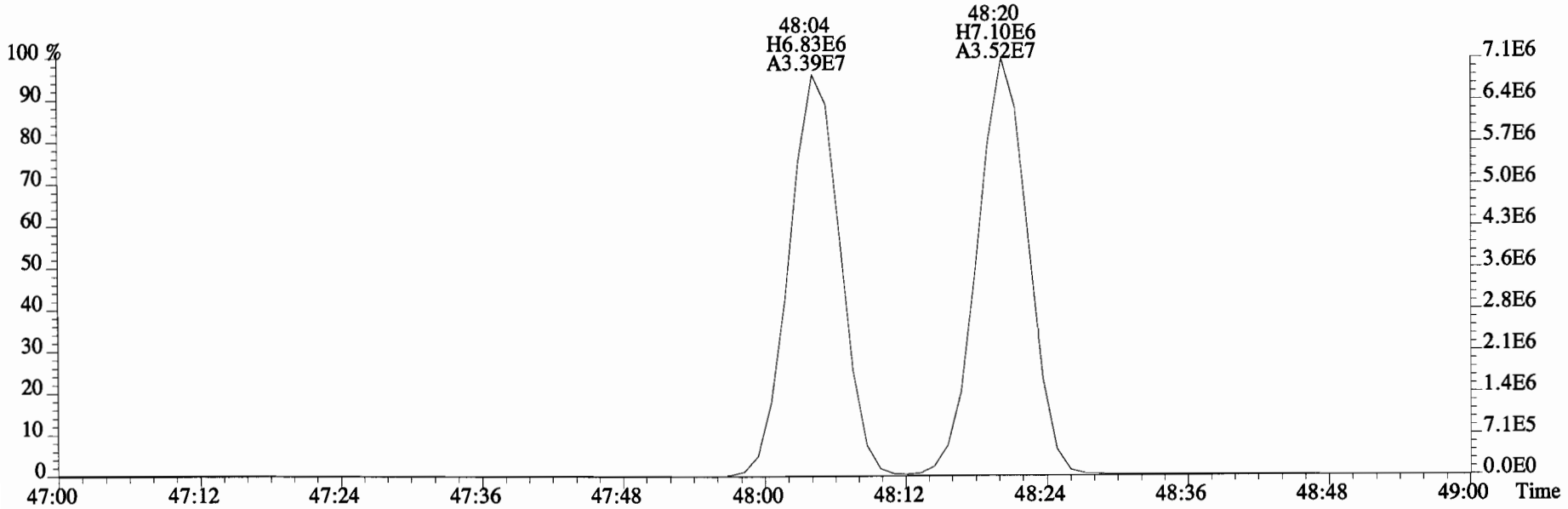


361.8385 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7784.0,0.00%,F,F)

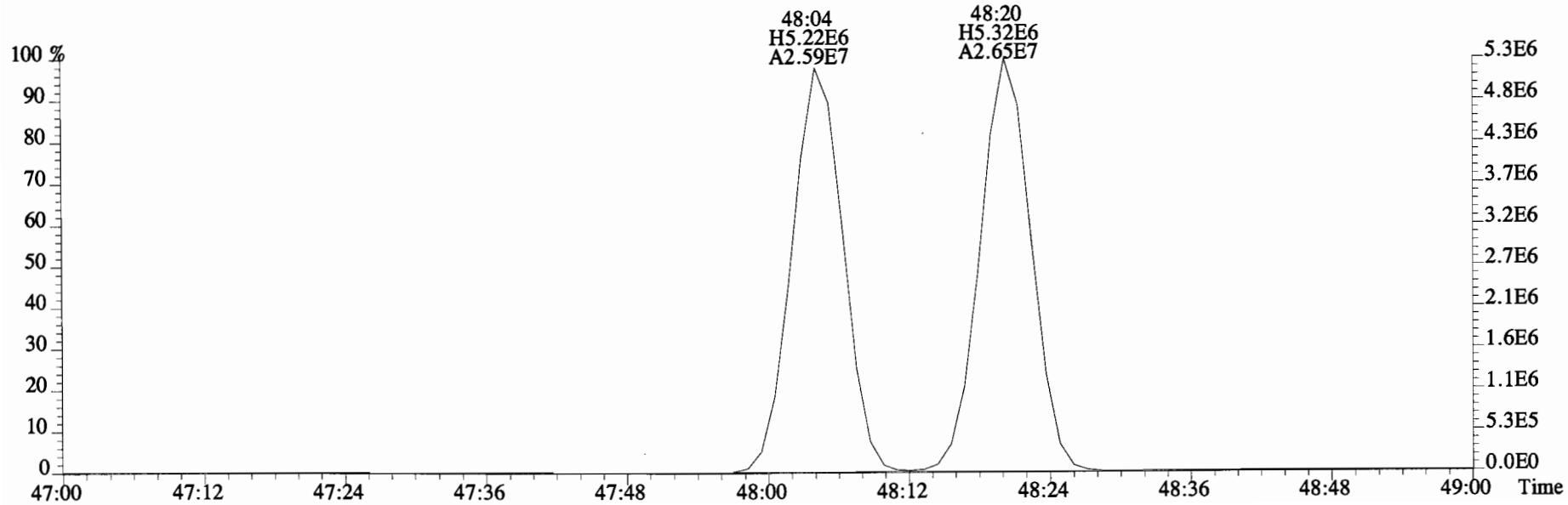


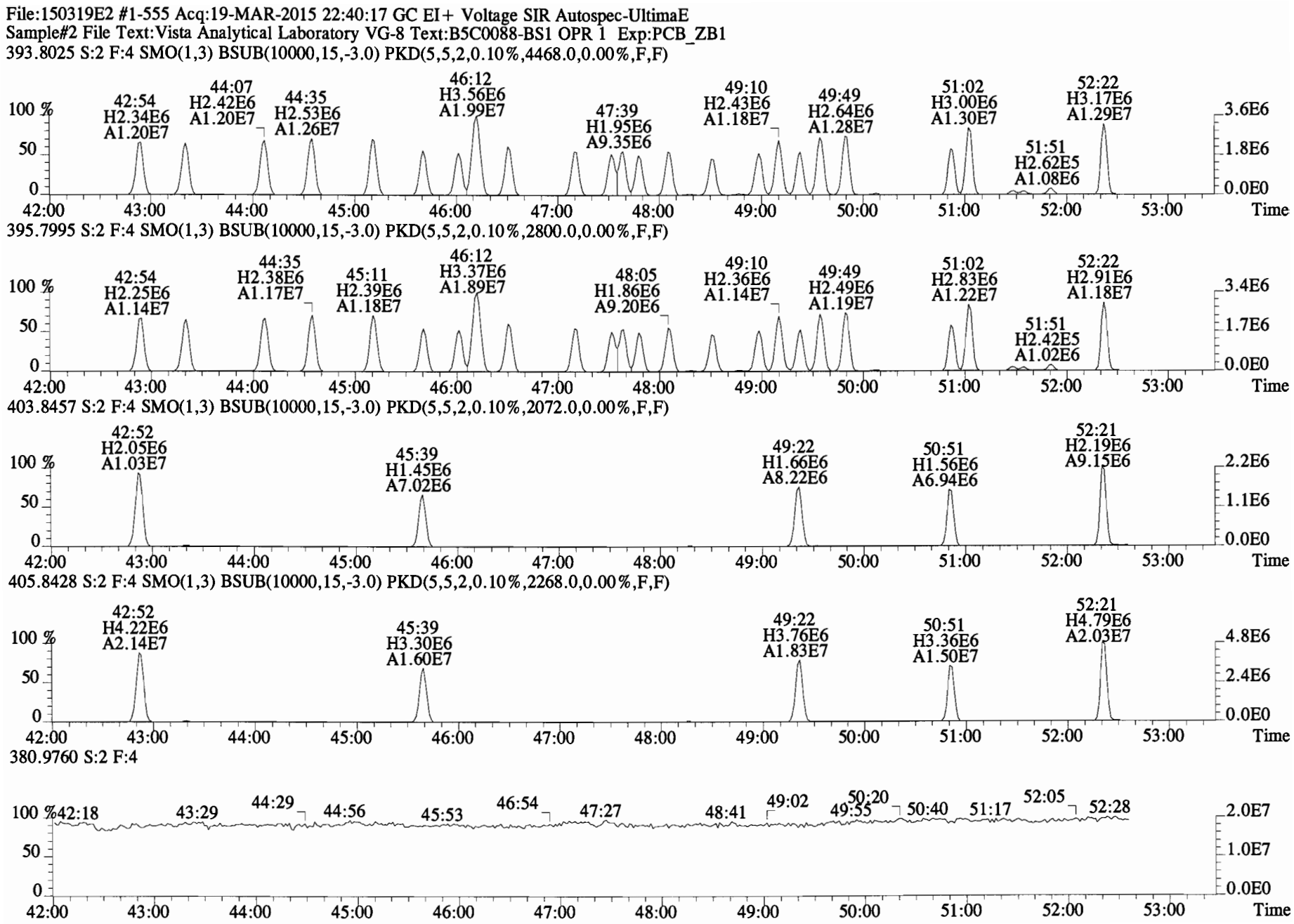

File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4708.0,0.00%,F,F)
46:06
H7.05E6
A3.43E7
46:22
H5.74E6
A2.86E7
46:47
H6.98E6
A3.57E7
100 %
90
80
70
60
50
40
30
20
10
0
7.1E6
6.3E6
5.6E6
4.9E6
4.2E6
3.5E6
2.8E6
2.1E6
1.4E6
7.1E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time
373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4776.0,0.00%,F,F)
46:06
H5.46E6
A2.68E7
46:22
H4.56E6
A2.27E7
46:47
H5.49E6
A2.77E7
100 %
90
80
70
60
50
40
30
20
10
0
5.5E6
4.9E6
4.4E6
3.8E6
3.3E6
2.7E6
2.2E6
1.6E6
1.1E6
5.5E5
0.0E0
45:30
45:36
45:42
45:48
45:54
46:00
46:06
46:12
46:18
46:24
46:30
46:36
46:42
46:48
46:54
47:00
47:06
47:12
Time

File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4708.0,0.00%,F,F)

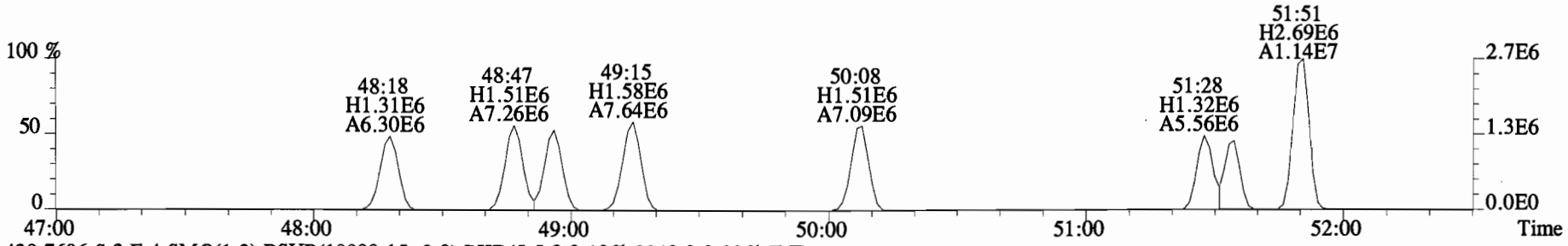


373.8788 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4776.0,0.00%,F,F)

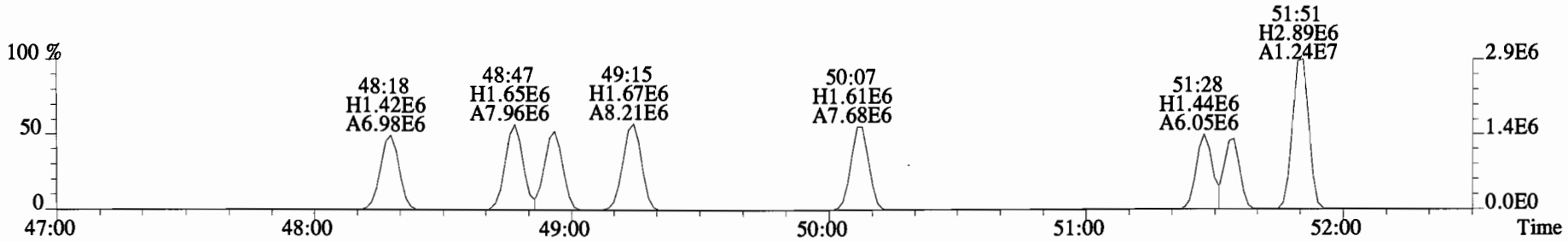



File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4468.0,0.00%,F,F)
42:54 H2.34E6 A1.20E7
44:07 H2.42E6 A1.20E7
44:35 H2.53E6 A1.26E7
46:12 H3.56E6 A1.99E7
47:39 H1.95E6 A9.35E6
49:10 H2.43E6 A1.18E7
49:49 H2.64E6 A1.28E7
51:02 H3.00E6 A1.30E7
51:51 H2.62E5 A1.08E6
52:22 H3.17E6 A1.29E7
395.7995 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2800.0,0.00%,F,F)
42:54 H2.25E6 A1.14E7
44:35 H2.38E6 A1.17E7
45:11 H2.39E6 A1.18E7
46:12 H3.37E6 A1.89E7
48:05 H1.86E6 A9.20E6
49:10 H2.36E6 A1.14E7
49:49 H2.49E6 A1.19E7
51:02 H2.83E6 A1.22E7
51:51 H2.42E5 A1.02E6
52:22 H2.91E6 A1.18E7
403.8457 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2072.0,0.00%,F,F)
42:52 H2.05E6 A1.03E7
45:39 H1.45E6 A7.02E6
49:22 H1.66E6 A8.22E6
50:51 H1.56E6 A6.94E6
52:21 H2.19E6 A9.15E6
405.8428 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2268.0,0.00%,F,F)
42:52 H4.22E6 A2.14E7
45:39 H3.30E6 A1.60E7
49:22 H3.76E6 A1.83E7
50:51 H3.36E6 A1.50E7
52:21 H4.79E6 A2.03E7
380.9760 S:2 F:4
42:18
43:29
44:29
44:56
45:53
46:54
47:27
48:41
49:02
49:55
50:20
50:40
51:17
52:05
52:28
100 %
50
0
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
50:00
51:00
52:00
53:00
Time
3.6E6
1.8E6
0.0E0
3.4E6
1.7E6
2.2E6
1.1E6
4.8E6
2.4E6
2.0E7
1.0E7

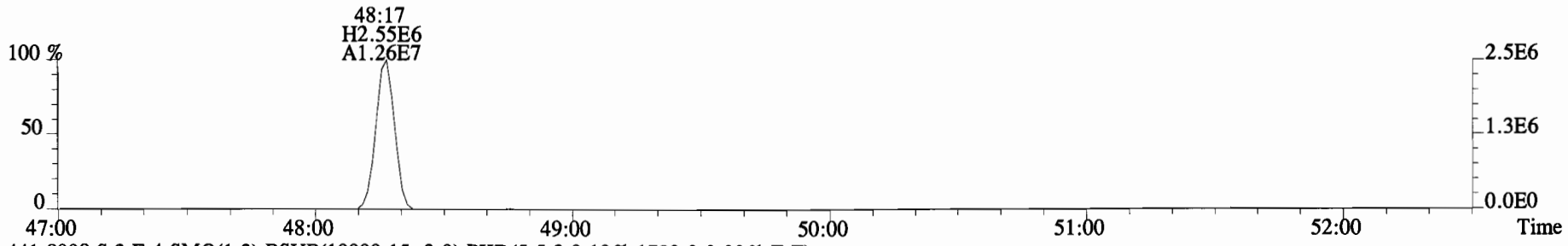
File:150319E2 #1-555 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1860.0,0.00%,F,F)



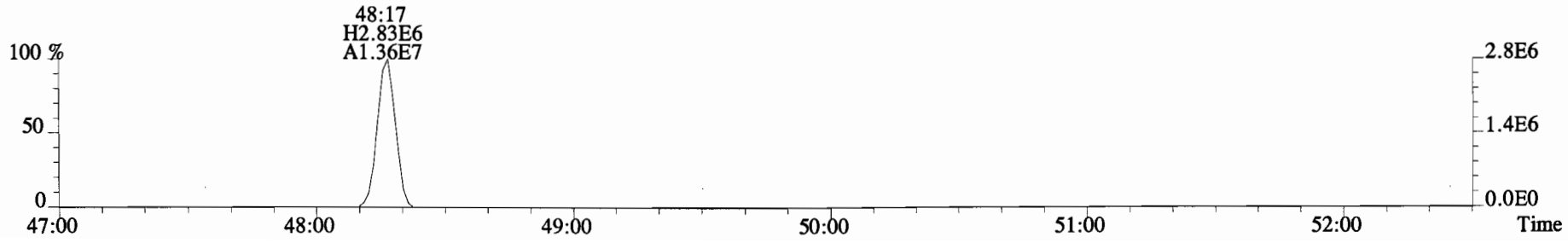
429.7606 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2240.0,0.00%,F,F)



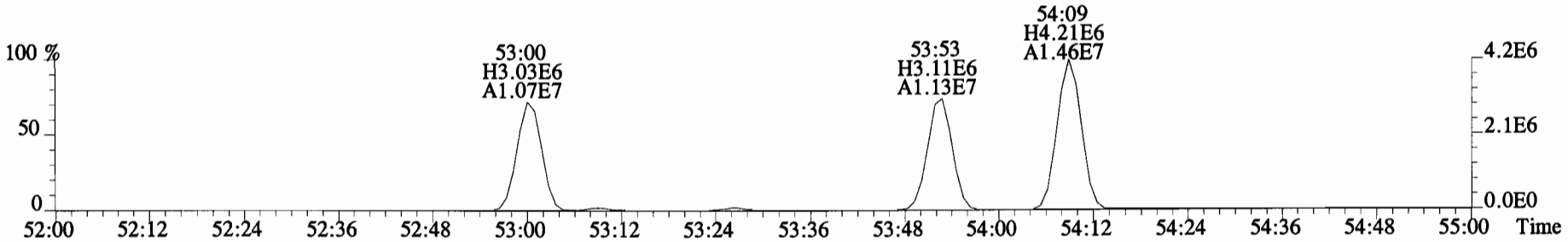
439.8038 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1556.0,0.00%,F,F)



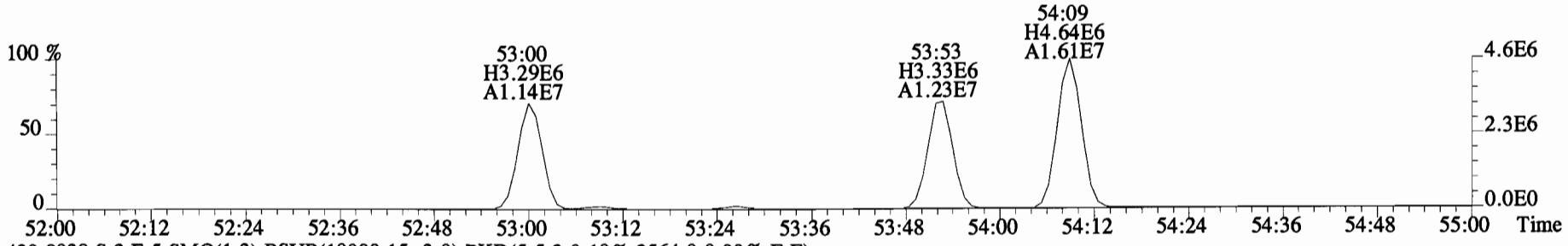
441.8008 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1780.0,0.00%,F,F)



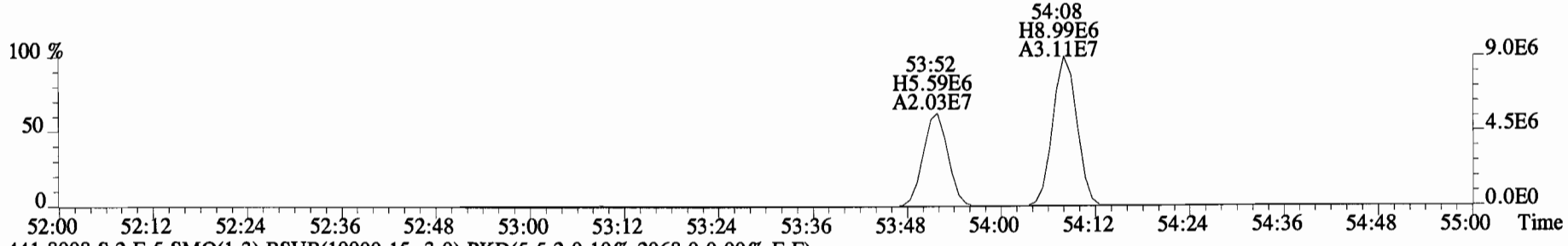
File:150319E2 #1-429 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2088.0,0.00%,F,F)



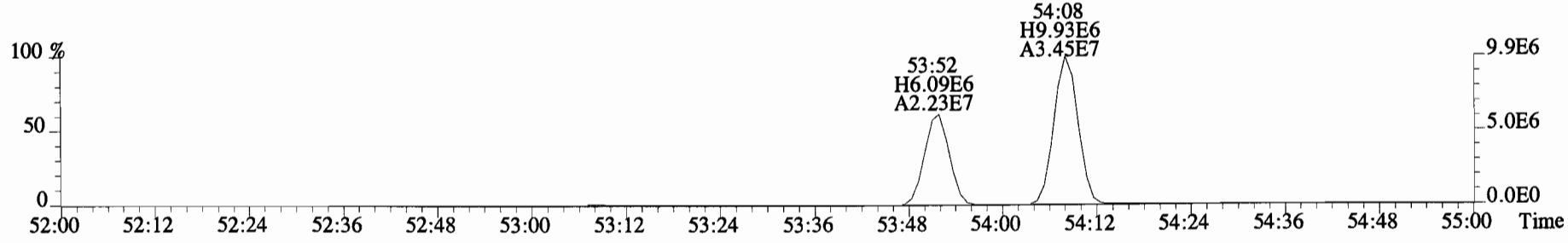
429.7606 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2164.0,0.00%,F,F)



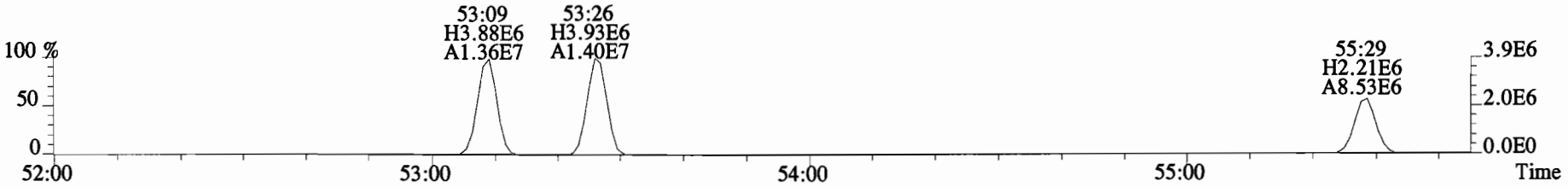
439.8038 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2564.0,0.00%,F,F)



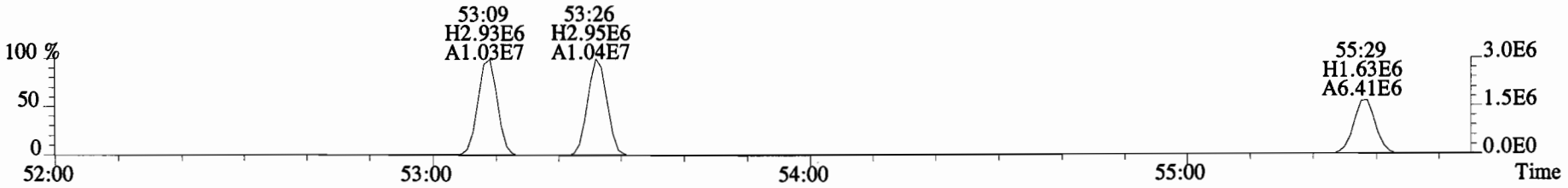
441.8008 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2068.0,0.00%,F,F)



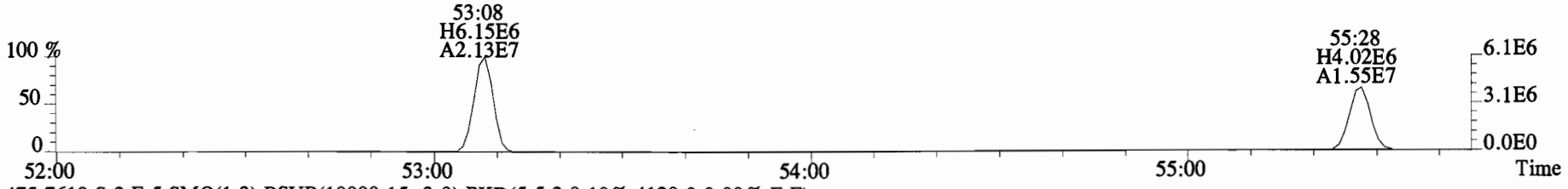
File:150319E2 #1-429 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2796.0,0.00%,F,F)



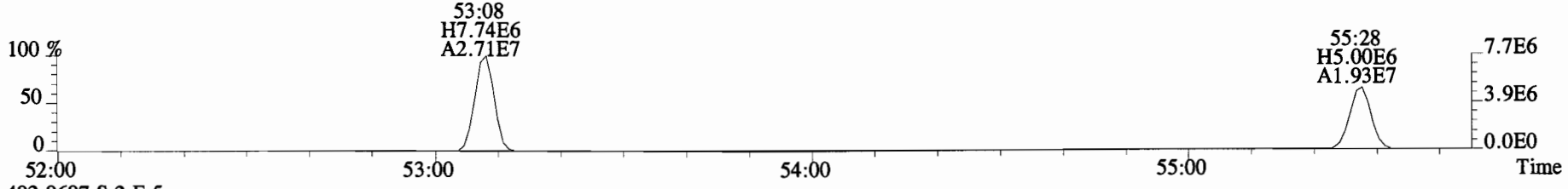
465.7186 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1844.0,0.00%,F,F)



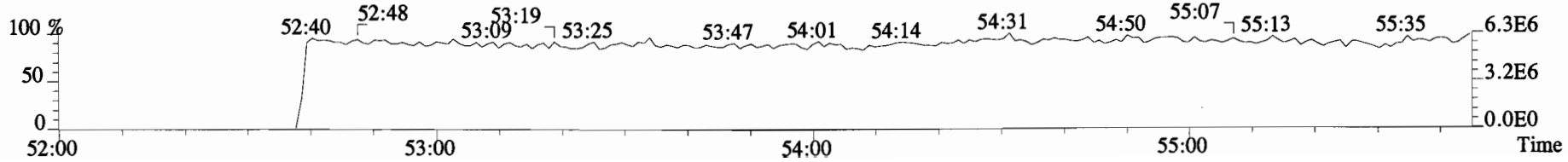
473.7648 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2564.0,0.00%,F,F)



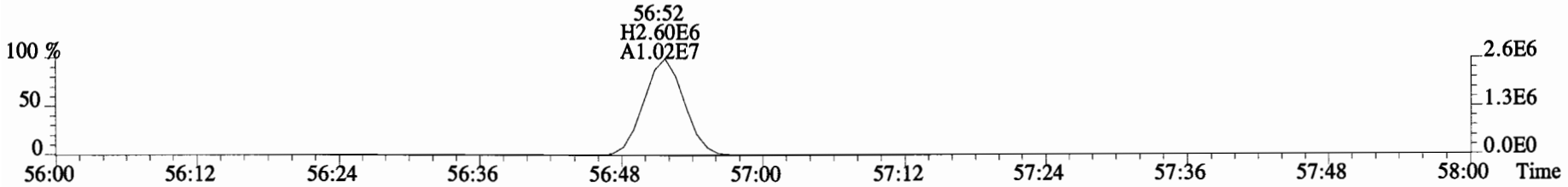
475.7619 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4120.0,0.00%,F,F)



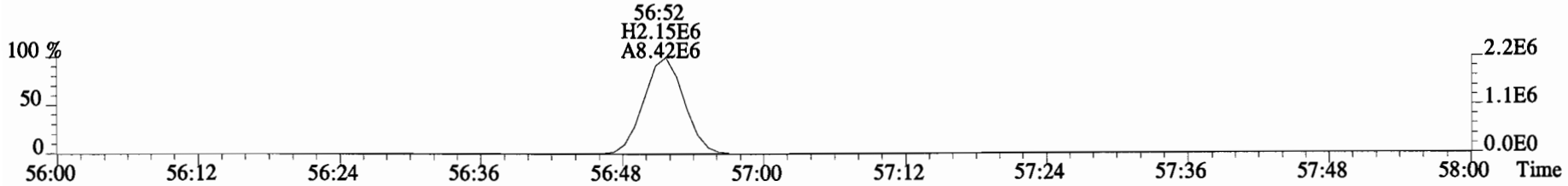
492.9697 S:2 F:5



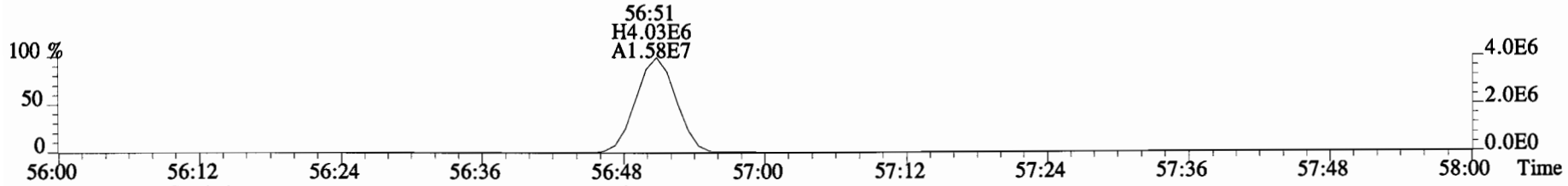
File:150319E2 #1-429 Acq:19-MAR-2015 22:40:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5C0088-BS1 OPR 1 Exp:PCB_ZB1
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1364.0,0.00%,F,F)



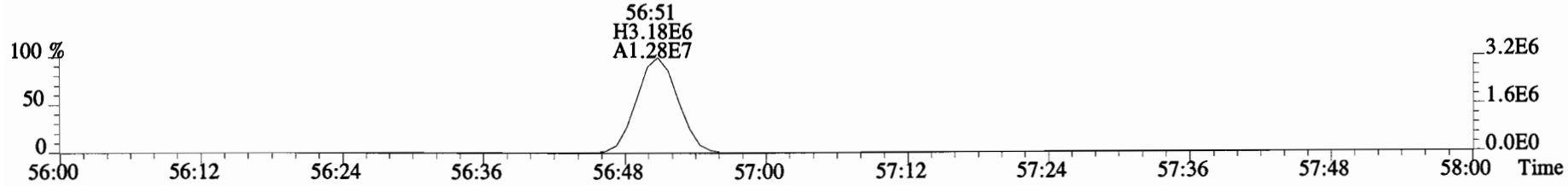
499.6797 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1220.0,0.00%,F,F)



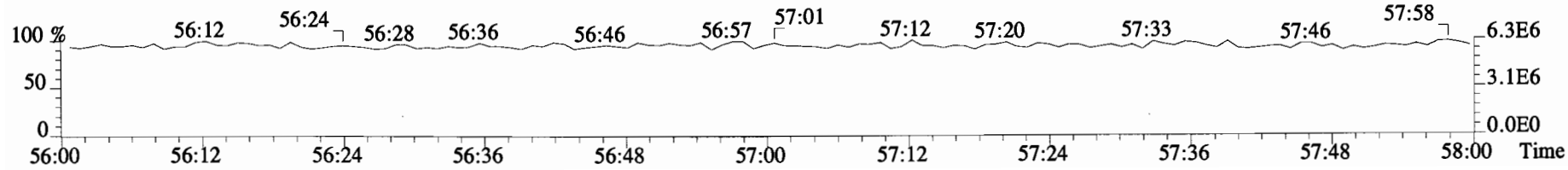
509.7229 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1380.0,0.00%,F,F)



511.7199 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1572.0,0.00%,F,F)



492.9697 S:2 F:5



Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1

Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.030 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF¶	1.33	*		3070	2.5	1.83	*	0.997	1.007
Mono	PCB-2	*	*	n	NotF¶	1.30	*		3070	2.5	1.84	*	0.983	0.993
Mono	PCB-3	*	*	n	NotF¶	1.30	*		3070	2.5	1.84	*	0.996	1.006
Di	PCB-4/10	4.41e+05	1.71	y	20:08	1.67	8.90		*	2.5	*	1.002	0.997	1.007
Di	PCB-7/9	*	*	n	NotF¶	1.25	*		9730	2.5	3.61	*	0.864	0.872
Di	PCB-6	*	*	n	NotF¶	1.24	*		9730	2.5	3.66	*	0.888	0.897
Di	PCB-5/8	*	*	n	NotF¶	1.27	*		9730	2.5	3.56	*	0.905	0.915
Di	PCB-14	*	*	n	NotF¶	1.47	*		9730	2.5	3.07	*	0.948	0.958
Di	PCB-11	*	*	n	NotF¶	1.28	*		9730	2.5	3.51	*	0.995	1.005
Di	PCB-12/13	*	*	n	NotF¶	1.27	*		9730	2.5	3.56	*	1.011	1.021
Di	PCB-15	5.07e+05	1.57	y	25:59	1.44	6.55		*	2.5	*	1.028	1.023	1.031
Tri	PCB-19	3.11e+05	1.17	y	24:16	1.18	9.86		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n	NotF¶	1.87	*		2540	2.5	1.01	*	1.033	1.043
Tri	PCB-18	6.49e+05	1.11	y	25:54	0.89	18.0		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	2.30e+05	1.11	y	26:05	0.96	5.90		*	2.5	*	0.961	0.956	0.966
Tri	PCB-24/27	3.09e+05	1.26	n	26:38	1.30	5.85	R	*	2.5	*	0.981	0.977	0.987
Tri	PCB-16/32	6.49e+05	1.10	y	27:10	1.05	15.2		*	2.5	*	1.001	0.996	1.006
Tri	PCB-34	*	*	n	NotF¶	1.30	*		1750	2.5	0.627	*	0.955	0.965
Tri	PCB-23	*	*	n	NotF¶	1.21	*		1750	2.5	0.674	*	0.958	0.968
Tri	PCB-29	*	*	n	NotF¶	1.21	*		1750	2.5	0.674	*	0.967	0.977
Tri	PCB-26	1.93e+05	1.15	y	28:30	1.24	3.30		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	*	*	n	NotF¶	1.10	*		1750	2.5	0.743	*	0.980	0.990
Tri	PCB-31	2.60e+05	1.09	y	29:01	1.25	4.40		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	3.40e+05	1.20	n	29:08	1.24	5.82	R	*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	6.41e+04	1.82	n	29:46	1.16	1.17	R	*	2.5	*	1.022	1.016	1.026
Tri	PCB-22	*	*	n	NotF¶	1.16	*		1750	2.5	0.701	*	1.032	1.042
Tri	PCB-36	*	*	n	NotF¶	1.30	*		1750	2.5	0.633	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF¶	1.26	*		1750	2.5	0.652	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF¶	1.24	*		1750	2.5	0.662	*	0.967	0.977
Tri	PCB-35	*	*	n	NotF¶	1.26	*		1750	2.5	0.654	*	0.982	0.992
Tri	PCB-37	1.29e+05	1.19	y	32:59	1.35	1.75		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-54	*	*	n	NotF¶	1.02	*		2060	2.5	1.12	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF¶	0.78	*		2060	2.5	1.48	*	1.037	1.047
Tetra	PCB-53	2.98e+05	0.88	y	29:49	1.14	9.03		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	9.26e+04	0.78	y	30:09	1.16	2.75		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	1.17e+05	0.76	y	30:35	1.04	3.89		*	2.5	*	0.970	0.965	0.975
Tetra	PCB-46	6.55e+04	0.79	y	31:05	0.95	2.38		*	2.5	*	0.986	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/25/15

Reviewed by: [signature] Date: 3/26/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1

Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.030 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	1.17e+06	0.81	y	31:32	1.29	31.2		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.41	*		2060	2.5	1.08	*	0.999	1.009
Tetra	PCB-43/49	6.24e+05	0.83	y	31:50	1.14	18.9		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	2.78e+05	0.85	y	32:03	1.20	7.66		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	6.78e+04	1.13	n	32:11	1.33	1.69	R	*	2.5	*	1.005	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.32	*		2060	2.5	1.13	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF	1.36	*		2060	2.5	1.09	*	1.011	1.021
Tetra	PCB-44	3.86e+05	0.80	y	32:49	0.87	14.6		*	2.5	*	1.024	1.020	1.030
Tetra	PCB-42/59	2.00e+05	0.81	y	33:03	1.24	5.34		*	2.5	*	1.032	1.027	1.037
Tetra	PCB-41/64/71/72	6.50e+05	0.72	y	33:38	1.34	16.1		*	2.5	*	1.050	1.045	1.055
Tetra	PCB-68	*	*	n	NotF	1.61	*		2060	2.5	0.920	*	1.053	1.063
Tetra	PCB-40	7.18e+04	0.93	n	34:07	0.86	2.77	R	*	2.5	*	1.065	1.061	1.071
Tetra	PCB-57	*	*	n	NotF	1.12	*		2060	2.5	1.05	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF	1.09	*		2060	2.5	1.08	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF	1.14	*		2060	2.5	1.04	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF	1.16	*		2060	2.5	1.01	*	0.981	0.991
Tetra	PCB-74	1.87e+05	0.92	n	35:20	1.21	3.88	R	*	2.5	*	0.994	0.989	0.999
Tetra	PCB-61/70	4.07e+05	0.72	y	35:33	1.13	9.10		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-76/66	4.31e+05	0.88	y	35:45	1.18	9.20		*	2.5	*	1.006	1.000	1.010
Tetra	PCB-80	*	*	n	NotF	1.32	*		2060	2.5	0.855	*	0.995	1.005
Tetra	PCB-55	*	*	n	NotF	1.23	*		2060	2.5	0.920	*	1.004	1.014
Tetra	PCB-56/60	2.70e+05	0.91	n	36:47	1.11	5.88	R	*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	*	*	n	NotF	1.16	*		2060	2.5	0.976	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.18	*		2060	2.5	1.09	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF	1.29	*		2060	2.5	0.994	*	0.995	1.005
Tetra	PCB-77	*	*	n	NotF	1.29	*		2060	2.5	1.07	*	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.26	*		2080	2.5	2.49	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF	1.09	*		2080	2.5	2.88	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF	0.97	*		2080	2.5	3.25	*	1.051	1.061
Penta	PCB-100	*	*	n	NotF	0.96	*		2080	2.5	3.27	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF	1.13	*		2080	2.5	4.05	*	0.980	0.990
Penta	PCB-95/98/102	4.65e+05	1.73	y	35:51	1.29	23.9		*	2.5	*	1.000	0.994	1.004
Penta	PCB-93	*	*	n	NotF	1.06	*		2080	2.5	4.32	*	0.998	1.008
Penta	PCB-88/91	1.13e+05	1.45	y	36:15	1.12	6.65		*	2.5	*	1.012	1.006	1.016
Penta	PCB-121	*	*	n	NotF	1.76	*		2080	2.5	2.60	*	1.009	1.019
Penta	PCB-84/92	2.40e+05	1.35	y	37:09	1.07	13.2		*	2.5	*	0.990	0.985	0.995
Penta	PCB-89	*	*	n	NotF	1.00	*		2080	2.5	4.20	*	0.990	1.000

Analyst: DMS

Date: 3/25/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1
Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.030 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Penta	PCB-90/101	5.49e+05	1.60	y 37:32	1.21	26.9		*	2.5	*	1.000	0.995-1.005
Penta	PCB-113	*	*	n NotF	1.34	*		2080	2.5	3.12	*	1.002-1.012
Penta	PCB-99	2.53e+05	1.71	y 37:52	1.25	12.0		*	2.5	*	1.009	1.004-1.014
Penta	PCB-119	*	*	n NotF	1.88	*		2080	2.5	2.43	*	0.982-0.992
Penta	PCB-108/112	4.13e+04	1.25	n 38:30	1.41	1.96	R	*	2.5	*	0.992	0.986-0.996
Penta	PCB-83	*	*	n NotF	1.66	*		2080	2.5	2.75	*	0.990-1.000
Penta	PCB-97	1.87e+05	1.42	y 38:51	1.30	9.61		*	2.5	*	1.001	0.995-1.005
Penta	PCB-86	*	*	n NotF	1.03	*		2080	2.5	4.42	*	0.999-1.009
Penta	PCB-87/117/125	1.99e+05	1.88	n 39:07	1.59	8.32	R	*	2.5	*	1.008	1.002-1.012
Penta	PCB-111/115	*	*	n NotF	1.86	*		2080	2.5	2.46	*	1.006-1.016
Penta	PCB-85/116	7.72e+04	1.69	y 39:22	1.39	3.69		*	2.5	*	1.014	1.010-1.020
Penta	PCB-120	*	*	n NotF	1.99	*		2080	2.5	2.30	*	1.016-1.026
Penta	PCB-110	8.31e+05	1.54	y 39:46	1.70	32.5		*	2.5	*	1.024	1.019-1.029
Penta	PCB-82	4.32e+04	1.39	y 40:24	0.74	3.00		*	2.5	*	0.976	0.971-0.981
Penta	PCB-124	*	*	n NotF	1.30	*		2080	2.5	2.75	*	0.988-0.998
Penta	PCB-107/109	4.01e+04	1.45	y 41:15	1.34	1.55		*	2.5	*	0.997	0.991-1.001
Penta	PCB-123	*	*	n NotF	1.25	*		2080	2.5	2.87	*	0.995-1.005
Penta	PCB-106/118	5.11e+05	1.63	y 41:35	1.29	19.9		*	2.5	*	1.000	0.996-1.006
Penta	PCB-114	*	*	n NotF	1.45	*		1820	2.5	1.29	*	0.995-1.005
Penta	PCB-122	*	*	n NotF	1.22	*		1820	2.5	1.53	*	0.999-1.009
Penta	PCB-105	4.01e+05	1.70	y 43:06	1.56	8.07		*	2.5	*	1.000	0.995-1.005
Penta	PCB-127	*	*	n NotF	1.31	*		1820	2.5	1.36	*	0.995-1.005
Penta	PCB-126	*	*	n NotF	1.41	*		1820	2.5	1.35	*	0.995-1.005
Hexa	PCB-155	*	*	n NotF	1.20	*		1730	2.5	3.09	*	0.966-1.006
Hexa	PCB-150	*	*	n NotF	1.13	*		1730	2.5	3.28	*	1.030-1.040
Hexa	PCB-152	*	*	n NotF	1.17	*		1730	2.5	3.16	*	1.043-1.053
Hexa	PCB-145	*	*	n NotF	1.09	*		1730	2.5	3.38	*	1.055-1.065
Hexa	PCB-136	5.83e+04	1.24	y 39:35	1.14	3.87		*	2.5	*	1.068	1.063-1.073
Hexa	PCB-148	*	*	n NotF	0.82	*		1730	2.5	4.52	*	1.066-1.076
Hexa	PCB-154	*	*	n NotF	0.89	*		1730	2.5	4.15	*	1.079-1.089
Hexa	PCB-151	8.83e+04	1.35	y 40:50	0.82	8.17		*	2.5	*	1.102	1.097-1.107
Hexa	PCB-135	*	*	n NotF	0.80	*		1730	2.5	4.64	*	1.101-1.113
Hexa	PCB-144	*	*	n NotF	0.86	*		1730	2.5	4.32	*	1.105-1.116
Hexa	PCB-147	*	*	n NotF	0.78	*		1730	2.5	4.75	*	1.108-1.120
Hexa	PCB-139/149	3.81e+05	1.12	y 41:31	0.87	33.2		*	2.5	*	1.120	1.115-1.127
Hexa	PCB-140	*	*	n NotF	0.78	*		1730	2.5	4.76	*	1.120-1.132
Hexa	PCB-134/143	6.94e+04	1.24	y 42:10	0.93	2.90		*	2.5	*	0.975	0.970-0.980

Analyst: DMS

Date: 3/25/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1
Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.030 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hexa	PCB-133/142	4.44e+04	1.11	y 42:28	0.91	1.90		*	2.5	*	0.982	0.977-0.987
Hexa	PCB-131	*	*	n NotF¶	0.85	*		1920	2.5	2.50	*	0.981-0.991
Hexa	PCB-146/165	1.87e+05	1.33	y 42:51	1.08	6.74		*	2.5	*	0.991	0.986-0.996
Hexa	PCB-132/161	3.15e+05	1.35	y 43:06	1.12	11.0		*	2.5	*	0.997	0.992-1.002
Hexa	PCB-153	1.03e+06	1.15	y 43:16	1.20	33.4		*	2.5	*	1.001	0.996-1.006
Hexa	PCB-168	*	*	n NotF¶	1.36	*		1920	2.5	1.56	*	1.000-1.010
Hexa	PCB-141	1.97e+05	1.27	y 43:59	1.16	7.56		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-137	3.86e+04	1.83	n 44:21	1.18	1.45	R	*	2.5	*	1.009	1.004-1.014
Hexa	PCB-130	5.58e+04	1.68	n 44:28	0.92	2.69	R	*	2.5	*	1.011	1.006-1.016
Hexa	PCB-138/163/164	1.23e+06	1.35	y 44:50	1.38	38.6		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-158/160	1.32e+05	0.97	n 45:04	1.48	3.87	R	*	2.5	*	1.006	1.001-1.011
Hexa	PCB-129	5.19e+04	0.97	n 45:20	0.99	2.27	R	*	2.5	*	1.012	1.007-1.017
Hexa	PCB-166	*	*	n NotF¶	1.14	*		1920	2.5	1.60	*	0.988-0.998
Hexa	PCB-159	*	*	n NotF¶	1.22	*		1920	2.5	1.50	*	0.995-1.005
Hexa	PCB-128/162	2.17e+05	1.24	y 46:23	1.03	6.92		*	2.5	*	1.006	1.002-1.012
Hexa	PCB-167	6.33e+04	1.26	y 46:47	1.18	1.76		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-156	1.38e+05	1.11	y 48:05	1.27	3.56		*	2.5	*	1.000	0.995-1.005
Hexa	PCB-157	*	*	n NotF¶	1.22	*		1920	2.5	1.51	*	0.995-1.005
Hexa	PCB-169	*	*	n NotF¶	1.07	*		1920	2.5	1.59	*	0.995-1.005
Hepta	PCB-188	*	*	n NotF¶	1.52	*		1360	2.5	1.06	*	0.996-1.006
Hepta	PCB-184	*	*	n NotF¶	1.34	*		1360	2.5	1.21	*	1.006-1.016
Hepta	PCB-179	1.31e+05	0.95	y 44:05	1.39	5.97		*	2.5	*	1.028	1.024-1.034
Hepta	PCB-176	3.65e+04	1.09	y 44:33	1.45	1.59		*	2.5	*	1.039	1.035-1.045
Hepta	PCB-186	*	*	n NotF¶	1.46	*		1360	2.5	1.11	*	1.049-1.059
Hepta	PCB-178	5.37e+04	1.07	y 45:40	1.07	3.17		*	2.5	*	1.065	1.061-1.071
Hepta	PCB-175	*	*	n NotF¶	1.05	*		1360	2.5	1.54	*	1.069-1.079
Hepta	PCB-182/187	3.12e+05	0.97	y 46:10	1.14	17.4		*	2.5	*	1.077	1.073-1.083
Hepta	PCB-183	1.30e+05	1.03	y 46:30	1.22	6.74		*	2.5	*	1.085	1.080-1.090
Hepta	PCB-185	*	*	n NotF¶	1.40	*		1360	2.5	1.29	*	0.950-0.960
Hepta	PCB-174	2.27e+05	1.15	y 47:31	1.29	13.3		*	2.5	*	0.963	0.958-0.968
Hepta	PCB-181	*	*	n NotF¶	1.35	*		1360	2.5	1.34	*	0.960-0.970
Hepta	PCB-177	1.21e+05	1.00	y 47:47	1.27	7.25		*	2.5	*	0.968	0.963-0.973
Hepta	PCB-171	5.60e+04	0.95	y 48:05	1.46	2.91		*	2.5	*	0.974	0.969-0.979
Hepta	PCB-173	*	*	n NotF¶	1.10	*		1360	2.5	1.64	*	0.978-0.988
Hepta	PCB-172	4.35e+04	1.10	y 48:58	1.35	2.43		*	2.5	*	0.992	0.987-0.997
Hepta	PCB-192	*	*	n NotF¶	1.74	*		1360	2.5	1.04	*	0.991-1.001
Hepta	PCB-180	4.85e+05	1.15	y 49:22	1.45	25.4		*	2.5	*	1.000	0.995-1.005

Analyst: DMS

Date: 3/25/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1

Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.030 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF╖	1.85	*		1360	2.5	0.976	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF╖	1.86	*		1360	2.5	0.971	*	1.005	1.015
Hepta	PCB-170	1.42e+05	1.20	y	50:51	1.67	7.87		*	2.5	*	1.000	0.995	1.005
Hepta	PCB-190	5.04e+04	0.95	y	51:02	2.25	2.07		*	2.5	*	1.004	0.999	1.009
Hepta	PCB-189	*	*	n	NotF╖	1.67	*		1360	2.5	0.935	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF╖	1.02	*		1590	2.5	2.61	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF╖	1.10	*		1590	2.5	2.43	*	1.005	1.015
Octa	PCB-204	*	*	n	NotF╖	1.07	*		1590	2.5	2.47	*	1.009	1.019
Octa	PCB-197	*	*	n	NotF╖	1.17	*		1590	2.5	2.28	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF╖	1.03	*		1590	2.5	2.57	*	1.034	1.044
Octa	PCB-198	*	*	n	NotF╖	0.75	*		1590	2.5	3.53	*	1.062	1.072
Octa	PCB-199	7.51e+04	1.01	y	51:33	0.74	7.46		*	2.5	*	1.068	1.064	1.074
Octa	PCB-196/203	9.66e+04	0.87	y	51:49	0.83	8.58		*	2.5	*	1.074	1.070	1.080
Octa	PCB-195	5.64e+04	0.92	y	52:59	1.14	2.76		*	2.5	*	0.984	0.979	0.989
Octa	PCB-194	1.18e+05	0.95	y	53:51	1.29	5.06		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	*	*	n	NotF╖	1.61	*		1380	2.5	0.831	*	1.001	1.010
Nona	PCB-208	2.51e+04	1.33	y	53:08	1.01	1.10		*	2.5	*	1.000	0.995	1.005
Nona	PCB-207	*	*	n	NotF╖	1.03	*		1050	2.5	0.727	*	1.001	1.011
Nona	PCB-206	4.30e+04	1.31	y	55:29	0.88	3.25		*	2.5	*	1.000	0.995	1.005
Deca	PCB-209	2.53e+04	0.87	n	56:50	1.35	1.49	R	*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/25/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1
Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0300 EndCAL: NA

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.31	*	
Total Di-PCB	9.48e+05	1.71	y	20:08	1.32	15.4453	
Total Tri-PCB	1.84e+06	1.17	y	24:16	1.20	48.9787	
Total Tri-PCB	5.82e+05	1.15	y	28:30	1.23	9.44425	Sum:58.4230
Total Tetra-PCB	4.72e+06	0.88	y	29:49	1.17	130.137	
Total Penta-PCB	3.31e+06	1.73	y	35:51	1.24	152.995	
Total Penta-PCB	4.01e+05	1.70	y	43:06	1.39	8.06582	Sum:161.060
Total Hexa-PCB	5.28e+05	1.24	y	39:35	0.94	45.2204	
Total Hexa-PCB	3.49e+06	1.24	y	42:10	1.13	114.261	Sum:159.481
Total Hepta-PCB	1.79e+06	0.95	y	44:05	1.37	96.1348	
Total Octa-PCB	1.72e+05	1.01	y	51:33	0.95	16.0432	
Total Octa-PCB	1.74e+05	0.92	y	52:59	1.35	7.82165	Sum:23.8648
Total Nona-PCB	6.80e+04	1.33	y	53:08	0.99	4.34566	
Total Deca-PCB	2.53e+04	0.87	n	56:50	1.35	1.48889	

Total PCB Conc:698.003657000

GH9

Integrations by Analyst: DMS

Date: 3/25/15

Client ID: BD-OWS-14-20141222-W Filename: 150319E2 S:6 Acq:20-MAR-15 02:58:04 ConCal: ST150319E2-1
Lab ID: 1400984-01 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0300 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	7.87e+07	3.21 y	0.91	16:10	0.623	0.619	0.625	1350	69.3
13C-PCB-3	8.73e+07	3.17 y	0.94	18:47	0.723	0.718	0.726	1440	74.2
13C-PCB-4	5.75e+07	1.60 y	0.60	20:06	0.774	0.770	0.778	1500	77.1
13C-PCB-9	9.83e+07	1.59 y	0.96	21:54	0.843	0.839	0.847	1590	82.0
13C-PCB-11	1.04e+08	1.57 y	0.95	25:16	0.973	0.968	0.978	1700	87.7
13C-PCB-19	5.16e+07	1.11 y	0.56	24:15	0.934	0.929	0.939	1430	73.7
13C-PCB-28	9.19e+07	1.05 y	1.07	29:07	1.003	0.999	1.009	1500	77.3
13C-PCB-32	7.91e+07	1.10 y	0.83	27:09	1.046	1.041	1.051	1490	76.7
13C-PCB-37	1.06e+08	1.05 y	0.96	32:59	1.137	1.131	1.143	1930	99.6
13C-PCB-47	5.88e+07	0.82 y	0.77	32:02	0.871	0.867	0.875	1760	90.7
13C-PCB-52	5.62e+07	0.80 y	0.71	31:31	0.857	0.853	0.861	1820	93.6
13C-PCB-54	7.22e+07	0.80 y	1.06	27:59	0.761	0.757	0.765	1570	80.7
13C-PCB-70	7.72e+07	0.81 y	0.99	35:33	0.966	0.961	0.971	1790	92.0
13C-PCB-77	6.83e+07	0.80 y	0.96	39:39	1.078	1.073	1.083	1630	83.9
13C-PCB-80	8.06e+07	0.80 y	1.02	35:58	0.978	0.973	0.983	1810	93.4
13C-PCB-81	7.15e+07	0.80 y	1.00	39:04	1.062	1.057	1.067	1650	84.9
13C-PCB-95	2.93e+07	1.69 y	0.70	35:50	0.913	0.908	0.918	1910	98.2
13C-PCB-97	2.91e+07	1.63 y	0.66	38:49	0.989	0.984	0.994	2010	104
13C-PCB-101	3.29e+07	1.63 y	0.77	37:31	0.955	0.951	0.961	1950	100
13C-PCB-104	4.03e+07	1.63 y	0.97	32:40	0.832	0.828	0.836	1900	97.6
13C-PCB-105	6.20e+07	1.62 y	1.20	43:05	0.929	0.924	0.934	2220	114
13C-PCB-114	6.41e+07	1.60 y	1.26	42:13	0.910	0.905	0.915	2200	113
13C-PCB-118	3.86e+07	1.61 y	0.94	41:34	1.059	1.054	1.064	1870	96.4
13C-PCB-123	3.76e+07	1.62 y	0.88	41:23	1.054	1.049	1.059	1940	100.0
13C-PCB-126	6.10e+07	1.60 y	1.13	45:19	0.977	0.972	0.982	2330	120
13C-PCB-127	6.67e+07	1.61 y	1.26	43:26	0.937	0.931	0.941	2280	118
13C-PCB-138	4.50e+07	1.30 y	1.12	44:49	0.967	0.961	0.971	1730	89.1
13C-PCB-141	4.37e+07	1.28 y	1.09	43:58	0.948	0.943	0.953	1720	88.7
13C-PCB-153	4.98e+07	1.26 y	1.27	43:14	0.932	0.927	0.937	1680	86.8
13C-PCB-155	2.56e+07	1.27 y	0.87	37:04	0.944	0.939	0.949	1340	69.0
13C-PCB-156	5.91e+07	1.30 y	1.35	48:04	1.037	1.032	1.042	1880	97.0
13C-PCB-157	5.95e+07	1.29 y	1.42	48:20	1.042	1.037	1.047	1810	93.0
13C-PCB-159	5.87e+07	1.28 y	1.37	46:06	0.994	0.989	0.999	1850	95.1
13C-PCB-167	5.92e+07	1.27 y	1.38	46:47	1.009	1.004	1.014	1840	94.9
13C-PCB-169	5.74e+07	1.25 y	1.38	50:29	1.089	1.084	1.094	1790	92.1
13C-PCB-170	2.10e+07	0.49 y	0.60	50:51	1.097	1.091	1.103	1500	77.1
13C-PCB-180	2.56e+07	0.47 y	0.76	49:21	1.064	1.059	1.069	1460	75.1
13C-PCB-188	3.06e+07	0.47 y	1.01	42:52	0.925	0.919	0.929	1300	66.9
13C-PCB-189	2.70e+07	0.49 y	0.80	52:20	1.129	1.124	1.136	1450	74.5
13C-PCB-194	3.49e+07	0.92 y	0.75	53:50	0.995	0.990	1.000	1800	92.9
13C-PCB-202	2.64e+07	0.91 y	0.99	48:16	1.041	1.036	1.046	1150	59.1
13C-PCB-206	2.92e+07	0.80 y	0.73	55:28	1.025	1.020	1.301	1530	78.9
13C-PCB-208	4.36e+07	0.78 y	1.08	53:07	0.982	0.977	0.987	1550	79.9
13C-PCB-209	2.45e+07	1.24 y	0.71	56:50	1.050	1.045	1.055	1330	68.5

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.83e+07	0.82 y	1.02	37:50	1.029	1.024	1.033	1760	90.8
13C-PCB-178	2.11e+07	0.46 y	0.64	45:39	0.985	0.980	0.989	1420	73.3

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	7.83e+07	0.82 y	1.02	37:50	0.968	0.963	0.973	2070	107
13C-PCB-178	2.11e+07	0.46 y	0.84	45:39	0.925	0.920	0.930	1900	97.6

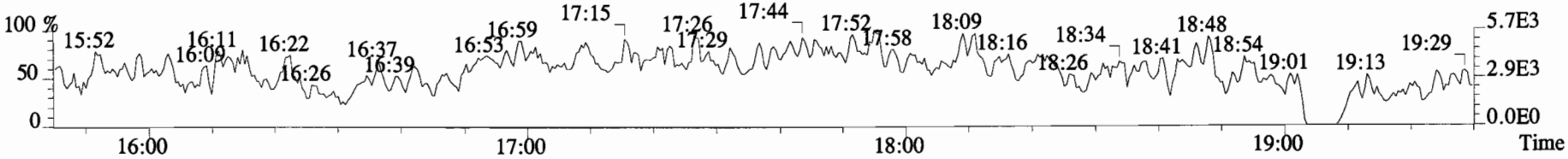
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.25e+08	1.57	y	1.00	25:58	1940
13C-PCB-31	1.11e+08	1.06	y	1.00	29:01	1940
13C-PCB-60	8.44e+07	0.79	y	1.00	36:47	1940
13C-PCB-111	4.28e+07	1.63	y	1.00	39:16	1940
13C-PCB-128	4.52e+07	1.28	y	1.00	46:22	1940
13C-PCB-205	5.04e+07	0.92	y	1.00	54:07	1940

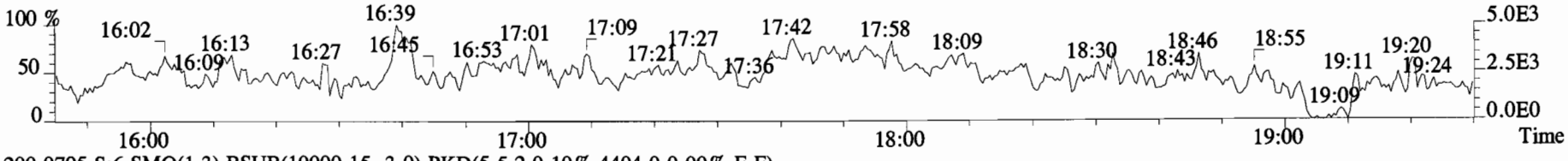
Analyst: DMS

Date: 3/25/15

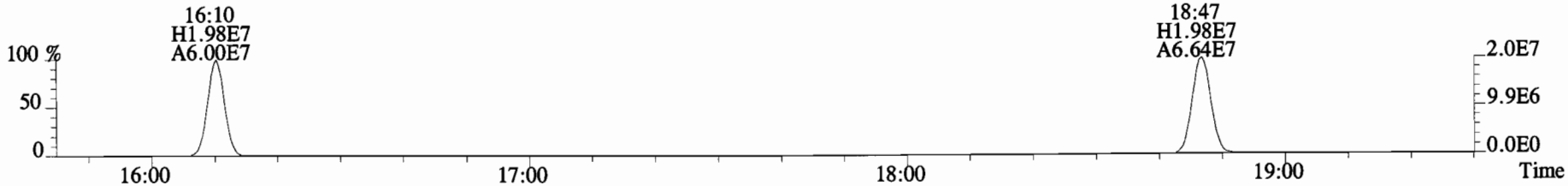
File:150319E2 #1-867 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4244.0,0.00%,F,F)



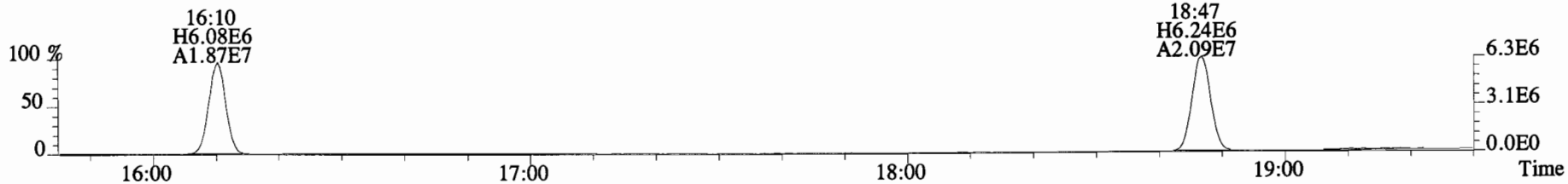
190.0363 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3072.0,0.00%,F,F)



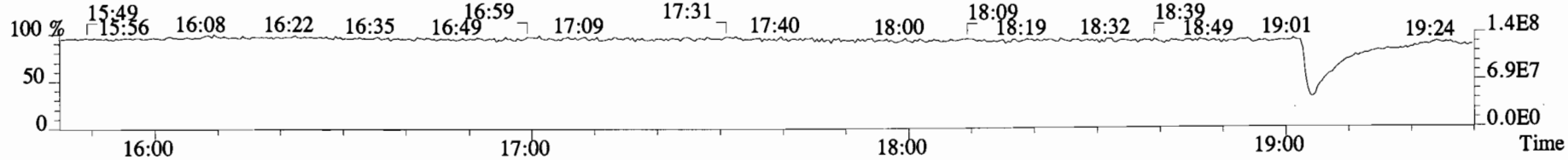
200.0795 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4404.0,0.00%,F,F)



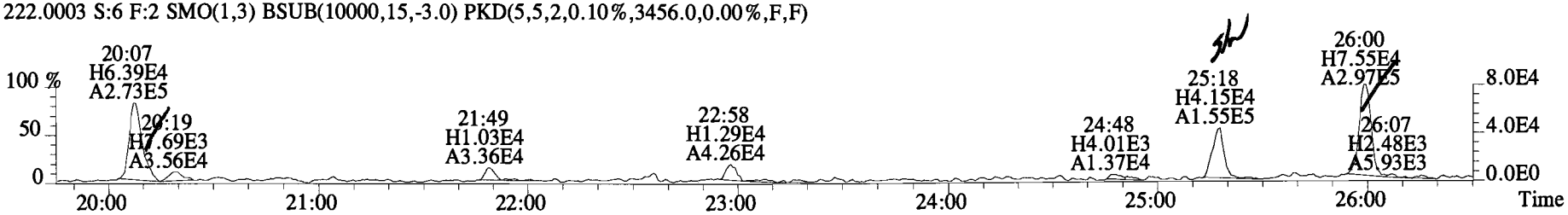
202.0766 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33332.0,0.00%,F,F)



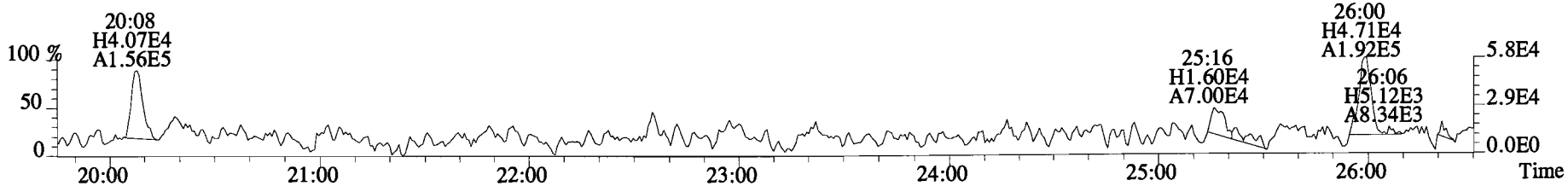
180.9880 S:6



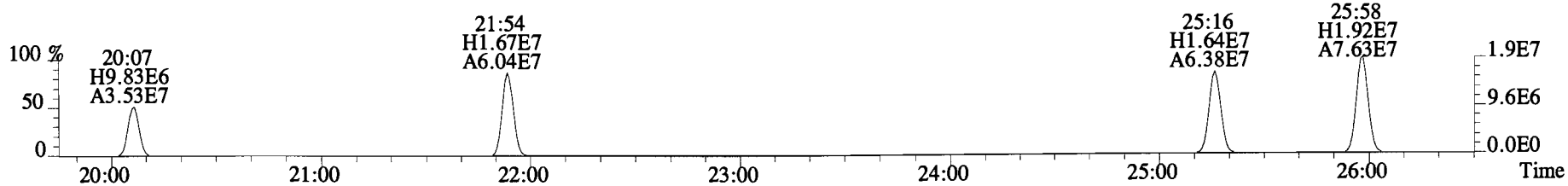
File:150319E2 #1-757 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3456.0,0.00%,F,F)



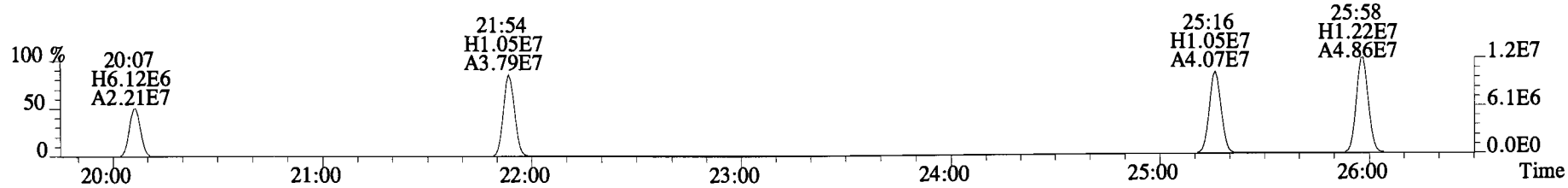
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14396.0,0.00%,F,F)



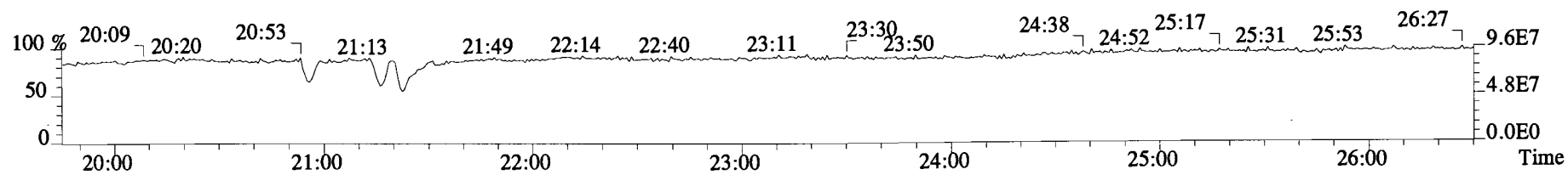
234.0406 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3700.0,0.00%,F,F)



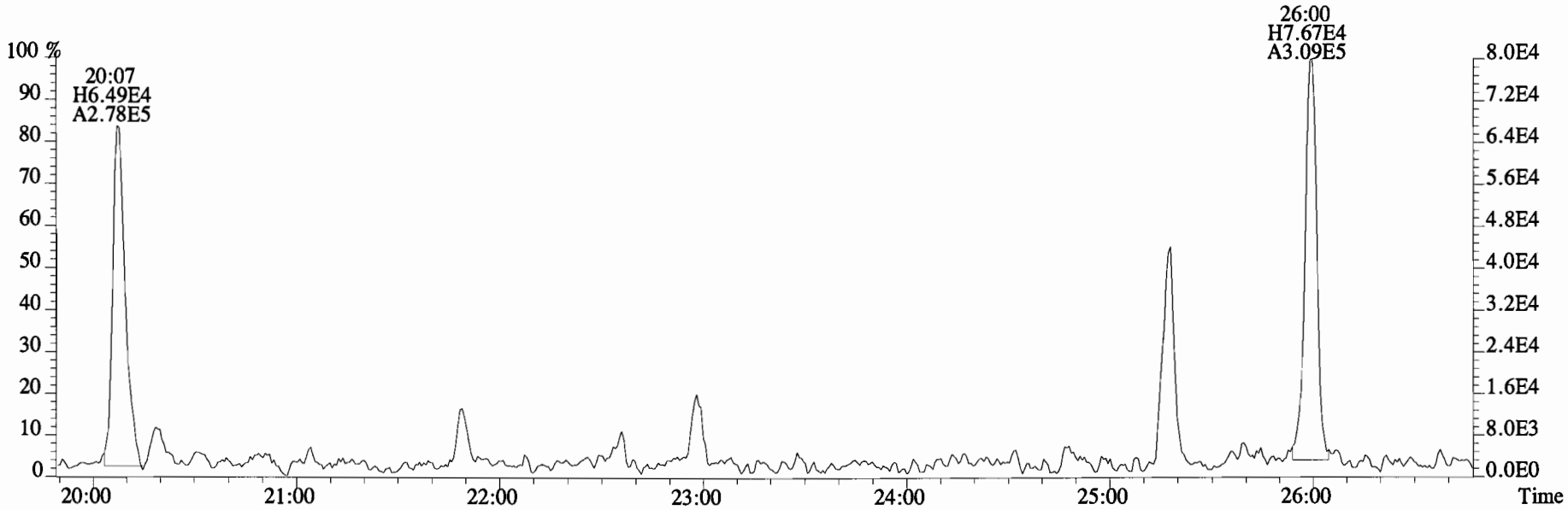
236.0376 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2744.0,0.00%,F,F)



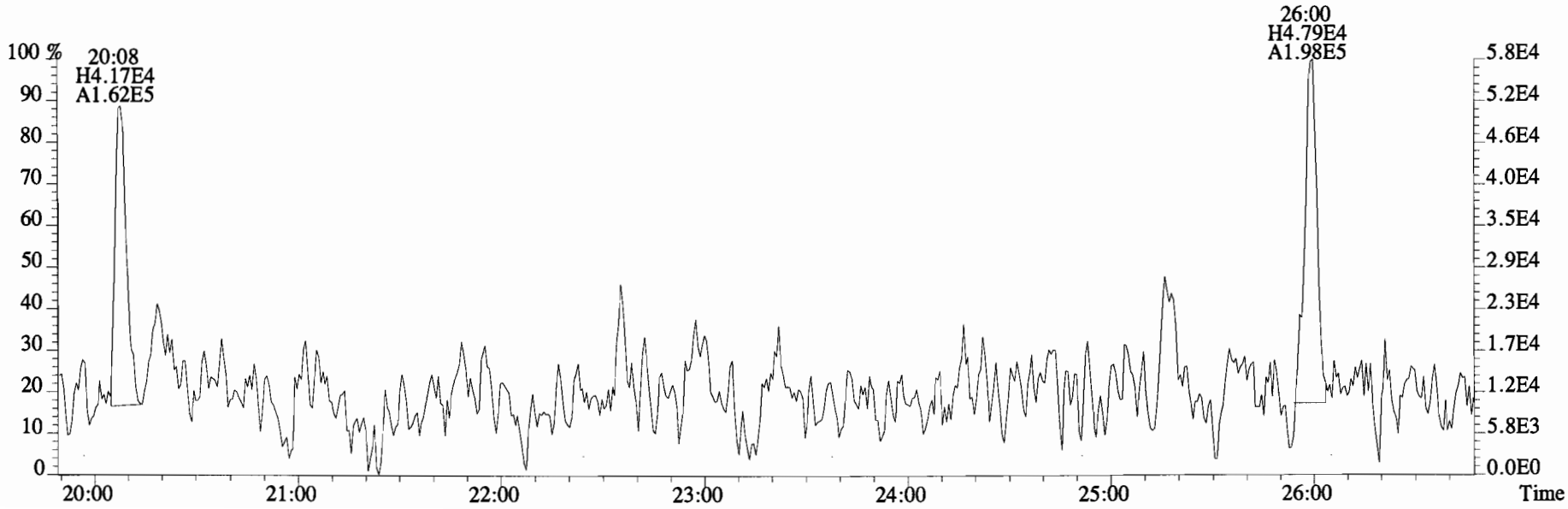
230.9856 S:6 F:2



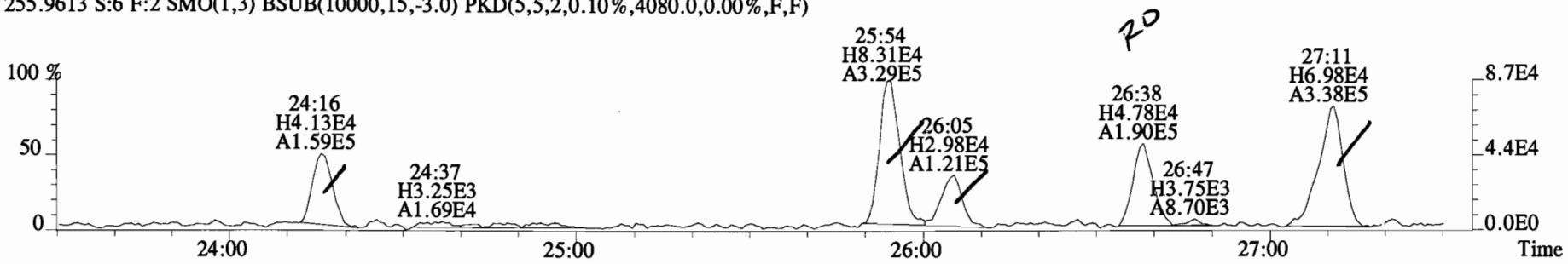
File:150319E2 #1-757 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0)



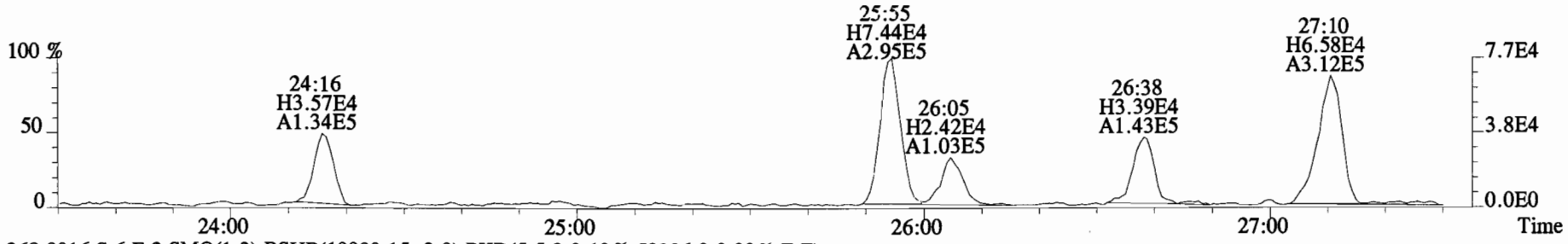
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0)



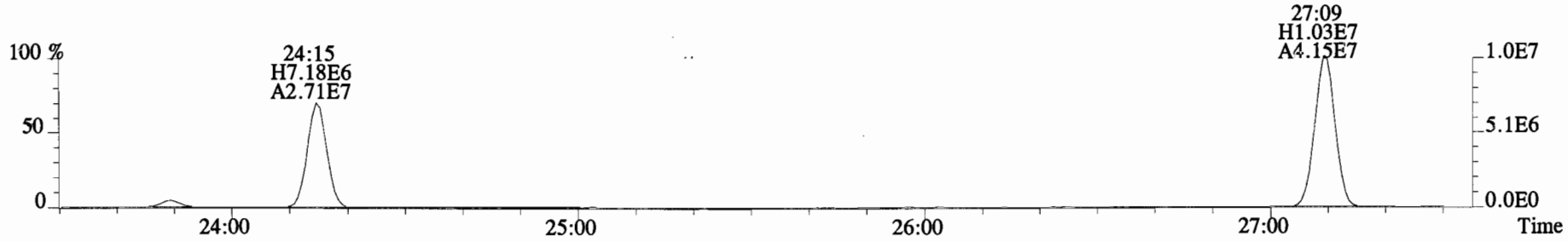
File:150319E2 #1-757 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4080.0,0.00%,F,F)



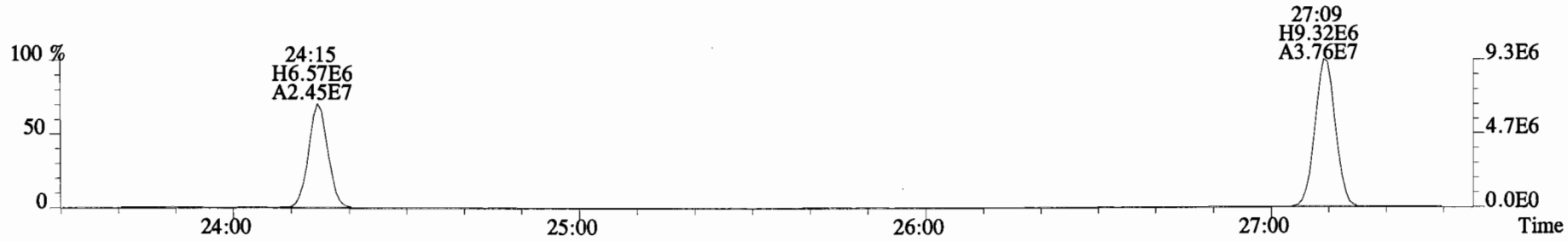
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2540.0,0.00%,F,F)



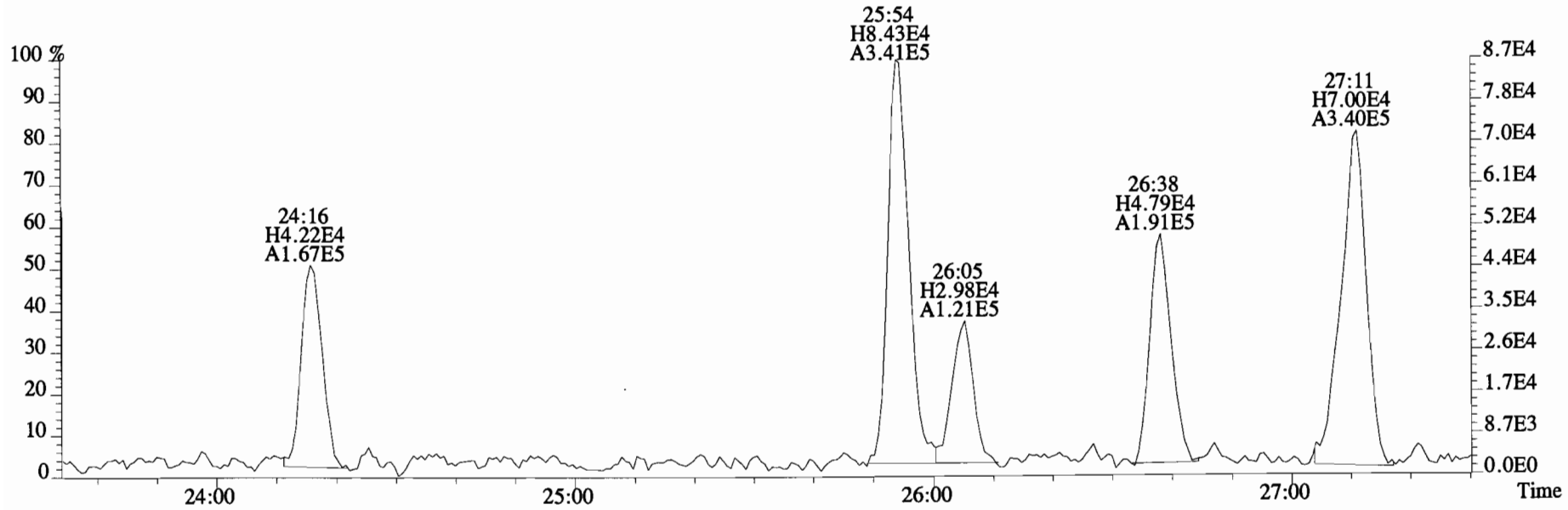
268.0016 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,59296.0,0.00%,F,F)



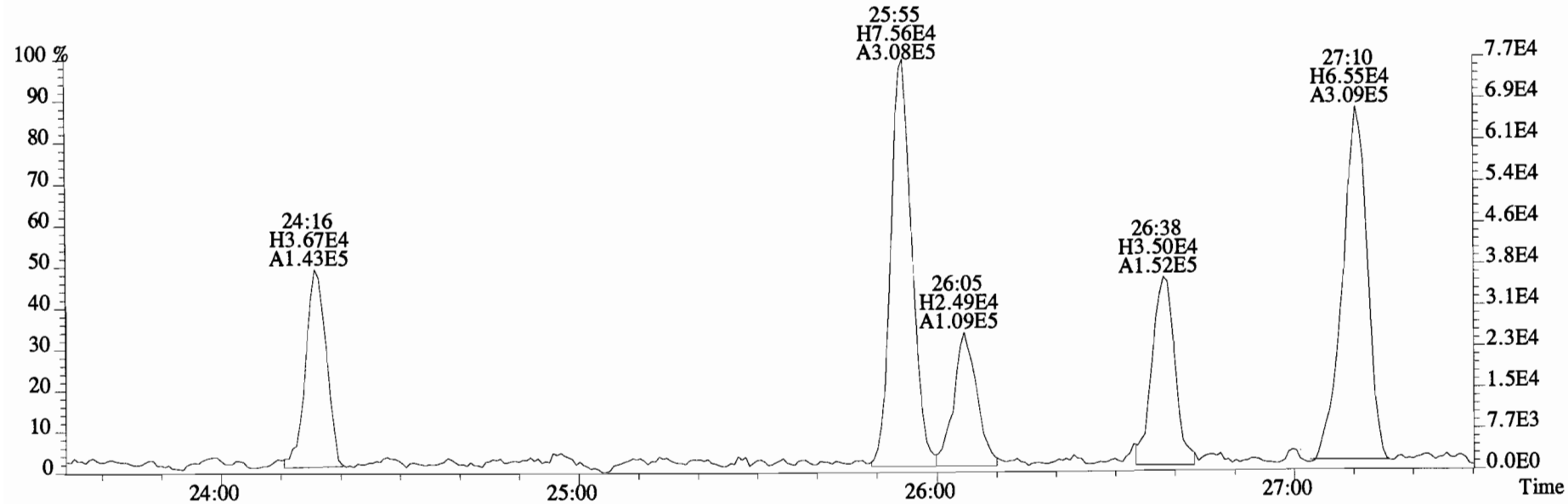
269.9986 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33992.0,0.00%,F,F)



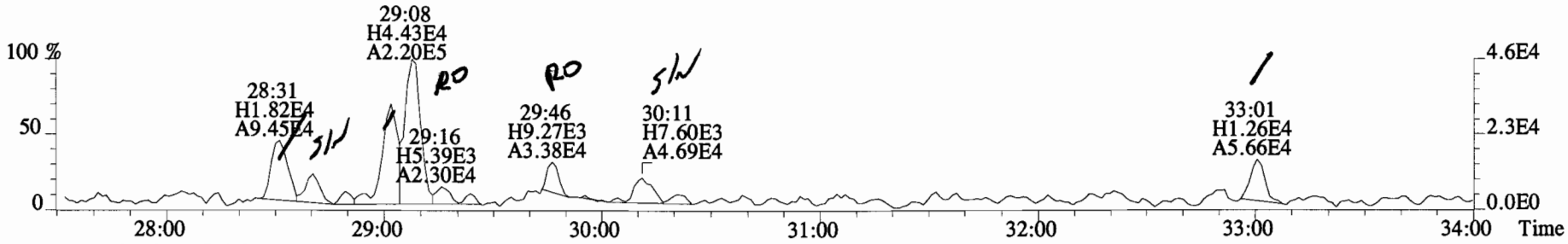
File:150319E2 #1-757 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4080.0,0.00%,F,F)



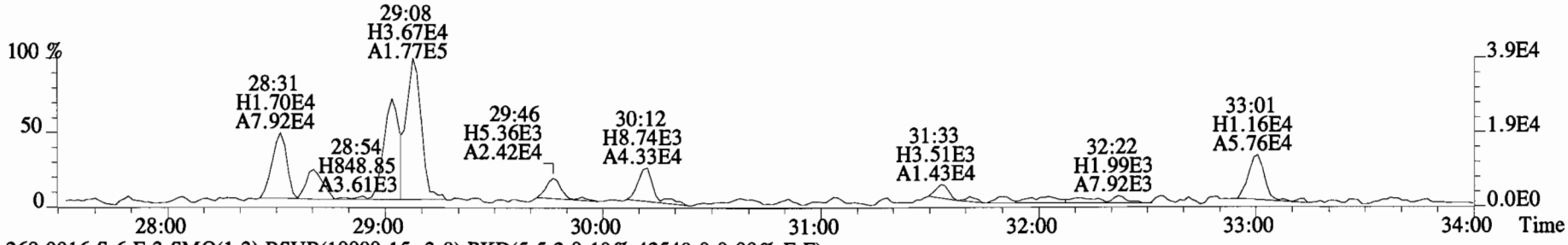
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2540.0,0.00%,F,F)



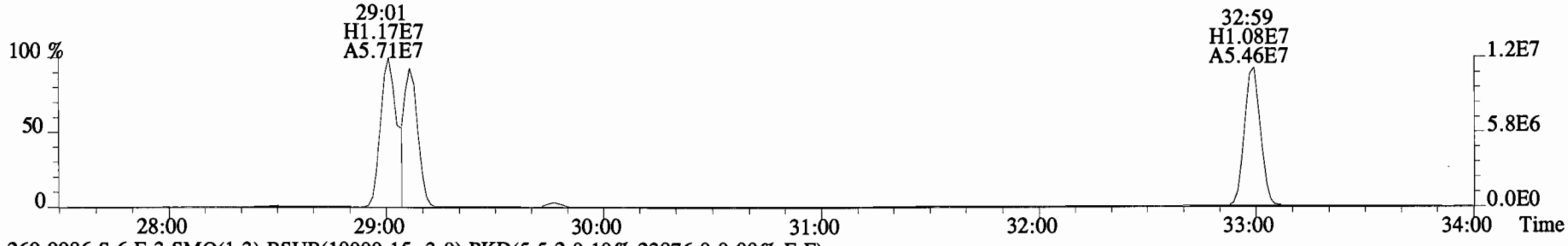
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4056.0,0.00%,F,F)



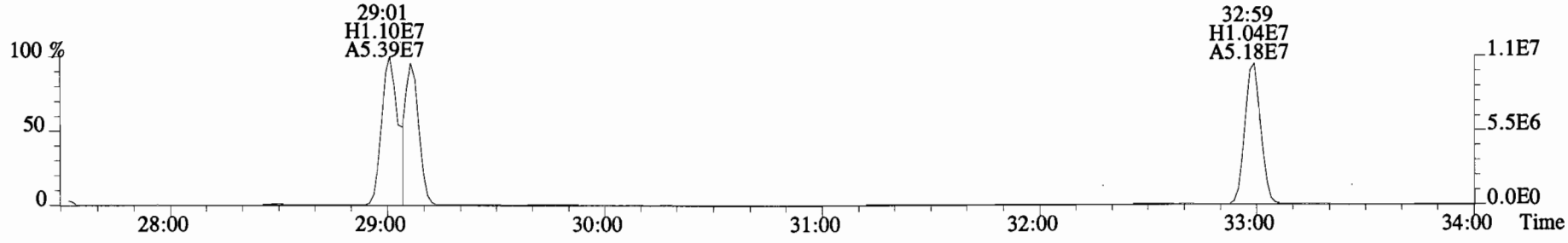
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2152.0,0.00%,F,F)



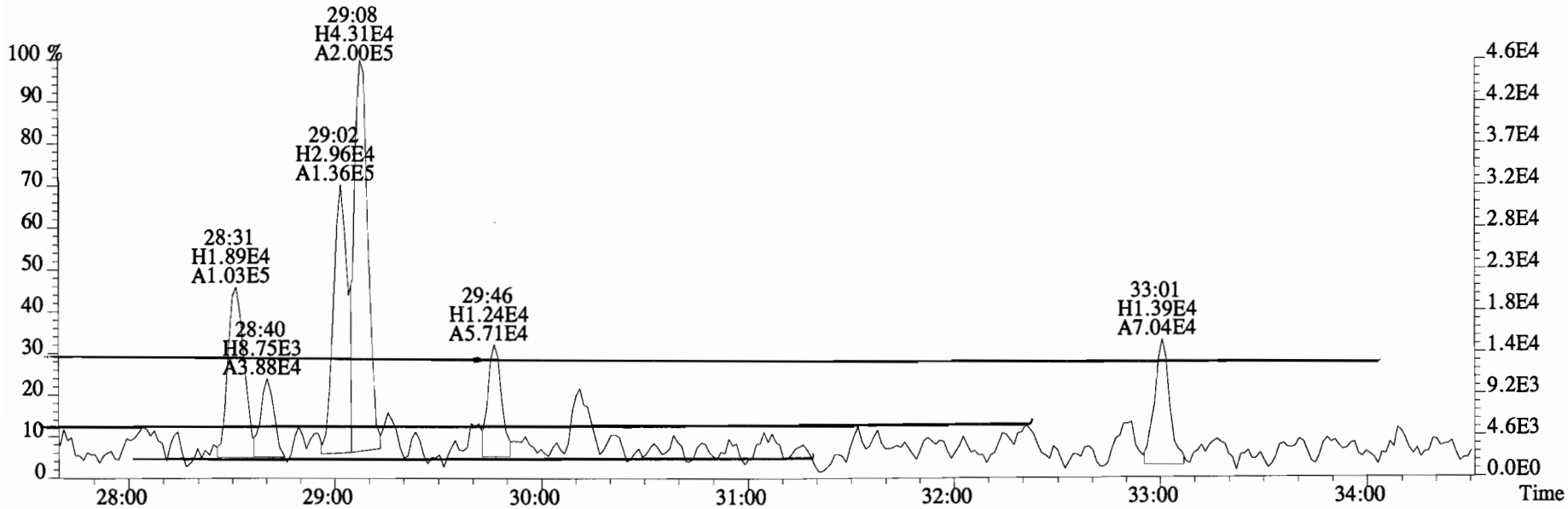
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,42540.0,0.00%,F,F)



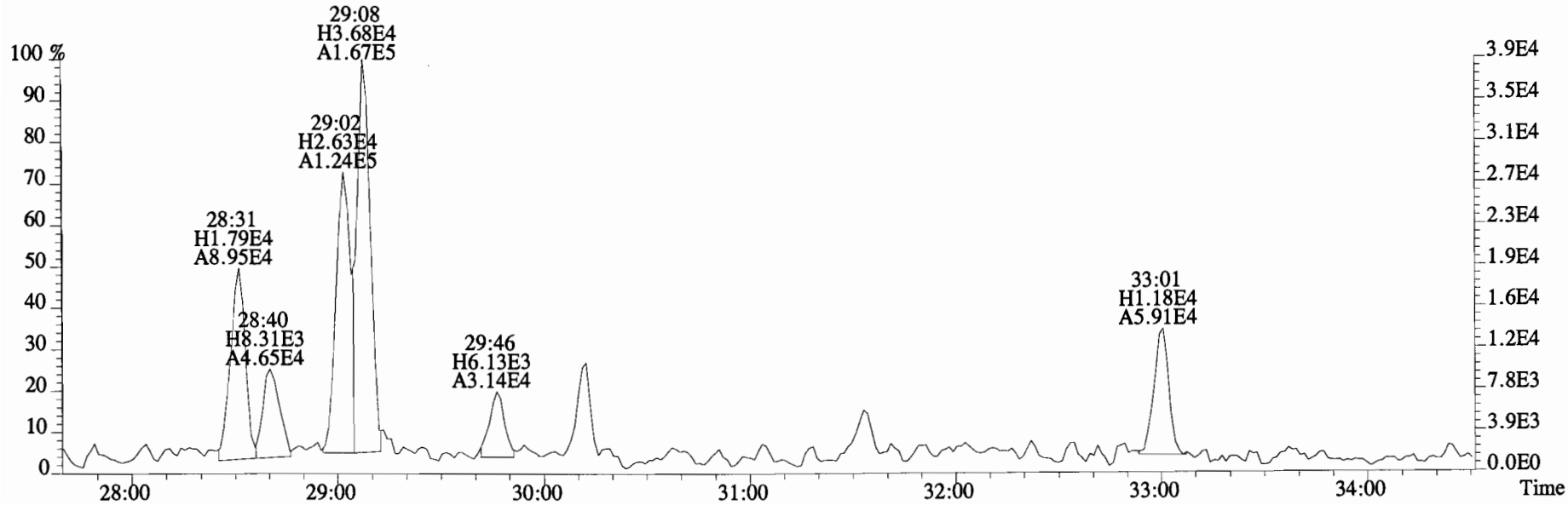
269.9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23876.0,0.00%,F,F)



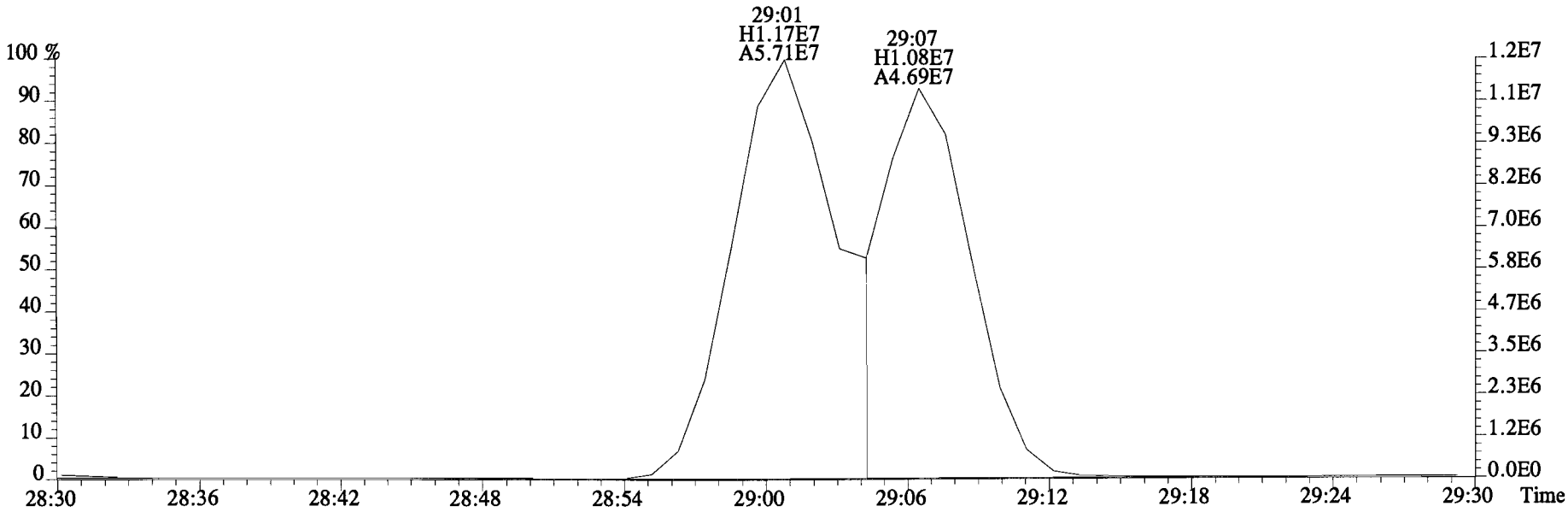
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4056.0,0.00%,F,F)



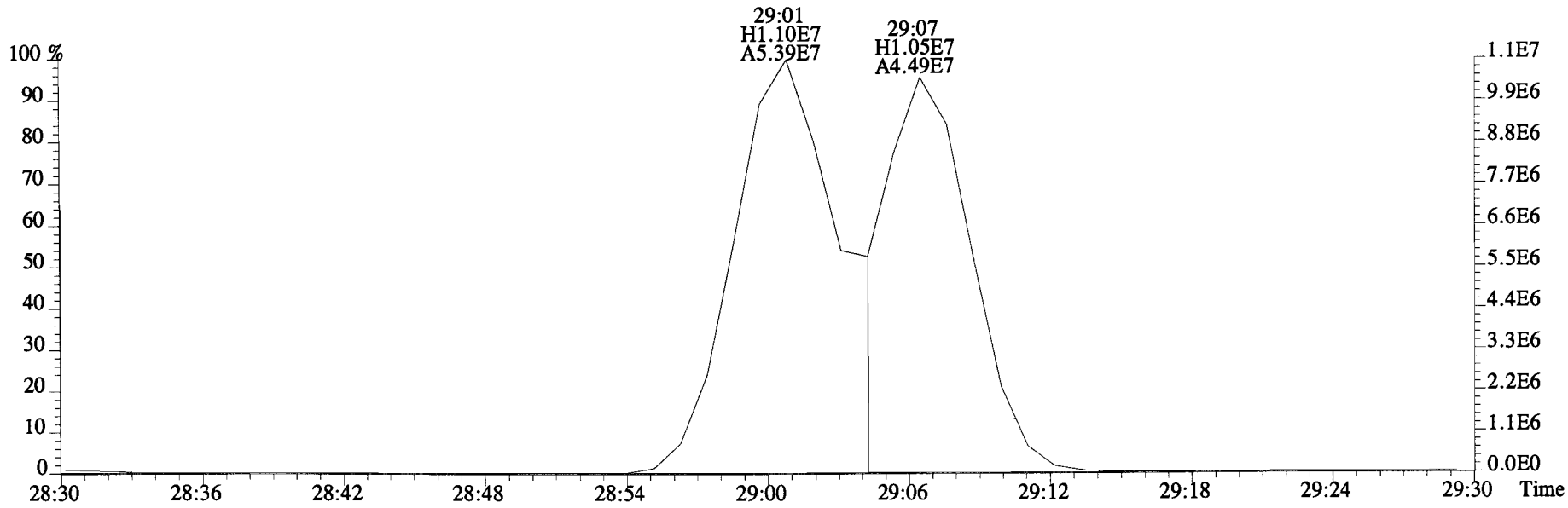
257.9584 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2152.0,0.00%,F,F)



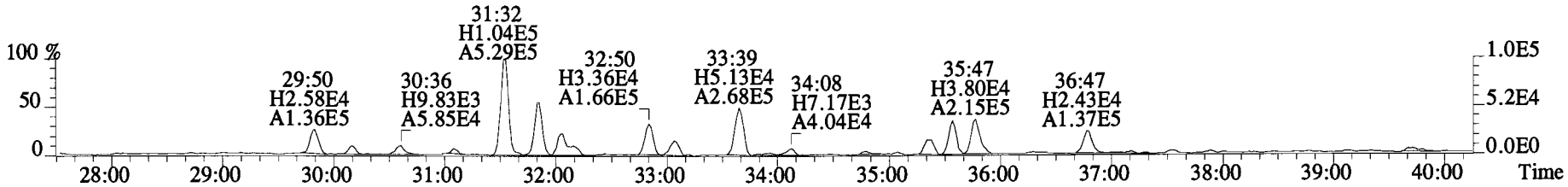
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,42540.0,0.00%,F,F)



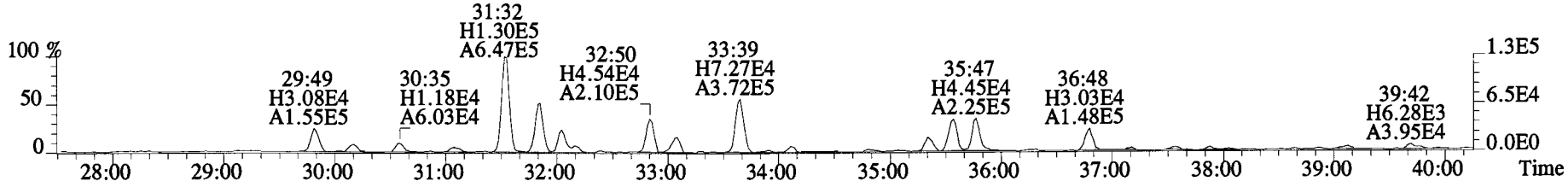
269.9986 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23876.0,0.00%,F,F)



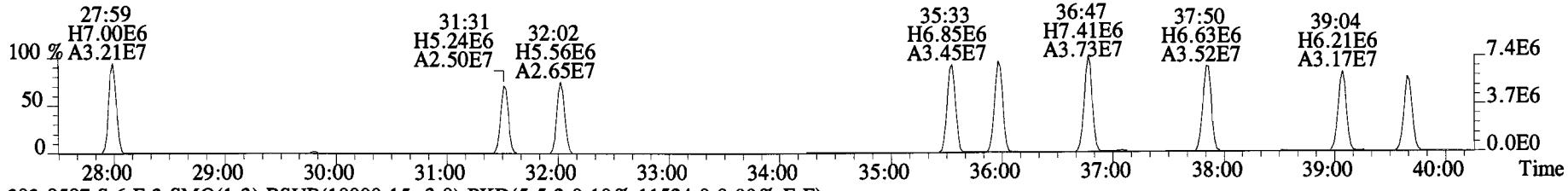
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2256.0,0.00%,F,F)



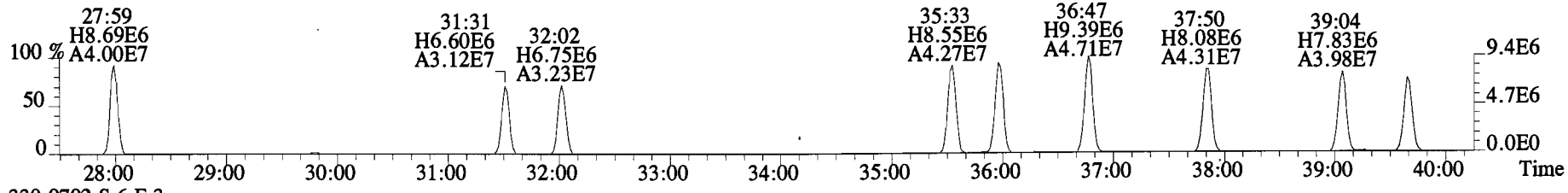
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2064.0,0.00%,F,F)



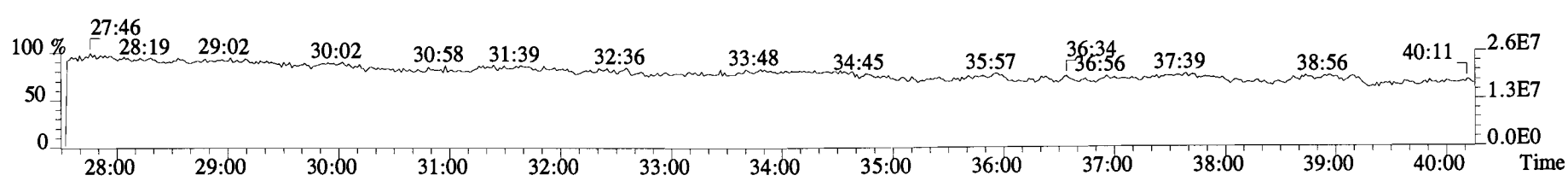
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23128.0,0.00%,F,F)



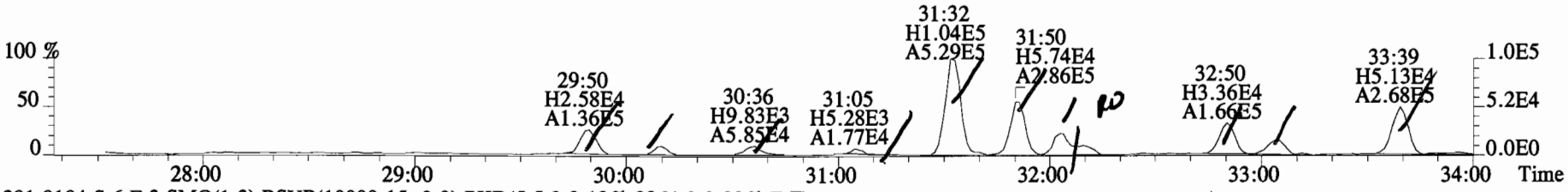
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11524.0,0.00%,F,F)



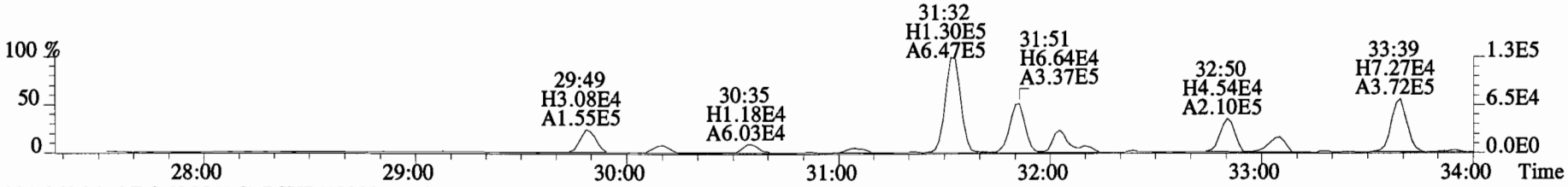
330.9792 S:6 F:3



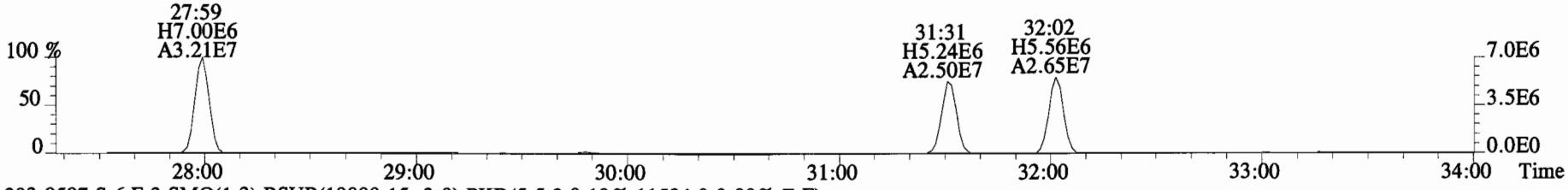
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2256.0,0.00%,F,F)



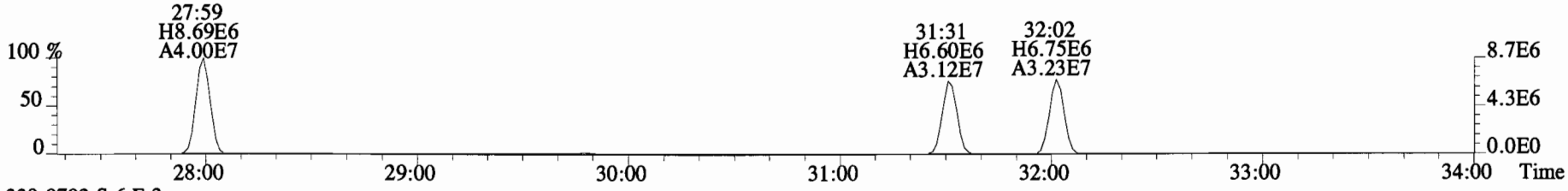
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2064.0,0.00%,F,F)



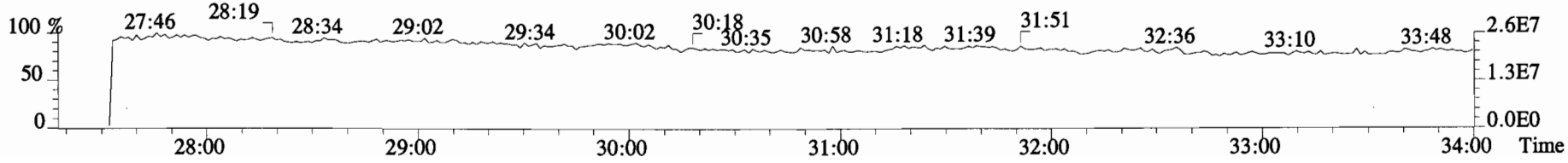
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23128.0,0.00%,F,F)



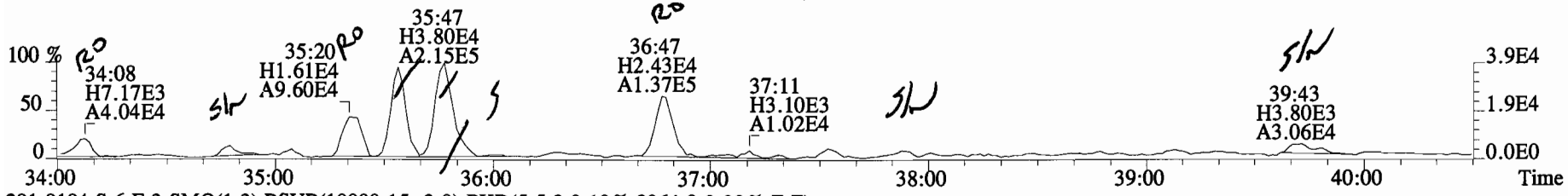
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11524.0,0.00%,F,F)



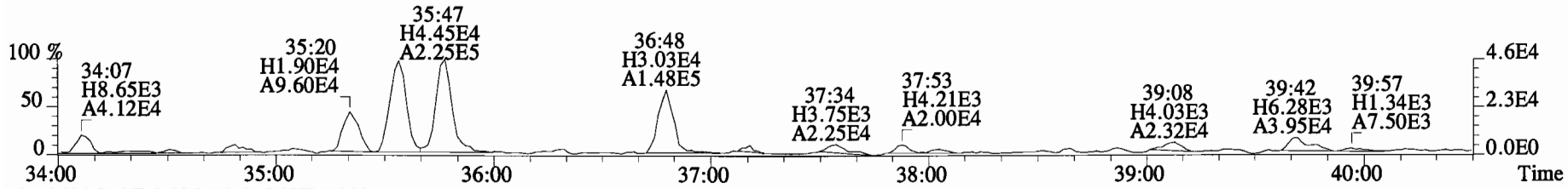
330.9792 S:6 F:3



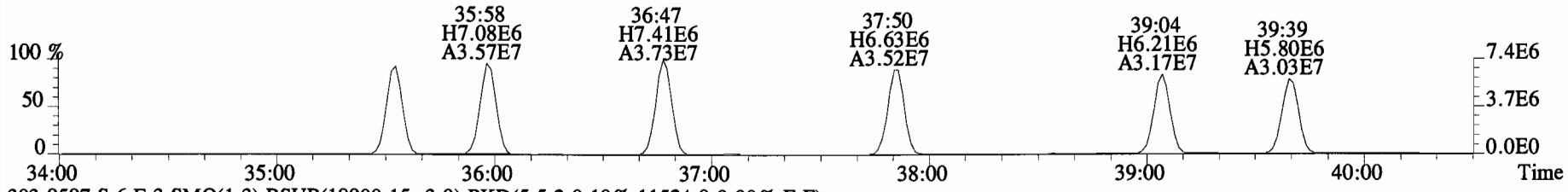
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2256.0,0.00%,F,F)



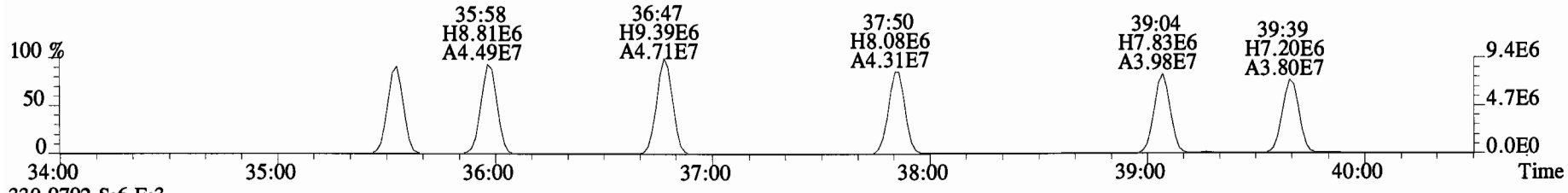
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2064.0,0.00%,F,F)



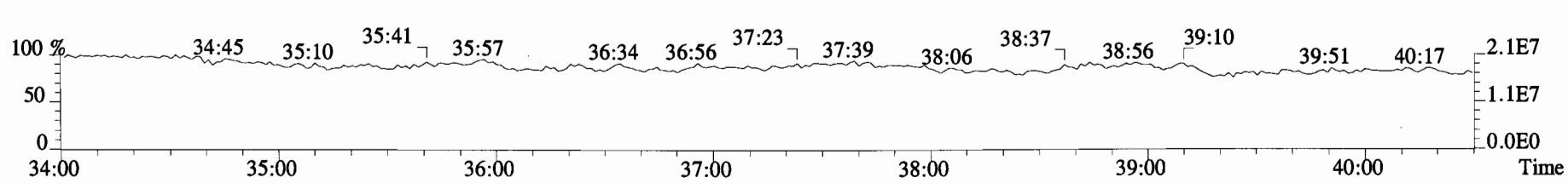
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23128.0,0.00%,F,F)



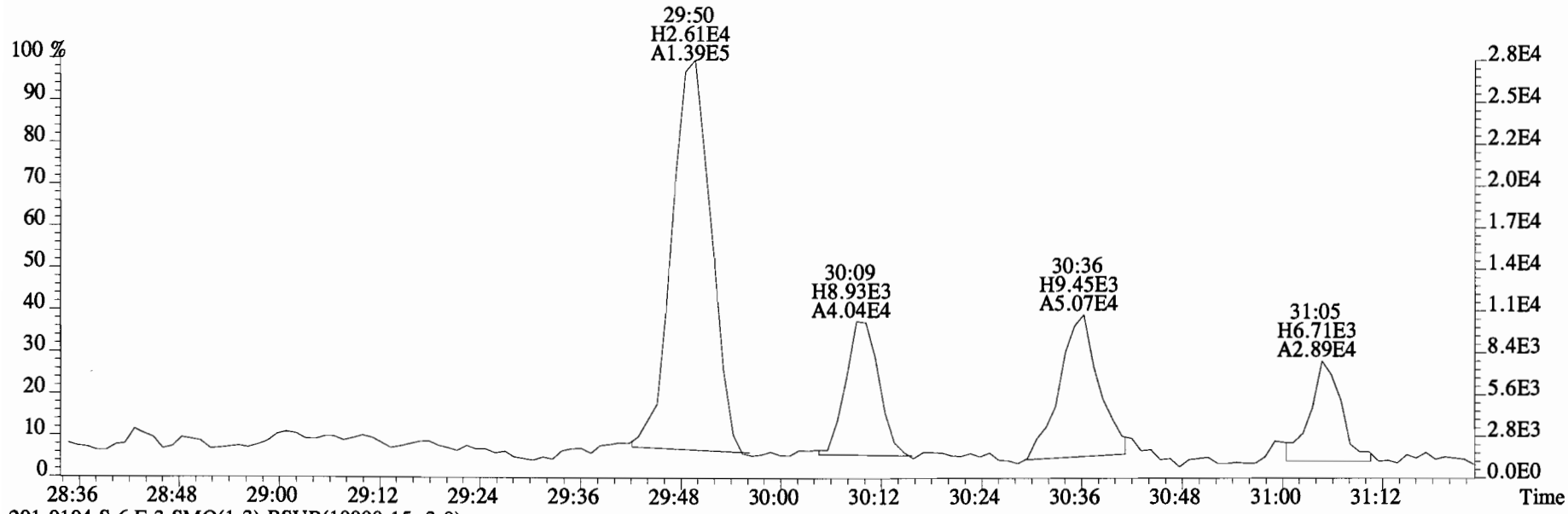
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11524.0,0.00%,F,F)



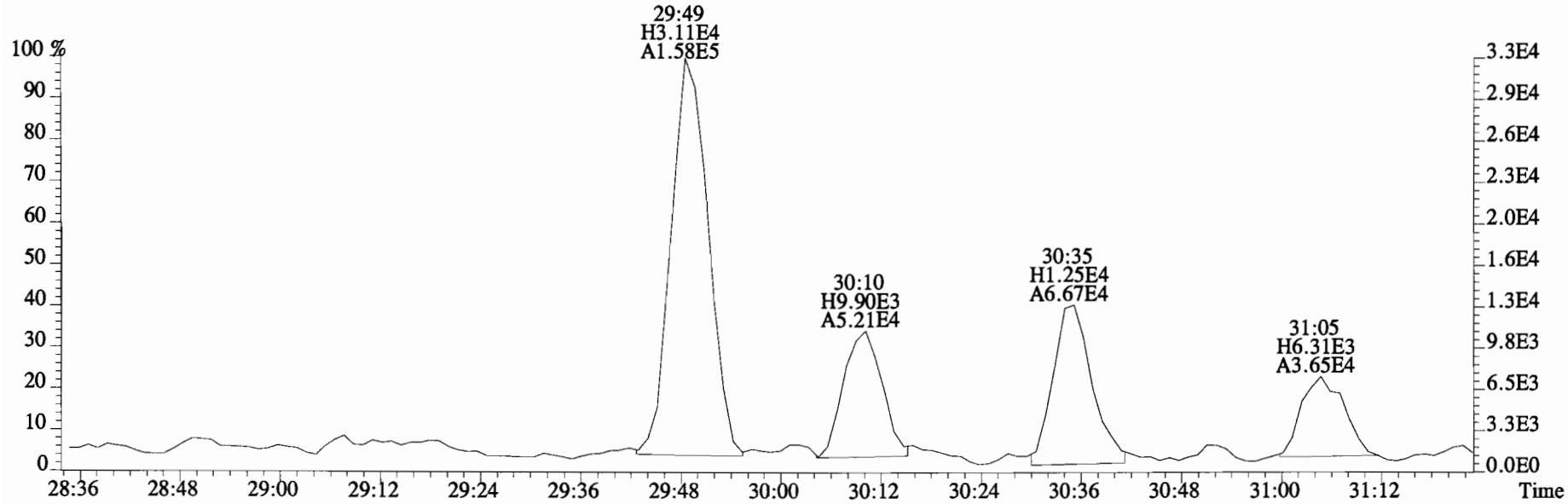
330.9792 S:6 F:3



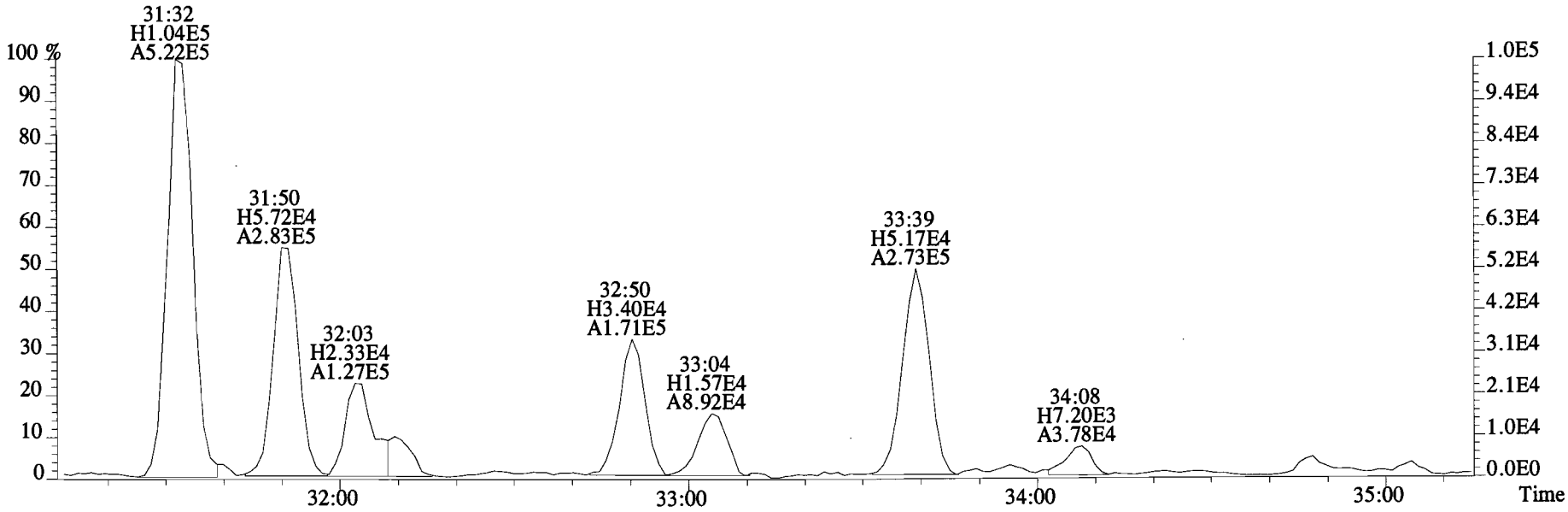
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



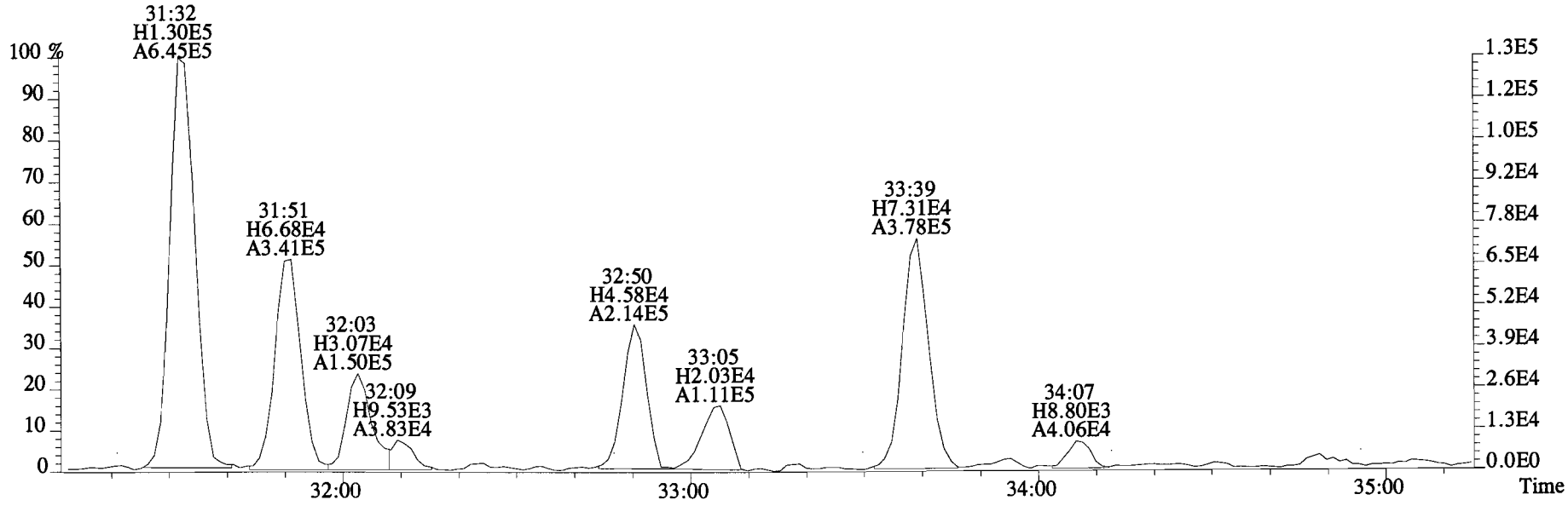
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



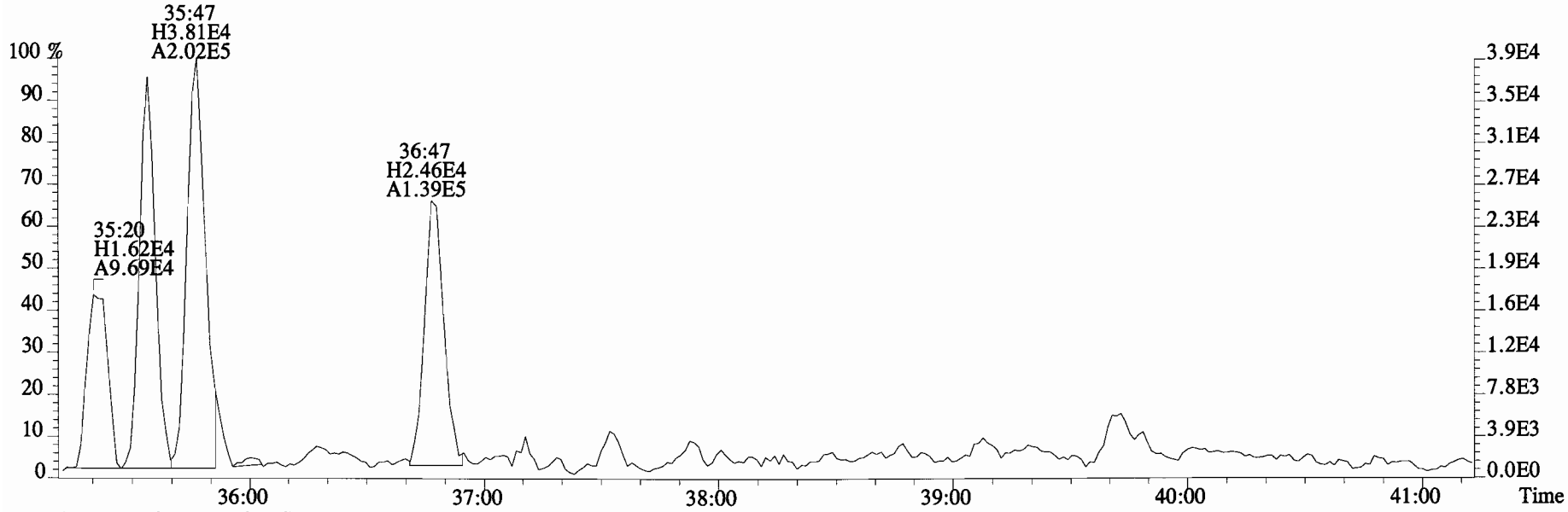
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



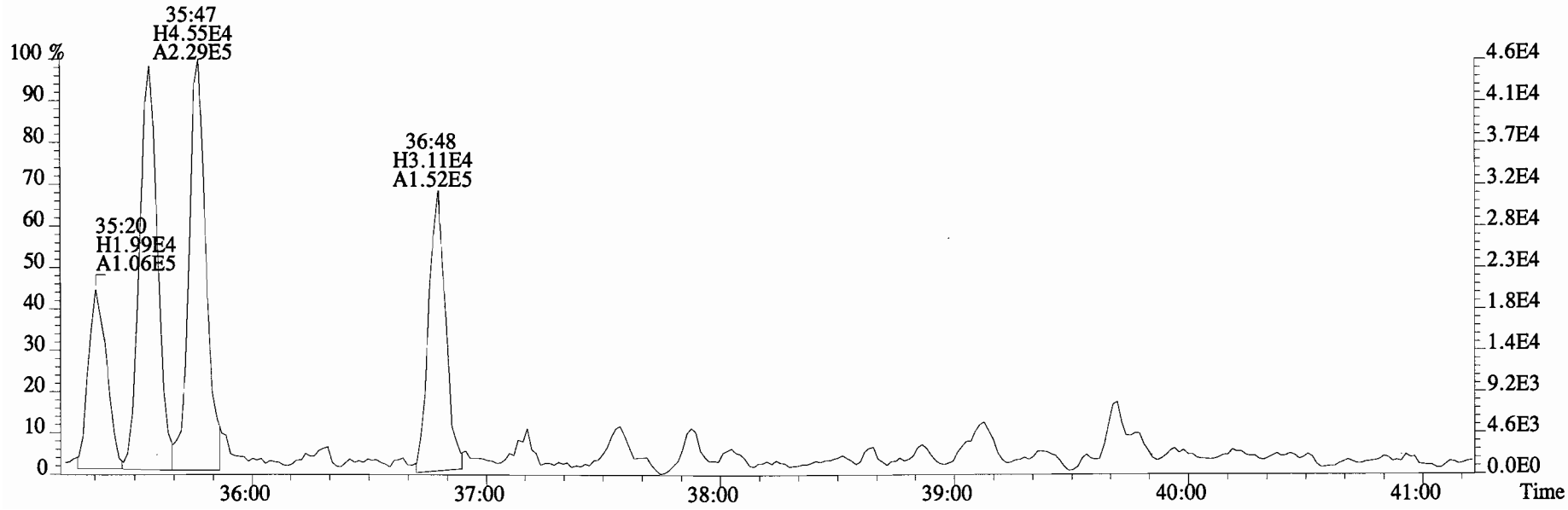
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



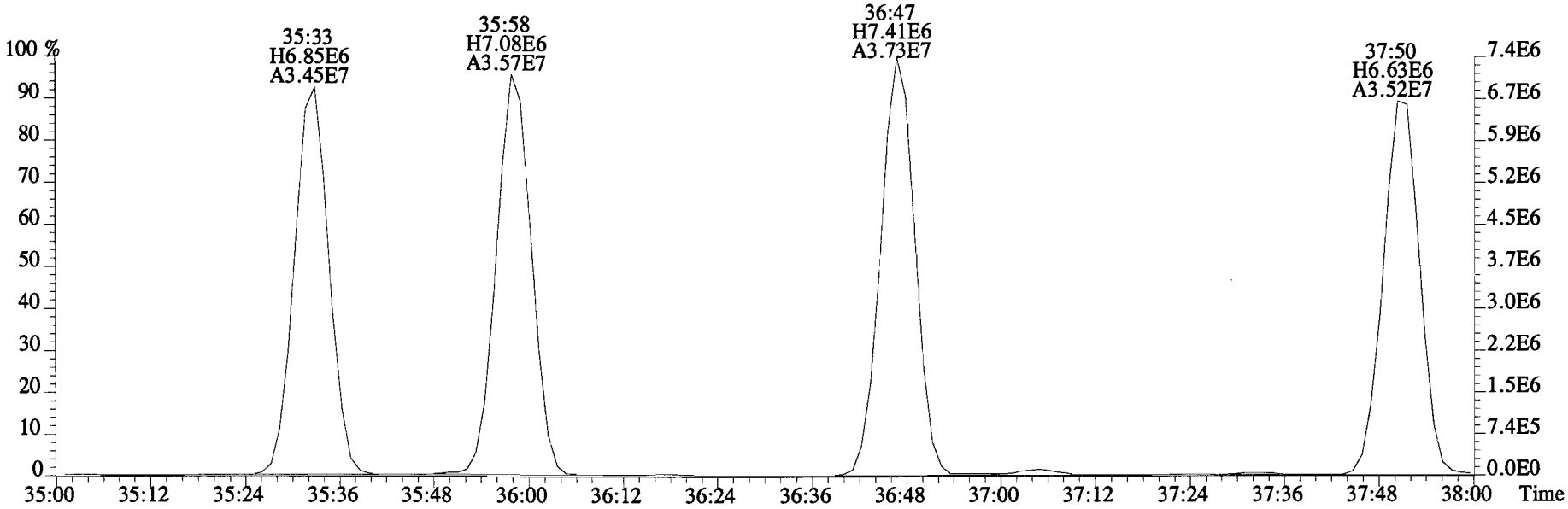
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



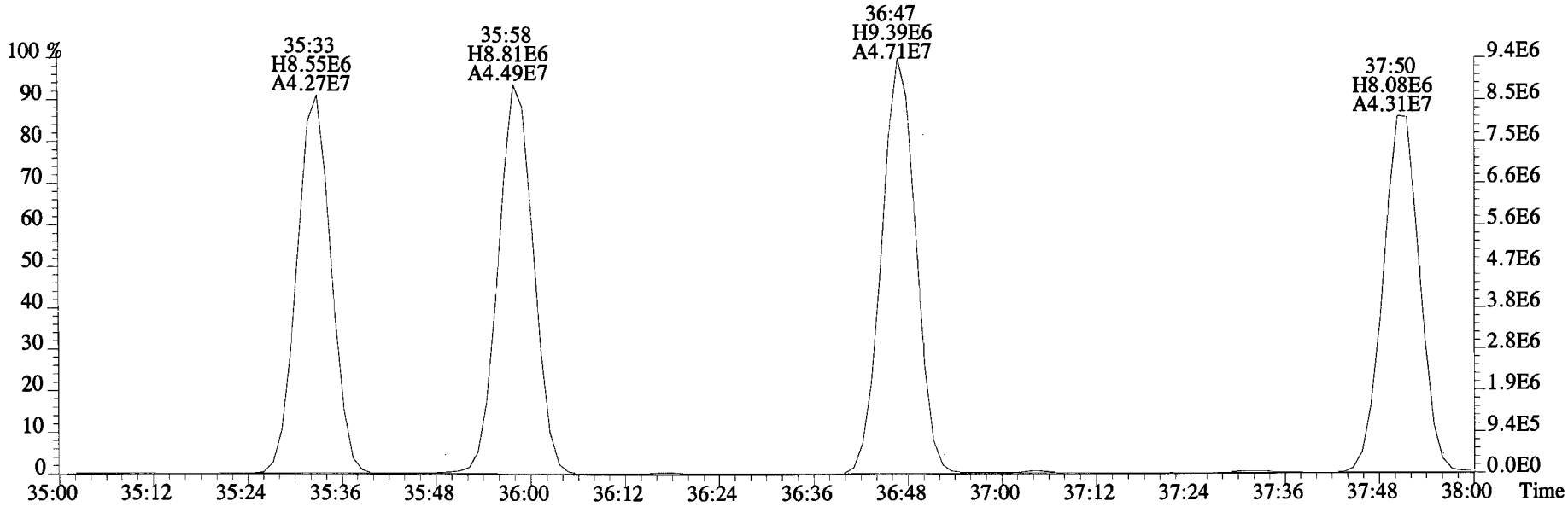
291.9194 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



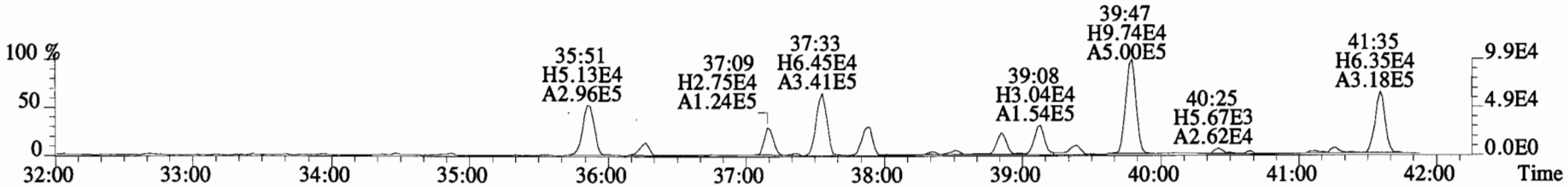
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23128.0,0.00%,F,F)



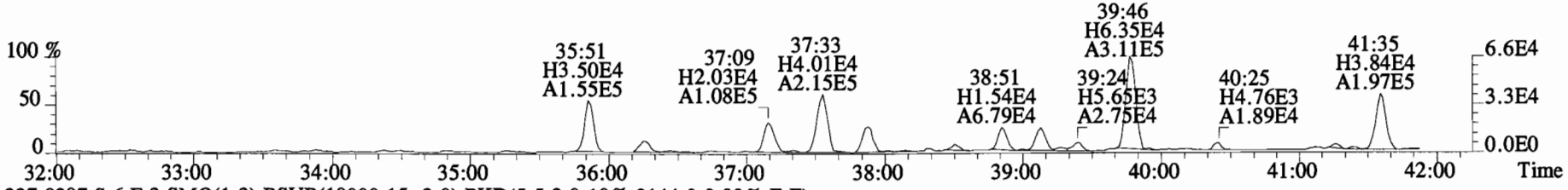
303.9597 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,11524.0,0.00%,F,F)



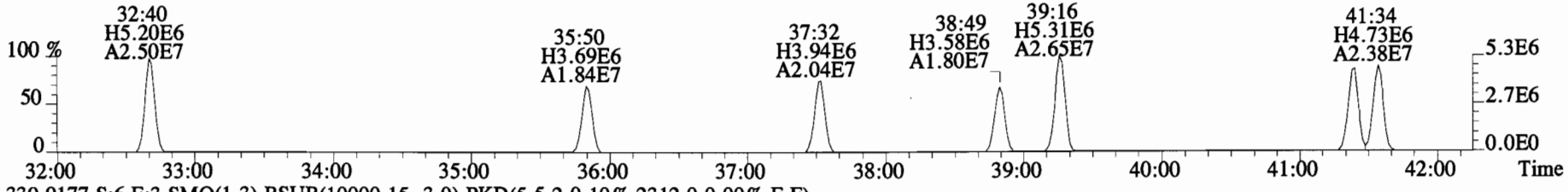
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



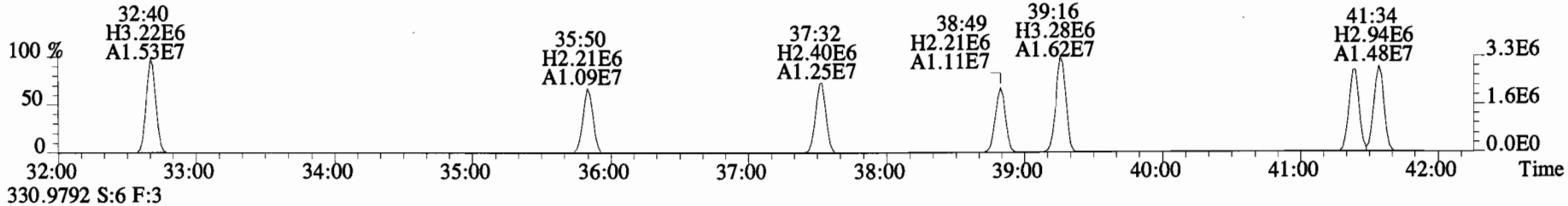
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



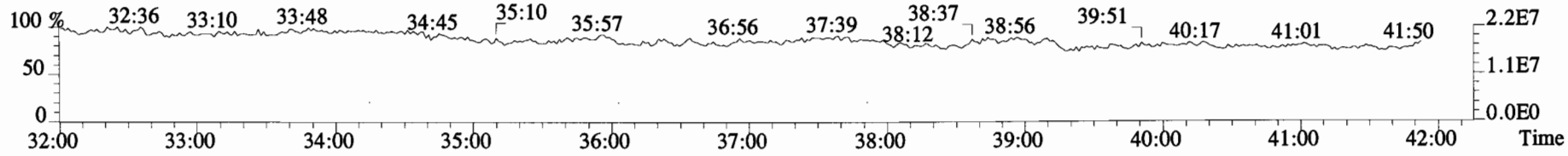
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2144.0,0.00%,F,F)



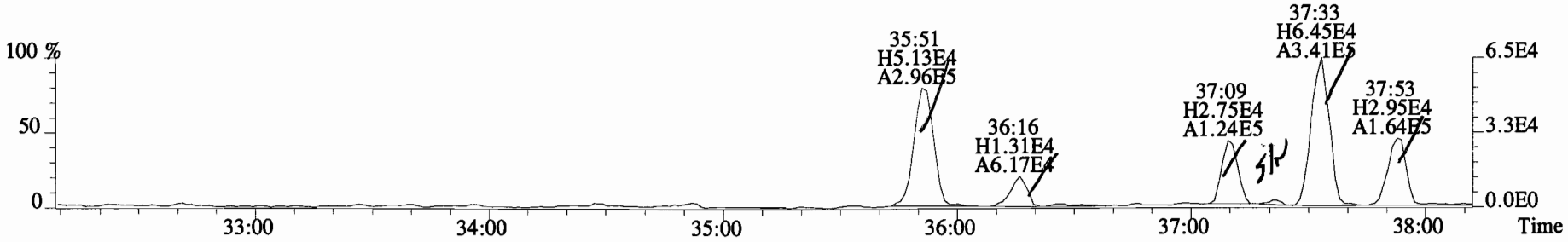
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2312.0,0.00%,F,F)



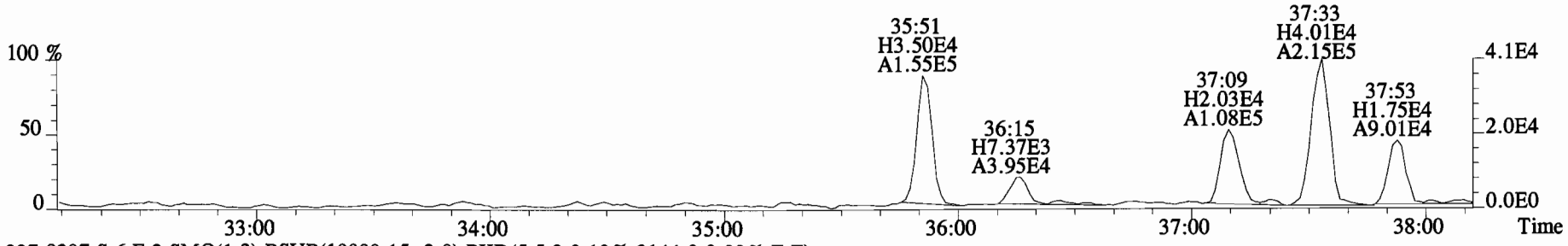
330.9792 S:6 F:3



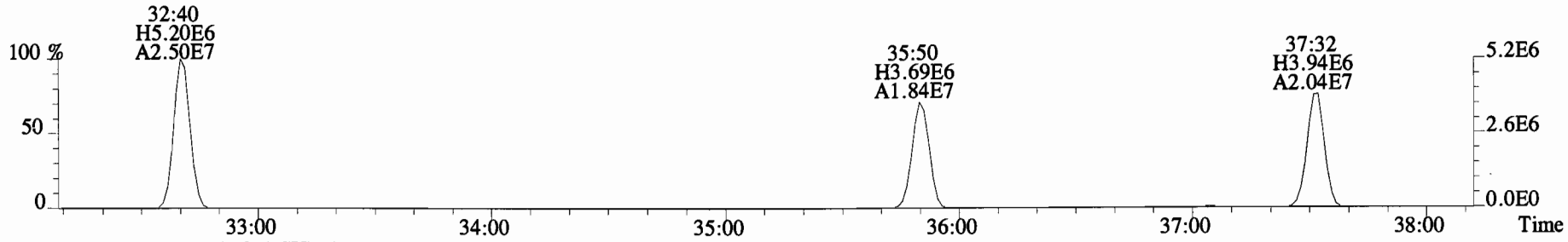
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



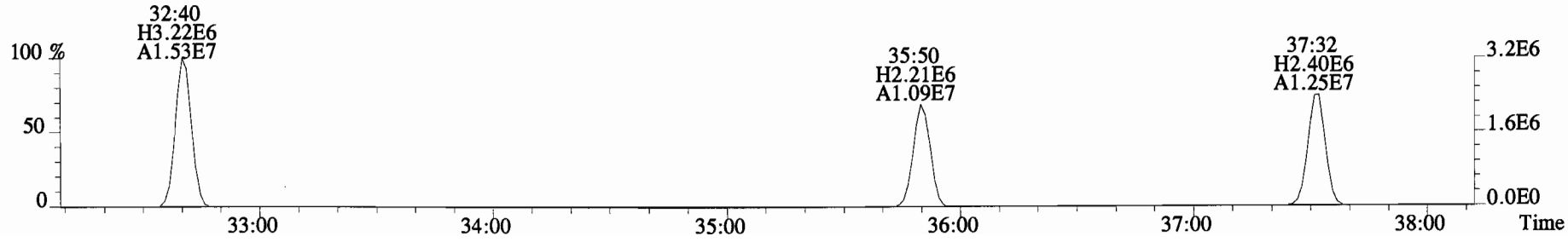
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



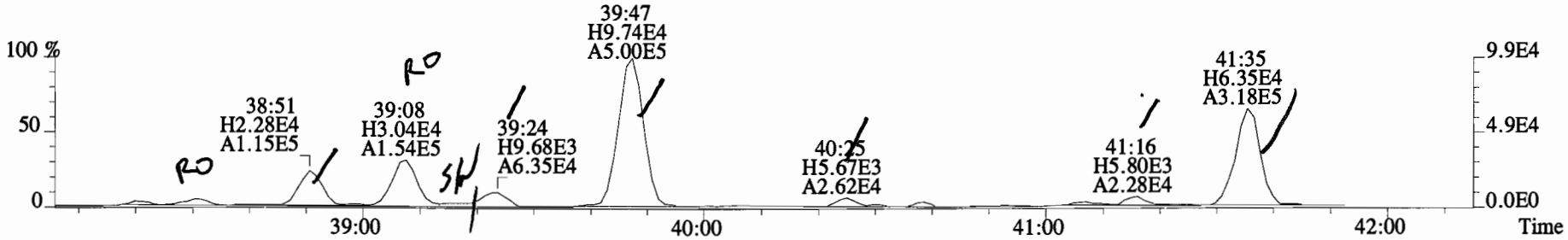
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2144.0,0.00%,F,F)



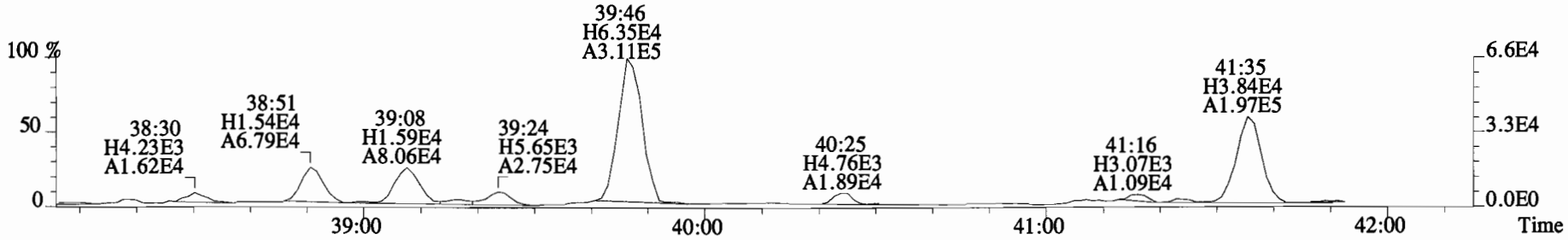
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2312.0,0.00%,F,F)



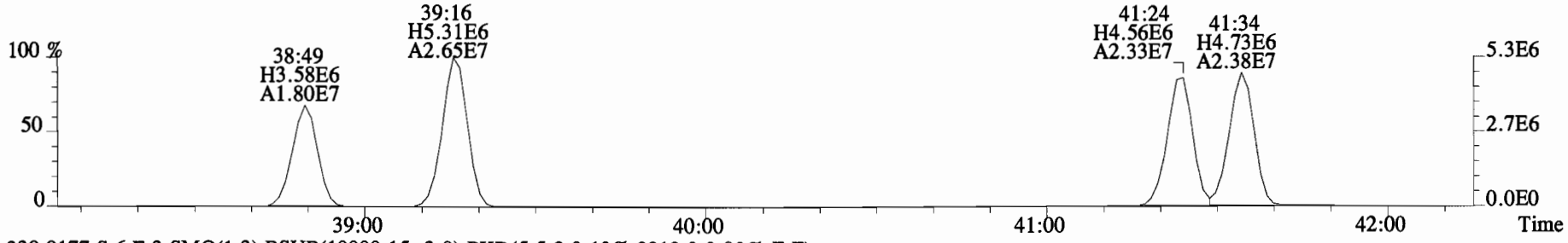
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



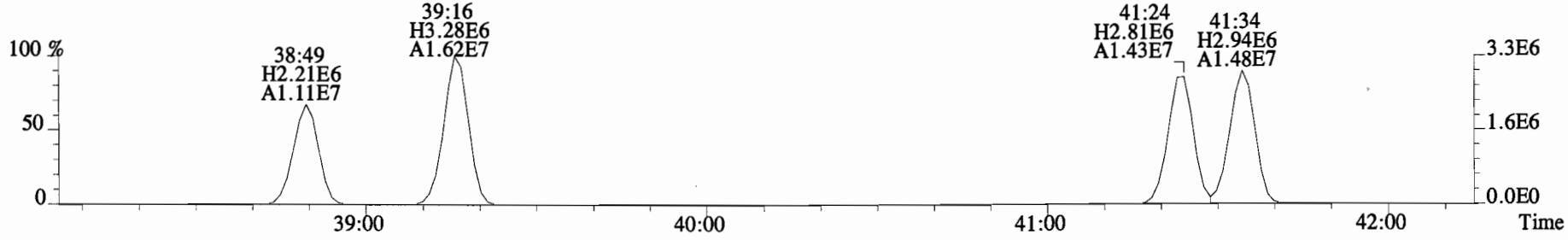
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



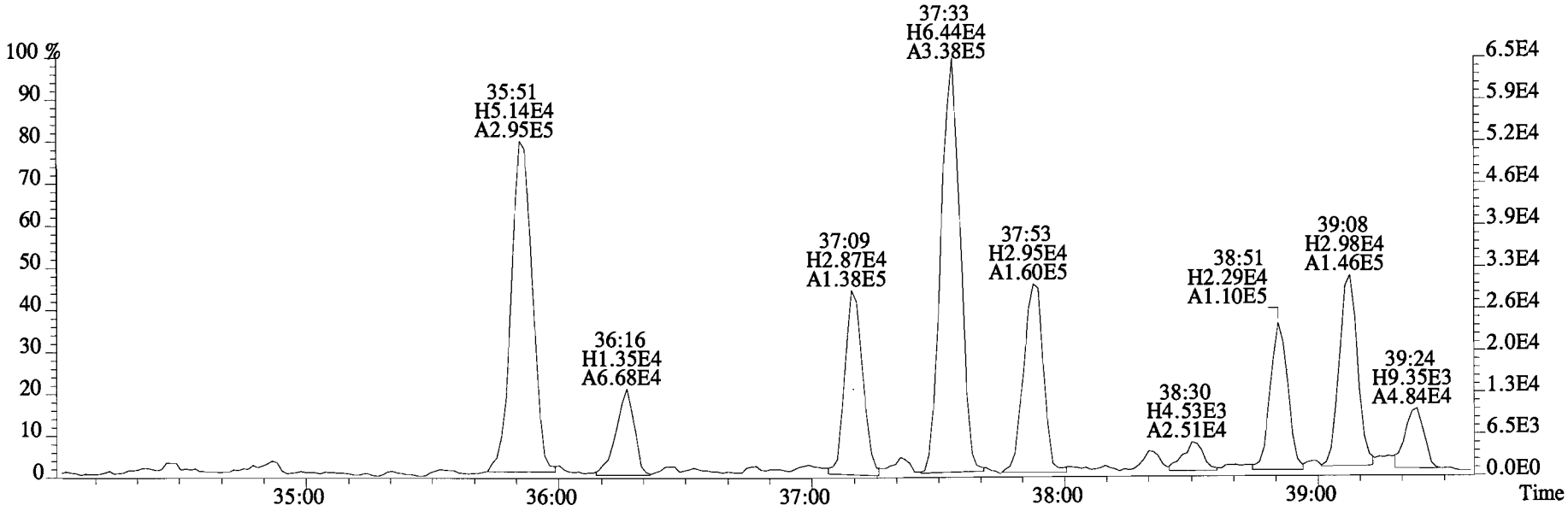
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2144.0,0.00%,F,F)



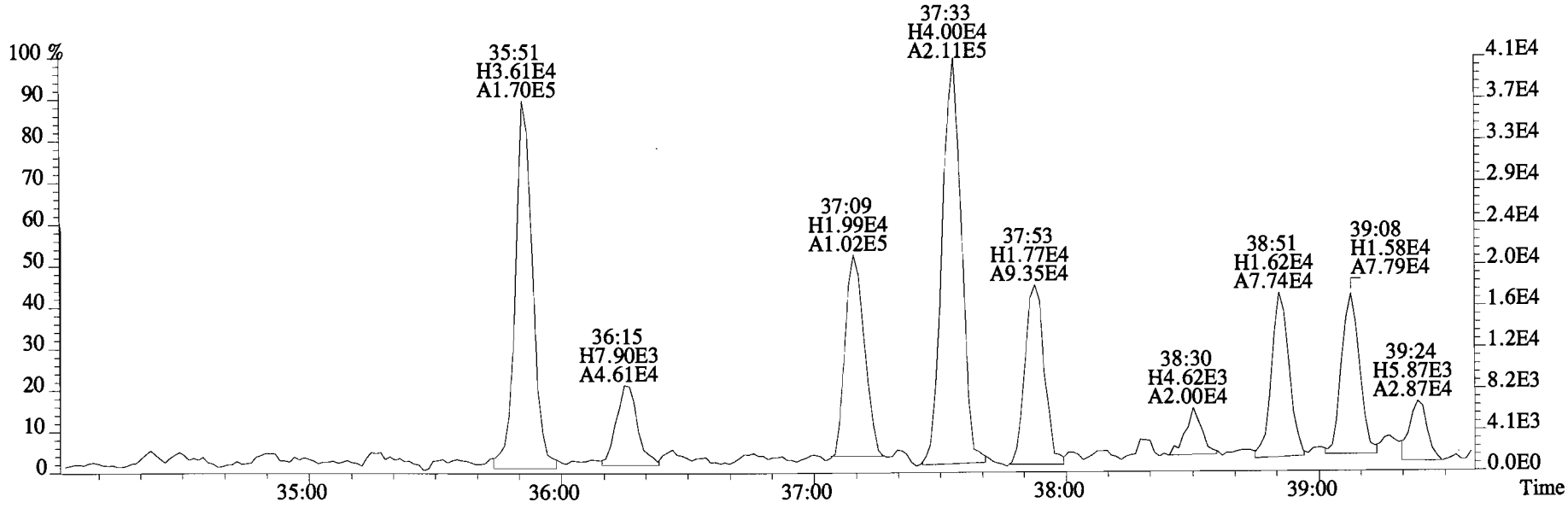
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2312.0,0.00%,F,F)



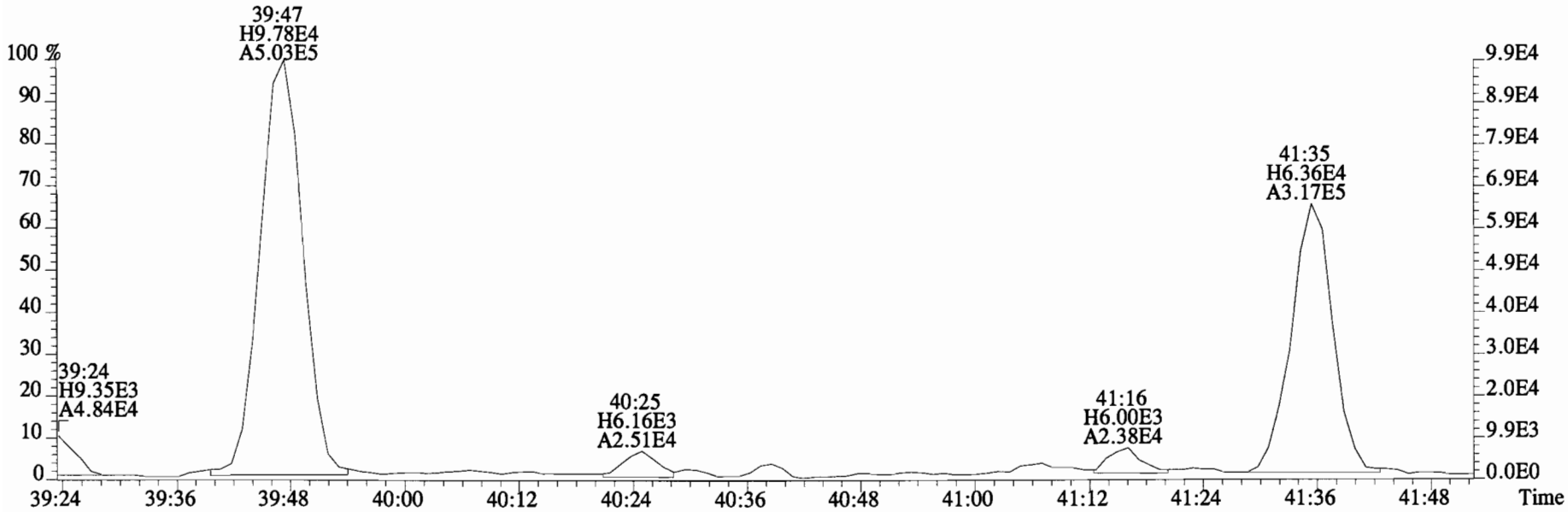
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



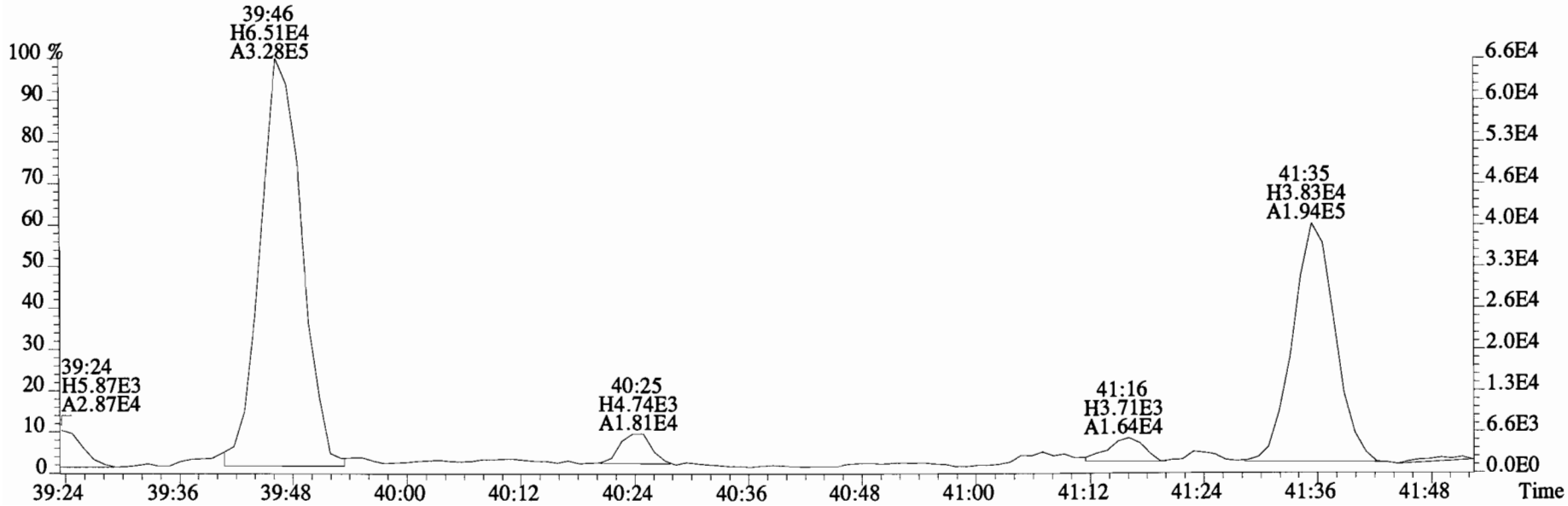
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



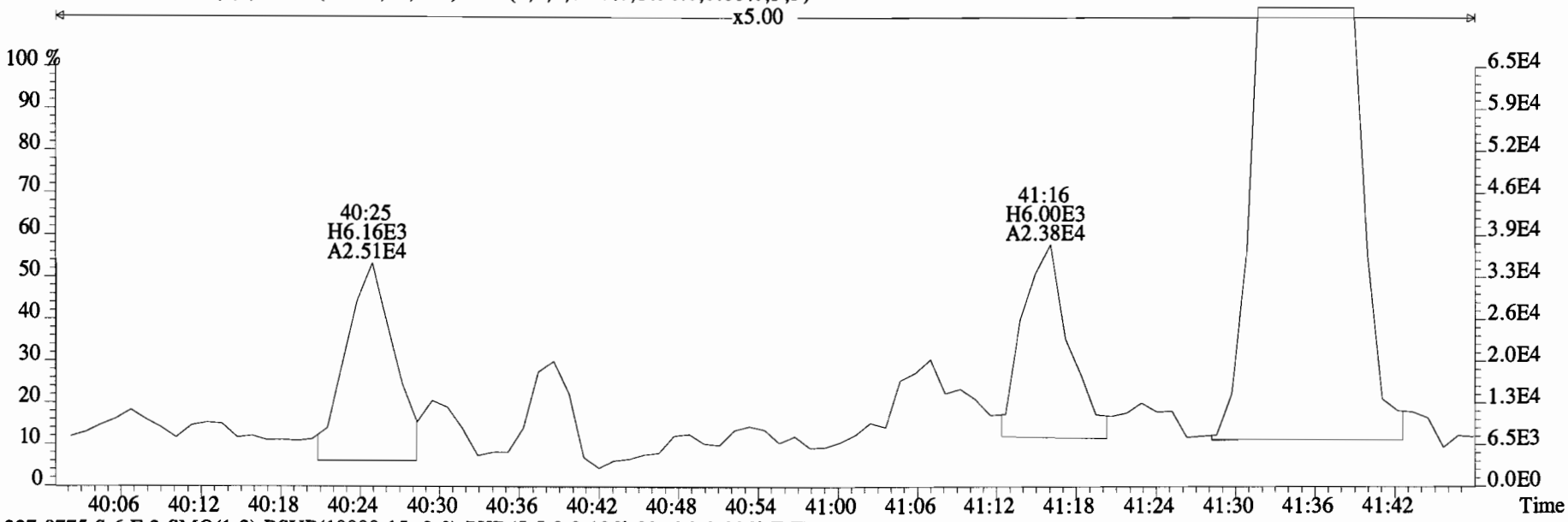
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



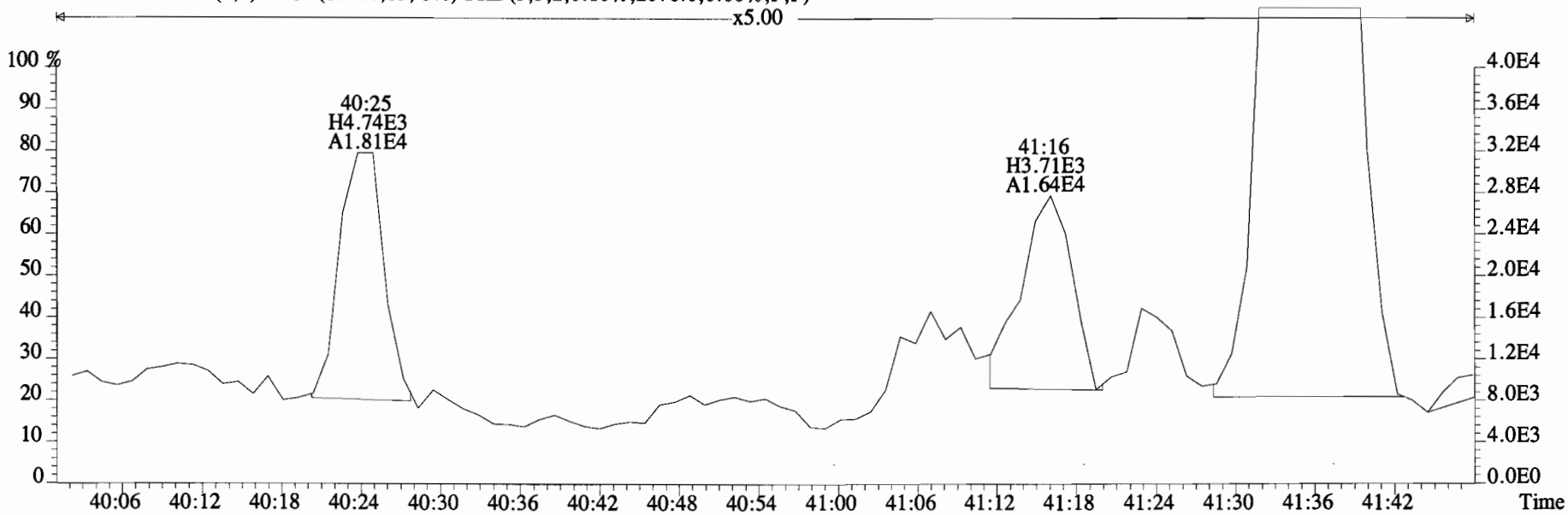
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



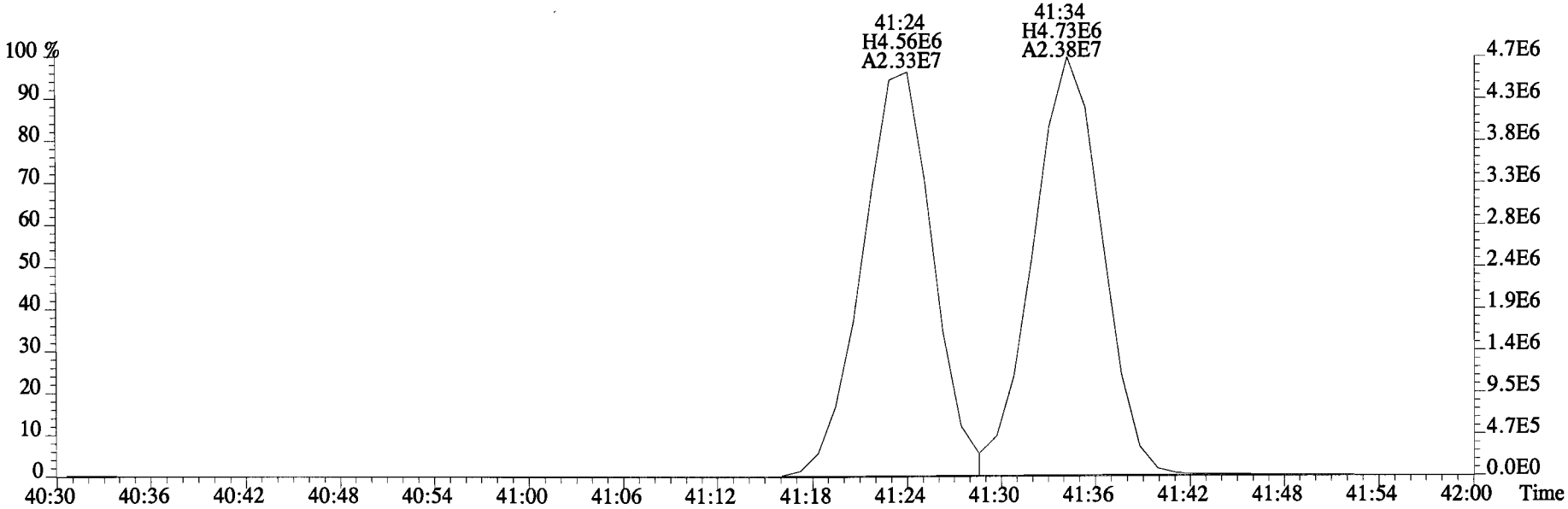
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



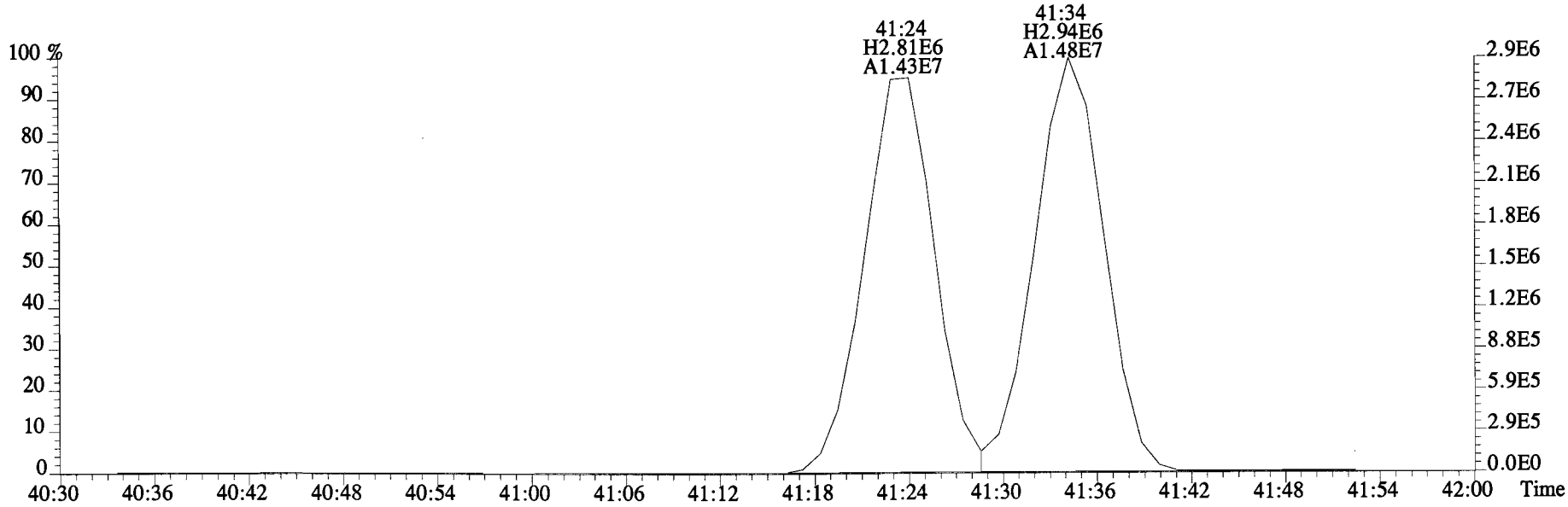
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2076.0,0.00%,F,F)



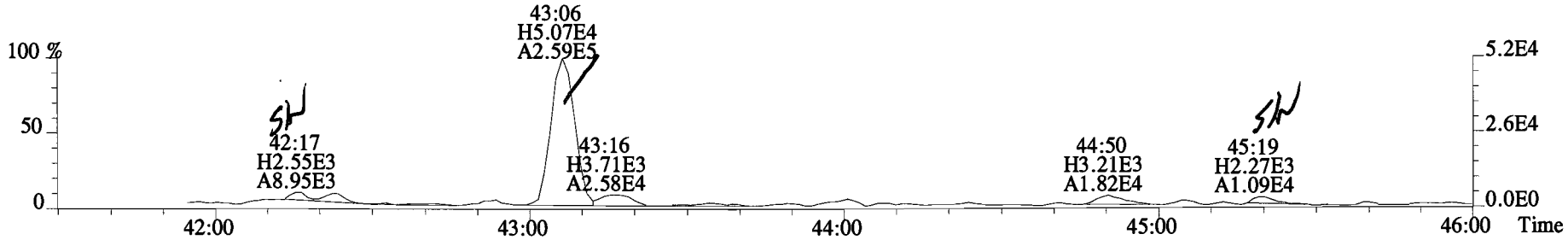
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2144.0,0.00%,F,F)



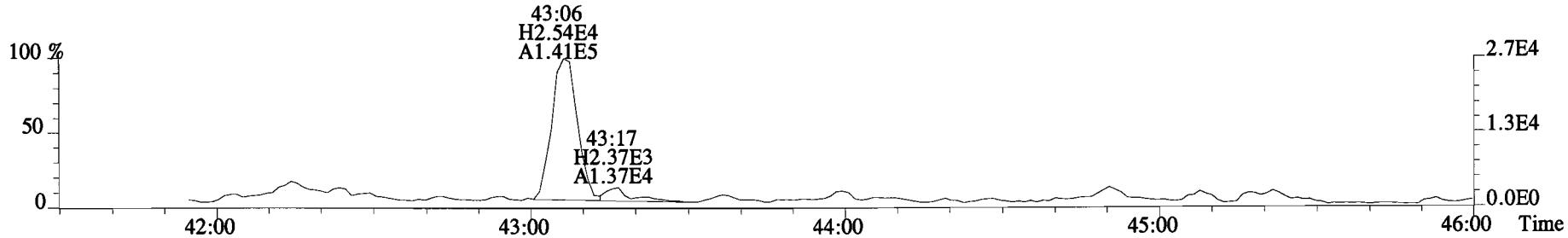
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2312.0,0.00%,F,F)



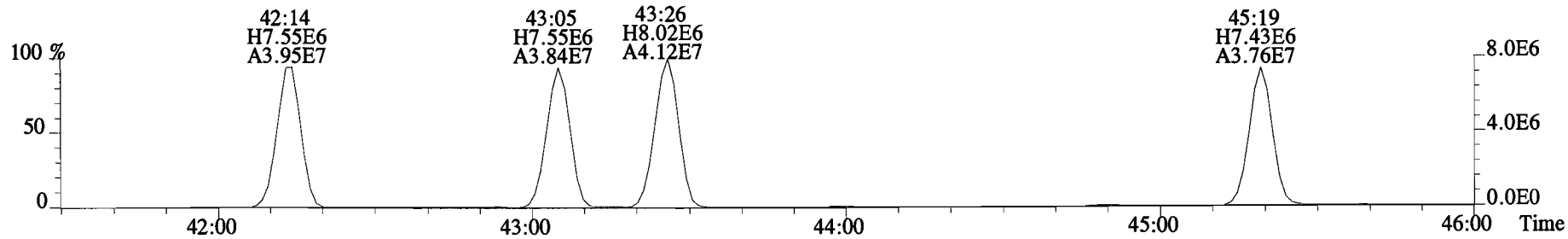
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1744.0,0.00%,F,F)



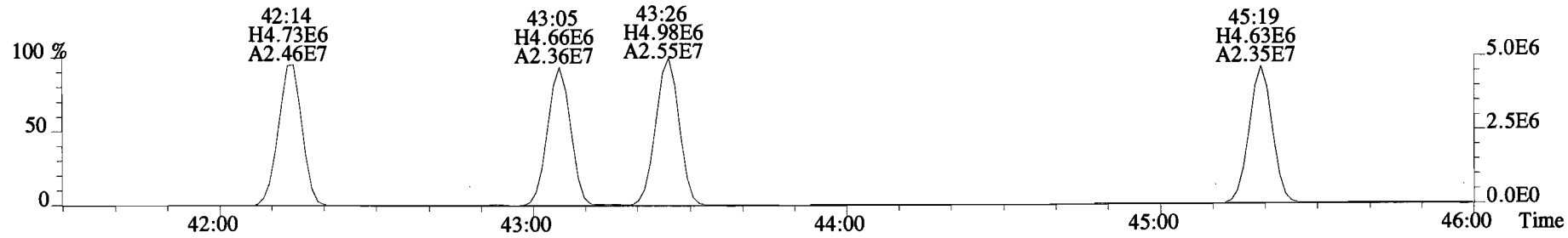
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



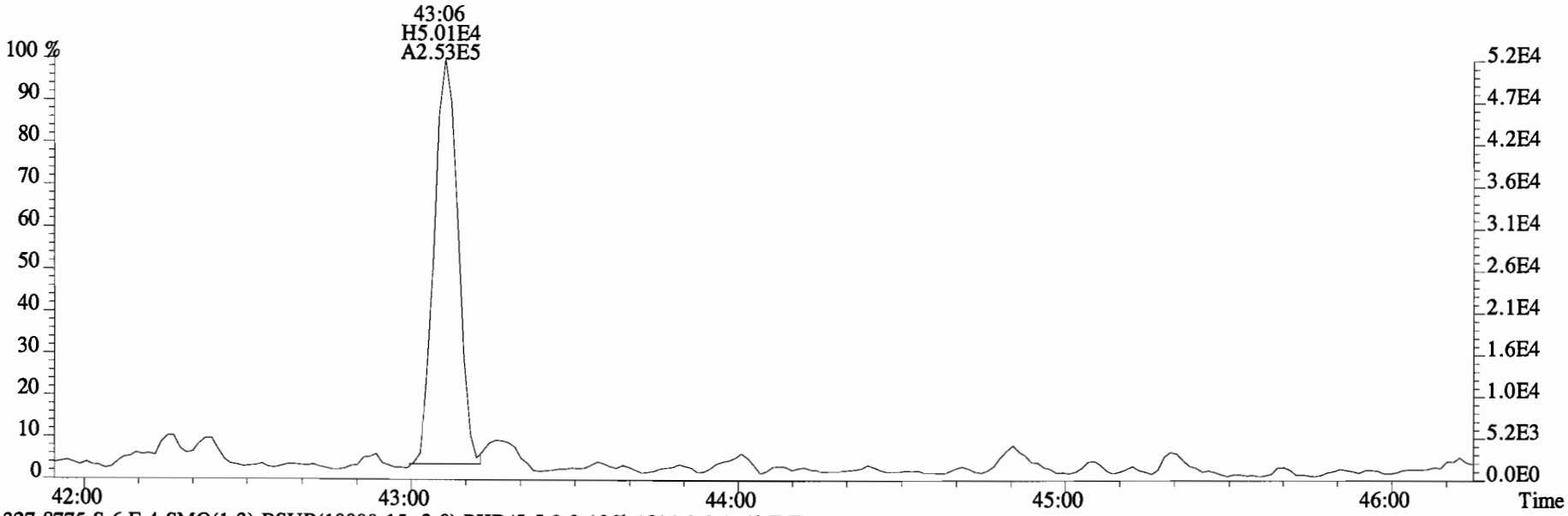
337.9207 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5444.0,0.00%,F,F)



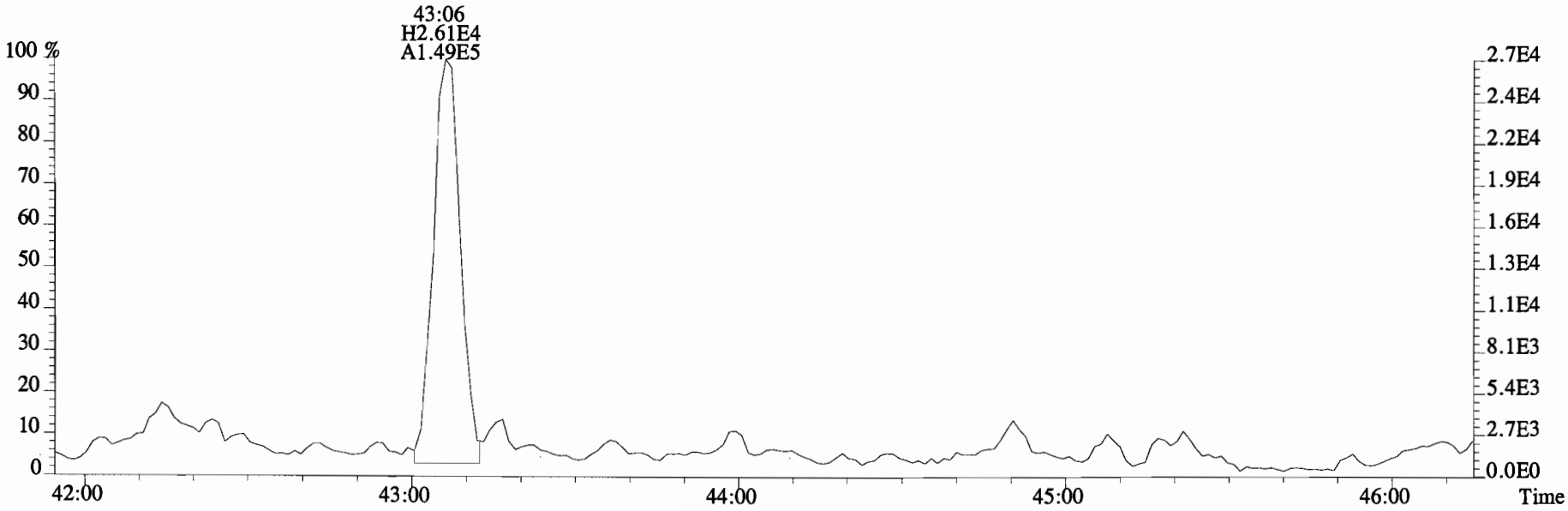
339.9177 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4732.0,0.00%,F,F)



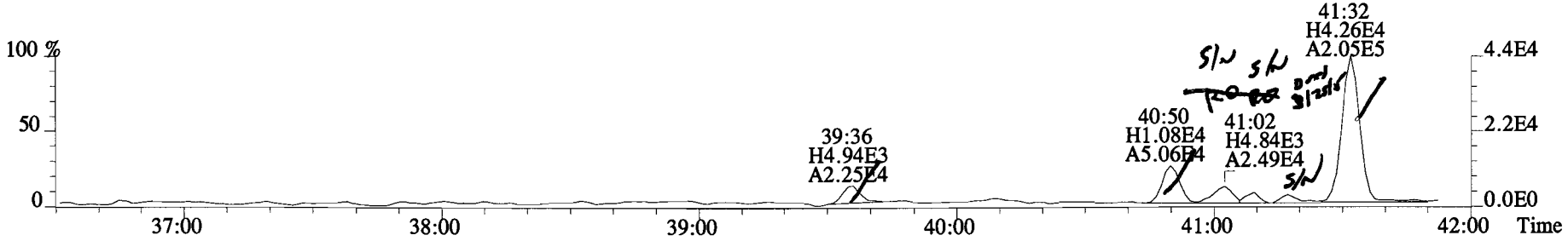
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1744.0,0.00%,F,F)



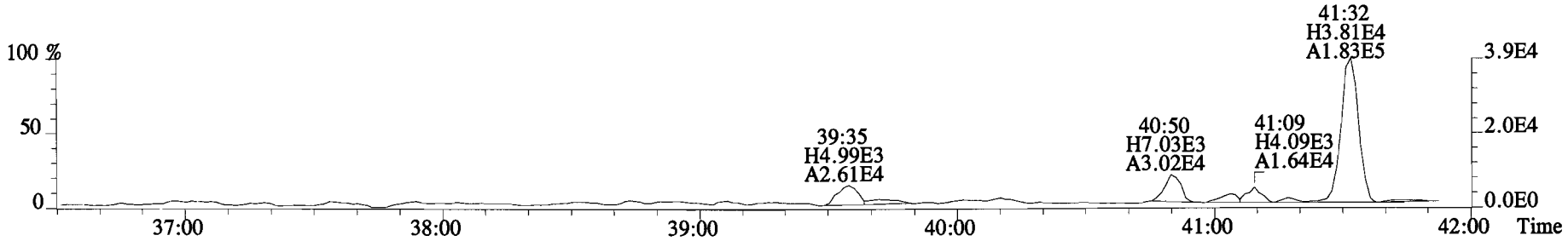
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1824.0,0.00%,F,F)



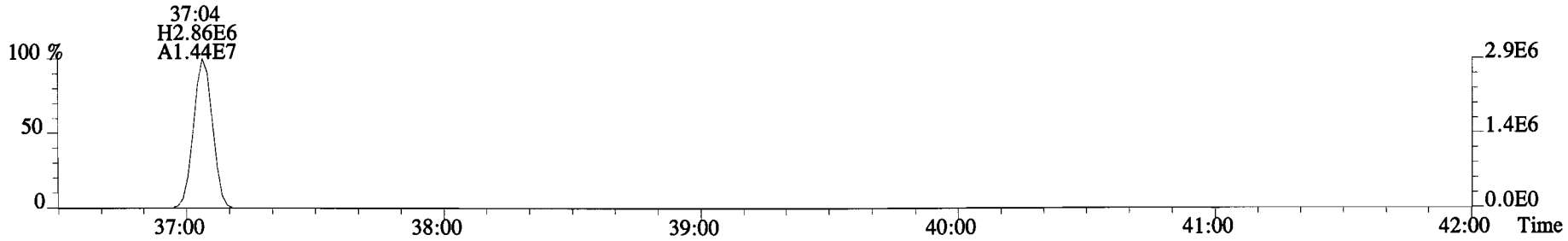
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1632.0,0.00%,F,F)



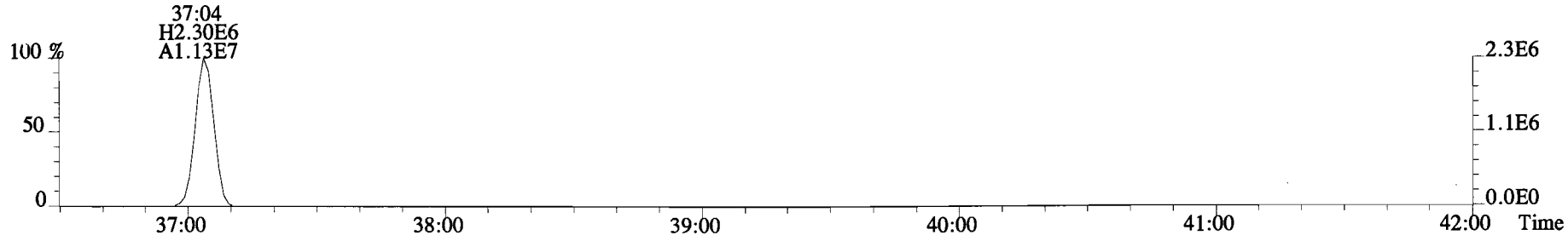
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1732.0,0.00%,F,F)



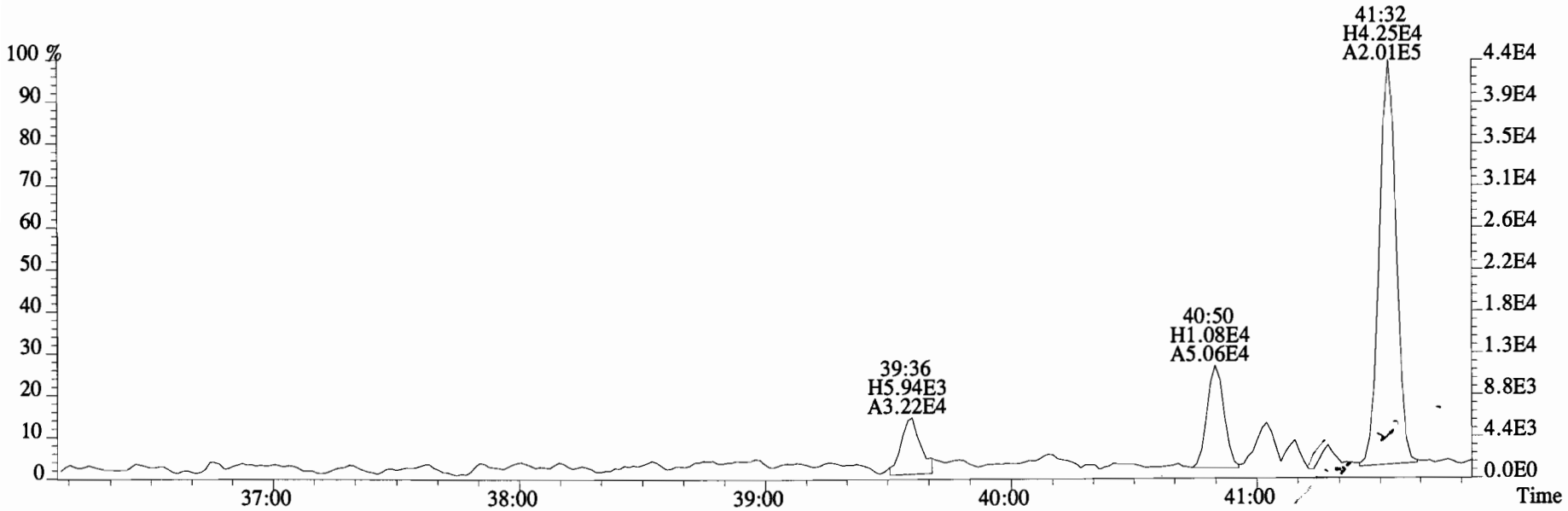
371.8817 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1696.0,0.00%,F,F)



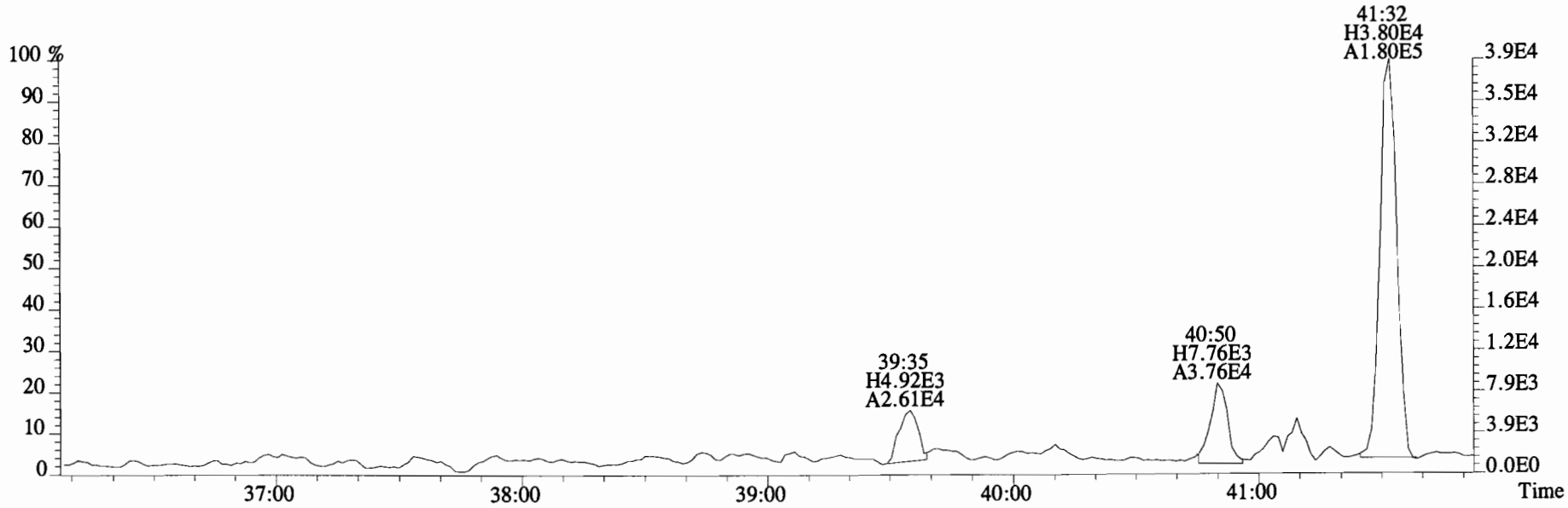
373.8788 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1740.0,0.00%,F,F)



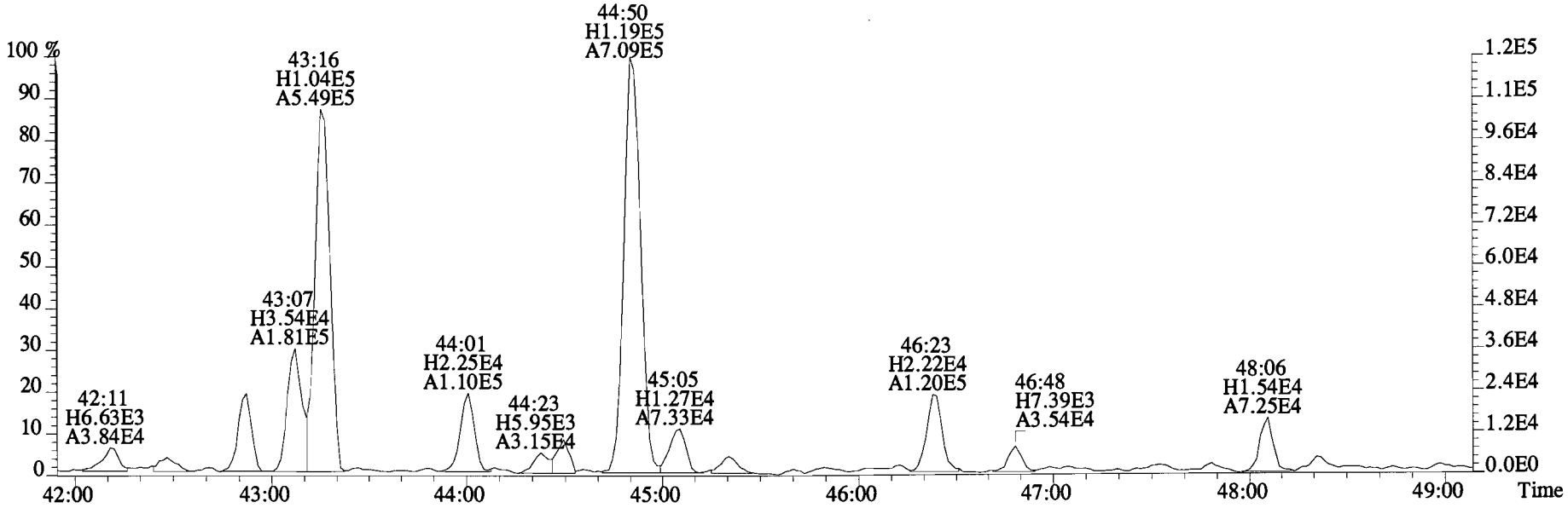
File:150319E2 #1-758 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1632.0,0.00%,F,F)



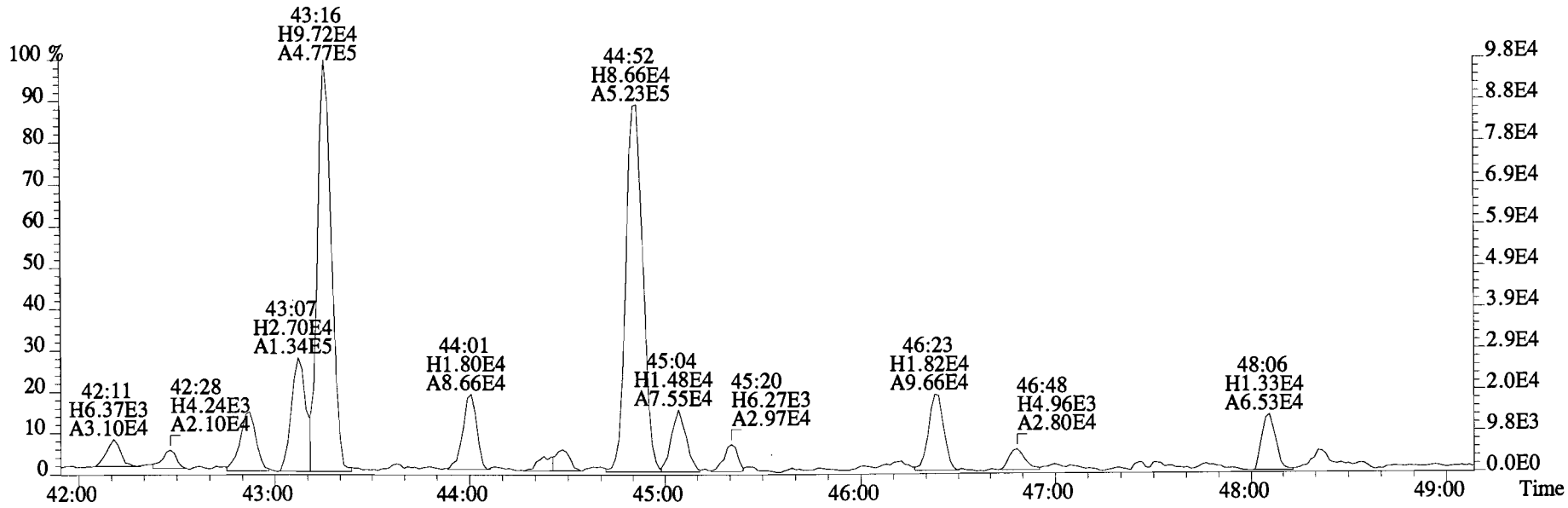
361.8385 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1732.0,0.00%,F,F)



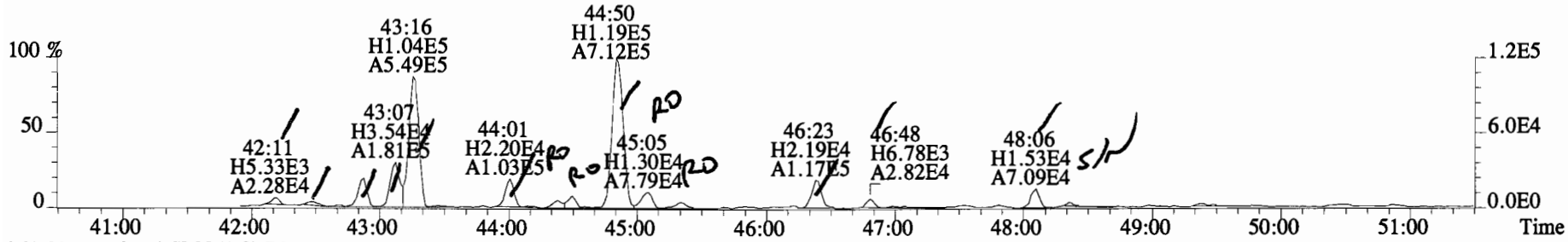
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1916.0,0.00%,F,F)



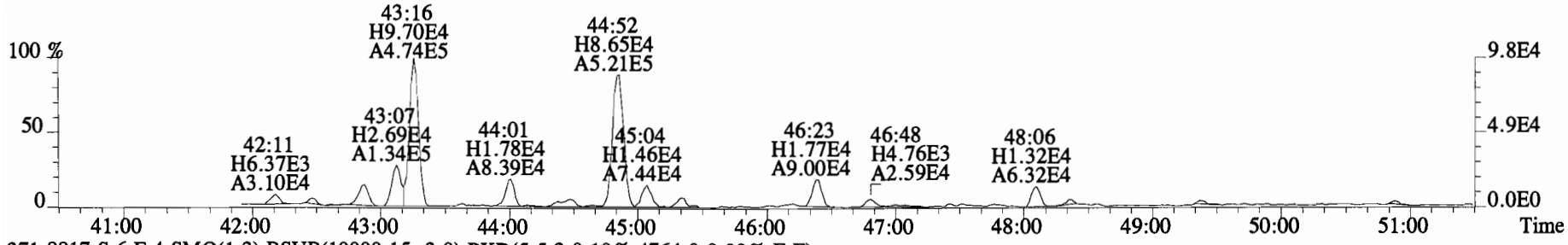
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1920.0,0.00%,F,F)



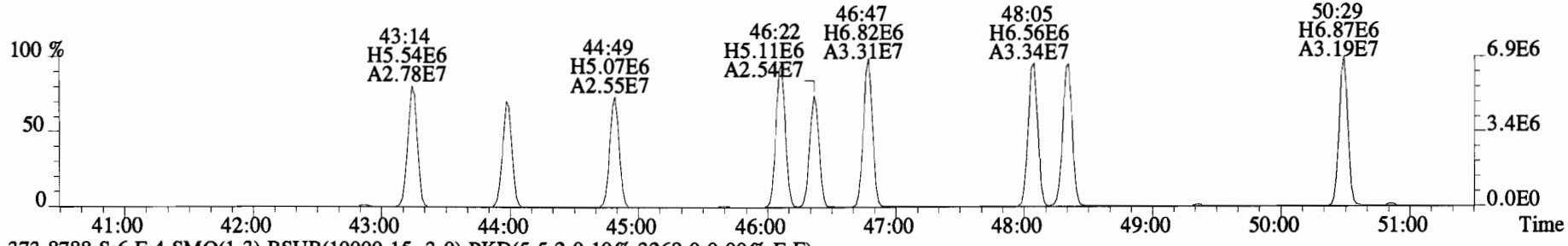
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1916.0,0.00%,F,F)



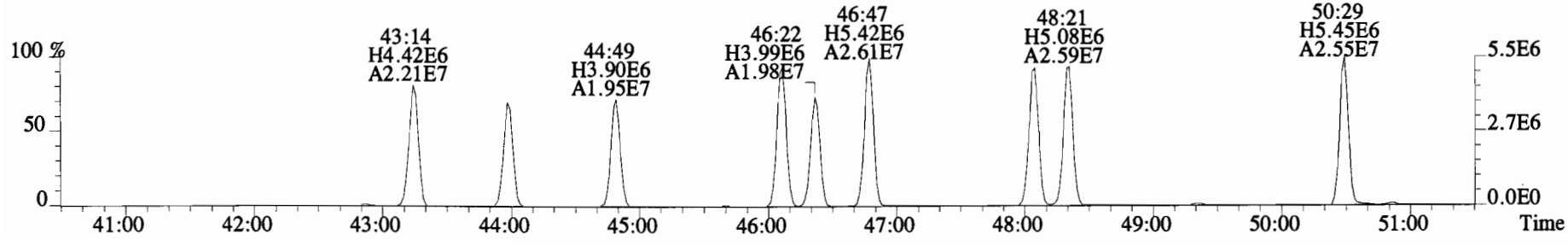
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1920.0,0.00%,F,F)



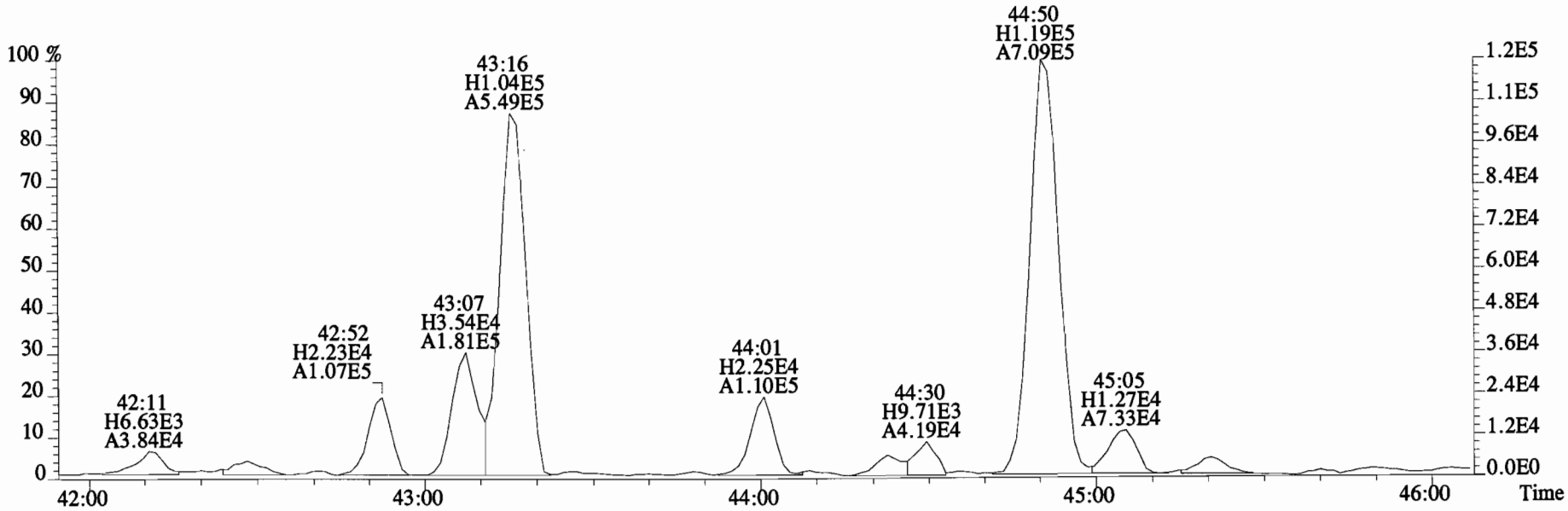
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4764.0,0.00%,F,F)



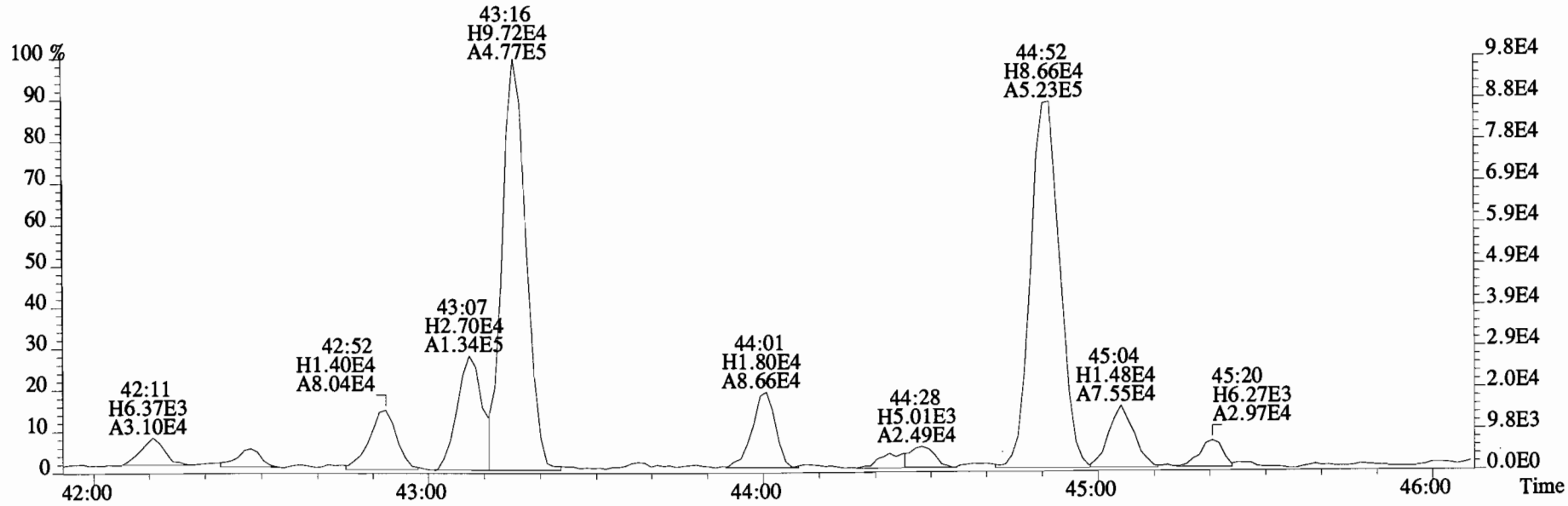
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3268.0,0.00%,F,F)



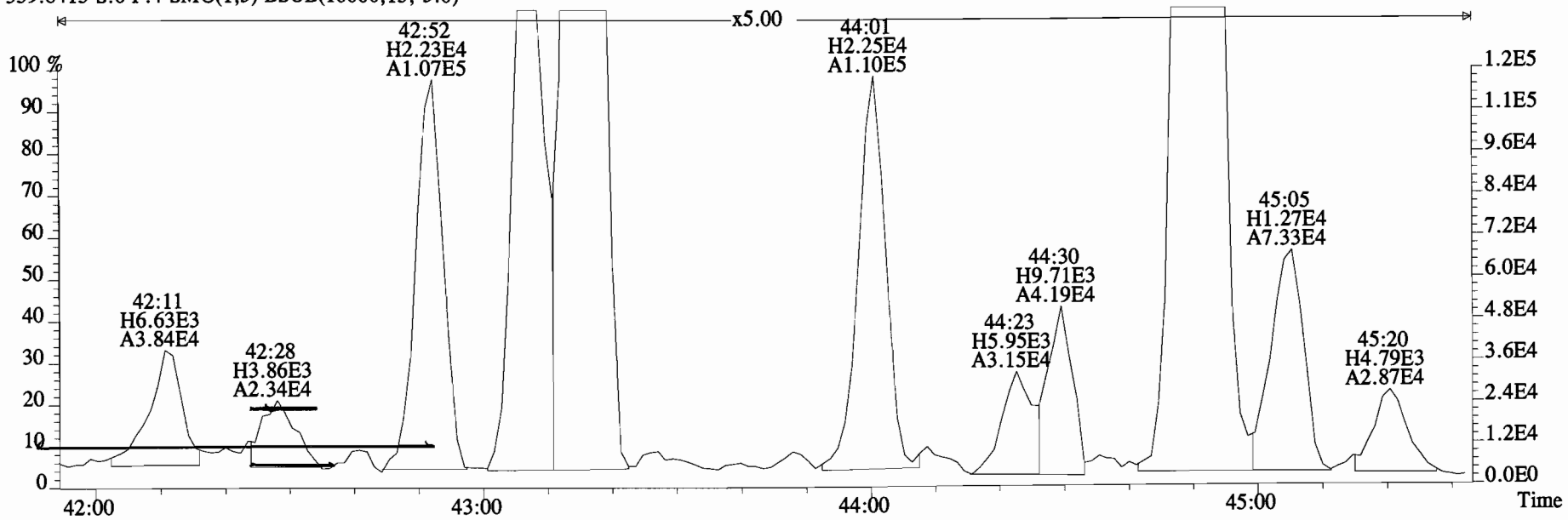
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



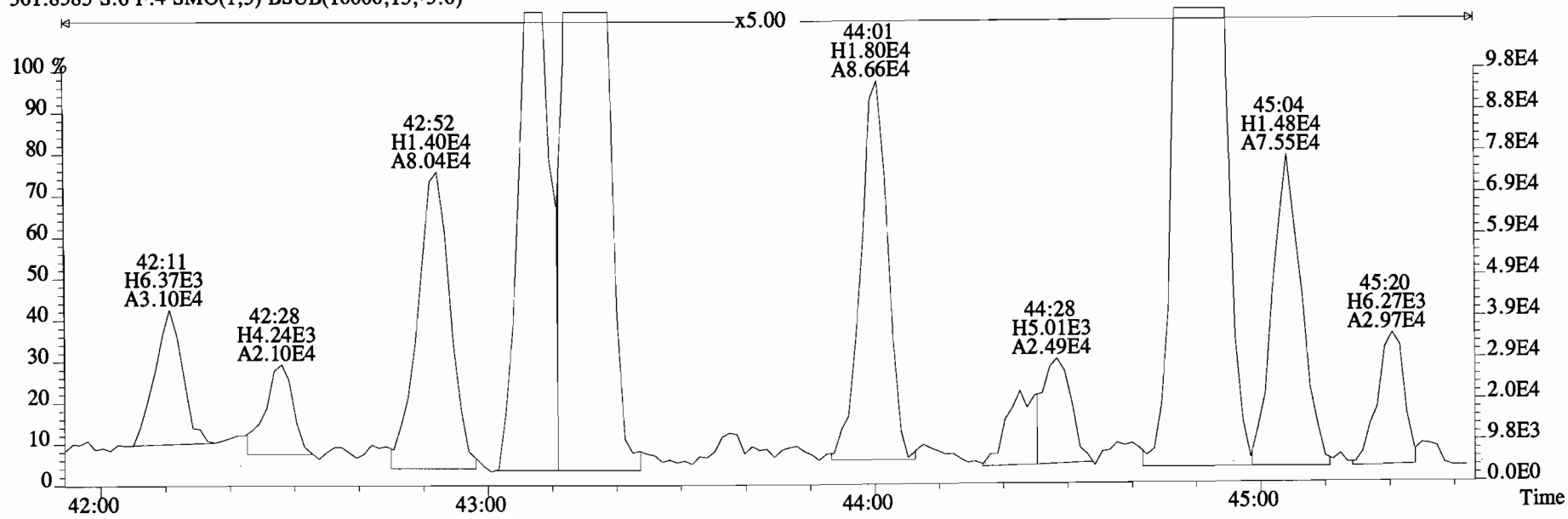
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



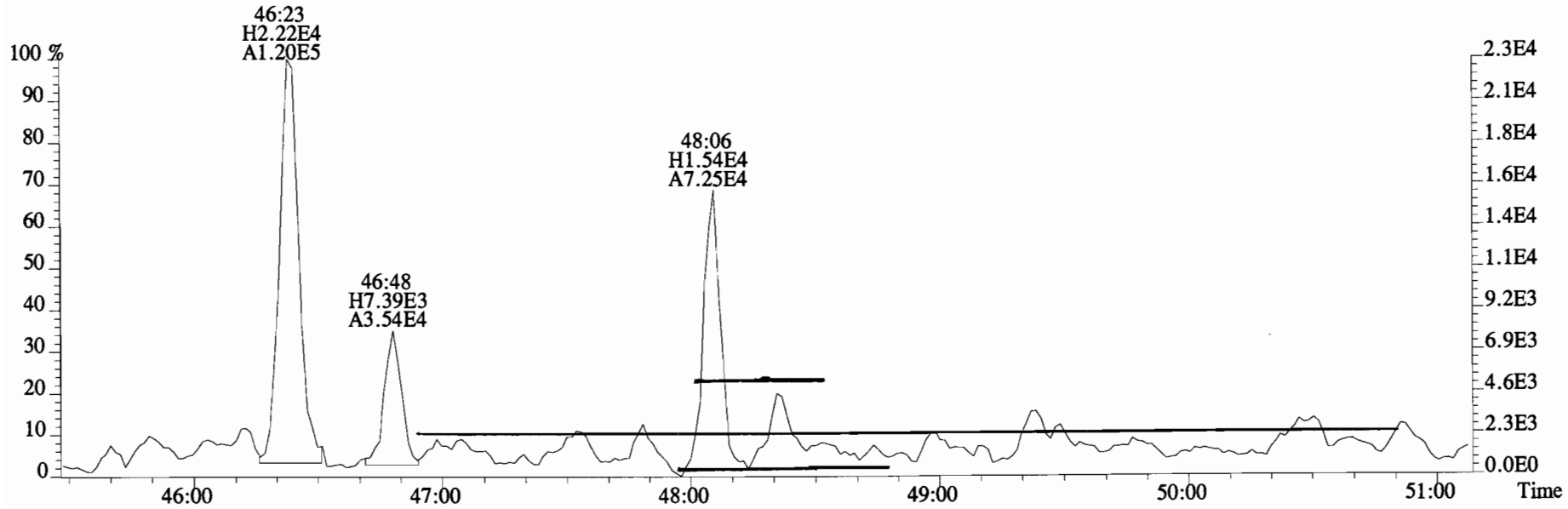
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



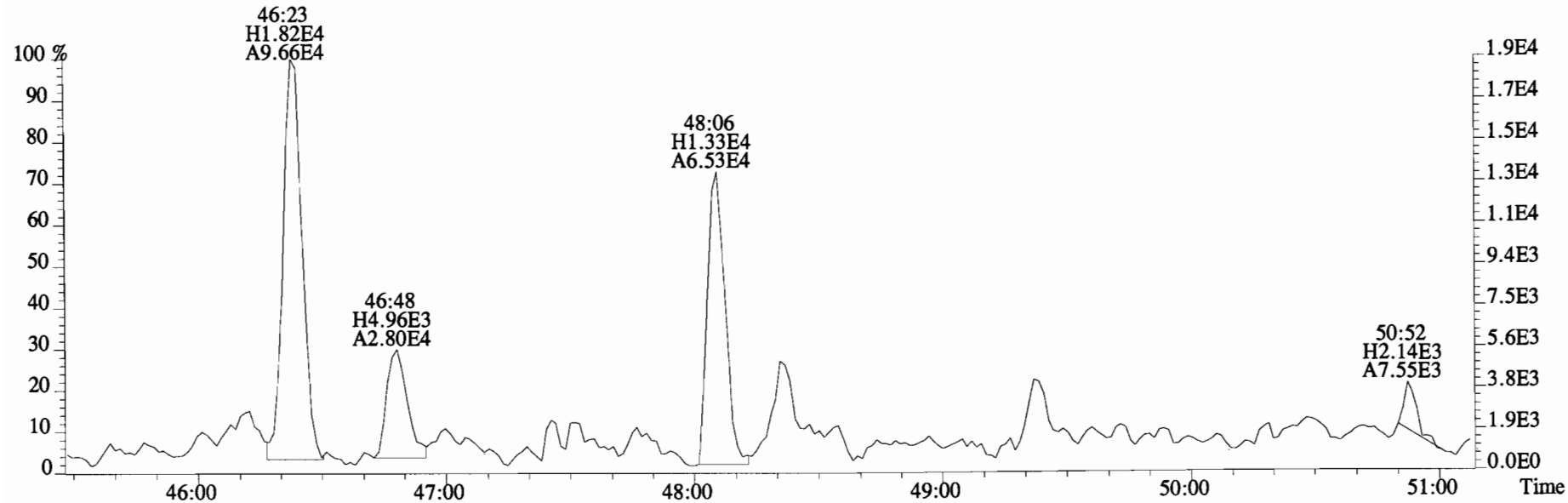
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



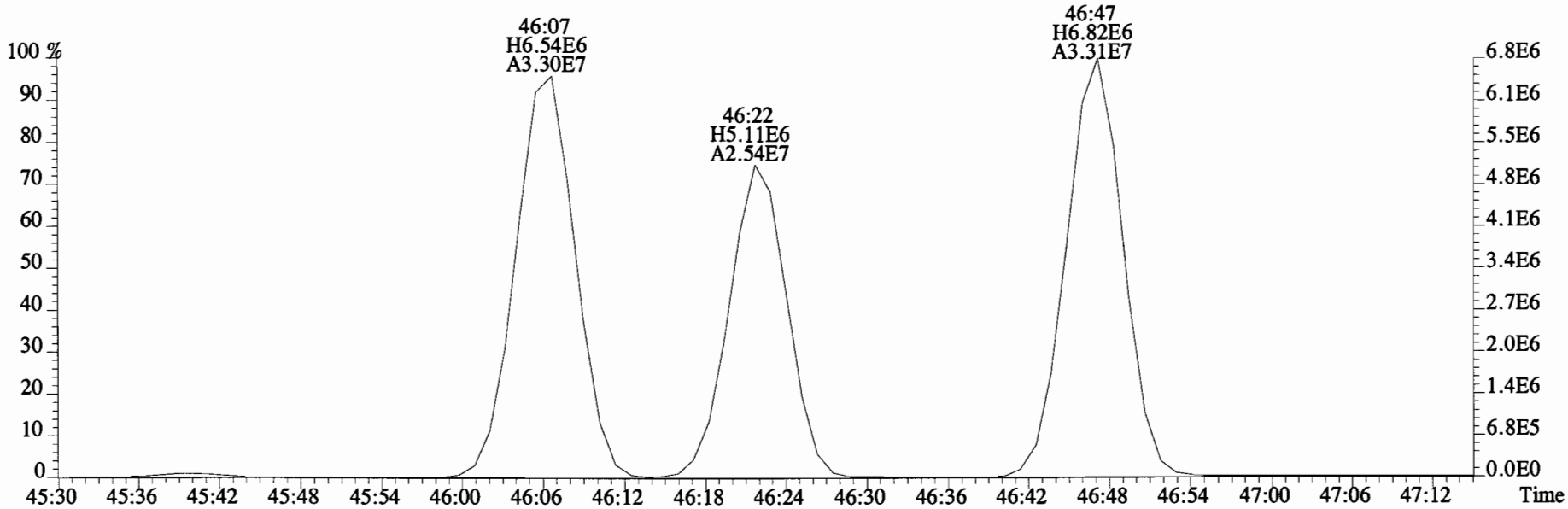
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



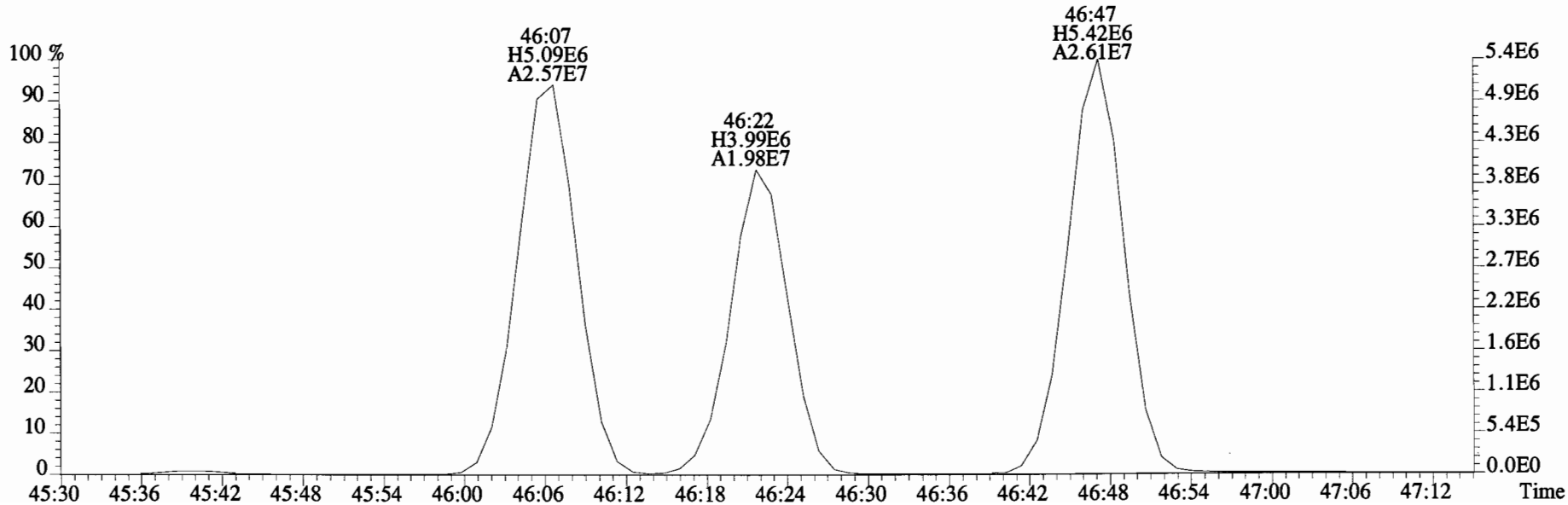
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



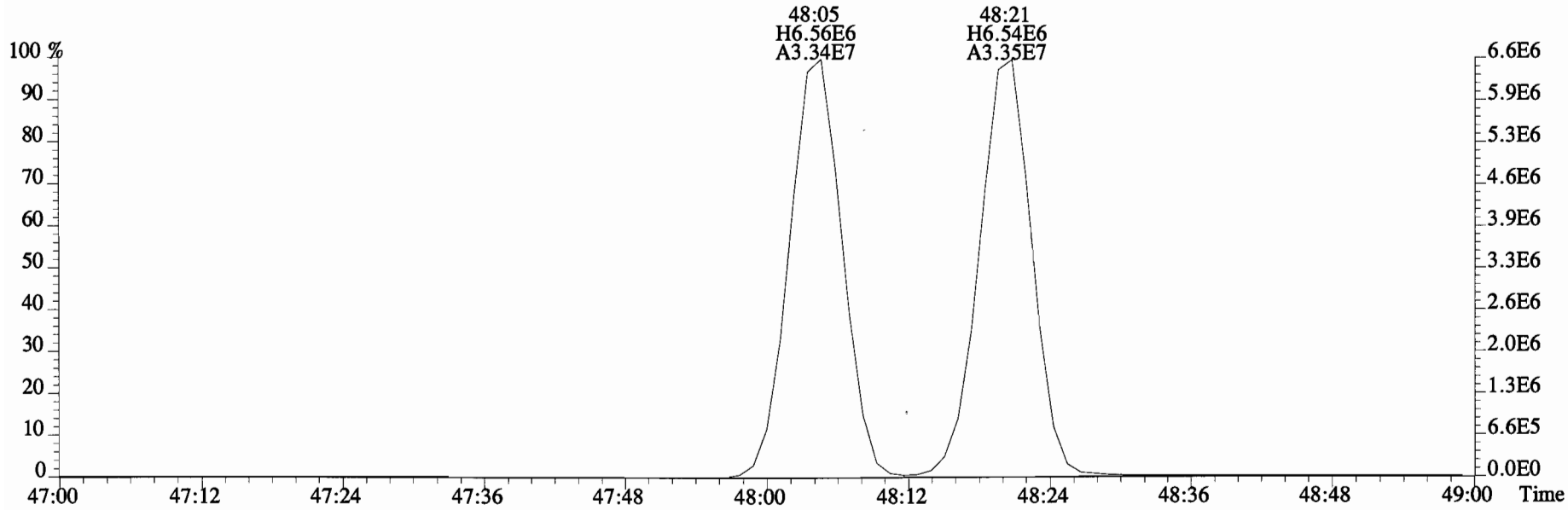
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4764.0,0.00%,F,F)



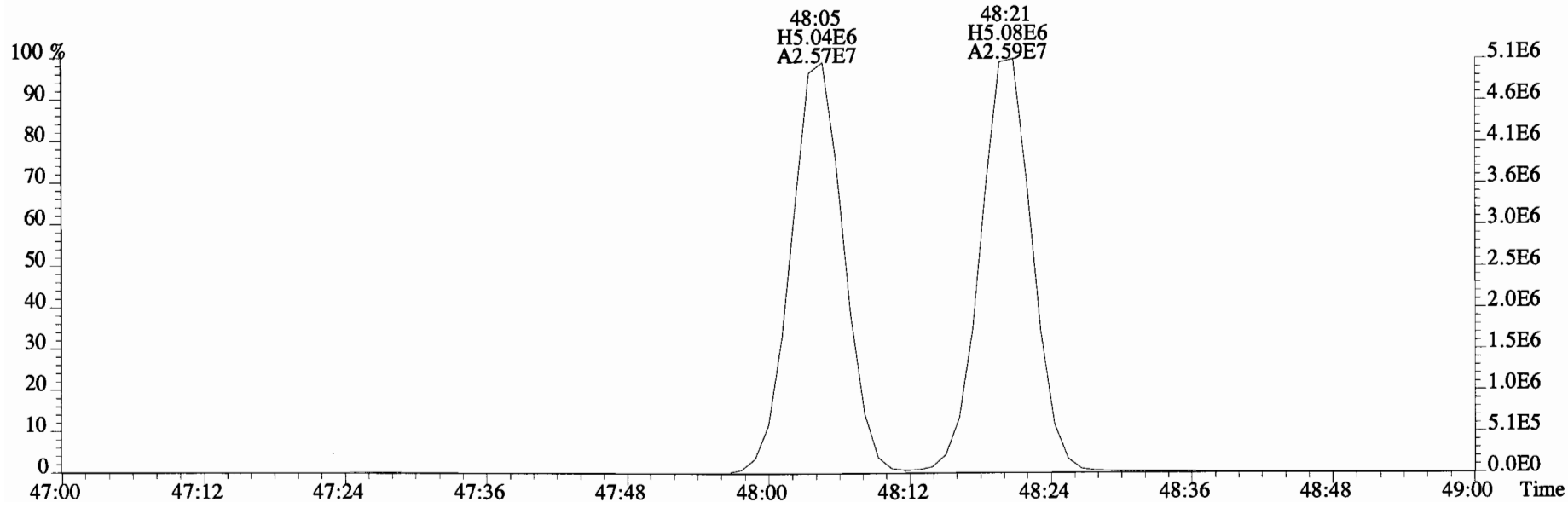
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3268.0,0.00%,F,F)



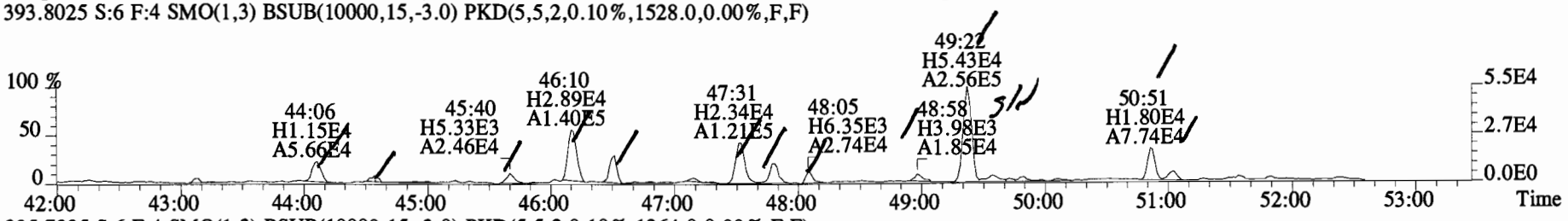
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4764.0,0.00%,F,F)



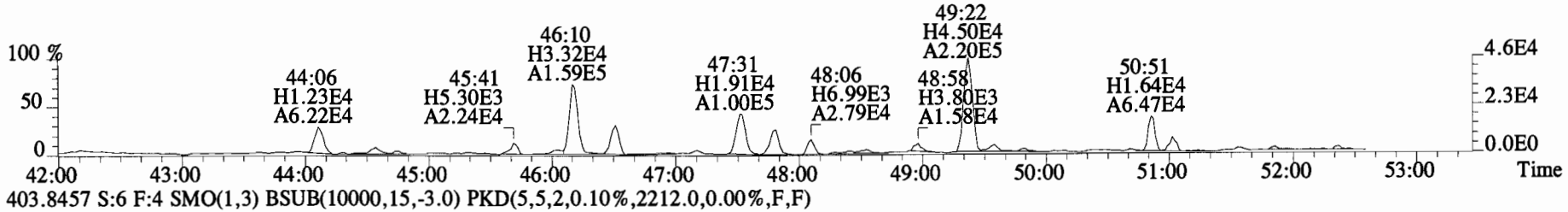
373.8788 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3268.0,0.00%,F,F)



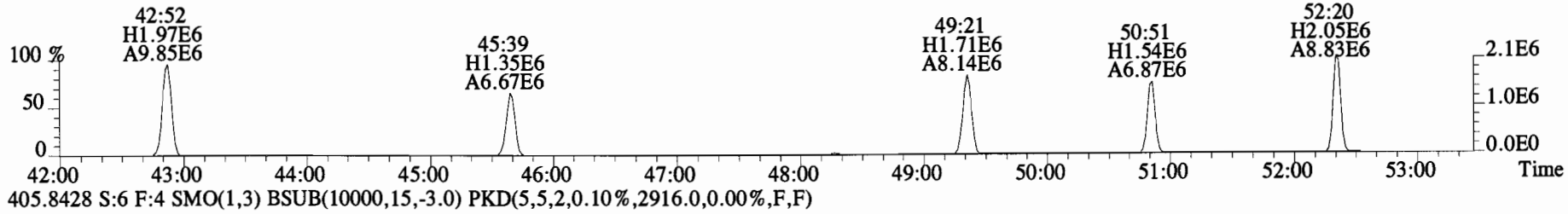
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1528.0,0.00%,F,F)



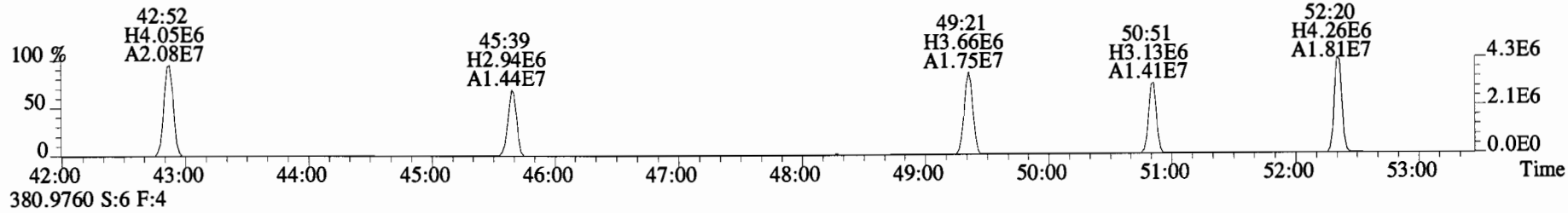
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1364.0,0.00%,F,F)



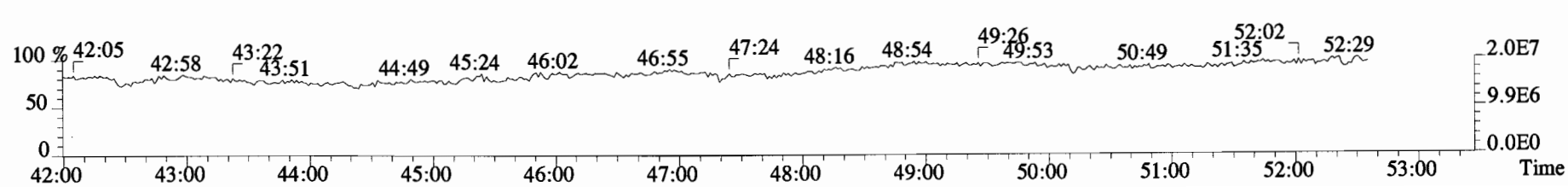
403.8457 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2212.0,0.00%,F,F)



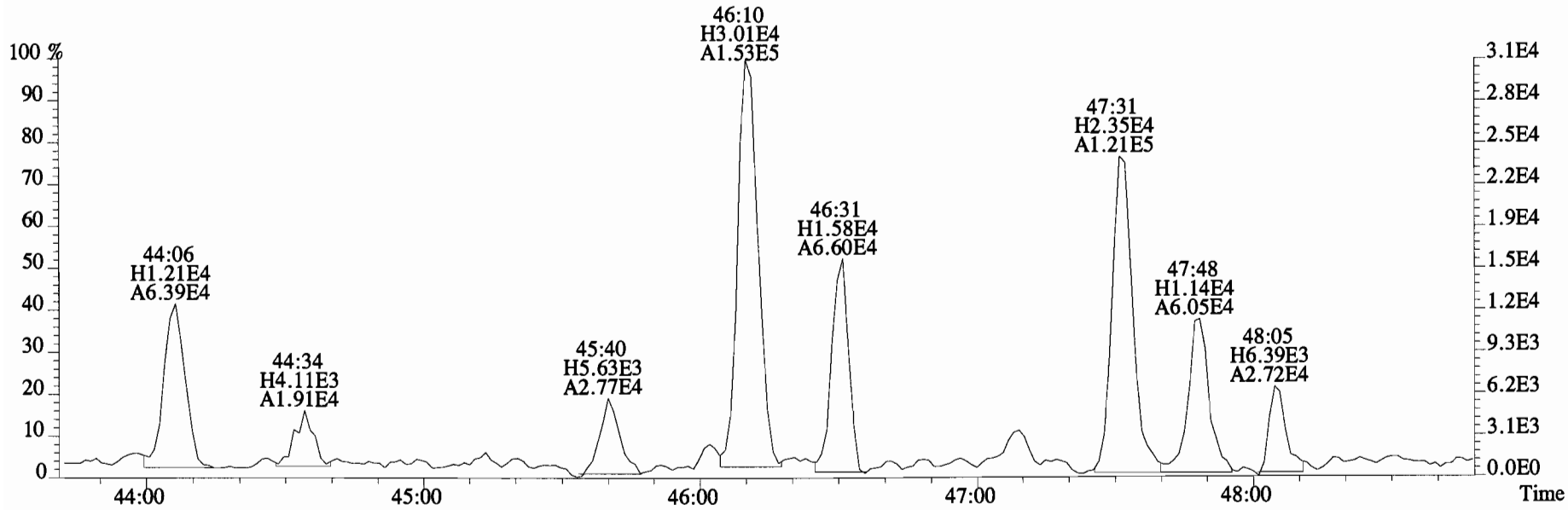
405.8428 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2916.0,0.00%,F,F)



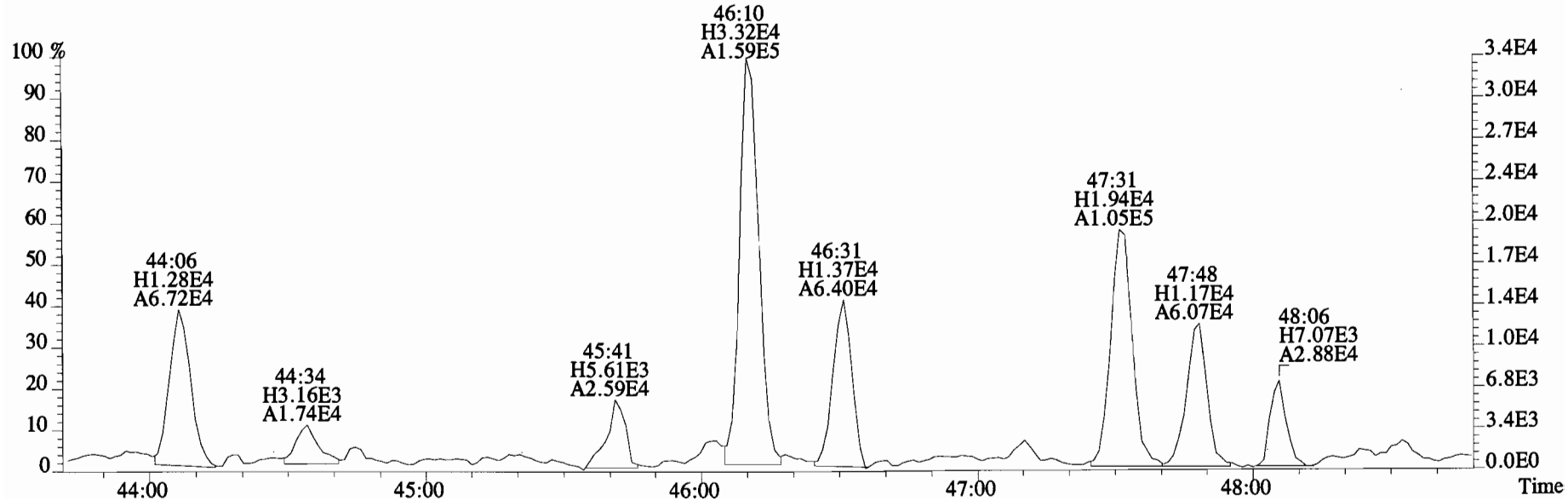
380.9760 S:6 F:4



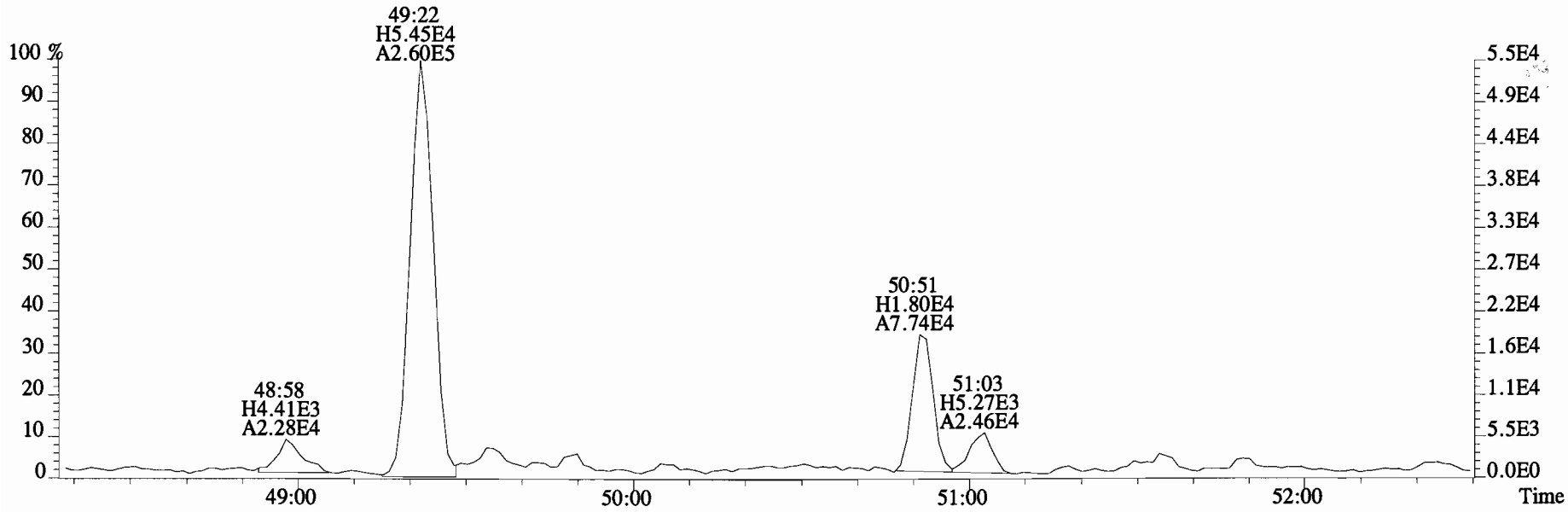
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1528.0,0.00%,F,F)



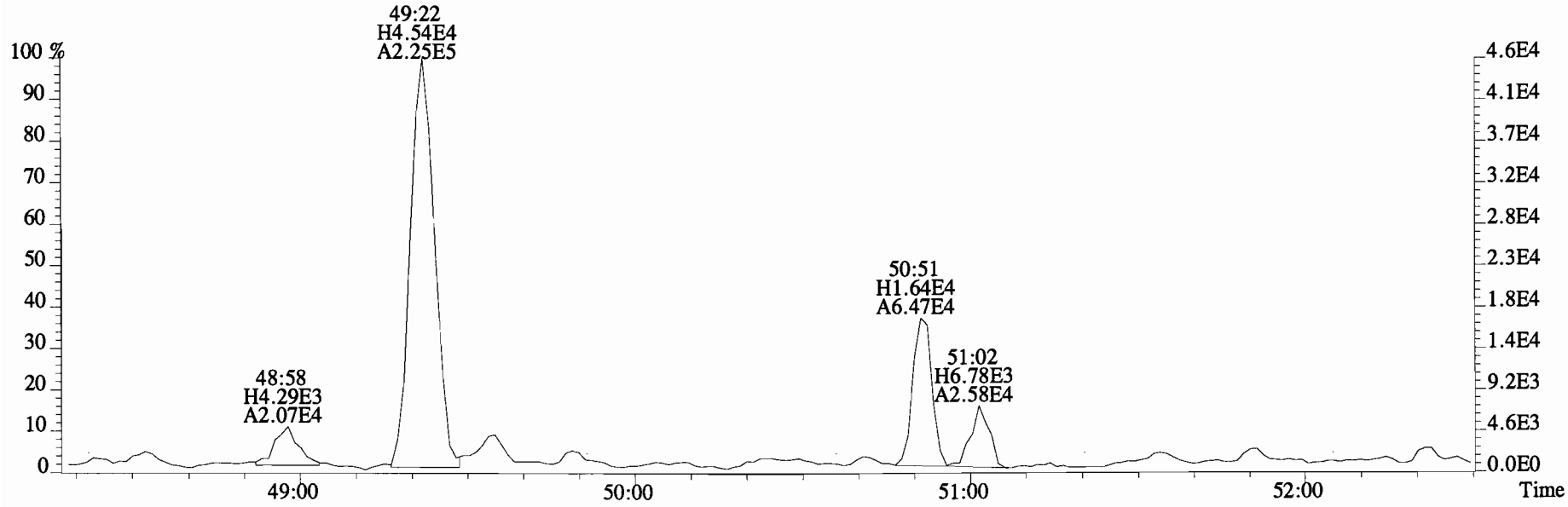
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1364.0,0.00%,F,F)



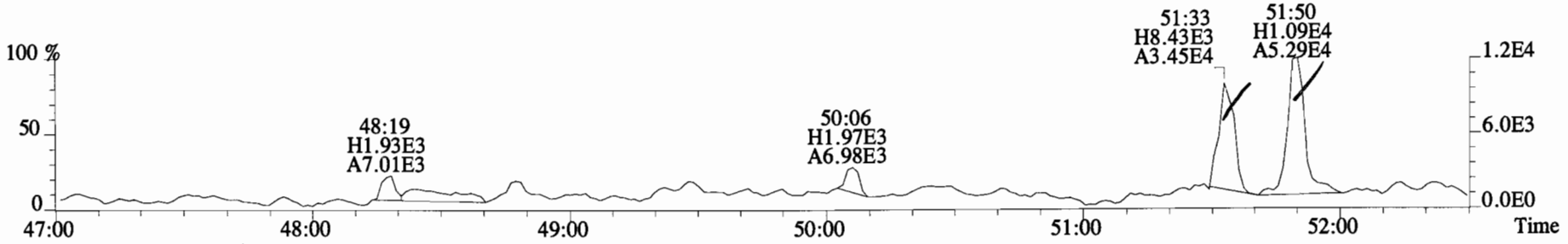
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1528.0,0.00%,F,F)



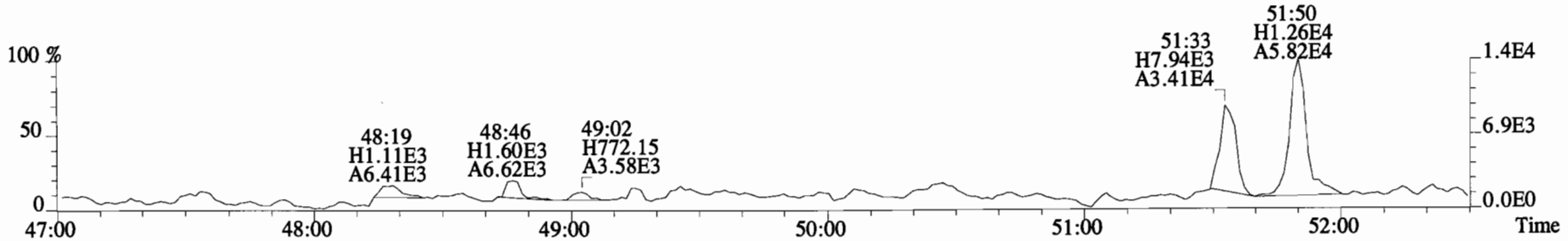
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1364.0,0.00%,F,F)



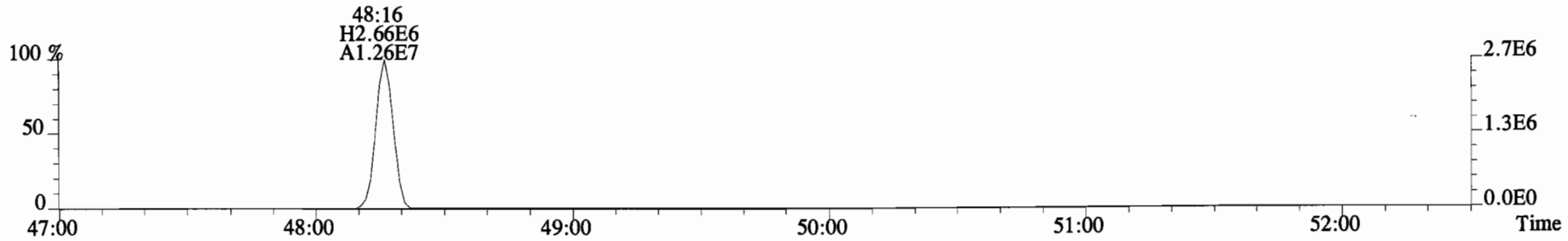
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



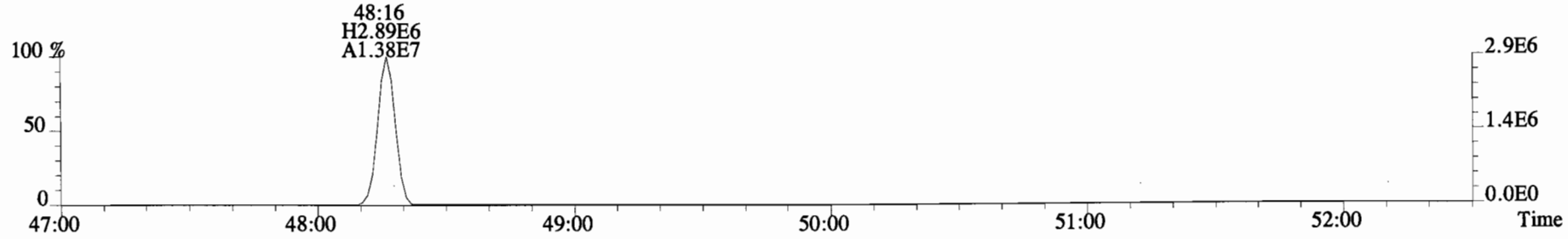
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1588.0,0.00%,F,F)



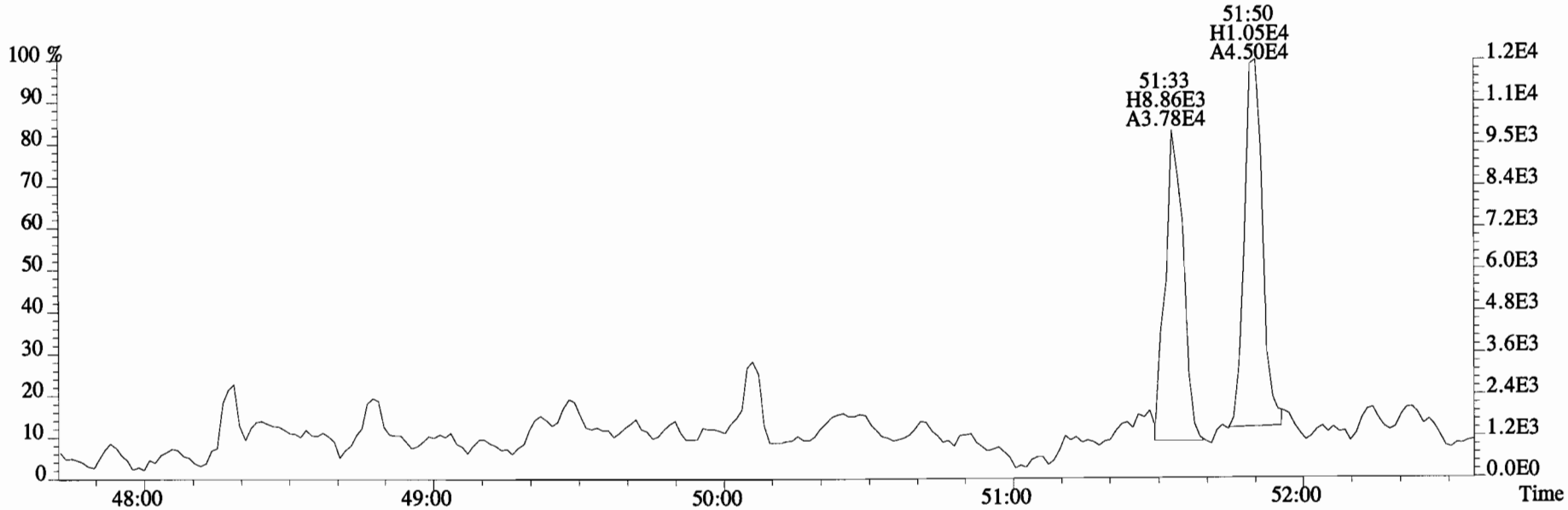
439.8038 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1956.0,0.00%,F,F)



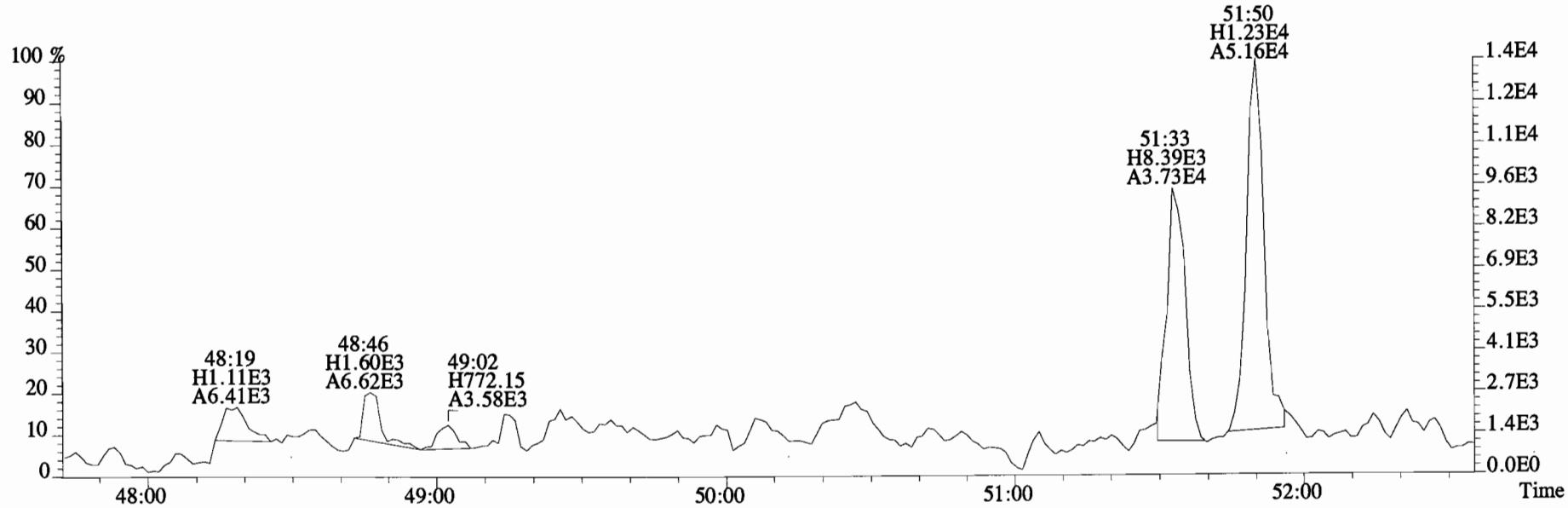
441.8008 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2328.0,0.00%,F,F)



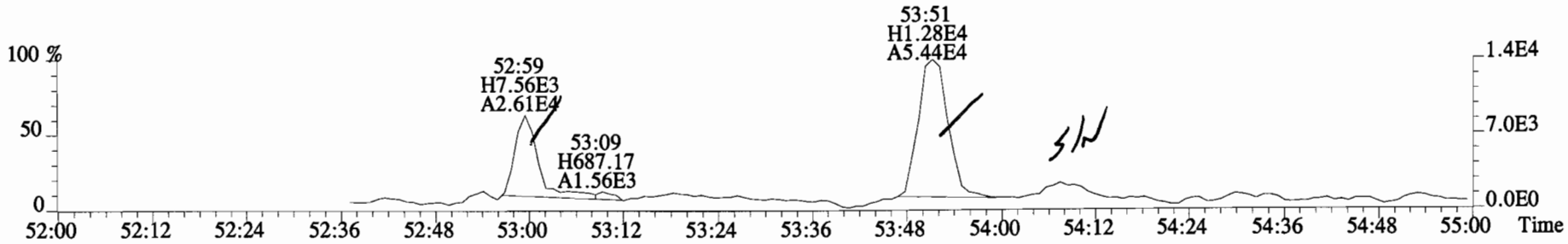
File:150319E2 #1-555 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



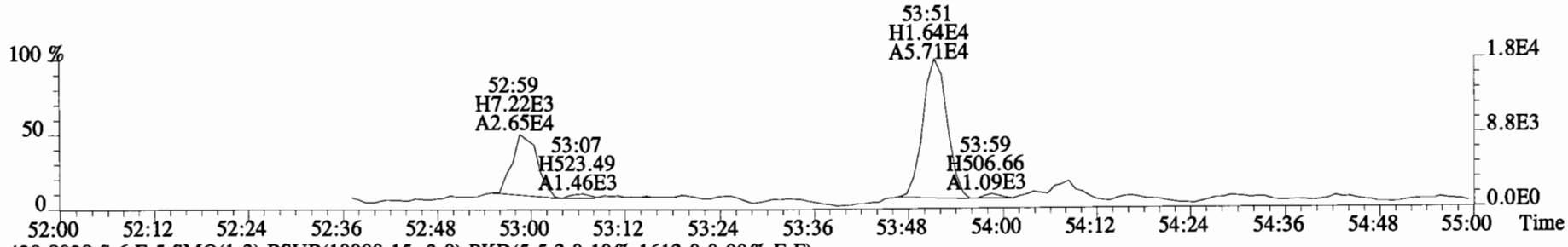
429.7606 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1588.0,0.00%,F,F)



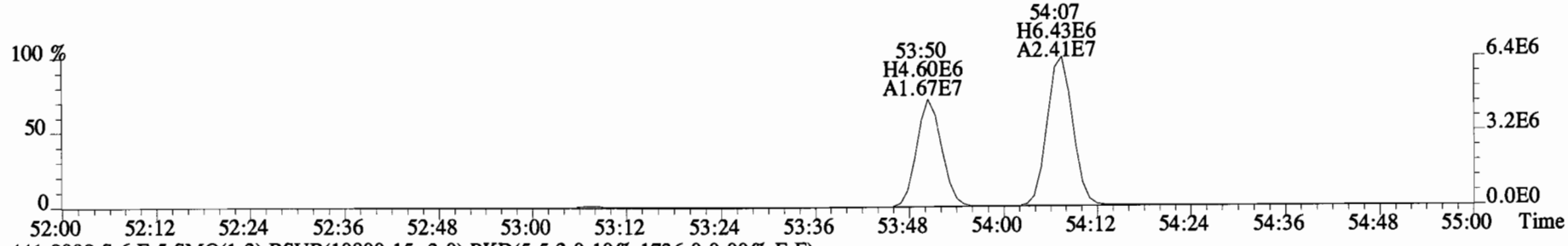
File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1264.0,0.00%,F,F)



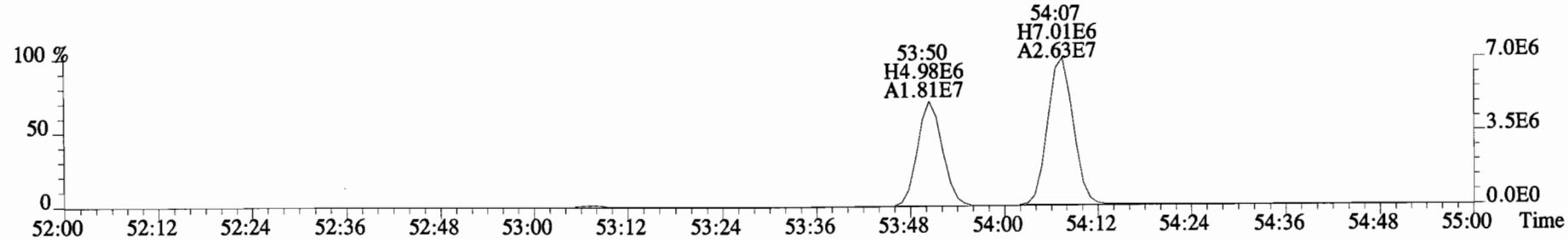
429.7606 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1376.0,0.00%,F,F)



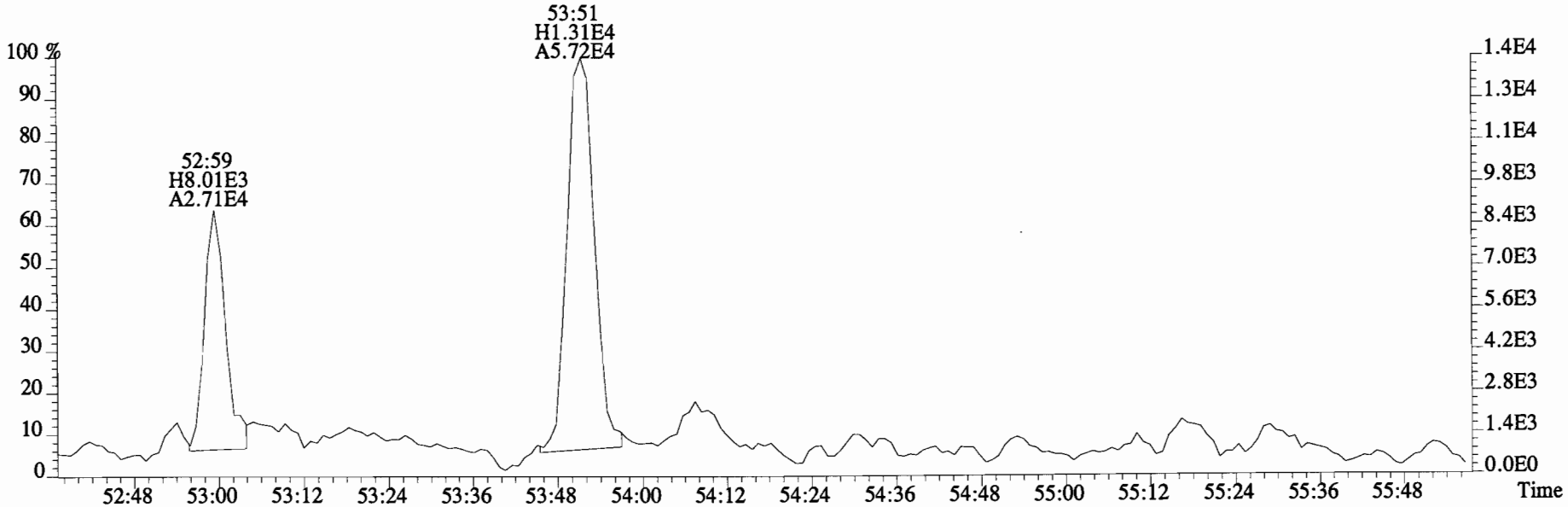
439.8038 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1612.0,0.00%,F,F)



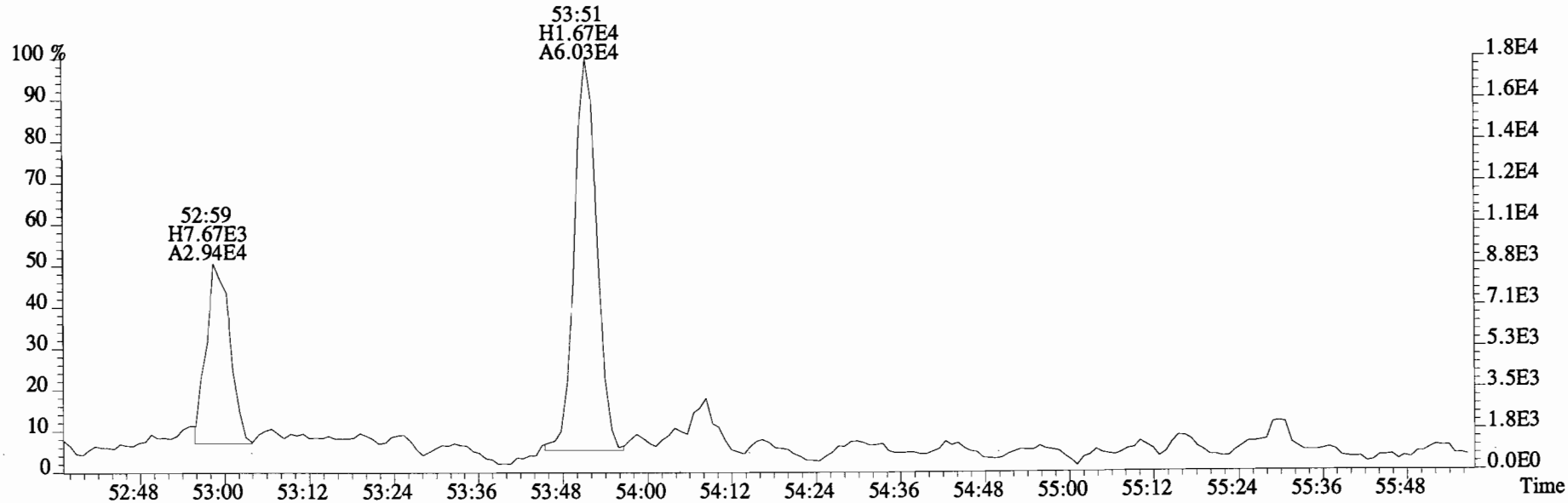
441.8008 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1736.0,0.00%,F,F)



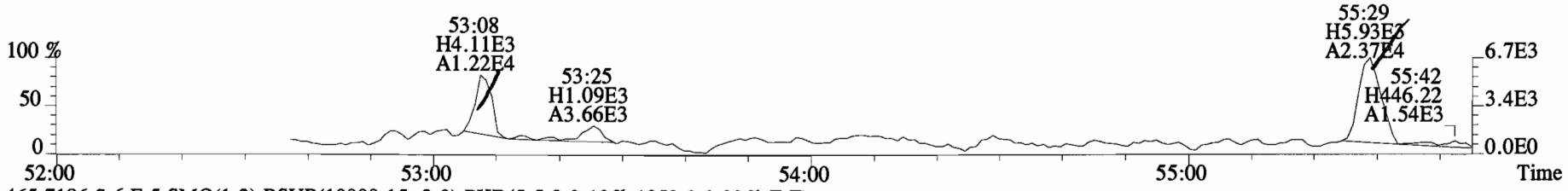
File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1264.0,0.00%,F,F)



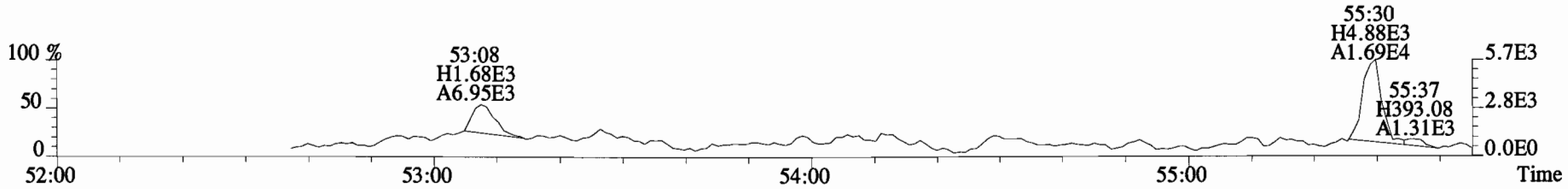
429.7606 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1376.0,0.00%,F,F)



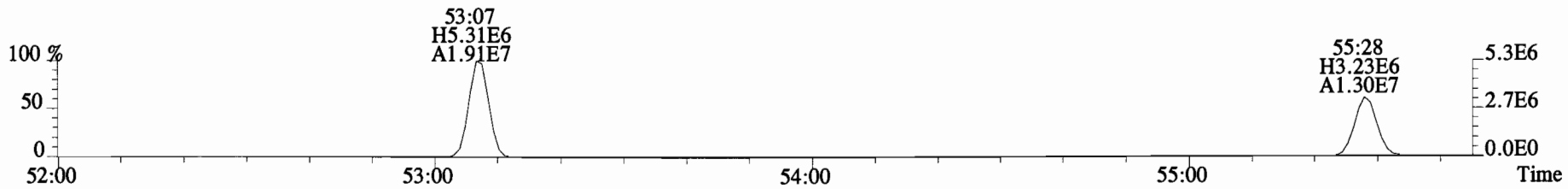
File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1124.0,0.00%,F,F)



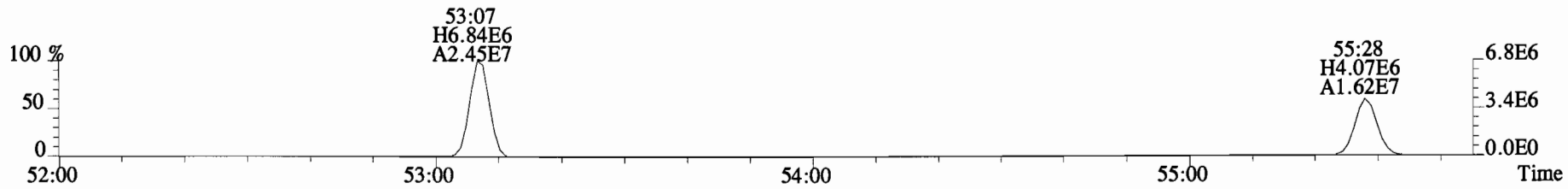
465.7186 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1052.0,0.00%,F,F)



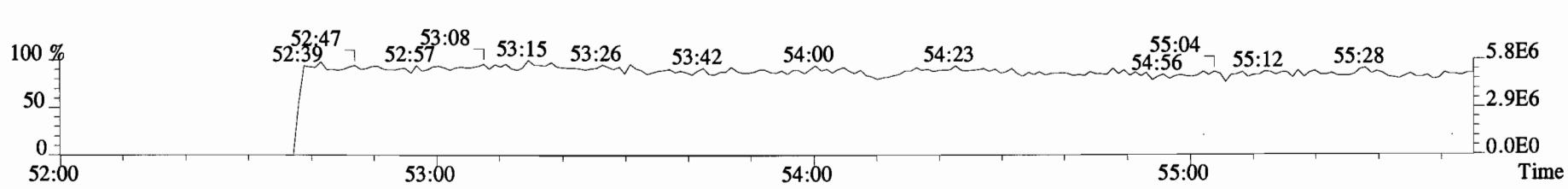
473.7648 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3260.0,0.00%,F,F)



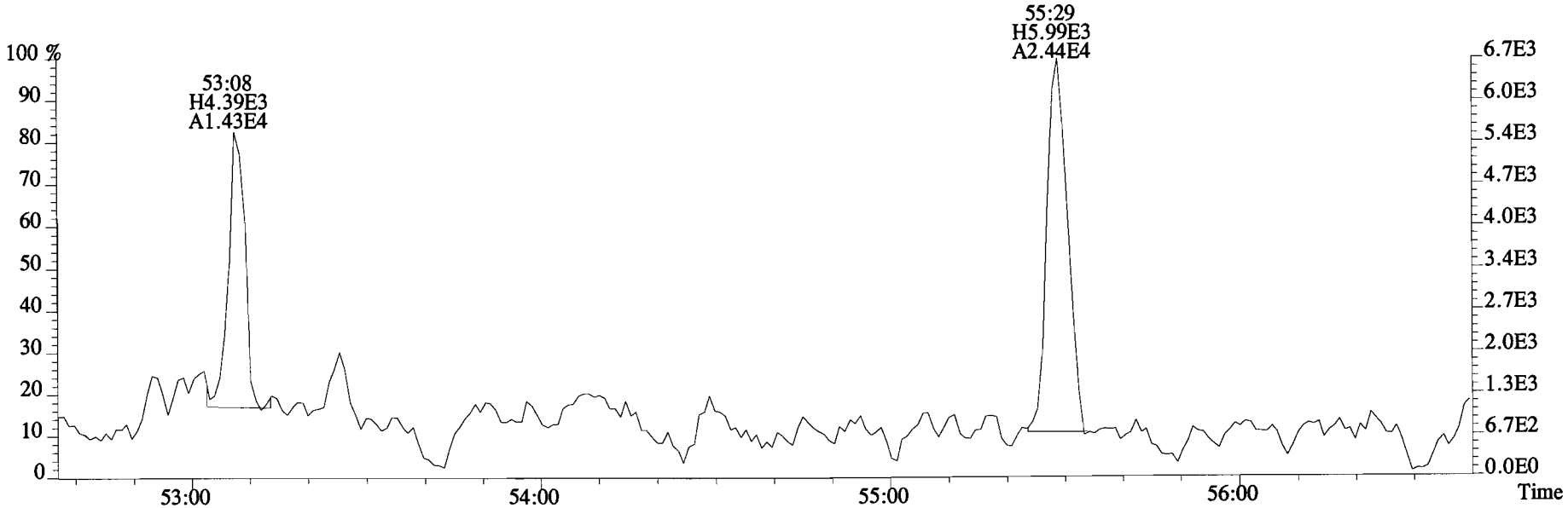
475.7619 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4620.0,0.00%,F,F)



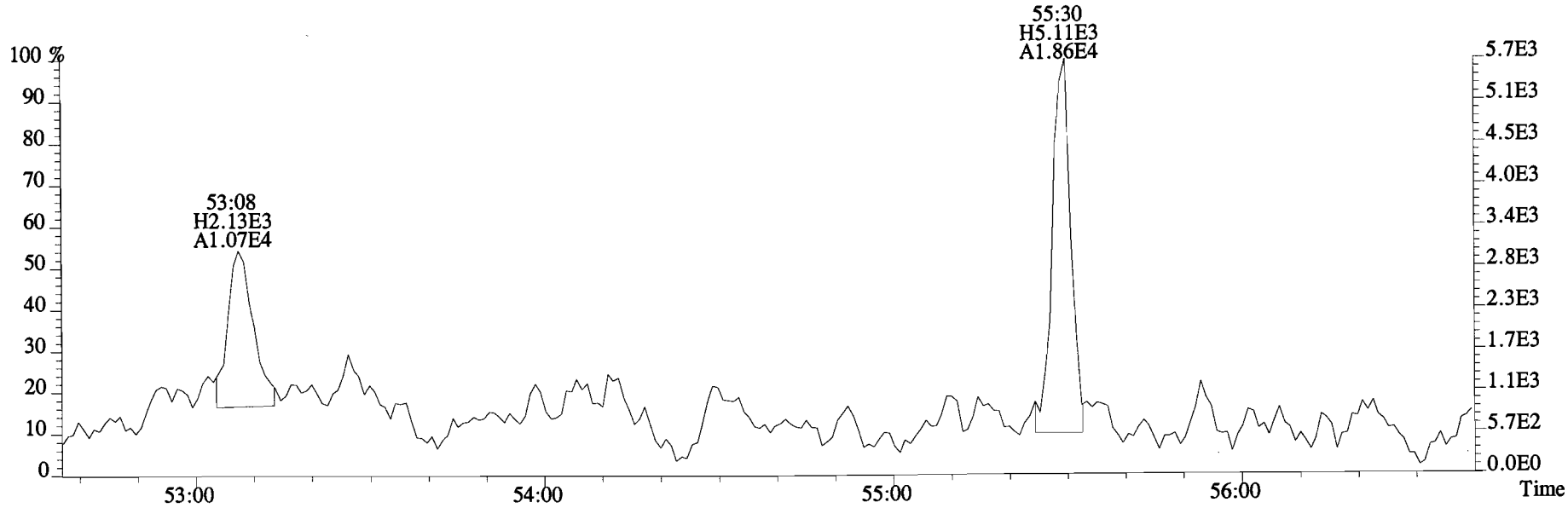
492.9697 S:6 F:5



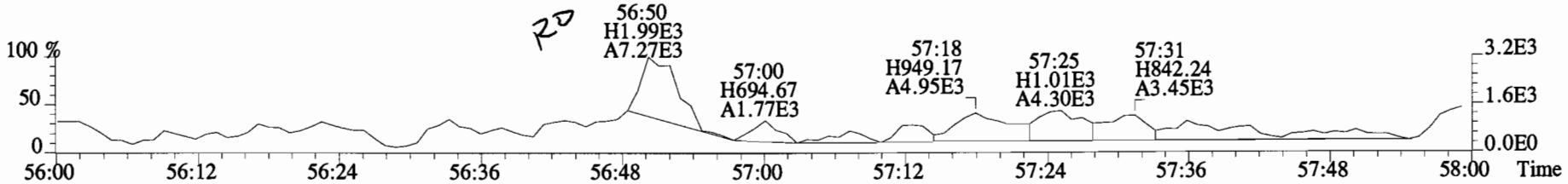
File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1124.0,0.00%,F,F)



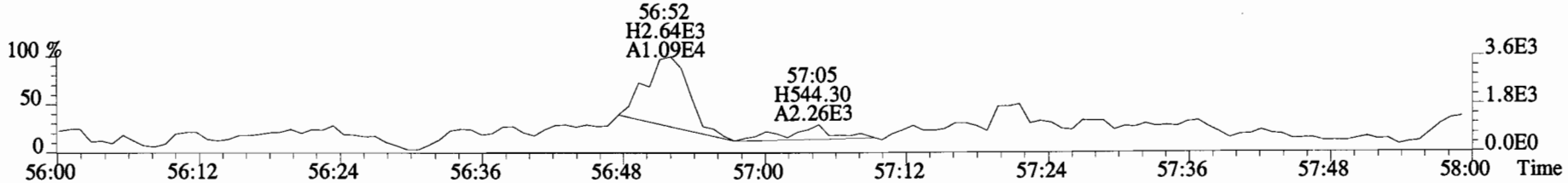
465.7186 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1052.0,0.00%,F,F)



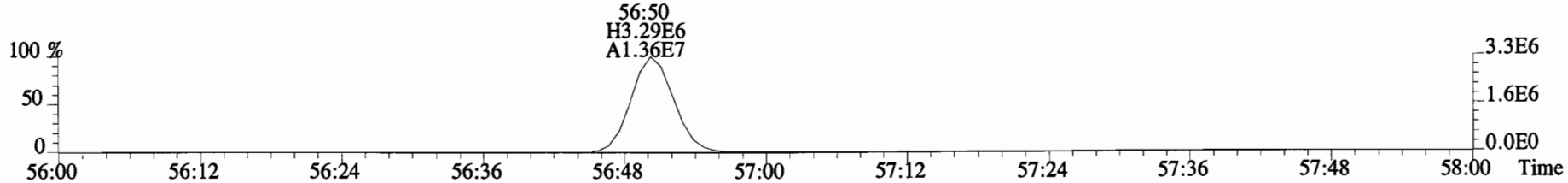
File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1092.0,0.00%,F,F)



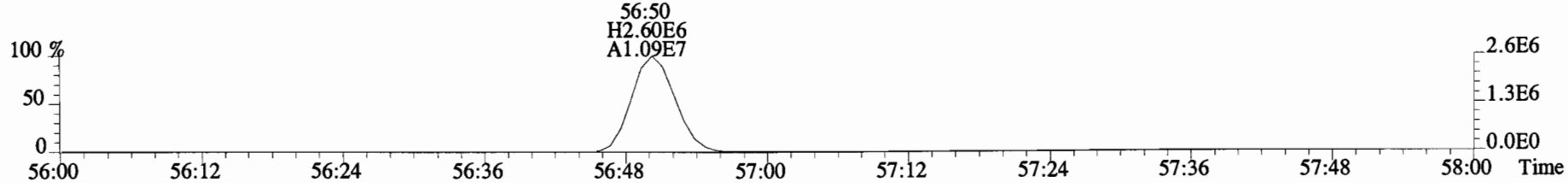
499.6797 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1116.0,0.00%,F,F)



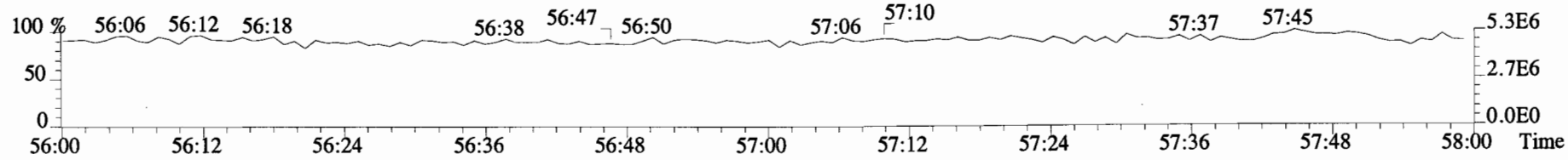
509.7229 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1220.0,0.00%,F,F)



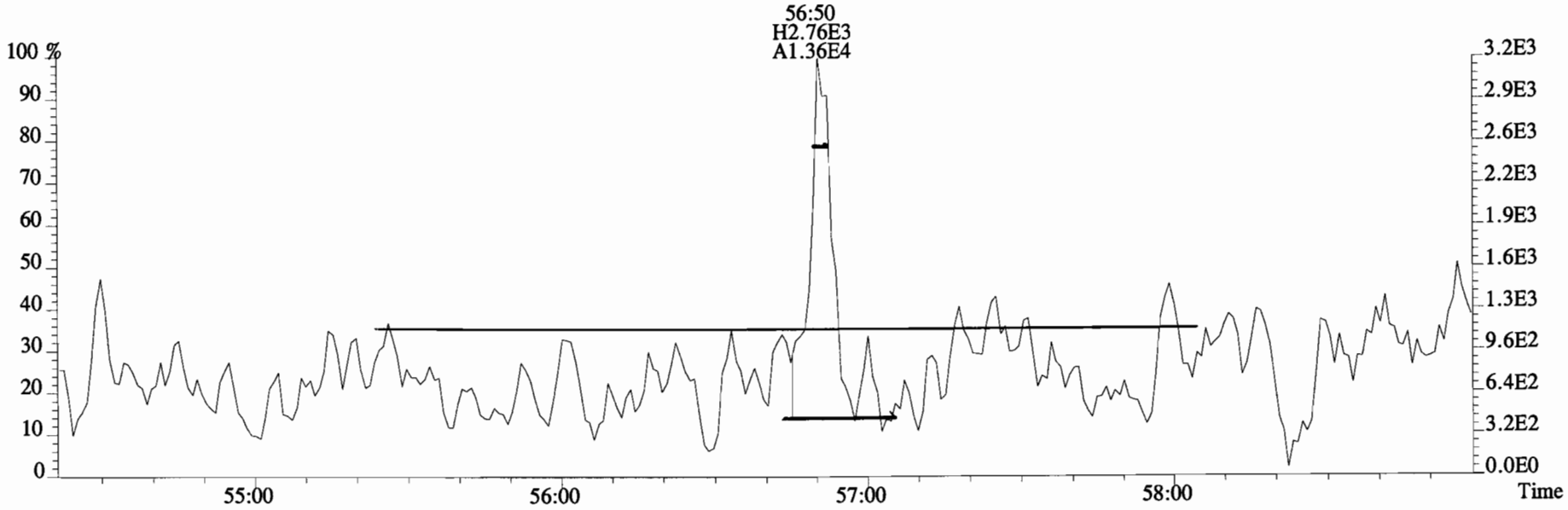
511.7199 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1124.0,0.00%,F,F)



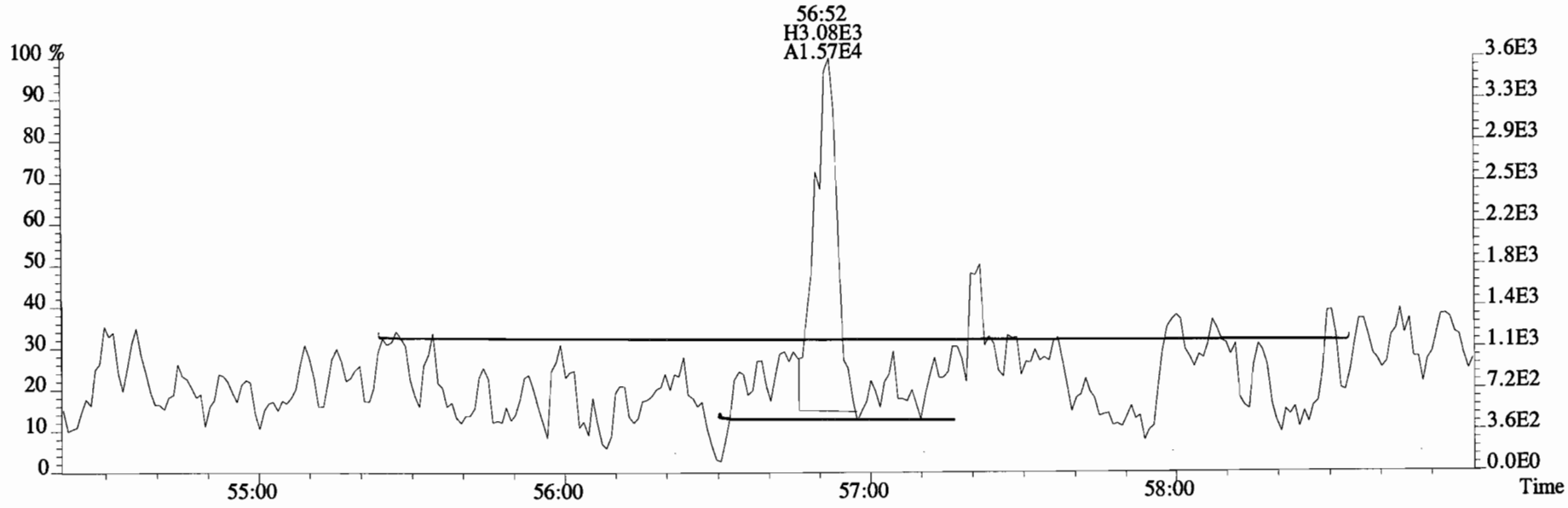
492.9697 S:6 F:5



File:150319E2 #1-430 Acq:20-MAR-2015 02:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400984-01 BD-OWS-14-20141222-W 1 Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1092.0,0.00%,F,F)



499.6797 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1116.0,0.00%,F,F)



Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1

Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.026 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n NotF¶	1.33	*		1850	2.5	1.07	*	0.997	1.007
Mono	PCB-2	*	*	n NotF¶	1.30	*		1850	2.5	1.13	*	0.983	0.993
Mono	PCB-3	*	*	n NotF¶	1.30	*		1850	2.5	1.13	*	0.996	1.006
Di	PCB-4/10	3.85e+05	1.27	n 20:08	1.67	8.52	R	*	2.5	*	1.002	0.997	1.007
Di	PCB-7/9	*	*	n NotF¶	1.25	*		9720	2.5	4.03	*	0.864	0.872
Di	PCB-6	*	*	n NotF¶	1.24	*		9720	2.5	4.08	*	0.888	0.897
Di	PCB-5/8	*	*	n NotF¶	1.27	*		9720	2.5	3.98	*	0.905	0.915
Di	PCB-14	*	*	n NotF¶	1.47	*		9720	2.5	3.35	*	0.948	0.958
Di	PCB-11	5.02e+05	1.38	y 25:17	1.28	7.78		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	*	*	n NotF¶	1.27	*		9720	2.5	3.89	*	1.011	1.021
Di	PCB-15	2.91e+05	1.38	y 25:59	1.44	4.01		*	2.5	*	1.028	1.023	1.031
Tri	PCB-19	1.16e+05	0.98	y 24:15	1.18	3.94		*	2.5	*	1.001	0.996	1.006
Tri	PCB-30	*	*	n NotF¶	1.87	*		2190	2.5	0.927	*	1.033	1.043
Tri	PCB-18	5.30e+05	0.97	y 25:54	0.89	15.7		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	2.01e+05	0.93	y 26:05	0.96	5.50		*	2.5	*	0.961	0.956	0.966
Tri	PCB-24/27	1.68e+05	1.13	y 26:38	1.30	3.39		*	2.5	*	0.981	0.977	0.987
Tri	PCB-16/32	3.61e+05	1.08	y 27:10	1.05	9.03		*	2.5	*	1.001	0.996	1.006
Tri	PCB-34	*	*	n NotF¶	1.30	*		2150	2.5	0.826	*	0.955	0.965
Tri	PCB-23	*	*	n NotF¶	1.21	*		2150	2.5	0.888	*	0.958	0.968
Tri	PCB-29	*	*	n NotF¶	1.21	*		2150	2.5	0.888	*	0.967	0.977
Tri	PCB-26	2.94e+05	0.94	y 28:31	1.24	4.75		*	2.5	*	0.979	0.974	0.984
Tri	PCB-25	1.45e+05	1.37	n 28:41	1.10	2.64	R	*	2.5	*	0.985	0.980	0.990
Tri	PCB-31	4.43e+05	1.13	y 29:01	1.25	7.08		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	4.38e+05	1.10	y 29:07	1.24	7.08		*	2.5	*	1.000	0.996	1.006
Tri	PCB-20/21/33	1.63e+05	1.15	y 29:46	1.16	2.82		*	2.5	*	1.022	1.016	1.026
Tri	PCB-22	1.28e+05	1.11	y 30:11	1.16	2.19		*	2.5	*	1.037	1.032	1.042
Tri	PCB-36	*	*	n NotF¶	1.30	*		2150	2.5	0.838	*	0.929	0.939
Tri	PCB-39	*	*	n NotF¶	1.26	*		2150	2.5	0.864	*	0.943	0.953
Tri	PCB-38	*	*	n NotF¶	1.24	*		2150	2.5	0.877	*	0.967	0.977
Tri	PCB-35	*	*	n NotF¶	1.26	*		2150	2.5	0.867	*	0.982	0.992
Tri	PCB-37	*	*	n NotF¶	1.35	*		2150	2.5	0.807	*	0.996	1.006
Tetra	PCB-54	*	*	n NotF¶	1.02	*		1770	2.5	1.01	*	0.996	1.006
Tetra	PCB-50	*	*	n NotF¶	0.78	*		1770	2.5	1.33	*	1.037	1.047
Tetra	PCB-53	1.02e+05	1.02	n 29:48	1.14	3.27	R	*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	1.70e+05	0.78	y 30:09	1.16	5.31		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	4.65e+04	0.93	n 30:36	1.04	1.62	R	*	2.5	*	0.971	0.965	0.975
Tetra	PCB-46	*	*	n NotF¶	0.95	*		1770	2.5	1.49	*	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/25/15

Reviewed by: [illegible] Date: 3/26/15

Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1
Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.026 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	5.92e+05	0.85	y	31:32	1.29	16.7		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF¶	1.41	*		1770	2.5	1.00	*	0.999	1.009
Tetra	PCB-43/49	3.24e+05	0.88	y	31:49	1.14	10.3		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	6.30e+05	0.74	y	32:02	1.20	17.5		*	2.5	*	1.000	0.996	1.006
Tetra	PCB-48/75	4.24e+04	0.78	y	32:10	1.33	1.06		*	2.5	*	1.004	0.999	1.009
Tetra	PCB-65	*	*	n	NotF¶	1.32	*		1770	2.5	0.975	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF¶	1.36	*		1770	2.5	0.945	*	1.011	1.021
Tetra	PCB-44	1.75e+05	0.82	y	32:50	0.87	6.68		*	2.5	*	1.025	1.020	1.030
Tetra	PCB-42/59	8.87e+04	0.72	y	33:03	1.24	2.39		*	2.5	*	1.032	1.027	1.037
Tetra	PCB-41/64/71/72	2.59e+05	0.81	y	33:39	1.34	6.44		*	2.5	*	1.050	1.045	1.055
Tetra	PCB-68	2.05e+05	0.71	y	33:54	1.61	4.24		*	2.5	*	1.058	1.053	1.063
Tetra	PCB-40	*	*	n	NotF¶	0.86	*		1770	2.5	1.50	*	1.061	1.071
Tetra	PCB-57	*	*	n	NotF¶	1.12	*		1770	2.5	0.988	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF¶	1.09	*		1770	2.5	1.01	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF¶	1.14	*		1770	2.5	0.974	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF¶	1.16	*		1770	2.5	0.952	*	0.981	0.991
Tetra	PCB-74	1.17e+05	0.76	y	35:21	1.21	2.57		*	2.5	*	0.995	0.989	0.999
Tetra	PCB-61/70	2.77e+05	0.83	y	35:33	1.13	6.54		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-76/66	1.74e+05	0.69	y	35:46	1.18	3.91		*	2.5	*	1.007	1.000	1.010
Tetra	PCB-80	*	*	n	NotF¶	1.32	*		1770	2.5	0.855	*	0.995	1.005
Tetra	PCB-55	*	*	n	NotF¶	1.23	*		1770	2.5	0.921	*	1.004	1.014
Tetra	PCB-56/60	1.11e+05	1.01	n	36:47	1.11	2.68	R	*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	*	*	n	NotF¶	1.16	*		1770	2.5	0.977	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF¶	1.18	*		1770	2.5	1.06	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF¶	1.29	*		1770	2.5	0.968	*	0.995	1.005
Tetra	PCB-77	*	*	n	NotF¶	1.29	*		1770	2.5	1.04	*	0.995	1.005
Penta	PCB-104	*	*	n	NotF¶	1.26	*		1600	2.5	1.99	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF¶	1.09	*		1600	2.5	2.30	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF¶	0.97	*		1600	2.5	2.60	*	1.051	1.061
Penta	PCB-100	*	*	n	NotF¶	0.96	*		1600	2.5	2.61	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF¶	1.13	*		1600	2.5	3.19	*	0.980	0.990
Penta	PCB-95/98/102	2.23e+05	1.34	y	35:50	1.29	11.9		*	2.5	*	1.000	0.994	1.004
Penta	PCB-93	*	*	n	NotF¶	1.06	*		1600	2.5	3.40	*	0.998	1.008
Penta	PCB-88/91	*	*	n	NotF¶	1.12	*		1600	2.5	3.21	*	1.006	1.016
Penta	PCB-121	*	*	n	NotF¶	1.76	*		1600	2.5	2.05	*	1.009	1.019
Penta	PCB-84/92	8.70e+04	1.34	y	37:10	1.07	5.49		*	2.5	*	0.990	0.985	0.995
Penta	PCB-89	*	*	n	NotF¶	1.00	*		1600	2.5	3.79	*	0.990	1.000

Analyst: DMS

Date: 3/25/15

Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1

Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.026 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	1.90e+05	1.76	y 37:33	1.21	10.6		*	2.5	*	1.000	0.995	1.005
Penta	PCB-113	*	*	n NotF¶	1.34	*		1600	2.5	2.82	*	1.002	1.012
Penta	PCB-99	7.99e+04	1.33	y 37:53	1.25	4.33		*	2.5	*	1.009	1.004	1.014
Penta	PCB-119	*	*	n NotF¶	1.88	*		1600	2.5	2.21	*	0.982	0.992
Penta	PCB-108/112	*	*	n NotF¶	1.41	*		1600	2.5	2.95	*	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.66	*		1600	2.5	2.50	*	0.990	1.000
Penta	PCB-97	*	*	n NotF¶	1.30	*		1600	2.5	3.20	*	0.995	1.005
Penta	PCB-86	*	*	n NotF¶	1.03	*		1600	2.5	4.02	*	0.999	1.009
Penta	PCB-87/117/125	8.79e+04	1.77	y 39:08	1.59	4.15		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	*	*	n NotF¶	1.86	*		1600	2.5	2.24	*	1.006	1.016
Penta	PCB-85/116	*	*	n NotF¶	1.39	*		1600	2.5	2.98	*	1.010	1.020
Penta	PCB-120	*	*	n NotF¶	1.99	*		1600	2.5	2.09	*	1.016	1.026
Penta	PCB-110	2.83e+05	1.42	y 39:47	1.70	12.5		*	2.5	*	1.024	1.019	1.029
Penta	PCB-82	*	*	n NotF¶	0.74	*		1600	2.5	4.04	*	0.971	0.981
Penta	PCB-124	*	*	n NotF¶	1.30	*		1600	2.5	2.30	*	0.988	0.998
Penta	PCB-107/109	*	*	n NotF¶	1.34	*		1600	2.5	2.24	*	0.991	1.001
Penta	PCB-123	*	*	n NotF¶	1.25	*		1600	2.5	2.39	*	0.995	1.005
Penta	PCB-106/118	1.86e+05	1.49	y 41:36	1.29	8.11		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	*	*	n NotF¶	1.45	*		1630	2.5	1.26	*	0.995	1.005
Penta	PCB-122	*	*	n NotF¶	1.22	*		1630	2.5	1.50	*	0.999	1.009
Penta	PCB-105	9.54e+04	1.77	y 43:07	1.56	2.10		*	2.5	*	1.000	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.31	*		1630	2.5	1.38	*	0.995	1.005
Penta	PCB-126	*	*	n NotF¶	1.41	*		1630	2.5	1.30	*	0.995	1.005
Hexa	PCB-155	*	*	n NotF¶	1.20	*		1520	2.5	3.06	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF¶	1.13	*		1520	2.5	3.25	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF¶	1.17	*		1520	2.5	3.13	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF¶	1.09	*		1520	2.5	3.35	*	1.055	1.065
Hexa	PCB-136	*	*	n NotF¶	1.14	*		1520	2.5	3.21	*	1.063	1.073
Hexa	PCB-148	*	*	n NotF¶	0.82	*		1520	2.5	4.48	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF¶	0.89	*		1520	2.5	4.11	*	1.079	1.089
Hexa	PCB-151	*	*	n NotF¶	0.82	*		1520	2.5	4.48	*	1.097	1.107
Hexa	PCB-135	*	*	n NotF¶	0.80	*		1520	2.5	4.59	*	1.101	1.113
Hexa	PCB-144	*	*	n NotF¶	0.86	*		1520	2.5	4.28	*	1.105	1.116
Hexa	PCB-147	*	*	n NotF¶	0.78	*		1520	2.5	4.70	*	1.108	1.120
Hexa	PCB-139/149	7.51e+04	1.95	n 41:32	0.87	7.11	R	*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	*	*	n NotF¶	0.78	*		1520	2.5	4.71	*	1.120	1.132
Hexa	PCB-134/143	*	*	n NotF¶	0.93	*		1650	2.5	2.21	*	0.970	0.980

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Date: 3/25/15

Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1
Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.026 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hexa	PCB-133/142	*	*	n NotF	0.91	*		1650	2.5	2.27	*	0.977-0.987
Hexa	PCB-131	*	*	n NotF	0.85	*		1650	2.5	2.44	*	0.981-0.991
Hexa	PCB-146/165	*	*	n NotF	1.08	*		1650	2.5	1.91	*	0.986-0.996
Hexa	PCB-132/161	*	*	n NotF	1.12	*		1650	2.5	1.84	*	0.992-1.002
Hexa	PCB-153	2.88e+05	1.35	y 43:16	1.20	10.2		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-168	*	*	n NotF	1.36	*		1650	2.5	1.52	*	1.000-1.010
Hexa	PCB-141	*	*	n NotF	1.16	*		1650	2.5	1.97	*	0.995-1.005
Hexa	PCB-137	*	*	n NotF	1.18	*		1650	2.5	1.93	*	1.004-1.014
Hexa	PCB-130	*	*	n NotF	0.92	*		1650	2.5	2.47	*	1.006-1.016
Hexa	PCB-138/163/164	3.07e+05	1.28	y 44:51	1.38	10.7		*	2.5	*	1.000	0.996-1.006
Hexa	PCB-158/160	*	*	n NotF	1.48	*		1650	2.5	1.50	*	1.001-1.011
Hexa	PCB-129	*	*	n NotF	0.99	*		1650	2.5	2.24	*	1.007-1.017
Hexa	PCB-166	*	*	n NotF	1.14	*		1650	2.5	1.52	*	0.988-0.998
Hexa	PCB-159	*	*	n NotF	1.22	*		1650	2.5	1.42	*	0.995-1.005
Hexa	PCB-128/162	6.54e+04	1.37	y 46:23	1.03	2.38		*	2.5	*	1.006	1.002-1.012
Hexa	PCB-167	*	*	n NotF	1.18	*		1650	2.5	1.36	*	0.995-1.005
Hexa	PCB-156	*	*	n NotF	1.27	*		1650	2.5	1.26	*	0.995-1.005
Hexa	PCB-157	*	*	n NotF	1.22	*		1650	2.5	1.34	*	0.995-1.005
Hexa	PCB-169	*	*	n NotF	1.07	*		1650	2.5	1.40	*	0.995-1.005
Hepta	PCB-188	*	*	n NotF	1.52	*		1730	2.5	1.44	*	0.996-1.006
Hepta	PCB-184	*	*	n NotF	1.34	*		1730	2.5	1.64	*	1.006-1.016
Hepta	PCB-179	*	*	n NotF	1.39	*		1730	2.5	1.58	*	1.024-1.034
Hepta	PCB-176	*	*	n NotF	1.45	*		1730	2.5	1.51	*	1.035-1.045
Hepta	PCB-186	*	*	n NotF	1.46	*		1730	2.5	1.51	*	1.049-1.059
Hepta	PCB-178	*	*	n NotF	1.07	*		1730	2.5	2.04	*	1.061-1.071
Hepta	PCB-175	*	*	n NotF	1.05	*		1730	2.5	2.10	*	1.069-1.079
Hepta	PCB-182/187	6.61e+04	0.91	y 46:11	1.14	4.00		*	2.5	*	1.077	1.073-1.083
Hepta	PCB-183	*	*	n NotF	1.22	*		1730	2.5	1.80	*	1.080-1.090
Hepta	PCB-185	*	*	n NotF	1.40	*		1730	2.5	1.60	*	0.950-0.960
Hepta	PCB-174	*	*	n NotF	1.29	*		1730	2.5	1.74	*	0.958-0.968
Hepta	PCB-181	*	*	n NotF	1.35	*		1730	2.5	1.67	*	0.960-0.970
Hepta	PCB-177	*	*	n NotF	1.27	*		1730	2.5	1.77	*	0.963-0.973
Hepta	PCB-171	*	*	n NotF	1.46	*		1730	2.5	1.54	*	0.969-0.979
Hepta	PCB-173	*	*	n NotF	1.10	*		1730	2.5	2.04	*	0.978-0.988
Hepta	PCB-172	*	*	n NotF	1.35	*		1730	2.5	1.66	*	0.987-0.997
Hepta	PCB-192	*	*	n NotF	1.74	*		1730	2.5	1.29	*	0.991-1.001
Hepta	PCB-180	1.05e+05	0.90	y 49:23	1.45	5.36		*	2.5	*	1.001	0.995-1.005

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Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1
Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.026 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	NotF¶	1.85	*		1730	2.5	1.21	*	0.999	1.009
Hepta	PCB-191	*	*	n	NotF¶	1.86	*		1730	2.5	1.21	*	1.005	1.015
Hepta	PCB-170	3.61e+04	1.19	y	50:52	1.67	2.00		*	2.5	*	1.001	0.995	1.005
Hepta	PCB-190	*	*	n	NotF¶	2.25	*		1730	2.5	1.16	*	0.999	1.009
Hepta	PCB-189	*	*	n	NotF¶	1.67	*		1730	2.5	1.21	*	0.995	1.005
Octa	PCB-202	*	*	n	NotF¶	1.02	*		1500	2.5	2.64	*	0.995	1.005
Octa	PCB-201	*	*	n	NotF¶	1.10	*		1500	2.5	2.45	*	1.005	1.015
Octa	PCB-204	*	*	n	NotF¶	1.07	*		1500	2.5	2.50	*	1.009	1.019
Octa	PCB-197	*	*	n	NotF¶	1.17	*		1500	2.5	2.30	*	1.015	1.025
Octa	PCB-200	*	*	n	NotF¶	1.03	*		1500	2.5	2.60	*	1.034	1.044
Octa	PCB-198	*	*	n	NotF¶	0.75	*		1500	2.5	3.56	*	1.062	1.072
Octa	PCB-199	*	*	n	NotF¶	0.74	*		1500	2.5	3.62	*	1.064	1.074
Octa	PCB-196/203	3.12e+04	1.55	n	51:48	0.83	2.93	R	*	2.5	*	1.073	1.070	1.080
Octa	PCB-195	*	*	n	NotF¶	1.14	*		1350	2.5	1.24	*	0.979	0.989
Octa	PCB-194	4.35e+04	0.95	y	53:52	1.29	1.85		*	2.5	*	1.000	0.995	1.005
Octa	PCB-205	*	*	n	NotF¶	1.61	*		1350	2.5	0.877	*	1.001	1.010
Nona	PCB-208	*	*	n	NotF¶	1.01	*		1250	2.5	0.915	*	0.995	1.005
Nona	PCB-207	*	*	n	NotF¶	1.03	*		1250	2.5	0.902	*	1.001	1.011
Nona	PCB-206	*	*	n	NotF¶	0.88	*		1250	2.5	1.71	*	0.995	1.005
Deca	PCB-209	*	*	n	NotF¶	1.35	*		956	2.5	1.35	*	0.995	1.005

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Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.31	*	
Total Di-PCB	7.92e+05	1.38	y	25:17	1.32	11.7935	
Total Tri-PCB	1.38e+06	0.98	y	24:15	1.20	37.5612	
Total Tri-PCB	1.47e+06	0.94	y	28:31	1.23	23.9207	Sum:61.4819
Total Tetra-PCB	3.05e+06	0.78	y	30:09	1.17	83.6352	
Total Penta-PCB	1.14e+06	1.34	y	35:50	1.24	57.0781	
Total Penta-PCB	9.54e+04	1.77	y	43:07	1.39	2.10489	Sum:59.1830
Total Hexa-PCB	*	*	n	NotFnd	0.94	*	
Total Hexa-PCB	6.60e+05	1.35	y	43:16	1.13	23.2929	Sum:23.2929
Total Hepta-PCB	2.07e+05	0.91	y	46:11	1.37	11.3603	
Total Octa-PCB	*	*	n	NotFnd	0.95	*	
Total Octa-PCB	4.35e+04	0.95	y	53:52	1.35	1.84592	Sum:1.84592
Total Nona-PCB	*	*	n	NotFnd	0.99	*	
Total Deca-PCB	*	*	n	NotFnd	1.35	*	

Total PCB Conc:281.354434000
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Integrations
by
Analyst: DMS

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Client ID: BD-MH-12.56-20141222-W Filename: 150319E2 S:7 Acq:20-MAR-15 04:02:32 ConCal: ST150319E2-1
Lab ID: 1400984-02 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0265 EndCAL: NA

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	8.21e+07	3.20	y	0.91	16:10	0.623	0.619	0.625	1260	64.8
13C-PCB-3	8.62e+07	3.19	y	0.94	18:47	0.723	0.718	0.726	1280	65.7
13C-PCB-4	5.26e+07	1.62	y	0.60	20:06	0.774	0.770	0.778	1230	63.2
13C-PCB-9	8.85e+07	1.60	y	0.96	21:53	0.843	0.839	0.847	1290	66.1
13C-PCB-11	9.80e+07	1.59	y	0.95	25:16	0.973	0.968	0.978	1440	73.7
13C-PCB-19	4.83e+07	1.09	y	0.56	24:14	0.933	0.929	0.939	1200	61.8
13C-PCB-28	9.76e+07	1.07	y	1.07	29:07	1.004	0.999	1.009	1560	79.9
13C-PCB-32	7.43e+07	1.10	y	0.83	27:09	1.046	1.041	1.051	1260	64.6
13C-PCB-37	1.01e+08	1.05	y	0.96	32:59	1.137	1.131	1.143	1800	92.1
13C-PCB-47	5.86e+07	0.79	y	0.77	32:02	0.871	0.867	0.875	1840	94.6
13C-PCB-52	5.36e+07	0.81	y	0.71	31:31	0.857	0.853	0.861	1820	93.4
13C-PCB-54	6.98e+07	0.81	y	1.06	27:59	0.761	0.757	0.765	1590	81.7
13C-PCB-70	7.34e+07	0.80	y	0.99	35:32	0.966	0.961	0.971	1790	91.7
13C-PCB-77	6.18e+07	0.78	y	0.96	39:41	1.079	1.073	1.083	1550	79.5
13C-PCB-80	7.28e+07	0.81	y	1.02	35:58	0.978	0.973	0.983	1720	88.4
13C-PCB-81	6.62e+07	0.80	y	1.00	39:05	1.063	1.057	1.067	1600	82.2
13C-PCB-95	2.84e+07	1.59	y	0.70	35:50	0.912	0.908	0.918	1820	93.3
13C-PCB-97	2.59e+07	1.69	y	0.66	38:50	0.989	0.984	0.994	1760	90.5
13C-PCB-101	2.88e+07	1.66	y	0.77	37:32	0.955	0.951	0.961	1680	86.3
13C-PCB-104	3.94e+07	1.63	y	0.97	32:41	0.832	0.828	0.836	1820	93.6
13C-PCB-105	5.67e+07	1.64	y	1.20	43:06	0.930	0.924	0.934	1950	100
13C-PCB-114	5.86e+07	1.64	y	1.26	42:15	0.911	0.905	0.915	1930	99.2
13C-PCB-118	3.45e+07	1.71	y	0.94	41:35	1.059	1.054	1.064	1650	84.7
13C-PCB-123	3.40e+07	1.56	y	0.88	41:24	1.054	1.049	1.059	1730	88.6
13C-PCB-126	5.79e+07	1.59	y	1.13	45:20	0.978	0.972	0.982	2130	109
13C-PCB-127	6.01e+07	1.56	y	1.26	43:26	0.937	0.931	0.941	1980	102
13C-PCB-138	4.06e+07	1.27	y	1.12	44:50	0.967	0.961	0.971	1500	77.2
13C-PCB-141	4.05e+07	1.30	y	1.09	44:00	0.949	0.943	0.953	1540	78.9
13C-PCB-153	4.57e+07	1.27	y	1.27	43:16	0.933	0.927	0.937	1490	76.4
13C-PCB-155	2.36e+07	1.30	y	0.87	37:04	0.944	0.939	0.949	1220	62.4
13C-PCB-156	5.60e+07	1.23	y	1.35	48:05	1.037	1.032	1.042	1720	88.2
13C-PCB-157	5.67e+07	1.28	y	1.42	48:20	1.042	1.037	1.047	1660	85.1
13C-PCB-159	5.19e+07	1.28	y	1.37	46:07	0.995	0.989	0.999	1570	80.6
13C-PCB-167	5.47e+07	1.25	y	1.38	46:48	1.009	1.004	1.014	1640	84.3
13C-PCB-169	5.73e+07	1.29	y	1.38	50:29	1.089	1.084	1.094	1720	88.1
13C-PCB-170	2.11e+07	0.48	y	0.60	50:50	1.096	1.091	1.103	1450	74.3
13C-PCB-180	2.62e+07	0.48	y	0.76	49:21	1.064	1.059	1.069	1440	73.8
13C-PCB-188	2.83e+07	0.47	y	1.01	42:53	0.925	0.919	0.929	1160	59.4
13C-PCB-189	2.64e+07	0.46	y	0.80	52:21	1.129	1.124	1.136	1370	70.1
13C-PCB-194	3.55e+07	0.93	y	0.75	53:51	0.995	0.990	1.000	1620	83.0
13C-PCB-202	2.50e+07	0.92	y	0.99	48:16	1.041	1.036	1.046	1050	53.8
13C-PCB-206	3.02e+07	0.80	y	0.73	55:28	1.025	1.020	1.301	1390	71.5
13C-PCB-208	4.24e+07	0.77	y	1.08	53:08	0.982	0.977	0.987	1330	68.1
13C-PCB-209	2.46e+07	1.21	y	0.71	56:50	1.050	1.045	1.055	1170	60.2

CRS vs. RS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	6.69e+07	0.83	y	1.02	37:52	1.029	1.024	1.033	1580	81.2
13C-PCB-178	1.94e+07	0.45	y	0.64	45:39	0.985	0.980	0.989	1260	64.6

PS vs. IS

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	6.69e+07	0.83	y	1.02	37:52	0.969	0.963	0.973	1920	98.8
13C-PCB-178	1.94e+07	0.45	y	0.84	45:39	0.925	0.920	0.930	1710	87.5

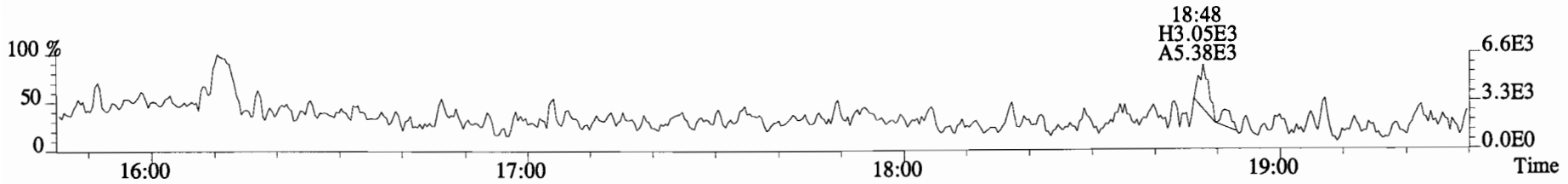
RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.39e+08	1.61	y	1.00	25:58	1950
13C-PCB-31	1.14e+08	1.09	y	1.00	29:00	1950
13C-PCB-60	8.06e+07	0.80	y	1.00	36:47	1950
13C-PCB-111	4.35e+07	1.60	y	1.00	39:17	1950
13C-PCB-128	4.70e+07	1.26	y	1.00	46:22	1950
13C-PCB-205	5.75e+07	0.92	y	1.00	54:08	1950

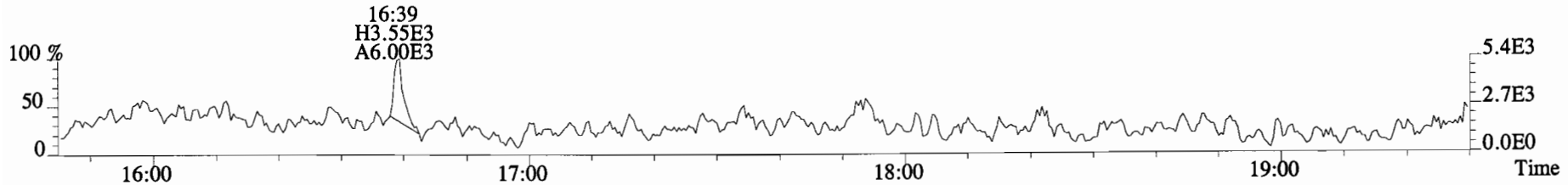
Analyst: DMS

Date: 3/25/15

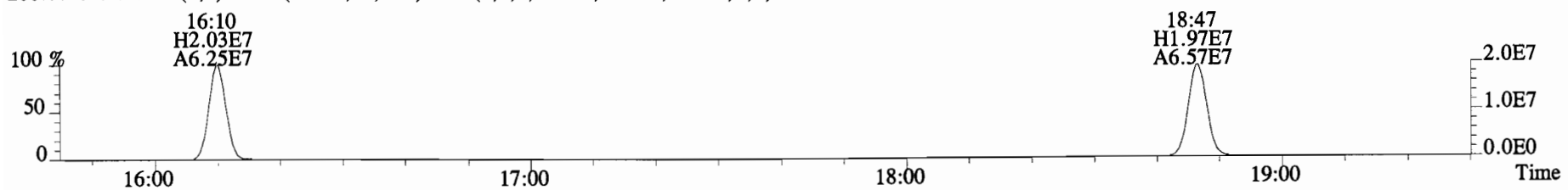
File:150319E2 #1-866 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
188.0393 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2668.0,0.00%,F,F)



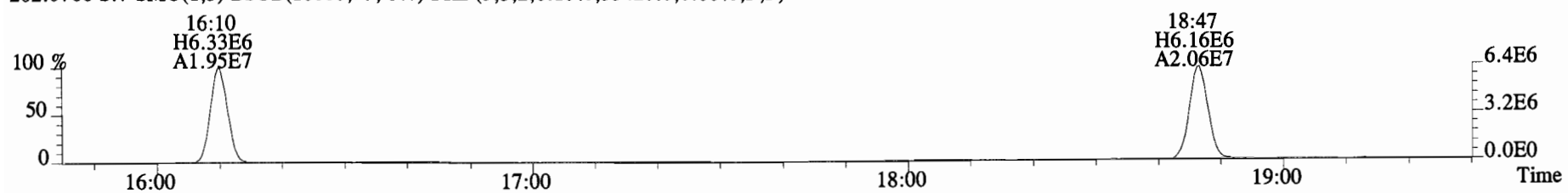
190.0363 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1848.0,0.00%,F,F)



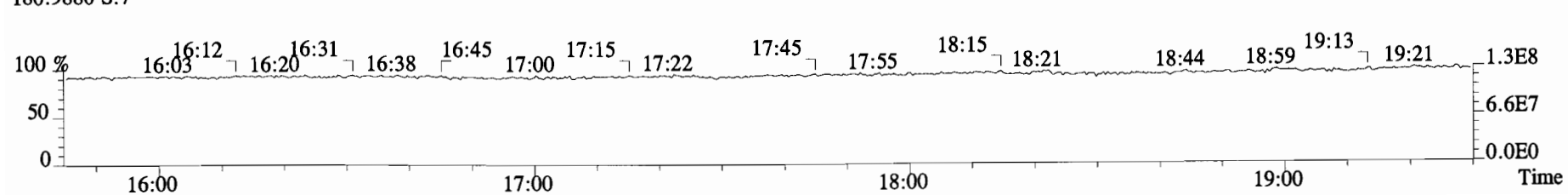
200.0795 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4420.0,0.00%,F,F)



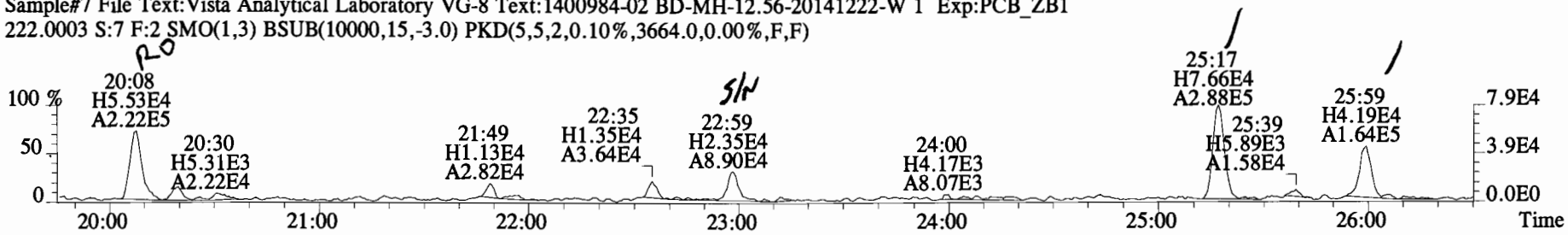
202.0766 S:7 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33420.0,0.00%,F,F)



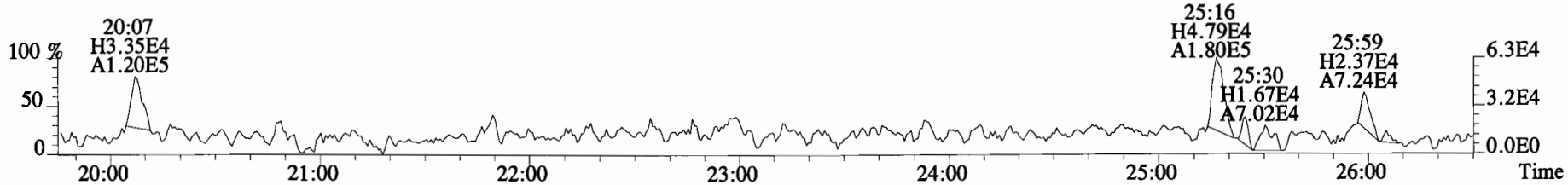
180.9880 S:7



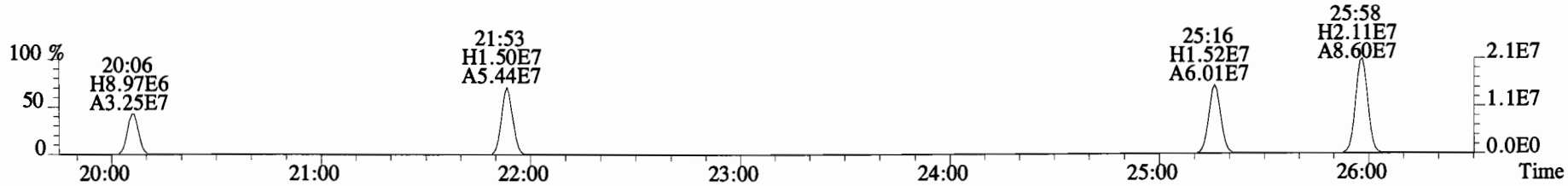
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3664.0,0.00%,F,F)



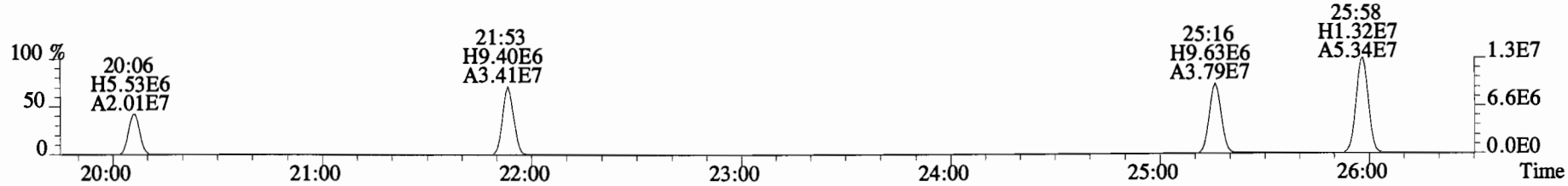
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15992.0,0.00%,F,F)



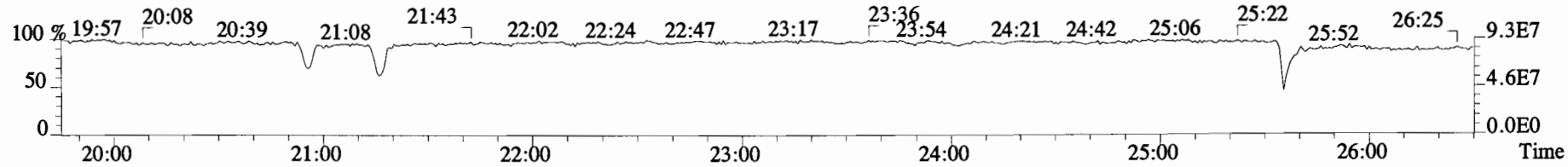
234.0406 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3696.0,0.00%,F,F)



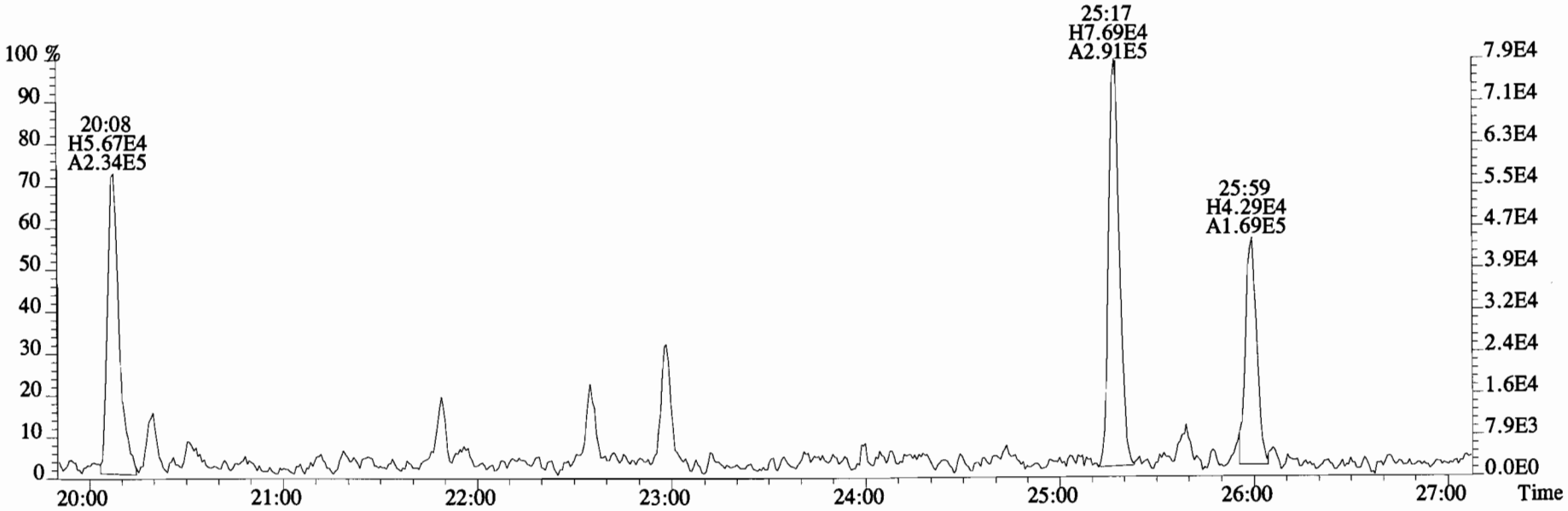
236.0376 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3244.0,0.00%,F,F)



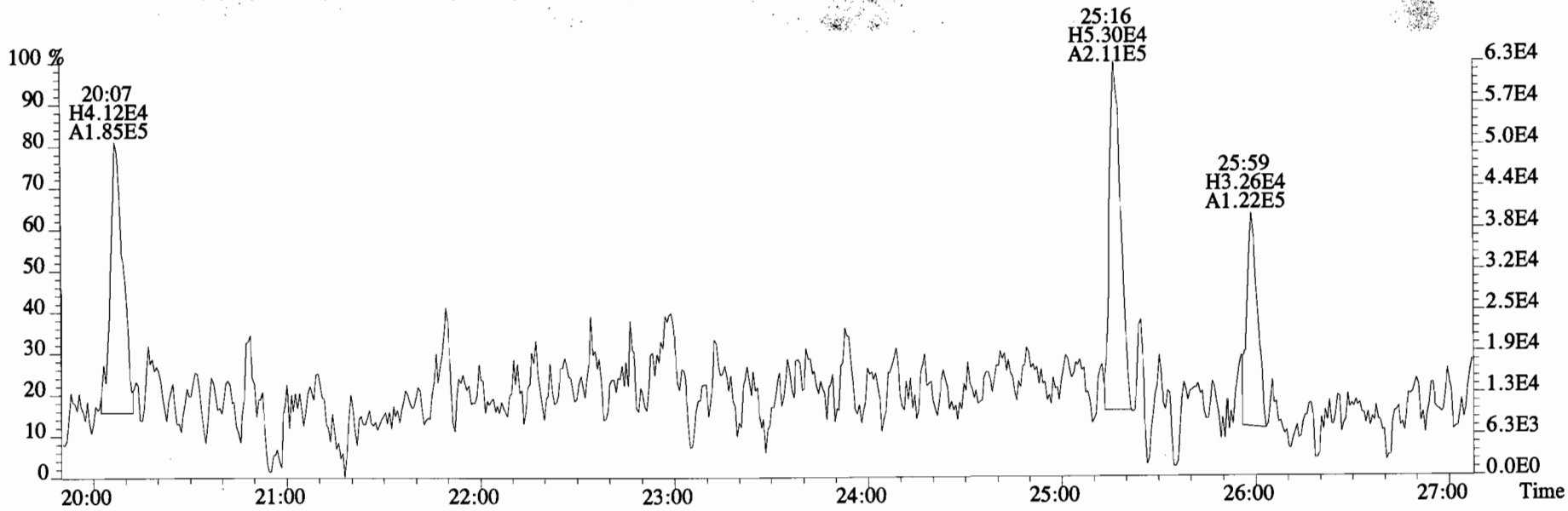
230.9856 S:7 F:2



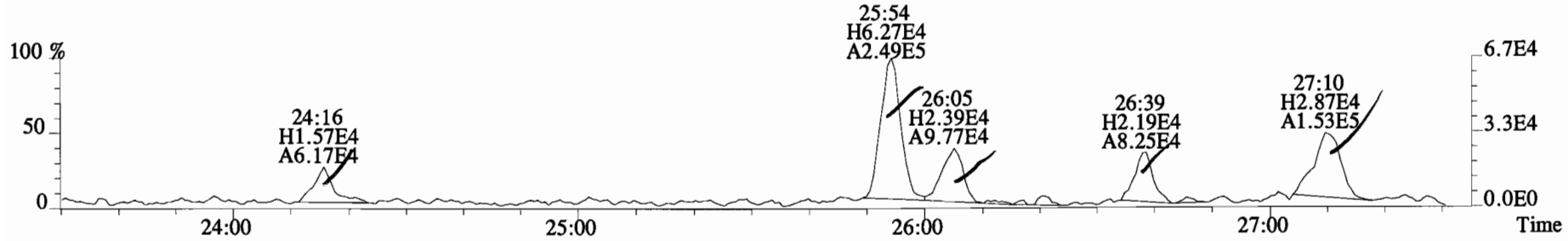
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
222.0003 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3664.0,0.00%,F,F)



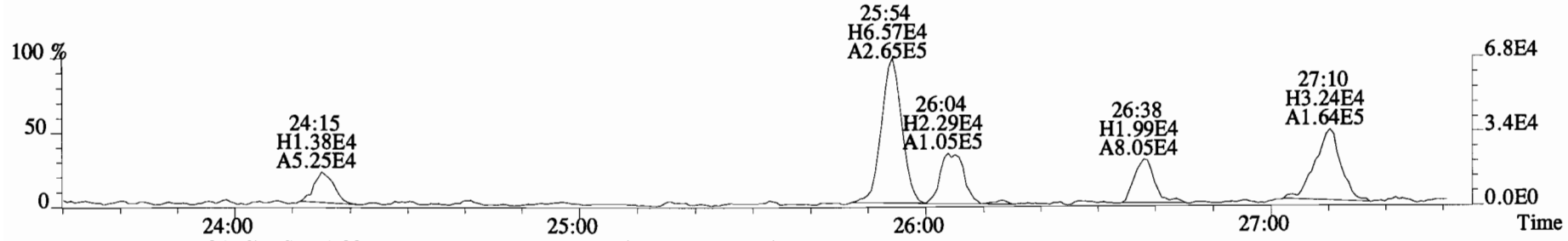
223.9974 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,15992.0,0.00%,F,F)



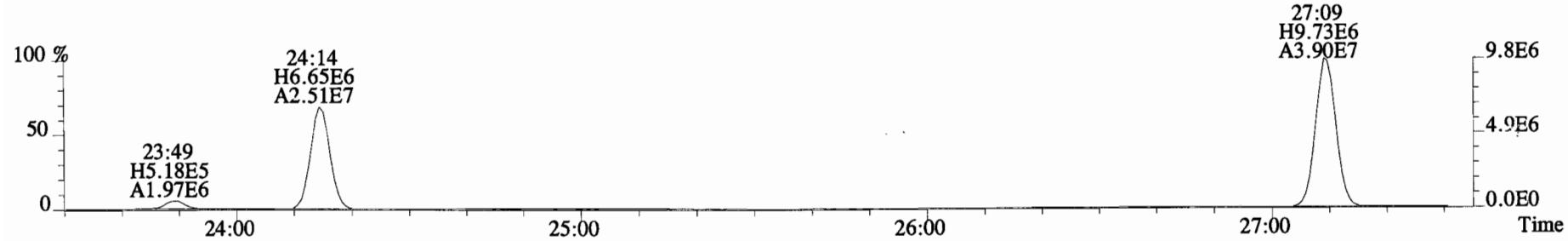
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3840.0,0.00%,F,F)



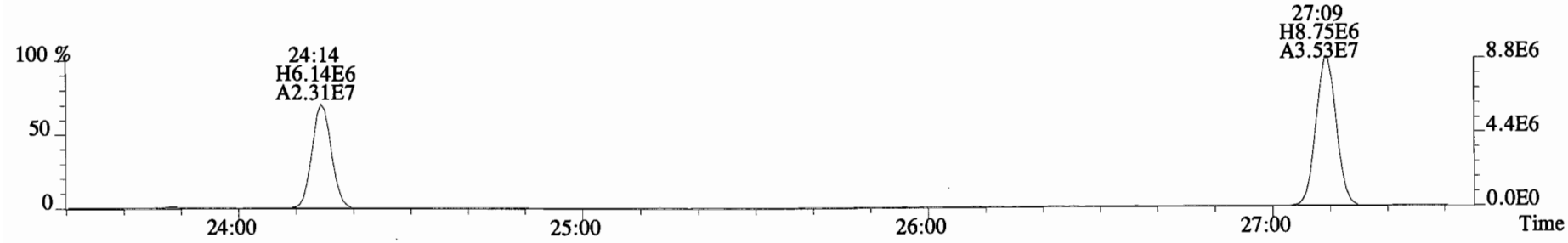
257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2188.0,0.00%,F,F)



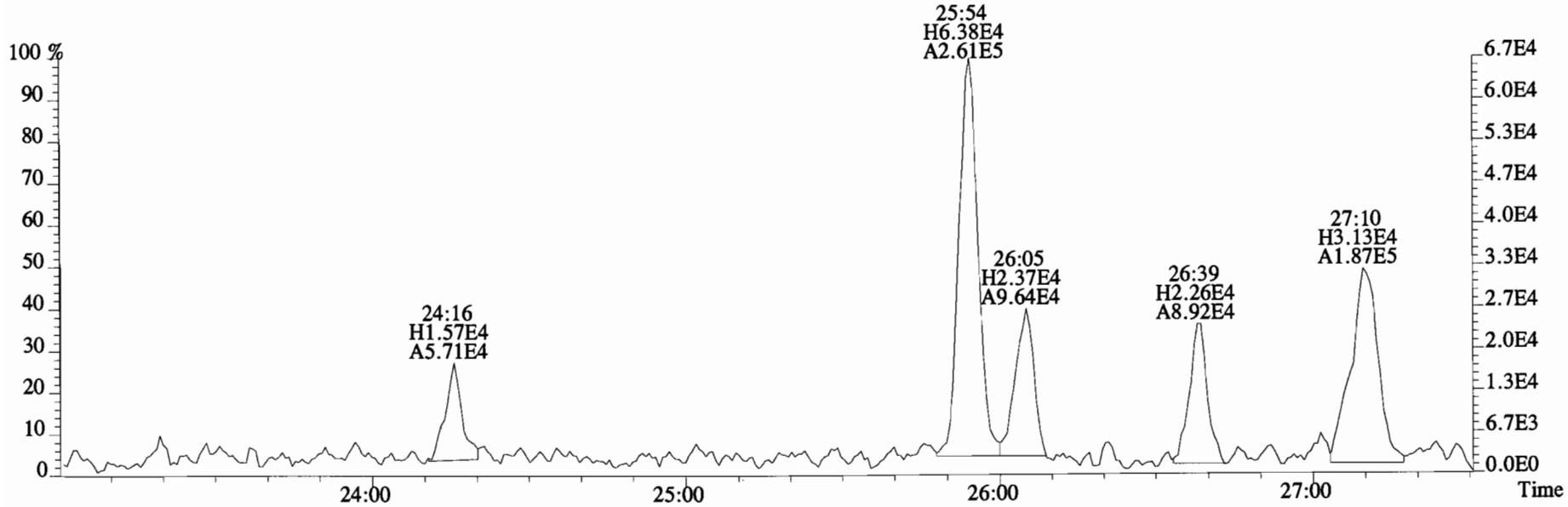
268.0016 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,65520.0,0.00%,F,F)



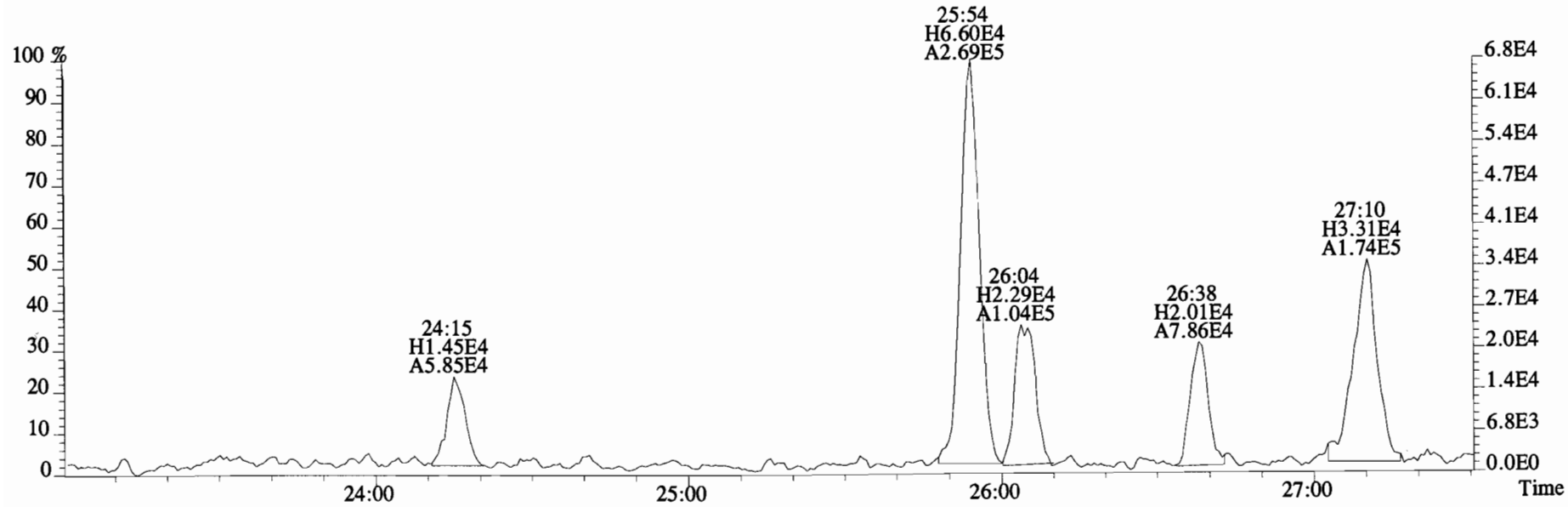
269.9986 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,33276.0,0.00%,F,F)

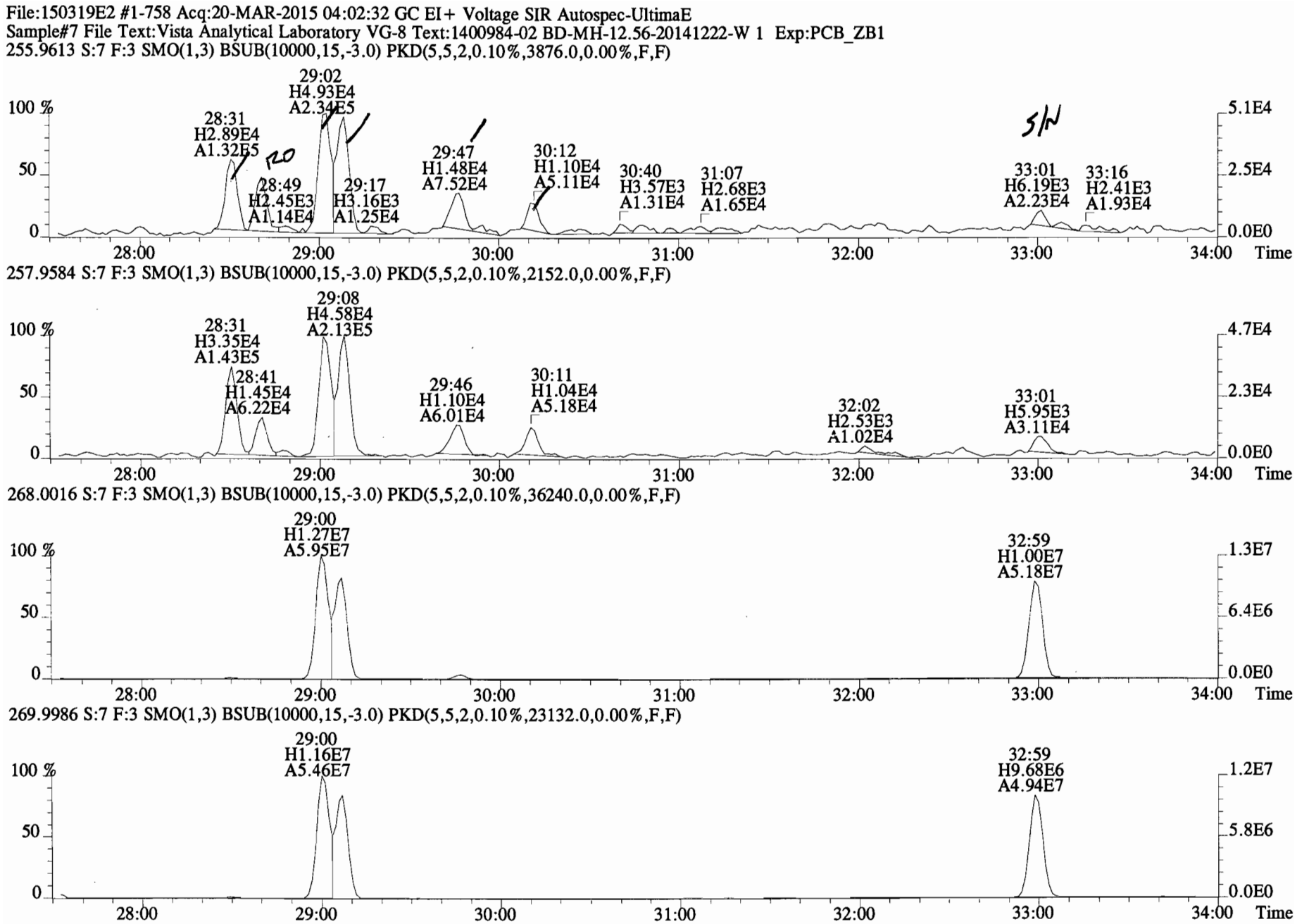


File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
255.9613 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3840.0,0.00%,F,F)

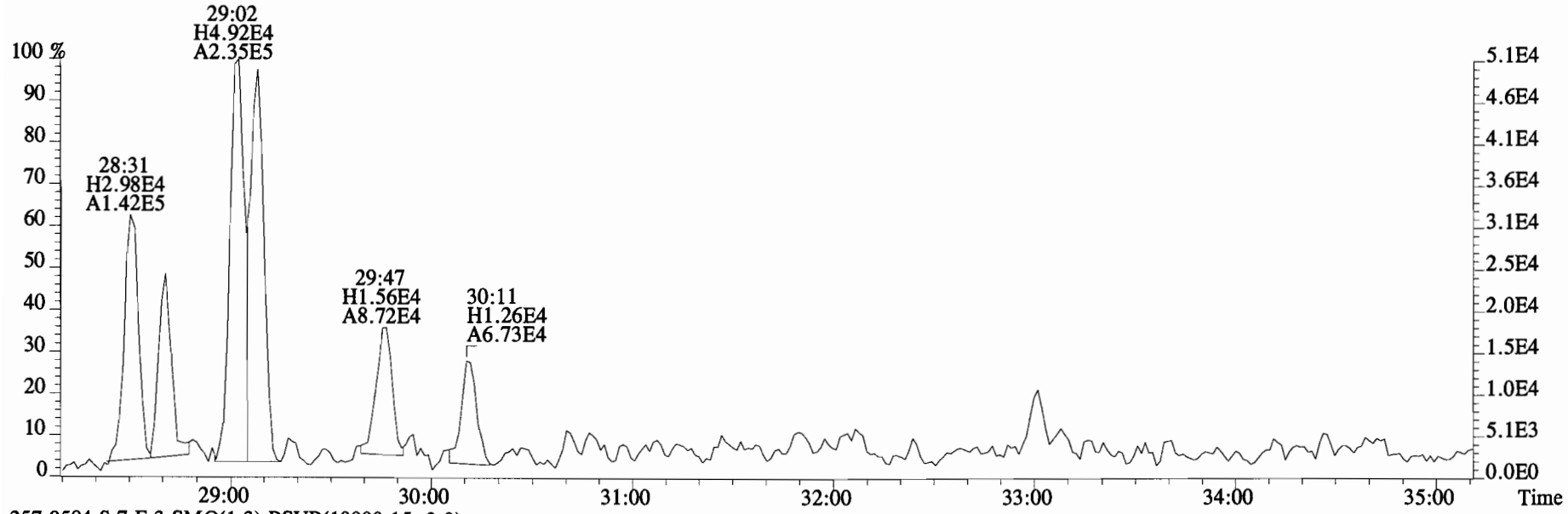


257.9584 S:7 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2188.0,0.00%,F,F)

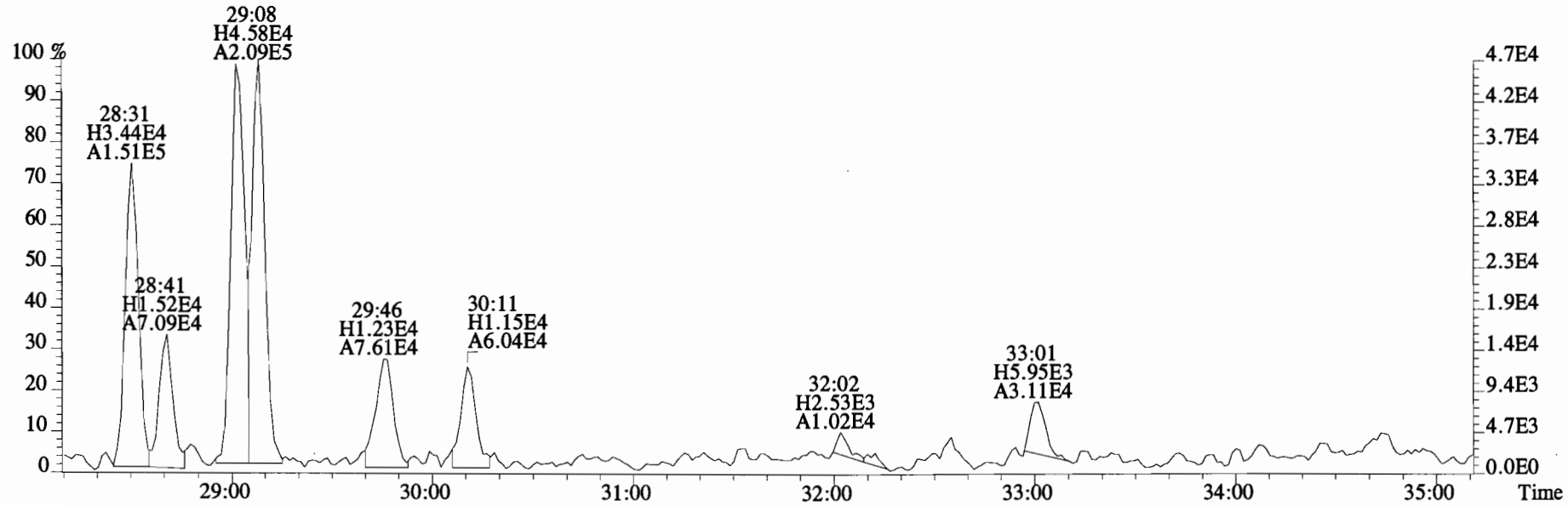



File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3876.0,0.00%,F,F)
29:02 H4.93E4 A2.34E5
28:31 H2.89E4 A1.32E5
28:49 H2.45E3 A1.14E4
29:17 H3.16E3 A1.25E4
29:47 H1.48E4 A7.52E4
30:12 H1.10E4 A5.11E4
30:40 H3.57E3 A1.31E4
31:07 H2.68E3 A1.65E4
33:01 H6.19E3 A2.23E4
33:16 H2.41E3 A1.93E4
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2152.0,0.00%,F,F)
29:08 H4.58E4 A2.13E5
28:31 H3.35E4 A1.43E5
28:41 H1.45E4 A6.22E4
29:46 H1.10E4 A6.01E4
30:11 H1.04E4 A5.18E4
32:02 H2.53E3 A1.02E4
33:01 H5.95E3 A3.11E4
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36240.0,0.00%,F,F)
29:00 H1.27E7 A5.95E7
32:59 H1.00E7 A5.18E7
269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23132.0,0.00%,F,F)
29:00 H1.16E7 A5.46E7
32:59 H9.68E6 A4.94E7
100 %
50
0
28:00
29:00
30:00
31:00
32:00
33:00
34:00
Time
5.1E4
2.5E4
0.0E0
4.7E4
2.3E4
1.3E7
6.4E6
1.2E7
5.8E6

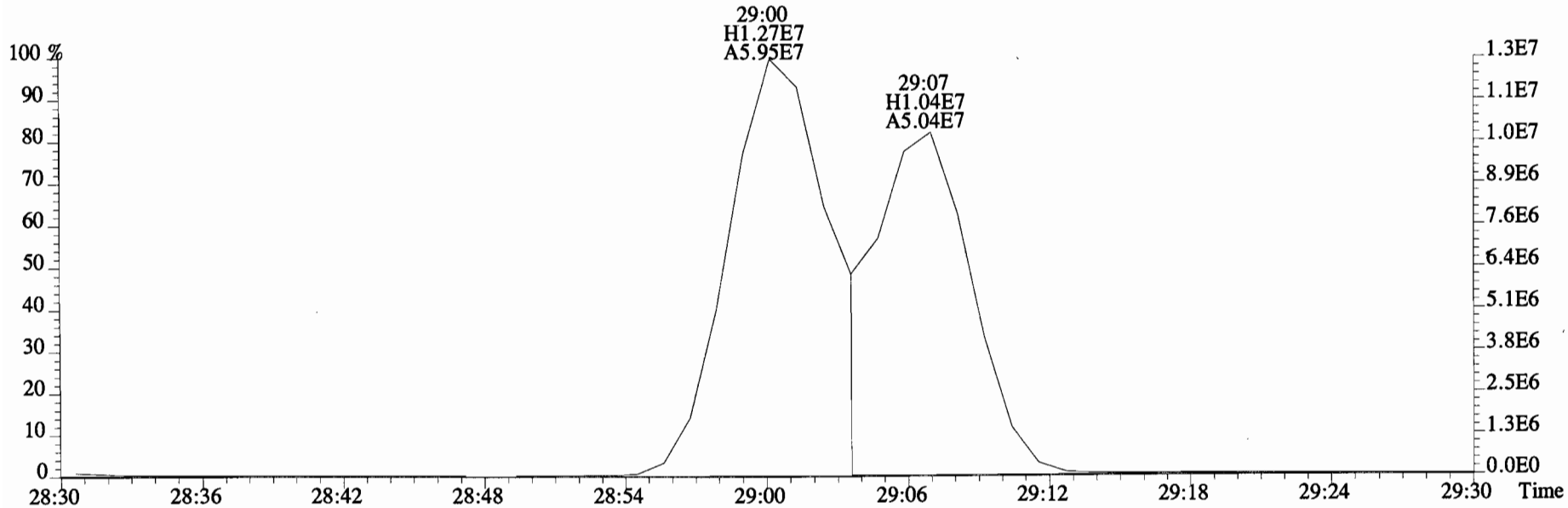
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



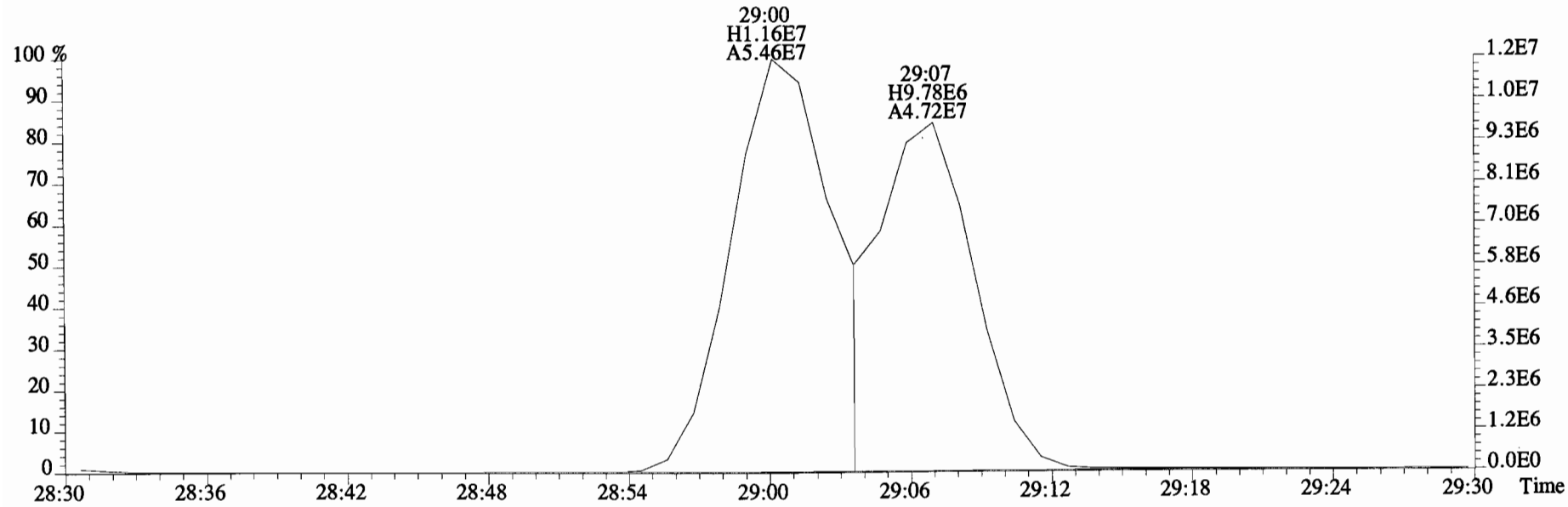
257.9584 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
268.0016 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,36240.0,0.00%,F,F)

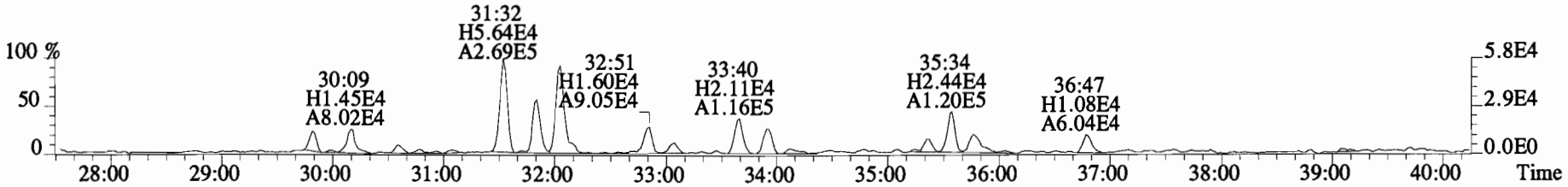


269.9986 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,23132.0,0.00%,F,F)

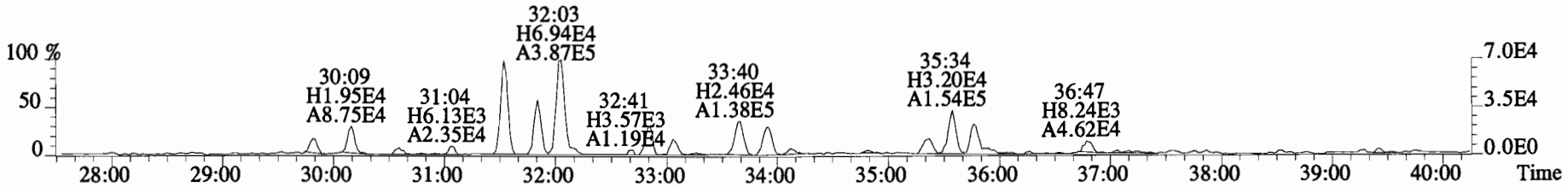


File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1

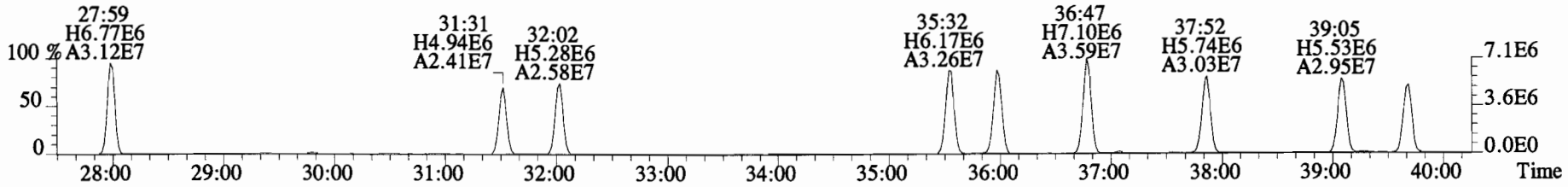
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1956.0,0.00%,F,F)



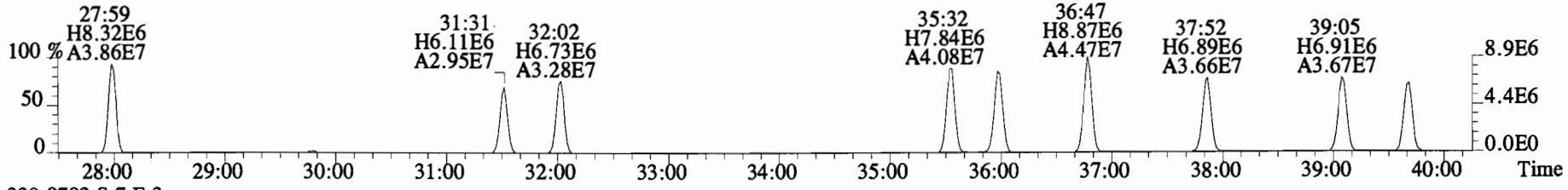
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1768.0,0.00%,F,F)



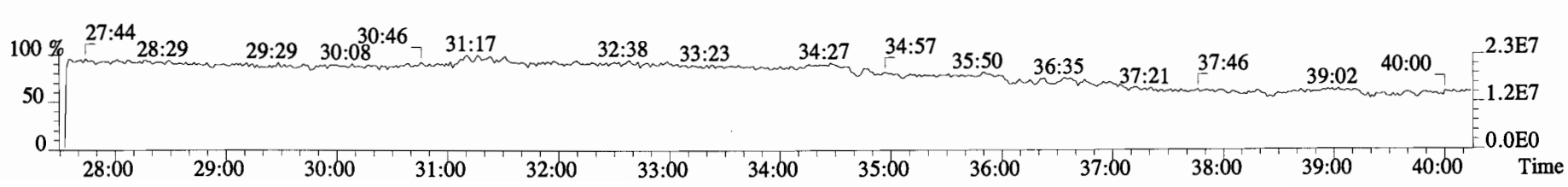
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25524.0,0.00%,F,F)



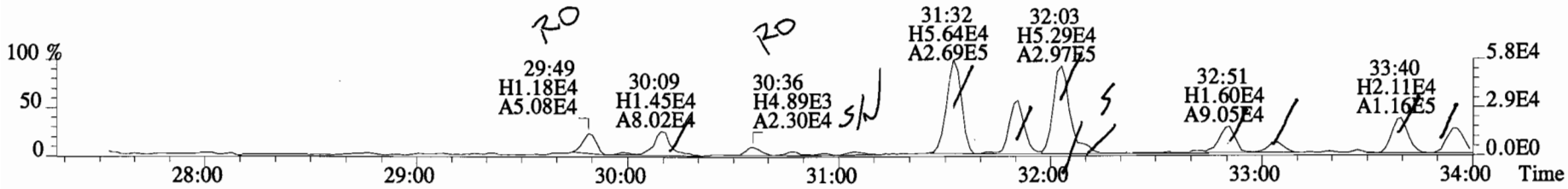
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12552.0,0.00%,F,F)



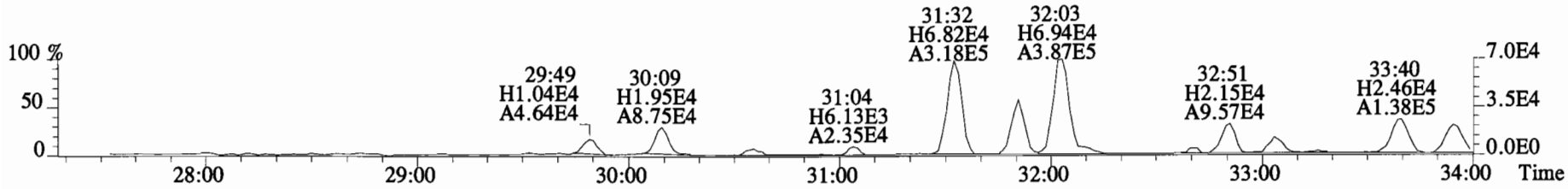
330.9792 S:7 F:3



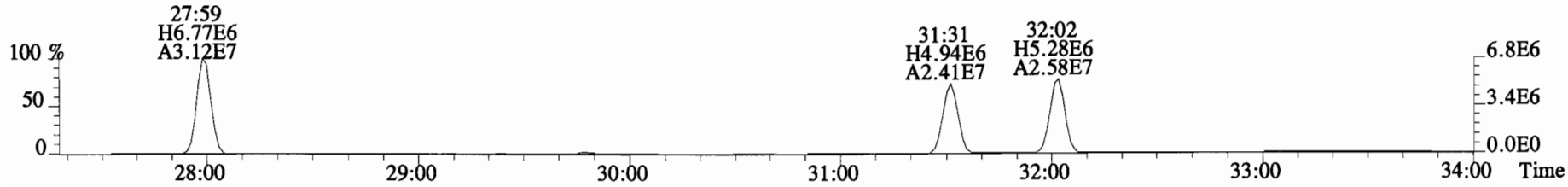
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1956.0,0.00%,F,F)



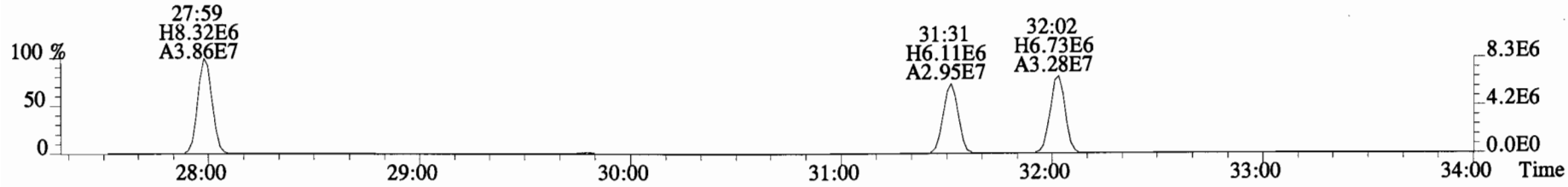
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1768.0,0.00%,F,F)



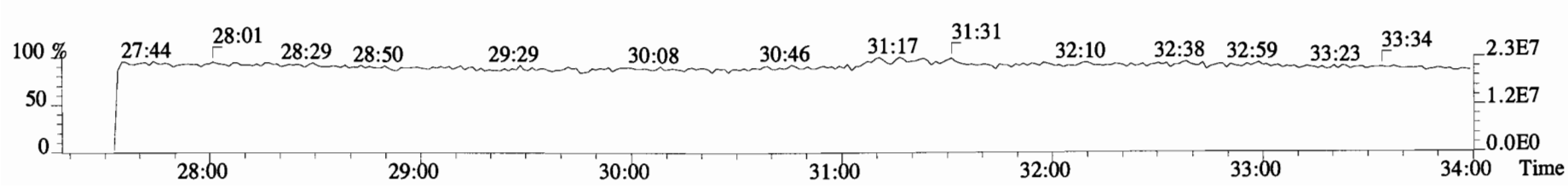
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25524.0,0.00%,F,F)



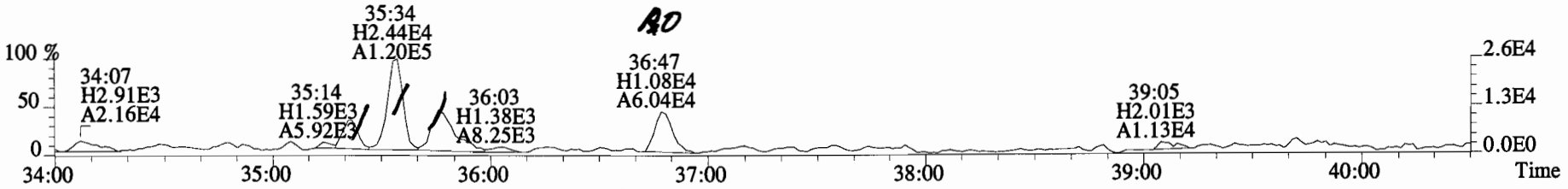
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12552.0,0.00%,F,F)



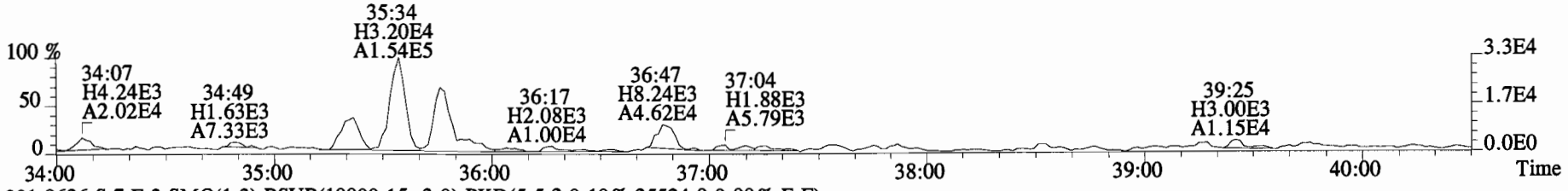
330.9792 S:7 F:3



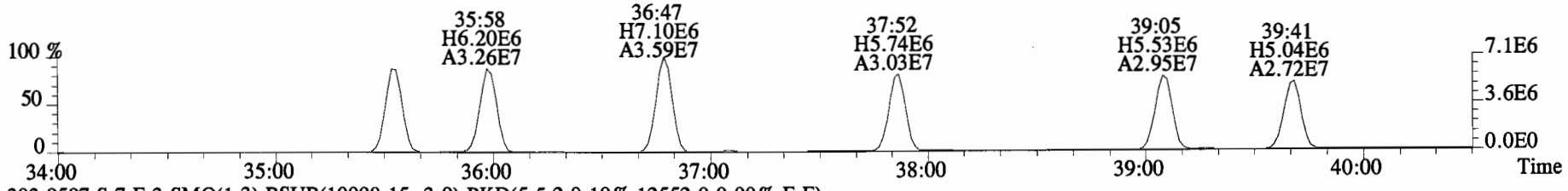
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1956.0,0.00%,F,F)



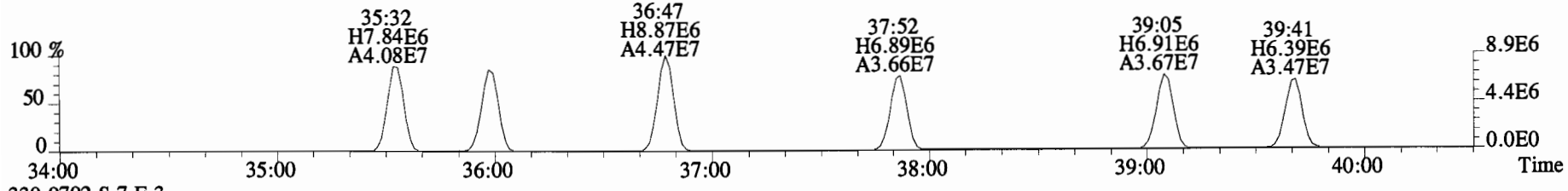
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1768.0,0.00%,F,F)



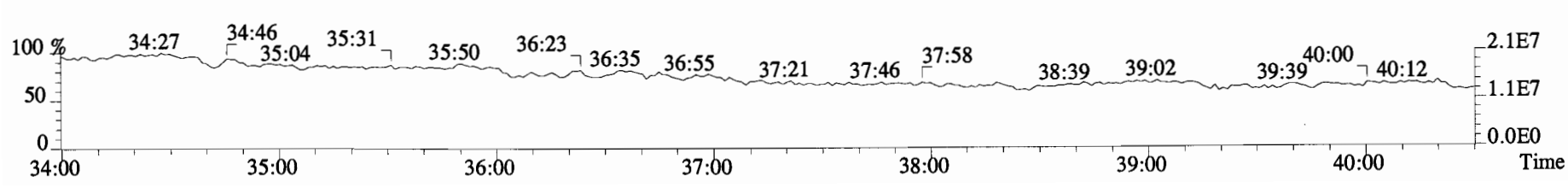
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25524.0,0.00%,F,F)



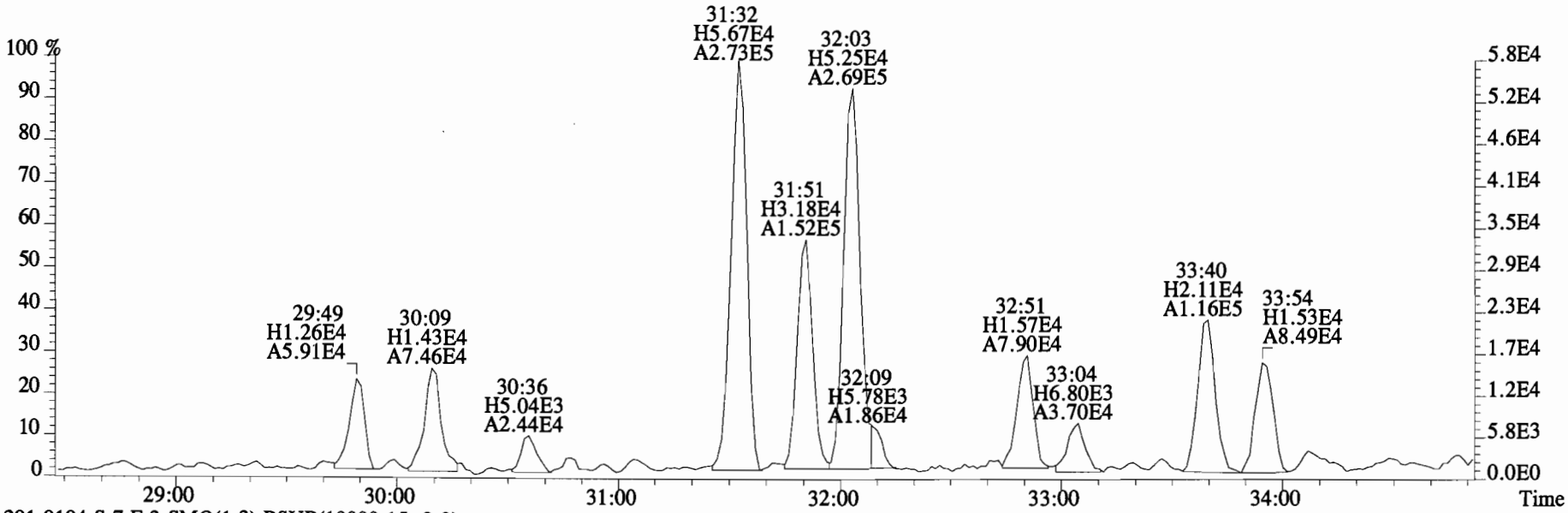
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12552.0,0.00%,F,F)



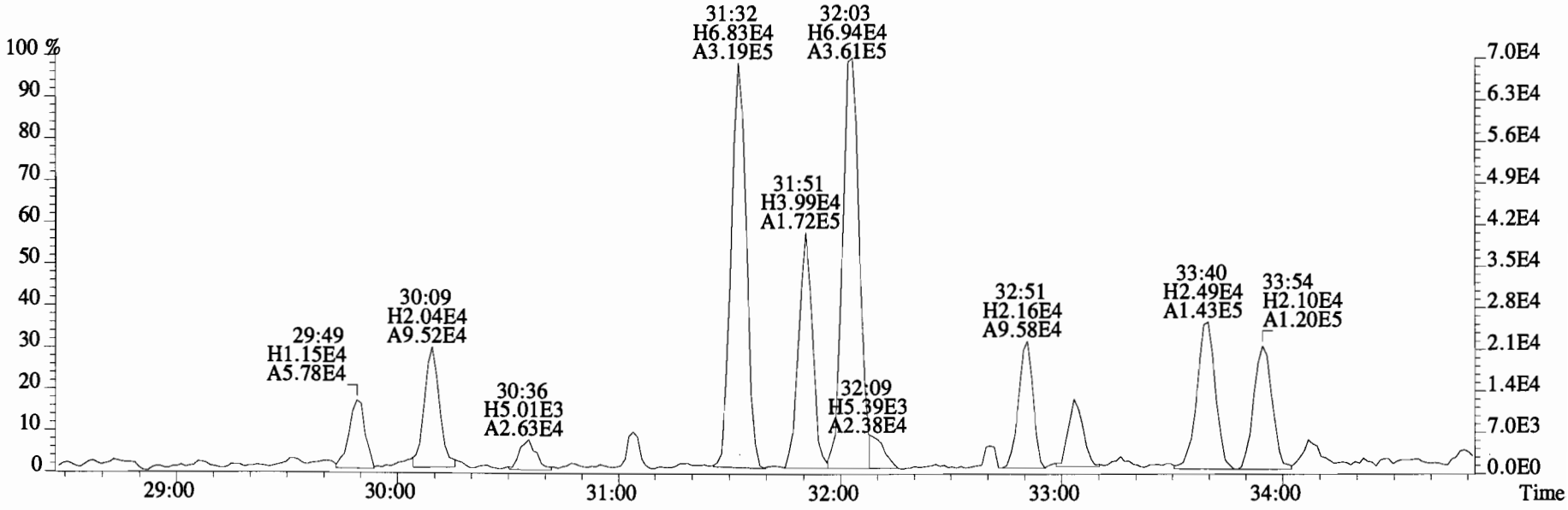
330.9792 S:7 F:3



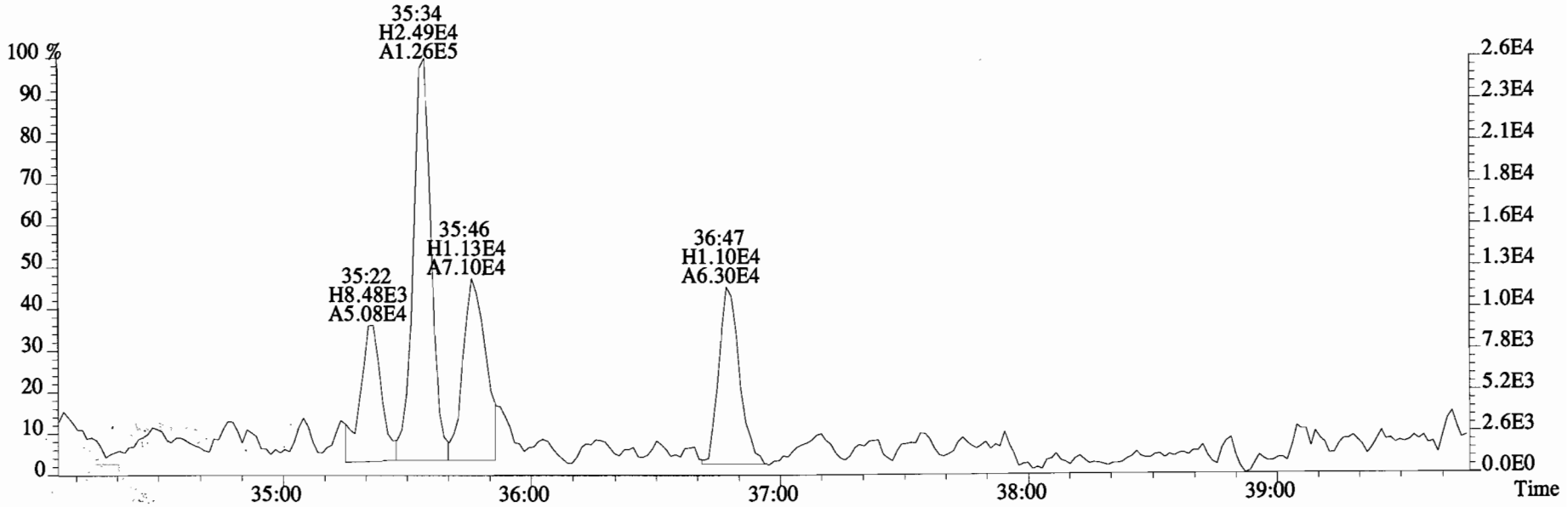
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



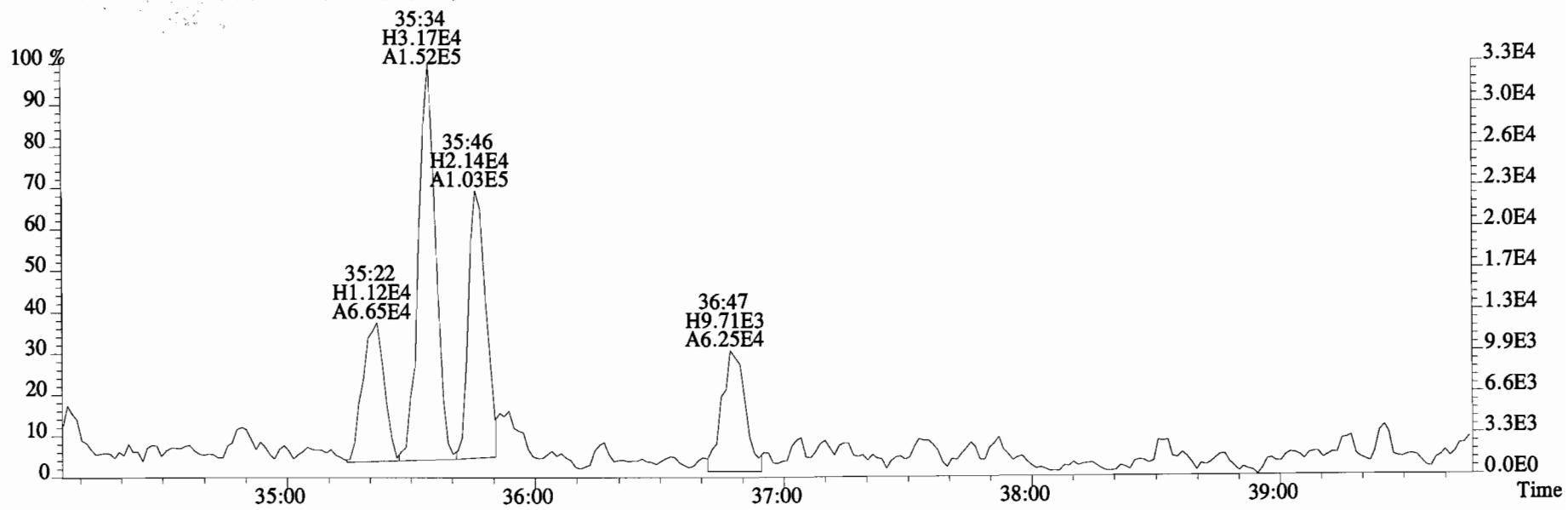
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



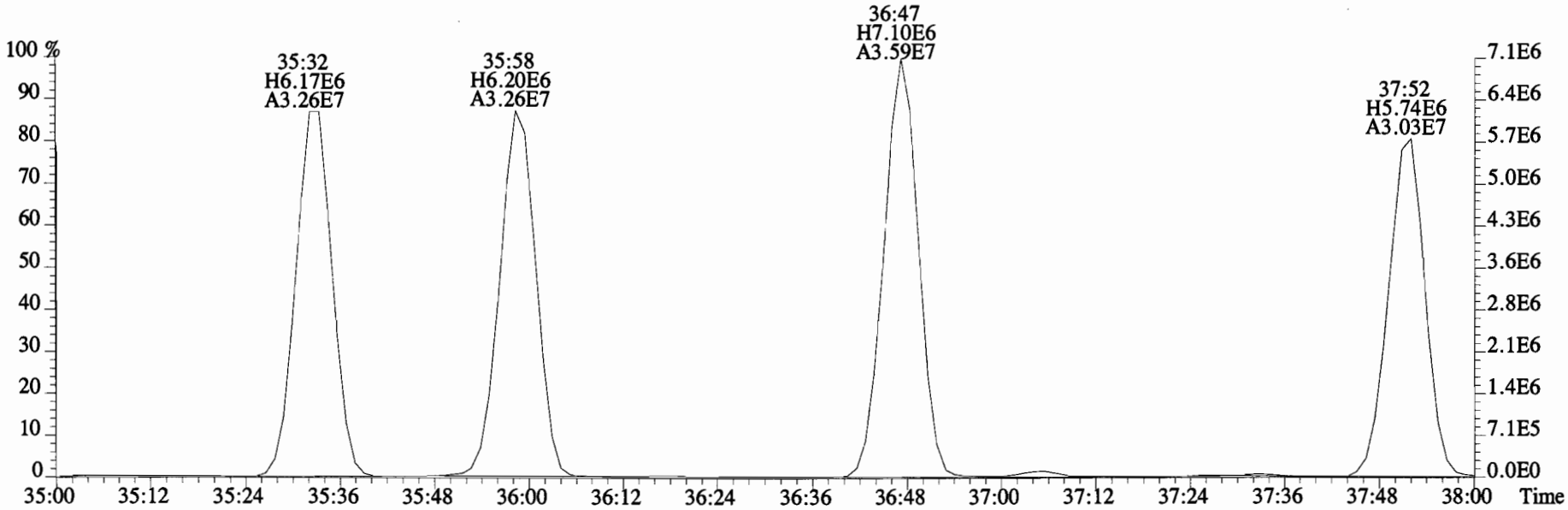
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
289.9224 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



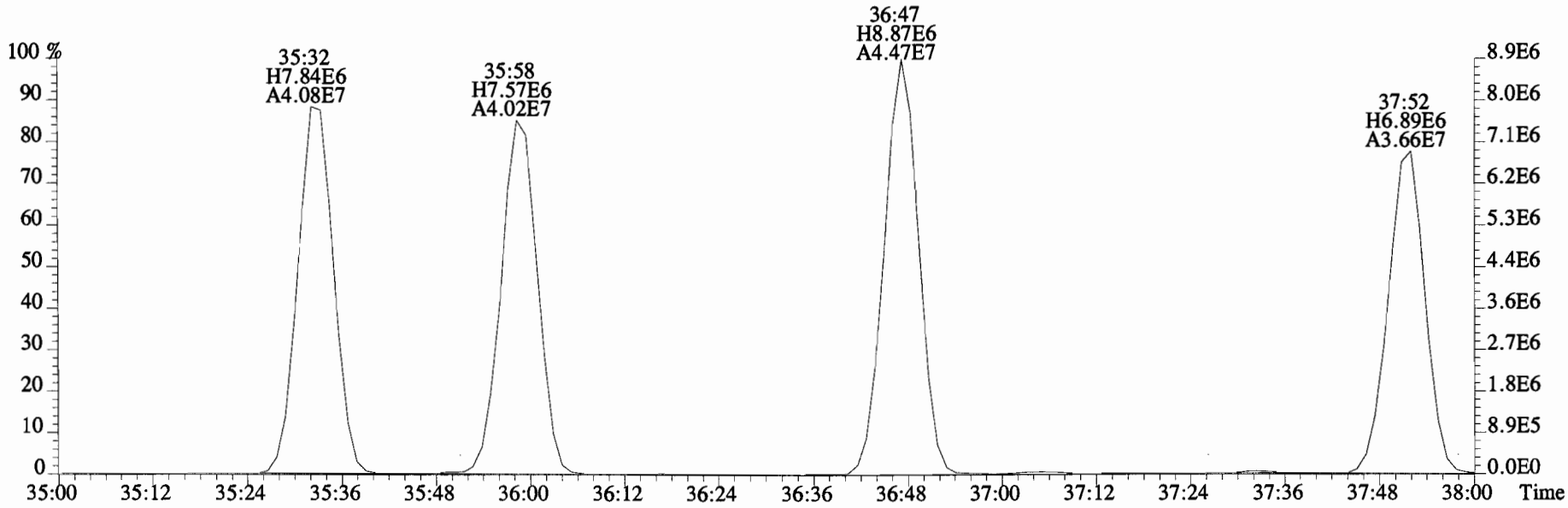
291.9194 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



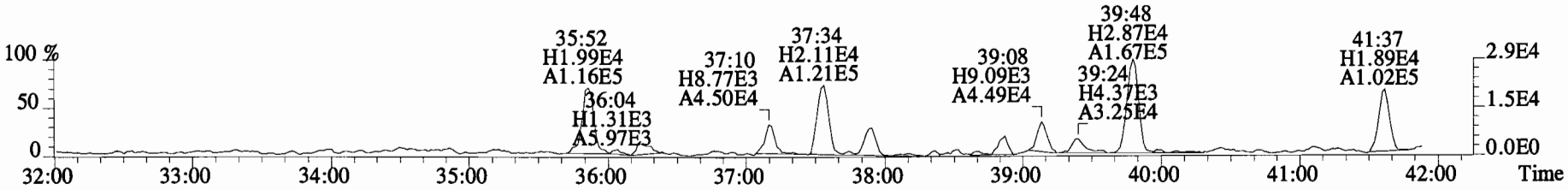
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
301.9626 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,25524.0,0.00%,F,F)



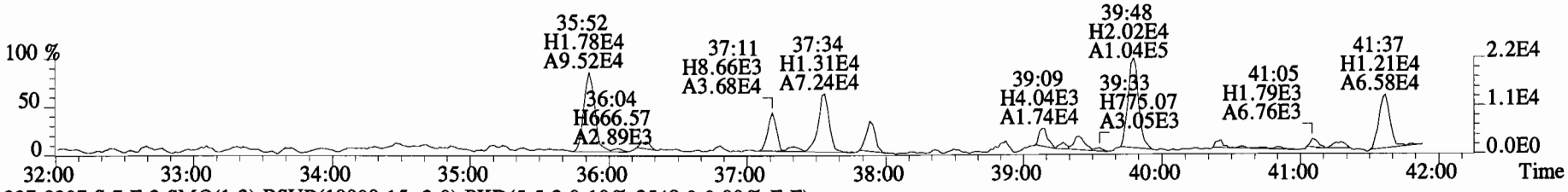
303.9597 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12552.0,0.00%,F,F)



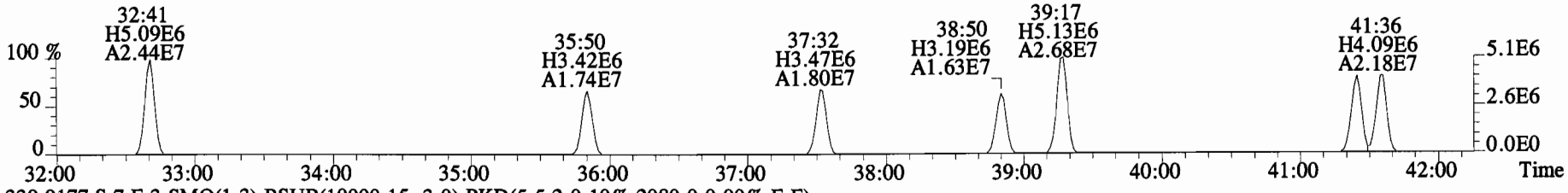
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



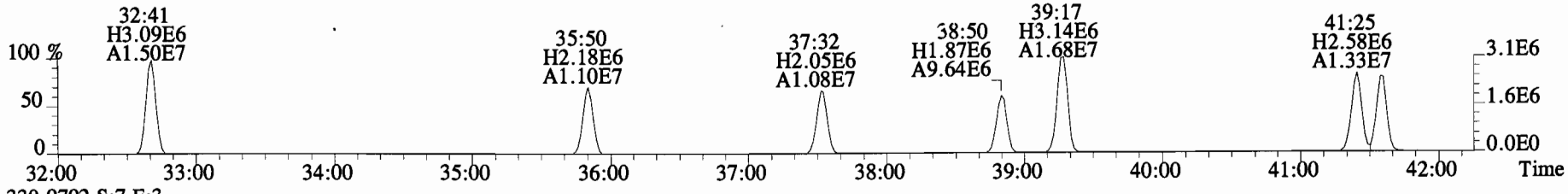
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1604.0,0.00%,F,F)



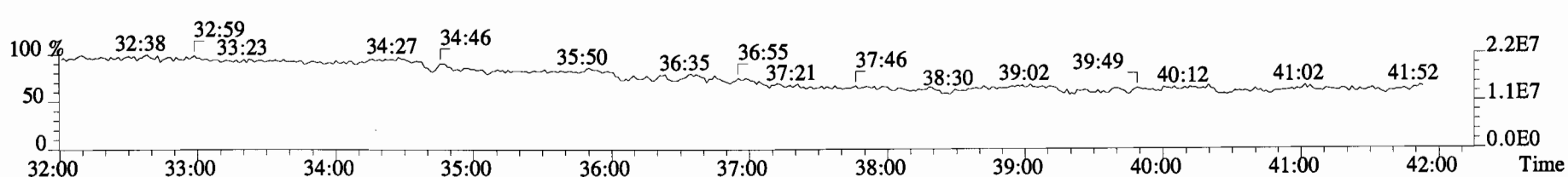
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2548.0,0.00%,F,F)



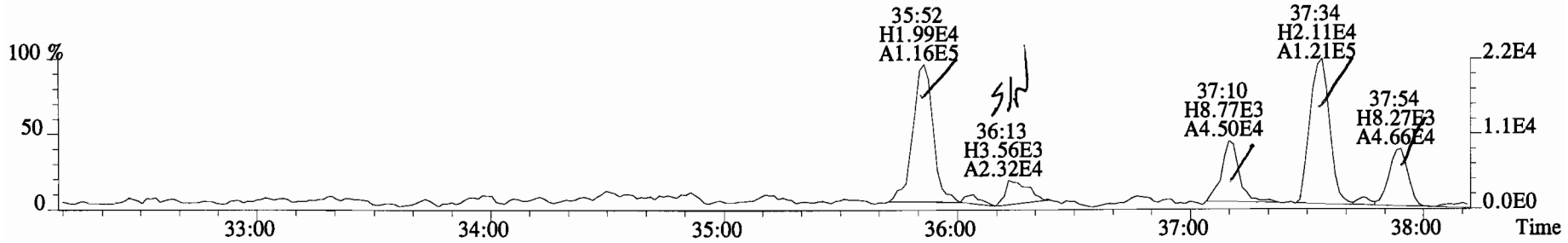
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2080.0,0.00%,F,F)



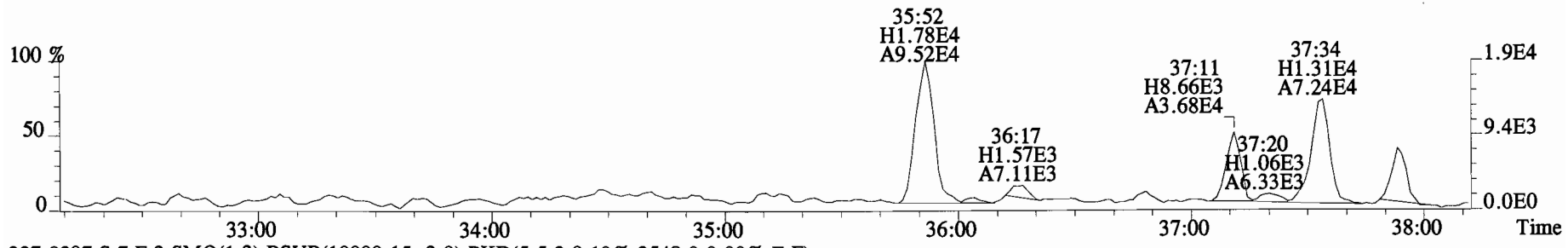
330.9792 S:7 F:3



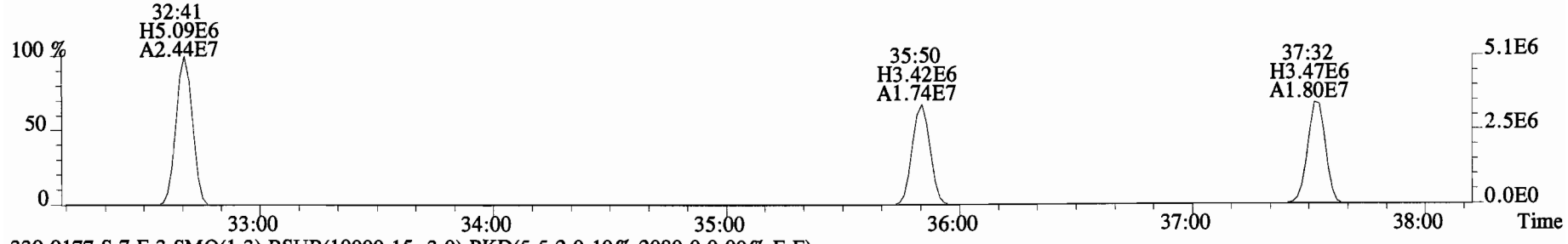
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



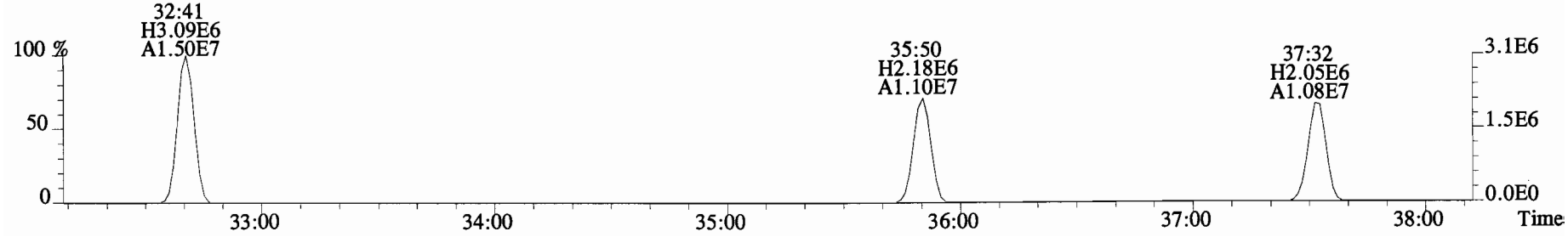
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1604.0,0.00%,F,F)



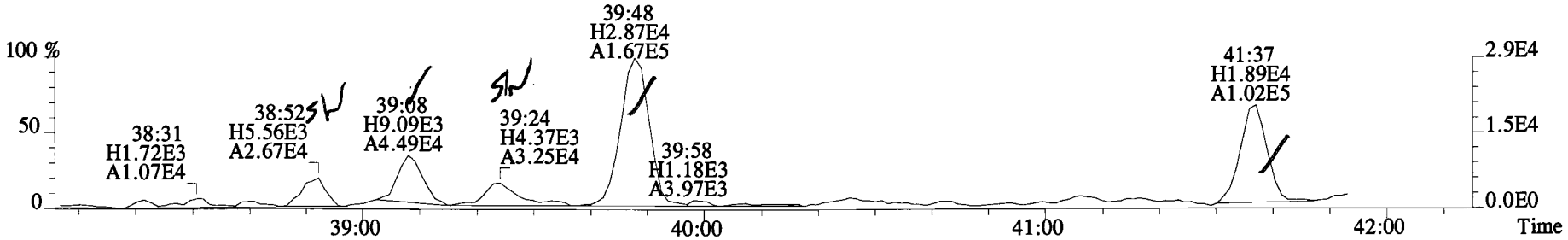
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2548.0,0.00%,F,F)



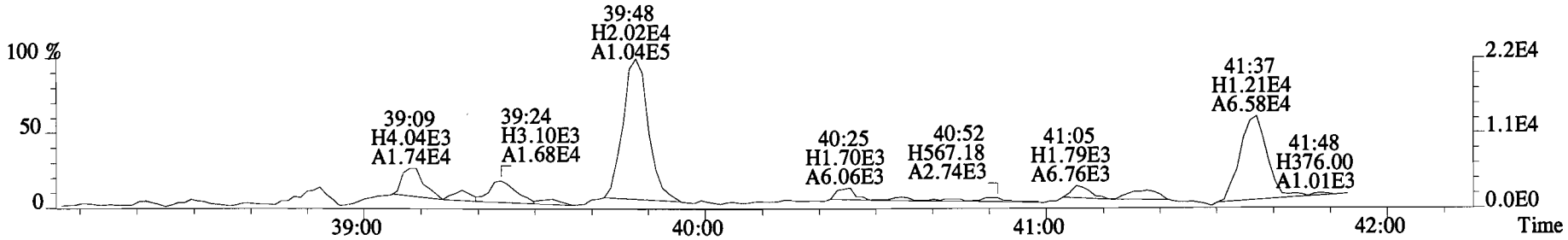
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2080.0,0.00%,F,F)



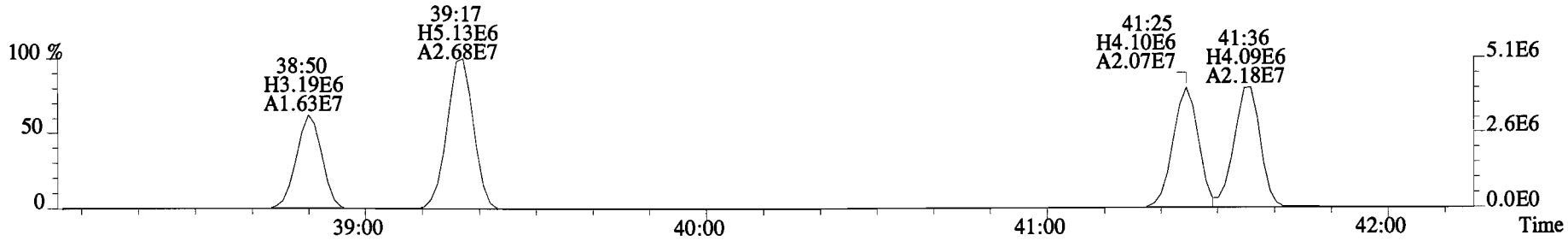
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



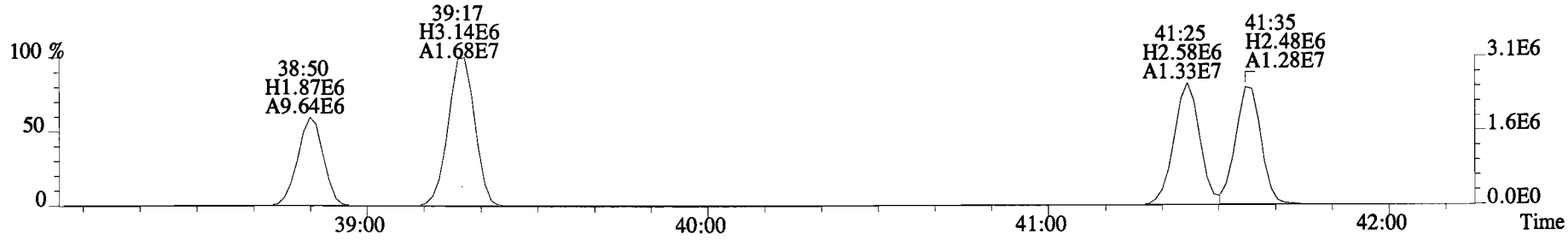
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1604.0,0.00%,F,F)



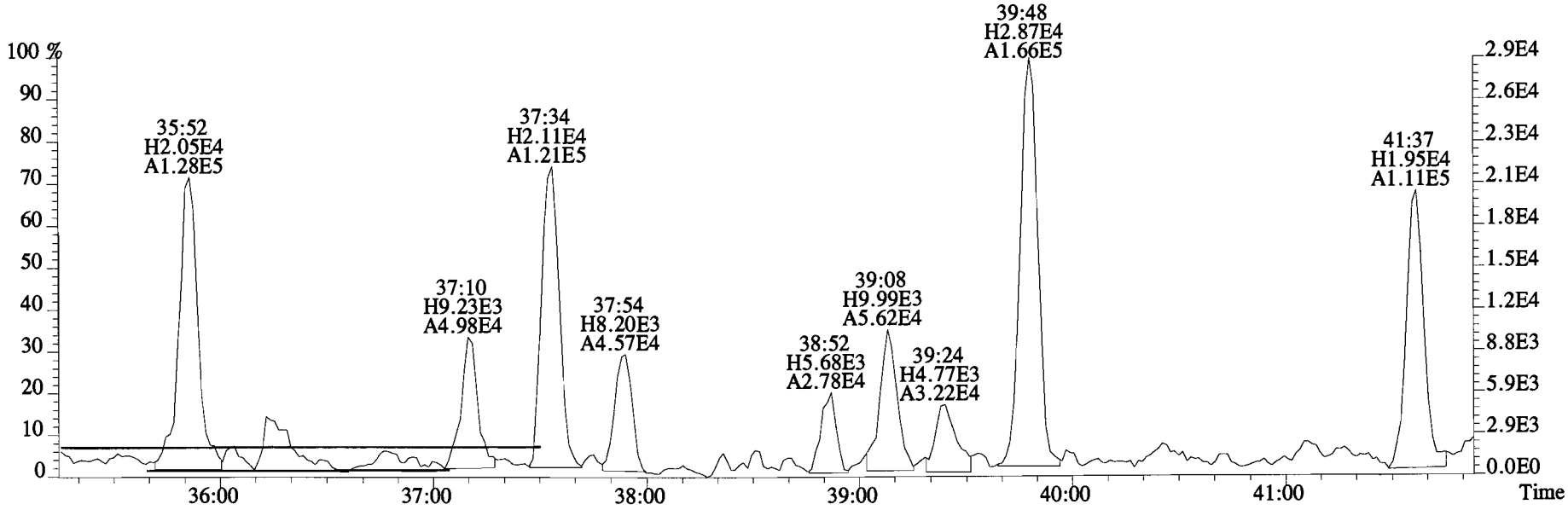
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2548.0,0.00%,F,F)



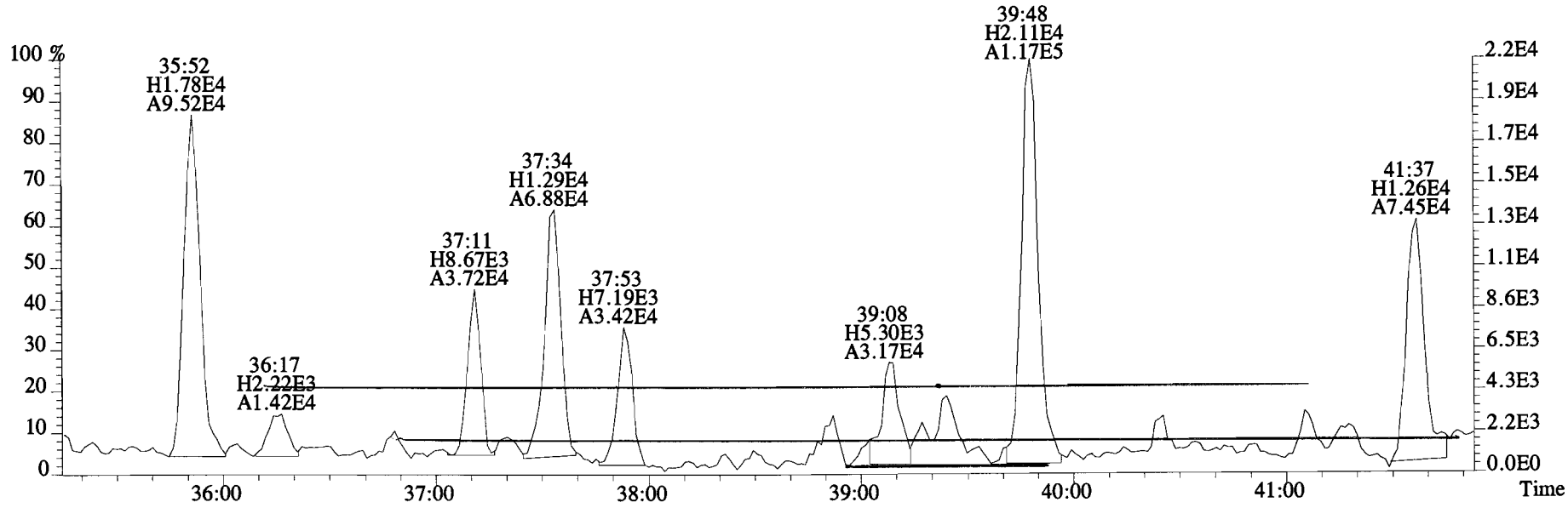
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2080.0,0.00%,F,F)



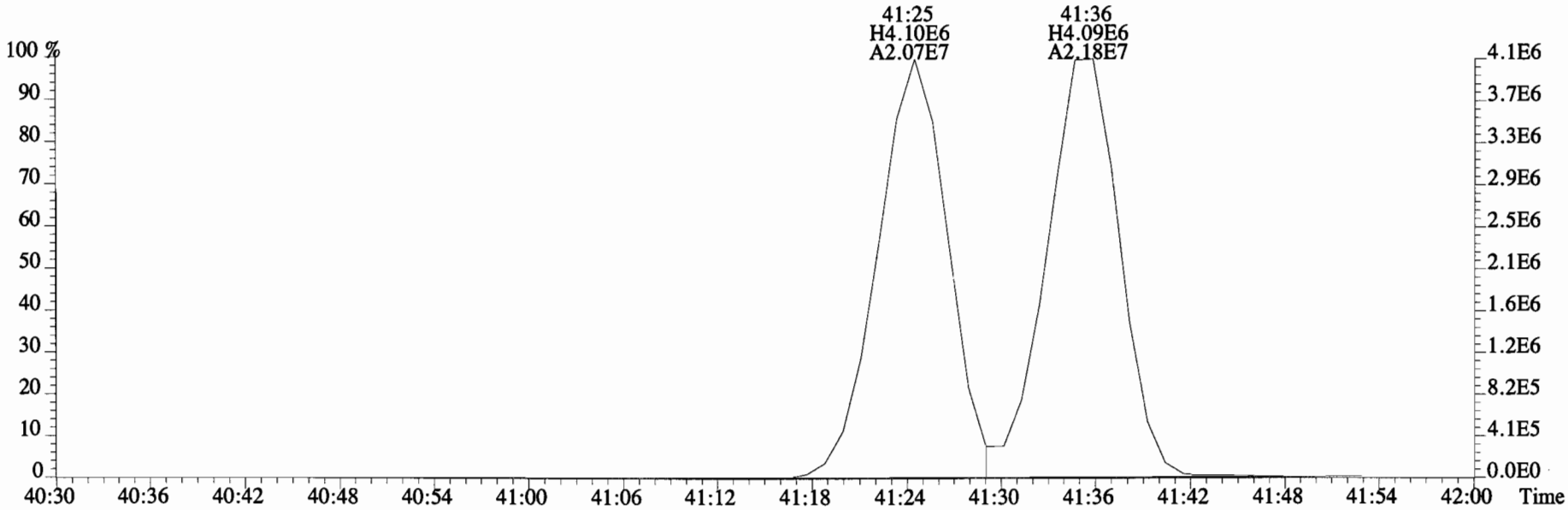
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1540.0,0.00%,F,F)



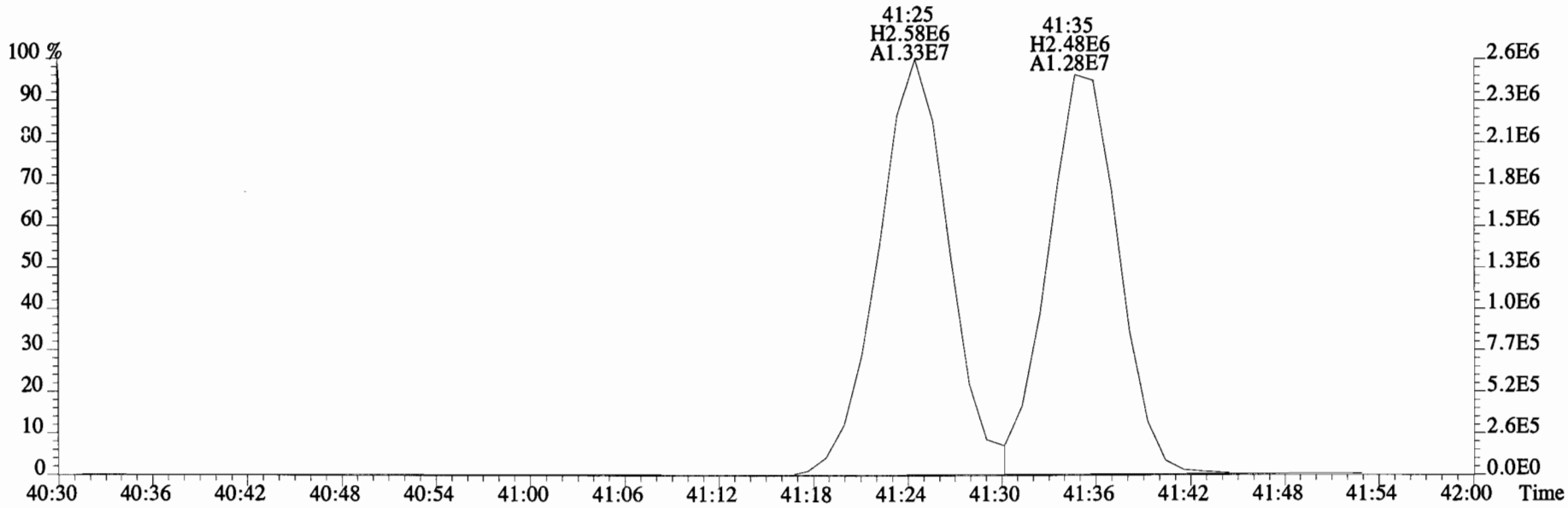
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1604.0,0.00%,F,F)



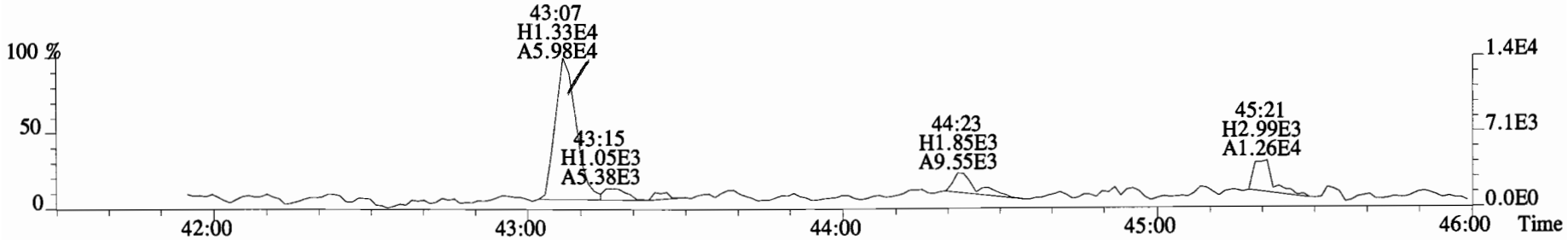
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2548.0,0.00%,F,F)



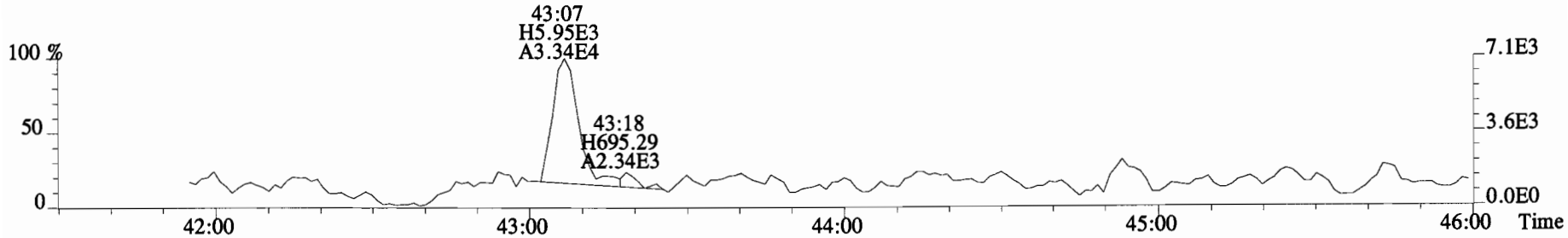
339.9177 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2080.0,0.00%,F,F)



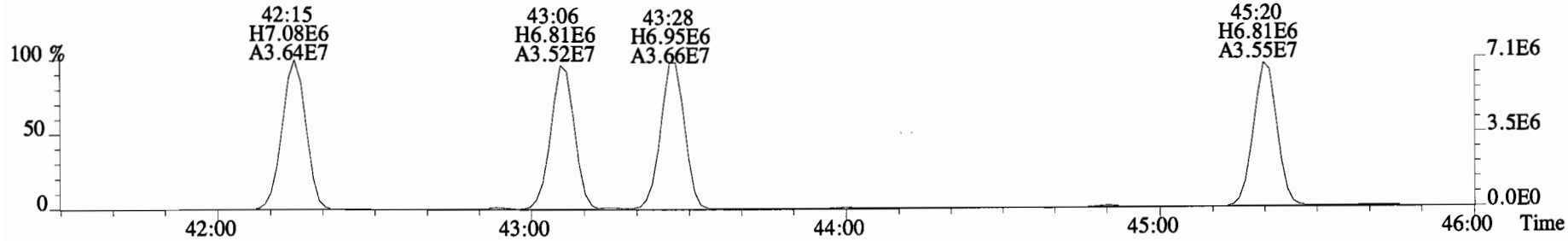
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1668.0,0.00%,F,F)



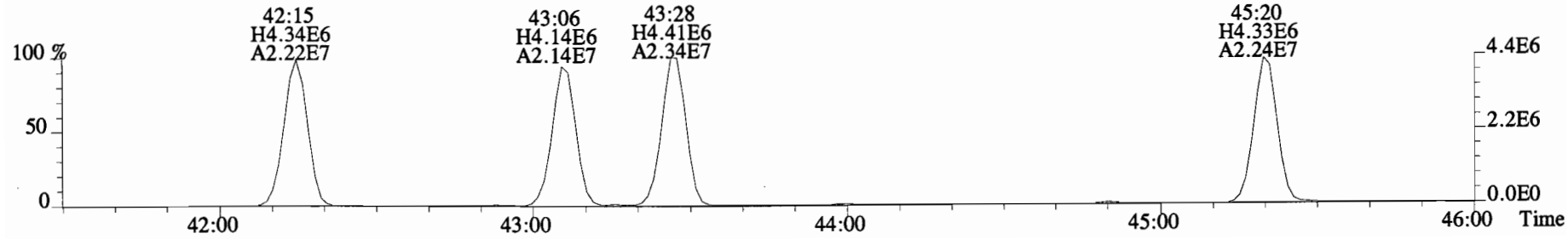
327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1632.0,0.00%,F,F)



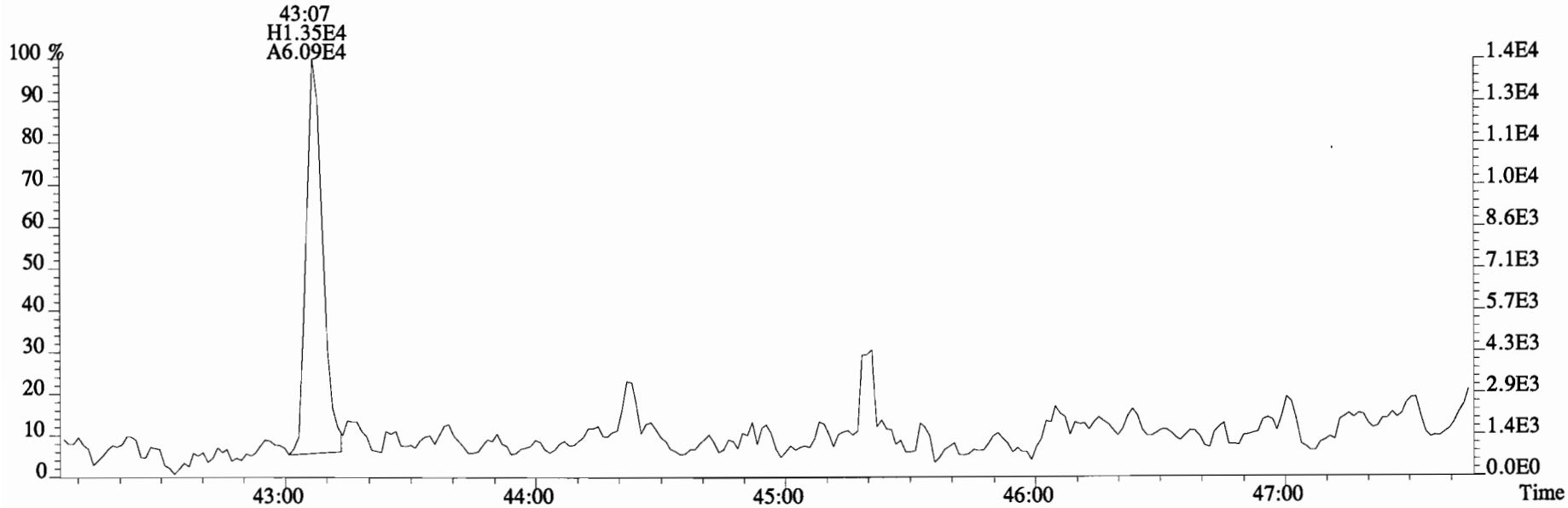
337.9207 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5580.0,0.00%,F,F)



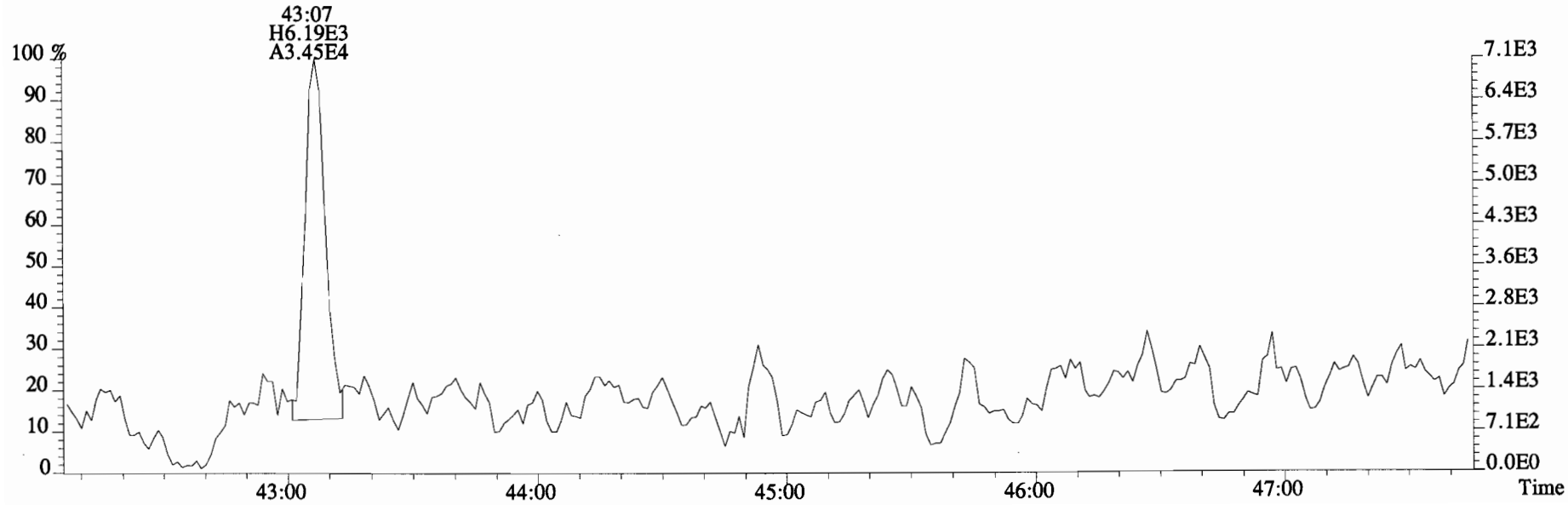
339.9177 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4192.0,0.00%,F,F)

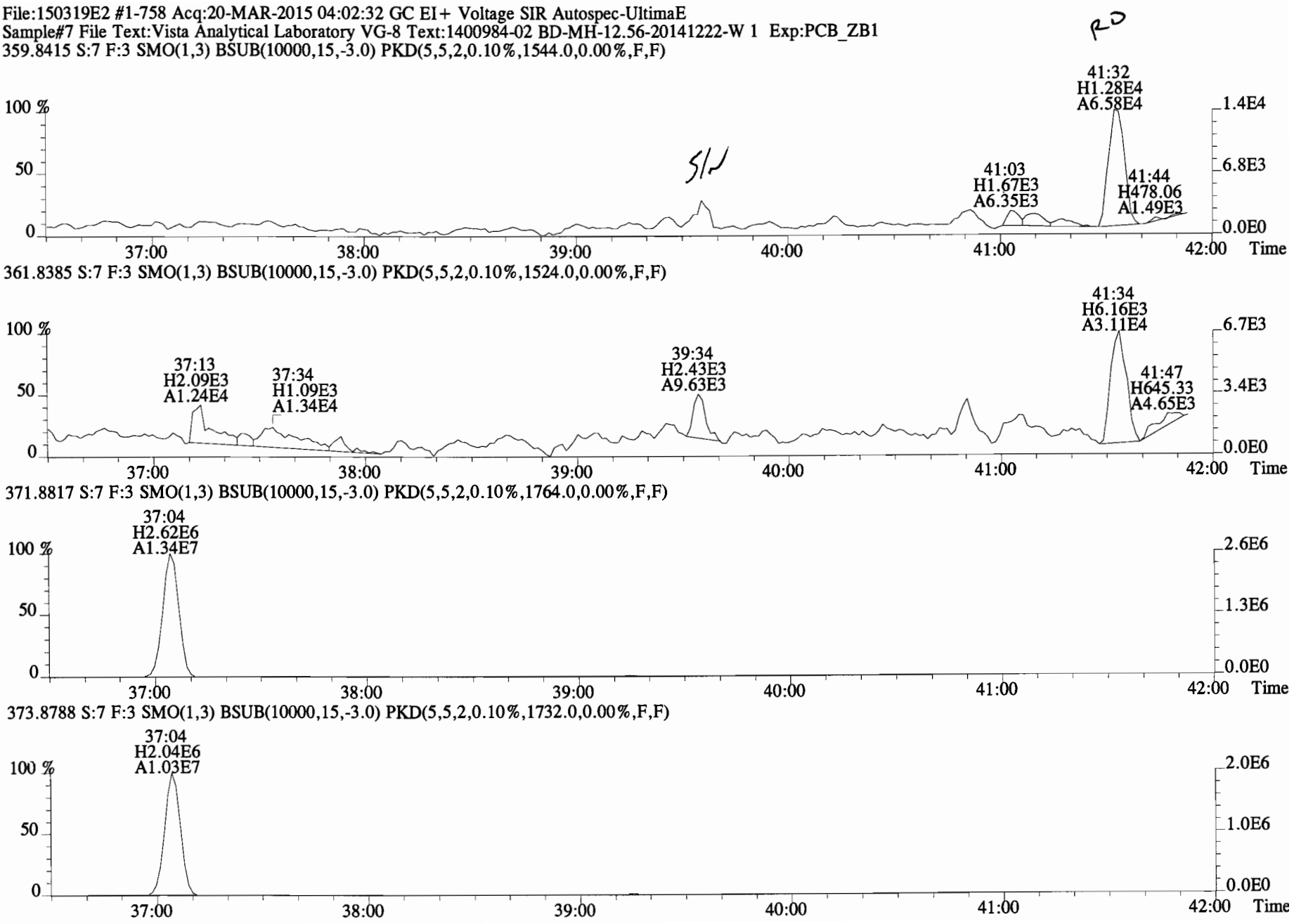


File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1668.0,0.00%,F,F)

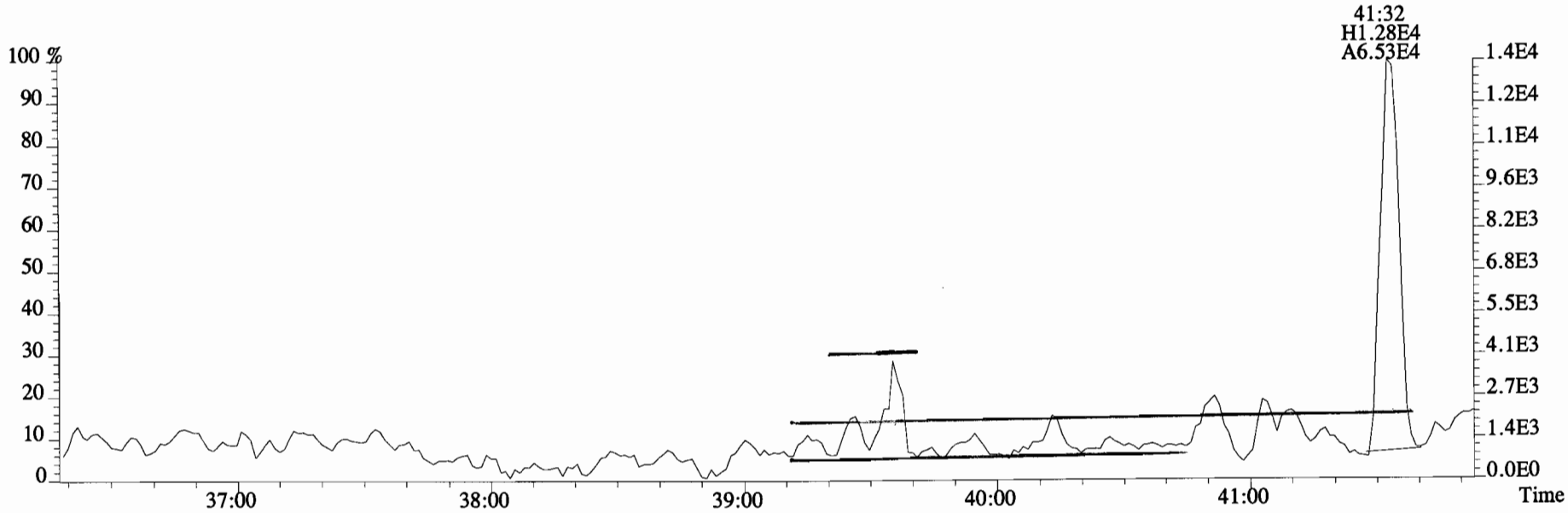


327.8775 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1632.0,0.00%,F,F)

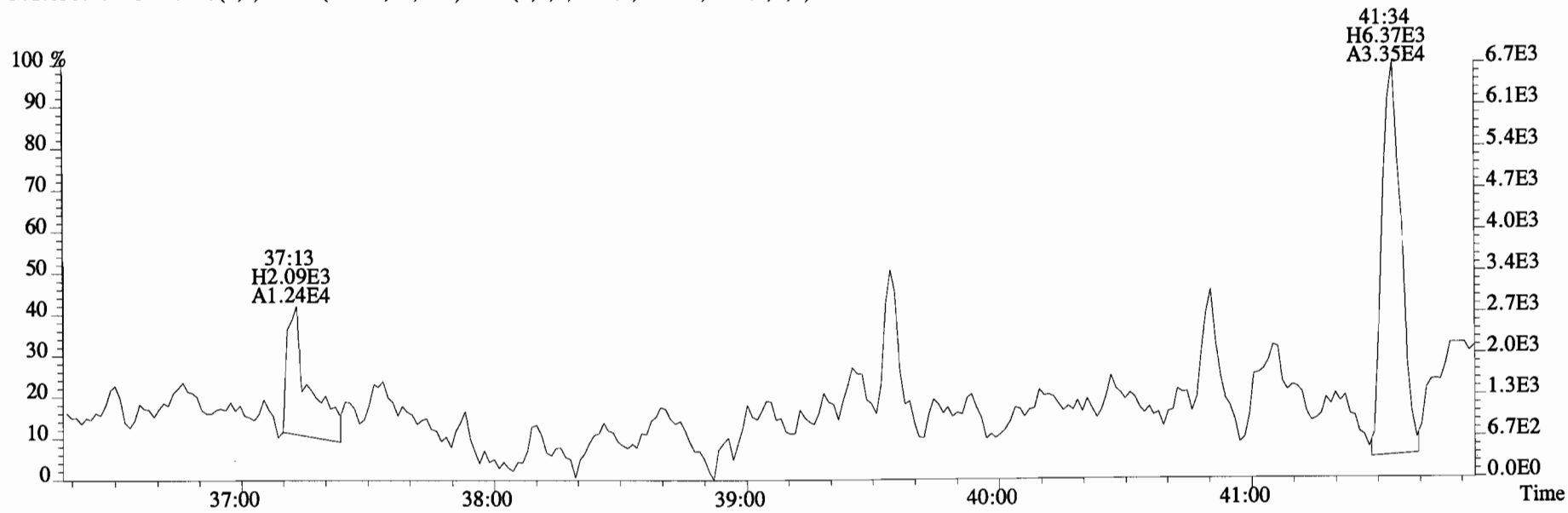



File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1544.0,0.00%,F,F)
RD
S/N
41:32
H1.28E4
A6.58E4
41:03
H1.67E3
A6.35E3
41:44
H478.06
A1.49E3
1.4E4
6.8E3
0.0E0
100 %
50
0
37:00
38:00
39:00
40:00
41:00
42:00
Time
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1524.0,0.00%,F,F)
41:34
H6.16E3
A3.11E4
37:13
H2.09E3
A1.24E4
37:34
H1.09E3
A1.34E4
39:34
H2.43E3
A9.63E3
41:47
H645.33
A4.65E3
6.7E3
3.4E3
0.0E0
371.8817 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1764.0,0.00%,F,F)
37:04
H2.62E6
A1.34E7
2.6E6
1.3E6
0.0E0
373.8788 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1732.0,0.00%,F,F)
37:04
H2.04E6
A1.03E7
2.0E6
1.0E6
0.0E0

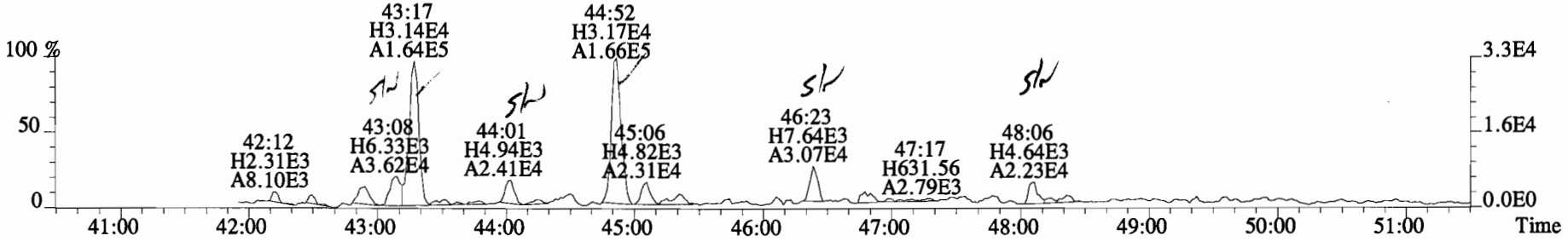
File:150319E2 #1-758 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1544.0,0.00%,F,F)



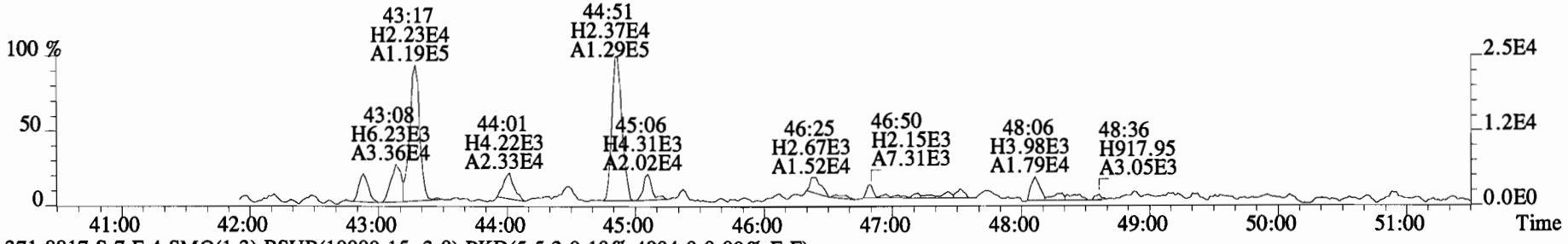
361.8385 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1524.0,0.00%,F,F)



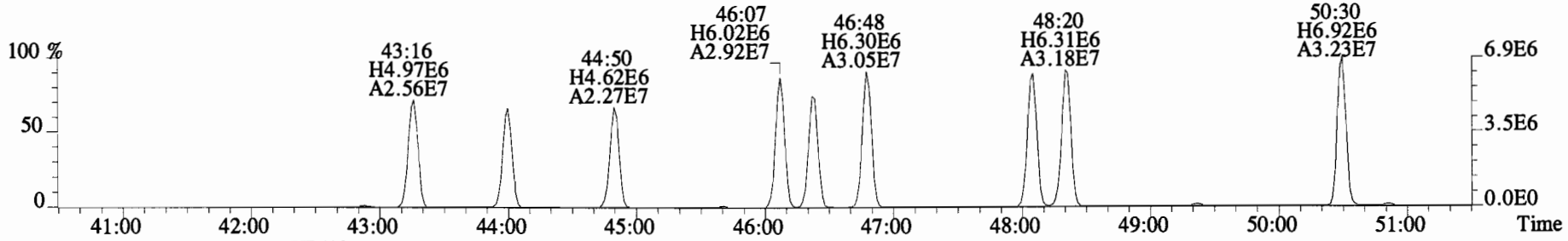
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)



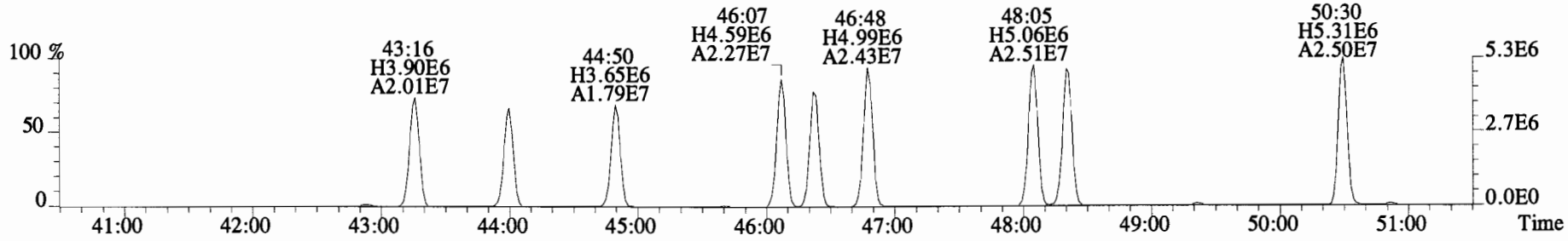
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)



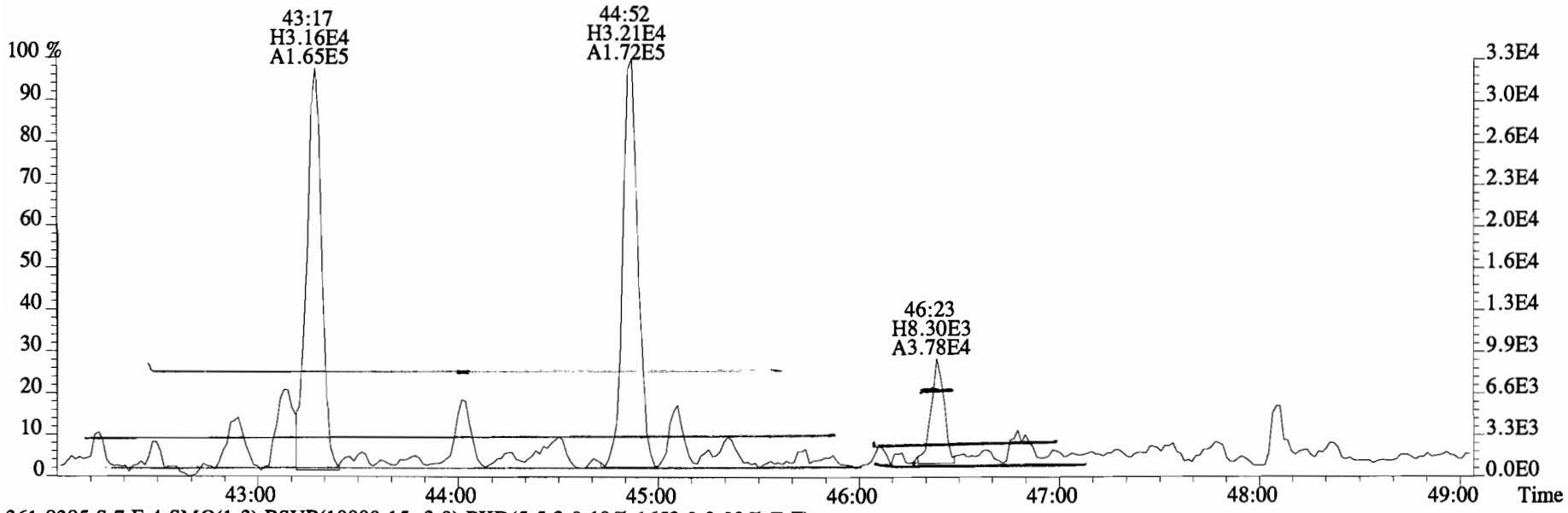
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4904.0,0.00%,F,F)



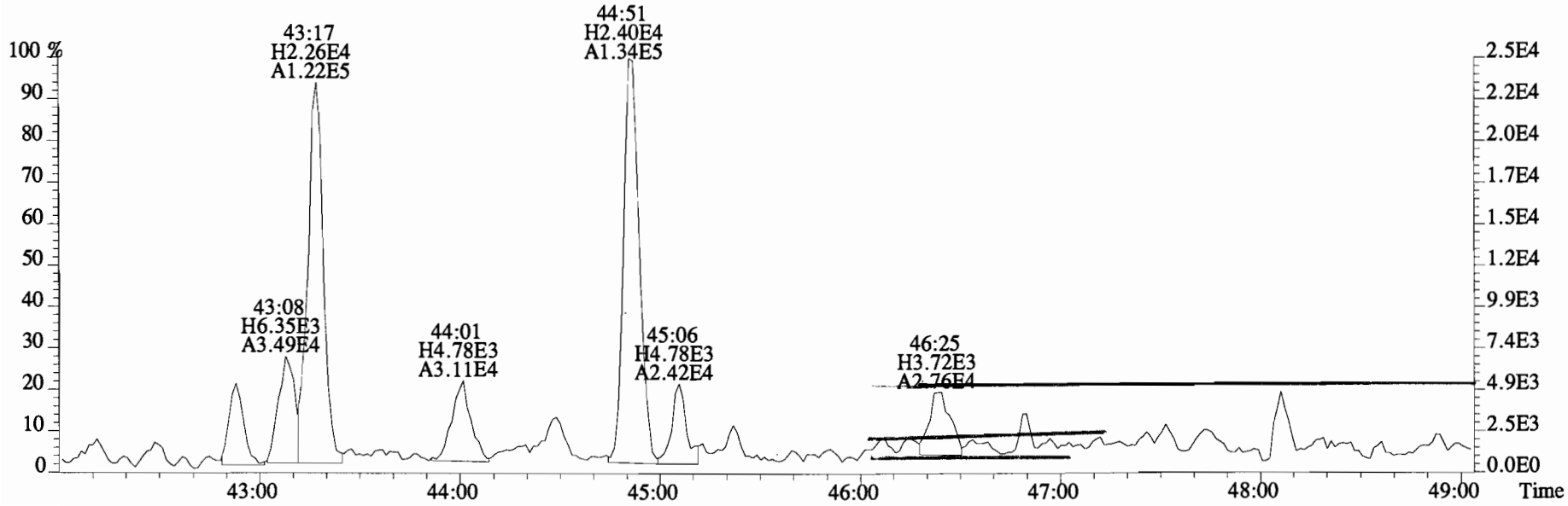
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)



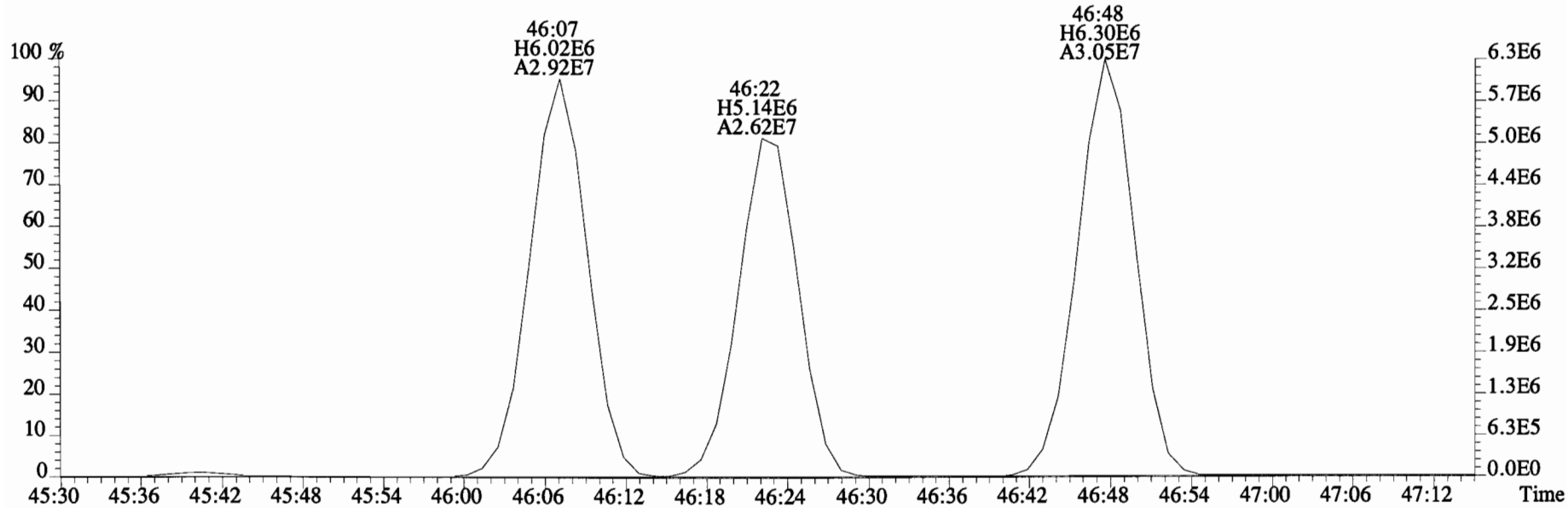
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1720.0,0.00%,F,F)



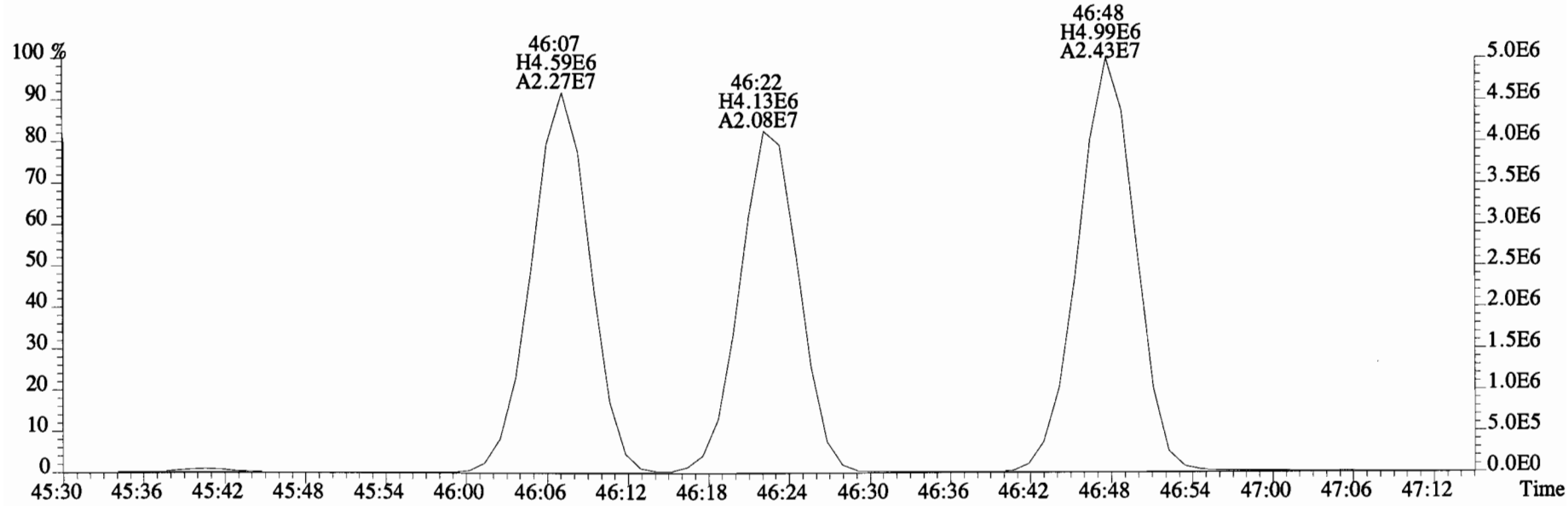
361.8385 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1652.0,0.00%,F,F)



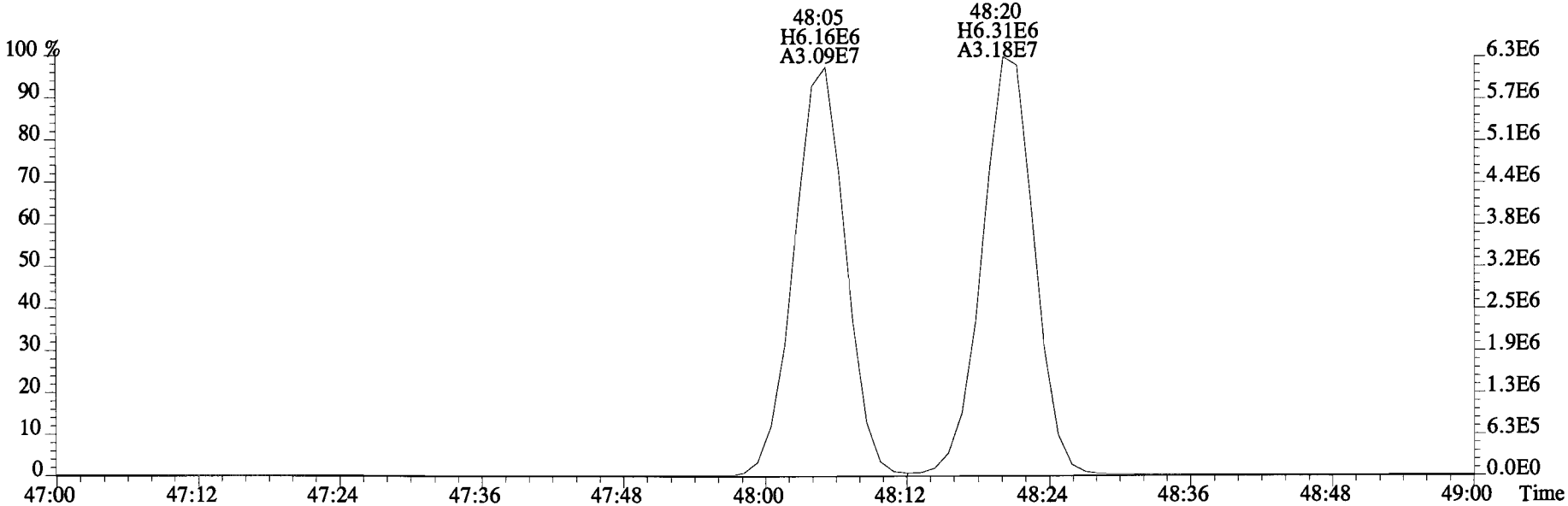
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4904.0,0.00%,F,F)



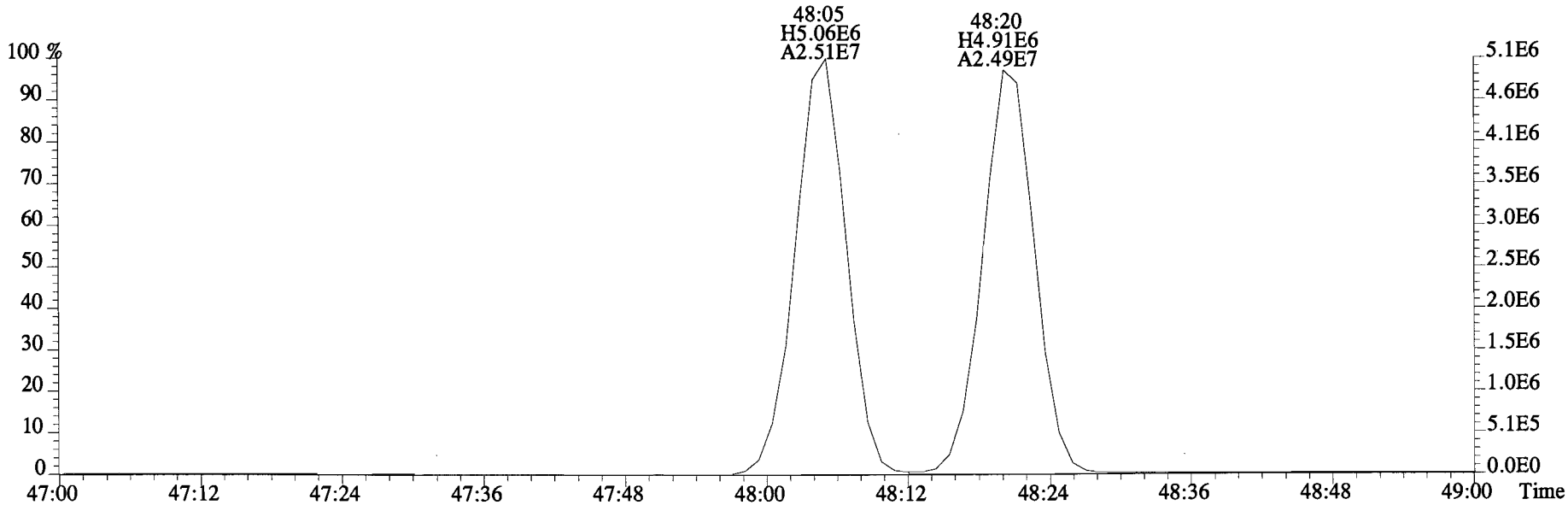
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)



File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4904.0,0.00%,F,F)

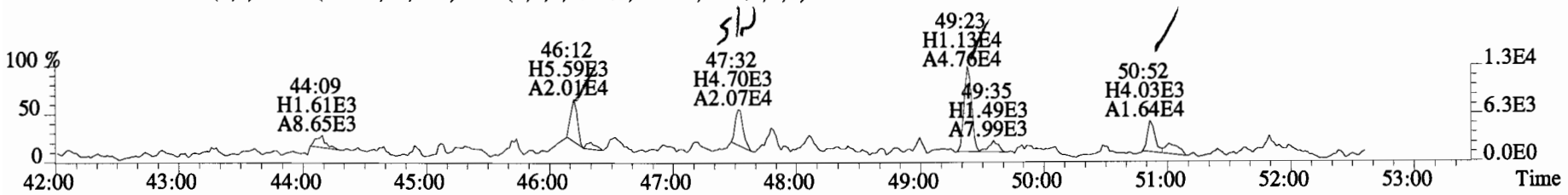


373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3888.0,0.00%,F,F)

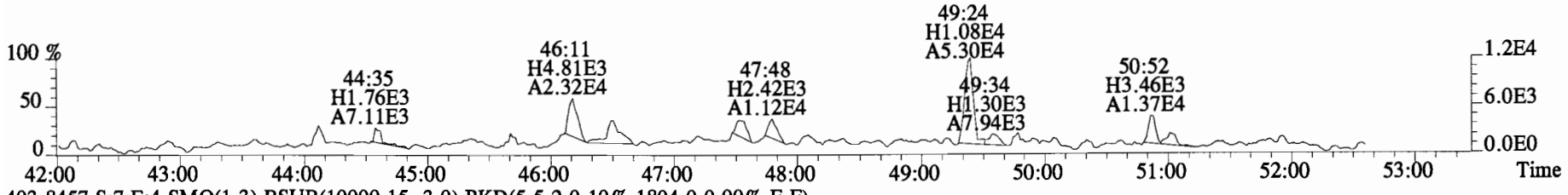


File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1

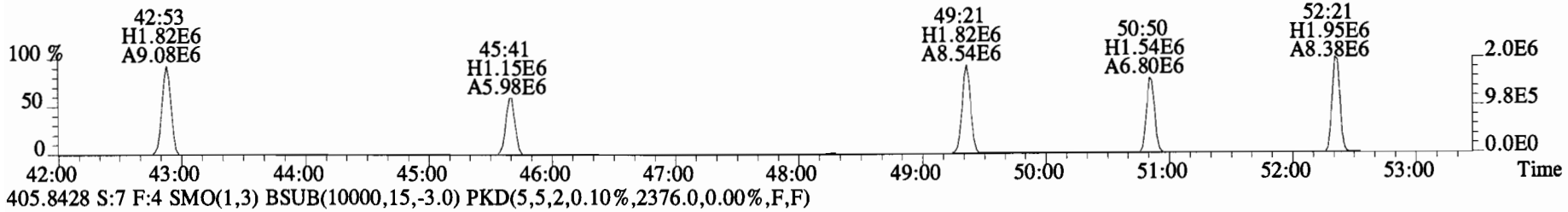
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1928.0,0.00%,F,F)



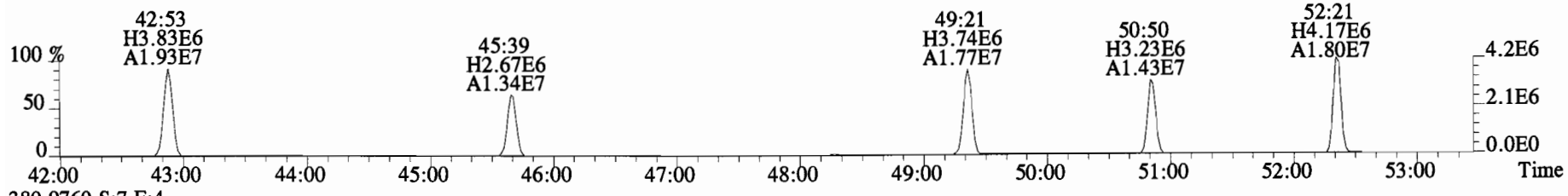
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1732.0,0.00%,F,F)



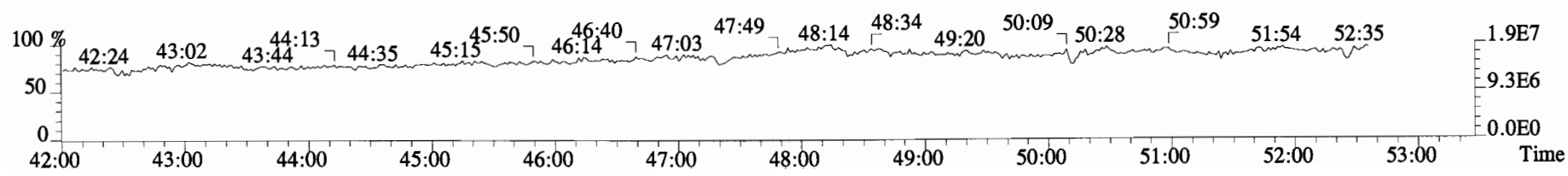
403.8457 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1804.0,0.00%,F,F)



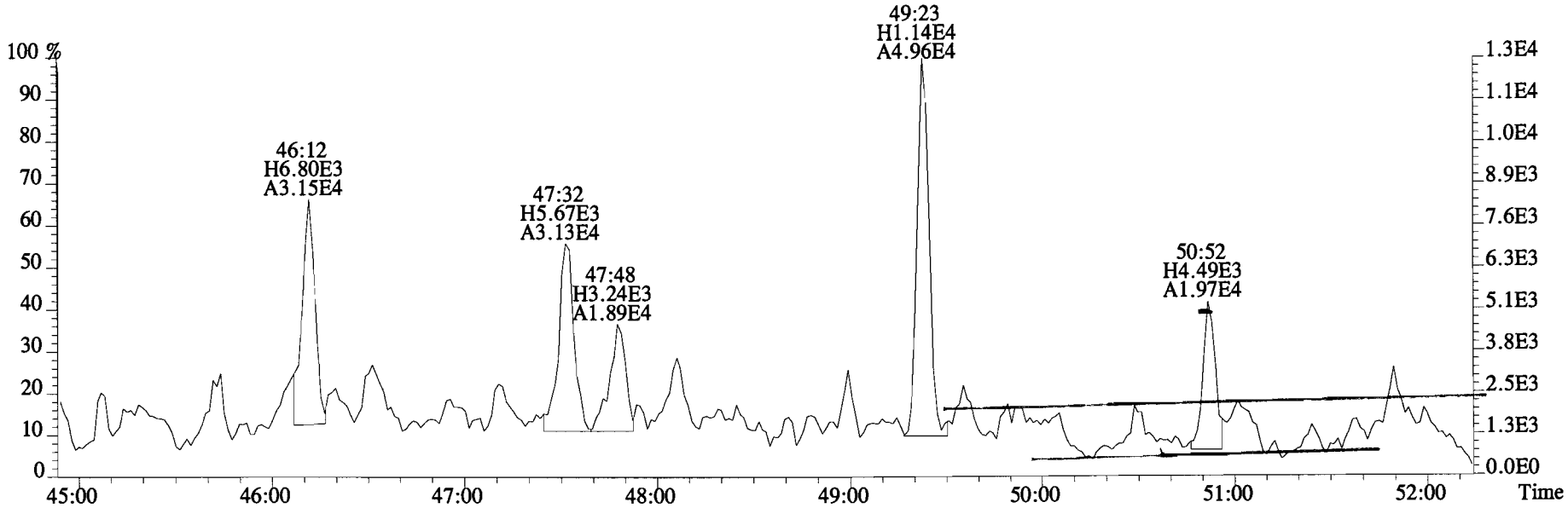
405.8428 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2376.0,0.00%,F,F)



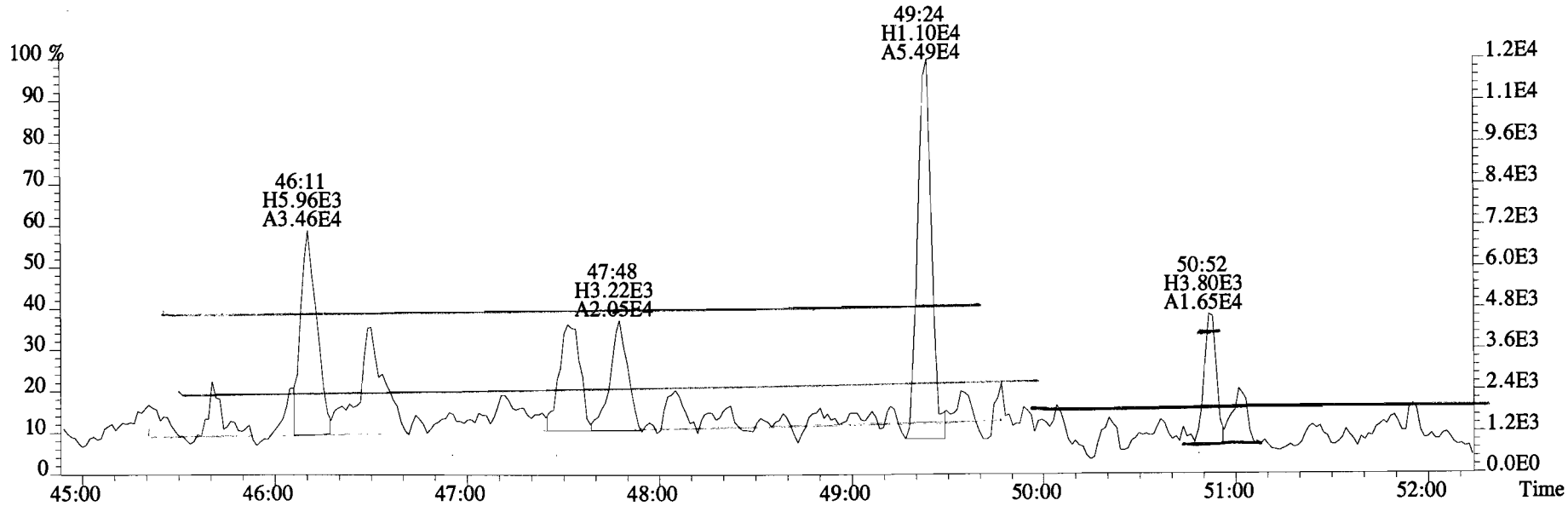
380.9760 S:7 F:4



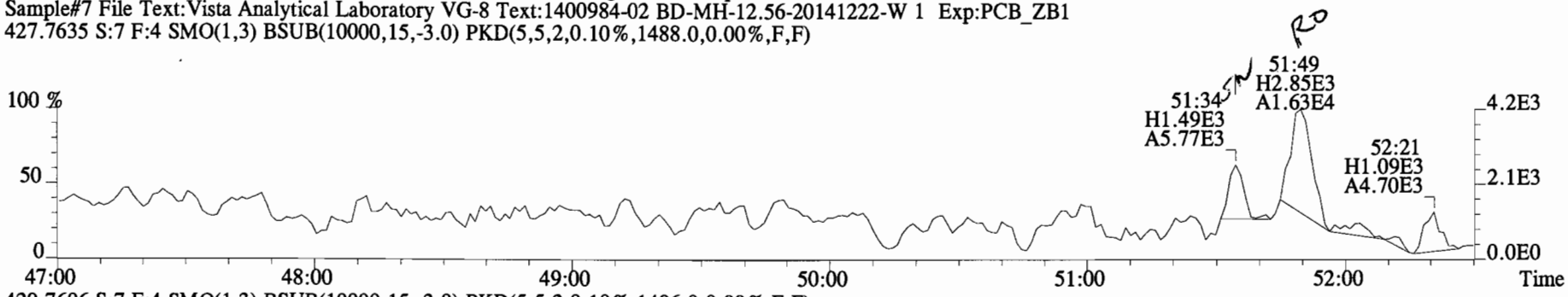
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1928.0,0.00%,F,F)



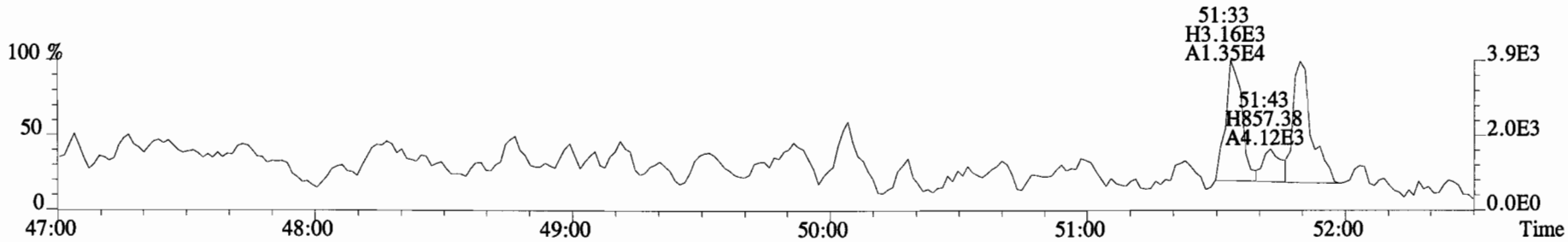
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1732.0,0.00%,F,F)



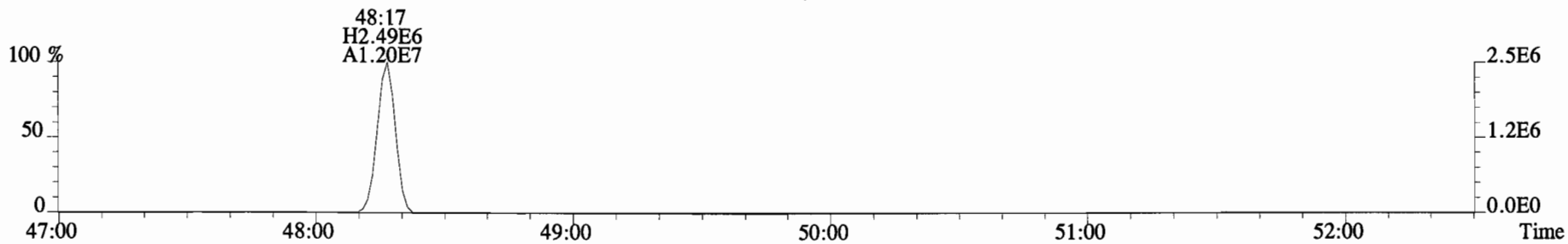
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1488.0,0.00%,F,F)



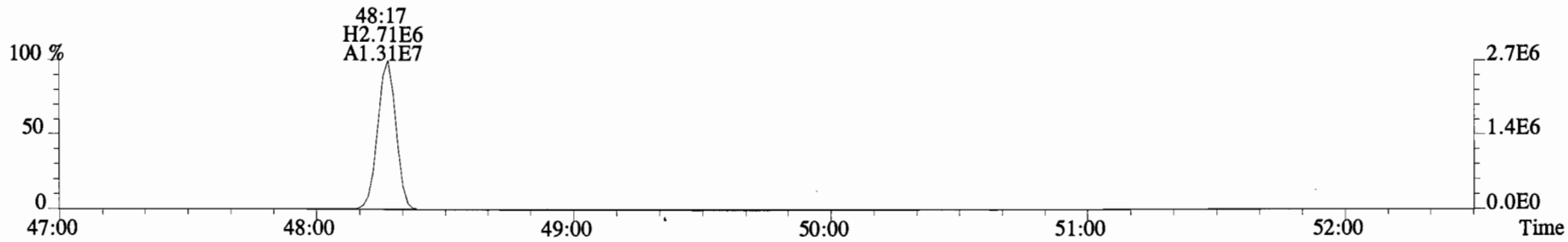
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



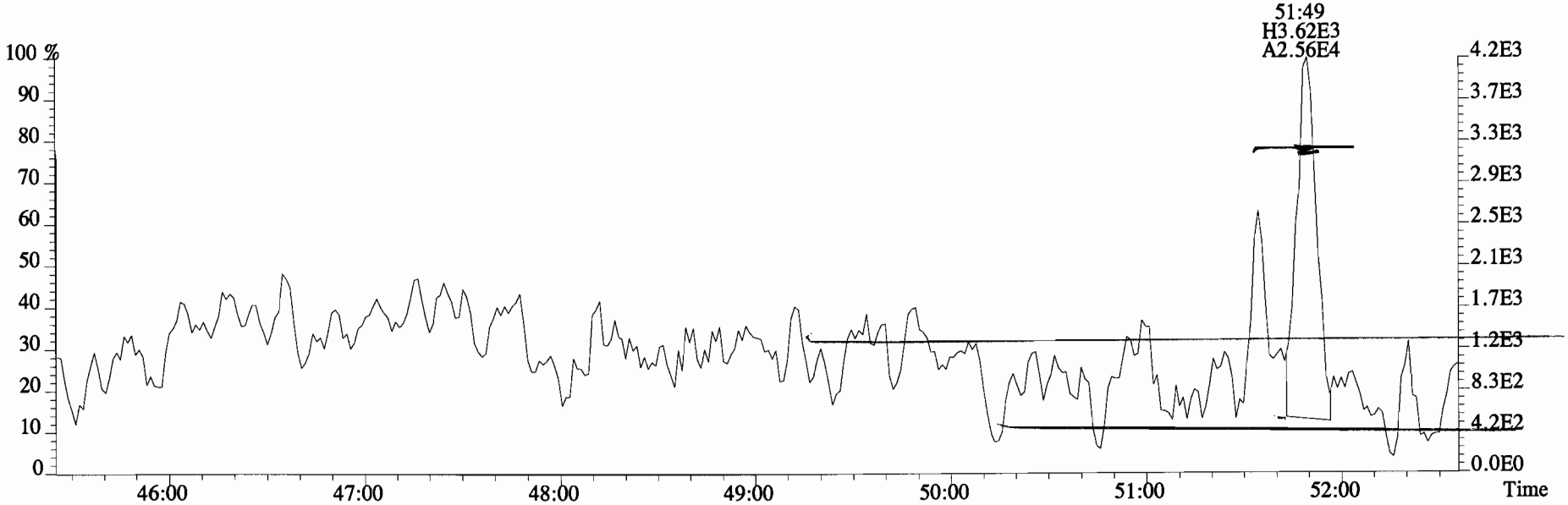
439.8038 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1660.0,0.00%,F,F)



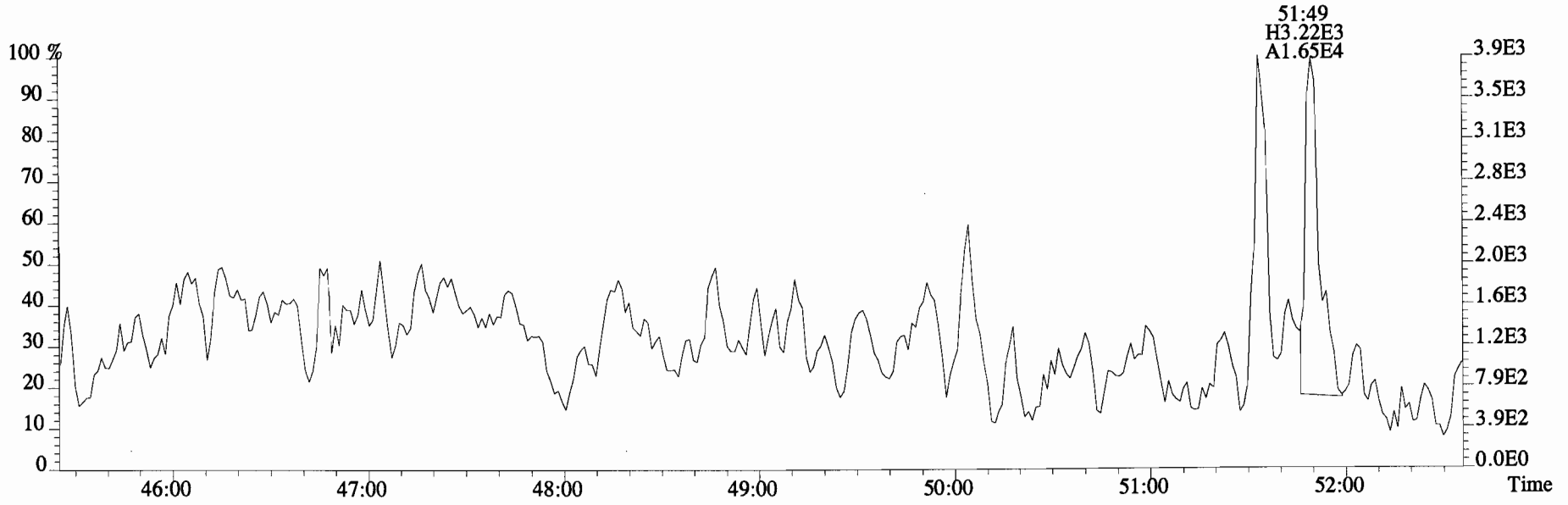
441.8008 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1776.0,0.00%,F,F)



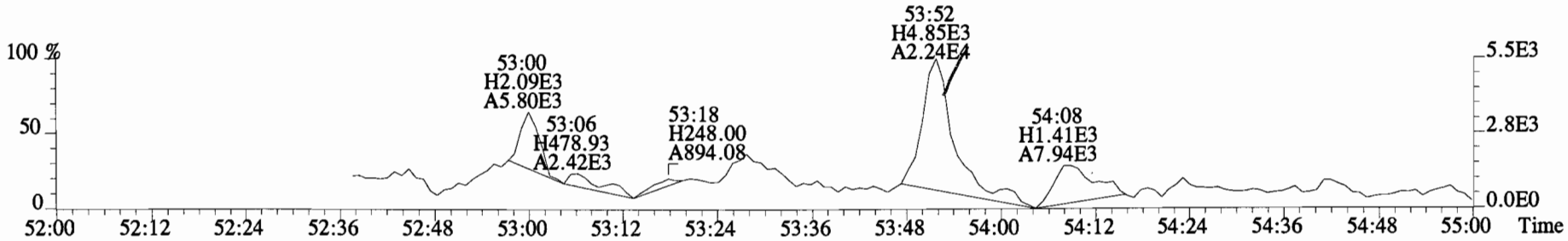
File:150319E2 #1-555 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
427.7635 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1488.0,0.00%,F,F)



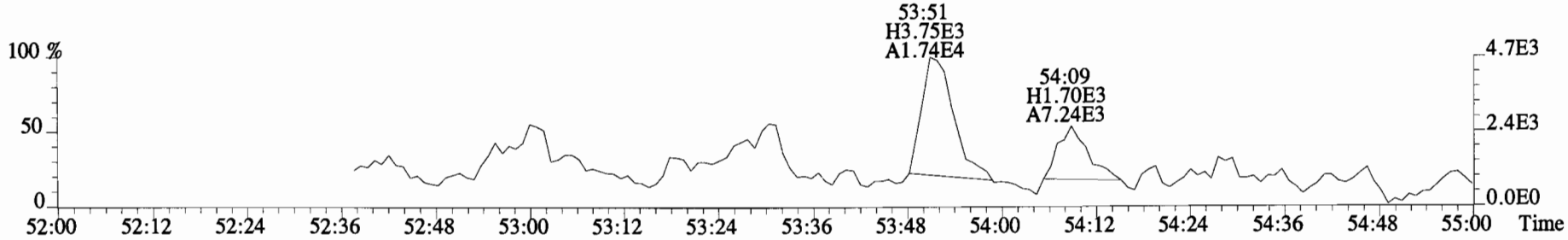
429.7606 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



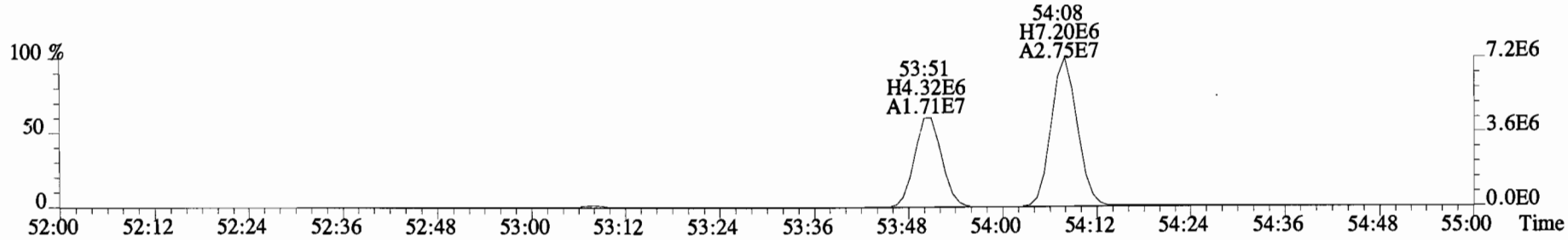
File:150319E2 #1-429 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1168.0,0.00%,F,F)



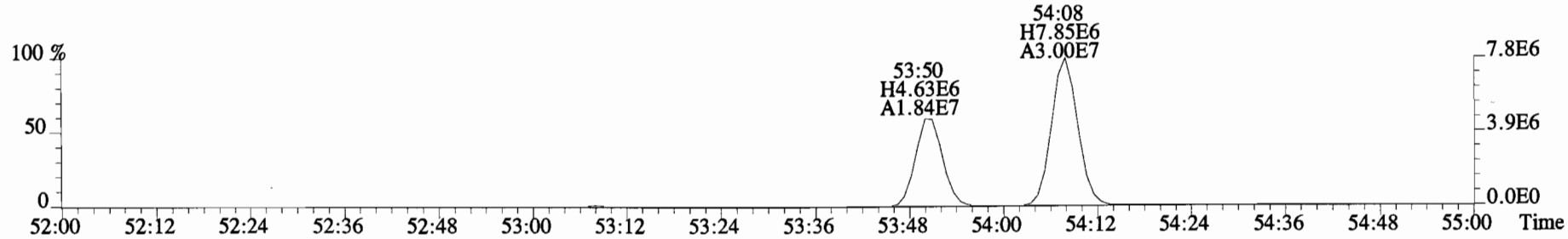
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1348.0,0.00%,F,F)



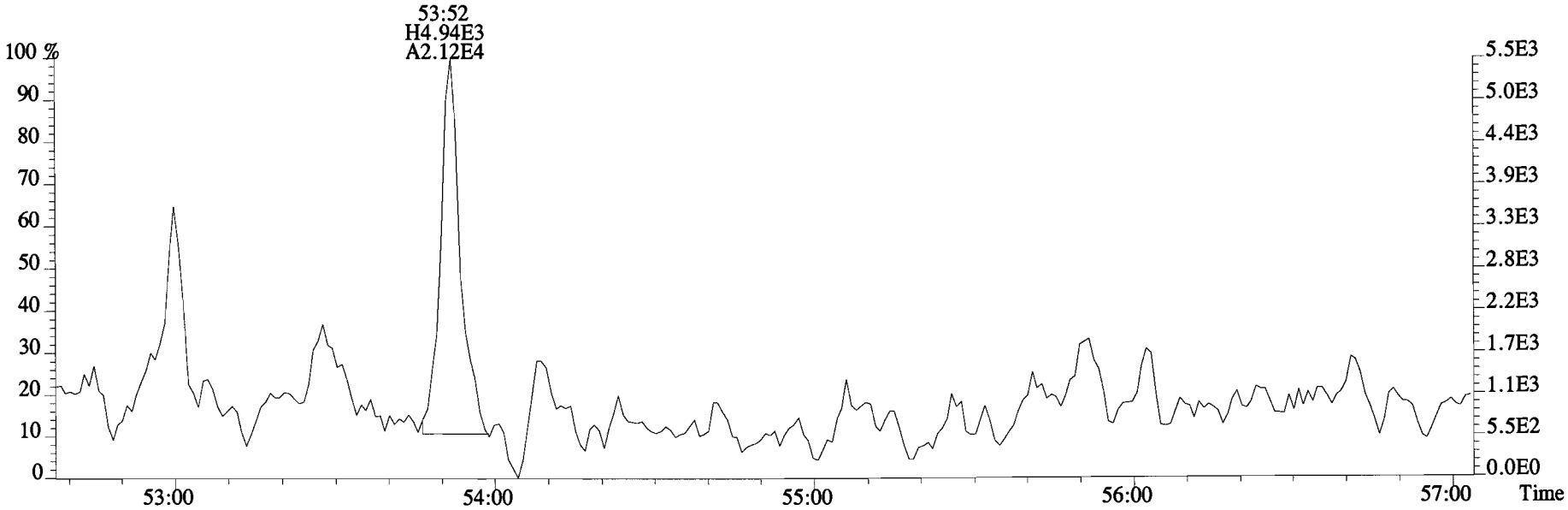
439.8038 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2848.0,0.00%,F,F)



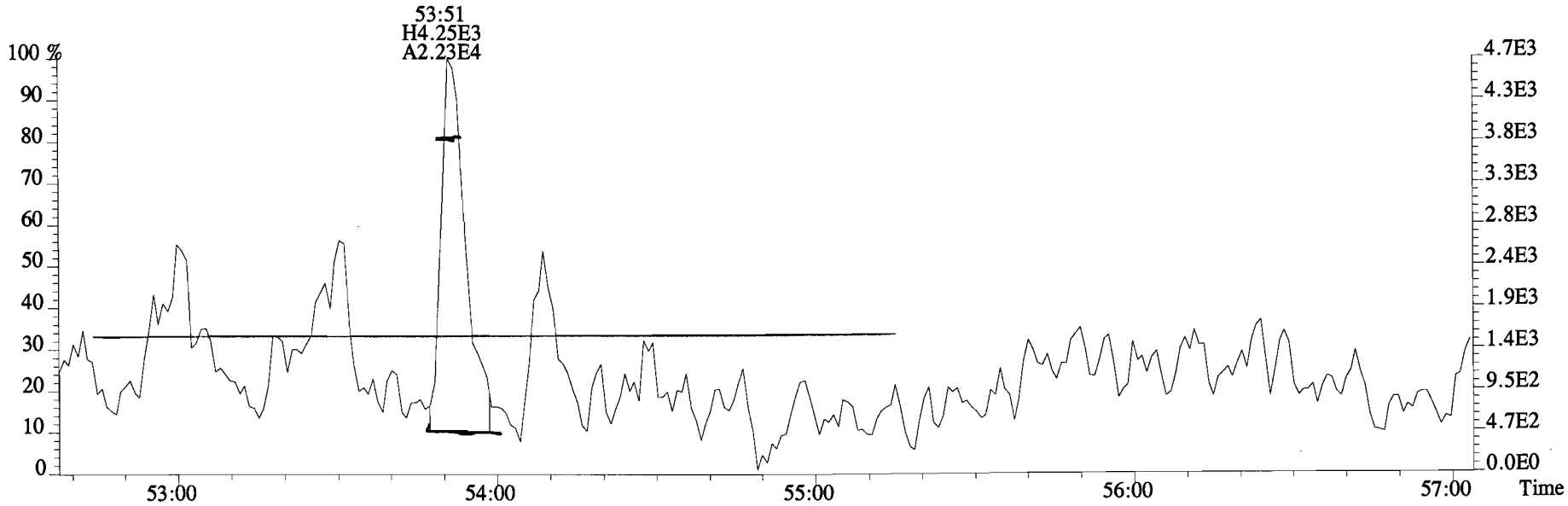
441.8008 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2180.0,0.00%,F,F)



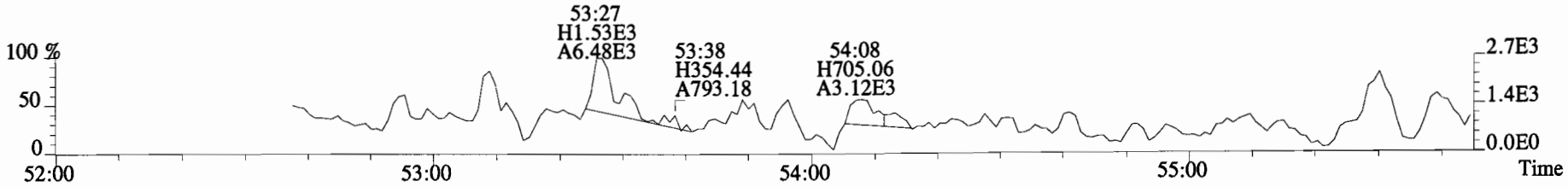
File:150319E2 #1-429 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
427.7635 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1168.0,0.00%,F,F)



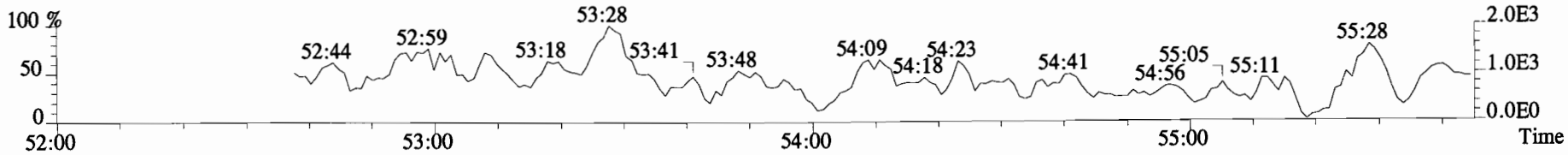
429.7606 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1348.0,0.00%,F,F)



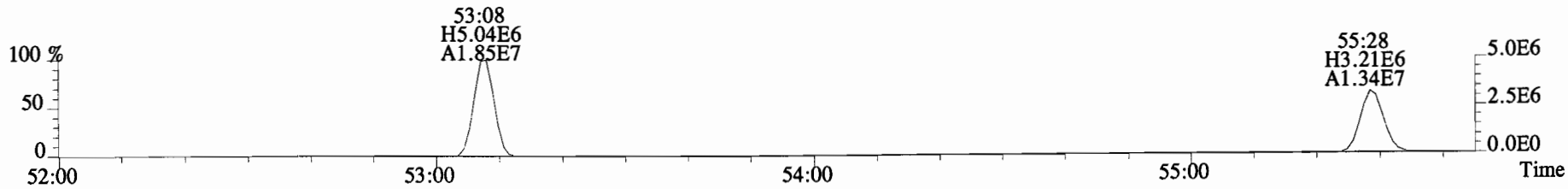
File:150319E2 #1-429 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1252.0,0.00%,F,F)



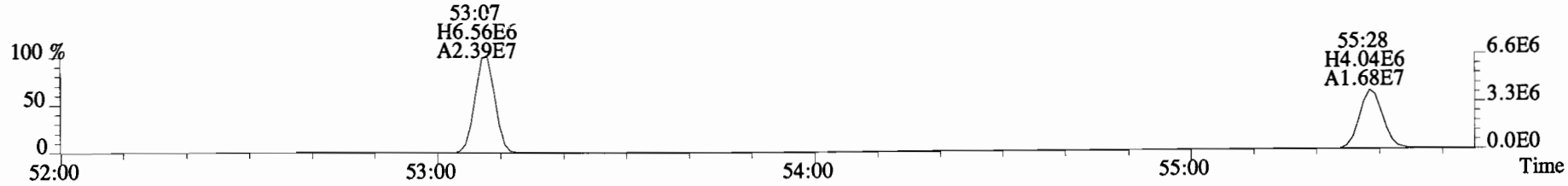
465.7186 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1248.0,0.00%,F,F)



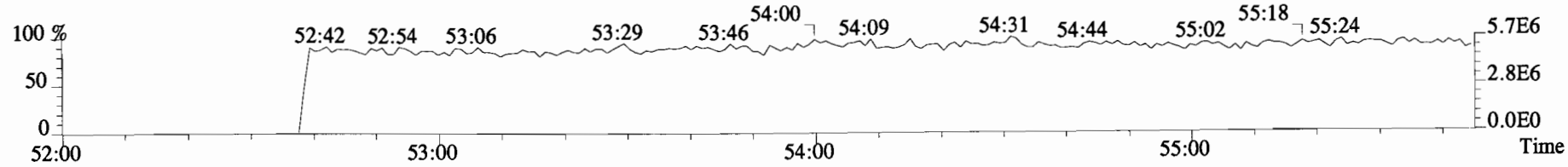
473.7648 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1376.0,0.00%,F,F)



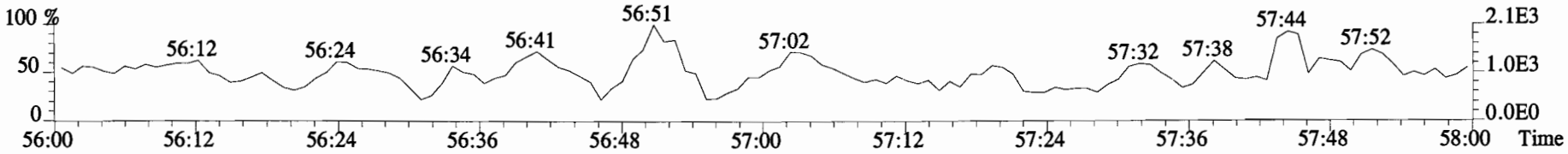
475.7619 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3116.0,0.00%,F,F)



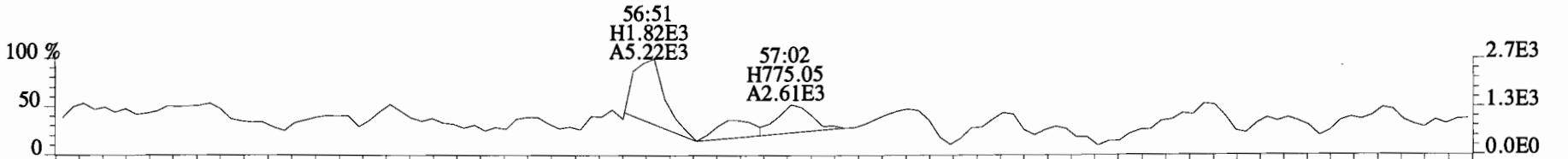
492.9697 S:7 F:5



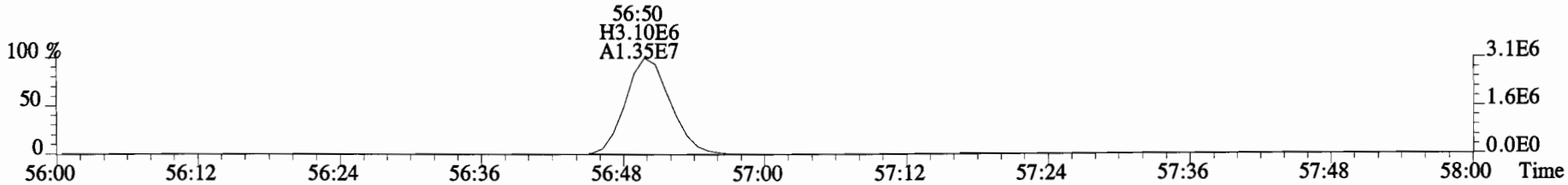
File:150319E2 #1-429 Acq:20-MAR-2015 04:02:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400984-02 BD-MH-12.56-20141222-W 1 Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1272.0,0.00%,F,F)



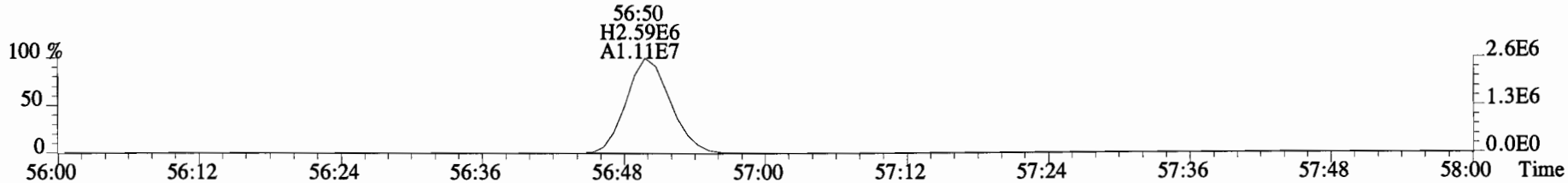
499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1204.0,0.00%,F,F)



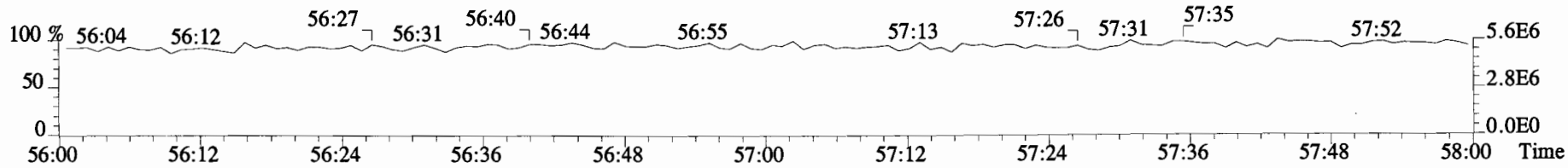
509.7229 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1368.0,0.00%,F,F)



511.7199 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1316.0,0.00%,F,F)



492.9697 S:7 F:5



Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1

Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF¶	1.33	*		2520	2.5	0.871	*	0.997	1.007
Mono	PCB-2	*	*	n	NotF¶	1.30	*		2520	2.5	0.882	*	0.983	0.993
Mono	PCB-3	4.47e+04	2.58	n	18:47	1.30	0.452	R	*	2.5	*	1.001	0.996	1.006
Di	PCB-4/10	*	*	n	NotF¶	1.67	*		14300	2.5	4.22	*	0.997	1.007
Di	PCB-7/9	*	*	n	NotF¶	1.25	*		14300	2.5	3.55	*	0.864	0.872
Di	PCB-6	*	*	n	NotF¶	1.24	*		14300	2.5	3.60	*	0.888	0.897
Di	PCB-5/8	*	*	n	NotF¶	1.27	*		14300	2.5	3.51	*	0.905	0.915
Di	PCB-14	*	*	n	NotF¶	1.47	*		14300	2.5	2.79	*	0.948	0.958
Di	PCB-11	9.76e+05	1.47	y	25:17	1.28	8.77		*	2.5	*	1.001	0.995	1.005
Di	PCB-12/13	*	*	n	NotF¶	1.27	*		14300	2.5	3.23	*	1.011	1.021
Di	PCB-15	2.89e+05	1.39	y	25:59	1.44	2.31		*	2.5	*	1.028	1.023	1.031
Tri	PCB-19	*	*	n	NotF¶	1.18	*		2200	2.5	0.923	*	0.996	1.006
Tri	PCB-30	*	*	n	NotF¶	1.87	*		2200	2.5	0.583	*	1.033	1.043
Tri	PCB-18	3.36e+05	1.06	y	25:54	0.89	5.96		*	2.5	*	0.954	0.949	0.959
Tri	PCB-17	1.19e+05	1.12	y	26:04	0.96	1.96		*	2.5	*	0.960	0.956	0.966
Tri	PCB-24/27	*	*	n	NotF¶	1.30	*		2200	2.5	0.586	*	0.977	0.987
Tri	PCB-16/32	3.25e+05	1.13	y	27:09	1.05	4.88		*	2.5	*	1.000	0.996	1.006
Tri	PCB-34	*	*	n	NotF¶	1.30	*		2130	2.5	0.490	*	0.955	0.965
Tri	PCB-23	*	*	n	NotF¶	1.21	*		2130	2.5	0.527	*	0.958	0.968
Tri	PCB-29	*	*	n	NotF¶	1.21	*		2130	2.5	0.527	*	0.967	0.977
Tri	PCB-26	*	*	n	NotF¶	1.24	*		2130	2.5	0.515	*	0.974	0.984
Tri	PCB-25	*	*	n	NotF¶	1.10	*		2130	2.5	0.581	*	0.980	0.990
Tri	PCB-31	3.81e+05	1.05	y	29:01	1.25	3.68		*	2.5	*	0.997	0.992	1.002
Tri	PCB-28	6.54e+05	1.19	y	29:08	1.24	6.39		*	2.5	*	1.001	0.996	1.006
Tri	PCB-20/21/33	1.75e+05	1.71	n	29:45	1.16	1.83	R	*	2.5	*	1.022	1.016	1.026
Tri	PCB-22	1.18e+05	1.44	n	30:10	1.16	1.23	R	*	2.5	*	1.036	1.032	1.042
Tri	PCB-36	*	*	n	NotF¶	1.30	*		2130	2.5	0.531	*	0.929	0.939
Tri	PCB-39	*	*	n	NotF¶	1.26	*		2130	2.5	0.547	*	0.943	0.953
Tri	PCB-38	*	*	n	NotF¶	1.24	*		2130	2.5	0.556	*	0.967	0.977
Tri	PCB-35	*	*	n	NotF¶	1.26	*		2130	2.5	0.550	*	0.982	0.992
Tri	PCB-37	3.60e+05	1.19	y	33:00	1.35	3.23		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-54	*	*	n	NotF¶	1.02	*		2090	2.5	0.753	*	0.996	1.006
Tetra	PCB-50	*	*	n	NotF¶	0.78	*		2090	2.5	0.991	*	1.037	1.047
Tetra	PCB-53	1.02e+05	0.85	y	29:49	1.14	1.94		*	2.5	*	0.946	0.941	0.951
Tetra	PCB-51	1.86e+05	0.86	y	30:09	1.16	3.49		*	2.5	*	0.957	0.952	0.962
Tetra	PCB-45	8.34e+04	0.83	y	30:35	1.04	1.74		*	2.5	*	0.970	0.965	0.975
Tetra	PCB-46	*	*	n	NotF¶	0.95	*		2090	2.5	1.05	*	0.981	0.991

Integrations by:

Analyst: DMS

Date: 3/26/15

Reviewed by: [illegible]/2 Date: 3/26/15

Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1
Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	1.30e+06	0.81	y	31:32	1.29	21.8		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-73	*	*	n	NotF	1.41	*		2090	2.5	0.704	*	0.999	1.009
Tetra	PCB-43/49	4.84e+05	0.81	y	31:50	1.14	9.25		*	2.5	*	1.010	1.005	1.015
Tetra	PCB-47	8.93e+05	0.76	y	32:03	1.20	15.5		*	2.5	*	1.001	0.996	1.006
Tetra	PCB-48/75	1.00e+05	0.81	y	32:10	1.33	1.57		*	2.5	*	1.004	0.999	1.009
Tetra	PCB-65	*	*	n	NotF	1.32	*		2090	2.5	0.733	*	1.007	1.017
Tetra	PCB-62	*	*	n	NotF	1.36	*		2090	2.5	0.711	*	1.011	1.021
Tetra	PCB-44	5.79e+05	0.82	y	32:49	0.87	13.8		*	2.5	*	1.024	1.020	1.030
Tetra	PCB-42/59	2.26e+05	0.81	y	33:03	1.24	3.79		*	2.5	*	1.032	1.027	1.037
Tetra	PCB-41/64/71/72	6.96e+05	0.74	y	33:39	1.34	10.8		*	2.5	*	1.050	1.045	1.055
Tetra	PCB-68	2.50e+05	0.73	y	33:54	1.61	3.22		*	2.5	*	1.058	1.053	1.063
Tetra	PCB-40	1.21e+05	0.80	y	34:07	0.86	2.92		*	2.5	*	1.065	1.061	1.071
Tetra	PCB-57	*	*	n	NotF	1.12	*		2090	2.5	0.748	*	0.965	0.975
Tetra	PCB-67	*	*	n	NotF	1.09	*		2090	2.5	0.767	*	0.974	0.984
Tetra	PCB-58	*	*	n	NotF	1.14	*		2090	2.5	0.737	*	0.977	0.987
Tetra	PCB-63	*	*	n	NotF	1.16	*		2090	2.5	0.720	*	0.981	0.991
Tetra	PCB-74	3.79e+05	0.87	y	35:21	1.21	5.42		*	2.5	*	0.994	0.989	0.999
Tetra	PCB-61/70	1.15e+06	0.75	y	35:33	1.13	17.6		*	2.5	*	1.000	0.995	1.005
Tetra	PCB-76/66	6.84e+05	0.84	y	35:46	1.18	10.0		*	2.5	*	1.006	1.000	1.010
Tetra	PCB-80	*	*	n	NotF	1.32	*		2090	2.5	0.691	*	0.995	1.005
Tetra	PCB-55	*	*	n	NotF	1.23	*		2090	2.5	0.743	*	1.004	1.014
Tetra	PCB-56/60	4.90e+05	0.88	y	36:48	1.11	7.93		*	2.5	*	1.023	1.018	1.028
Tetra	PCB-79	*	*	n	NotF	1.16	*		2090	2.5	0.788	*	1.048	1.058
Tetra	PCB-78	*	*	n	NotF	1.18	*		2090	2.5	0.818	*	0.982	0.992
Tetra	PCB-81	*	*	n	NotF	1.29	*		2090	2.5	0.746	*	0.995	1.005
Tetra	PCB-77	2.46e+05	0.67	y	39:42	1.29	3.65		*	2.5	*	1.000	0.995	1.005
Penta	PCB-104	*	*	n	NotF	1.26	*		1680	2.5	1.29	*	0.996	1.006
Penta	PCB-96	*	*	n	NotF	1.09	*		1680	2.5	1.49	*	1.034	1.044
Penta	PCB-103	*	*	n	NotF	0.97	*		1680	2.5	1.69	*	1.051	1.061
Penta	PCB-100	*	*	n	NotF	0.96	*		1680	2.5	1.69	*	1.061	1.071
Penta	PCB-94	*	*	n	NotF	1.13	*		1680	2.5	2.18	*	0.980	0.990
Penta	PCB-95/98/102	1.14e+06	1.48	y	35:51	1.29	38.6		*	2.5	*	1.000	0.994	1.004
Penta	PCB-93	*	*	n	NotF	1.06	*		1680	2.5	2.32	*	0.998	1.008
Penta	PCB-88/91	1.64e+05	1.77	y	36:15	1.12	6.38		*	2.5	*	1.012	1.006	1.016
Penta	PCB-121	*	*	n	NotF	1.76	*		1680	2.5	1.40	*	1.009	1.019
Penta	PCB-84/92	6.04e+05	1.62	y	37:10	1.07	23.9		*	2.5	*	0.990	0.985	0.995
Penta	PCB-89	*	*	n	NotF	1.00	*		1680	2.5	2.55	*	0.990	1.000

Analyst: DMS

Date: 3/26/15

Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1
Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	1.45e+06	1.60	y 37:34	1.21	50.9		*	2.5	*	1.001	0.995	1.005
Penta	PCB-113	*	*	n NotF¶	1.34	*		1680	2.5	1.90	*	1.002	1.012
Penta	PCB-99	5.56e+05	1.73	y 37:53	1.25	18.9		*	2.5	*	1.009	1.004	1.014
Penta	PCB-119	3.47e+04	1.51	y 38:20	1.88	0.894		*	2.5	*	0.987	0.982	0.992
Penta	PCB-108/112	6.90e+04	1.53	y 38:30	1.41	2.38		*	2.5	*	0.991	0.986	0.996
Penta	PCB-83	*	*	n NotF¶	1.66	*		1680	2.5	1.71	*	0.990	1.000
Penta	PCB-97	3.83e+05	1.65	y 38:51	1.30	14.3		*	2.5	*	1.000	0.995	1.005
Penta	PCB-86	*	*	n NotF¶	1.03	*		1680	2.5	2.74	*	0.999	1.009
Penta	PCB-87/117/125	6.79e+05	1.67	y 39:08	1.59	20.7		*	2.5	*	1.008	1.002	1.012
Penta	PCB-111/115	3.15e+04	1.66	y 39:17	1.86	0.823		*	2.5	*	1.012	1.006	1.016
Penta	PCB-85/116	1.86e+05	1.95	n 39:24	1.39	6.47	R	*	2.5	*	1.015	1.010	1.020
Penta	PCB-120	*	*	n NotF¶	1.99	*		1680	2.5	1.43	*	1.016	1.026
Penta	PCB-110	2.26e+06	1.60	y 39:48	1.70	64.4		*	2.5	*	1.025	1.019	1.029
Penta	PCB-82	1.70e+05	1.34	y 40:24	0.74	7.94		*	2.5	*	0.976	0.971	0.981
Penta	PCB-124	1.05e+05	1.51	y 41:06	1.30	2.79		*	2.5	*	0.993	0.988	0.998
Penta	PCB-107/109	1.54e+05	1.61	y 41:16	1.34	4.00		*	2.5	*	0.997	0.991	1.001
Penta	PCB-123	3.63e+04	1.86	n 41:25	1.25	1.00	R	*	2.5	*	1.000	0.995	1.005
Penta	PCB-106/118	1.82e+06	1.64	y 41:37	1.29	48.5		*	2.5	*	1.000	0.996	1.006
Penta	PCB-114	8.01e+04	1.41	y 42:17	1.45	1.16		*	2.5	*	1.001	0.995	1.005
Penta	PCB-122	*	*	n NotF¶	1.22	*		2350	2.5	1.44	*	0.999	1.009
Penta	PCB-105	1.28e+06	1.46	y 43:08	1.56	18.7		*	2.5	*	1.001	0.995	1.005
Penta	PCB-127	*	*	n NotF¶	1.31	*		2350	2.5	1.31	*	0.995	1.005
Penta	PCB-126	6.35e+04	1.37	y 45:22	1.41	0.995		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-155	*	*	n NotF¶	1.20	*		1490	2.5	1.97	*	0.966	1.006
Hexa	PCB-150	*	*	n NotF¶	1.13	*		1490	2.5	2.09	*	1.030	1.040
Hexa	PCB-152	*	*	n NotF¶	1.17	*		1490	2.5	2.02	*	1.043	1.053
Hexa	PCB-145	*	*	n NotF¶	1.09	*		1490	2.5	2.15	*	1.055	1.065
Hexa	PCB-136	2.15e+05	1.33	y 39:35	1.14	9.68		*	2.5	*	1.068	1.063	1.073
Hexa	PCB-148	*	*	n NotF¶	0.82	*		1490	2.5	2.88	*	1.066	1.076
Hexa	PCB-154	*	*	n NotF¶	0.89	*		1490	2.5	2.65	*	1.079	1.089
Hexa	PCB-151	2.45e+05	1.34	y 40:50	0.82	15.4		*	2.5	*	1.102	1.097	1.107
Hexa	PCB-135	1.64e+05	1.23	y 41:03	0.80	10.6		*	2.5	*	1.107	1.101	1.113
Hexa	PCB-144	5.07e+04	1.18	y 41:11	0.86	3.05		*	2.5	*	1.111	1.105	1.116
Hexa	PCB-147	*	*	n NotF¶	0.78	*		1490	2.5	3.02	*	1.108	1.120
Hexa	PCB-139/149	1.07e+06	1.20	y 41:32	0.87	63.5		*	2.5	*	1.121	1.115	1.127
Hexa	PCB-140	*	*	n NotF¶	0.78	*		1490	2.5	3.03	*	1.120	1.132
Hexa	PCB-134/143	1.33e+05	1.53	n 42:12	0.93	3.77	R	*	2.5	*	0.975	0.970	0.980

Analyst: DMS

Date: 3/26/15

Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1
Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA		RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	8.39e+04	1.19	y	42:29	0.91	2.44		*	2.5	*	0.982	0.977	0.987
Hexa	PCB-131	*	*	n	NotF¶	0.85	*		1720	2.5	1.62	*	0.981	0.991
Hexa	PCB-146/165	4.97e+05	1.12	y	42:53	1.08	12.1		*	2.5	*	0.991	0.986	0.996
Hexa	PCB-132/161	9.84e+05	1.25	y	43:08	1.12	23.3		*	2.5	*	0.997	0.992	1.002
Hexa	PCB-153	3.06e+06	1.31	y	43:17	1.20	67.5		*	2.5	*	1.000	0.996	1.006
Hexa	PCB-168	*	*	n	NotF¶	1.36	*		1720	2.5	1.01	*	1.000	1.010
Hexa	PCB-141	6.52e+05	1.39	y	44:01	1.16	17.4		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-137	1.90e+05	1.24	y	44:24	1.18	4.98		*	2.5	*	1.009	1.004	1.014
Hexa	PCB-130	1.96e+05	1.13	y	44:30	0.92	6.58		*	2.5	*	1.011	1.006	1.016
Hexa	PCB-138/163/164	4.19e+06	1.24	y	44:52	1.38	89.9		*	2.5	*	1.001	0.996	1.006
Hexa	PCB-158/160	5.30e+05	1.37	y	45:06	1.48	10.6		*	2.5	*	1.006	1.001	1.011
Hexa	PCB-129	1.33e+05	1.61	n	45:21	0.99	3.98	R	*	2.5	*	1.012	1.007	1.017
Hexa	PCB-166	*	*	n	NotF¶	1.14	*		1720	2.5	1.04	*	0.988	0.998
Hexa	PCB-159	*	*	n	NotF¶	1.22	*		1720	2.5	0.968	*	0.995	1.005
Hexa	PCB-128/162	5.56e+05	1.52	n	46:24	1.03	12.8	R	*	2.5	*	1.006	1.002	1.012
Hexa	PCB-167	2.03e+05	1.19	y	46:49	1.18	3.93		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-156	4.58e+05	1.36	y	48:06	1.27	8.45		*	2.5	*	1.000	0.995	1.005
Hexa	PCB-157	8.30e+04	0.83	n	48:22	1.22	1.57	R	*	2.5	*	1.000	0.995	1.005
Hexa	PCB-169	*	*	n	NotF¶	1.07	*		1720	2.5	1.02	*	0.995	1.005
Hepta	PCB-188	*	*	n	NotF¶	1.52	*		1480	2.5	0.814	*	0.996	1.006
Hepta	PCB-184	*	*	n	NotF¶	1.34	*		1480	2.5	0.926	*	1.006	1.016
Hepta	PCB-179	3.24e+05	1.07	y	44:07	1.39	10.00		*	2.5	*	1.029	1.024	1.034
Hepta	PCB-176	1.07e+05	1.01	y	44:36	1.45	3.14		*	2.5	*	1.040	1.035	1.045
Hepta	PCB-186	*	*	n	NotF¶	1.46	*		1480	2.5	0.850	*	1.049	1.059
Hepta	PCB-178	1.38e+05	1.06	y	45:41	1.07	5.51		*	2.5	*	1.065	1.061	1.071
Hepta	PCB-175	*	*	n	NotF¶	1.05	*		1480	2.5	1.18	*	1.069	1.079
Hepta	PCB-182/187	1.01e+06	1.09	y	46:12	1.14	38.2		*	2.5	*	1.077	1.073	1.083
Hepta	PCB-183	4.29e+05	1.12	y	46:31	1.22	15.0		*	2.5	*	1.085	1.080	1.090
Hepta	PCB-185	8.33e+04	1.08	y	47:10	1.40	3.03		*	2.5	*	0.955	0.950	0.960
Hepta	PCB-174	7.14e+05	0.99	y	47:32	1.29	28.3		*	2.5	*	0.963	0.958	0.968
Hepta	PCB-181	*	*	n	NotF¶	1.35	*		1480	2.5	1.04	*	0.960	0.970
Hepta	PCB-177	4.34e+05	1.20	y	47:49	1.27	17.5		*	2.5	*	0.969	0.963	0.973
Hepta	PCB-171	2.30e+05	1.10	y	48:06	1.46	8.08		*	2.5	*	0.974	0.969	0.979
Hepta	PCB-173	*	*	n	NotF¶	1.10	*		1480	2.5	1.27	*	0.978	0.988
Hepta	PCB-172	1.39e+05	1.17	y	48:59	1.35	5.25		*	2.5	*	0.992	0.987	0.997
Hepta	PCB-192	*	*	n	NotF¶	1.74	*		1480	2.5	0.807	*	0.991	1.001
Hepta	PCB-180	1.70e+06	1.03	y	49:22	1.45	59.8		*	2.5	*	1.000	0.995	1.005

Analyst: DMS

Date: 3/26/15

Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1
Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.027 EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL UCL
Hepta	PCB-193	1.15e+05	1.09	y 49:35	1.85	3.18		*	2.5	*	1.004	0.999-1.009
Hepta	PCB-191	4.74e+04	1.40	n 49:50	1.86	1.30	R	*	2.5	*	1.009	1.005-1.015
Hepta	PCB-170	6.66e+05	1.14	y 50:52	1.67	25.4		*	2.5	*	1.000	0.995-1.005
Hepta	PCB-190	1.62e+05	1.02	y 51:03	2.25	4.58		*	2.5	*	1.004	0.999-1.009
Hepta	PCB-189	3.73e+04	1.20	y 52:22	1.67	1.11		*	2.5	*	1.000	0.995-1.005
Octa	PCB-202	1.09e+05	0.99	y 48:18	1.02	5.42		*	2.5	*	1.000	0.995-1.005
Octa	PCB-201	4.24e+04	0.68	n 48:46	1.10	1.96	R	*	2.5	*	1.010	1.005-1.015
Octa	PCB-204	*	*	n NotF╗	1.07	*		1500	2.5	1.71	*	1.009-1.019
Octa	PCB-197	*	*	n NotF╗	1.17	*		1500	2.5	1.57	*	1.015-1.025
Octa	PCB-200	4.67e+04	0.91	y 50:06	1.03	2.28		*	2.5	*	1.038	1.034-1.044
Octa	PCB-198	*	*	n NotF╗	0.75	*		1500	2.5	2.44	*	1.062-1.072
Octa	PCB-199	3.19e+05	0.97	y 51:33	0.74	21.8		*	2.5	*	1.068	1.064-1.074
Octa	PCB-196/203	3.55e+05	1.02	y 51:49	0.83	21.7		*	2.5	*	1.073	1.070-1.080
Octa	PCB-195	1.83e+05	0.94	y 53:00	1.14	5.71		*	2.5	*	0.984	0.979-0.989
Octa	PCB-194	5.20e+05	0.89	y 53:52	1.29	14.3		*	2.5	*	1.000	0.995-1.005
Octa	PCB-205	3.34e+04	0.95	y 54:09	1.61	0.736		*	2.5	*	1.005	1.001-1.010
Nona	PCB-208	6.93e+04	1.51	y 53:08	1.01	2.11		*	2.5	*	1.000	0.995-1.005
Nona	PCB-207	3.99e+04	1.45	y 53:27	1.03	1.20		*	2.5	*	1.006	1.001-1.011
Nona	PCB-206	1.73e+05	1.71	n 55:30	0.88	7.83	R	*	2.5	*	1.000	0.995-1.005
Deca	PCB-209	4.38e+04	0.99	y 56:52	1.35	1.47		*	2.5	*	1.000	0.995-1.005

Analyst: DMS

Date: 3/26/15

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	*	*	n	NotFnd	1.31	*	
Total Di-PCB	1.27e+06	1.47	y	25:17	1.32	11.0775	
Total Tri-PCB	7.81e+05	1.06	y	25:54	1.20	12.8037	
Total Tri-PCB	1.39e+06	1.05	y	29:01	1.23	13.2923	Sum:26.0959
Total Tetra-PCB	7.96e+06	0.85	y	29:49	1.17	134.515	
Total Penta-PCB	9.62e+06	1.48	y	35:51	1.24	305.428	
Total Penta-PCB	1.43e+06	1.41	y	42:17	1.39	20.8113	Sum:326.239
Total Hexa-PCB	1.75e+06	1.33	y	39:35	0.94	102.180	
Total Hexa-PCB	1.10e+07	1.19	y	42:29	1.13	247.277	Sum:349.457
Total Hepta-PCB	6.29e+06	1.07	y	44:07	1.37	228.106	
Total Octa-PCB	8.30e+05	0.99	y	48:18	0.95	51.1301	
Total Octa-PCB	7.37e+05	0.94	y	53:00	1.35	20.7436	Sum:71.8737
Total Nona-PCB	1.09e+05	1.51	y	53:08	0.99	3.30632	
Total Deca-PCB	4.38e+04	0.99	y	56:52	1.35	1.46632	

Total PCB Conc:1196.29244300
1150

Integrations
by
Analyst: DMS

Date: 3/20/15

Client ID: BD-MH-1.32-20141222-W Filename: 150319E2 S:8 Acq:20-MAR-15 05:07:00 ConCal: ST150319E2-1
Lab ID: 1400984-03 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0271 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.37e+08	3.20 y	0.91	16:10	0.623	0.619	0.625	1550	79.7
13C-PCB-3	1.49e+08	3.17 y	0.94	18:46	0.723	0.718	0.726	1630	83.5
13C-PCB-4	9.05e+07	1.58 y	0.60	20:06	0.774	0.770	0.778	1560	80.2
13C-PCB-9	1.48e+08	1.59 y	0.96	21:53	0.843	0.839	0.847	1590	81.8
13C-PCB-11	1.69e+08	1.56 y	0.95	25:16	0.973	0.968	0.978	1830	93.8
13C-PCB-19	8.10e+07	1.12 y	0.56	24:14	0.933	0.929	0.939	1490	76.4
13C-PCB-28	1.61e+08	1.05 y	1.07	29:07	1.004	0.999	1.009	1880	96.5
13C-PCB-32	1.24e+08	1.11 y	0.83	27:09	1.046	1.041	1.051	1550	79.5
13C-PCB-37	1.61e+08	1.07 y	0.96	32:59	1.137	1.131	1.143	2080	107
13C-PCB-47	9.39e+07	0.80 y	0.77	32:02	0.871	0.867	0.875	2210	113
13C-PCB-52	8.95e+07	0.82 y	0.71	31:31	0.857	0.853	0.861	2270	117
13C-PCB-54	1.14e+08	0.81 y	1.06	27:59	0.761	0.757	0.765	1940	99.6
13C-PCB-70	1.12e+08	0.80 y	0.99	35:33	0.966	0.961	0.971	2040	105
13C-PCB-77	1.02e+08	0.81 y	0.96	39:41	1.079	1.073	1.083	1910	97.9
13C-PCB-80	1.09e+08	0.80 y	1.02	35:59	0.978	0.973	0.983	1920	98.6
13C-PCB-81	1.04e+08	0.81 y	1.00	39:05	1.063	1.057	1.067	1870	96.2
13C-PCB-95	4.45e+07	1.67 y	0.70	35:50	0.912	0.908	0.918	2130	110
13C-PCB-97	4.01e+07	1.63 y	0.66	38:50	0.989	0.984	0.994	2050	105
13C-PCB-101	4.59e+07	1.69 y	0.77	37:32	0.955	0.951	0.961	2010	103
13C-PCB-104	6.36e+07	1.62 y	0.97	32:40	0.832	0.828	0.836	2210	113
13C-PCB-105	8.61e+07	1.60 y	1.20	43:06	0.929	0.924	0.934	2270	116
13C-PCB-114	9.28e+07	1.64 y	1.26	42:14	0.911	0.905	0.915	2340	120
13C-PCB-118	5.65e+07	1.63 y	0.94	41:36	1.059	1.054	1.064	2020	104
13C-PCB-123	5.63e+07	1.63 y	0.88	41:24	1.054	1.049	1.059	2140	110
13C-PCB-126	8.79e+07	1.60 y	1.13	45:21	0.978	0.972	0.982	2470	127
13C-PCB-127	9.25e+07	1.61 y	1.26	43:27	0.937	0.931	0.941	2330	120
13C-PCB-138	6.58e+07	1.27 y	1.12	44:50	0.967	0.961	0.971	1860	95.6
13C-PCB-141	6.30e+07	1.33 y	1.09	44:00	0.949	0.943	0.953	1830	93.8
13C-PCB-153	7.36e+07	1.29 y	1.27	43:16	0.933	0.927	0.937	1830	94.0
13C-PCB-155	3.78e+07	1.28 y	0.87	37:04	0.944	0.939	0.949	1460	74.8
13C-PCB-156	8.31e+07	1.30 y	1.35	48:05	1.037	1.032	1.042	1950	100
13C-PCB-157	8.43e+07	1.29 y	1.42	48:21	1.042	1.037	1.047	1880	96.7
13C-PCB-159	8.20e+07	1.25 y	1.37	46:08	0.995	0.989	0.999	1900	97.3
13C-PCB-167	8.49e+07	1.29 y	1.38	46:48	1.009	1.004	1.014	1940	99.9
13C-PCB-169	8.51e+07	1.28 y	1.38	50:30	1.089	1.084	1.094	1950	100
13C-PCB-170	3.06e+07	0.47 y	0.60	50:51	1.096	1.091	1.103	1610	82.6
13C-PCB-180	3.81e+07	0.47 y	0.76	49:22	1.064	1.059	1.069	1590	81.9
13C-PCB-188	4.54e+07	0.47 y	1.01	42:53	0.925	0.919	0.929	1420	72.8
13C-PCB-189	3.93e+07	0.46 y	0.80	52:22	1.129	1.124	1.136	1550	79.6
13C-PCB-194	5.48e+07	0.91 y	0.75	53:52	0.995	0.990	1.000	1930	99.2
13C-PCB-202	3.85e+07	0.93 y	0.99	48:17	1.041	1.036	1.046	1230	63.3
13C-PCB-206	4.88e+07	0.81 y	0.73	55:30	1.025	1.020	1.301	1750	89.7
13C-PCB-208	6.31e+07	0.79 y	1.08	53:08	0.981	0.977	0.987	1530	78.5
13C-PCB-209	4.32e+07	1.21 y	0.71	56:52	1.050	1.045	1.055	1600	82.0

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.09e+08	0.80 y	1.02	37:52	1.029	1.024	1.033	1920	98.5
13C-PCB-178	3.12e+07	0.46 y	0.64	45:40	0.985	0.980	0.989	1550	79.5

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.09e+08	0.80 y	1.02	37:52	0.969	0.963	0.973	1990	102
13C-PCB-178	3.12e+07	0.46 y	0.84	45:40	0.925	0.920	0.930	1890	97.1

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.89e+08	1.59	y	1.00	25:58	1950
13C-PCB-31	1.56e+08	1.04	y	1.00	29:00	1950
13C-PCB-60	1.08e+08	0.81	y	1.00	36:47	1950
13C-PCB-111	5.81e+07	1.65	y	1.00	39:17	1950
13C-PCB-128	6.15e+07	1.31	y	1.00	46:23	1950
13C-PCB-205	7.42e+07	0.92	y	1.00	54:09	1950

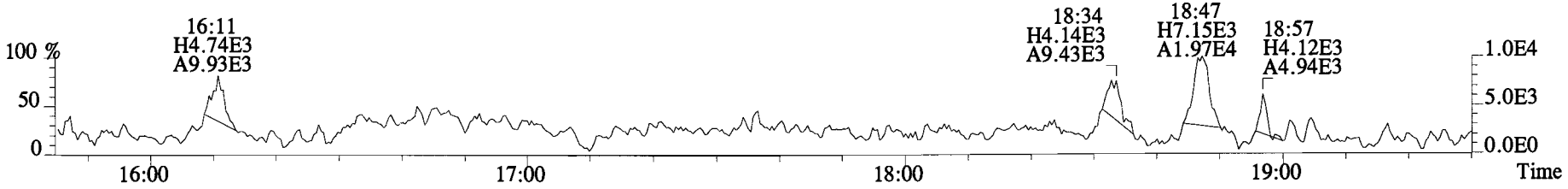
Analyst: DMS

Date: 3/25/15

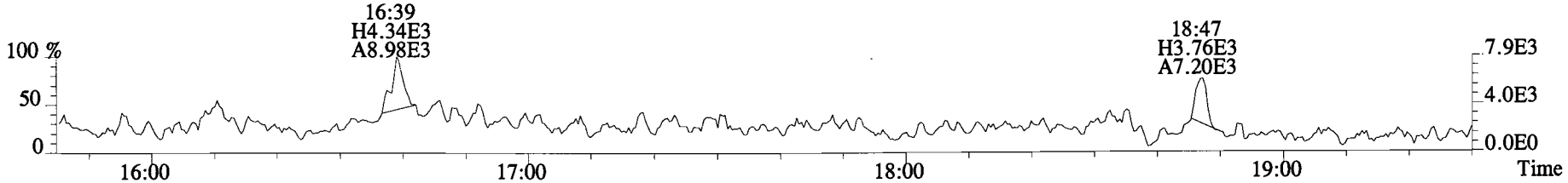
File:150319E2 #1-867 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1

RO

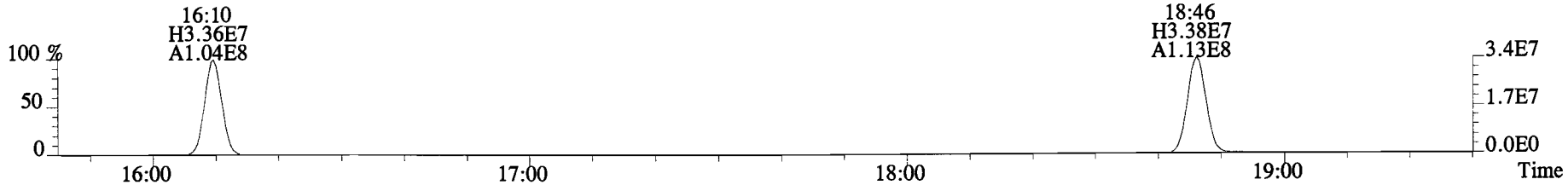
188.0393 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2908.0,0.00%,F,F)



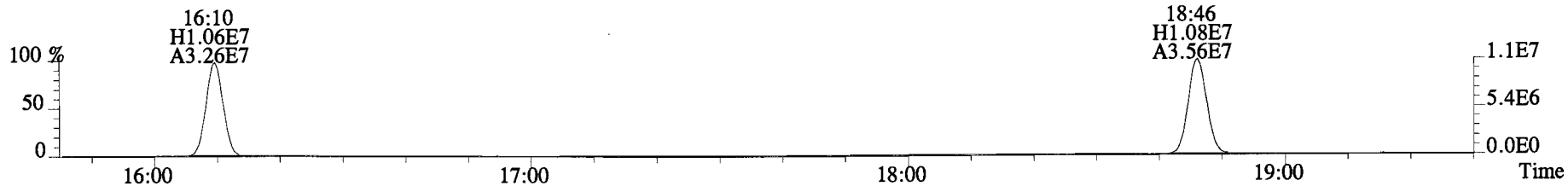
190.0363 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2516.0,0.00%,F,F)



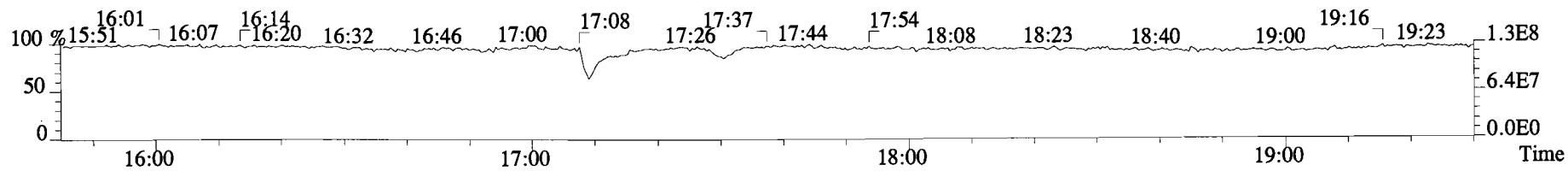
200.0795 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4704.0,0.00%,F,F)



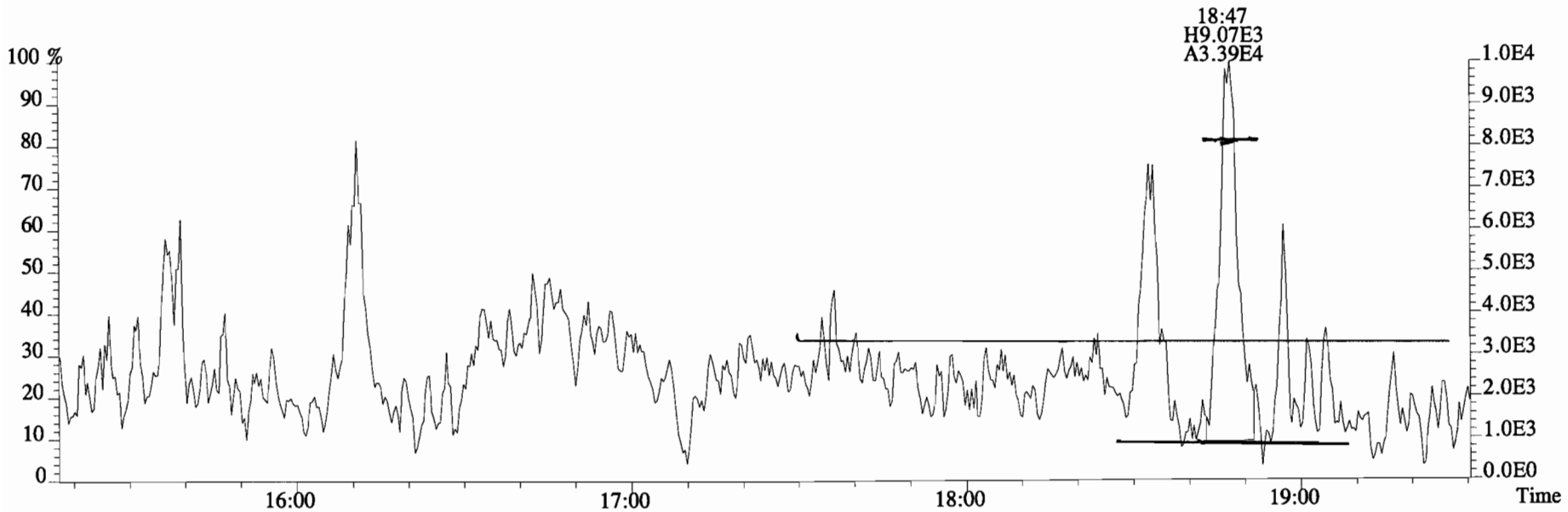
202.0766 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,55004.0,0.00%,F,F)



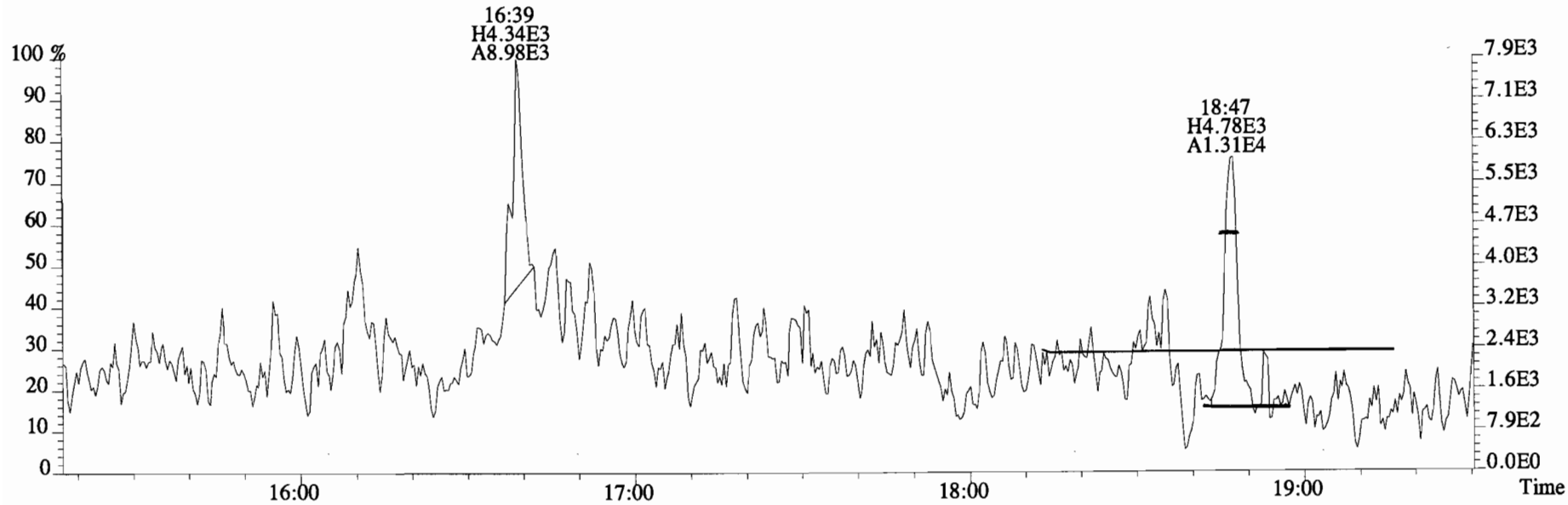
180.9880 S:8

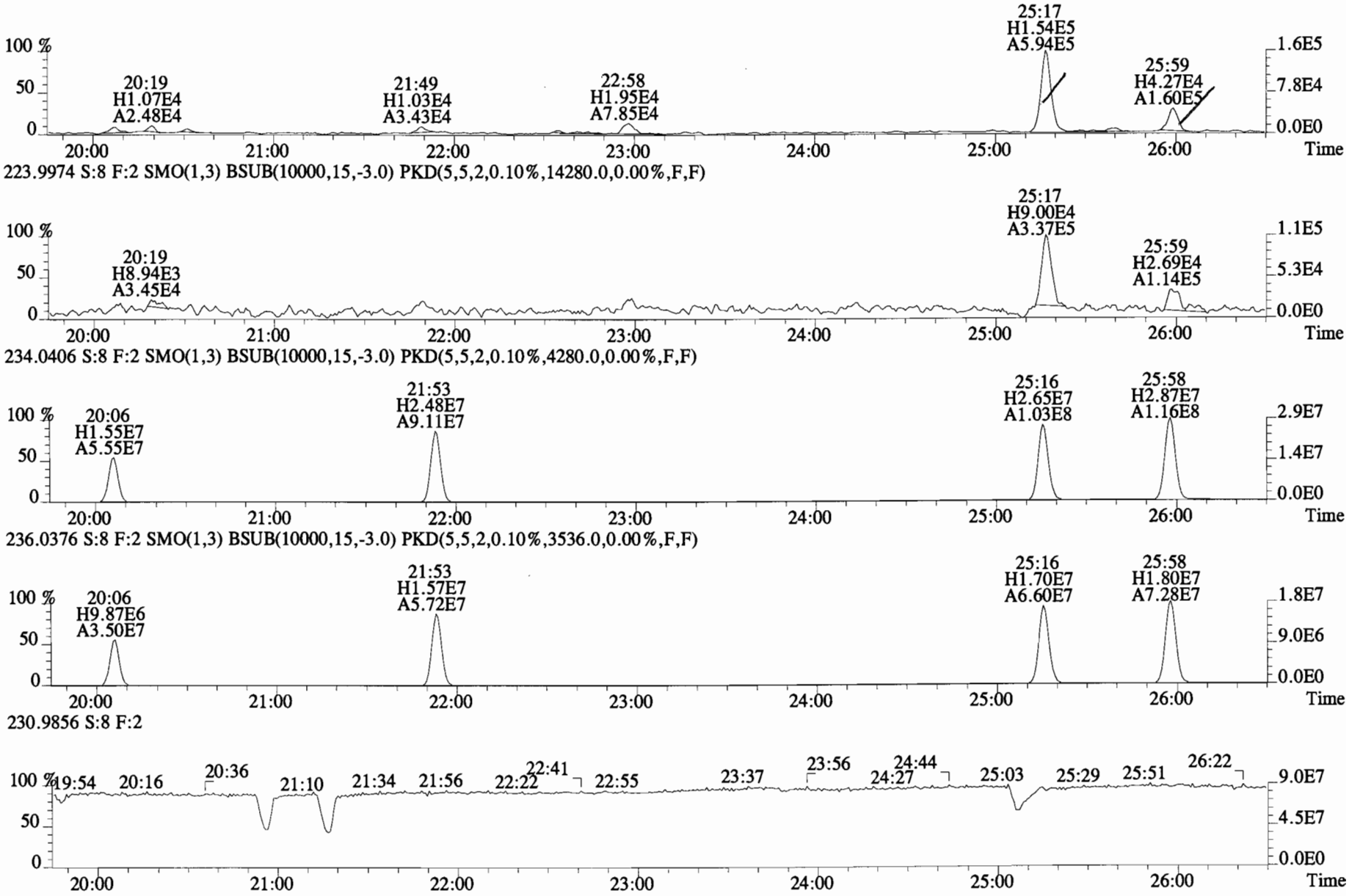


File:150319E2 #1-867 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
188.0393 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2908.0,0.00%,F,F)

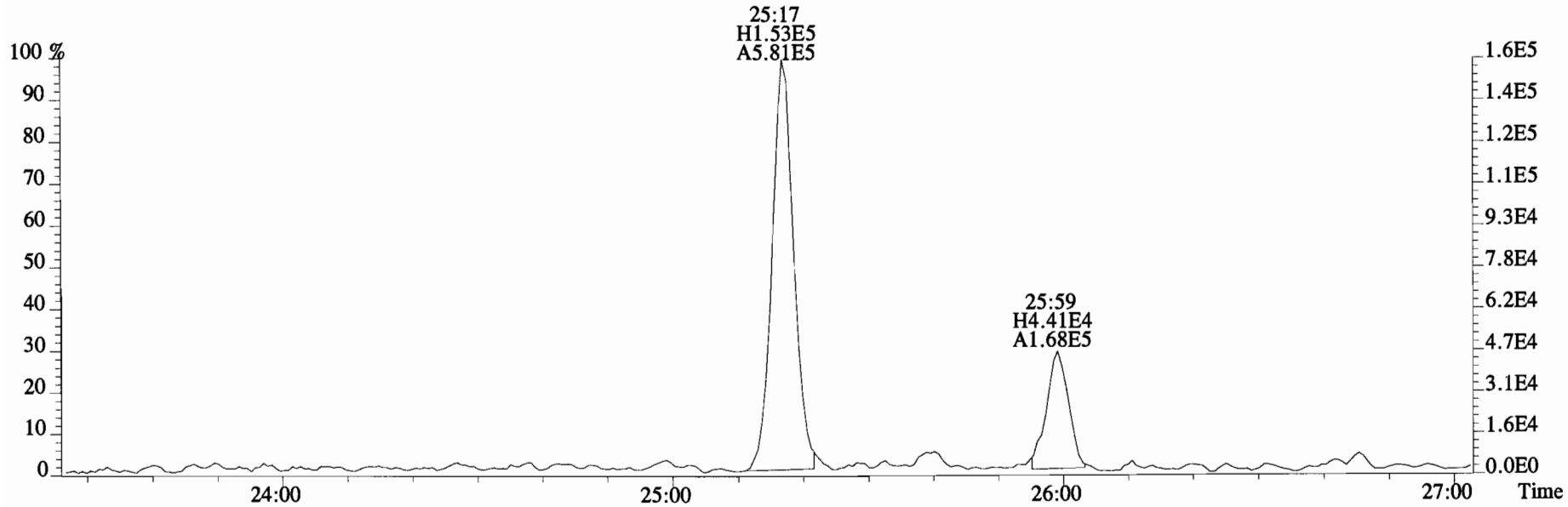


190.0363 S:8 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2516.0,0.00%,F,F)

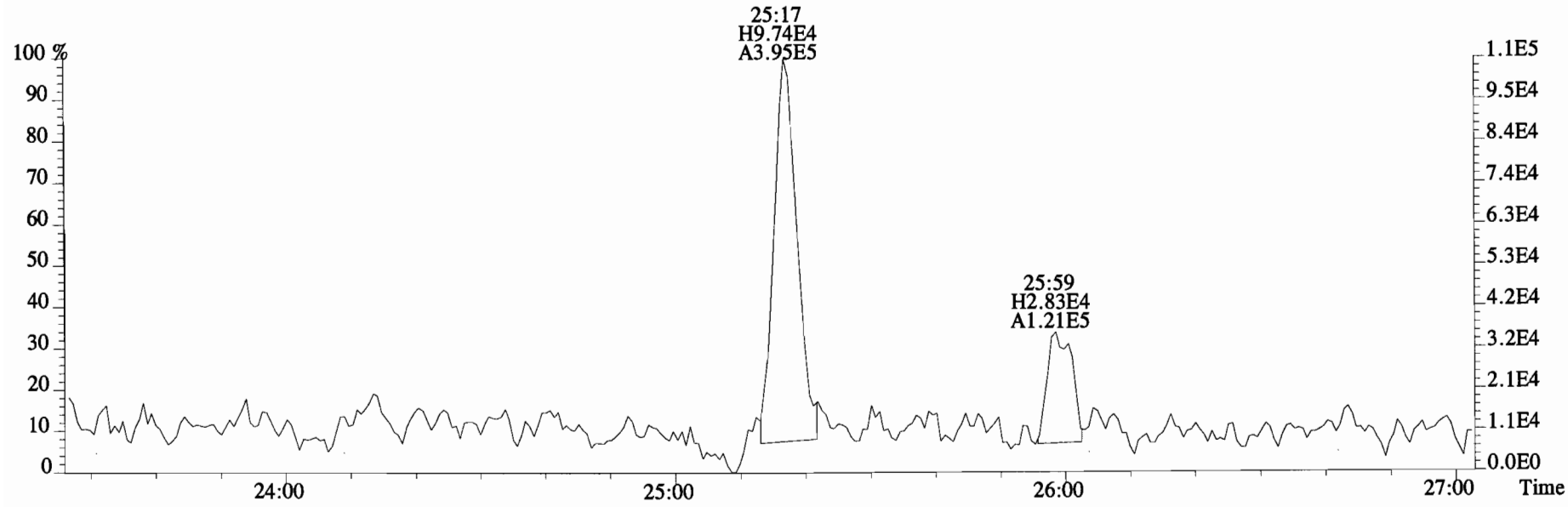



File:150319E2 #1-757 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
222.0003 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3708.0,0.00%,F,F)
20:19 H1.07E4 A2.48E4
21:49 H1.03E4 A3.43E4
22:58 H1.95E4 A7.85E4
25:17 H1.54E5 A5.94E5
25:59 H4.27E4 A1.60E5
223.9974 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14280.0,0.00%,F,F)
20:19 H8.94E3 A3.45E4
25:17 H9.00E4 A3.37E5
25:59 H2.69E4 A1.14E5
234.0406 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4280.0,0.00%,F,F)
20:06 H1.55E7 A5.55E7
21:53 H2.48E7 A9.11E7
25:16 H2.65E7 A1.03E8
25:58 H2.87E7 A1.16E8
236.0376 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3536.0,0.00%,F,F)
20:06 H9.87E6 A3.50E7
21:53 H1.57E7 A5.72E7
25:16 H1.70E7 A6.60E7
25:58 H1.80E7 A7.28E7
230.9856 S:8 F:2
19:54 20:16 20:36 21:10 21:34 21:56 22:22 22:41 22:55 23:37 23:56 24:27 24:44 25:03 25:29 25:51 26:22
100 %
50
0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 Time
1.6E5 7.8E4 0.0E0
1.1E5 5.3E4 0.0E0
2.9E7 1.4E7 0.0E0
1.8E7 9.0E6 0.0E0
9.0E7 4.5E7 0.0E0

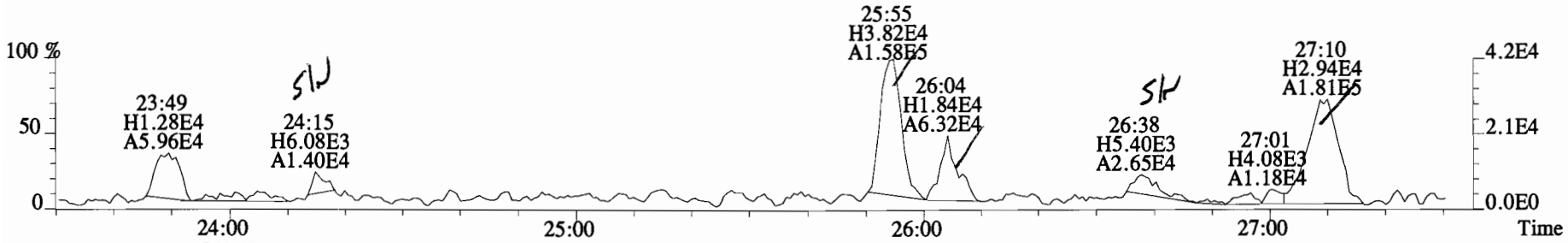
File:150319E2 #1-757 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
222.0003 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3708.0,0.00%,F,F)



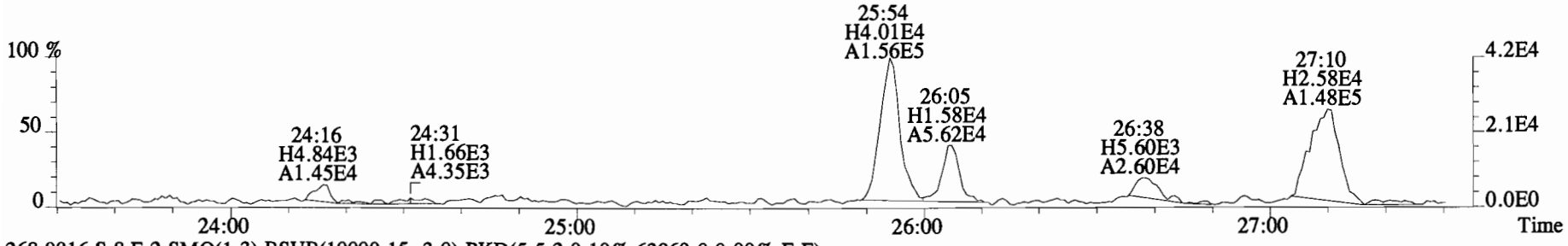
223.9974 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,14280.0,0.00%,F,F)



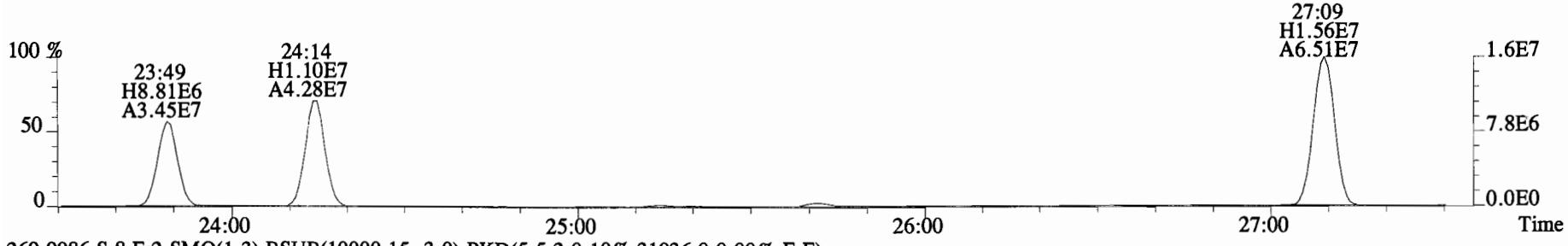
File:150319E2 #1-757 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
255.9613 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4308.0,0.00%,F,F)



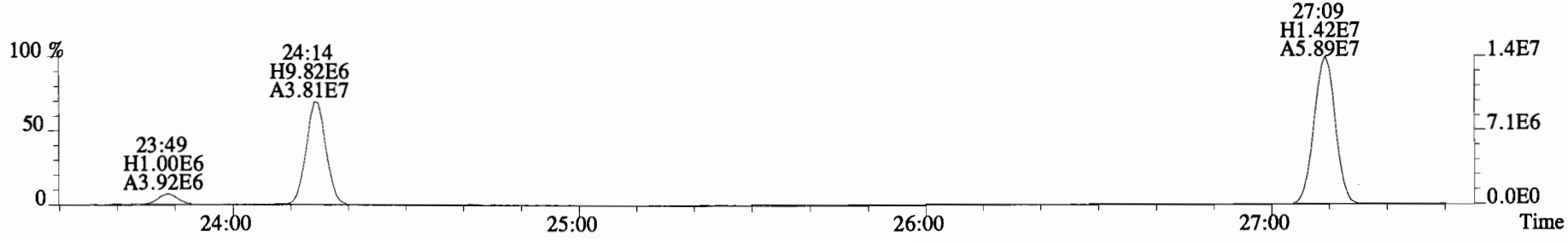
257.9584 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2204.0,0.00%,F,F)



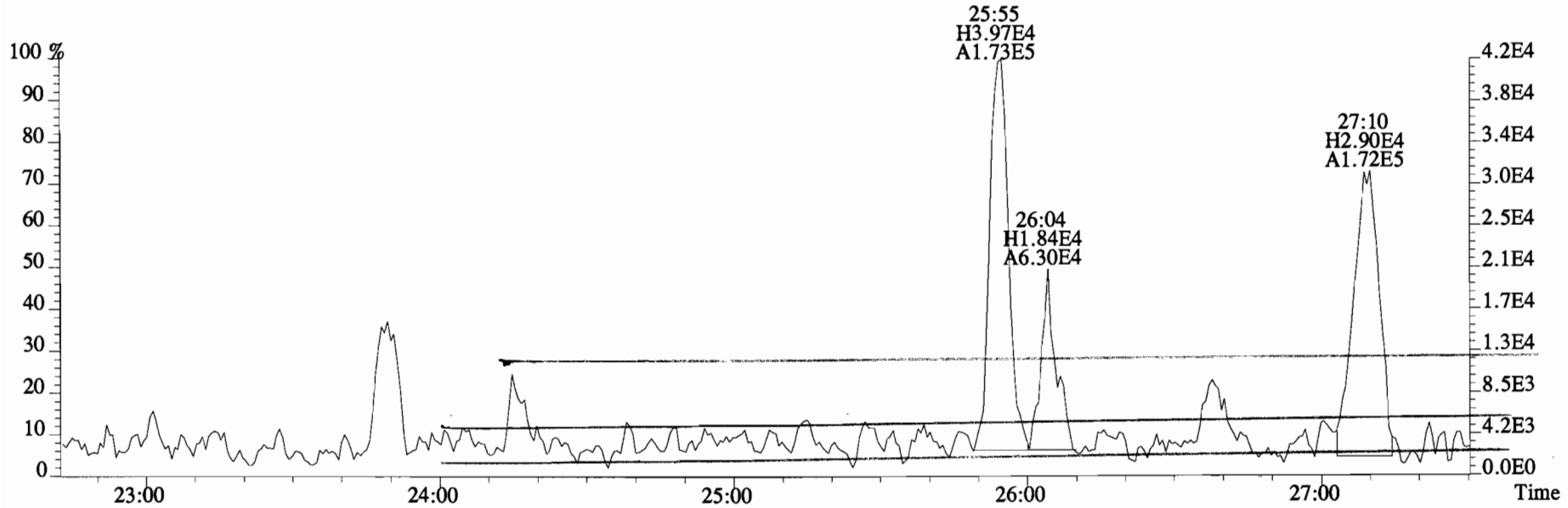
268.0016 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,63960.0,0.00%,F,F)



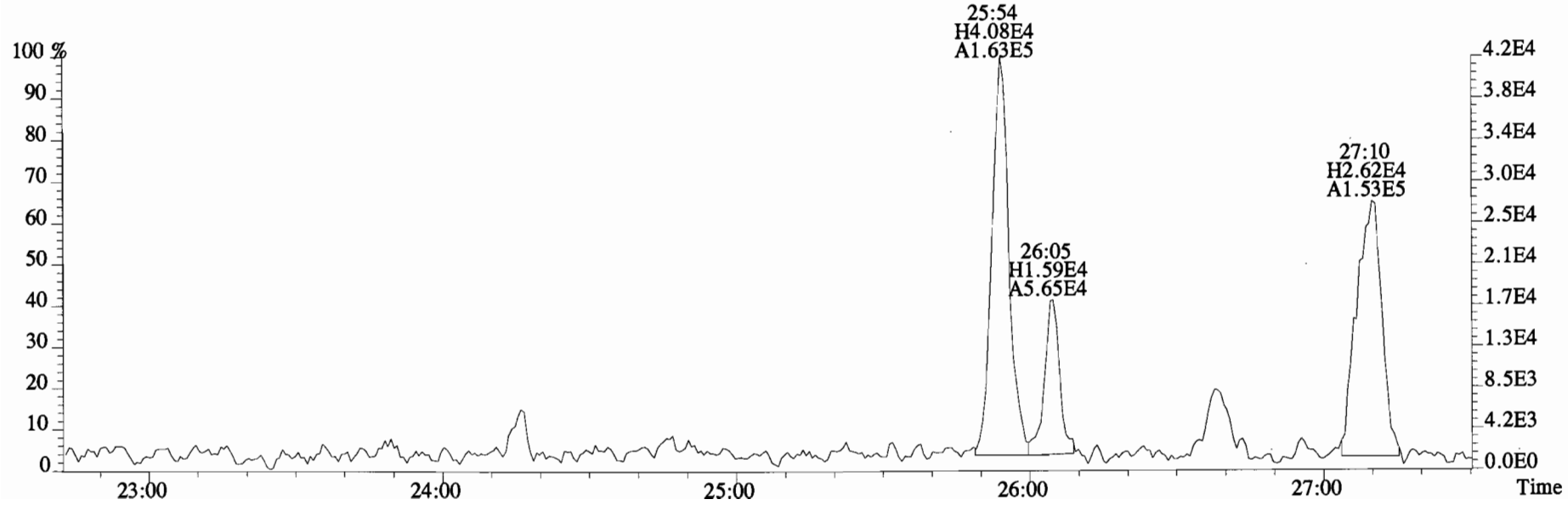
269.9986 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,31936.0,0.00%,F,F)



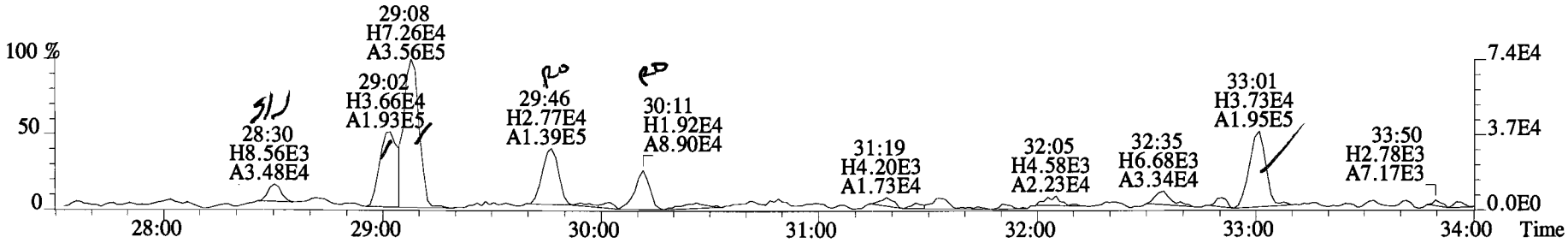
File:150319E2 #1-757 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
255.9613 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4308.0,0.00%,F,F)



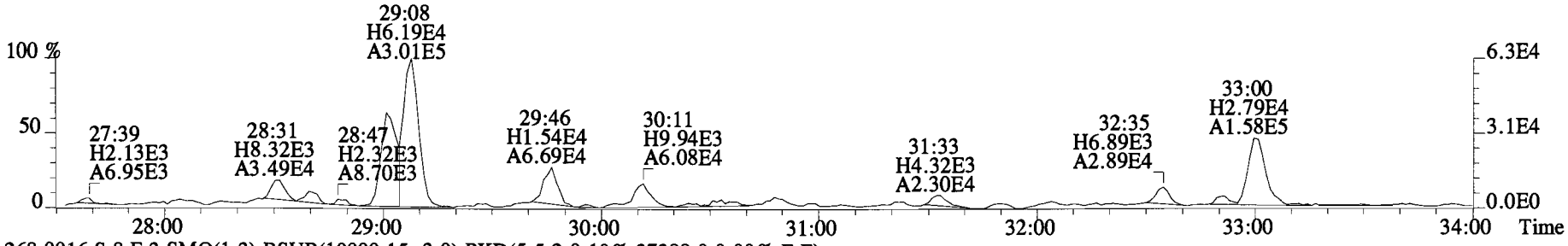
257.9584 S:8 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2204.0,0.00%,F,F)



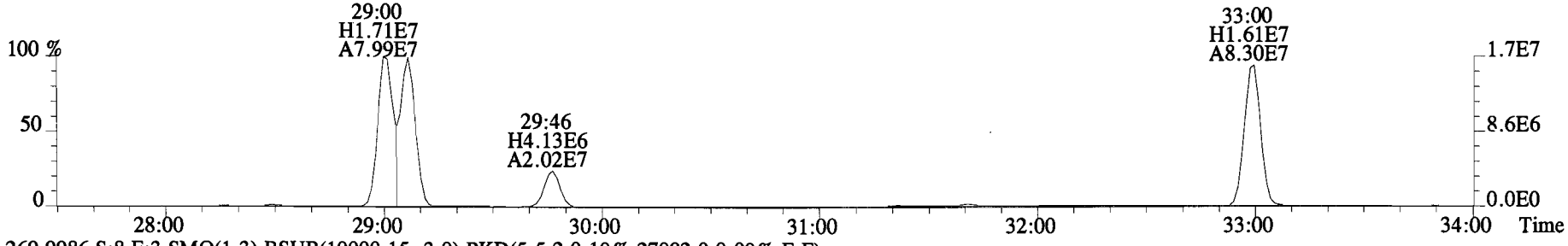
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
255.9613 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3488.0,0.00%,F,F)



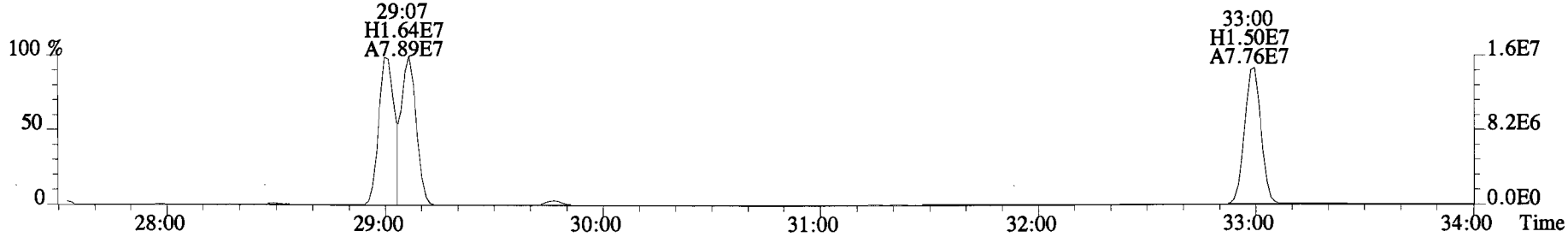
257.9584 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2132.0,0.00%,F,F)



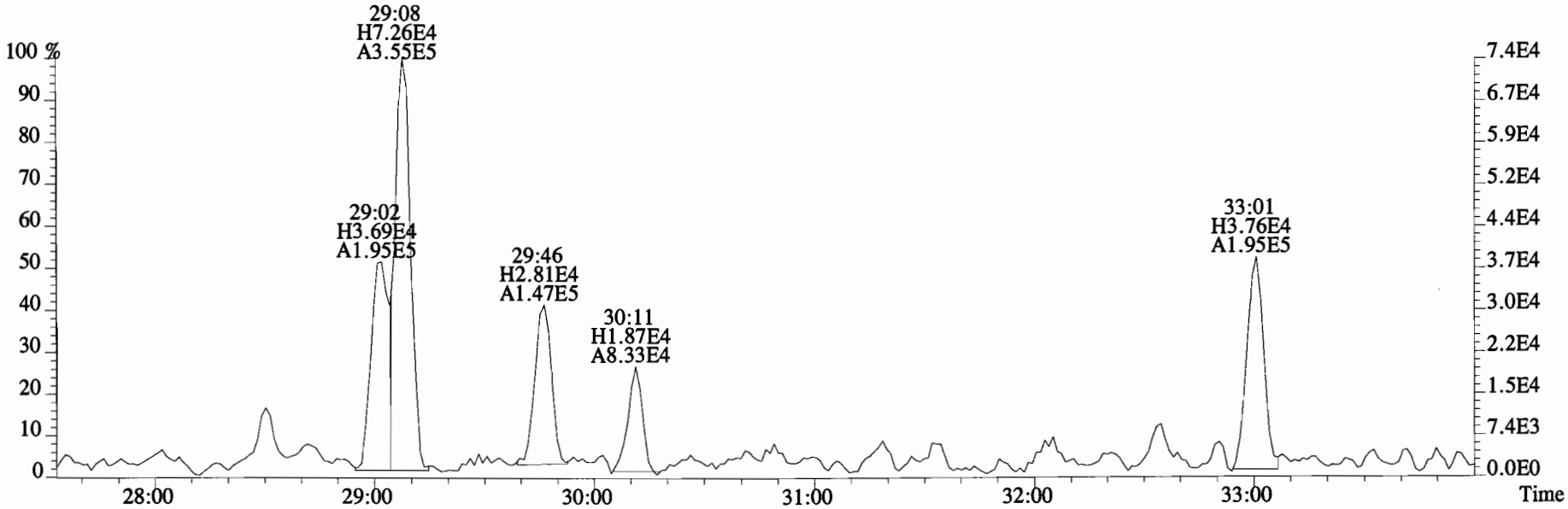
268.0016 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,37388.0,0.00%,F,F)



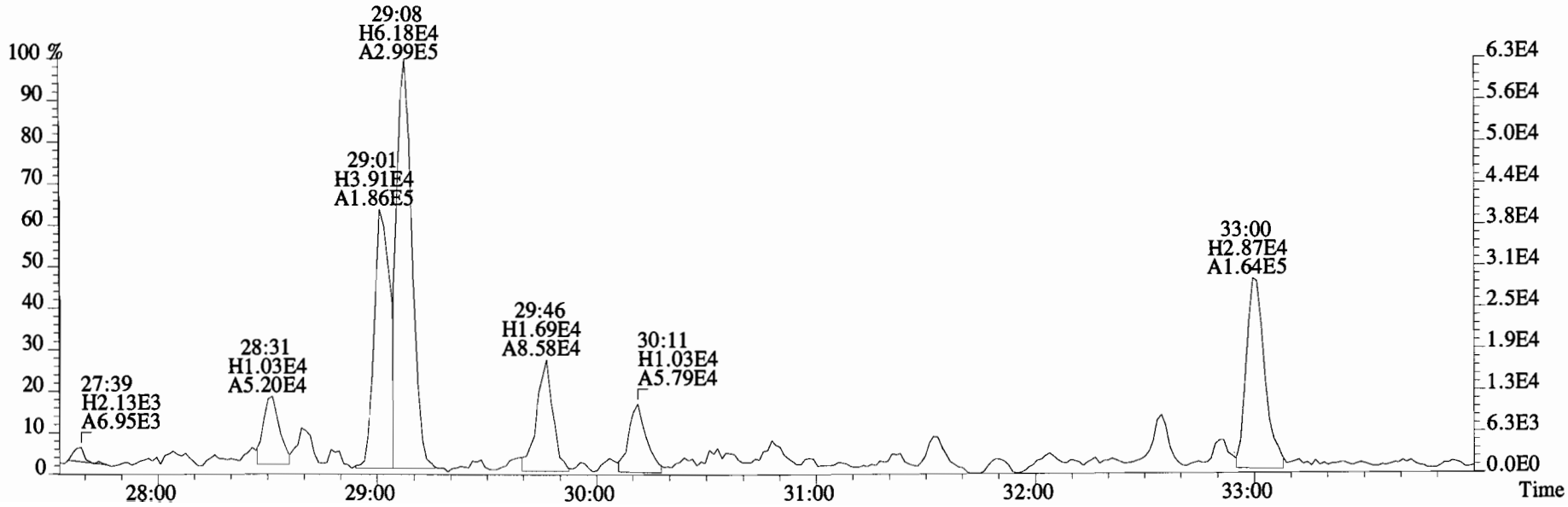
269.9986 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27092.0,0.00%,F,F)



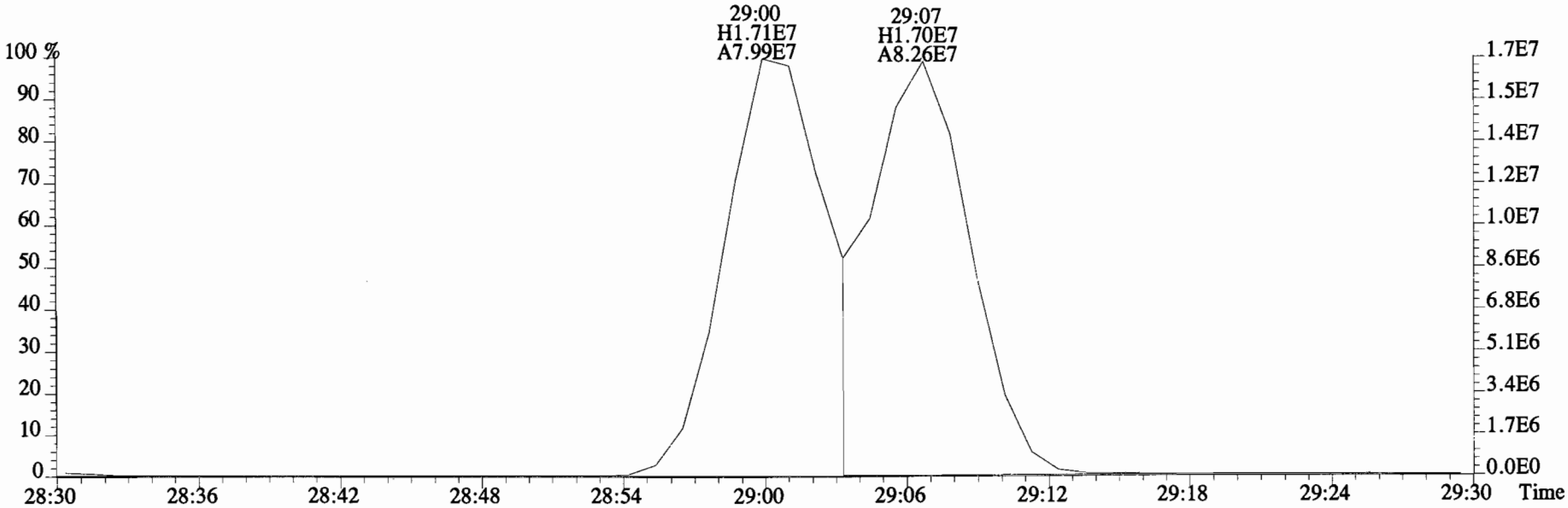
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
255.9613 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3488.0,0.00%,F,F)



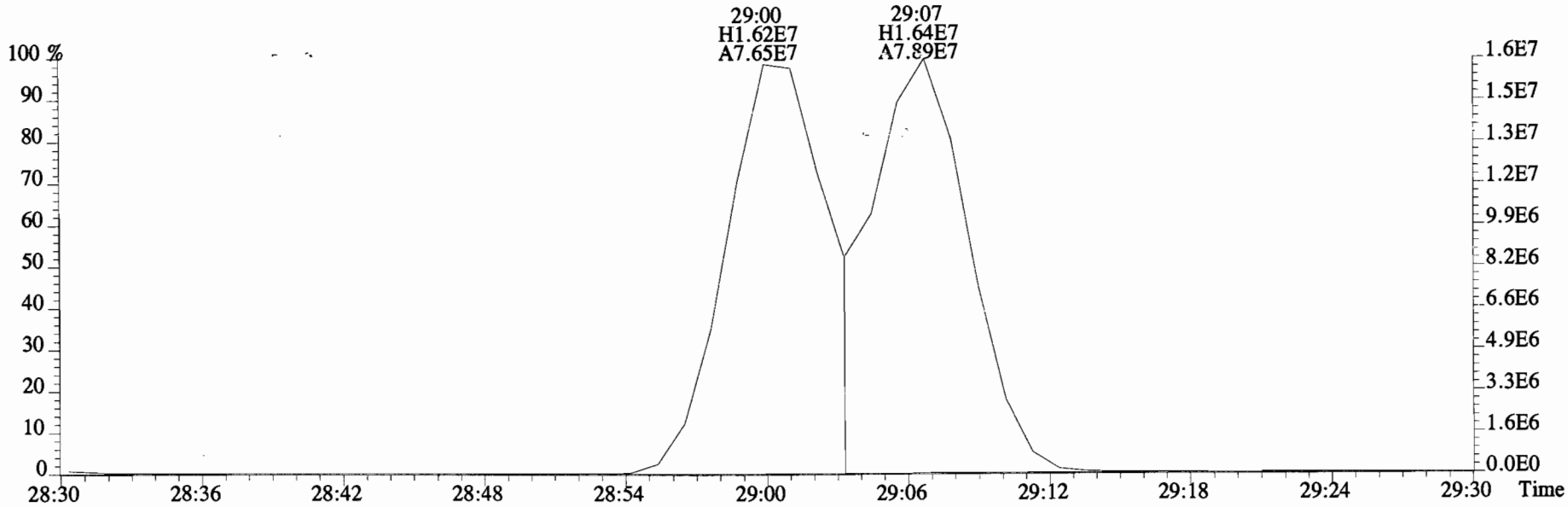
257.9584 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2132.0,0.00%,F,F)



File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
268.0016 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,37388.0,0.00%,F,F)

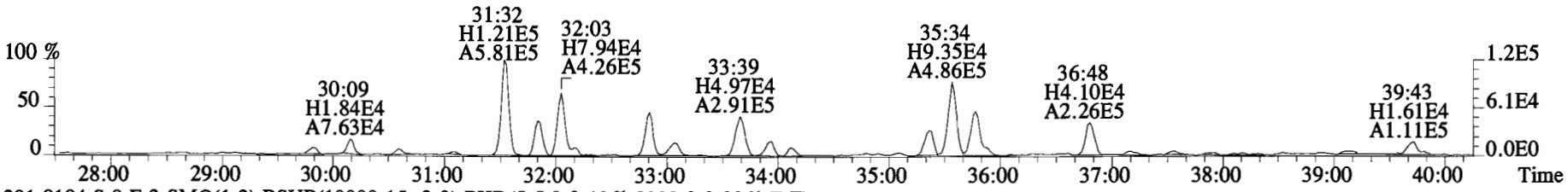


269.9986 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,27092.0,0.00%,F,F)

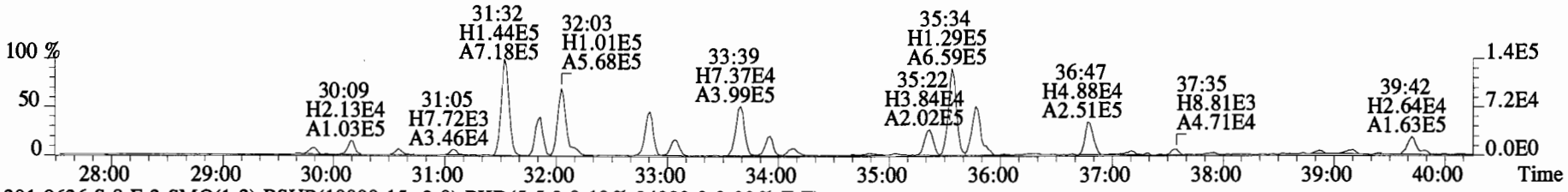


File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1

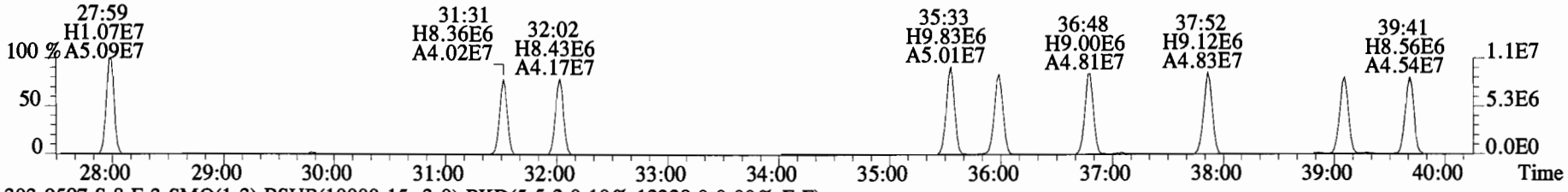
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



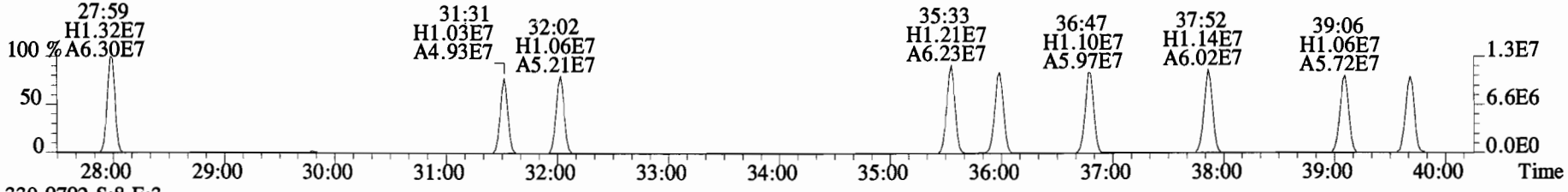
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



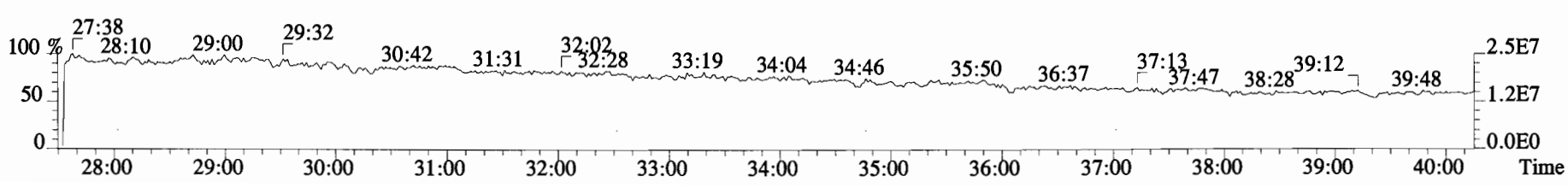
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24000.0,0.00%,F,F)



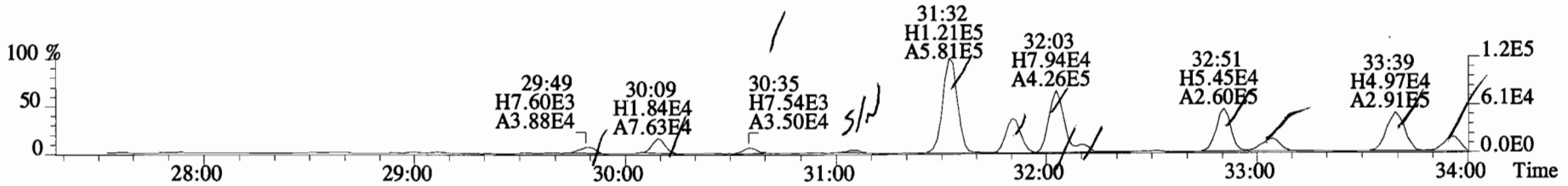
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12328.0,0.00%,F,F)



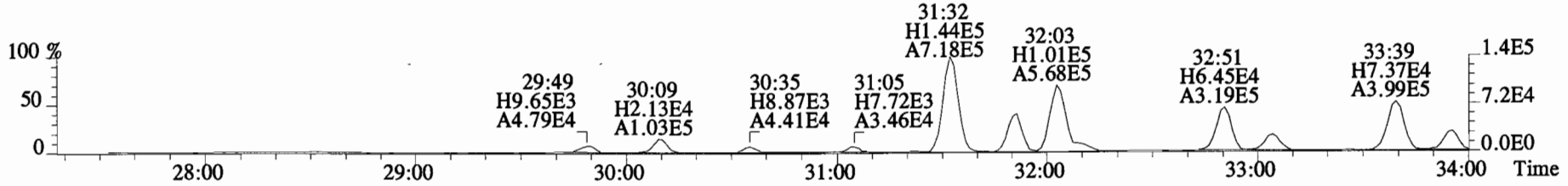
330.9792 S:8 F:3



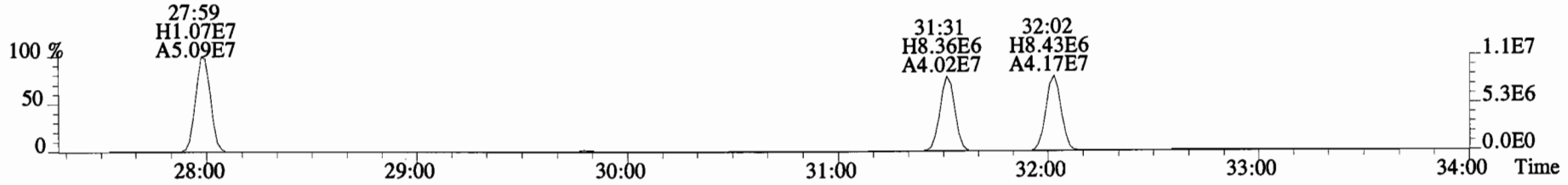
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



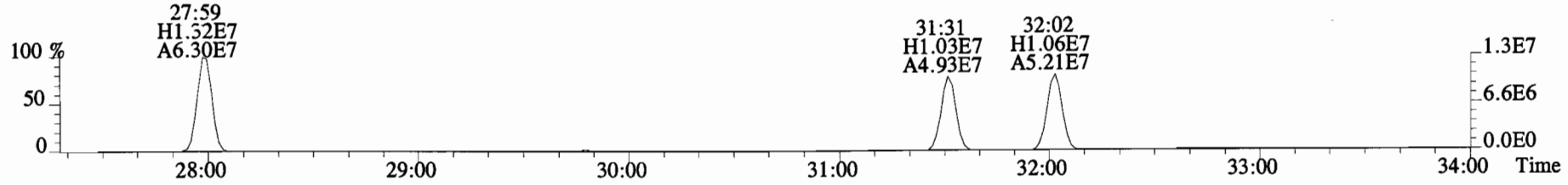
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



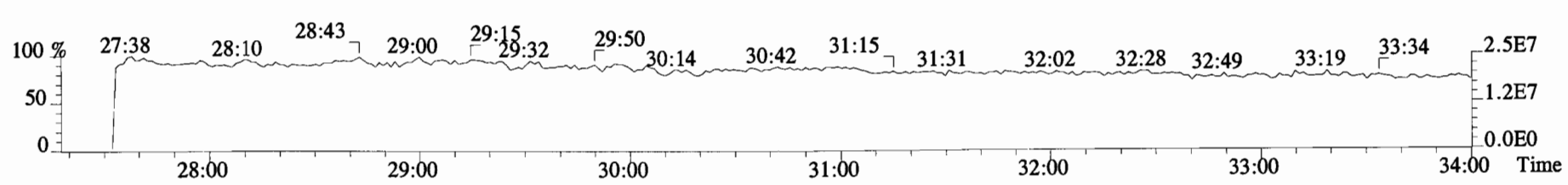
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24000.0,0.00%,F,F)



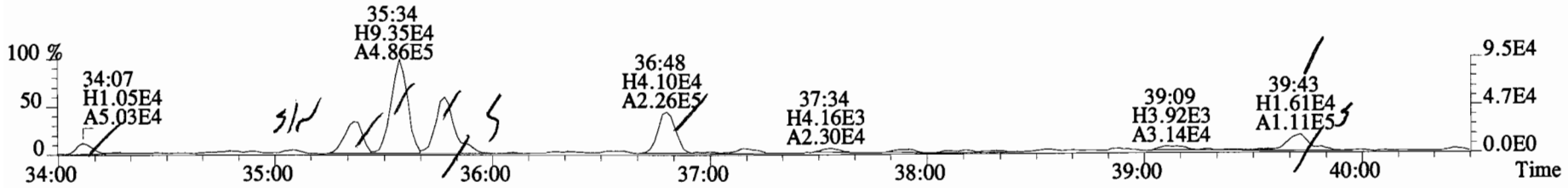
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12328.0,0.00%,F,F)



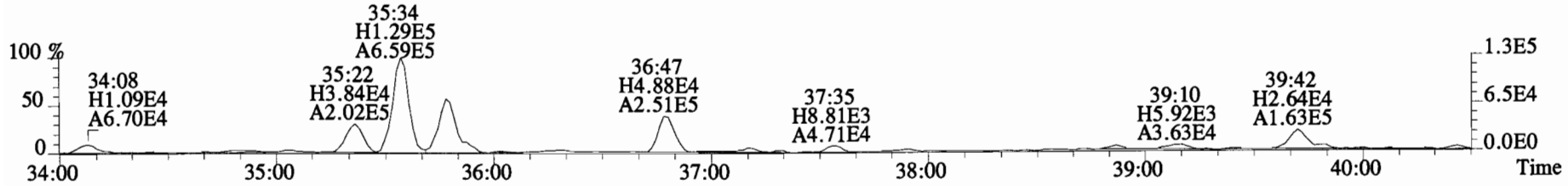
330.9792 S:8 F:3



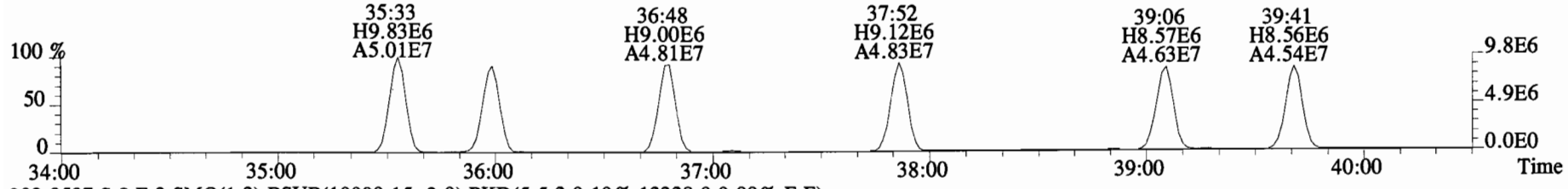
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



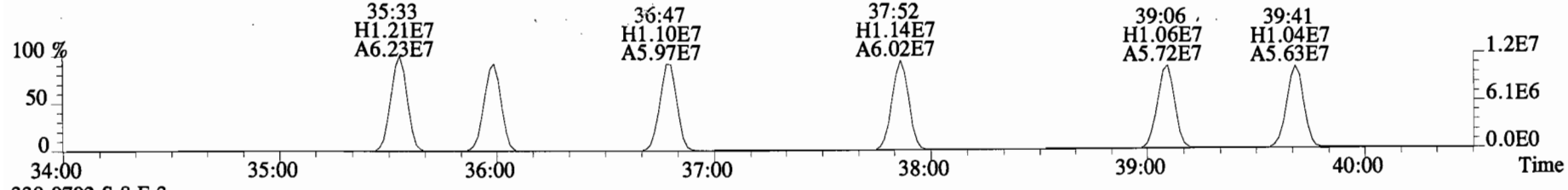
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



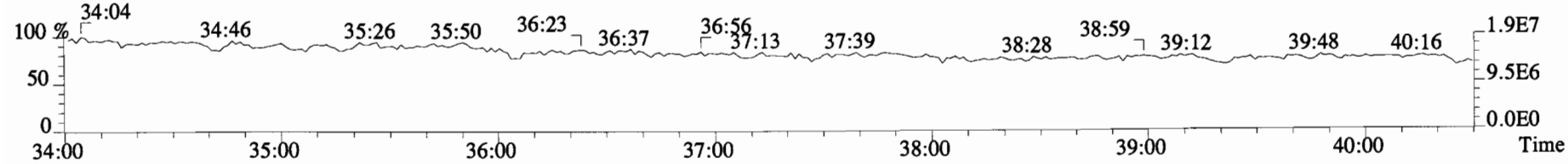
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24000.0,0.00%,F,F)



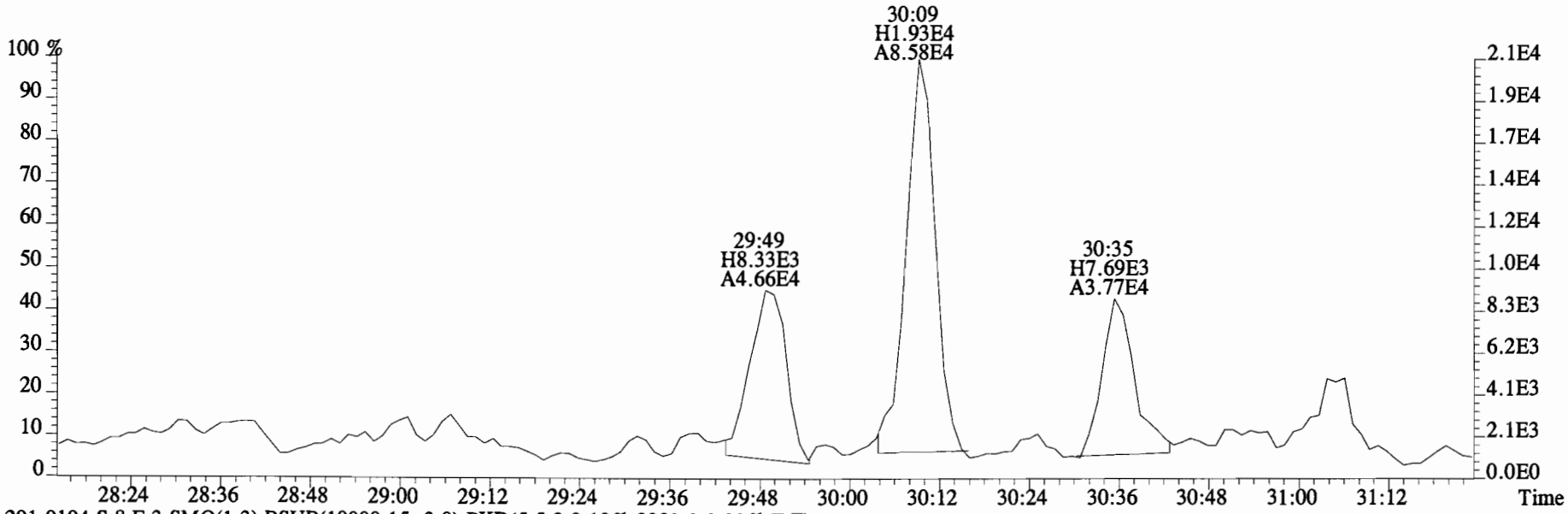
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12328.0,0.00%,F,F)



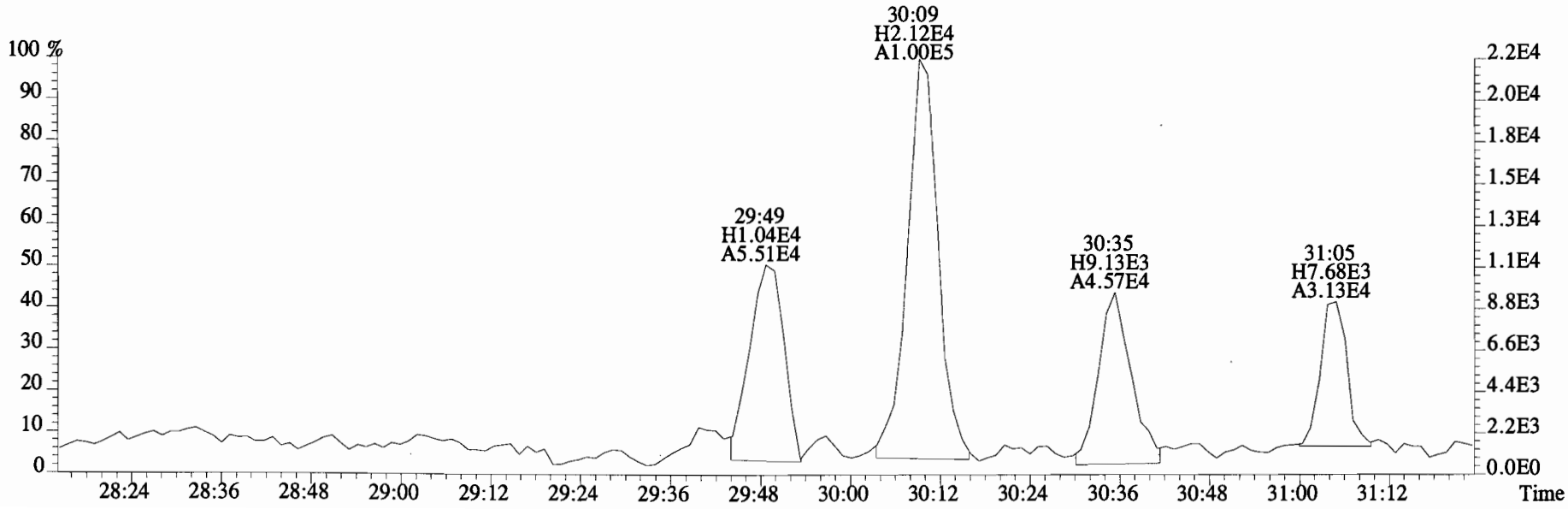
330.9792 S:8 F:3



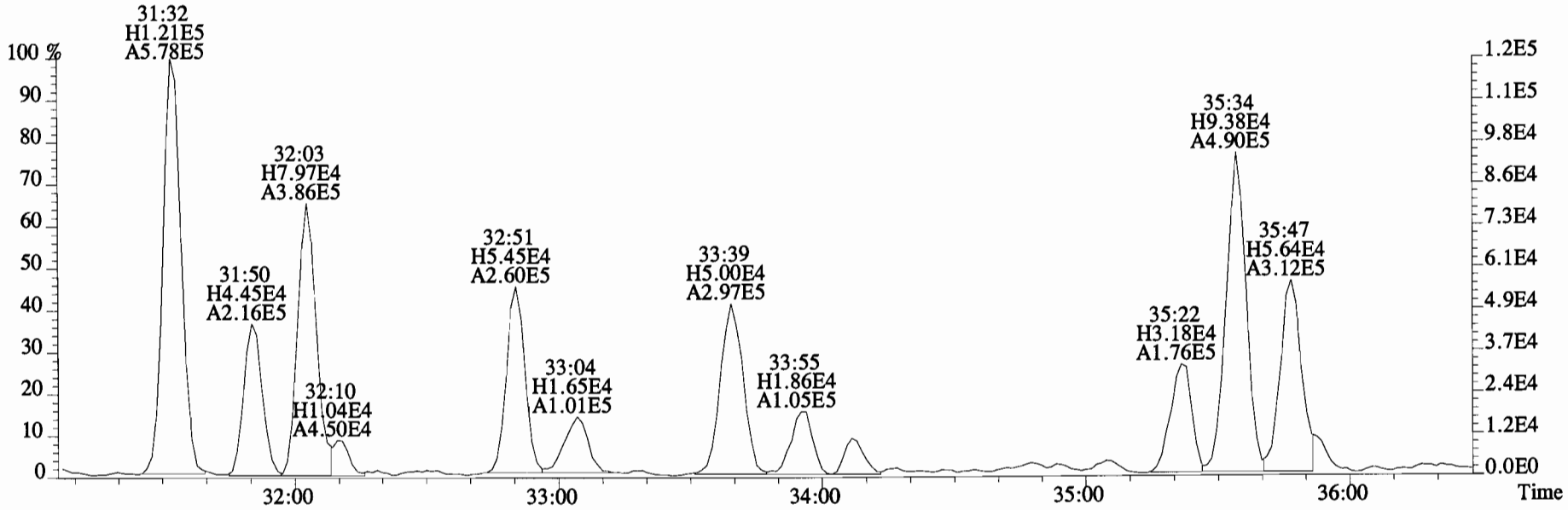
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



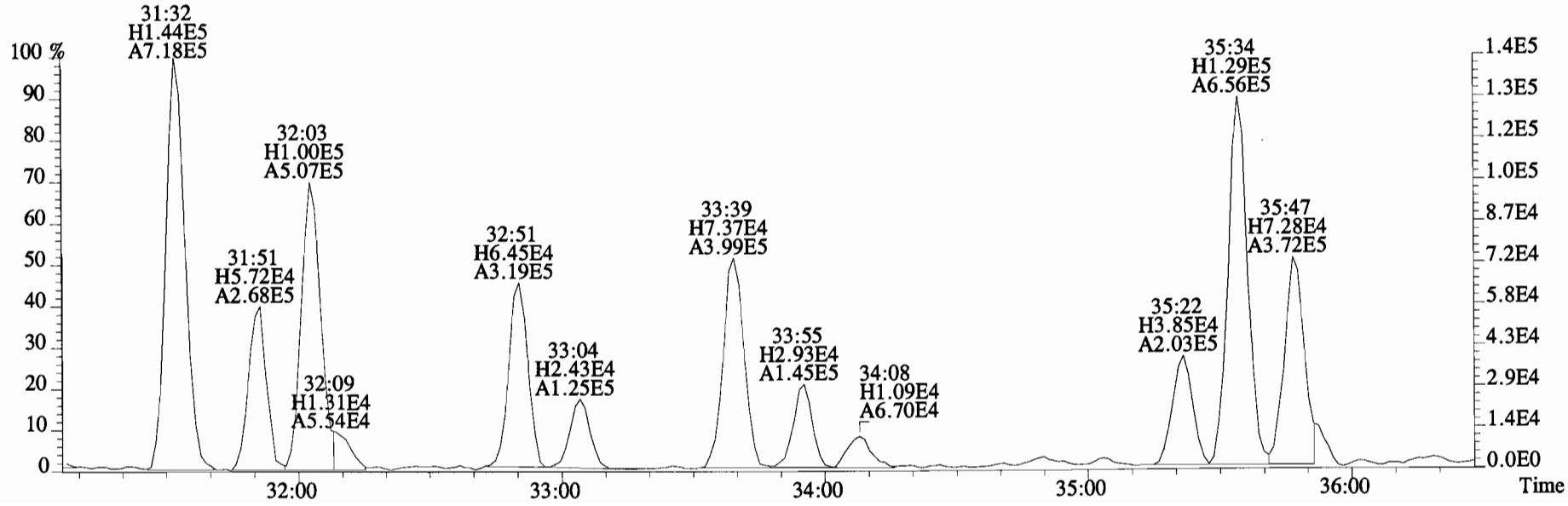
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



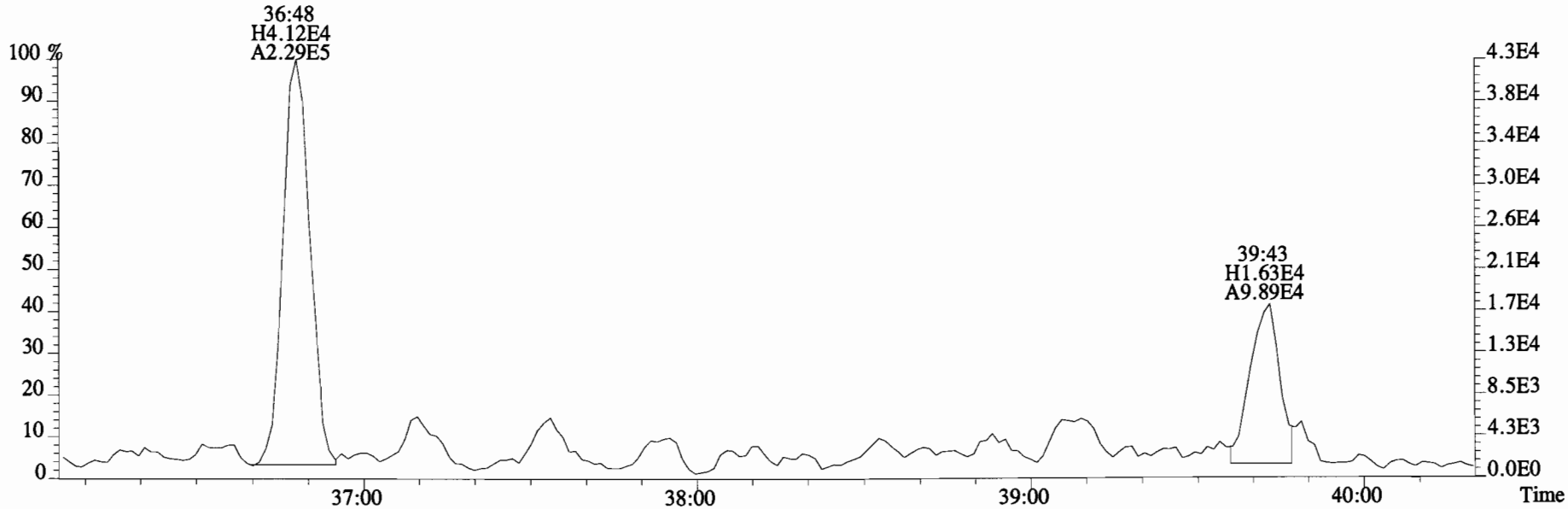
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



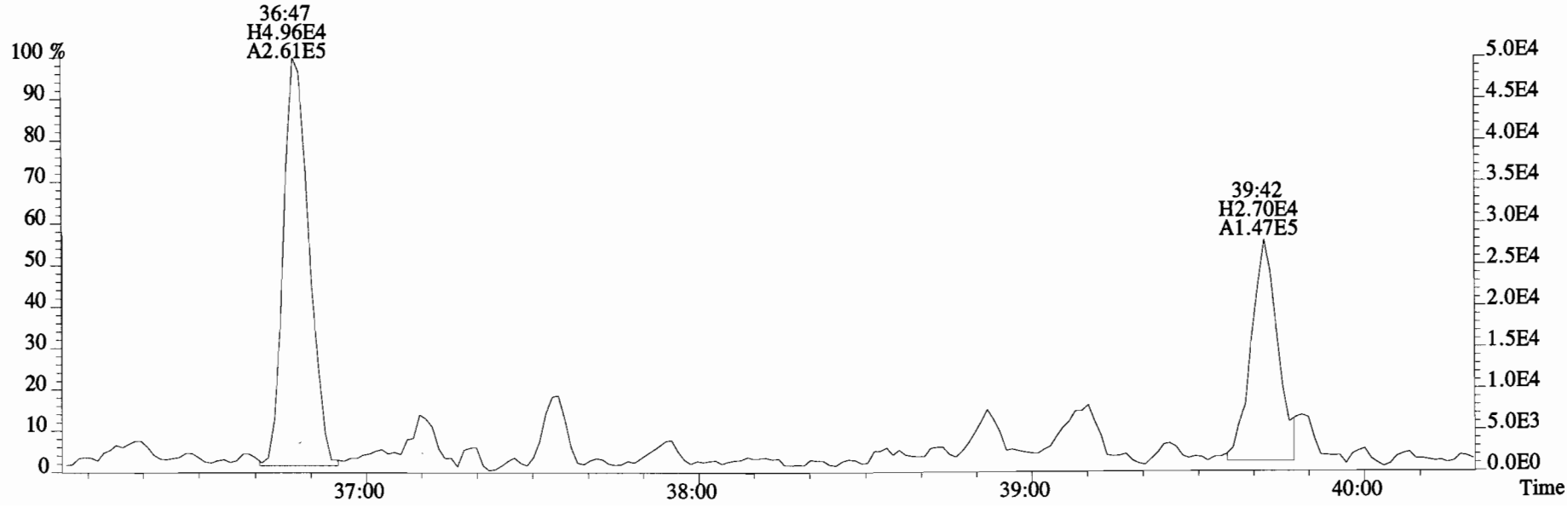
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



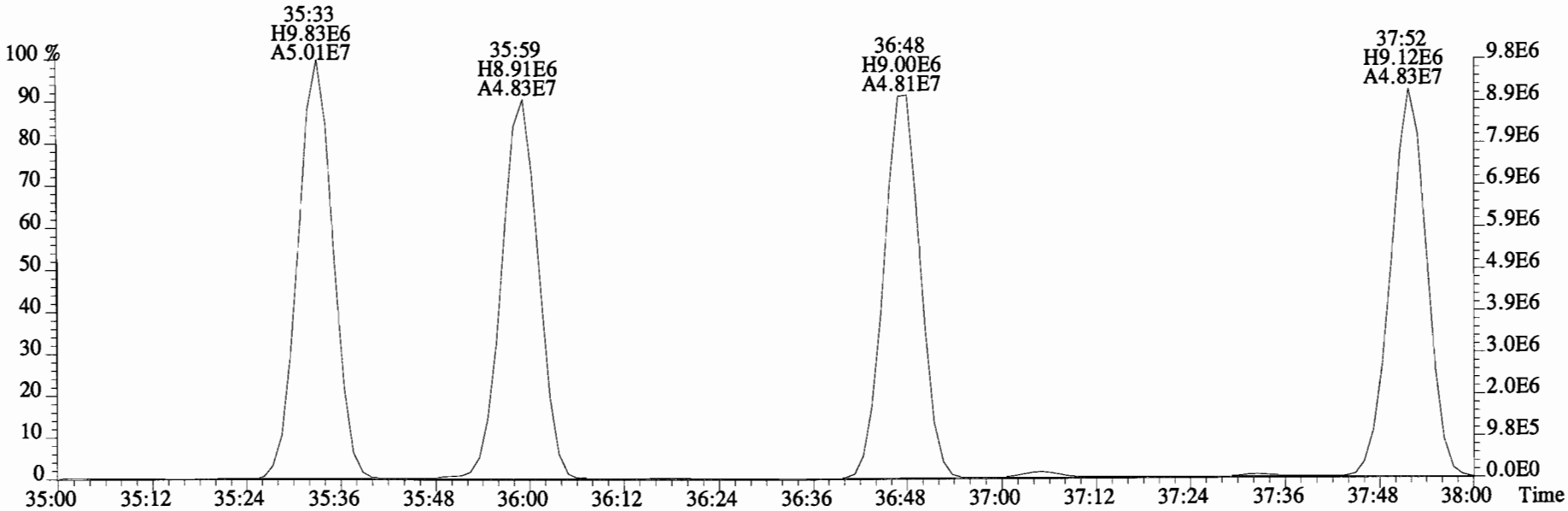
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
289.9224 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2392.0,0.00%,F,F)



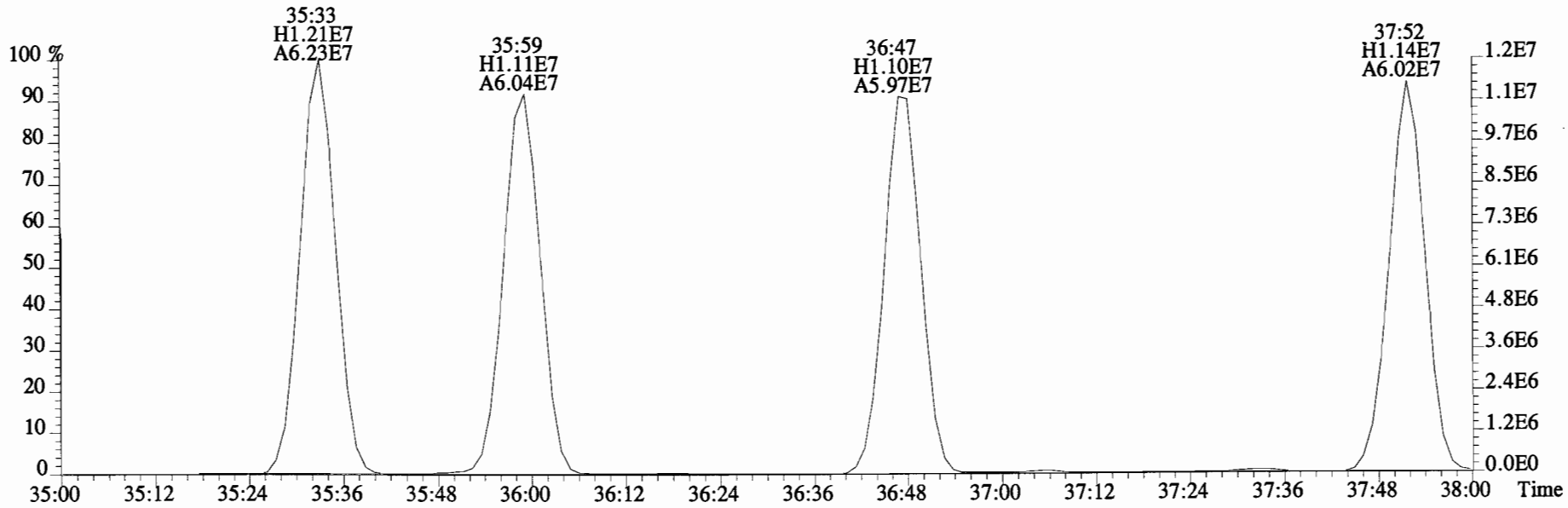
291.9194 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2092.0,0.00%,F,F)



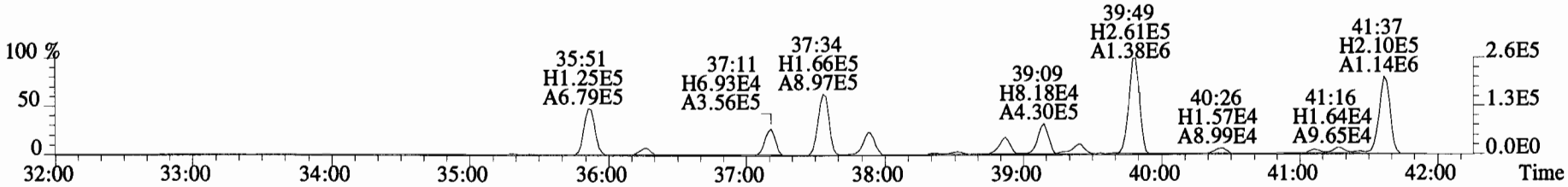
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
301.9626 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,24000.0,0.00%,F,F)



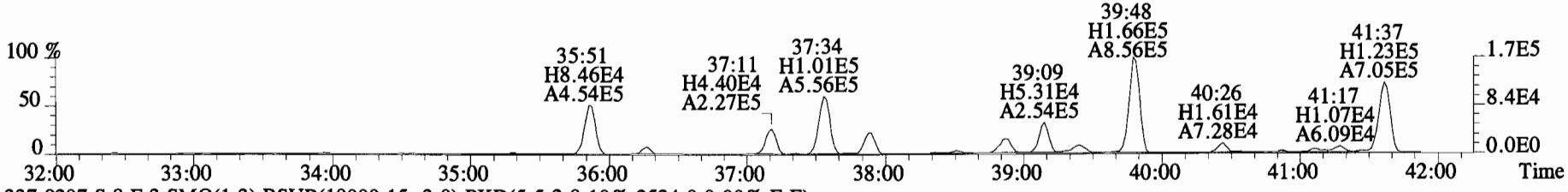
303.9597 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,12328.0,0.00%,F,F)



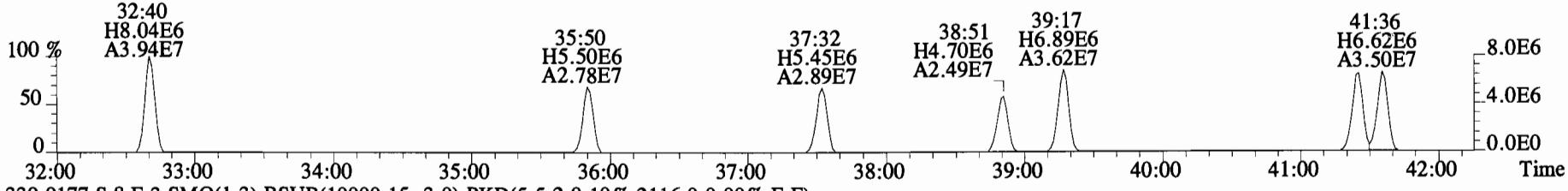
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



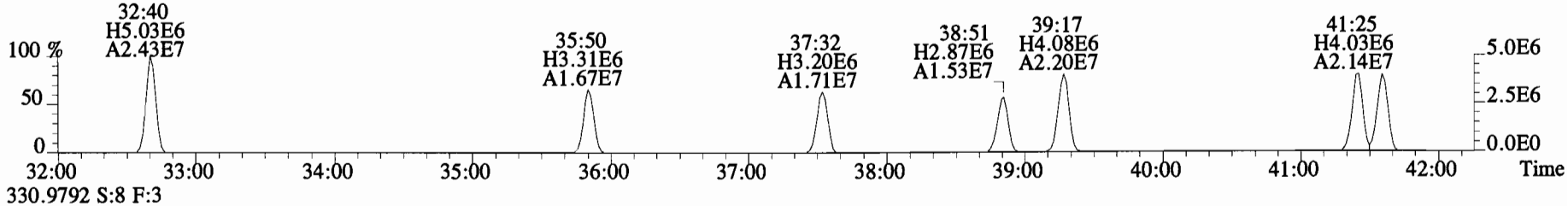
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



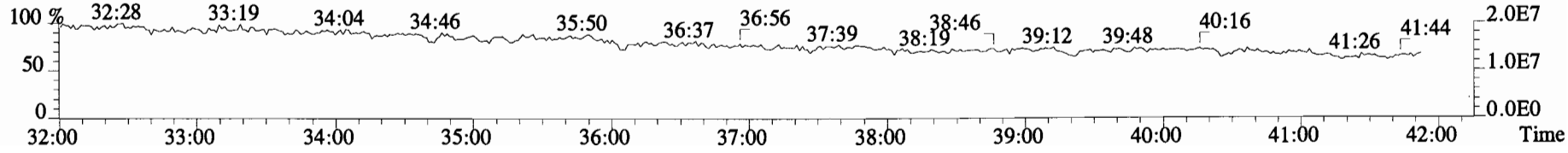
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2524.0,0.00%,F,F)



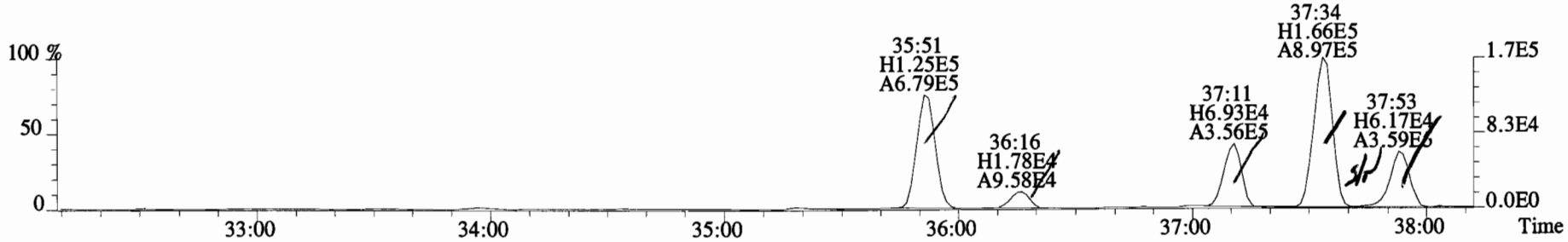
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2116.0,0.00%,F,F)



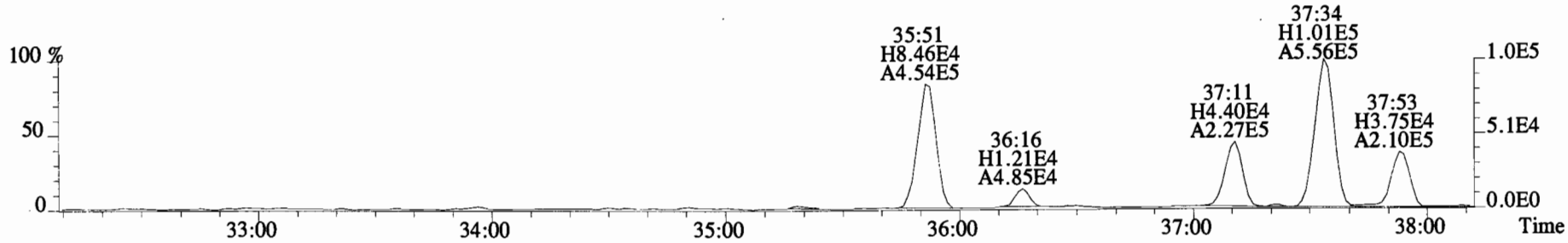
330.9792 S:8 F:3



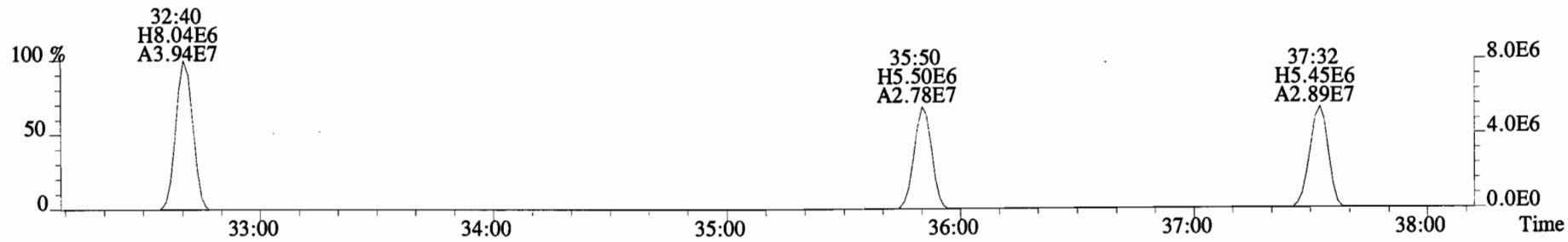
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



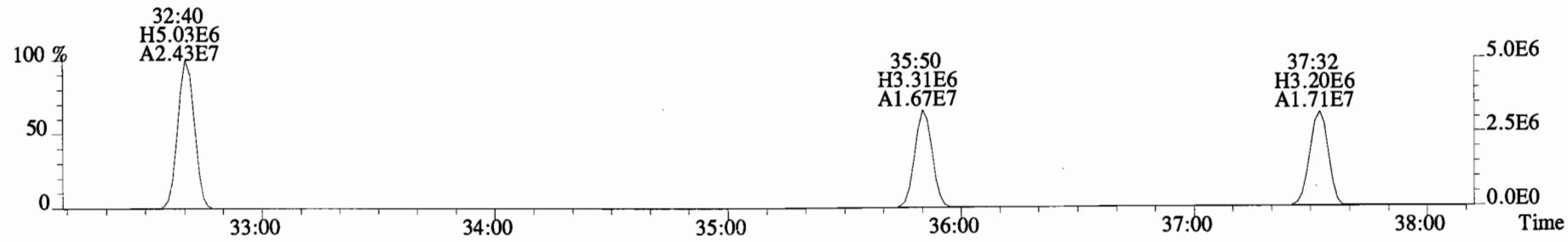
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



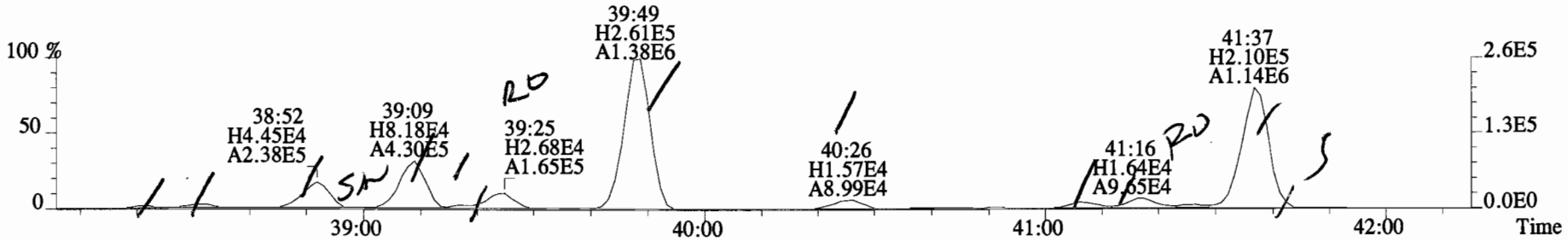
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2524.0,0.00%,F,F)



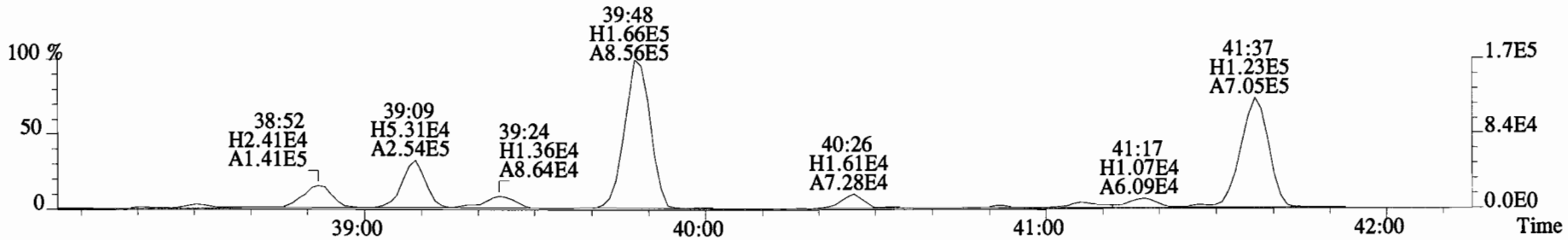
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2116.0,0.00%,F,F)



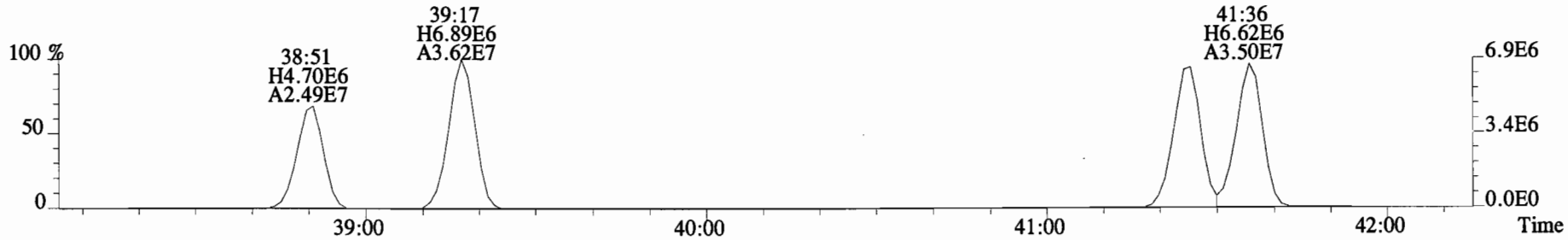
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1708.0,0.00%,F,F)



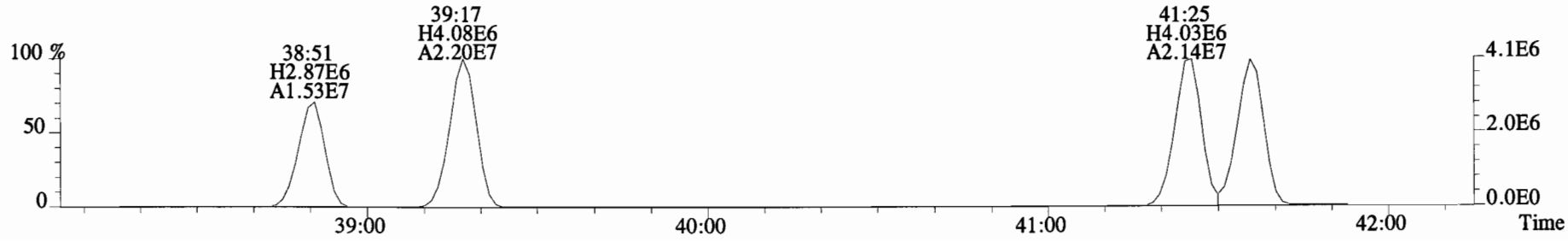
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



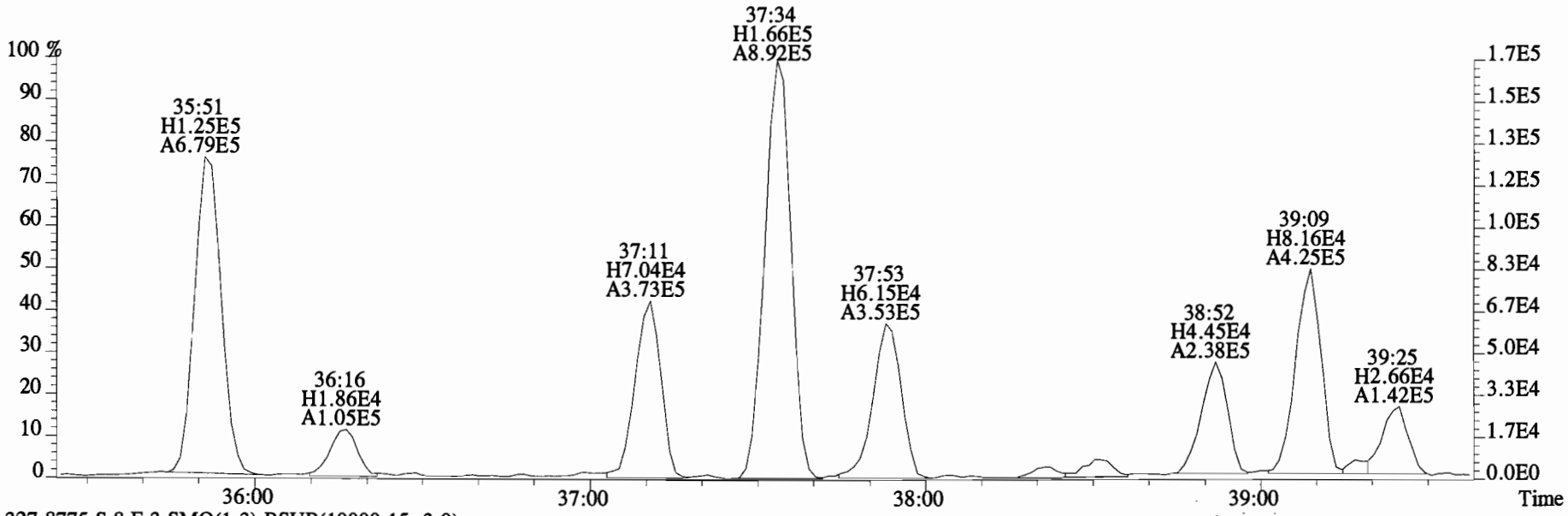
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2524.0,0.00%,F,F)



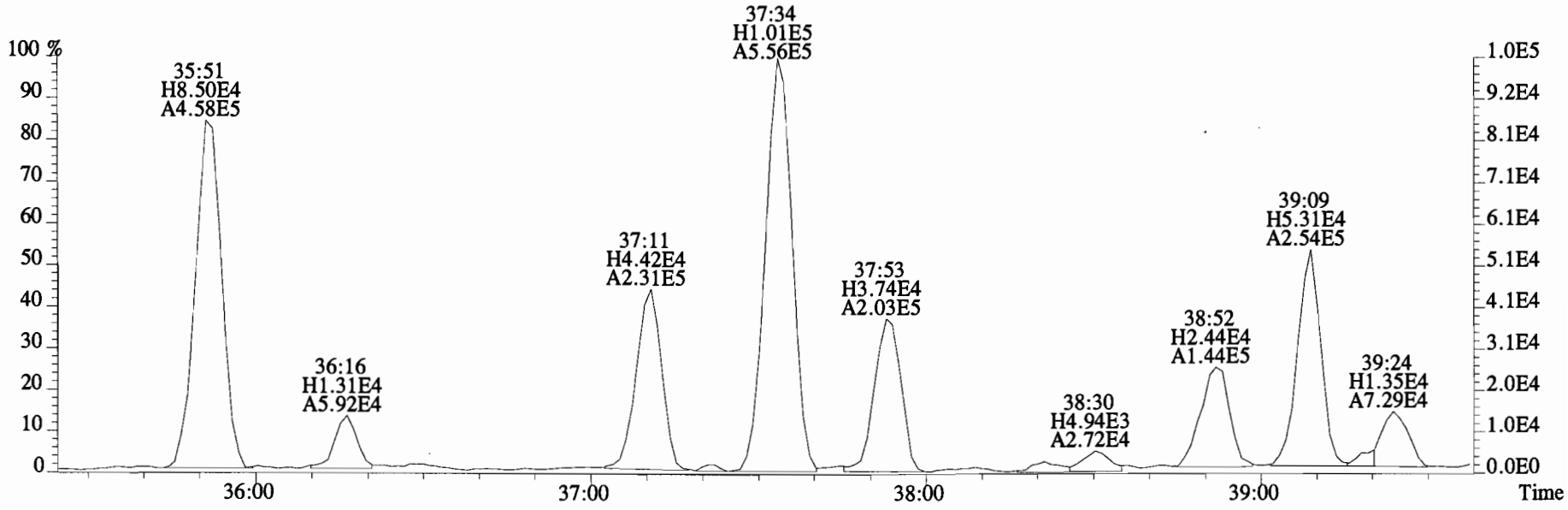
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2116.0,0.00%,F,F)



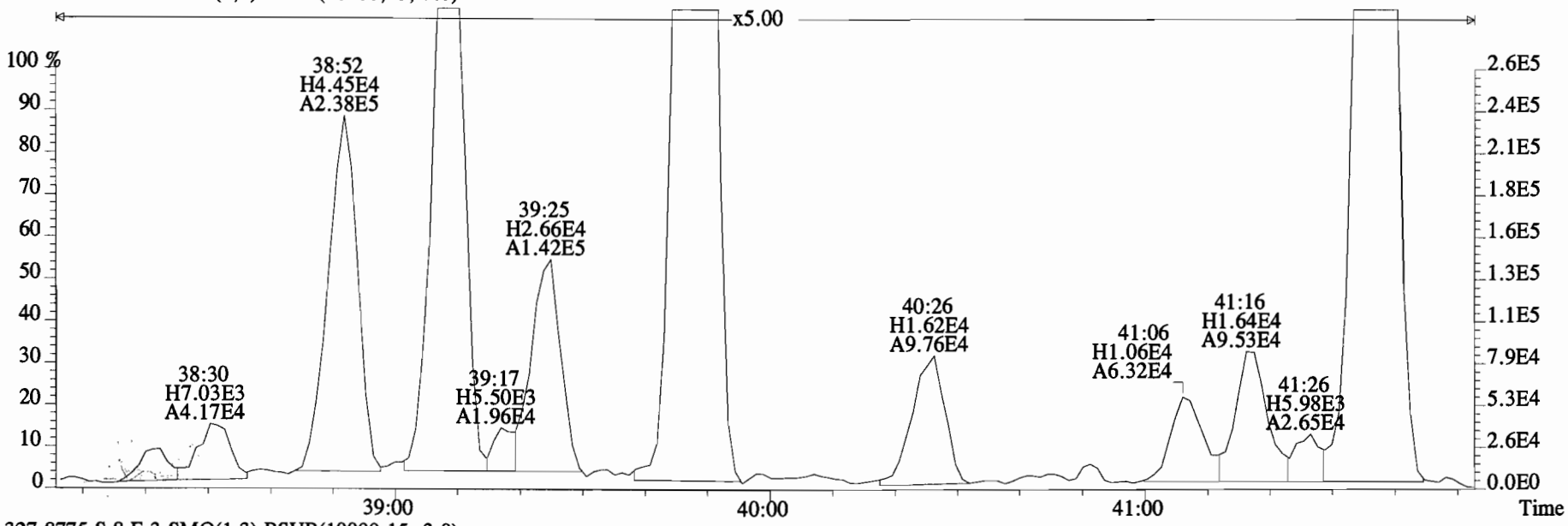
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



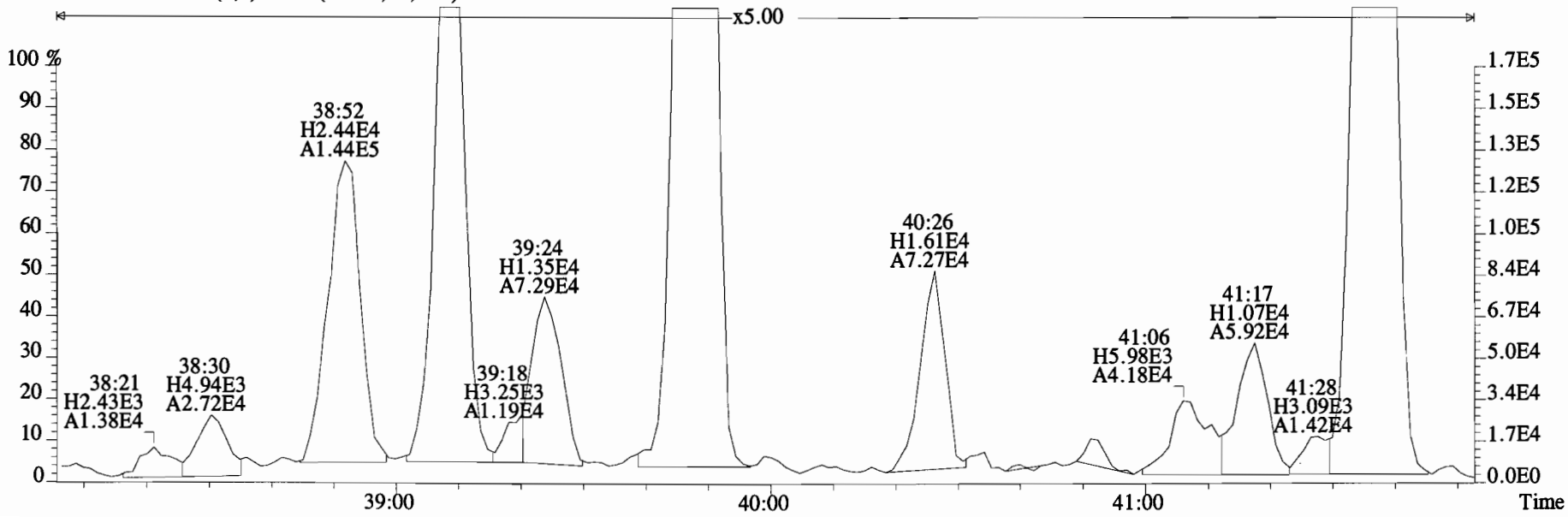
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



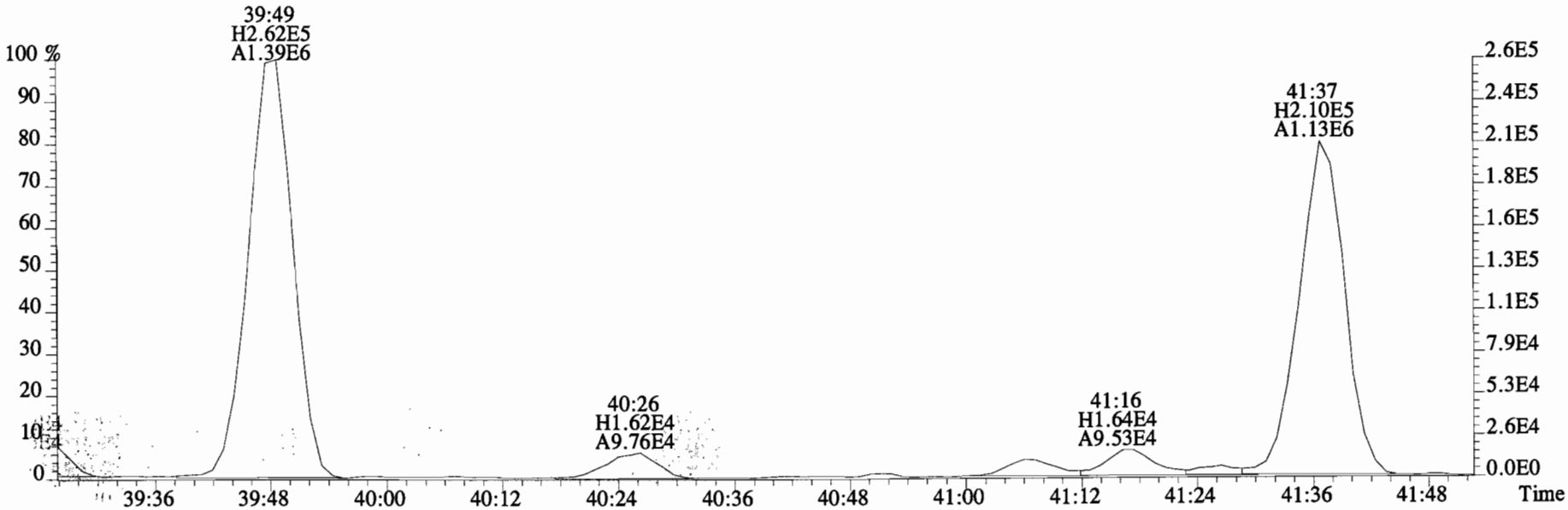
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



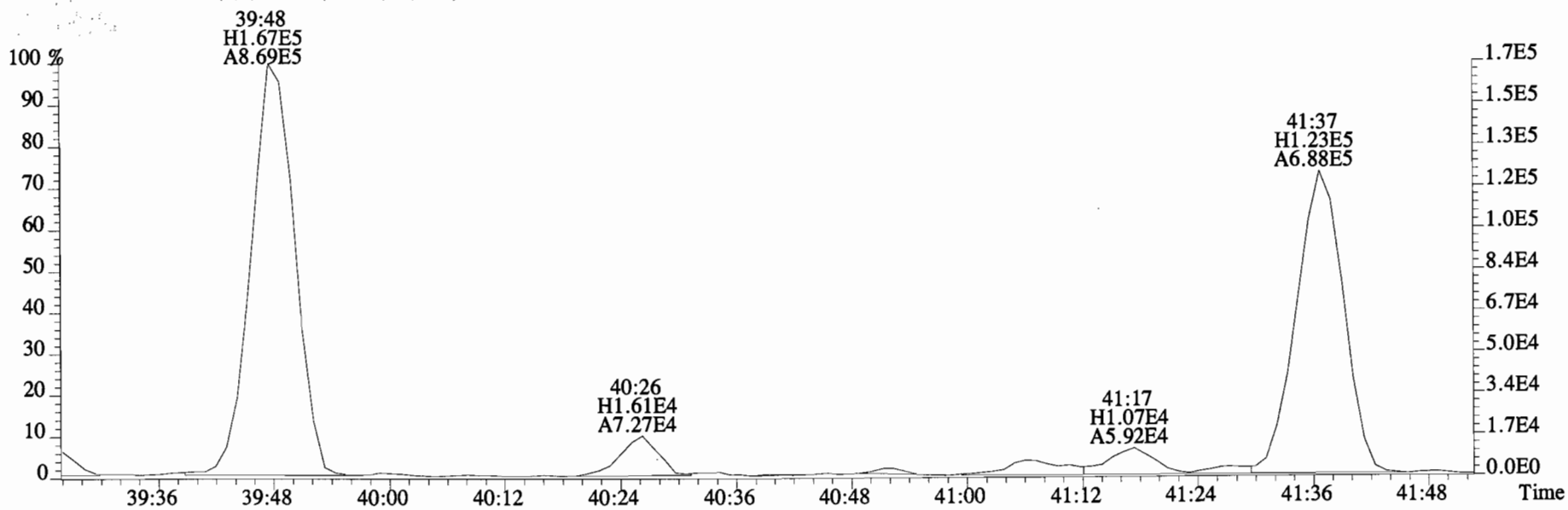
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



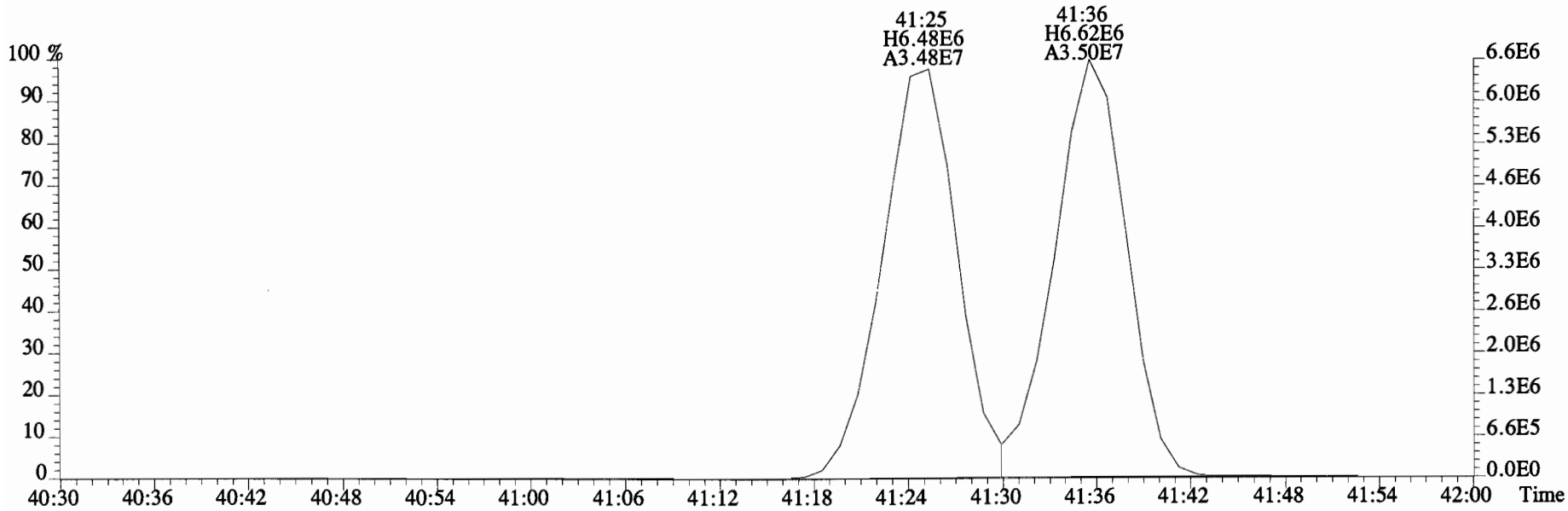
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



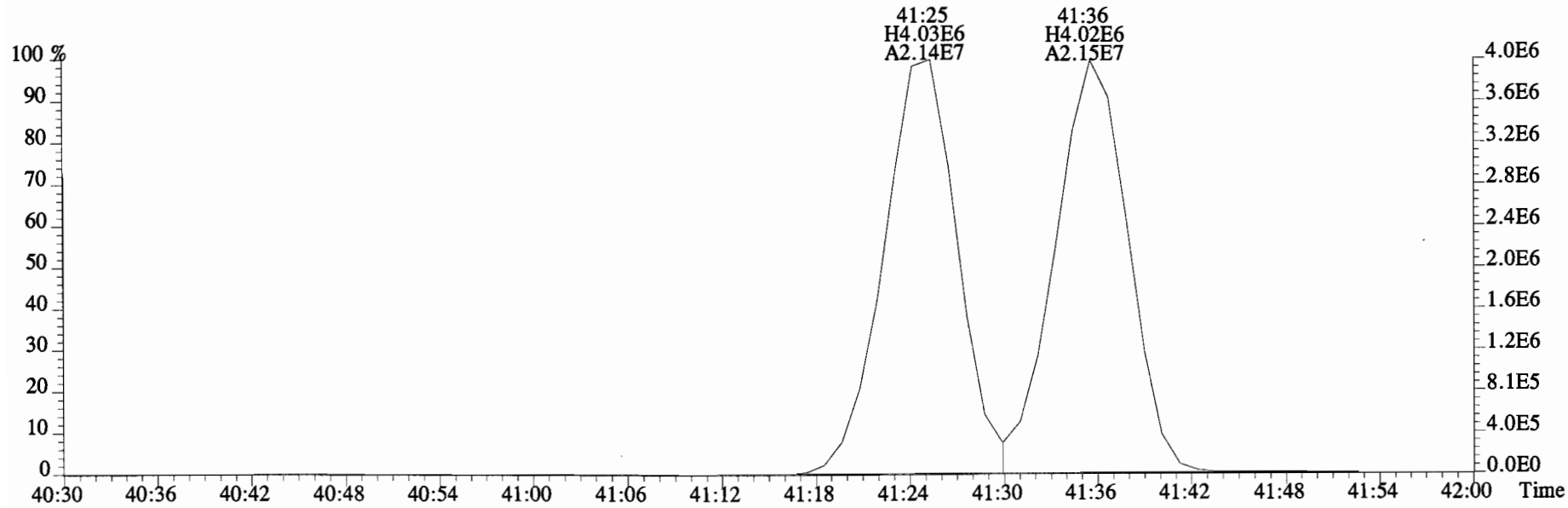
327.8775 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0)



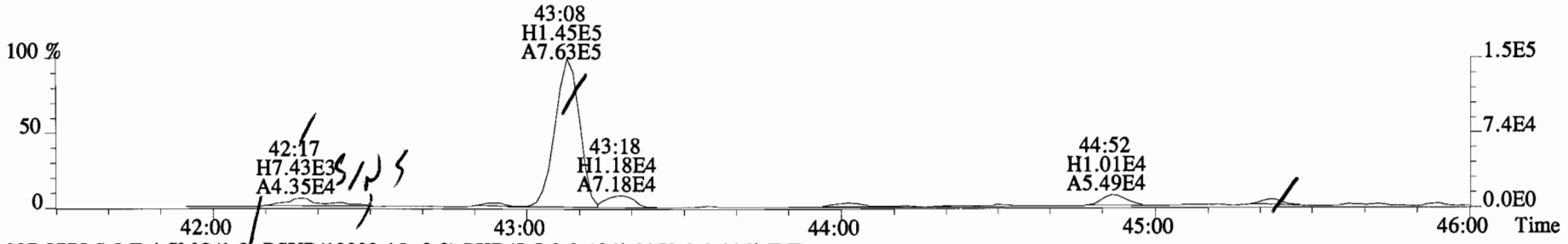
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
337.9207 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2524.0,0.00%,F,F)



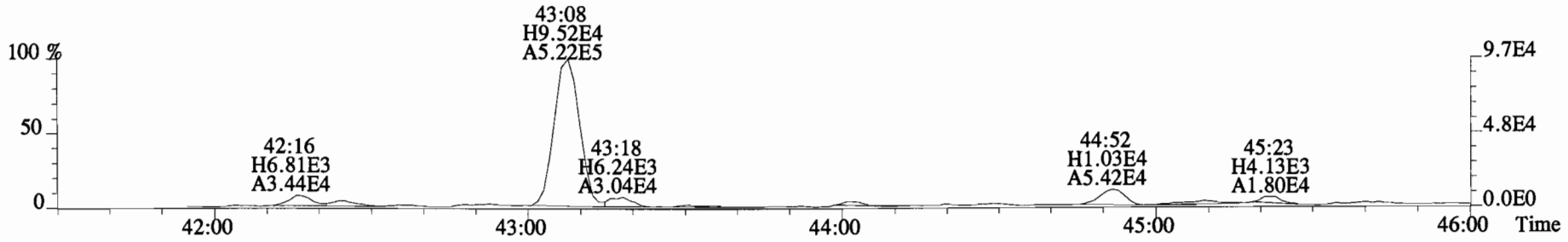
339.9177 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2116.0,0.00%,F,F)



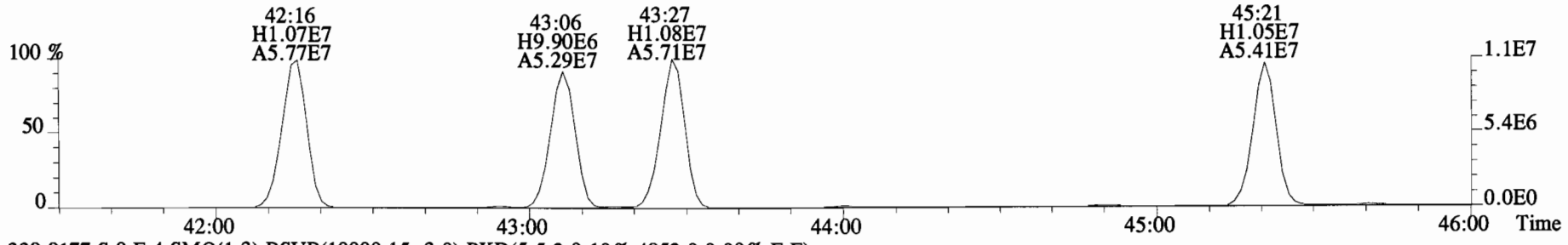
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2804.0,0.00%,F,F)



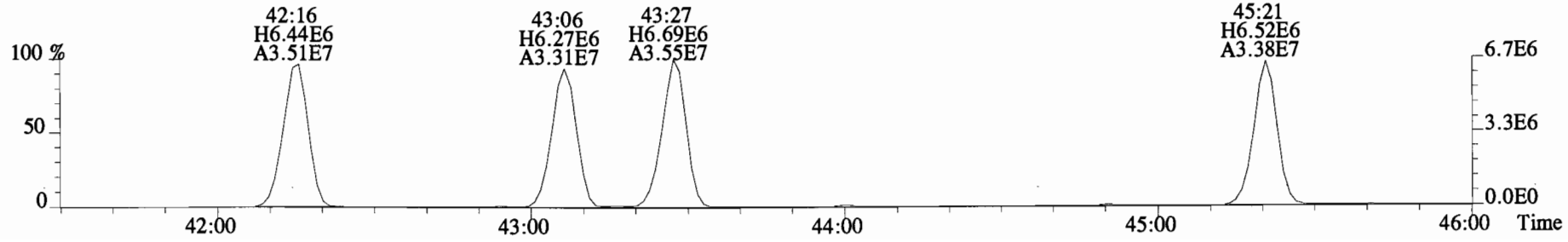
327.8775 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2352.0,0.00%,F,F)



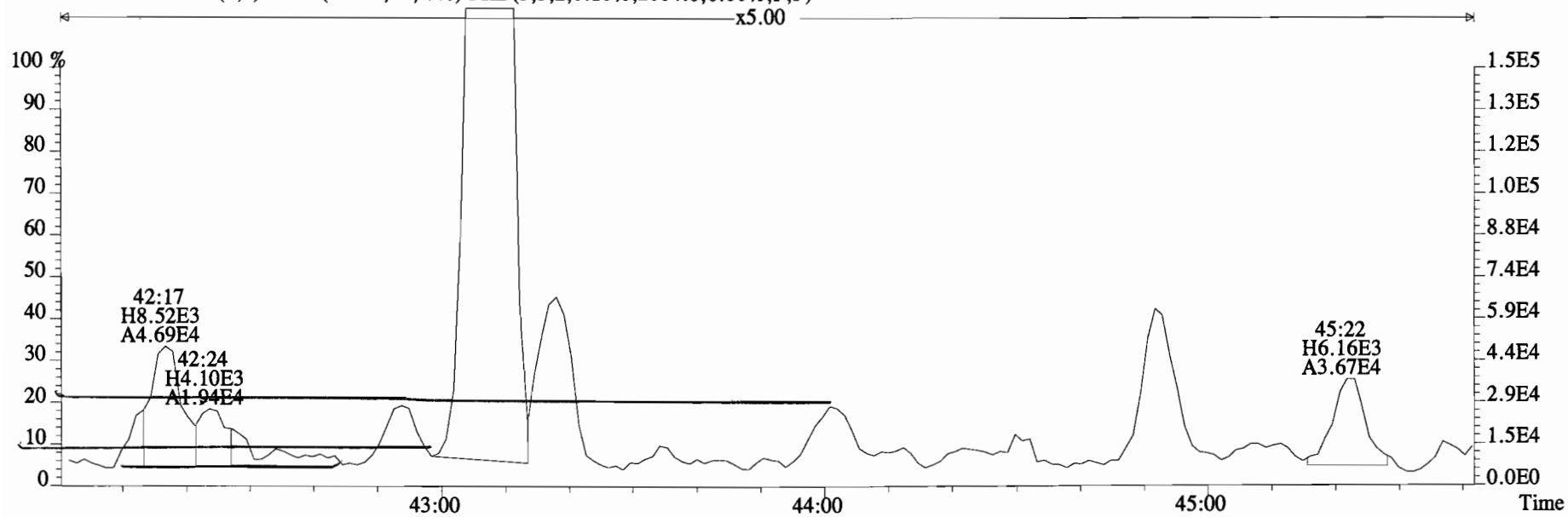
337.9207 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5420.0,0.00%,F,F)



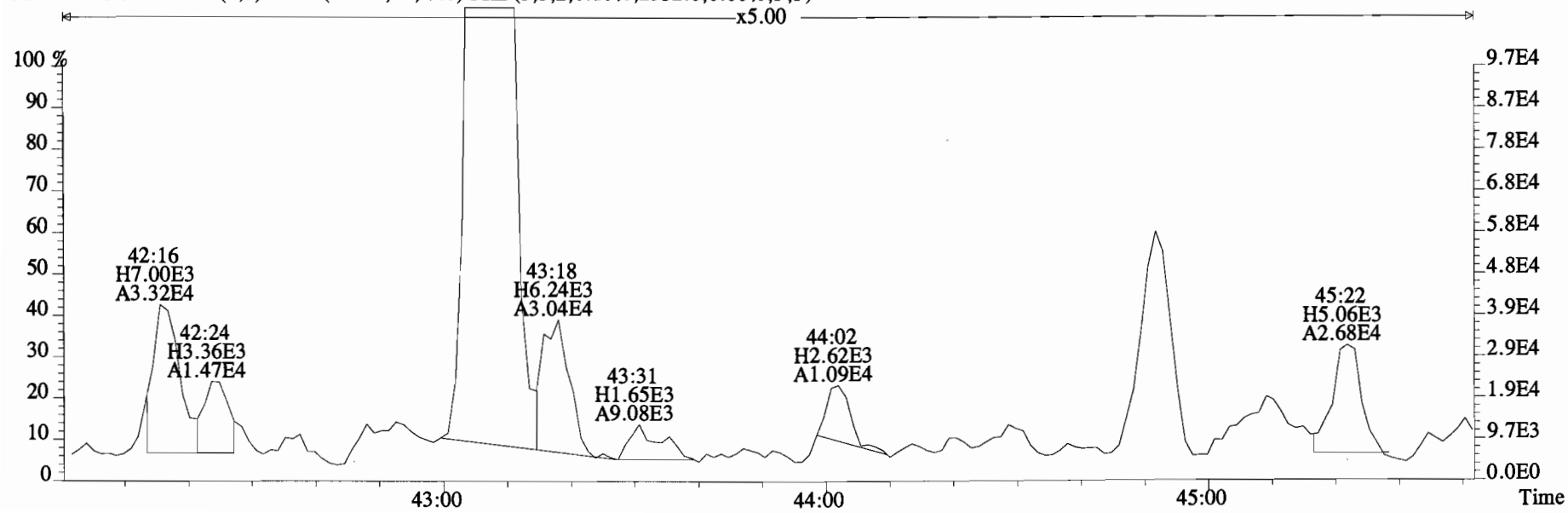
339.9177 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,4852.0,0.00%,F,F)



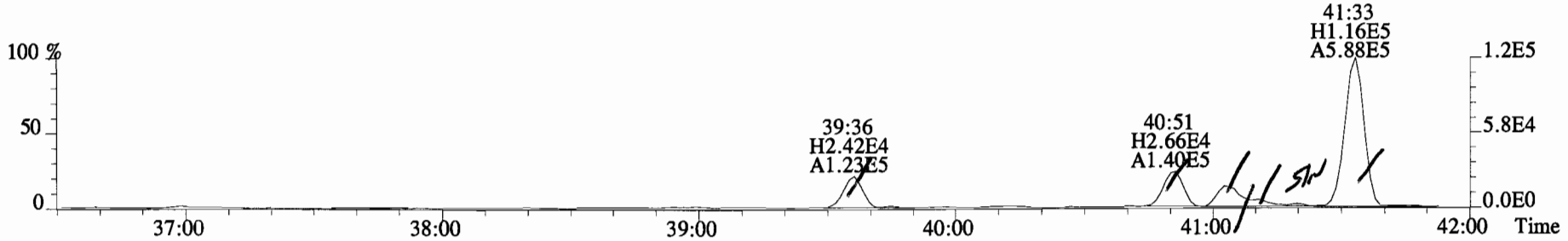
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
325.8804 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2804.0,0.00%,F,F)



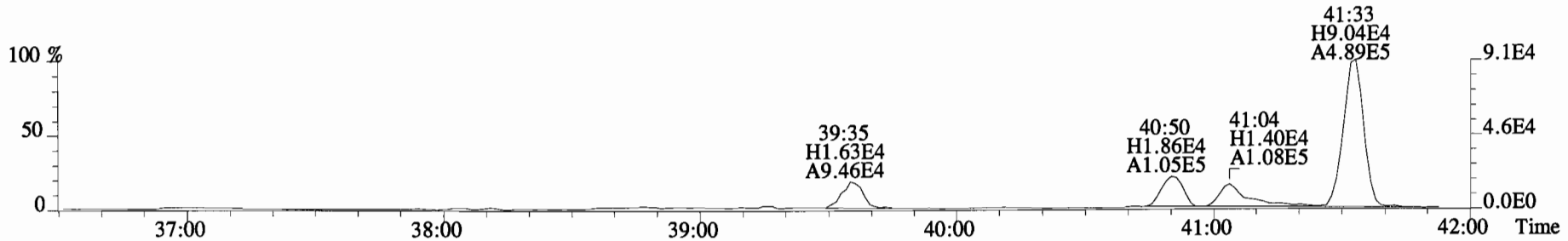
327.8775 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2352.0,0.00%,F,F)



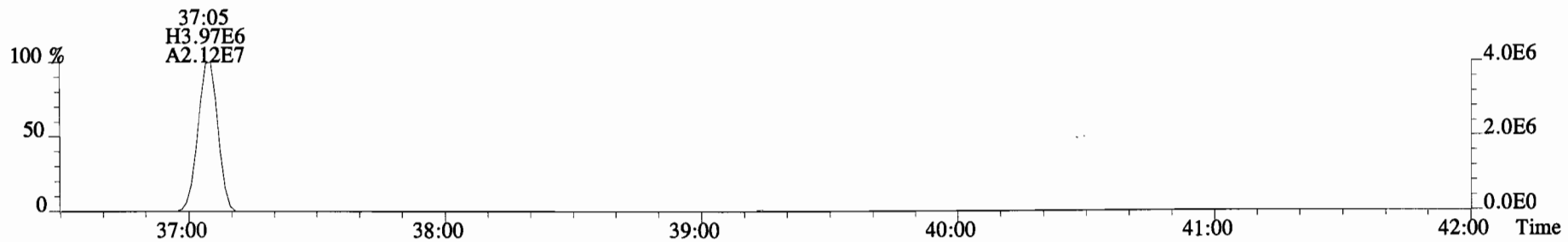
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)



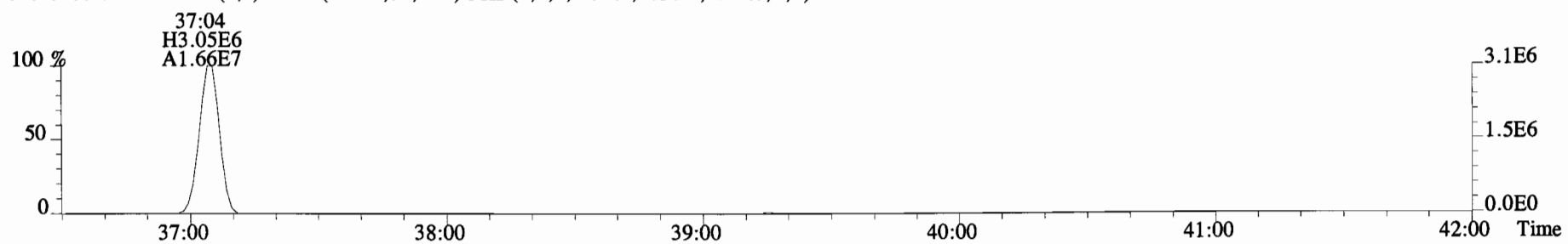
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1488.0,0.00%,F,F)



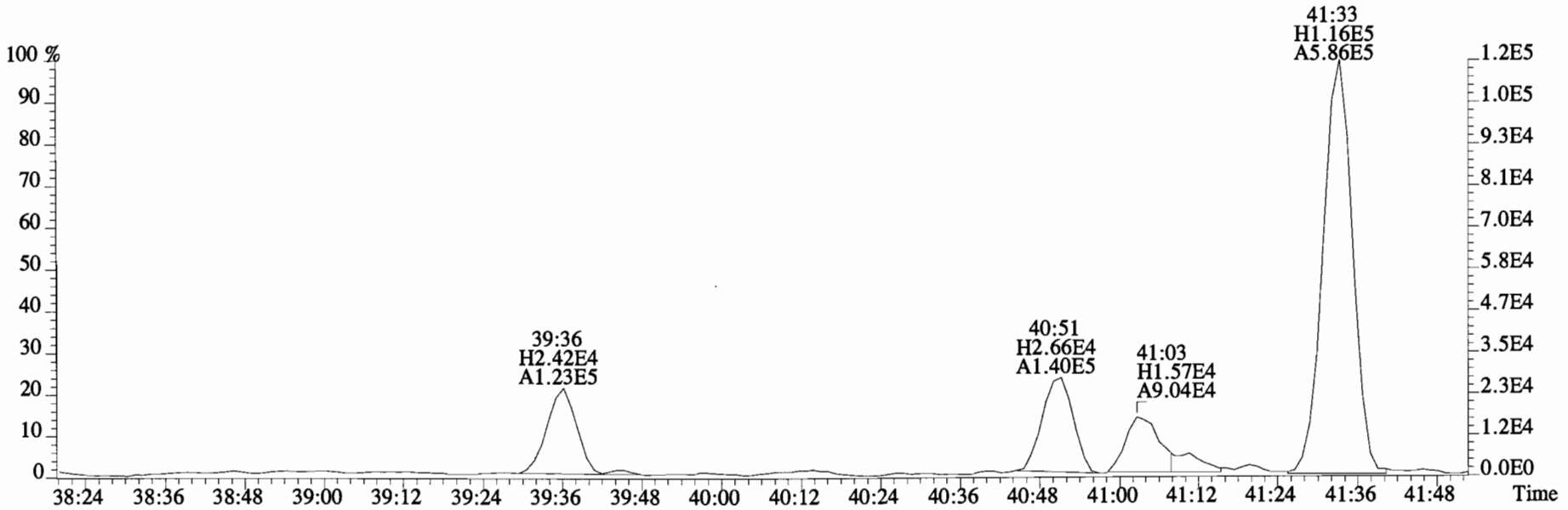
371.8817 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1616.0,0.00%,F,F)



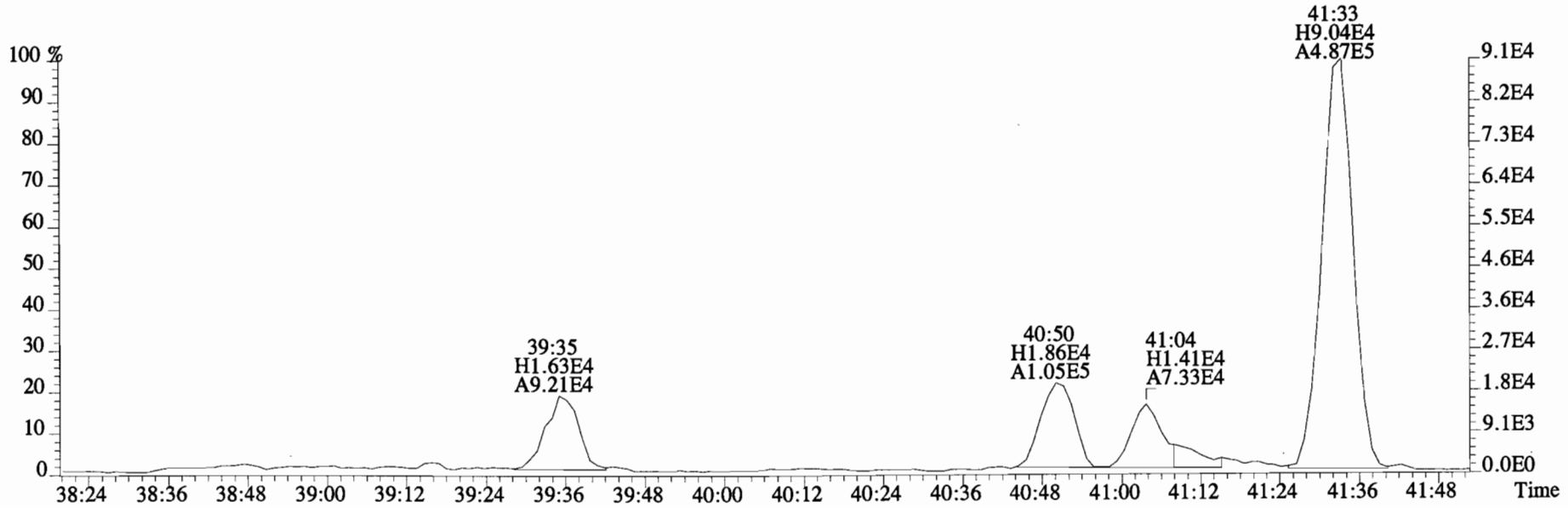
373.8788 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1656.0,0.00%,F,F)



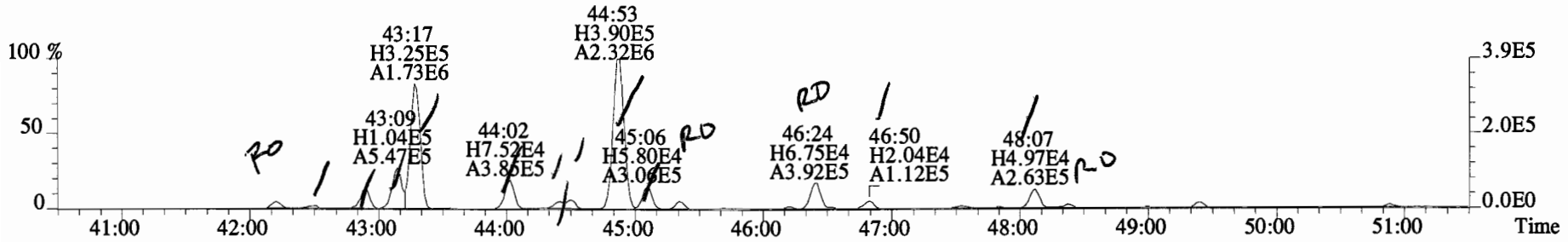
File:150319E2 #1-758 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)



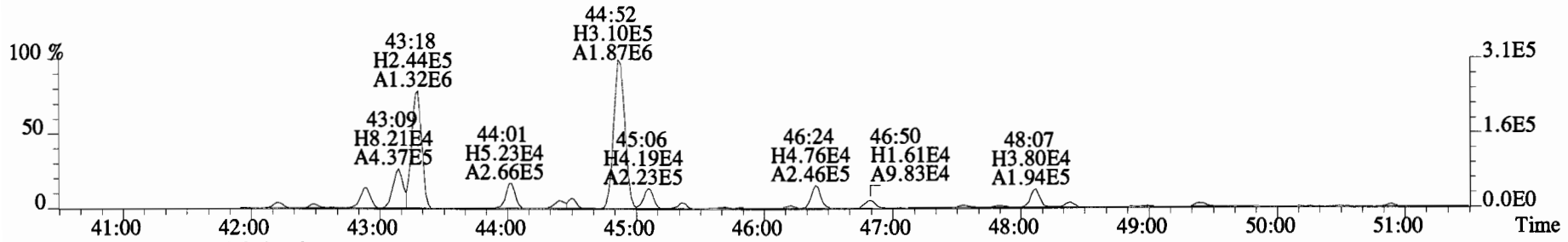
361.8385 S:8 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1488.0,0.00%,F,F)



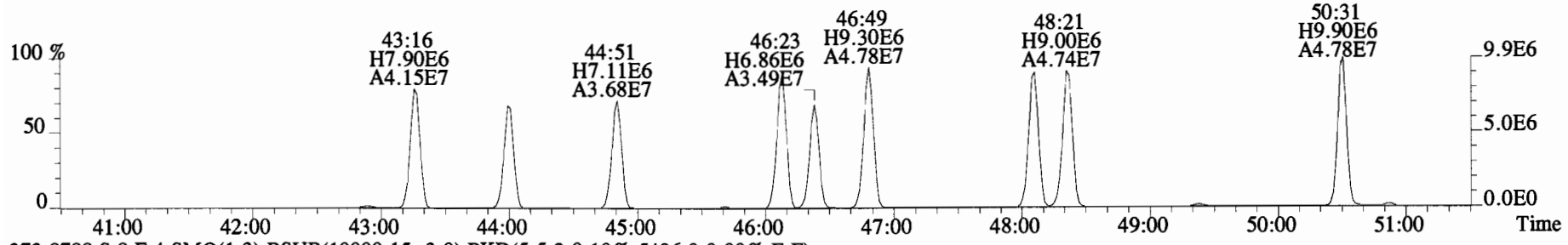
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2108.0,0.00%,F,F)



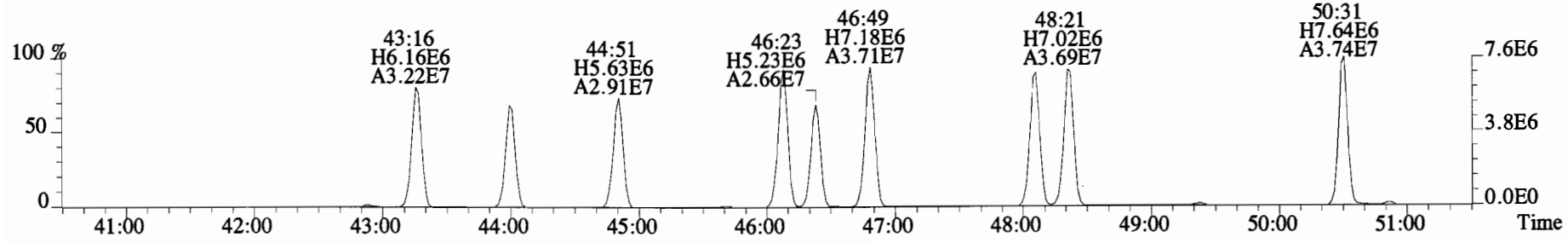
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



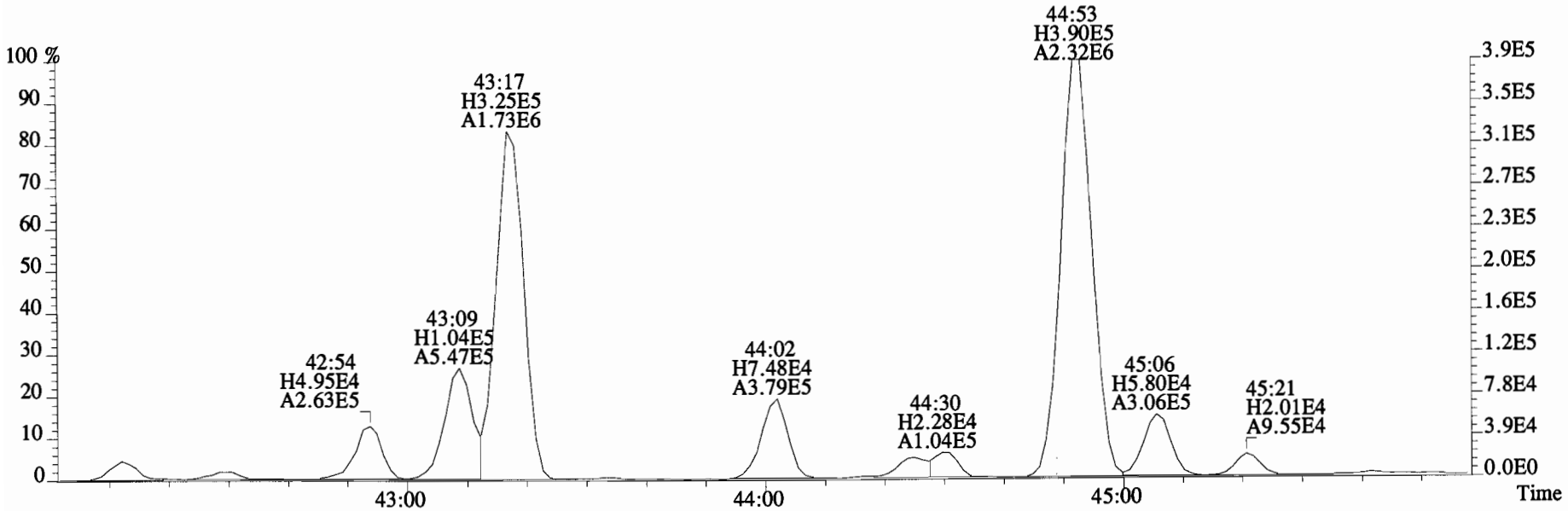
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5904.0,0.00%,F,F)



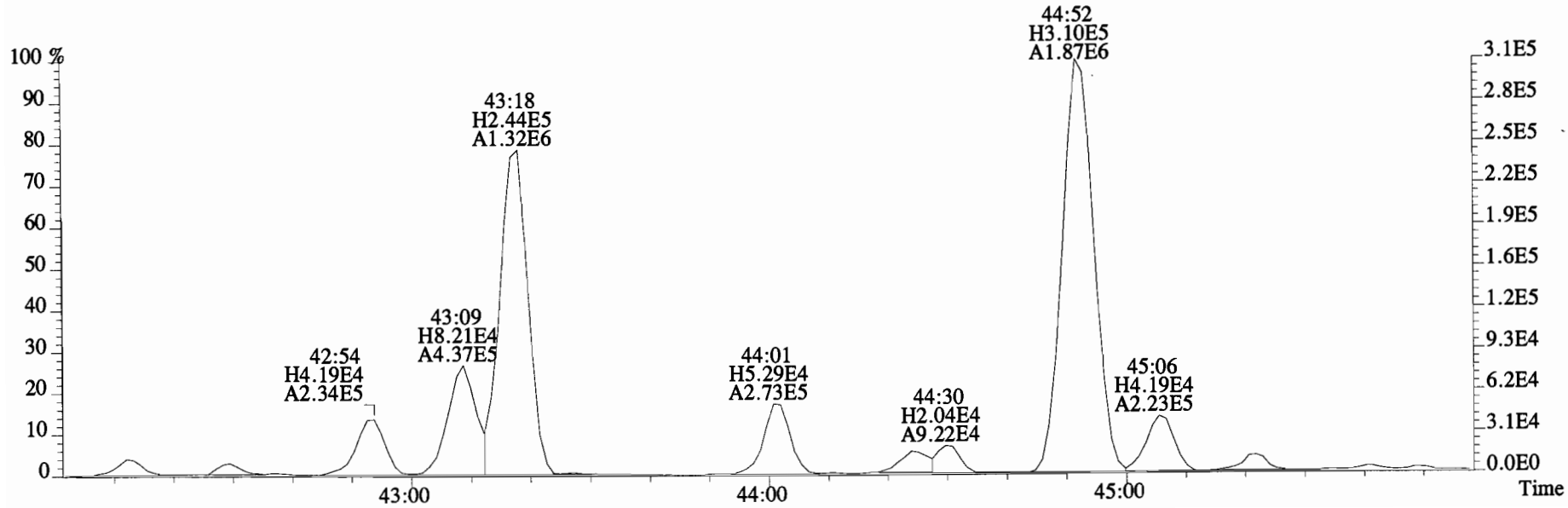
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5496.0,0.00%,F,F)



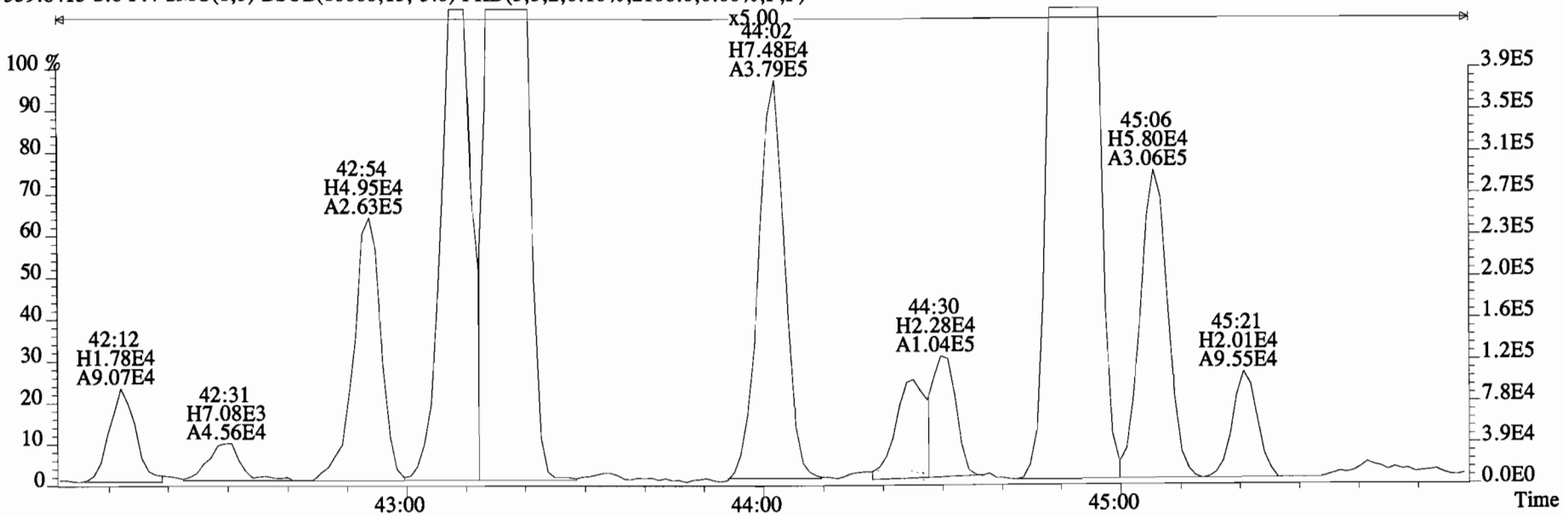
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2108.0,0.00%,F,F)



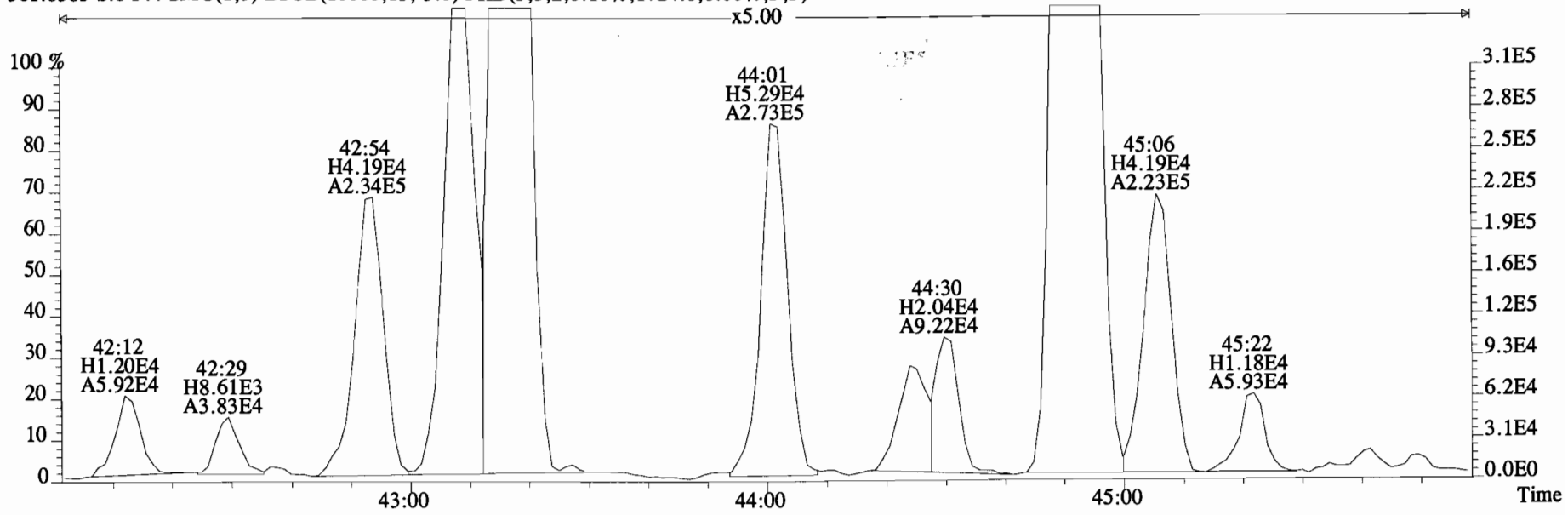
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



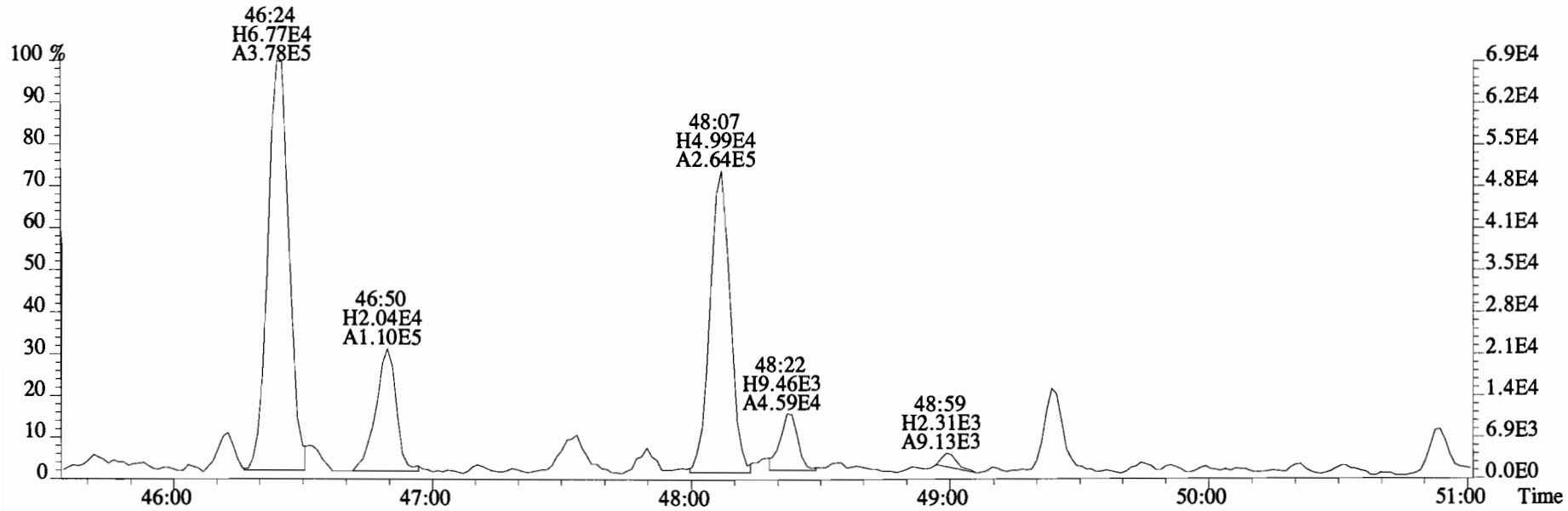
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2108.0,0.00%,F,F)



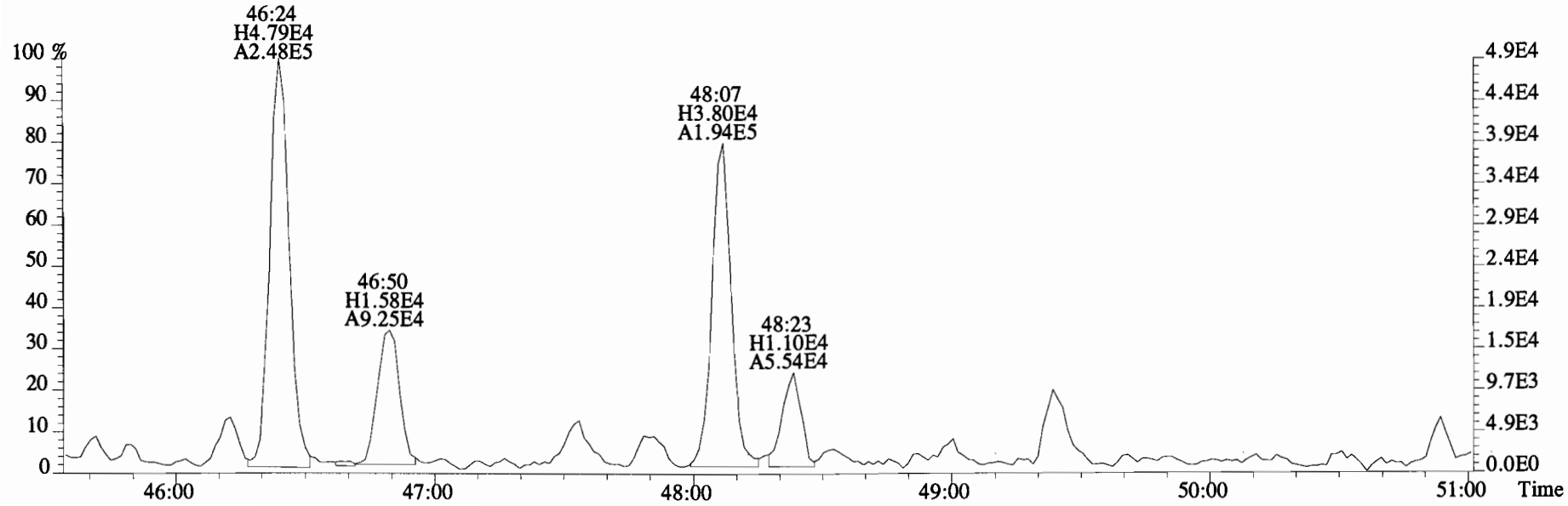
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



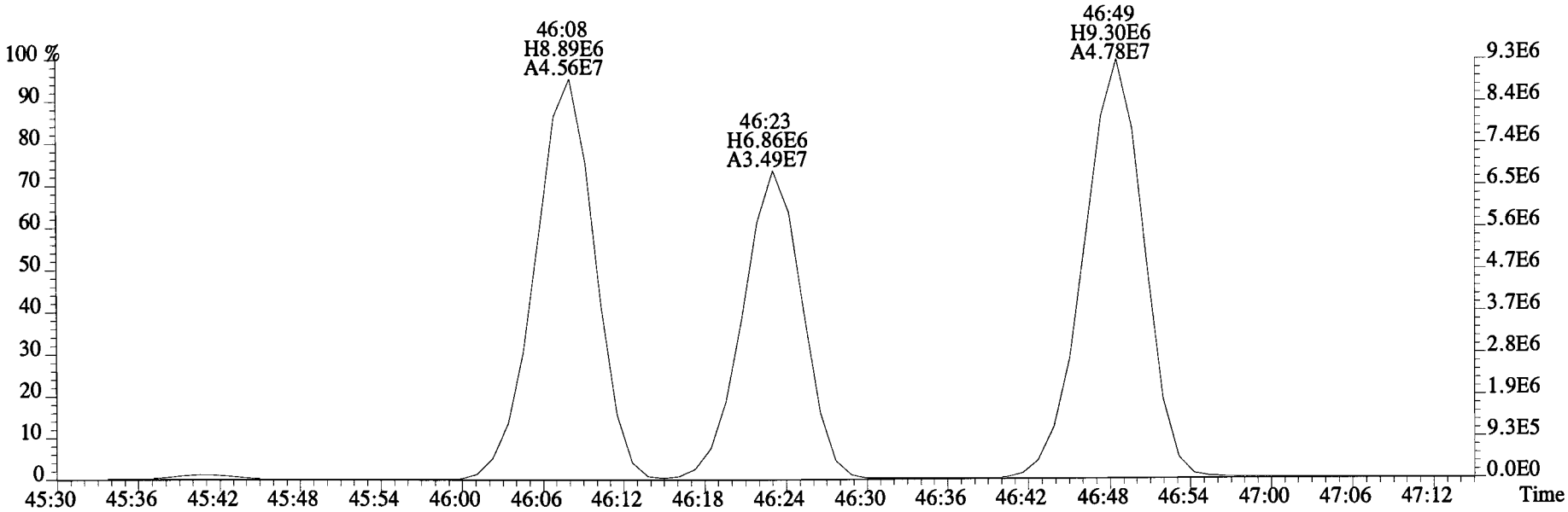
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
359.8415 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2108.0,0.00%,F,F)



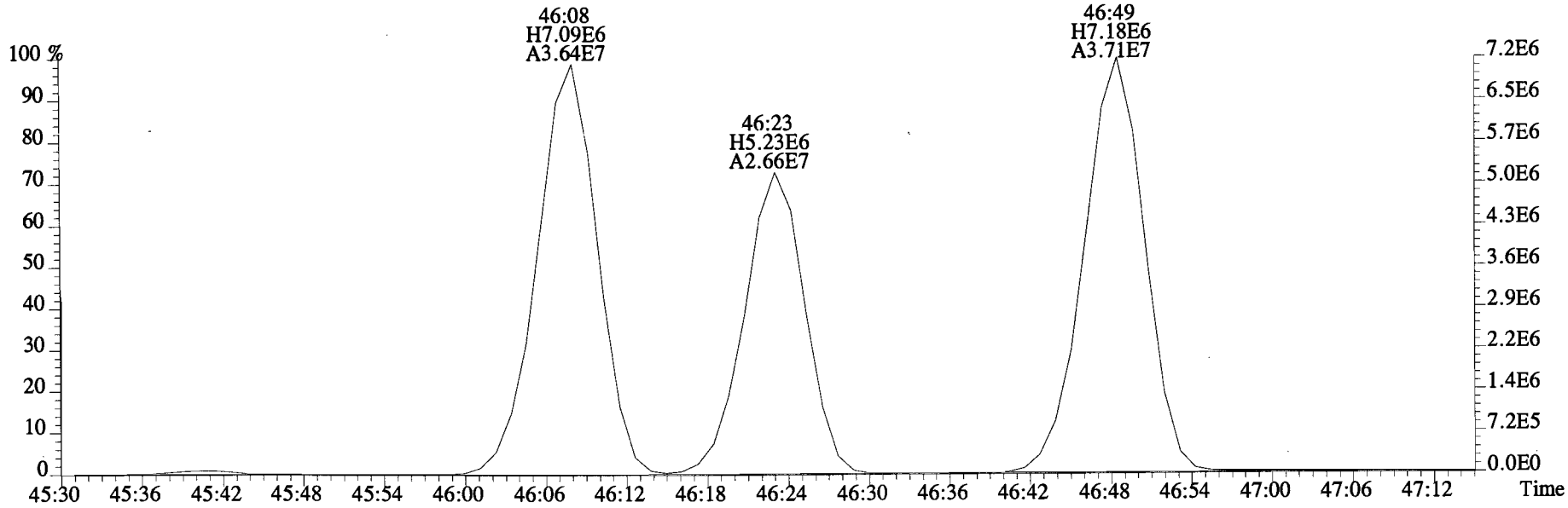
361.8385 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1724.0,0.00%,F,F)



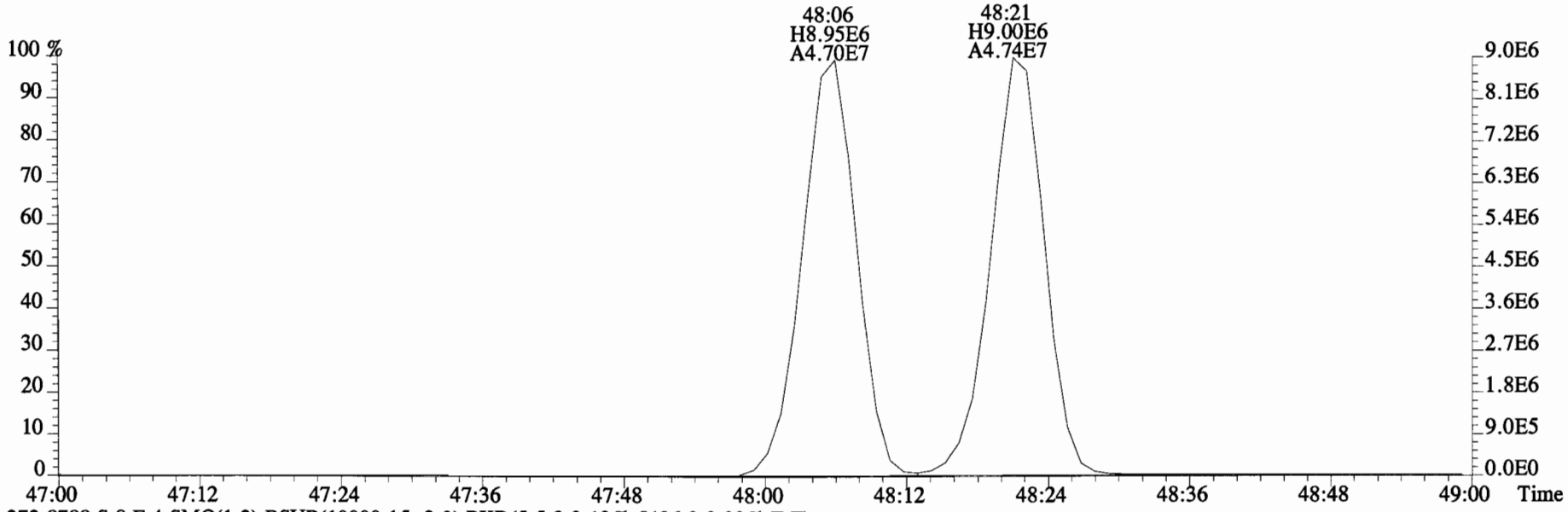
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5904.0,0.00%,F,F)



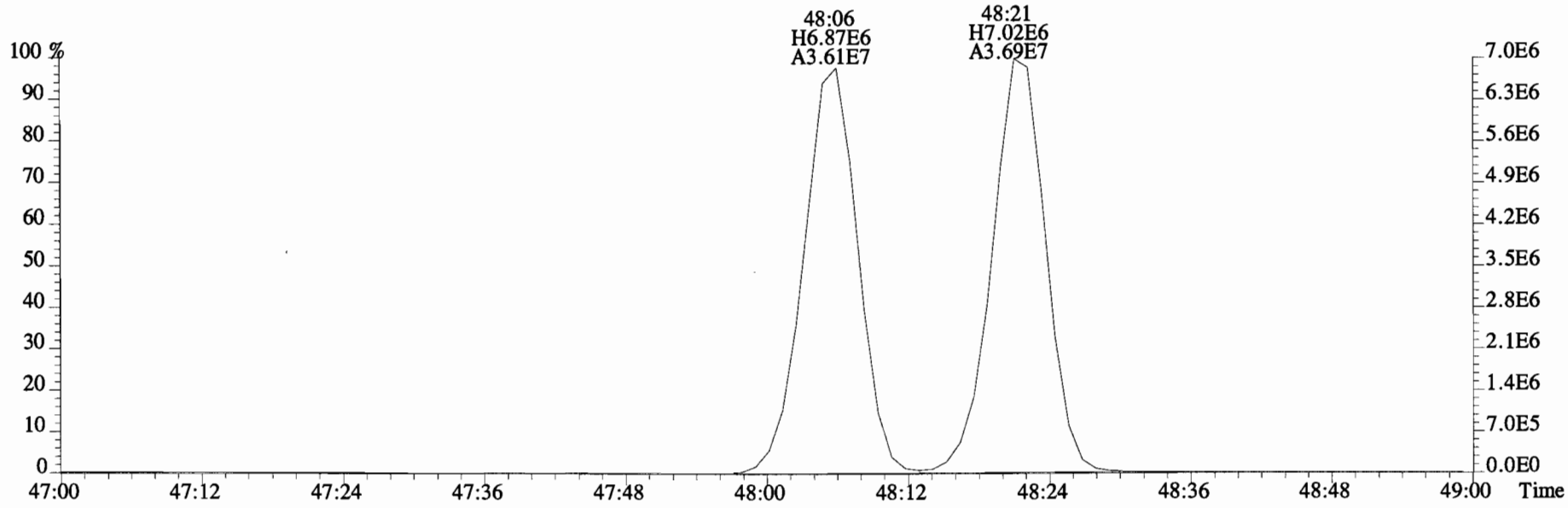
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5496.0,0.00%,F,F)



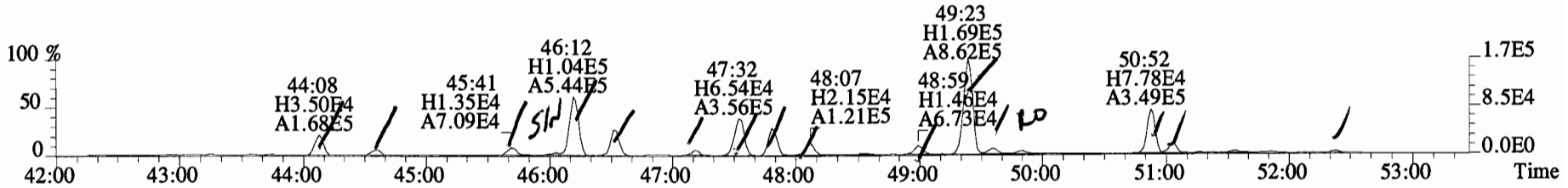
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
371.8817 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5904.0,0.00%,F,F)



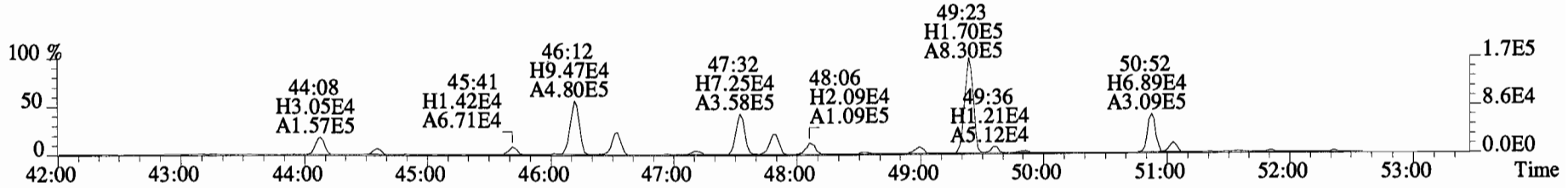
373.8788 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5496.0,0.00%,F,F)



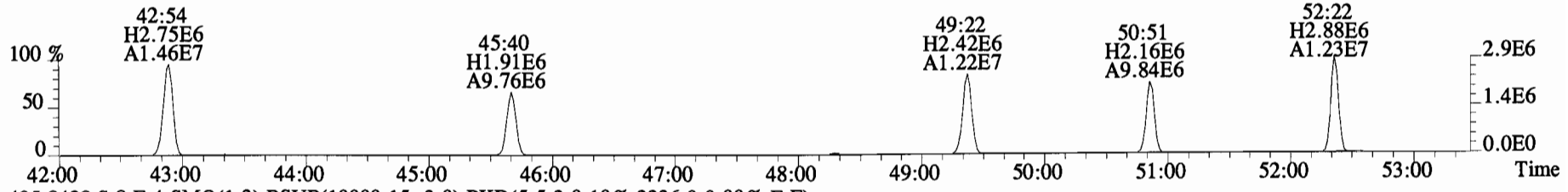
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



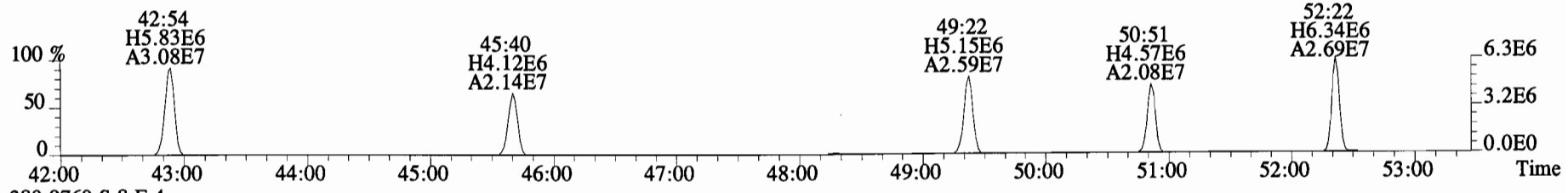
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)



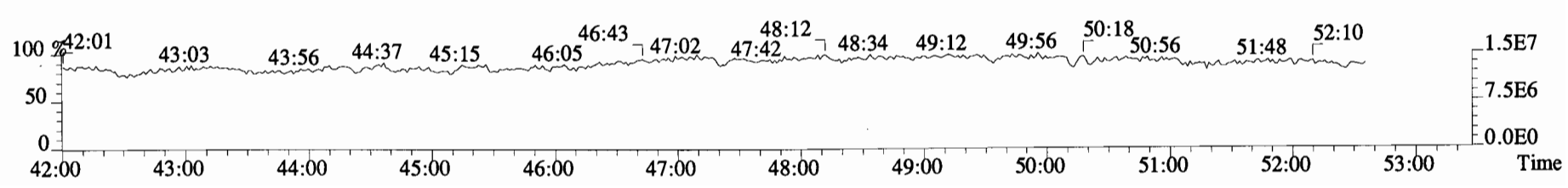
403.8457 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2112.0,0.00%,F,F)



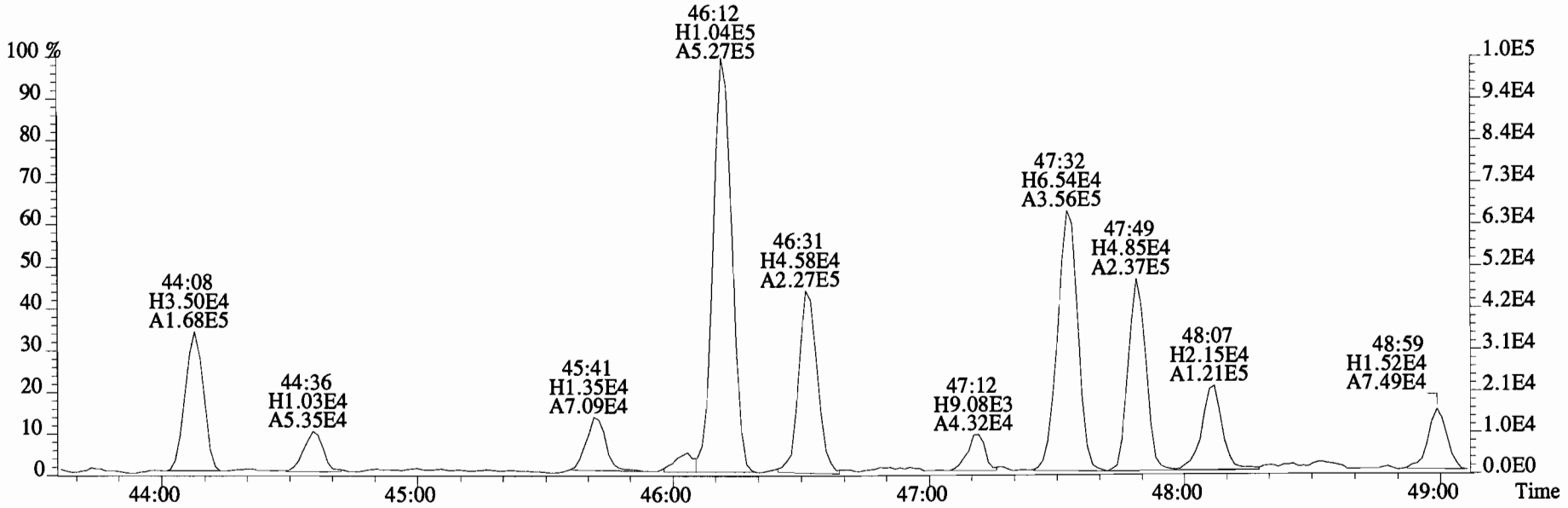
405.8428 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,2236.0,0.00%,F,F)



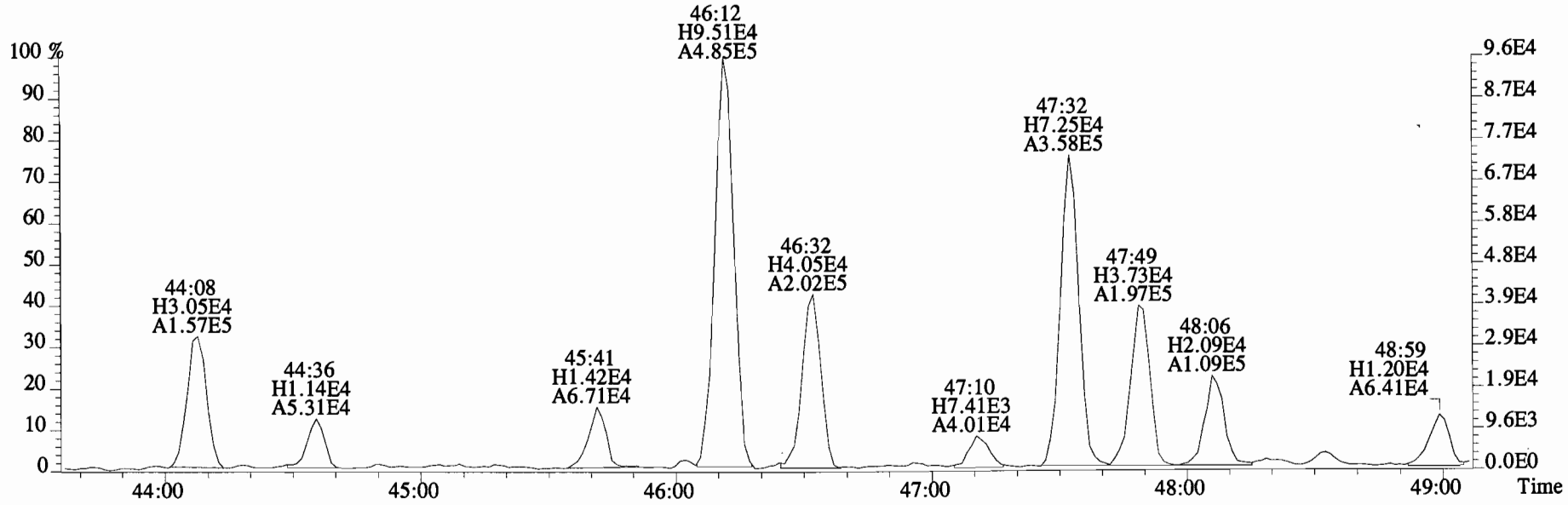
380.9760 S:8 F:4



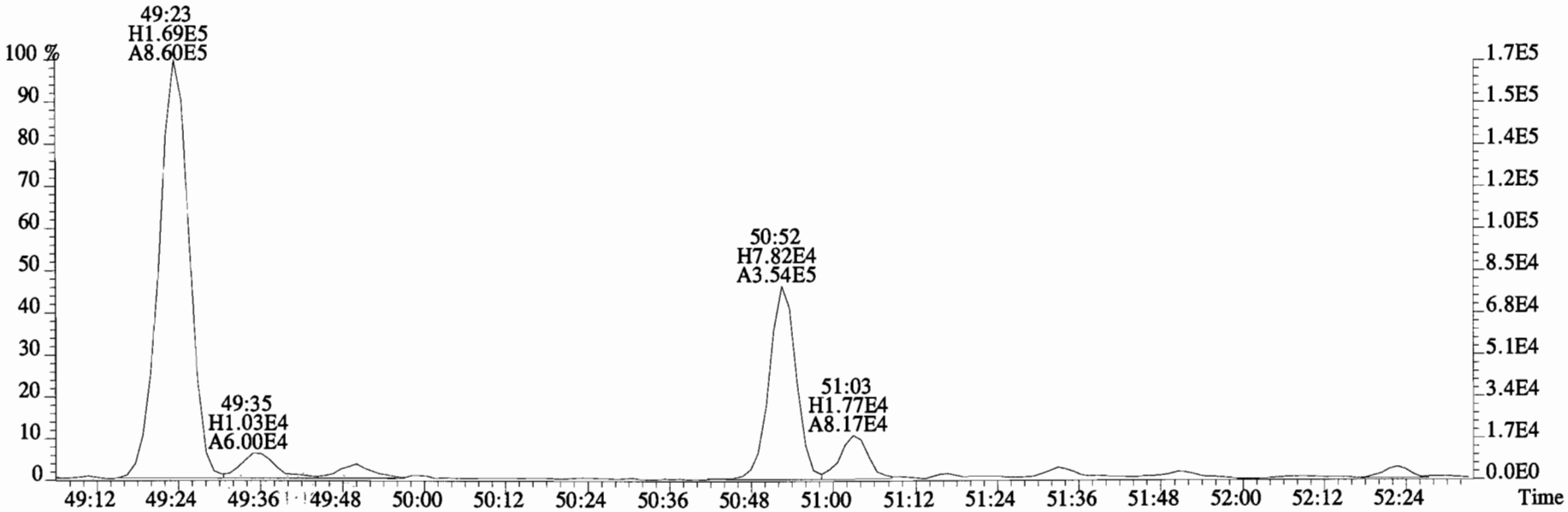
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)



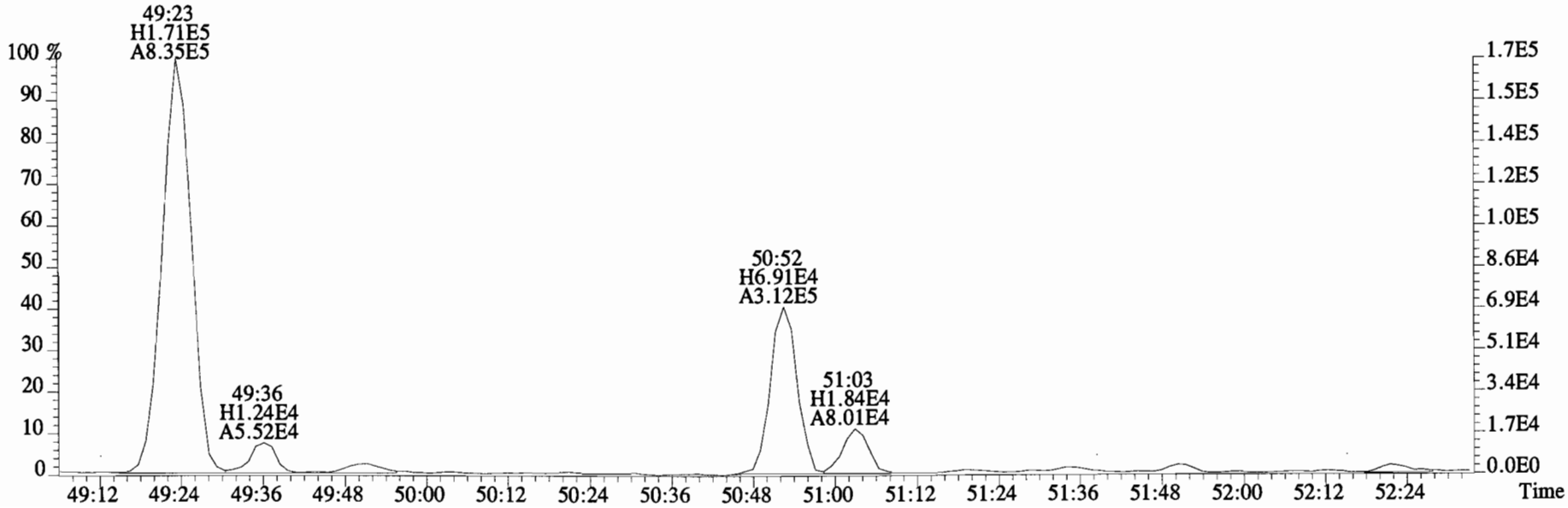
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)

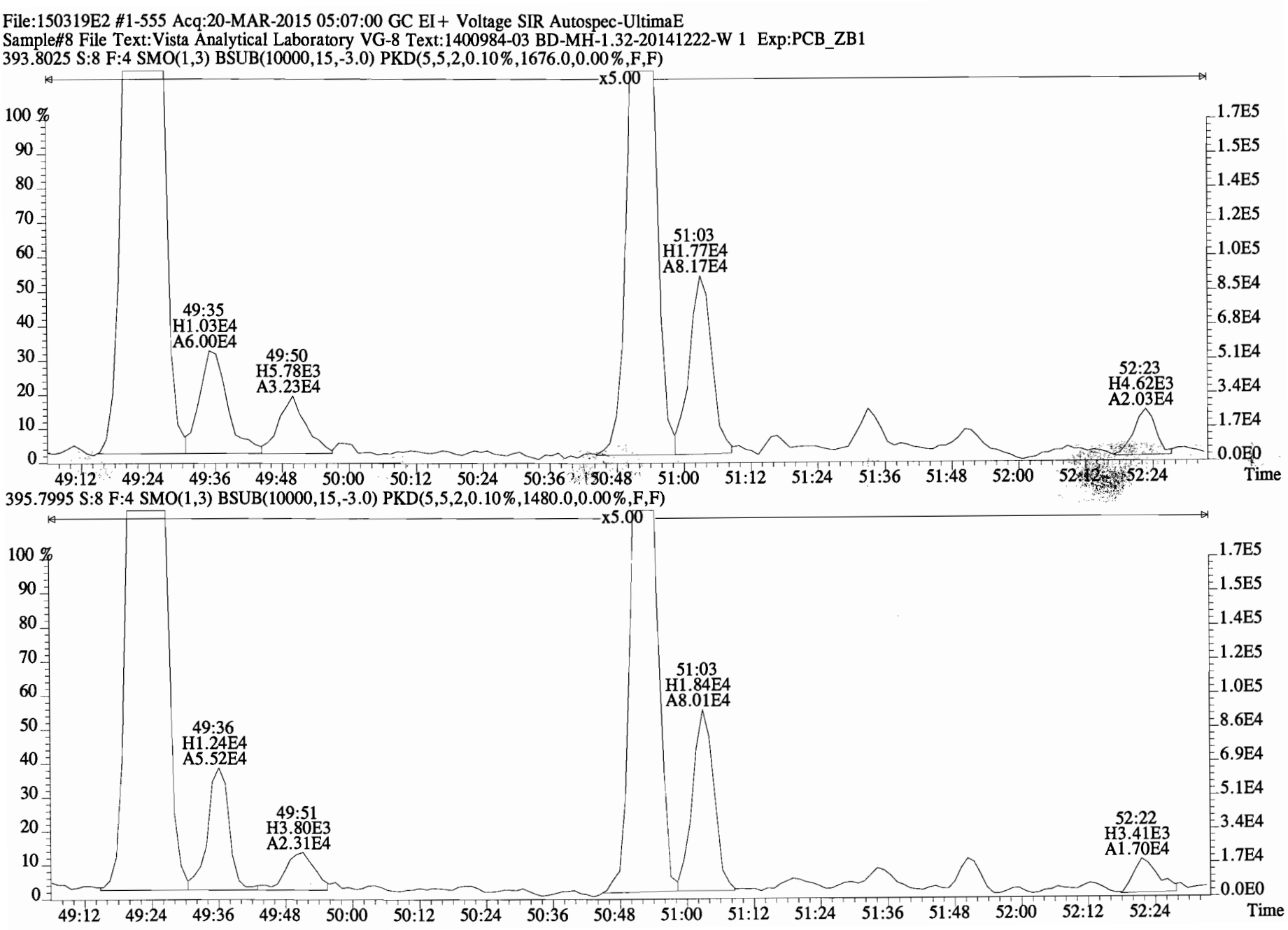


File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)

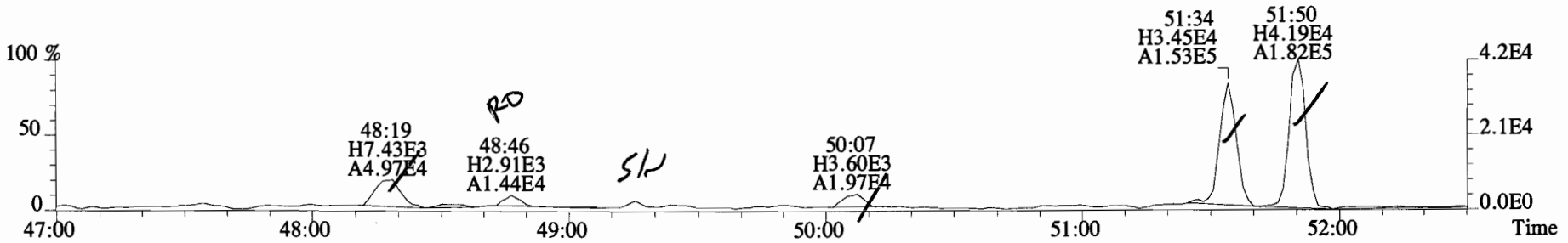


395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)

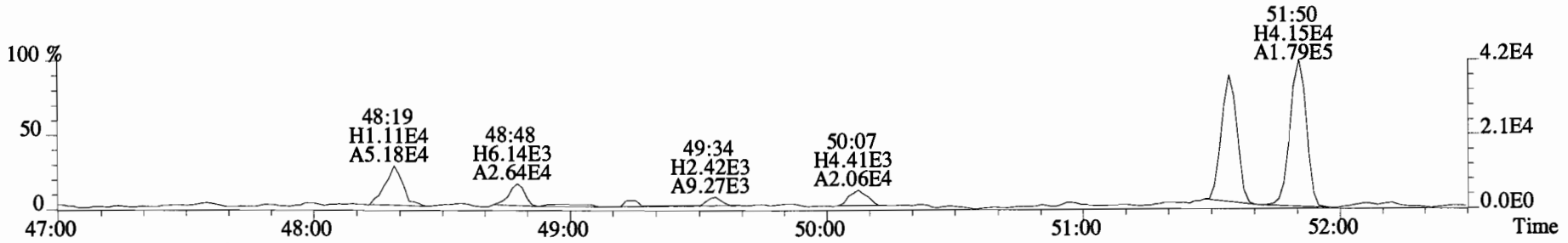



File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
393.8025 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1676.0,0.00%,F,F)
x5.00
49:35
H1.03E4
A6.00E4
49:50
H5.78E3
A3.23E4
51:03
H1.77E4
A8.17E4
52:23
H4.62E3
A2.03E4
Time
395.7995 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1480.0,0.00%,F,F)
x5.00
49:36
H1.24E4
A5.52E4
49:51
H3.80E3
A2.31E4
51:03
H1.84E4
A8.01E4
52:22
H3.41E3
A1.70E4
Time

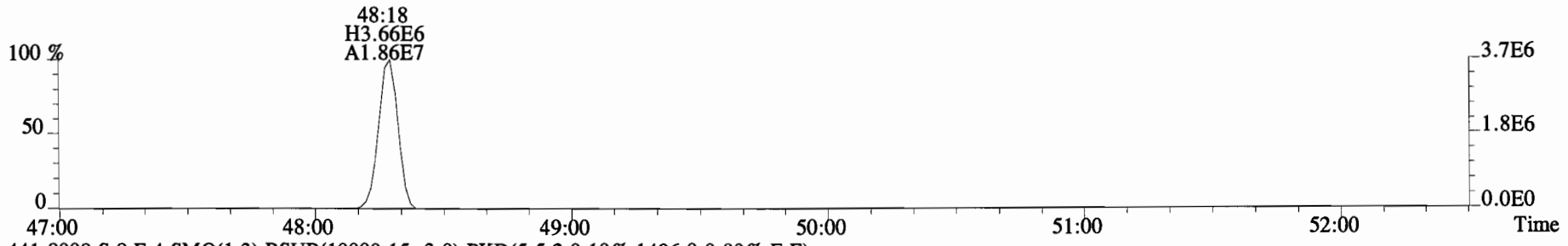
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
427.7635 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1316.0,0.00%,F,F)



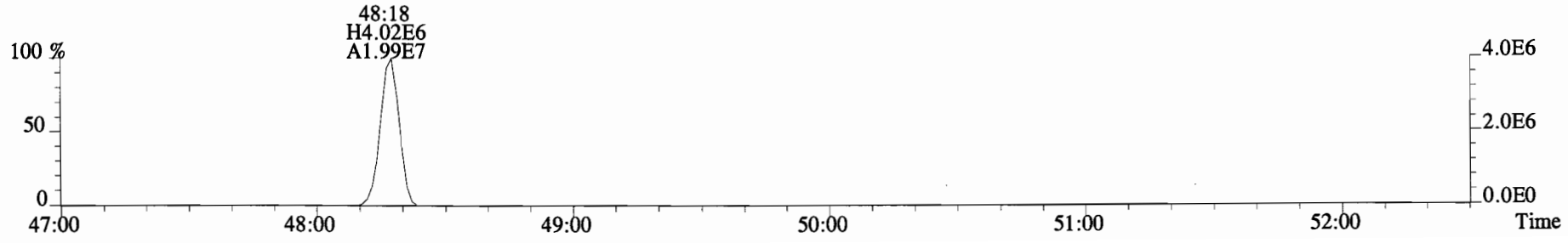
429.7606 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



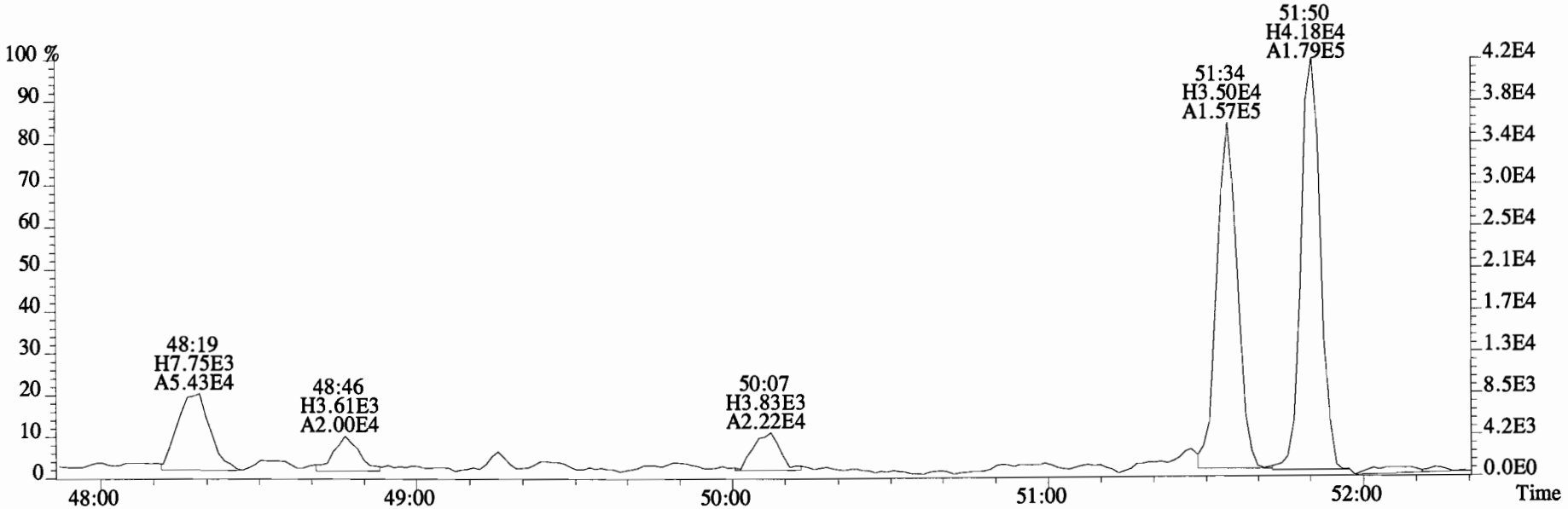
439.8038 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1436.0,0.00%,F,F)



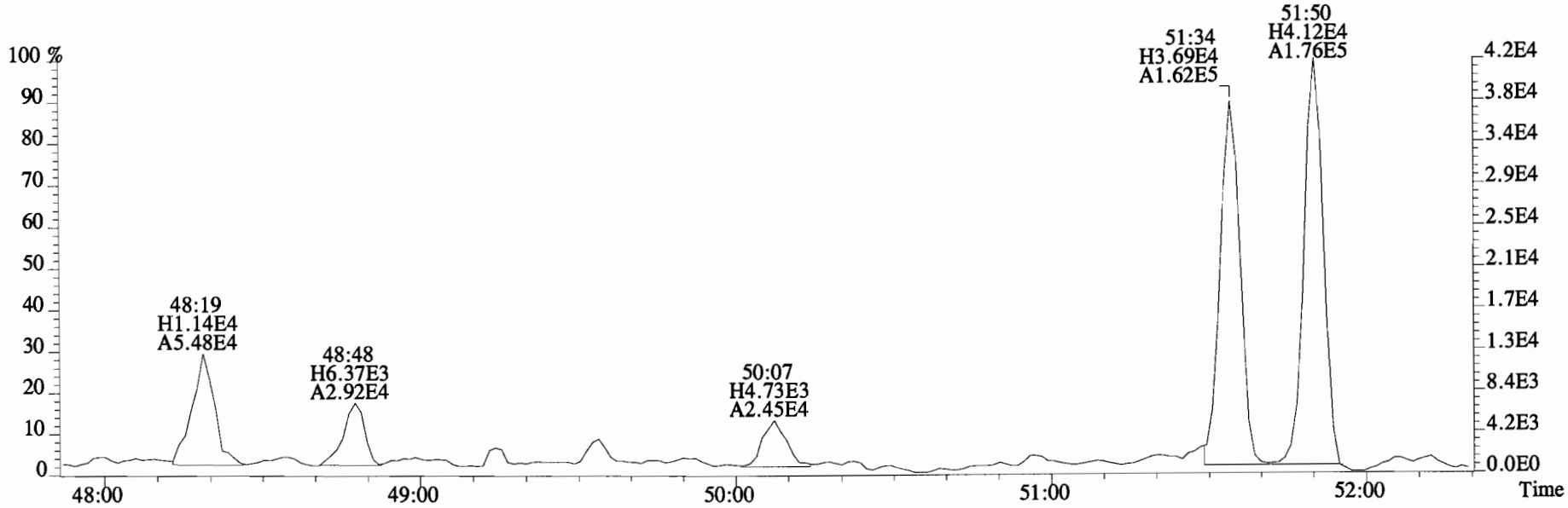
441.8008 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



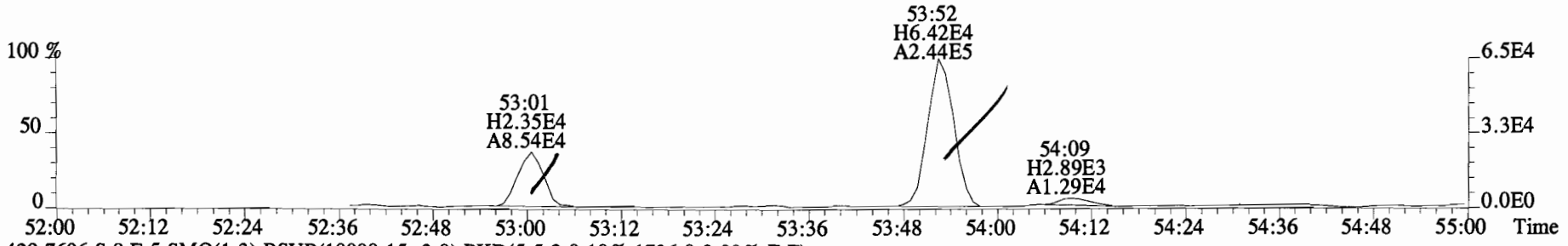
File:150319E2 #1-555 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
427.7635 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1316.0,0.00%,F,F)



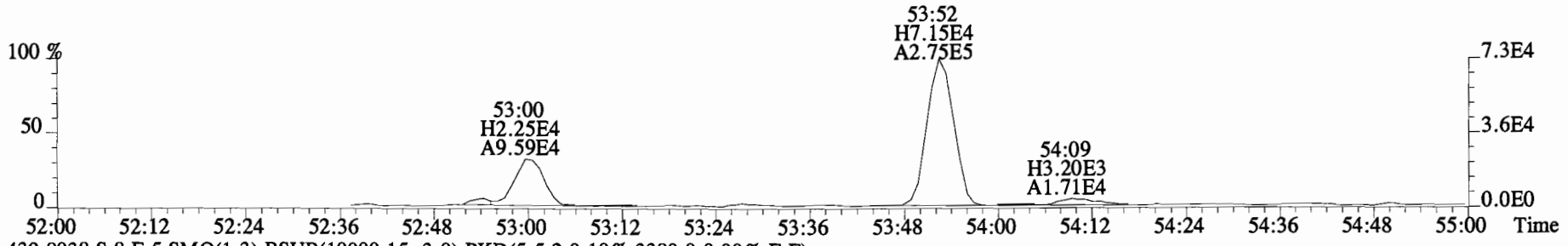
429.7606 S:8 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1496.0,0.00%,F,F)



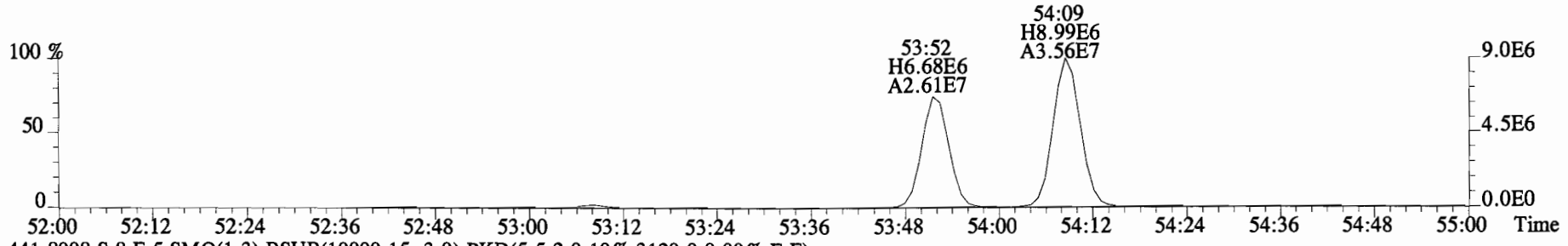
File:150319E2 #1-429 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
427.7635 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1412.0,0.00%,F,F)



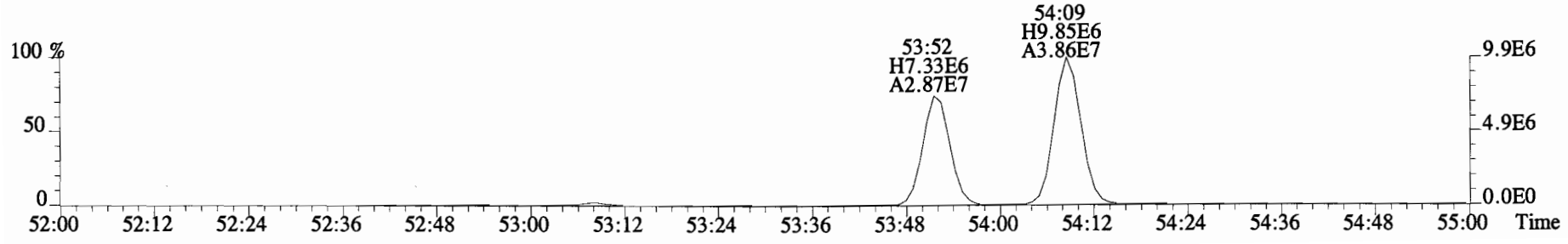
429.7606 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1736.0,0.00%,F,F)

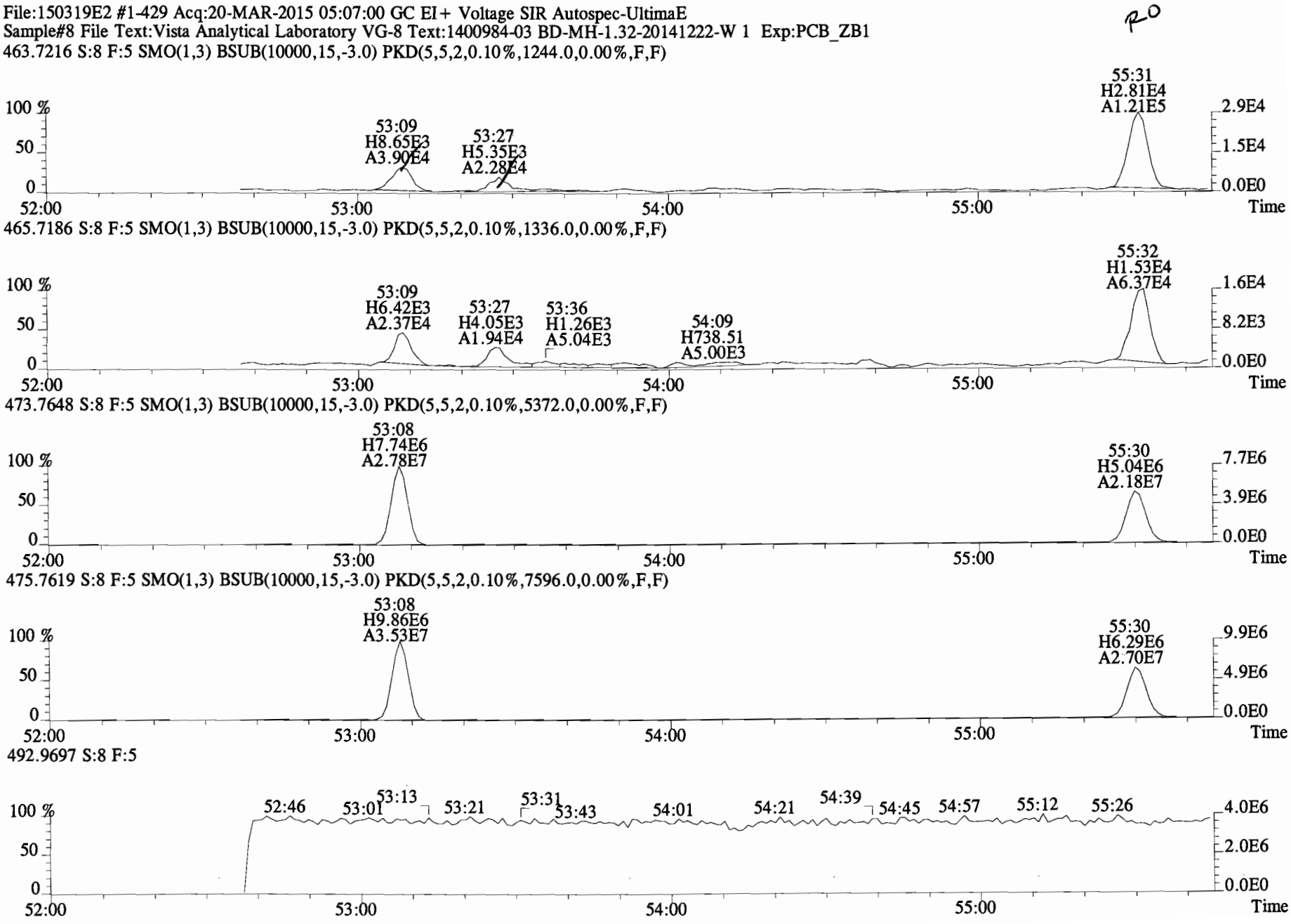


439.8038 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3380.0,0.00%,F,F)

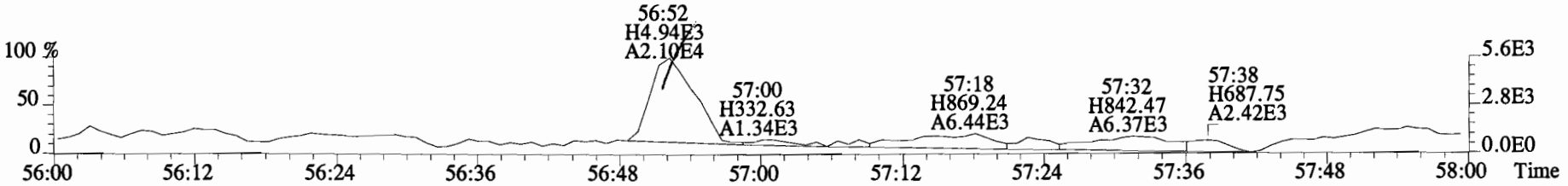


441.8008 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,3120.0,0.00%,F,F)

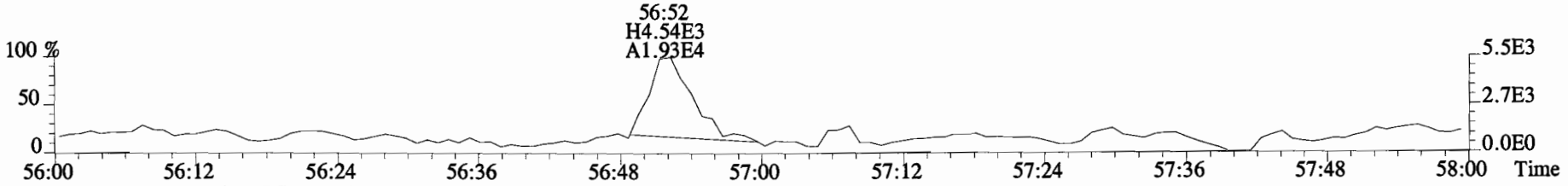



File:150319E2 #1-429 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
463.7216 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1244.0,0.00%,F,F)
53:09 H8.65E3 A3.90E4
53:27 H5.35E3 A2.28E4
55:31 H2.81E4 A1.21E5
465.7186 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1336.0,0.00%,F,F)
53:09 H6.42E3 A2.37E4
53:27 H4.05E3 A1.94E4
53:36 H1.26E3 A5.04E3
54:09 H738.51 A5.00E3
55:32 H1.53E4 A6.37E4
473.7648 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,5372.0,0.00%,F,F)
53:08 H7.74E6 A2.78E7
55:30 H5.04E6 A2.18E7
475.7619 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,7596.0,0.00%,F,F)
53:08 H9.86E6 A3.53E7
55:30 H6.29E6 A2.70E7
492.9697 S:8 F:5
52:46 53:01 53:13 53:21 53:31 53:43 54:01 54:21 54:39 54:45 54:57 55:12 55:26
100 %
50
0
52:00
53:00
54:00
55:00
Time
2.9E4
1.5E4
0.0E0
1.6E4
8.2E3
7.7E6
3.9E6
9.9E6
4.9E6
4.0E6
2.0E6

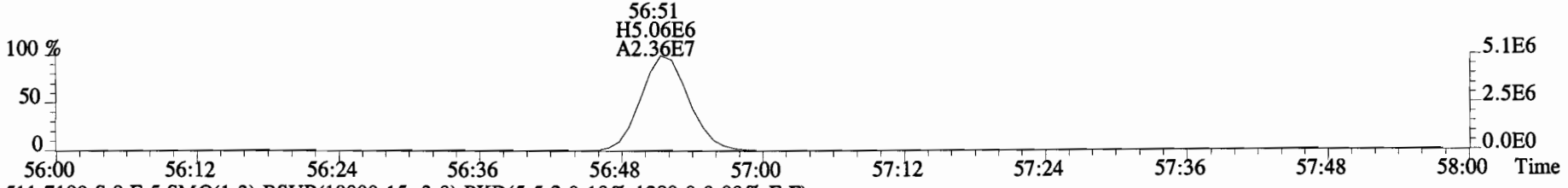
File:150319E2 #1-429 Acq:20-MAR-2015 05:07:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-8 Text:1400984-03 BD-MH-1.32-20141222-W 1 Exp:PCB_ZB1
497.6826 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1244.0,0.00%,F,F)



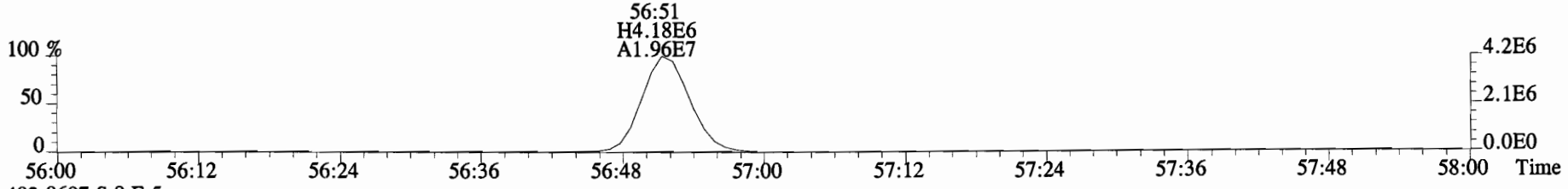
499.6797 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1140.0,0.00%,F,F)



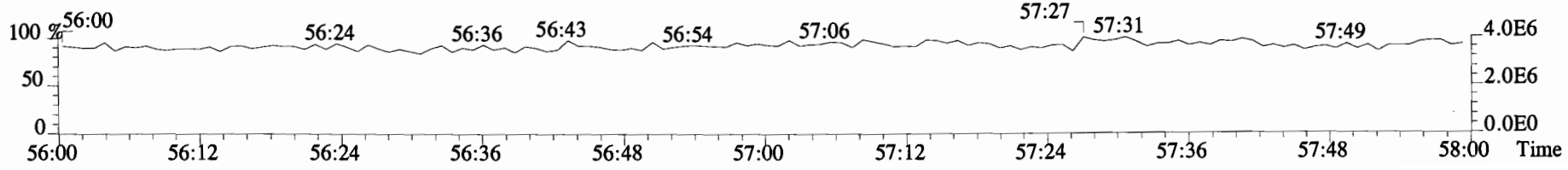
509.7229 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1192.0,0.00%,F,F)



511.7199 S:8 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(5,5,2,0.10%,1280.0,0.00%,F,F)



492.9697 S:8 F:5



CONTINUING CALIBRATION

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150311D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.57	7.8 - 12.9
						8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	y	48.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	48.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	50.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	48.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	50.0	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.3	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.07	8.4 - 12.0
						8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	51.1	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	47.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.1	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	48.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	48.4	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	99.4	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MJ

Date: 3/11/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	100	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	88.1	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	100.0	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	99.9	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	101	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	94.0	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	175	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	98.5	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	102	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	95.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	110	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	111	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	95.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	101	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	96.2	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	94.9	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	180	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.6	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: [signature]

Date: 3/11/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

ZB-5MS IS Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:18	1,3,6,8-TCDF (F)	21:06
1,2,8,9-TCDD (L)	27:52	1,2,8,9-TCDF (L)	28:00
1,2,4,7,9-PeCDD (F)	29:32	1,3,4,6,8-PeCDF (F)	27:59
1,2,3,8,9-PeCDD (L)	32:00	1,2,3,8,9-PeCDF (L)	32:15
1,2,4,6,7,9-HxCDD (F)	33:27	1,2,3,4,6,8-HxCDF (F)	32:55
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:45
1,2,3,4,6,7,9-HpCDD (F)	37:59	1,2,3,4,6,7,8-HpCDF (F)	37:35
1,2,3,4,6,7,8-HpCDD (L)	38:54	1,2,3,4,7,8,9-HpCDF (L)	39:25

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: MJ

Date: 3/12/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.200	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: [signature]

Date: 3/11/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D1 S#1 Analysis Date: 11-MAR-15 Time: 10:46:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: [signature]

Date: 3/11/15

Client ID: 1613 CS3 15A0501 Filename: 150311D1 S:1 Acq:11-MAR-15 10:46:20 ConCal: ST150311D1-1

Lab ID: ST150311D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.45e+06	0.76 y	1.17	26:58	1.001	9.5675		*	2.5	*
	1,2,3,7,8-PeCDD	9.49e+06	0.60 y	0.91	31:38	1.000	48.928		*	2.5	*
	1,2,3,4,7,8-HxCDD	9.17e+06	1.27 y	1.08	34:58	1.000	48.680		*	2.5	*
	1,2,3,6,7,8-HxCDD	9.57e+06	1.25 y	1.06	35:05	1.000	50.362		*	2.5	*
	1,2,3,7,8,9-HxCDD	9.47e+06	1.26 y	0.93	35:22	1.000	48.520		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	8.23e+06	1.06 y	1.10	38:54	1.000	49.994		*	2.5	*
	OCDD	1.52e+07	0.90 y	0.95	42:10	1.000	98.281		*	2.5	*
	2,3,7,8-TCDF	3.24e+06	0.80 y	1.07	26:07	1.001	9.0717		*	2.5	*
	1,2,3,7,8-PeCDF	1.90e+07	1.61 y	1.07	30:26	1.000	51.079		*	2.5	*
	2,3,4,7,8-PeCDF	1.73e+07	1.59 y	1.03	31:21	1.001	51.263		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.82e+07	1.27 y	1.38	34:05	1.000	50.050		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.75e+07	1.29 y	1.26	34:13	1.001	47.429		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.51e+07	1.27 y	1.29	34:48	1.000	48.970		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.22e+07	1.29 y	1.19	35:45	1.000	49.056		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.32e+07	1.08 y	1.61	37:35	1.001	48.545		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.19e+07	1.10 y	1.53	39:25	1.000	48.434		*	2.5	*
	OCDF	2.02e+07	0.92 y	1.10	42:23	1.000	99.439		*	2.5	*
IS	13C-2,3,7,8-TCDD	2.19e+07	0.78 y	1.06	26:56	1.022	100.36				
IS	13C-1,2,3,7,8-PeCDD	2.13e+07	0.64 y	1.18	31:37	1.200	88.136				
IS	13C-1,2,3,4,7,8-HxCDD	1.75e+07	1.26 y	0.72	34:58	1.014	99.978				
IS	13C-1,2,3,6,7,8-HxCDD	1.79e+07	1.23 y	0.74	35:04	1.017	99.870				
IS	13C-1,2,3,7,8,9-HxCDD	2.10e+07	1.27 y	0.85	35:22	1.025	101.21				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.49e+07	1.06 y	0.65	38:53	1.127	93.986				
IS	13C-OCDD	3.25e+07	0.87 y	0.76	42:09	1.222	175.33				
IS	13C-2,3,7,8-TCDF	3.33e+07	0.77 y	0.92	26:06	0.991	98.482				
IS	13C-1,2,3,7,8-PeCDF	3.46e+07	1.60 y	0.92	30:25	1.154	101.93				
IS	13C-2,3,4,7,8-PeCDF	3.27e+07	1.60 y	0.93	31:20	1.189	95.246				
IS	13C-1,2,3,4,7,8-HxCDF	2.62e+07	0.51 y	0.98	34:04	0.988	110.26				
IS	13C-1,2,3,6,7,8-HxCDF	2.93e+07	0.52 y	1.08	34:12	0.992	111.38				
IS	13C-2,3,4,6,7,8-HxCDF	2.39e+07	0.50 y	1.03	34:47	1.009	95.920				
IS	13C-1,2,3,7,8,9-HxCDF	2.10e+07	0.53 y	0.86	35:44	1.036	100.69				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.69e+07	0.44 y	0.72	37:34	1.089	96.171				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.61e+07	0.45 y	0.70	39:25	1.143	94.855				
IS	13C-OCDF	3.71e+07	0.89 y	0.85	42:22	1.229	179.81				
C/Up	37Cl-2,3,7,8-TCDD	2.44e+06		1.12	26:57	1.023	10.623				
RS/RT	13C-1,2,3,4-TCDD	2.06e+07	0.80 y	1.00	26:21	*	100.00				
RS	13C-1,2,3,4-TCDF	3.69e+07	0.76 y	1.00	24:48	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.43e+07	0.52 y	1.00	34:29	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	53.9	54.2		*	*
Total Penta-Dioxins	178	179		*	*
Total Hexa-Dioxins	194	194		*	*
Total Hepta-Dioxins	135	136		*	*
Total Tetra-Furans	29.8	30.0		*	*
Total Penta-Furans	192.11	193.05		*	*
Total Hexa-Furans	242	243		*	*
Total Hepta-Furans	97.1	98.2		*	*

		Rec	Qual
IS	13C-2,3,7,8-TCDD	100	
IS	13C-1,2,3,7,8-PeCDD	88.1	
IS	13C-1,2,3,4,7,8-HxCDD	100.0	
IS	13C-1,2,3,6,7,8-HxCDD	99.9	
IS	13C-1,2,3,7,8,9-HxCDD	101	
IS	13C-1,2,3,4,6,7,8-HpCDD	94.0	
IS	13C-OCDD	87.7	
IS	13C-2,3,7,8-TCDF	98.5	
IS	13C-1,2,3,7,8-PeCDF	102	
IS	13C-2,3,4,7,8-PeCDF	95.2	
IS	13C-1,2,3,4,7,8-HxCDF	110	
IS	13C-1,2,3,6,7,8-HxCDF	111	
IS	13C-2,3,4,6,7,8-HxCDF	95.9	
IS	13C-1,2,3,7,8,9-HxCDF	101	
IS	13C-1,2,3,4,6,7,8-HpCDF	96.2	
IS	13C-1,2,3,4,7,8,9-HpCDF	94.9	
IS	13C-OCDF	89.9	
C/Up	37Cl-2,3,7,8-TCDD	26.6	
RS/RT	13C-1,2,3,4-TCDD	100.00	
RS	13C-1,2,3,4-TCDF	100.00	
RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	

Integrations by Analyst: [signature]

Date: 4/11/15

Reviewed by Analyst: _____

Date: _____

Vista Analytical Laboratory - Injection Log Run file: 150311D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150311D1	1	ST150311D1-1	MAS	11-MAR-15	10:46:20	ST150311D1-1	NA
150311D1	2	SOLVENT BLANK	MAS	11-MAR-15	11:35:10	ST150311D1-1	NA
150311D1	3	SOLVENT BLANK	MAS	11-MAR-15	12:24:06	ST150311D1-1	NA
150311D1	4	B5C0006-BLK1	MAS	11-MAR-15	13:13:01	ST150311D1-1	NA
150311D1	5	B5C0006-BS1	MAS	11-MAR-15	14:01:52	ST150311D1-1	NA
150311D1	6	B5C0033-BS1	MAS	11-MAR-15	14:50:48	ST150311D1-1	NA
150311D1	7	SOLVENT BLANK	MAS	11-MAR-15	15:39:44	ST150311D1-1	NA
150311D1	8	B5C0033-BLK	MAS	11-MAR-15	16:28:35	ST150311D1-1	NA
150311D1	9	B5C0037-BS1	MAS	11-MAR-15	17:17:25	ST150311D1-1	NA
150311D1	10	SOLVENT BLANK	MAS	11-MAR-15	18:06:16	ST150311D1-1	NA
150311D1	11	B5C0037-BLK1	MAS	11-MAR-15	18:55:07	ST150311D1-1	NA
150311D1	12	1500231-01	MAS	11-MAR-15	19:44:02	ST150311D1-1	NA
150311D1	13	1500230-01	MAS	11-MAR-15	20:32:51	ST150311D1-1	NA
150311D1	14	1500234-02	MAS	11-MAR-15	21:21:40	ST150311D1-1	NA
150311D1	15	1500234-01	MAS	11-MAR-15	22:10:30	ST150311D1-1	NA
150311D1	16	SOLVENT BLANK	MAS	11-MAR-15	22:59:20	ST150311D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150311101-1

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	NA ~~✗~~ CB	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > ~~10,000~~? ▪ Method 1614 > 5,000; ~~CARB~~ 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: ✓ 3/12/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 12/2009 rmh

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST150311D2-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.71	0.65-0.89	y	9.42	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	48.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	49.4	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	49.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	47.6	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	96.5	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	8.60	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	51.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	50.9	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	47.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	48.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	47.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	y	48.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	49.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	49.8	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	98.7	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: MS

Date: 3/12/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	99.6	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	97.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	95.5	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	94.6	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	91.7	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	171	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.76	0.65-0.89	y	97.1	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	112	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	107	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	112	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	110	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.4	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	97.6	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.42	0.37-0.51	y	97.3	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.41	0.37-0.51	y	82.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	173	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.9	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: [signature]

Date: 3/12/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

ZB-5MS IS Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:17	1,3,6,8-TCDF (F)	21:05
1,2,8,9-TCDD (L)	27:51	1,2,8,9-TCDF (L)	27:59
1,2,4,7,9-PeCDD (F)	29:32	1,3,4,6,8-PeCDF (F)	27:58
1,2,3,8,9-PeCDD (L)	32:00	1,2,3,8,9-PeCDF (L)	32:14
1,2,4,6,7,9-HxCDD (F)	33:27	1,2,3,4,6,8-HxCDF (F)	32:54
1,2,3,7,8,9-HxCDD (L)	35:22	1,2,3,7,8,9-HxCDF (L)	35:45
1,2,3,4,6,7,9-HpCDD (F)	37:59	1,2,3,4,6,7,8-HpCDF (F)	37:35
1,2,3,4,6,7,8-HpCDD (L)	38:54	1,2,3,4,7,8,9-HpCDF (L)	39:25

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT BETWEEN COMPARED PEAKS (1)
<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: [signature]

Date: 3/12/15

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.201	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.990	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.155	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.525
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: MV

Date: 3/12/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150311D2 S#1 Analysis Date: 12-MAR-15 Time: 00:02:00

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.036	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.090	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.128	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.222	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.229	1.091-1.371

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

Analyst: MD

Date: 3/12/15

Client ID: 1613 CS3 15A0501 Filename: 150311D2 S:1 Acq:12-MAR-15 00:02:00 ConCal: ST150311D2-1

Lab ID: ST150311D2-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.04e+06	0.71 y	1.17	26:57	1.001	9.4222		*	2.5	*
	1,2,3,7,8-PeCDD	8.80e+06	0.61 y	0.91	31:38	1.000	48.291		*	2.5	*
	1,2,3,4,7,8-HxCDD	8.99e+06	1.21 y	1.08	35:05	1.001	49.413		*	2.5	*
	1,2,3,6,7,8-HxCDD	8.99e+06	1.21 y	1.06	35:05	1.001	50.050		*	2.5	*
	1,2,3,7,8,9-HxCDD	8.98e+06	1.26 y	0.93	35:22	1.000	49.835		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.56e+06	1.00 y	1.10	38:54	1.000	47.613		*	2.5	*
	OCDD	1.44e+07	0.89 y	0.95	42:09	1.000	96.589		*	2.5	*
	2,3,7,8-TCDF	2.62e+06	0.78 y	1.07	26:07	1.001	8.6013		*	2.5	*
	1,2,3,7,8-PeCDF	1.81e+07	1.60 y	1.07	30:25	1.000	51.028		*	2.5	*
	2,3,4,7,8-PeCDF	1.67e+07	1.60 y	1.03	31:20	1.000	50.915		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.71e+07	1.27 y	1.38	34:05	1.001	47.111		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.73e+07	1.27 y	1.26	34:12	1.000	48.246		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.43e+07	1.30 y	1.29	34:48	1.000	47.845		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.16e+07	1.30 y	1.19	35:45	1.000	48.625		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.33e+07	1.10 y	1.61	37:35	1.000	49.001		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.05e+07	1.10 y	1.53	39:25	1.000	49.833		*	2.5	*
	OCDF	1.91e+07	0.93 y	1.10	42:23	1.000	98.735		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.85e+07	0.79 y	1.06	26:56	1.022	102.07				
IS	13C-1,2,3,7,8-PeCDD	2.00e+07	0.63 y	1.18	31:37	1.201	99.566				
IS	13C-1,2,3,4,7,8-HxCDD	1.69e+07	1.25 y	0.72	35:04	1.017	97.655				
IS	13C-1,2,3,6,7,8-HxCDD	1.69e+07	1.25 y	0.74	35:04	1.017	95.500				
IS	13C-1,2,3,7,8,9-HxCDD	1.94e+07	1.25 y	0.85	35:21	1.026	94.554				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.44e+07	1.04 y	0.65	38:53	1.128	91.713				
IS	13C-OCDD	3.13e+07	0.88 y	0.76	42:09	1.222	170.94				
IS	13C-2,3,7,8-TCDF	2.85e+07	0.76 y	0.92	26:05	0.990	97.103				
IS	13C-1,2,3,7,8-PeCDF	3.31e+07	1.56 y	0.92	30:24	1.155	112.46				
IS	13C-2,3,4,7,8-PeCDF	3.18e+07	1.63 y	0.93	31:19	1.189	107.07				
IS	13C-1,2,3,4,7,8-HxCDF	2.63e+07	0.52 y	0.98	34:04	0.988	111.68				
IS	13C-1,2,3,6,7,8-HxCDF	2.86e+07	0.52 y	1.08	34:12	0.992	110.04				
IS	13C-2,3,4,6,7,8-HxCDF	2.32e+07	0.51 y	1.03	34:47	1.009	94.439				
IS	13C-1,2,3,7,8,9-HxCDF	2.01e+07	0.52 y	0.86	35:44	1.036	97.572				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.68e+07	0.42 y	0.72	37:34	1.090	97.296				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.38e+07	0.41 y	0.70	39:25	1.143	82.378				
IS	13C-OCDF	3.53e+07	0.91 y	0.85	42:22	1.229	173.29				
C/Up	37Cl-2,3,7,8-TCDD	2.07e+06		1.12	26:57	1.023	10.856				
RS/RT	13C-1,2,3,4-TCDD	1.71e+07	0.79 y	1.00	26:20	*	100.00				
RS	13C-1,2,3,4-TCDF	3.19e+07	0.74 y	1.00	24:47	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.40e+07	0.52 y	1.00	34:29	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	53.5	53.8		*	*
Total Penta-Dioxins	180	180		*	*
Total Hexa-Dioxins	195	197		*	*
Total Hepta-Dioxins	136	137		*	*
Total Tetra-Furans	28.3	28.7		*	*
Total Penta-Furans	185.48	186.98		*	*
Total Hexa-Furans	238	239		*	*
Total Hepta-Furans	98.8	99.6		*	*

	Name	Rec	Qual
IS	13C-2,3,7,8-TCDD	102	
IS	13C-1,2,3,7,8-PeCDD	99.6	
IS	13C-1,2,3,4,7,8-HxCDD	97.7	
IS	13C-1,2,3,6,7,8-HxCDD	95.5	
IS	13C-1,2,3,7,8,9-HxCDD	94.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	91.7	
IS	13C-OCDD	85.5	
IS	13C-2,3,7,8-TCDF	97.1	
IS	13C-1,2,3,7,8-PeCDF	112	
IS	13C-2,3,4,7,8-PeCDF	107	
IS	13C-1,2,3,4,7,8-HxCDF	112	
IS	13C-1,2,3,6,7,8-HxCDF	110	
IS	13C-2,3,4,6,7,8-HxCDF	94.4	
IS	13C-1,2,3,7,8,9-HxCDF	97.6	
IS	13C-1,2,3,4,6,7,8-HpCDF	97.3	
IS	13C-1,2,3,4,7,8,9-HpCDF	82.4	
IS	13C-OCDF	86.6	
C/Up	37Cl-2,3,7,8-TCDD	27.1	

Integrations by Analyst: m Date: 3/12/15

Reviewed by Analyst: CJ Date: 3/12/15

Vista Analytical Laboratory - Injection Log Run file: 150311D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150311D2	1	ST150311D2-1	MAS	12-MAR-15	00:02:00	ST150311D2-1	NA
150311D2	2	SOLVENT BLANK	MAS	12-MAR-15	00:50:50	ST150311D2-1	NA
150311D2	3	1400984-03	MAS	12-MAR-15	01:39:40	ST150311D2-1	NA
150311D2	4	1400984-02	MAS	12-MAR-15	02:28:29	ST150311D2-1	NA
150311D2	5	1400984-01	MAS	12-MAR-15	03:17:23	ST150311D2-1	NA
150311D2	6	1400958-02	MAS	12-MAR-15	04:06:15	ST150311D2-1	NA
150311D2	7	1400958-01	MAS	12-MAR-15	04:55:08	ST150311D2-1	NA
150311D2	8	1500227-01	MAS	12-MAR-15	05:44:02	ST150311D2-1	NA
150311D2	9	1500227-02	MAS	12-MAR-15	06:32:54	ST150311D2-1	NA
150311D2	10	1500228-01	MAS	12-MAR-15	07:21:47	ST150311D2-1	NA
150311D2	11	1500229-01	MAS	12-MAR-15	08:10:38	ST150311D2-1	NA
150311D2	12	SOLVENT BLANK	MAS	12-MAR-15	08:59:35	ST150311D2-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150311D2-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: CJ 3/12/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 12/2009 mh

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E2-1 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: PCBVG8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150319E2 S#1 Analysis Date: 19-MAR-15 Time: 21:35:50

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.97	2.66-3.60	y	42.0	37.5-62.5	PCB-52/69	0.77	0.65-0.89	y	114.9	75.0-125
PCB-2	3.02	2.66-3.60	y	42.8	37.5-62.5	PCB-73	0.79	0.65-0.89	y	54.5	37.5-62.5
PCB-3	3.03	2.66-3.60	y	42.2	37.5-62.5	PCB-43/49	0.78	0.65-0.89	y	111.5	75.0-125
PCB-4/10	1.59	1.33-1.79	y	85.0	75-125	PCB-47	0.77	0.65-0.89	y	58.0	37.5-62.5
PCB-7/9	1.61	1.33-1.79	y	91.2	75-125	PCB-48/75	0.78	0.65-0.89	y	110.5	75.0-125
PCB-6	1.61	1.33-1.79	y	45.9	37.5-62.5	PCB-65	0.77	0.65-0.89	y	56.4	37.5-62.5
PCB-5/8	1.61	1.33-1.79	y	92.1	75-125	PCB-62	0.78	0.65-0.89	y	57.9	37.5-62.5
PCB-14	1.63	1.33-1.79	y	46.9	37.5-62.5	PCB-44	0.79	0.65-0.89	y	61.2	37.5-62.5
PCB-11	1.64	1.33-1.79	y	46.8	37.5-62.5	PCB-42/59	0.78	0.65-0.89	y	120.3	75.0-125
PCB-12/13	1.63	1.33-1.79	y	96.5	75-125	PCB-41/64/71/72	0.79	0.65-0.89	y	227.6	150-250
PCB-15	1.60	1.33-1.79	y	46.8	37.5-62.5	PCB-68	0.78	0.65-0.89	y	55.3	37.5-62.5
PCB-19	1.07	0.88-1.20	y	52.2	37.5-62.5	PCB-40	0.79	0.65-0.89	y	58.0	37.5-62.5
PCB-30	1.08	0.88-1.20	y	53.4	37.5-62.5	PCB-57	0.79	0.65-0.89	y	57.2	37.5-62.5
PCB-18	1.07	0.88-1.20	y	53.4	37.5-62.5	PCB-67	0.77	0.65-0.89	y	57.3	37.5-62.5
PCB-17	1.08	0.88-1.20	y	53.6	37.5-62.5	PCB-58	0.78	0.65-0.89	y	58.0	37.5-62.5
PCB-24/27	1.08	0.88-1.20	y	104.9	75.0-125	PCB-63	0.77	0.65-0.89	y	57.5	37.5-62.5
PCB-16/32	1.08	0.88-1.20	y	104.8	75.0-125	PCB-74	0.78	0.65-0.89	y	56.0	37.5-62.5
PCB-34	1.08	0.88-1.20	y	45.7	37.5-62.5	PCB-61/70	0.79	0.65-0.89	y	112.9	75.0-125
PCB-23	1.10	0.88-1.20	y	51.3	37.5-62.5	PCB-76/66	0.78	0.65-0.89	y	113.4	75.0-125
PCB-29	1.10	0.88-1.20	y	51.7	37.5-62.5	PCB-80	0.80	0.65-0.89	y	54.5	37.5-62.5
PCB-26	1.08	0.88-1.20	y	50.6	37.5-62.5	PCB-55	0.78	0.65-0.89	y	54.7	37.5-62.5
PCB-25	1.08	0.88-1.20	y	51.8	37.5-62.5	PCB-56/60	0.79	0.65-0.89	y	105.8	75.0-125
PCB-31	1.10	0.88-1.20	y	54.1	37.5-62.5	PCB-79	0.78	0.65-0.89	y	54.6	37.5-62.5
PCB-28	1.11	0.88-1.20	y	46.3	37.5-62.5	PCB-78	0.78	0.65-0.89	y	54.2	37.5-62.5
PCB-20/21/33	1.08	0.88-1.20	y	153.0	112.5-225	PCB-81	0.78	0.65-0.89	y	53.5	37.5-62.5
PCB-22	1.10	0.88-1.20	y	50.5	37.5-62.5	PCB-77	0.80	0.65-0.89	y	54.7	37.5-62.5
PCB-36	1.10	0.88-1.20	y	52.0	37.5-62.5	PCB-104	1.60	1.32-1.78	y	53.9	37.5-62.5
PCB-39	1.10	0.88-1.20	y	55.9	37.5-62.5	PCB-96	1.58	1.32-1.78	y	54.7	37.5-62.5
PCB-38	1.09	0.88-1.20	y	51.0	37.5-62.5	PCB-103	1.59	1.32-1.78	y	56.0	37.5-62.5
PCB-35	1.10	0.88-1.20	y	51.6	37.5-62.5	PCB-100	1.59	1.32-1.78	y	56.0	37.5-62.5
PCB-37	1.10	0.88-1.20	y	52.5	37.5-62.5	PCB-94	1.60	1.32-1.78	y	55.1	37.5-62.5
PCB-54	0.79	0.65-0.89	y	55.2	37.5-62.5	PCB-95/98/102	1.59	1.32-1.78	y	160.1	112.5-225
PCB-50	0.78	0.65-0.89	y	58.2	37.5-62.5	PCB-93	1.68	1.32-1.78	y	60.9	37.5-62.5
PCB-53	0.78	0.65-0.89	y	54.6	37.5-62.5	PCB-88/91	1.60	1.32-1.78	y	114.9	75.0-125
PCB-51	0.80	0.65-0.89	y	54.9	37.5-62.5	PCB-121	1.63	1.32-1.78	y	55.5	37.5-62.5
PCB-45	0.76	0.65-0.89	y	56.2	37.5-62.5						
PCB-46	0.79	0.65-0.89	y	55.9	37.5-62.5						

Analyst: DMS

Date: 3/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E2-1 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: PCBVG8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150319E2 S#1 Analysis Date: 19-MAR-15 Time: 21:35:50

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.61	1.32-1.78	y	109.7	75.0-125	PCB-140	1.29	1.05-1.43	y	51.6	37.5-62.5
PCB-89	1.61	1.32-1.78	y	54.6	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	107.9	75.0-125
PCB-90/101	1.61	1.32-1.78	y	106.0	75.0-125	PCB-133/142	1.27	1.05-1.43	y	109.1	75.0-125
PCB-113	1.62	1.32-1.78	y	56.3	37.5-62.5	PCB-131	1.24	1.05-1.43	y	57.9	37.5-62.5
PCB-99	1.63	1.32-1.78	y	49.7	37.5-62.5	PCB-146/165	1.27	1.05-1.43	y	109.1	75.0-125
PCB-119	1.59	1.32-1.78	y	51.5	37.5-62.5	PCB-132/161	1.26	1.05-1.43	y	107.5	75.0-125
PCB-108/112	1.61	1.32-1.78	y	106.5	75.0-125	PCB-153	1.25	1.05-1.43	y	48.7	37.5-62.5
PCB-83	1.60	1.32-1.78	y	54.8	37.5-62.5	PCB-168	1.27	1.05-1.43	y	52.9	37.5-62.5
PCB-97	1.62	1.32-1.78	y	54.2	37.5-62.5	PCB-141	1.23	1.05-1.43	y	52.0	37.5-62.5
PCB-86	1.64	1.32-1.78	y	50.8	37.5-62.5	PCB-137	1.21	1.05-1.43	y	52.8	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	154.9	112.5-225	PCB-130	1.27	1.05-1.43	y	55.0	37.5-62.5
PCB-111/115	1.59	1.32-1.78	y	107.5	75.0-125	PCB-138/163/164	1.26	1.05-1.43	y	155.0	112.5-225
PCB-85/116	1.63	1.32-1.78	y	96.9	75.0-125	PCB-158/160	1.25	1.05-1.43	y	109.0	75.0-125
PCB-120	1.72	1.32-1.78	y	50.3	37.5-62.5	PCB-129	1.27	1.05-1.43	y	52.9	37.5-62.5
PCB-110	1.49	1.32-1.78	y	49.1	37.5-62.5	PCB-166	1.26	1.05-1.43	y	54.9	37.5-62.5
PCB-82	1.55	1.32-1.78	y	52.6	37.5-62.5	PCB-159	1.26	1.05-1.43	y	54.0	37.5-62.5
PCB-124	1.57	1.32-1.78	y	53.1	37.5-62.5	PCB-128/162	1.25	1.05-1.43	y	107.0	75.0-125
PCB-107/109	1.62	1.32-1.78	y	105.1	75.0-125	PCB-167	1.27	1.05-1.43	y	52.7	37.5-62.5
PCB-123	1.59	1.32-1.78	y	52.8	37.5-62.5	PCB-156	1.23	1.05-1.43	y	51.5	37.5-62.5
PCB-106/118	1.62	1.32-1.78	y	106.9	75.0-125	PCB-157	1.27	1.05-1.43	y	52.3	37.5-62.5
PCB-114	1.60	1.32-1.78	y	48.1	37.5-62.5	PCB-169	1.25	1.05-1.43	y	54.9	37.5-62.5
PCB-122	1.64	1.32-1.78	y	51.0	37.5-62.5	PCB-188	1.08	0.89-1.21	y	52.4	37.5-62.5
PCB-105	1.59	1.32-1.78	y	46.3	37.5-62.5	PCB-184	1.08	0.89-1.21	y	54.6	37.5-62.5
PCB-127	1.66	1.32-1.78	y	49.1	37.5-62.5	PCB-179	1.08	0.89-1.21	y	53.4	37.5-62.5
PCB-126	1.63	1.32-1.78	y	48.4	37.5-62.5	PCB-176	1.06	0.89-1.21	y	53.8	37.5-62.5
PCB-155	1.27	1.05-1.43	y	51.8	37.5-62.5	PCB-186	1.07	0.89-1.21	y	54.3	37.5-62.5
PCB-150	1.28	1.05-1.43	y	50.0	37.5-62.5	PCB-178	1.07	0.89-1.21	y	55.4	37.5-62.5
PCB-152	1.26	1.05-1.43	y	51.5	37.5-62.5	PCB-175	1.05	0.89-1.21	y	56.8	37.5-62.5
PCB-145	1.29	1.05-1.43	y	53.3	37.5-62.5	PCB-182/187	1.07	0.89-1.21	y	107.0	75.0-125
PCB-136	1.29	1.05-1.43	y	50.1	37.5-62.5	PCB-183	1.06	0.89-1.21	y	54.0	37.5-62.5
PCB-148	1.27	1.05-1.43	y	46.6	37.5-62.5	PCB-185	1.06	0.89-1.21	y	52.7	37.5-62.5
PCB-154	1.29	1.05-1.43	y	49.1	37.5-62.5	PCB-174	1.04	0.89-1.21	y	54.4	37.5-62.5
PCB-151	1.28	1.05-1.43	y	51.2	37.5-62.5	PCB-181	1.08	0.89-1.21	y	51.6	37.5-62.5
PCB-135	1.28	1.05-1.43	y	50.9	37.5-62.5	PCB-177	1.05	0.89-1.21	y	50.4	37.5-62.5
PCB-144	1.29	1.05-1.43	y	48.8	37.5-62.5	PCB-171	1.09	0.89-1.21	y	49.2	37.5-62.5
PCB-147	1.31	1.05-1.43	y	52.8	37.5-62.5	PCB-173	1.05	0.89-1.21	y	55.5	37.5-62.5
PCB-139/149	1.29	1.05-1.43	y	105.8	75.0-125	PCB-172	1.07	0.89-1.21	y	52.3	37.5-62.5

Analyst: DMS

Date: 3/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E2-1 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: PCBVG8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150319E2 S#1 Analysis Date: 19-MAR-15 Time: 21:35:50

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.09	0.89-1.21	y	52.8	37.5-62.5
PCB-180	1.09	0.89-1.21	y	48.9	37.5-62.5
PCB-193	1.08	0.89-1.21	y	53.8	37.5-62.5
PCB-191	1.07	0.89-1.21	y	51.7	37.5-62.5
PCB-170	1.06	0.89-1.21	y	47.4	37.5-62.5
PCB-190	1.05	0.89-1.21	y	48.7	37.5-62.5
PCB-189	1.07	0.89-1.21	y	50.5	37.5-62.5
PCB-202	0.90	0.76-1.02	y	52.4	37.5-62.5
PCB-201	0.91	0.76-1.02	y	53.3	37.5-62.5
PCB-204	0.91	0.76-1.02	y	51.4	37.5-62.5
PCB-197	0.90	0.76-1.02	y	53.1	37.5-62.5
PCB-200	0.89	0.76-1.02	y	54.7	37.5-62.5
PCB-198	0.93	0.76-1.02	y	59.6	37.5-62.5
PCB-199	0.93	0.76-1.02	y	53.0	37.5-62.5
PCB-196/203	0.93	0.76-1.02	y	108.6	75.0-125
PCB-195	0.92	0.76-1.02	y	50.1	37.5-62.5
PCB-194	0.91	0.76-1.02	y	46.4	37.5-62.5
PCB-205	0.92	0.76-1.02	y	48.2	37.5-62.5
PCB-208	1.34	1.14-1.54	y	51.5	37.5-62.5
PCB-207	1.36	1.14-1.54	y	52.4	37.5-62.5
PCB-206	1.31	1.14-1.54	y	50.1	37.5-62.5
PCB-209	1.16	0.99-1.33	y	48.6	37.5-62.5

Analyst: DMS

Date: 3/20/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150319E2-1 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: PCBVG8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150319E2 S#1 Analysis Date: 19-MAR-15 Time: 21:35:50

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.26	2.66-3.60	y	110.5	50.0-145
13C-PCB-3	3.22	2.66-3.60	y	110.8	50.0-145
13C-PCB-4	1.60	1.33-1.79	y	101.5	50.0-145
13C-PCB-9	1.57	1.33-1.79	y	99.9	50.0-145
13C-PCB-11	1.58	1.33-1.79	y	100.2	50.0-145
13C-PCB-19	1.10	0.88-1.20	y	89.7	50.0-145
13C-PCB-32	1.09	0.88-1.20	y	87.3	50.0-145
13C-PCB-28	1.08	0.88-1.20	y	108.4	50.0-145
13C-PCB-37	1.07	0.88-1.20	y	111.8	50.0-145
13C-PCB-54	0.80	0.65-0.89	y	98.8	50.0-145
13C-PCB-52	0.79	0.65-0.89	y	105.8	50.0-145
13C-PCB-47	0.79	0.65-0.89	y	99.6	50.0-145
13C-PCB-70	0.81	0.65-0.89	y	100.2	50.0-145
13C-PCB-80	0.81	0.65-0.89	y	103.7	50.0-145
13C-PCB-81	0.81	0.65-0.89	y	104.1	50.0-145
13C-PCB-77	0.80	0.65-0.89	y	97.7	50.0-145
13C-PCB-104	1.61	1.32-1.78	y	97.9	50.0-145
13C-PCB-95	1.66	1.32-1.78	y	99.1	50.0-145
13C-PCB-101	1.60	1.32-1.78	y	100.0	50.0-145
13C-PCB-97	1.66	1.32-1.78	y	104.8	50.0-145
13C-PCB-123	1.66	1.32-1.78	y	104.7	50.0-145
13C-PCB-118	1.66	1.32-1.78	y	101.8	50.0-145
13C-PCB-114	1.63	1.32-1.78	y	127.3	50.0-145
13C-PCB-105	1.61	1.32-1.78	y	130.0	50.0-145
13C-PCB-127	1.58	1.32-1.78	y	128.3	50.0-145
13C-PCB-126	1.58	1.32-1.78	y	134.7	50.0-145
13C-PCB-155	1.30	1.05-1.43	y	74.8	50.0-145
13C-PCB-153	1.26	1.05-1.43	y	96.7	50.0-145
13C-PCB-141	1.32	1.05-1.43	y	99.7	50.0-145
13C-PCB-138	1.30	1.05-1.43	y	97.4	50.0-145
13C-PCB-159	1.29	1.05-1.43	y	99.2	50.0-145
13C-PCB-167	1.30	1.05-1.43	y	102.7	50.0-145
13C-PCB-156	1.29	1.05-1.43	y	103.9	50.0-145
13C-PCB-157	1.28	1.05-1.43	y	101.5	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.30	1.05-1.43	y	104.4	50 - 145
13C-PCB-188	0.47	0.38-0.52	y	73.0	50 - 145
13C-PCB-180	0.46	0.38-0.52	y	79.4	50 - 145
13C-PCB-170	0.44	0.38-0.52	y	85.1	50 - 145
13C-PCB-189	0.46	0.38-0.52	y	90.2	50 - 145
13C-PCB-202	0.91	0.76-1.02	y	65.6	50 - 145
13C-PCB-194	0.91	0.76-1.02	y	100.3	50 - 145
13C-PCB-208	0.80	0.65-0.89	y	72.9	50 - 145
13C-PCB-206	0.77	0.65-0.89	y	83.8	50 - 145
13C-PCB-209	1.23	0.99-1.33	y	82.3	50 - 145

CRS vs. RS

13C-PCB-79	0.81	0.65-0.89	y	101.9	75 - 125
13C-PCB-178	0.46	0.38-0.52	y	81.1	75 - 125

Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14L1801 Filename: 150319E2 S:1 Acq:19-MAR-15 21:35:50 ConCal: ST150319E2-1

Lab ID: ST150319E2-1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	8.86e+07	2.97	y	1.33	16:10	1.001	0.997	1.007	41.9847
	PCB-2	9.11e+07	3.02	y	1.30	18:32	0.988	0.983	0.993	42.8059
	PCB-3	9.01e+07	3.03	y	1.30	18:46	1.001	0.996	1.006	42.2194
	PCB-4/10	1.36e+08	1.59	y	1.67	20:09	1.003	0.997	1.007	85.0171
	PCB-7/9	1.72e+08	1.61	y	1.25	21:55	0.868	0.864	0.872	91.2152
	PCB-6	8.58e+07	1.61	y	1.24	22:33	0.893	0.888	0.897	45.9267
	PCB-5/8	1.77e+08	1.61	y	1.27	22:59	0.910	0.905	0.915	92.1286
	PCB-14	1.04e+08	1.63	y	1.47	24:05	0.954	0.948	0.958	46.9241
	PCB-11	9.04e+07	1.64	y	1.28	25:16	1.001	0.995	1.005	46.7817
	PCB-12/13	1.84e+08	1.63	y	1.27	25:39	1.016	1.011	1.021	96.4914
	PCB-15	1.01e+08	1.60	y	1.44	25:58	1.028	1.023	1.031	46.7929
	PCB-19	4.90e+07	1.07	y	1.18	24:15	1.001	0.996	1.006	52.1592
	PCB-30	7.93e+07	1.08	y	1.87	25:08	1.038	1.033	1.043	53.4024
	PCB-18	5.37e+07	1.07	y	0.89	25:53	0.954	0.949	0.959	53.4456
	PCB-17	5.81e+07	1.08	y	0.96	26:04	0.961	0.956	0.966	53.5852
	PCB-24/27	1.55e+08	1.08	y	1.30	26:38	0.982	0.977	0.987	104.929
-	PCB-16/32	1.25e+08	1.08	y	1.05	27:09	1.001	0.996	1.006	104.829
-	PCB-34	8.75e+07	1.08	y	1.30	27:56	0.960	0.955	0.965	45.6745
	PCB-23	9.15e+07	1.10	y	1.21	28:02	0.964	0.958	0.968	51.3380
	PCB-29	9.22e+07	1.10	y	1.21	28:17	0.972	0.967	0.977	51.7405
	PCB-26	9.22e+07	1.08	y	1.24	28:29	0.979	0.974	0.984	50.5979
	PCB-25	8.37e+07	1.08	y	1.10	28:39	0.985	0.980	0.990	51.7954
	PCB-31	9.97e+07	1.10	y	1.25	29:00	0.997	0.992	1.002	54.0908
	PCB-28	8.44e+07	1.11	y	1.24	29:07	1.001	0.996	1.006	46.3385
	PCB-20/21/33	2.61e+08	1.08	y	1.16	29:43	1.022	1.016	1.026	152.956
	PCB-22	8.66e+07	1.10	y	1.16	30:10	1.037	1.032	1.042	50.5469
	PCB-36	9.25e+07	1.10	y	1.30	30:47	0.934	0.929	0.939	51.9647
	PCB-39	9.65e+07	1.10	y	1.26	31:15	0.948	0.943	0.953	55.8531
	PCB-38	8.67e+07	1.09	y	1.24	32:02	0.972	0.967	0.977	50.9710
	PCB-35	8.87e+07	1.10	y	1.26	32:32	0.987	0.982	0.992	51.5710
	PCB-37	9.71e+07	1.10	y	1.35	32:58	1.000	0.996	1.006	52.5315
	PCB-54	5.79e+07	0.79	y	1.02	28:00	1.001	0.996	1.006	55.2238
	PCB-50	4.64e+07	0.78	y	0.78	29:10	1.043	1.037	1.047	58.2192
	PCB-53	4.57e+07	0.78	y	1.14	29:48	0.946	0.941	0.951	54.5538
	PCB-51	4.70e+07	0.80	y	1.16	30:09	0.957	0.952	0.962	54.9374
	PCB-45	4.31e+07	0.76	y	1.04	30:34	0.970	0.965	0.975	56.1654
	PCB-46	3.91e+07	0.79	y	0.95	31:04	0.986	0.981	0.991	55.8876

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	1.09e+08	0.77	y	1.29	31:32	1.001	0.996	1.006	114.882
PCB-73	5.67e+07	0.79	y	1.41	31:40	1.005	0.999	1.009	54.4525
PCB-43/49	9.36e+07	0.78	y	1.14	31:49	1.010	1.005	1.015	111.504
PCB-47	5.20e+07	0.77	y	1.20	32:02	1.001	0.996	1.006	58.0363
PCB-48/75	1.10e+08	0.78	y	1.33	32:08	1.004	0.999	1.009	110.533
PCB-65	5.55e+07	0.77	y	1.32	32:24	1.012	1.007	1.017	56.3858
PCB-62	5.88e+07	0.78	y	1.36	32:31	1.016	1.011	1.021	57.8733
PCB-44	3.98e+07	0.79	y	0.87	32:49	1.026	1.020	1.030	61.1782
PCB-42/59	1.11e+08	0.78	y	1.24	33:03	1.033	1.027	1.037	120.309
PCB-41/64/71/72	2.28e+08	0.79	y	1.34	33:38	1.051	1.045	1.055	227.566
PCB-68	6.66e+07	0.78	y	1.61	33:54	1.059	1.053	1.063	55.3423
PCB-40	3.72e+07	0.79	y	0.86	34:06	1.066	1.061	1.071	57.9684
PCB-57	6.24e+07	0.79	y	1.12	34:28	0.970	0.965	0.975	57.2412
PCB-67	6.09e+07	0.77	y	1.09	34:46	0.979	0.974	0.984	57.2895
PCB-58	6.42e+07	0.78	y	1.14	34:53	0.982	0.977	0.987	58.0310
PCB-63	6.52e+07	0.77	y	1.16	35:02	0.986	0.981	0.991	57.5468
PCB-74	6.61e+07	0.78	y	1.21	35:19	0.994	0.989	0.999	55.9565
PCB-61/70	1.24e+08	0.79	y	1.13	35:30	1.000	0.995	1.005	112.859
PCB-76/66	1.30e+08	0.78	y	1.18	35:43	1.006	1.000	1.010	113.364
PCB-80	7.48e+07	0.80	y	1.32	35:58	1.000	0.995	1.005	54.5397
PCB-55	6.97e+07	0.78	y	1.23	36:16	1.009	1.004	1.014	54.6935
PCB-56/60	1.21e+08	0.79	y	1.11	36:46	1.023	1.018	1.028	105.771
PCB-79	6.57e+07	0.78	y	1.16	37:50	1.052	1.048	1.058	54.6476
PCB-78	6.48e+07	0.78	y	1.18	38:31	0.987	0.982	0.992	54.1617
PCB-81	7.01e+07	0.78	y	1.29	39:03	1.000	0.995	1.005	53.4707
PCB-77	6.50e+07	0.80	y	1.29	39:38	1.000	0.995	1.005	54.6674
PCB-104	3.50e+07	1.60	y	1.26	32:40	1.001	0.996	1.006	53.9294
PCB-96	3.07e+07	1.58	y	1.09	33:55	1.039	1.034	1.044	54.6875
PCB-103	2.79e+07	1.59	y	0.97	34:28	1.056	1.051	1.061	55.9775
PCB-100	2.78e+07	1.59	y	0.96	34:50	1.067	1.061	1.071	56.0152
PCB-94	2.34e+07	1.60	y	1.13	35:17	0.985	0.980	0.990	55.0620
PCB-95/98/102	7.77e+07	1.59	y	1.29	35:47	0.999	0.994	1.004	160.120
PCB-93	2.44e+07	1.68	y	1.06	35:55	1.003	0.998	1.008	60.9374
PCB-88/91	4.86e+07	1.60	y	1.12	36:12	1.011	1.006	1.016	114.898
PCB-121	3.68e+07	1.63	y	1.76	36:18	1.013	1.009	1.019	55.4729
PCB-84/92	4.90e+07	1.61	y	1.07	37:07	0.990	0.985	0.995	109.703
PCB-89	2.27e+07	1.61	y	1.00	37:19	0.995	0.990	1.000	54.6480

Integrations by Analyst: DMS Date: 3/20/15

Reviewed by Analyst:_____ Date:_____

Client ID: PCB CS3 14L1801 Filename: 150319E2 S:1 Acq:19-MAR-15 21:35:50 ConCal: ST150319E2-1

Lab ID: ST150319E2-1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	5.33e+07	1.61	y	1.21	37:30	1.000	0.995	1.005	105.973
	PCB-113	3.14e+07	1.62	y	1.34	37:45	1.007	1.002	1.012	56.3033
	PCB-99	2.59e+07	1.63	y	1.25	37:50	1.009	1.004	1.014	49.7445
	PCB-119	3.63e+07	1.59	y	1.88	38:18	0.988	0.982	0.992	51.4595
	PCB-108/112	5.61e+07	1.61	y	1.41	38:27	0.991	0.986	0.996	106.468
	PCB-83	3.41e+07	1.60	y	1.66	38:37	0.996	0.990	1.000	54.8007
	PCB-97	2.64e+07	1.62	y	1.30	38:48	1.000	0.995	1.005	54.2308
	PCB-86	1.97e+07	1.64	y	1.03	38:58	1.005	0.999	1.009	50.7929
	B-87/117/125	9.24e+07	1.59	y	1.59	39:04	1.007	1.002	1.012	154.862
	PCB-111/115	7.48e+07	1.59	y	1.86	39:15	1.012	1.006	1.016	107.491
	PCB-85/116	5.06e+07	1.63	y	1.39	39:21	1.015	1.010	1.020	96.8726
	PCB-120	3.74e+07	1.72	y	1.99	39:36	1.021	1.016	1.026	50.2639
	PCB-110	3.13e+07	1.49	y	1.70	39:45	1.025	1.019	1.029	49.1065
	PCB-82	1.96e+07	1.55	y	0.74	40:22	0.976	0.971	0.981	52.6024
	PCB-124	3.47e+07	1.57	y	1.30	41:03	0.993	0.988	0.998	53.1135
	PCB-107/109	7.04e+07	1.62	y	1.34	41:12	0.996	0.991	1.001	105.063
	PCB-123	3.32e+07	1.59	y	1.25	41:22	1.000	0.995	1.005	52.8486
-	PCB-106/118	7.15e+07	1.62	y	1.29	41:34	1.001	0.996	1.006	106.939
-	PCB-114	6.15e+07	1.60	y	1.45	42:12	1.000	0.995	1.005	48.1370
	PCB-122	5.48e+07	1.64	y	1.22	42:20	1.004	0.999	1.009	51.0274
	PCB-105	6.19e+07	1.59	y	1.56	43:04	1.000	0.995	1.005	46.2693
	PCB-127	5.69e+07	1.66	y	1.31	43:24	1.000	0.995	1.005	49.1417
	PCB-126	5.70e+07	1.63	y	1.41	45:17	1.000	0.995	1.005	48.3812
	PCB-155	2.20e+07	1.27	y	1.20	37:04	1.001	0.966	1.006	51.8448
	PCB-150	1.99e+07	1.28	y	1.13	38:19	1.035	1.030	1.040	49.9772
	PCB-152	2.13e+07	1.26	y	1.17	38:47	1.047	1.043	1.053	51.5301
	PCB-145	2.06e+07	1.29	y	1.09	39:14	1.059	1.055	1.065	53.3038
	PCB-136	2.02e+07	1.29	y	1.14	39:33	1.068	1.063	1.073	50.0922
	PCB-148	1.35e+07	1.27	y	0.82	39:40	1.071	1.066	1.076	46.6066
	PCB-154	1.55e+07	1.29	y	0.89	40:09	1.084	1.079	1.089	49.1270
	PCB-151	1.48e+07	1.28	y	0.82	40:48	1.102	1.097	1.107	51.2333
	PCB-135	1.44e+07	1.28	y	0.80	41:00	1.107	1.101	1.113	50.8726
	PCB-144	1.48e+07	1.29	y	0.86	41:07	1.110	1.105	1.116	48.8481
	PCB-147	1.46e+07	1.31	y	0.78	41:15	1.114	1.108	1.120	52.8071
	PCB-139/149	3.26e+07	1.29	y	0.87	41:31	1.121	1.115	1.127	105.765
-	PCB-140	1.42e+07	1.29	y	0.78	41:42	1.126	1.120	1.132	51.5985
-	PCB-134/143	6.79e+07	1.24	y	0.93	42:07	0.975	0.970	0.980	107.904

Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
PCB-133/142	6.71e+07	1.27	y	0.91	42:25	0.982	0.977	0.987	109.117
PCB-131	3.31e+07	1.24	y	0.85	42:35	0.986	0.981	0.991	57.8910
PCB-146/165	7.98e+07	1.27	y	1.08	42:48	0.991	0.986	0.996	109.120
PCB-132/161	8.13e+07	1.26	y	1.12	43:03	0.997	0.992	1.002	107.474
PCB-153	3.94e+07	1.25	y	1.20	43:13	1.000	0.996	1.006	48.7290
PCB-168	4.85e+07	1.27	y	1.36	43:26	1.005	1.000	1.010	52.8922
PCB-141	3.60e+07	1.23	y	1.16	43:57	1.000	0.995	1.005	51.9773
PCB-137	3.72e+07	1.21	y	1.18	44:20	1.009	1.004	1.014	52.7881
PCB-130	3.03e+07	1.27	y	0.92	44:26	1.011	1.006	1.016	54.9941
PCB-138/163/164	1.28e+08	1.26	y	1.38	44:49	1.001	0.996	1.006	154.971
PCB-158/160	9.64e+07	1.25	y	1.48	45:03	1.006	1.001	1.011	109.032
PCB-129	3.13e+07	1.27	y	0.99	45:17	1.011	1.007	1.017	52.8944
PCB-166	4.68e+07	1.26	y	1.14	45:45	0.993	0.988	0.998	54.8901
PCB-159	4.92e+07	1.26	y	1.22	46:04	1.000	0.995	1.005	53.9667
PCB-128/162	8.26e+07	1.25	y	1.03	46:22	1.007	1.002	1.012	107.015
PCB-167	4.86e+07	1.27	y	1.18	46:46	1.000	0.995	1.005	52.6641
PCB-156	5.04e+07	1.23	y	1.27	48:04	1.001	0.995	1.005	51.5174
PCB-157	5.03e+07	1.27	y	1.22	48:19	1.000	0.995	1.005	52.3012
PCB-169	4.68e+07	1.25	y	1.07	50:28	1.000	0.995	1.005	54.9218
PCB-188	3.24e+07	1.08	y	1.52	42:51	1.000	0.996	1.006	52.3689
PCB-184	2.97e+07	1.08	y	1.34	43:18	1.011	1.006	1.016	54.6457
PCB-179	3.02e+07	1.08	y	1.39	44:04	1.029	1.024	1.034	53.3708
PCB-176	3.18e+07	1.06	y	1.45	44:32	1.040	1.035	1.045	53.7666
PCB-186	3.22e+07	1.07	y	1.46	45:09	1.054	1.049	1.059	54.2638
PCB-178	2.42e+07	1.07	y	1.07	45:39	1.066	1.061	1.071	55.3519
PCB-175	2.42e+07	1.05	y	1.05	45:59	1.074	1.069	1.079	56.8465
PCB-182/187	4.94e+07	1.07	y	1.14	46:10	1.078	1.073	1.083	106.974
PCB-183	2.69e+07	1.06	y	1.22	46:29	1.085	1.080	1.090	54.0370
PCB-185	2.44e+07	1.06	y	1.40	47:08	0.956	0.950	0.960	52.7239
PCB-174	2.32e+07	1.04	y	1.29	47:30	0.963	0.958	0.968	54.4437
PCB-181	2.30e+07	1.08	y	1.35	47:37	0.966	0.960	0.970	51.6074
PCB-177	2.11e+07	1.05	y	1.27	47:46	0.969	0.963	0.973	50.4362
PCB-171	2.36e+07	1.09	y	1.46	48:04	0.975	0.969	0.979	49.2180
PCB-173	2.02e+07	1.05	y	1.10	48:29	0.983	0.978	0.988	55.4749
PCB-172	2.34e+07	1.07	y	1.35	48:56	0.992	0.987	0.997	52.3314
PCB-192	3.03e+07	1.09	y	1.74	49:08	0.996	0.991	1.001	52.8048
PCB-180	2.34e+07	1.09	y	1.45	49:20	1.000	0.995	1.005	48.8574

Integrations by Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14L1801 Filename: 150319E2 S:1 Acq:19-MAR-15 21:35:50 ConCal: ST150319E2-1

Lab ID: ST150319E2-1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.29e+07	1.08	y	1.85	49:33	1.005	0.999	1.009	53.8082
	PCB-191	3.18e+07	1.07	y	1.86	49:48	1.010	1.005	1.015	51.7018
	PCB-170	2.23e+07	1.06	y	1.67	50:50	1.000	0.995	1.005	47.4446
	PCB-190	3.08e+07	1.05	y	2.25	51:00	1.004	0.999	1.009	48.6504
	PCB-189	3.35e+07	1.07	y	1.67	52:20	1.000	0.995	1.005	50.4805
	PCB-202	1.90e+07	0.90	y	1.02	48:15	1.000	0.995	1.005	52.4317
	PCB-201	2.08e+07	0.91	y	1.10	48:44	1.010	1.005	1.015	53.2695
	PCB-204	1.97e+07	0.91	y	1.07	48:53	1.013	1.009	1.019	51.3596
	PCB-197	2.21e+07	0.90	y	1.17	49:12	1.020	1.015	1.025	53.0997
	PCB-200	2.02e+07	0.89	y	1.03	50:05	1.038	1.034	1.044	54.7263
	PCB-198	1.60e+07	0.93	y	0.75	51:25	1.066	1.062	1.072	59.5703
	PCB-199	1.40e+07	0.93	y	0.74	51:32	1.068	1.064	1.074	52.9598
-	PCB-196/203	3.21e+07	0.93	y	0.83	51:48	1.074	1.070	1.080	108.613
-	PCB-195	3.25e+07	0.92	y	1.14	52:59	0.984	0.979	0.989	50.0588
	PCB-194	3.41e+07	0.91	y	1.29	53:51	1.000	0.995	1.005	46.4230
	PCB-205	4.42e+07	0.92	y	1.61	54:08	1.006	1.001	1.010	48.2254
	PCB-208	3.15e+07	1.34	y	1.01	53:07	1.000	0.995	1.005	51.5374
	PCB-207	3.24e+07	1.36	y	1.03	53:26	1.006	1.001	1.011	52.3794
	PCB-206	2.07e+07	1.31	y	0.88	55:29	1.000	0.995	1.005	50.1265
	PCB-209	2.91e+07	1.16	y	1.35	56:49	1.000	0.995	1.005	48.5529

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.70e+08	2.97	y	16:10	1.31	127.010	
Total Di-PCB	1.05e+09	1.59	y	20:09	1.32	553.314	
Total Tri-PCB	5.19e+08	1.07	y	24:15	1.20	422.350	
Total Tri-PCB	1.46e+09	1.08	y	27:56	1.23	826.992	Sum:1249.34
Total Tetra-PCB	2.42e+09	0.79	y	28:00	1.17	2387.56	
Total Penta-PCB	1.21e+09	1.60	y	32:40	1.24	2195.75	
Total Penta-PCB	3.09e+08	1.60	y	42:12	1.39	257.096	Sum:2452.85
Total Hexa-PCB	2.38e+08	1.27	y	37:04	0.94	713.607	
Total Hexa-PCB	1.17e+09	1.24	y	42:07	1.13	1519.36	Sum:2232.97
Total Hepta-PCB	6.52e+08	1.08	y	42:51	1.37	1275.99	
Total Octa-PCB	1.64e+08	0.90	y	48:15	0.95	486.073	
Total Octa-PCB	1.14e+08	0.92	y	52:59	1.35	149.076	Sum:635.149
Total Nona-PCB	8.50e+07	1.34	y	53:07	0.99	154.841	
Total Deca-PCB	2.91e+07	1.16	y	56:49	1.35	48.5529	

Total PCB Conc:11022.8178520

Integrations by Analyst: DMS

Date: 3/20/15

Client ID: PCB CS3 14L1801 Filename: 150319E2 S:1 Acq:19-MAR-15 21:35:50 ConCal: ST150319E2-1

Lab ID: ST150319E2-1 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.58e+08	3.26 y	0.91	16:09	0.622	0.619	0.625	111	111
13C-PCB-3	1.64e+08	3.22 y	0.94	18:45	0.723	0.718	0.726	111	111
13C-PCB-4	9.54e+07	1.60 y	0.60	20:05	0.774	0.770	0.778	101	101
13C-PCB-9	1.51e+08	1.57 y	0.96	21:52	0.843	0.839	0.847	99.9	99.9
13C-PCB-11	1.51e+08	1.58 y	0.95	25:15	0.973	0.968	0.978	100	100
13C-PCB-19	7.92e+07	1.10 y	0.56	24:13	0.933	0.929	0.939	89.7	89.7
13C-PCB-28	1.48e+08	1.08 y	1.07	29:05	1.003	0.999	1.009	108	108
13C-PCB-32	1.14e+08	1.09 y	0.83	27:08	1.046	1.041	1.051	87.3	87.3
13C-PCB-37	1.37e+08	1.07 y	0.96	32:58	1.137	1.131	1.143	112	112
13C-PCB-47	7.48e+07	0.79 y	0.77	32:00	0.871	0.867	0.875	99.6	99.6
13C-PCB-52	7.37e+07	0.79 y	0.71	31:30	0.857	0.853	0.861	106	106
13C-PCB-54	1.02e+08	0.80 y	1.06	27:58	0.761	0.757	0.765	98.8	98.8
13C-PCB-70	9.74e+07	0.81 y	0.99	35:31	0.966	0.961	0.971	100	100
13C-PCB-77	9.22e+07	0.80 y	0.96	39:37	1.078	1.073	1.083	97.7	97.7
13C-PCB-80	1.04e+08	0.81 y	1.02	35:57	0.978	0.973	0.983	104	104
13C-PCB-81	1.02e+08	0.81 y	1.00	39:02	1.062	1.057	1.067	104	104
13C-PCB-95	3.76e+07	1.66 y	0.70	35:49	0.913	0.908	0.918	99.1	99.1
13C-PCB-97	3.75e+07	1.66 y	0.66	38:47	0.989	0.984	0.994	105	105
13C-PCB-101	4.17e+07	1.60 y	0.77	37:30	0.956	0.951	0.961	100	100
13C-PCB-104	5.14e+07	1.61 y	0.97	32:39	0.833	0.828	0.836	97.9	97.9
13C-PCB-105	8.59e+07	1.61 y	1.20	43:03	0.929	0.924	0.934	130	130
13C-PCB-114	8.79e+07	1.63 y	1.26	42:11	0.910	0.905	0.915	127	127
13C-PCB-118	5.18e+07	1.66 y	0.94	41:32	1.059	1.054	1.064	102	102
13C-PCB-123	5.01e+07	1.66 y	0.88	41:21	1.054	1.049	1.059	105	105
13C-PCB-126	8.33e+07	1.58 y	1.13	45:17	0.977	0.972	0.982	135	135
13C-PCB-127	8.87e+07	1.58 y	1.26	43:23	0.936	0.931	0.941	128	128
13C-PCB-138	5.99e+07	1.30 y	1.12	44:47	0.967	0.961	0.971	97.4	97.4
13C-PCB-141	5.98e+07	1.32 y	1.09	43:56	0.948	0.943	0.953	99.7	99.7
13C-PCB-153	6.76e+07	1.26 y	1.27	43:12	0.932	0.927	0.937	96.7	96.7
13C-PCB-155	3.54e+07	1.30 y	0.87	37:02	0.944	0.939	0.949	74.8	74.8
13C-PCB-156	7.71e+07	1.29 y	1.35	48:02	1.037	1.032	1.042	104	104
13C-PCB-157	7.90e+07	1.28 y	1.42	48:18	1.042	1.037	1.047	101	101
13C-PCB-159	7.46e+07	1.29 y	1.37	46:04	0.994	0.989	0.999	99.2	99.2
13C-PCB-167	7.80e+07	1.30 y	1.38	46:45	1.009	1.004	1.014	103	103
13C-PCB-169	7.93e+07	1.30 y	1.38	50:27	1.089	1.084	1.094	104	104
13C-PCB-170	2.82e+07	0.44 y	0.60	50:49	1.097	1.091	1.103	85.1	85.1
13C-PCB-180	3.30e+07	0.46 y	0.76	49:19	1.064	1.059	1.069	79.4	79.4
13C-PCB-188	4.07e+07	0.47 y	1.01	42:50	0.924	0.919	0.929	73.0	73.0
13C-PCB-189	3.97e+07	0.46 y	0.80	52:20	1.129	1.124	1.136	90.2	90.2
13C-PCB-194	5.69e+07	0.91 y	0.75	53:50	0.995	0.990	1.000	100	100
13C-PCB-202	3.56e+07	0.91 y	0.99	48:14	1.041	1.036	1.046	65.6	65.6
13C-PCB-206	4.68e+07	0.77 y	0.73	55:28	1.025	1.020	1.301	83.8	83.8
13C-PCB-208	6.01e+07	0.80 y	1.08	53:06	0.981	0.977	0.987	72.9	72.9
13C-PCB-209	4.45e+07	1.23 y	0.71	56:49	1.050	1.045	1.055	82.3	82.3

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.02e+08	0.81 y	1.02	37:49	1.029	1.024	1.033	102	102
13C-PCB-178	2.84e+07	0.46 y	0.64	45:37	0.985	0.980	0.989	81.1	81.1

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.02e+08	0.81 y	1.02	37:49	0.969	0.963	0.973	97.9	97.9
13C-PCB-178	2.84e+07	0.46 y	0.84	45:37	0.925	0.920	0.930	102	102

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.58e+08	1.59	y	1.00	25:57	100
13C-PCB-31	1.27e+08	1.07	y	1.00	28:59	100
13C-PCB-60	9.78e+07	0.80	y	1.00	36:45	100
13C-PCB-111	5.44e+07	1.61	y	1.00	39:13	100
13C-PCB-128	5.50e+07	1.27	y	1.00	46:20	100
13C-PCB-205	7.61e+07	0.91	y	1.00	54:07	100

Analyst: DMS

Date: 3/20/15

Vista Analytical Laboratory - Injection Log Run file: 150319E2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150319E2	1	ST150319E2-1	DMS	19-MAR-15	21:35:50	ST150319E2-1	NA
150319E2	2	B5C0088-BS1	DMS	19-MAR-15	22:40:17	ST150319E2-1	NA
150319E2	3	SOLVENT BLANK	DMS	19-MAR-15	23:44:45	ST150319E2-1	NA
150319E2	4	B5C0088-BLK1	DMS	20-MAR-15	00:49:09	ST150319E2-1	NA
150319E2	5	QC150319E2-1	DMS	20-MAR-15	01:53:36	ST150319E2-1	NA
150319E2	6	1400984-01	DMS	20-MAR-15	02:58:04	ST150319E2-1	NA
150319E2	7	1400984-02	DMS	20-MAR-15	04:02:32	ST150319E2-1	NA
150319E2	8	1400984-03	DMS	20-MAR-15	05:07:00	ST150319E2-1	NA
150319E2	9	SOLVENT BLANK	DMS	20-MAR-15	06:11:27	ST150319E2-1	NA
150319E2	10 *	SOLVENT BLANK	DMS	20-MAR-15	07:15:54	ST150319E2-1	NA
150319E2	12	SOLVENT BLANK	DMS	20-MAR-15	08:21:50	ST150319E2-1	NA

* = S# 11 A Solvent Blank Removed.

DMS 3/20/15

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST150319E2-1 End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentration within range?	✓	
First and last eluters present?	✓	
Retention Times within criteria?	DMS 3/20/15	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	
Forms signed and dated?	✓	
Correct ICAL referenced?	✓	
Run Log:		
-Data file matches Conc Cal ID?	✓	
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	✓	✓
TCDD/TCDF valleys < 25%?	NA	NA
Peaks integrated correctly?	✓	
Manual integrations included?	✓	
8280 CS1 Ending Standard		
-Ratios within limits		
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: DMS 3/20/15
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1

			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
			10	0.25	0.50	2.0	40	300
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
1,2,3,7,8-PeCDD	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
1,2,3,4,7,8-HxCDD	1.08	5.35 %	1.08	1.18	1.07	1.00	1.08	1.07
1,2,3,6,7,8-HxCDD	1.06	5.61 %	1.06	1.06	1.06	0.96	1.13	1.12
1,2,3,7,8,9-HxCDD	0.93	4.13 %	0.92	0.98	0.95	0.86	0.93	0.95
1,2,3,4,6,7,8-HpCDD	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
OCDD	0.95	4.86 %	0.97	0.96	0.97	0.85	0.97	0.97
2,3,7,8-TCDF	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1,2,3,7,8-PeCDF	1.07	4.51 %	1.10	1.13	1.05	1.00	1.11	1.06
2,3,4,7,8-PeCDF	1.03	3.55 %	1.05	1.04	1.06	0.96	1.07	1.02
1,2,3,4,7,8-HxCDF	1.38	3.14 %	1.40	1.42	1.37	1.31	1.42	1.39
1,2,3,6,7,8-HxCDF	1.26	5.25 %	1.26	1.34	1.29	1.14	1.26	1.27
2,3,4,6,7,8-HxCDF	1.29	3.82 %	1.28	1.30	1.33	1.20	1.34	1.29
1,2,3,7,8,9-HxCDF	1.19	3.32 %	1.16	1.25	1.18	1.13	1.20	1.19
1,2,3,4,6,7,8-HpCDF	1.61	4.02 %	1.59	1.67	1.66	1.49	1.64	1.61
1,2,3,4,7,8,9-HpCDF	1.53	4.55 %	1.54	1.58	1.55	1.39	1.53	1.57
OCDF	1.10	3.96 %	1.11	1.09	1.13	1.01	1.13	1.11
13C-2,3,7,8-TCDD	1.06	3.81 %	1.05	1.00	1.07	1.04	1.10	1.10
13C-1,2,3,7,8-PeCDD	1.18	9.13 %	1.06	1.09	1.23	1.23	1.34	1.11
13C-1,2,3,4,7,8-HxCDD	0.72	5.98 %	0.70	0.69	0.70	0.70	0.73	0.80
13C-1,2,3,6,7,8-HxCDD	0.74	6.30 %	0.72	0.71	0.71	0.71	0.73	0.83
13C-1,2,3,7,8,9-HxCDD	0.85	6.05 %	0.83	0.81	0.83	0.83	0.86	0.95
13C-1,2,3,4,6,7,8-HpCDD	0.65	10.75 %	0.63	0.61	0.61	0.62	0.66	0.79
13C-OCDD	0.76	5.80 %	0.70	0.73	0.76	0.77	0.79	0.82
13C-2,3,7,8-TCDF	0.92	2.26 %	0.93	0.89	0.91	0.91	0.94	0.93
13C-1,2,3,7,8-PeCDF	0.92	6.20 %	0.86	0.87	0.90	0.95	1.01	0.94
13C-2,3,4,7,8-PeCDF	0.93	5.50 %	0.89	0.89	0.91	0.96	1.02	0.92
13C-1,2,3,4,7,8-HxCDF	0.98	5.30 %	0.92	0.94	0.96	0.98	1.01	1.07
13C-1,2,3,6,7,8-HxCDF	1.08	5.13 %	1.07	1.00	1.05	1.09	1.12	1.16
13C-2,3,4,6,7,8-HxCDF	1.03	4.15 %	0.97	1.00	1.02	1.01	1.04	1.10
13C-1,2,3,7,8,9-HxCDF	0.86	7.80 %	0.84	0.82	0.82	0.83	0.87	0.99
13C-1,2,3,4,6,7,8-HpCDF	0.72	9.95 %	0.70	0.69	0.67	0.69	0.72	0.86
13C-1,2,3,4,7,8,9-HpCDF	0.70	6.18 %	0.65	0.69	0.67	0.67	0.74	0.76
13C-OCDF	0.85	5.23 %	0.82	0.80	0.83	0.85	0.88	0.92
37Cl-2,3,7,8-TCDD	1.12	13.99 %	1.22	1.08	1.03	1.24	1.27	0.86
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

ms 1/9/15

1/9/15

CT 1/9/15

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:
Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	2.08e+06	0.73 y	26:60	-	1.11
2	Unk	1,2,3,7,8-PeCDD	50.00	8.78e+06	0.61 y	31:30	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	50.00	7.82e+06	1.26 y	34:50	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.94e+06	1.25 y	34:57	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	50.00	7.97e+06	1.24 y	35:15	-	0.92
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	7.29e+06	1.04 y	38:42	-	1.12
7	Unk	OCDD	100.00	1.40e+07	0.89 y	42:02	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.78e+06	0.80 y	26:13	-	1.00
9	Unk	1,2,3,7,8-PeCDF	50.00	1.40e+07	1.59 y	30:20	-	1.10
10	Unk	2,3,4,7,8-PeCDF	50.00	1.38e+07	1.59 y	31:14	-	1.05
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.34e+07	1.29 y	33:56	-	1.40
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.40e+07	1.29 y	34:04	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.29e+07	1.31 y	34:40	-	1.28
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.01e+07	1.27 y	35:39	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.16e+07	1.08 y	37:30	-	1.59
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.04e+07	1.07 y	39:16	-	1.54
17	Unk	OCDF	100.00	1.88e+07	0.91 y	42:16	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	1.87e+07	0.79 y	26:58	-	1.05
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.90e+07	0.63 y	31:29	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.44e+07	1.25 y	34:49	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.50e+07	1.25 y	34:56	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.72e+07	1.23 y	35:14	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.30e+07	1.07 y	38:42	-	0.63
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:02	-	0.70
43	IS	13C-2,3,7,8-TCDF	100.00	2.77e+07	0.74 y	26:12	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.54e+07	1.55 y	30:19	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.61 y	31:13	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.92e+07	0.51 y	33:55	-	0.92
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.23e+07	0.50 y	34:03	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	34:39	-	0.97
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.73e+07	0.51 y	35:38	-	0.84
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.46e+07	0.43 y	37:29	-	0.70
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.35e+07	0.45 y	39:15	-	0.65
52	IS	13C-OCDF	200.00	3.39e+07	0.92 y	42:15	-	0.82
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.18e+06		26:59	-	1.22
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.79e+07	0.80 y	26:24	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.97e+07	0.78 y	24:58	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.08e+07	0.51 y	34:21	-	1.00

Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-2 1613 CS0 14I1819

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	5.01e+04	0.71 y	27:03	-	1.36
2	Unk	1,2,3,7,8-PeCDD	1.25	1.89e+05	0.58 y	31:32	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.80e+05	1.38 y	34:52	-	1.18
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.66e+05	1.38 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.76e+05	1.42 y	35:17	-	0.98
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.40e+05	0.92 y	38:44	-	1.04
7	Unk	OCDD	2.50	3.13e+05	0.92 y	42:04	-	0.96
8	Unk	2,3,7,8-TCDF	0.25	6.52e+04	0.82 y	26:17	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1.25	3.11e+05	1.49 y	30:22	-	1.13
10	Unk	2,3,4,7,8-PeCDF	1.25	2.91e+05	1.54 y	31:15	-	1.04
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.95e+05	1.36 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.95e+05	1.26 y	34:06	-	1.34
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.89e+05	1.31 y	34:43	-	1.30
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.25e+05	1.36 y	35:41	-	1.25
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.54e+05	1.14 y	37:32	-	1.67
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.39e+05	1.08 y	39:18	-	1.58
17	Unk	OCDF	2.50	3.84e+05	0.91 y	42:18	-	1.09
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.61e+07	0.64 y	31:32	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.24 y	34:51	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.31 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.44e+07	1.29 y	35:16	-	0.81
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.07e+07	1.03 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.60e+07	0.89 y	42:03	-	0.73
43	IS	13C-2,3,7,8-TCDF	100.00	2.24e+07	0.75 y	26:16	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.20e+07	1.59 y	30:21	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.24e+07	1.61 y	31:15	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.66e+07	0.52 y	33:57	-	0.94
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:05	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:42	-	1.00
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.45e+07	0.52 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.22e+07	0.44 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.21e+07	0.43 y	39:17	-	0.69
52	IS	13C-OCDF	200.00	2.81e+07	0.92 y	42:17	-	0.80
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	4.00e+04		27:03	-	1.08
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.48e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.52e+07	0.78 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.77e+07	0.53 y	34:23	-	1.00

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	9.47e+04	0.71 y	27:03	-	1.22
2	Unk	1,2,3,7,8-PeCDD	2.50	4.17e+05	0.58 y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.52e+05	1.23 y	34:52	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.56e+05	1.22 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.72e+05	1.18 y	35:17	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.28e+05	1.04 y	38:44	-	1.14
7	Unk	OCDD	5.00	7.00e+05	0.91 y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	0.50	1.35e+05	0.76 y	26:17	-	1.15
9	Unk	1,2,3,7,8-PeCDF	2.50	6.14e+05	1.75 y	30:22	-	1.05
10	Unk	2,3,4,7,8-PeCDF	2.50	6.26e+05	1.44 y	31:15	-	1.06
11	Unk	1,2,3,4,7,8-HxCDF	2.50	6.24e+05	1.23 y	33:58	-	1.37
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.42e+05	1.32 y	34:06	-	1.29
13	Unk	2,3,4,6,7,8-HxCDF	2.50	6.41e+05	1.24 y	34:42	-	1.33
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.56e+05	1.22 y	35:40	-	1.18
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.07 y	37:32	-	1.66
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.91e+05	1.14 y	39:17	-	1.55
17	Unk	OCDF	5.00	8.91e+05	0.93 y	42:17	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.56e+07	0.78 y	27:02	-	1.07
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.79e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.32e+07	1.27 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.35e+07	1.26 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.56e+07	1.27 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.05 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:03	-	0.76
43	IS	13C-2,3,7,8-TCDF	100.00	2.36e+07	0.78 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.34e+07	1.58 y	30:21	-	0.90
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.37e+07	1.54 y	31:14	-	0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.82e+07	0.52 y	33:57	-	0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.99e+07	0.52 y	34:05	-	1.05
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.93e+07	0.52 y	34:41	-	1.02
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.55e+07	0.53 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.26e+07	0.43 y	37:31	-	0.67
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.15e+07	0.89 y	42:17	-	0.83
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	7.54e+04		27:03	-	1.03
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.46e+07	0.79 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.60e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.89e+07	0.52 y	34:22	-	1.00

Filename: 141016D1 S: 5 Acquired: 16-OCT-14 14:19:34
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.13e+05	0.82 y	27:03	-	1.06
2	Unk	1,2,3,7,8-PeCDD	10.00	1.47e+06	0.59 y	31:32	-	0.84
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.26e+06	1.28 y	34:52	-	1.00
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.24e+06	1.26 y	34:59	-	0.96
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.30e+06	1.28 y	35:17	-	0.86
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.04 y	38:44	-	1.07
7	Unk	OCDD	20.00	2.38e+06	0.87 y	42:03	-	0.85
8	Unk	2,3,7,8-TCDF	2.00	4.47e+05	0.78 y	26:17	-	0.99
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.55 y	30:22	-	1.00
10	Unk	2,3,4,7,8-PeCDF	10.00	2.32e+06	1.57 y	31:15	-	0.96
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.31e+06	1.29 y	33:58	-	1.31
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.24e+06	1.28 y	34:06	-	1.14
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.19e+06	1.30 y	34:42	-	1.20
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.69e+06	1.33 y	35:41	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.86e+06	1.10 y	37:32	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.69e+06	1.09 y	39:17	-	1.39
17	Unk	OCDF	20.00	3.11e+06	0.93 y	42:17	-	1.01
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.04
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.74e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.26e+07	1.28 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.29e+07	1.24 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.51e+07	1.23 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.13e+07	1.05 y	38:43	-	0.62
42	IS	13C-OCDD	200.00	2.79e+07	0.88 y	42:03	-	0.77
43	IS	13C-2,3,7,8-TCDF	100.00	2.26e+07	0.77 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.36e+07	1.54 y	30:21	-	0.95
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.40e+07	1.57 y	31:14	-	0.96
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.77e+07	0.50 y	33:57	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.97e+07	0.51 y	34:05	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52 y	34:41	-	1.01
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.50e+07	0.52 y	35:40	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.24e+07	0.43 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.22e+07	0.43 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.07e+07	0.90 y	42:17	-	0.85
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.51e+05		27:03	-	1.24
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.49e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.80e+07	0.52 y	34:22	-	1.00

Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00
Run: 141016D1 Analyte: Cal: Results:
Sample text: ST141016D1-5 1613 CS4 14I1822

	Typ	Name	Amount	Resp	RA		RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	6.36e+06	0.79	y	27:03	-	1.16
2	Unk	1,2,3,7,8-PeCDD	200.00	3.08e+07	0.61	y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	200.00	2.57e+07	1.25	y	34:52	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	200.00	2.66e+07	1.26	y	34:59	-	1.13
5	Unk	1,2,3,7,8,9-HxCDD	200.00	2.59e+07	1.24	y	35:17	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.46e+07	1.04	y	38:44	-	1.14
7	Unk	OCDD	400.00	5.00e+07	0.89	y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	40.00	8.92e+06	0.77	y	26:17	-	1.08
9	Unk	1,2,3,7,8-PeCDF	200.00	4.90e+07	1.58	y	30:22	-	1.11
10	Unk	2,3,4,7,8-PeCDF	200.00	4.76e+07	1.60	y	31:15	-	1.07
11	Unk	1,2,3,4,7,8-HxCDF	200.00	4.66e+07	1.28	y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	200.00	4.56e+07	1.28	y	34:06	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	200.00	4.54e+07	1.26	y	34:42	-	1.34
14	Unk	1,2,3,7,8,9-HxCDF	200.00	3.40e+07	1.28	y	35:40	-	1.20
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.84e+07	1.09	y	37:32	-	1.64
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.69e+07	1.08	y	39:17	-	1.53
17	Unk	OCDF	400.00	6.50e+07	0.92	y	42:18	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.37e+07	0.81	y	27:02	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.63	y	31:31	-	1.34
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.19e+07	1.25	y	34:51	-	0.73
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.18e+07	1.26	y	34:58	-	0.73
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.40e+07	1.24	y	35:16	-	0.86
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.08e+07	1.07	y	38:43	-	0.66
42	IS	13C-OCDD	200.00	2.58e+07	0.89	y	42:03	-	0.79
43	IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.77	y	26:16	-	0.94
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.21e+07	1.61	y	30:21	-	1.01
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.23e+07	1.57	y	31:14	-	1.02
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.64e+07	0.51	y	33:57	-	1.01
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.82e+07	0.50	y	34:05	-	1.12
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.69e+07	0.51	y	34:41	-	1.04
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.52	y	35:40	-	0.87
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.45	y	37:31	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.20e+07	0.44	y	39:16	-	0.74
52	IS	13C-OCDF	200.00	2.87e+07	0.89	y	42:17	-	0.88
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	6.31e+06			27:03	-	1.27
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.24e+07	0.82	y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.19e+07	0.79	y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.63e+07	0.51	y	34:22	-	1.00

Filename: 150107D1 S: 1 Acquired: 7-JAN-15 10:43:31
Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:
Sample text: ST150107D1-1 1613 CS5 15A0502

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	300.00	9.22e+07	0.77 y	26:59	-	1.12
2	Unk	1,2,3,7,8-PeCDD	1500.00	3.69e+08	0.62 y	31:40	-	0.89
3	Unk	1,2,3,4,7,8-HxCDD	1500.00	3.48e+08	1.26 y	34:59	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	1500.00	3.80e+08	1.25 y	35:06	-	1.12
5	Unk	1,2,3,7,8,9-HxCDD	1500.00	3.67e+08	1.25 y	35:23	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	1500.00	3.56e+08	1.05 y	38:54	-	1.11
7	Unk	OCDD	3000.00	6.47e+08	0.90 y	42:09	-	0.97
8	Unk	2,3,7,8-TCDF	300.00	1.19e+08	0.78 y	26:09	-	1.04
9	Unk	1,2,3,7,8-PeCDF	1500.00	6.12e+08	1.59 y	30:27	-	1.06
10	Unk	2,3,4,7,8-PeCDF	1500.00	5.74e+08	1.56 y	31:23	-	1.02
11	Unk	1,2,3,4,7,8-HxCDF	1500.00	6.02e+08	1.28 y	34:06	-	1.39
12	Unk	1,2,3,6,7,8-HxCDF	1500.00	5.99e+08	1.28 y	34:14	-	1.27
13	Unk	2,3,4,6,7,8-HxCDF	1500.00	5.77e+08	1.29 y	34:50	-	1.29
14	Unk	1,2,3,7,8,9-HxCDF	1500.00	4.82e+08	1.30 y	35:46	-	1.19
15	Unk	1,2,3,4,6,7,8-HpCDF	1500.00	5.67e+08	1.07 y	37:34	-	1.61
16	Unk	1,2,3,4,7,8,9-HpCDF	1500.00	4.84e+08	1.07 y	39:27	-	1.57
17	Unk	OCDF	3000.00	8.27e+08	0.92 y	42:22	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	2.74e+07	0.80 y	26:57	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	2.75e+07	0.62 y	31:39	-	1.11
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.18e+07	1.22 y	34:58	-	0.80
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.25e+07	1.30 y	35:05	-	0.83
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	2.59e+07	1.25 y	35:22	-	0.95
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.15e+07	1.07 y	38:53	-	0.79
42	IS	13C-OCDD	200.00	4.45e+07	0.91 y	42:08	-	0.82
43	IS	13C-2,3,7,8-TCDF	100.00	3.80e+07	0.75 y	26:08	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	3.84e+07	1.58 y	30:27	-	0.94
45	IS	13C-2,3,4,7,8-PeCDF	100.00	3.74e+07	1.62 y	31:22	-	0.92
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.90e+07	0.52 y	34:05	-	1.07
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.15e+07	0.52 y	34:13	-	1.16
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.98e+07	0.51 y	34:49	-	1.10
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.69e+07	0.51 y	35:45	-	0.99
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.34e+07	0.44 y	37:34	-	0.86
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.06e+07	0.45 y	39:26	-	0.76
52	IS	13C-OCDF	200.00	4.97e+07	0.90 y	42:22	-	0.92
53	C/Up	37Cl-2,3,7,8-TCDD	300.00	6.41e+07		26:59	-	0.86
54	RS/RT	13C-1,2,3,4-TCDD	100.00	2.48e+07	0.80 y	26:21	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	4.08e+07	0.78 y	24:48	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.71e+07	0.51 y	34:30	-	1.00

Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
			10	0.25	0.50	2.0	40	300
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
TCDD EMPC	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
Total Penta-Dioxins	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
PeCDD EMPC	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
Total Hexa-Dioxins	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
HxCDD EMPC	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
Total Hepta-Dioxins	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
HpCDD EMPC	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
Total Tetra-Furans	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
TCDF EMPC	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1st Func. Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
1st Func. PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Hexa-Furans	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
HxCDF EMPC	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
Total Hepta-Furans	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59
HpCDF EMPC	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59

Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Inst. ID. VG-7

Data filename: 141016D1

Name	RRT Limits Lower	Upper	Samp# 1 10 RRT#1	Samp# 3 0.25 RRT#2	Samp# 4 0.50 RRT#3	Samp# 5 2.0 RRT#4	Samp# 6 40 RRT#5	Samp# 1 300 RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.000	1.001
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.001	1.000	1.000	1.000	1.000
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.001	1.000	1.001	1.001	1.001	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.001	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.001	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.021	1.021	1.021	1.021	1.021	1.023
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.192	1.191	1.191	1.191	1.191	1.201
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.026	1.026	1.026	1.026	1.026	1.025
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.126	1.126	1.126	1.126	1.127
13C-OCDD	1.085	-1.365	1.224	1.223	1.223	1.223	1.223	1.222
13C-2,3,7,8-TCDF	0.923	-1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.148	1.147	1.147	1.147	1.147	1.155
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.182	1.181	1.180	1.180	1.180	1.190
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.037	1.037	1.038	1.038	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.091	1.091	1.091	1.091	1.091	1.089
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.143	1.142	1.143	1.143	1.143	1.143
13C-OCDF	1.091	-1.371	1.230	1.230	1.230	1.230	1.230	1.228
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.022	1.022	1.022	1.022	1.024
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: [signature]

Date: 1/8/15

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	182	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.74	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	97.2	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	93.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.9	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: MJ

Date: 1/8/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST141016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	40.0 - 60.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	40.0 - 60.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	80.0 - 120

Analyst: MJ

Date: 1/9/15

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	70.0 - 130
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	182	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	y	102	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	97.2	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	93.4	70.0 - 130
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					10.9	7.00 - 13.0

Analyst: MJ

Date: 1/9/15

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.192	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.148	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.182	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613. 10/94

Analyst: VM

Date: 1/8/15

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.224	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

Analyst: (M)

Date: 1/9/15

Client ID: 1613 CS3 14I1102 Filename: 141016D1 S:1 Acq:16-OCT-14 11:05:57 ConCal: NA
Lab ID: ST141016D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL
	2,3,7,8-TCDD	2.08e+06	0.73 y	1.17	26:60	1.001	9.4477		*	2.5	*
	1,2,3,7,8-PeCDD	8.78e+06	0.61 y	0.91	31:30	1.000	50.922		*	2.5	*
	1,2,3,4,7,8-HxCDD	7.82e+06	1.26 y	1.08	34:50	1.000	50.237		*	2.5	*
	1,2,3,6,7,8-HxCDD	7.94e+06	1.25 y	1.06	34:57	1.001	49.601		*	2.5	*
	1,2,3,7,8,9-HxCDD	7.97e+06	1.24 y	0.93	35:15	1.000	49.631		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	7.29e+06	1.04 y	1.10	38:42	1.000	50.805		*	2.5	*
	OCDD	1.40e+07	0.89 y	0.95	42:02	1.000	102.06		*	2.5	*
	2,3,7,8-TCDF	2.78e+06	0.80 y	1.07	26:13	1.001	9.3791		*	2.5	*
	1,2,3,7,8-PeCDF	1.40e+07	1.59 y	1.07	30:20	1.000	51.276		*	2.5	*
	2,3,4,7,8-PeCDF	1.38e+07	1.59 y	1.03	31:14	1.000	50.741		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.34e+07	1.29 y	1.38	33:56	1.000	50.629		*	2.5	*
	1,2,3,6,7,8-HxCDF	1.40e+07	1.29 y	1.26	34:04	1.001	50.176		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.29e+07	1.31 y	1.29	34:40	1.001	49.592		*	2.5	*
	1,2,3,7,8,9-HxCDF	1.01e+07	1.27 y	1.19	35:39	1.000	49.090		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	1.16e+07	1.08 y	1.61	37:30	1.000	49.399		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	1.04e+07	1.07 y	1.53	39:16	1.000	50.426		*	2.5	*
	OCDF	1.88e+07	0.91 y	1.10	42:16	1.000	100.89		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.87e+07	0.79 y	1.06	26:58	1.021	98.865				
IS	13C-1,2,3,7,8-PeCDD	1.90e+07	0.63 y	1.18	31:29	1.192	90.040				
IS	13C-1,2,3,4,7,8-HxCDD	1.44e+07	1.25 y	0.72	34:49	1.014	96.577				
IS	13C-1,2,3,6,7,8-HxCDD	1.50e+07	1.25 y	0.74	34:56	1.017	98.426				
IS	13C-1,2,3,7,8,9-HxCDD	1.72e+07	1.23 y	0.85	35:14	1.026	97.305				
IS	13C-1,2,3,4,6,7,8-HpCDD	1.30e+07	1.07 y	0.65	38:42	1.127	95.724				
IS	13C-OCDD	2.89e+07	0.89 y	0.76	42:02	1.224	182.02				
IS	13C-2,3,7,8-TCDF	2.77e+07	0.74 y	0.92	26:12	0.992	101.61				
IS	13C-1,2,3,7,8-PeCDF	2.54e+07	1.55 y	0.92	30:19	1.148	92.843				
IS	13C-2,3,4,7,8-PeCDF	2.63e+07	1.61 y	0.93	31:13	1.182	95.246				
IS	13C-1,2,3,4,7,8-HxCDF	1.92e+07	0.51 y	0.98	33:55	0.988	94.089				
IS	13C-1,2,3,6,7,8-HxCDF	2.23e+07	0.50 y	1.08	34:03	0.991	99.047				
IS	13C-2,3,4,6,7,8-HxCDF	2.02e+07	0.52 y	1.03	34:39	1.009	94.921				
IS	13C-1,2,3,7,8,9-HxCDF	1.73e+07	0.51 y	0.86	35:38	1.037	97.069				
IS	13C-1,2,3,4,6,7,8-HpCDF	1.46e+07	0.43 y	0.72	37:29	1.091	97.247				
IS	13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.45 y	0.70	39:15	1.143	93.423				
IS	13C-OCDF	3.39e+07	0.92 y	0.85	42:15	1.230	192.38				
C/Up	37Cl-2,3,7,8-TCDD	2.18e+06		1.12	26:59	1.022	10.884				
RS/RT	13C-1,2,3,4-TCDD	1.79e+07	0.80 y	1.00	26:24	*	100.00				
RS	13C-1,2,3,4-TCDF	2.97e+07	0.78 y	1.00	24:58	*	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.08e+07	0.51 y	1.00	34:21	*	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	54.8	55.1		*	*
Total Penta-Dioxins	159	159		*	*
Total Hexa-Dioxins	194	195		*	*
Total Hepta-Dioxins	128	128		*	*
Total Tetra-Furans	30.0	30.3		*	*
Total Penta-Furans	209.92	210.51		*	*
Total Hexa-Furans	248	249		*	*
Total Hepta-Furans	102	102		*	*

	Rec	Qual
IS	98.9	
IS	90.0	
IS	96.6	
IS	98.4	
IS	97.3	
IS	95.7	
IS	91.0	
IS	102	
IS	92.8	
IS	95.2	
IS	94.1	
IS	99.0	
IS	94.9	
IS	97.1	
IS	97.2	
IS	93.4	
IS	96.2	
C/Up	2180	

Integrations by Analyst: MJ Date: 1/9/15

Reviewed by Analyst: CT Date: 1/12/15

Vista Analytical Laboratory - Injection Log Run file: 141016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141016D1	1	ST141016D1-1	MAS	16-OCT-14	11:05:57	ST141016D1-1	NA
141016D1	2	SOLVENT BLANK	MAS	16-OCT-14	11:54:17	ST141016D1-1	NA
141016D1	3	ST141016D1-2	MAS	16-OCT-14	12:42:43	ST141016D1-1	NA
141016D1	4	ST141016D1-3	MAS	16-OCT-14	13:31:08	ST141016D1-1	NA
141016D1	5	ST141016D1-4	MAS	16-OCT-14	14:19:34	ST141016D1-1	NA
141016D1	6	ST141016D1-5	MAS	16-OCT-14	15:08:00	ST141016D1-1	NA
141016D1	8	SOLVENT BLANK	MAS	16-OCT-14	16:44:52	ST141016D1-1	NA
141016D1	9	SS141016D1-1	MAS	16-OCT-14	17:33:17	ST141016D1-1	NA
150107D1	1	ST150107D1-1	MAS	7-JAN-15	10:43:31	ST141016D1-1	NA

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 150114E1 Analyte: Cal: pcbvg8-1-14-15 Inst. ID. VG-8

Data filename: 150114E1

Name	Mean RRF	%RSD	Samp# 4 1.0 RRF#1	Samp# 5 2.5 RRF#2	Samp# 6 50 RRF#3	Samp# 7 400 RRF#4	Samp# 8 1000 RRF#5	Samp# 2 0.25 * RRF#6
PCB-1	1.33	4.52 %	1.38	1.32	1.23	1.32	1.34	1.40
PCB-2	1.30	5.65 %	1.42	1.31	1.26	1.21	1.33	1.25
PCB-3	1.30	4.28 %	1.38	1.33	1.26	1.23	1.31	1.27
PCB-4/10	1.67	10.28 %	1.75	1.67	1.56	1.54	1.54	1.98
PCB-7/9	1.25	8.26 %	1.30	1.26	1.18	1.16	1.18	1.43
PCB-6	1.24	9.18 %	1.34	1.24	1.18	1.14	1.13	1.41
PCB-5/8	1.27	10.47 %	1.34	1.25	1.17	1.17	1.17	1.50
PCB-14	1.47	7.78 %	1.58	1.45	1.41	1.37	1.36	1.64
PCB-11	1.28	10.60 %	1.39	1.25	1.21	1.17	1.17	1.51
PCB-12/13	1.27	7.89 %	1.33	1.25	1.20	1.18	1.20	1.44
PCB-15	1.44	10.40 %	1.50	1.41	1.36	1.32	1.35	1.72
PCB-19	1.18	7.51 %	1.25	1.20	1.13	1.11	1.10	1.32
PCB-30	1.87	8.54 %	2.03	1.85	1.80	1.72	1.75	2.11
PCB-18	0.89	9.45 %	0.98	0.90	0.85	0.82	0.78	0.98
PCB-17	0.96	10.12 %	1.03	0.97	0.92	0.86	0.86	1.10
PCB-24/27	1.30	9.45 %	1.34	1.31	1.23	1.21	1.18	1.52
PCB-16/32	1.05	11.15 %	1.10	1.04	0.98	0.95	0.95	1.25
PCB-34	1.30	11.06 %	1.30	1.41	1.19	1.16	1.21	1.53
PCB-23	1.21	8.15 %	1.26	1.14	1.16	1.22	1.10	1.37
PCB-29	1.21	10.43 %	1.29	1.31	1.06	1.14	1.10	1.36
PCB-26	1.24	7.44 %	1.31	1.30	1.11	1.14	1.24	1.32
PCB-25	1.10	6.57 %	1.21	1.09	1.00	1.13	1.10	1.04
PCB-31	1.25	8.92 %	1.30	1.32	1.13	1.26	1.10	1.38
PCB-28	1.24	9.99 %	1.34	1.30	1.07	1.20	1.13	1.38
PCB-20/21/33	1.16	9.64 %	1.21	1.23	1.05	1.19	0.98	1.26
PCB-22	1.16	10.72 %	1.23	1.17	1.09	1.13	0.99	1.36
PCB-36	1.30	9.13 %	1.25	1.36	1.40	1.10	1.27	1.42
PCB-39	1.26	10.29 %	1.36	1.38	1.28	1.07	1.13	1.35
PCB-38	1.24	2.89 %	1.26	1.22	1.31	1.22	1.24	1.22
PCB-35	1.26	5.42 %	1.19	1.19	1.28	1.23	1.31	1.35
PCB-37	1.35	8.86 %	1.43	1.33	1.28	1.27	1.23	1.55
PCB-54	1.02	10.31 %	1.04	1.07	0.95	0.94	0.94	1.21
PCB-50	0.78	8.21 %	0.84	0.78	0.73	0.75	0.70	0.87
PCB-53	1.14	10.76 %	1.14	1.15	1.09	1.09	0.99	1.36
PCB-51	1.16	7.07 %	1.26	1.16	1.11	1.15	1.04	1.25
PCB-45	1.04	10.54 %	1.02	1.04	1.01	0.92	1.00	1.25
PCB-46	0.95	12.05 %	0.99	0.98	0.87	0.85	0.86	1.15
PCB-52/69	1.29	11.02 %	1.38	1.38	1.20	1.15	1.15	1.49
PCB-73	1.41	11.96 %	1.52	1.25	1.42	1.40	1.22	1.67
PCB-43/49	1.14	10.50 %	1.14	1.11	1.06	1.10	1.05	1.37
PCB-47	1.20	15.31 %	1.29	1.11	1.09	1.04	1.13	1.53

DMS 1/20/15

*=CS0 Reinjected due to PCB 153 contamination.

QMS 1/20/15

PCB-48/75	1.33	10.00 %	1.39	1.32	1.20	1.24	1.23	1.56
PCB-65	1.32	14.66 %	1.41	1.33	1.13	1.22	1.15	1.64
PCB-62	1.36	13.10 %	1.46	1.27	1.28	1.15	1.31	1.66
PCB-44	0.87	16.44 %	0.91	0.87	0.80	0.76	0.75	1.13
PCB-42/59	1.24	17.44 %	1.33	1.27	1.05	1.09	1.07	1.61
PCB-41/64/71/72	1.34	13.28 %	1.39	1.35	1.14	1.28	1.21	1.65
PCB-68	1.61	19.92 %	1.69	1.57	1.30	1.45	1.43	2.21
PCB-40	0.86	17.24 %	0.93	0.84	0.71	0.78	0.77	1.11
PCB-57	1.12	17.03 %	1.23	1.12	1.03	1.00	0.90	1.44
PCB-67	1.09	14.59 %	1.18	1.11	1.00	0.99	0.91	1.35
PCB-58	1.14	12.88 %	1.24	1.09	1.12	1.00	1.00	1.37

PCB-63	1.16	14.60 %	1.26	1.16	1.10	1.05	0.96	1.44
PCB-74	1.21	14.89 %	1.31	1.20	1.08	1.12	1.04	1.52
PCB-61/70	1.13	14.67 %	1.22	1.08	1.04	0.97	1.01	1.42
PCB-76/66	1.18	16.88 %	1.25	1.12	1.06	1.06	1.03	1.55
PCB-80	1.32	13.55 %	1.40	1.32	1.20	1.18	1.20	1.65
PCB-55	1.23	13.61 %	1.29	1.19	1.13	1.08	1.15	1.54
PCB-56/60	1.11	15.55 %	1.17	1.12	0.98	1.03	0.93	1.40
PCB-79	1.16	11.65 %	1.23	1.21	1.03	1.01	1.11	1.37
PCB-78	1.18	15.63 %	1.24	1.16	1.03	1.11	1.01	1.51
PCB-81	1.29	14.36 %	1.31	1.29	1.17	1.15	1.17	1.64
PCB-77	1.29	15.01 %	1.32	1.31	1.18	1.14	1.14	1.65
PCB-104	1.26	11.04 %	1.36	1.24	1.16	1.16	1.17	1.50
PCB-96	1.09	9.21 %	1.16	1.09	0.96	1.08	1.02	1.25
PCB-103	0.97	9.45 %	1.10	0.96	0.86	0.94	0.89	1.05
PCB-100	0.96	7.05 %	1.03	0.99	0.87	0.92	0.92	1.04
PCB-94	1.13	8.09 %	1.21	1.14	1.06	1.08	1.03	1.26
PCB-95/98/102	1.29	10.92 %	1.37	1.31	1.16	1.22	1.16	1.52
PCB-93	1.06	13.28 %	1.14	1.05	1.13	0.82	1.01	1.23
PCB-88/91	1.12	10.49 %	1.27	1.11	1.12	1.00	0.99	1.26
PCB-121	1.76	11.27 %	1.84	1.74	1.57	1.55	1.79	2.09
PCB-84/92	1.07	8.45 %	1.11	1.12	1.04	1.01	0.95	1.20
PCB-89	1.00	10.58 %	1.05	1.04	0.95	0.91	0.87	1.15
PCB-90/101	1.21	11.77 %	1.28	1.22	1.13	1.09	1.07	1.45
PCB-113	1.34	9.13 %	1.37	1.42	1.39	1.24	1.15	1.48
PCB-99	1.25	17.56 %	1.42	1.22	1.03	1.05	1.17	1.59
PCB-119	1.88	8.86 %	2.00	1.89	1.77	1.76	1.72	2.15
PCB-108/112	1.41	6.60 %	1.50	1.45	1.33	1.37	1.29	1.51
PCB-83	1.66	6.92 %	1.76	1.70	1.58	1.64	1.49	1.80
PCB-97	1.30	10.69 %	1.38	1.32	1.20	1.20	1.17	1.53
PCB-86	1.03	17.33 %	1.08	0.93	0.99	0.90	0.93	1.38
PCB-87/117/125	1.59	6.14 %	1.67	1.60	1.52	1.53	1.50	1.74
PCB-111/115	1.86	9.78 %	1.89	1.86	1.77	1.72	1.71	2.20
PCB-85/116	1.39	12.01 %	1.44	1.31	1.33	1.23	1.34	1.71
PCB-120	1.99	10.45 %	2.06	2.00	1.83	1.83	1.84	2.36
PCB-110	1.70	12.10 %	1.82	1.69	1.62	1.50	1.54	2.05
PCB-82	0.74	11.63 %	0.78	0.74	0.73	0.68	0.64	0.89
PCB-124	1.30	5.43 %	1.41	1.29	1.29	1.20	1.28	1.36
PCB-107/109	1.34	11.92 %	1.40	1.33	1.21	1.22	1.24	1.62
PCB-123	1.25	9.48 %	1.24	1.29	1.21	1.15	1.15	1.47
PCB-106/118	1.29	12.71 %	1.36	1.30	1.20	1.15	1.16	1.58
PCB-114	1.45	9.74 %	1.52	1.46	1.36	1.32	1.36	1.70
PCB-122	1.22	8.66 %	1.24	1.30	1.12	1.17	1.11	1.38
PCB-105	1.56	9.15 %	1.62	1.62	1.47	1.44	1.41	1.79
PCB-127	1.31	10.47 %	1.40	1.30	1.24	1.19	1.18	1.53
PCB-126	1.41	6.08 %	1.42	1.46	1.39	1.32	1.33	1.55
PCB-155	1.20	7.21 %	1.27	1.21	1.12	1.14	1.12	1.33
PCB-150	1.13	8.78 %	1.15	1.07	1.02	1.12	1.10	1.31
PCB-152	1.17	14.36 %	1.21	1.11	1.03	1.09	1.08	1.49
PCB-145	1.09	6.93 %	1.10	1.09	1.00	1.07	1.08	1.23
PCB-136	1.14	7.24 %	1.16	1.12	1.09	1.08	1.11	1.30

PCB-148	0.82	8.69 %	0.87	0.81	0.71	0.79	0.80	0.92
PCB-154	0.89	11.57 %	0.89	0.89	0.80	0.84	0.84	1.09
PCB-151	0.82	6.55 %	0.85	0.80	0.75	0.79	0.80	0.91
PCB-135	0.80	7.09 %	0.78	0.80	0.72	0.78	0.81	0.89
PCB-144	0.86	9.26 %	0.87	0.77	0.78	0.85	0.87	0.99
PCB-147	0.78	10.69 %	0.80	0.72	0.68	0.75	0.81	0.92
PCB-139/149	0.87	8.00 %	0.87	0.85	0.77	0.86	0.88	0.99
PCB-140	0.78	8.58 %	0.80	0.76	0.70	0.76	0.76	0.90
PCB-134/143	0.93	8.74 %	0.93	0.94	0.85	0.90	0.88	1.08
PCB-133/142	0.91	6.06 %	0.95	0.89	0.85	0.89	0.88	1.00
PCB-131	0.85	6.74 %	0.94	0.85	0.79	0.81	0.80	0.89

PCB-146/165	1.08	4.94 %	1.13	1.08	1.01	1.05	1.06	1.15
PCB-132/161	1.12	8.35 %	1.19	1.12	1.04	1.03	1.07	1.26
PCB-153	1.20	18.86 %	1.31	1.19	1.04	1.03	1.02	1.60
PCB-168	1.36	6.98 %	1.37	1.39	1.27	1.28	1.31	1.52
PCB-141	1.16	10.89 %	1.25	1.16	1.05	1.06	1.06	1.36
PCB-137	1.18	10.18 %	1.27	1.16	1.07	1.09	1.10	1.38
PCB-130	0.92	9.18 %	0.95	0.80	0.89	0.90	0.92	1.06
PCB-138/163/164	1.38	11.94 %	1.43	1.35	1.27	1.28	1.26	1.69
PCB-158/160	1.48	12.88 %	1.51	1.44	1.37	1.35	1.34	1.84
PCB-129	0.99	13.56 %	1.06	0.96	0.88	0.94	0.87	1.23
PCB-166	1.14	10.59 %	1.18	1.10	1.06	1.06	1.08	1.37
PCB-159	1.22	9.93 %	1.21	1.22	1.17	1.13	1.15	1.46
PCB-128/162	1.03	8.90 %	1.07	1.05	0.97	0.97	0.96	1.20
PCB-167	1.18	10.96 %	1.23	1.18	1.10	1.09	1.09	1.42
PCB-156	1.27	7.87 %	1.31	1.30	1.19	1.19	1.19	1.44
PCB-157	1.22	9.73 %	1.29	1.24	1.13	1.12	1.13	1.41
PCB-169	1.07	6.63 %	1.08	1.10	1.02	1.02	1.03	1.20
PCB-188	1.52	12.80 %	1.60	1.46	1.43	1.38	1.38	1.88
PCB-184	1.34	8.74 %	1.42	1.37	1.27	1.23	1.22	1.51
PCB-179	1.39	10.02 %	1.47	1.41	1.33	1.27	1.25	1.62
PCB-176	1.45	9.52 %	1.52	1.46	1.40	1.34	1.32	1.69
PCB-186	1.46	10.56 %	1.52	1.44	1.37	1.33	1.34	1.73
PCB-178	1.07	12.94 %	1.18	1.07	1.00	0.96	0.94	1.30
PCB-175	1.05	10.07 %	1.12	1.03	1.01	0.94	0.97	1.22
PCB-182/187	1.14	9.45 %	1.21	1.15	1.06	1.05	1.03	1.31
PCB-183	1.22	10.61 %	1.33	1.26	1.16	1.10	1.08	1.40
PCB-185	1.40	10.38 %	1.43	1.40	1.34	1.32	1.27	1.68
PCB-174	1.29	7.93 %	1.34	1.26	1.25	1.19	1.22	1.47
PCB-181	1.35	6.04 %	1.34	1.43	1.30	1.31	1.25	1.46
PCB-177	1.27	12.30 %	1.27	1.32	1.16	1.17	1.13	1.55
PCB-171	1.46	8.76 %	1.52	1.43	1.34	1.38	1.38	1.68
PCB-173	1.10	5.77 %	1.13	1.10	1.08	1.04	1.06	1.22
PCB-172	1.35	12.56 %	1.35	1.24	1.27	1.30	1.27	1.69
PCB-192	1.74	9.92 %	1.83	1.64	1.61	1.67	1.63	2.05
PCB-180	1.45	14.04 %	1.57	1.42	1.32	1.30	1.29	1.80
PCB-193	1.85	10.11 %	1.97	1.77	1.72	1.74	1.72	2.18
PCB-191	1.86	7.62 %	1.97	1.81	1.76	1.76	1.77	2.10
PCB-170	1.67	11.07 %	1.73	1.65	1.56	1.52	1.55	2.01
PCB-190	2.25	7.94 %	2.26	2.12	2.17	2.15	2.18	2.60
PCB-189	1.67	7.88 %	1.76	1.69	1.58	1.56	1.55	1.88
PCB-202	1.02	8.62 %	1.09	0.99	0.96	0.95	0.96	1.16
PCB-201	1.10	8.30 %	1.14	1.10	1.01	1.06	1.02	1.25
PCB-204	1.07	12.15 %	1.08	1.02	0.96	1.06	1.00	1.33
PCB-197	1.17	8.84 %	1.18	1.12	1.08	1.14	1.11	1.37
PCB-200	1.03	10.36 %	1.06	1.01	0.97	0.97	0.96	1.24
PCB-198	0.75	8.91 %	0.73	0.69	0.73	0.73	0.75	0.88
PCB-199	0.74	10.59 %	0.80	0.68	0.68	0.71	0.71	0.87
PCB-196/203	0.83	11.76 %	0.84	0.74	0.75	0.82	0.81	1.01
PCB-195	1.14	9.26 %	1.10	1.04	1.07	1.14	1.16	1.34
PCB-194	1.29	13.97 %	1.37	1.30	1.18	1.15	1.14	1.61

PCB-205	1.61	8.14 %	1.58	1.56	1.55	1.56	1.53	1.88
PCB-208	1.01	10.69 %	1.10	1.03	0.94	0.92	0.91	1.18
PCB-207	1.03	10.99 %	1.07	1.00	0.96	0.95	0.95	1.24
PCB-206	0.88	12.49 %	0.89	0.91	0.82	0.79	0.79	1.08
PCB-209	1.35	13.71 %	1.42	1.31	1.21	1.22	1.23	1.69
Total Mono-PCB	1.31	4.13 %	1.39	1.32	1.25	1.25	1.33	1.30
Total Di-PCB	1.32	9.07 %	1.39	1.31	1.25	1.22	1.23	1.52
Total Tri-PCB	1.20	9.46 %	1.28	1.21	1.14	1.11	1.10	1.39

Total Tri-PCB	1.23	6.59 %	1.28	1.27	1.16	1.18	1.13	1.34
Total Tetra-PCB	1.17	12.41 %	1.23	1.16	1.06	1.08	1.04	1.42
Total Penta-PCB	1.24	9.06 %	1.32	1.25	1.15	1.16	1.14	1.42
Total Penta-PCB	1.39	8.69 %	1.44	1.43	1.31	1.29	1.28	1.59
Total Hexa-PCB	0.94	8.43 %	0.96	0.92	0.85	0.91	0.93	1.09
Total Hexa-PCB	1.13	9.33 %	1.17	1.12	1.05	1.06	1.06	1.32
Total Hepta-PCB	1.37	9.78 %	1.44	1.36	1.29	1.27	1.26	1.61
Total Octa-PCB	0.95	9.73 %	0.98	0.90	0.88	0.92	0.90	1.12
Total Octa-PCB	1.35	9.69 %	1.35	1.30	1.27	1.28	1.28	1.61
Total Nona-PCB	0.99	10.97 %	1.04	0.99	0.92	0.90	0.90	1.18
Total Deca-PCB	1.35	13.71 %	1.42	1.31	1.21	1.22	1.23	1.69
13C-PCB-1	0.91	8.84 %	0.97	0.98	0.98	0.87	0.78	0.87
13C-PCB-3	0.94	7.32 %	0.95	0.94	0.95	0.99	0.81	1.01
13C-PCB-4	0.60	4.10 %	0.61	0.61	0.62	0.61	0.57	0.57
13C-PCB-9	0.96	2.48 %	0.97	0.98	0.98	0.97	0.92	0.95
13C-PCB-11	0.95	1.55 %	0.95	0.97	0.96	0.96	0.93	0.95
13C-PCB-19	0.56	2.90 %	0.57	0.58	0.56	0.57	0.54	0.54
13C-PCB-32	0.83	2.16 %	0.84	0.83	0.82	0.85	0.81	0.80
13C-PCB-28	1.07	9.16 %	1.09	1.00	1.21	0.96	1.15	1.00
13C-PCB-37	0.96	6.55 %	1.03	0.89	1.00	0.88	1.02	0.96
13C-PCB-54	1.06	5.00 %	1.00	1.08	1.15	1.03	1.08	1.03
13C-PCB-52	0.71	4.14 %	0.71	0.73	0.76	0.68	0.69	0.70
13C-PCB-47	0.77	5.19 %	0.74	0.74	0.84	0.78	0.79	0.73
13C-PCB-70	0.99	4.52 %	0.99	0.95	0.99	0.99	1.08	0.96
13C-PCB-80	1.02	3.31 %	1.02	0.99	1.03	1.00	1.08	1.02
13C-PCB-81	1.00	4.12 %	0.96	0.96	1.02	0.97	1.07	1.00
13C-PCB-77	0.96	4.93 %	0.94	0.94	0.98	0.93	1.06	0.95
13C-PCB-104	0.97	5.43 %	0.97	0.98	1.05	0.95	0.89	0.96
13C-PCB-95	0.70	2.72 %	0.71	0.71	0.72	0.71	0.67	0.68
13C-PCB-101	0.77	2.41 %	0.77	0.80	0.76	0.75	0.75	0.76
13C-PCB-97	0.66	1.72 %	0.66	0.67	0.66	0.65	0.64	0.66
13C-PCB-123	0.88	1.37 %	0.87	0.90	0.87	0.88	0.87	0.88
13C-PCB-118	0.94	2.58 %	0.90	0.95	0.93	0.97	0.95	0.91
13C-PCB-114	1.26	2.59 %	1.25	1.24	1.25	1.23	1.25	1.32
13C-PCB-105	1.20	4.66 %	1.21	1.20	1.19	1.11	1.21	1.29
13C-PCB-127	1.26	4.39 %	1.23	1.25	1.22	1.19	1.30	1.34
13C-PCB-126	1.13	5.54 %	1.12	1.07	1.06	1.16	1.12	1.23
13C-PCB-155	0.87	5.64 %	0.88	0.92	0.93	0.84	0.81	0.84
13C-PCB-153	1.27	2.20 %	1.26	1.27	1.29	1.23	1.27	1.31
13C-PCB-141	1.09	1.88 %	1.09	1.12	1.11	1.06	1.08	1.10
13C-PCB-138	1.12	2.25 %	1.09	1.11	1.11	1.10	1.16	1.14
13C-PCB-159	1.37	1.53 %	1.35	1.36	1.35	1.37	1.41	1.38
13C-PCB-167	1.38	2.42 %	1.37	1.39	1.41	1.33	1.37	1.42
13C-PCB-156	1.35	2.75 %	1.30	1.34	1.33	1.35	1.41	1.37
13C-PCB-157	1.42	3.06 %	1.39	1.35	1.41	1.42	1.48	1.45
13C-PCB-169	1.38	3.38 %	1.35	1.36	1.37	1.34	1.41	1.46
13C-PCB-188	1.01	2.32 %	0.99	1.00	1.01	1.03	1.05	1.01
13C-PCB-180	0.76	2.20 %	0.73	0.75	0.76	0.75	0.78	0.77
13C-PCB-170	0.60	2.12 %	0.60	0.59	0.59	0.61	0.62	0.62
13C-PCB-189	0.80	3.20 %	0.78	0.78	0.78	0.80	0.83	0.84
13C-PCB-202	0.99	1.63 %	0.96	0.98	1.00	0.98	1.00	1.00

13C-PCB-194	0.75	3.67 %	0.78	0.77	0.75	0.72	0.72	0.73
13C-PCB-208	1.08	5.55 %	1.08	1.09	1.11	1.12	1.13	0.97
13C-PCB-206	0.73	4.68 %	0.75	0.76	0.73	0.75	0.74	0.67
13C-PCB-209	0.71	4.81 %	0.71	0.69	0.75	0.72	0.74	0.66
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.02	5.92 %	1.04	1.02	0.99	0.97	1.13	0.97
13C-PCB-178	0.64	1.49 %	0.64	0.63	0.63	0.64	0.63	0.65
13C-PCB-79	1.02	4.88 %	1.08	1.07	0.97	0.99	1.06	0.97
13C-PCB-178	0.84	2.93 %	0.88	0.85	0.83	0.85	0.80	0.84

Filename: 150114E1 S: 4 Acquired: 14-JAN-15 15:50:46
Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-3 PCB CS1 14L2903

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	2.35e+06	3.11 y	16:11	-	1.38
2	Mono	PCB-2	1.00	2.36e+06	3.10 y	18:34	-	1.42
3	Mono	PCB-3	1.00	2.30e+06	3.03 y	18:48	-	1.38
4	Di	PCB-4/10	2.00	3.70e+06	1.55 y	20:10	-	1.75
5	Di	PCB-7/9	2.00	4.37e+06	1.61 y	21:57	-	1.30
6	Di	PCB-6	1.00	2.25e+06	1.47 y	22:36	-	1.34
7	Di	PCB-5/8	2.00	4.52e+06	1.59 y	23:01	-	1.34
8	Di	PCB-14	1.00	2.63e+06	1.54 y	24:06	-	1.58
9	Di	PCB-11	1.00	2.31e+06	1.75 y	25:18	-	1.39
10	Di	PCB-12/13	2.00	4.44e+06	1.62 y	25:42	-	1.33
11	Di	PCB-15	1.00	2.50e+06	1.76 y	26:00	-	1.50
12	Tri	PCB-19	1.00	1.25e+06	1.01 y	24:18	-	1.25
13	Tri	PCB-30	1.00	2.02e+06	1.05 y	25:11	-	2.03
14	Tri	PCB-18	1.00	1.43e+06	1.13 y	25:56	-	0.98
15	Tri	PCB-17	1.00	1.51e+06	1.06 y	26:06	-	1.03
16	Tri	PCB-24/27	2.00	3.91e+06	1.01 y	26:41	-	1.34
17	Tri	PCB-16/32	2.00	3.23e+06	1.10 y	27:11	-	1.10
18	Tri	PCB-34	1.00	1.63e+06	0.97 y	27:59	-	1.30
19	Tri	PCB-23	1.00	1.58e+06	0.97 y	28:05	-	1.26
20	Tri	PCB-29	1.00	1.62e+06	0.88 y	28:20	-	1.29
21	Tri	PCB-26	1.00	1.64e+06	1.03 y	28:32	-	1.31
22	Tri	PCB-25	1.00	1.52e+06	0.98 y	28:43	-	1.21
23	Tri	PCB-31	1.00	1.63e+06	1.07 y	29:03	-	1.30
24	Tri	PCB-28	1.00	1.68e+06	1.05 y	29:10	-	1.34
25	Tri	PCB-20/21/33	3.00	4.56e+06	1.03 y	29:46	-	1.21
26	Tri	PCB-22	1.00	1.54e+06	1.02 y	30:12	-	1.23
27	Tri	PCB-36	1.00	1.47e+06	1.12 y	30:50	-	1.25
28	Tri	PCB-39	1.00	1.60e+06	1.04 y	31:18	-	1.36
29	Tri	PCB-38	1.00	1.49e+06	1.01 y	32:05	-	1.26
30	Tri	PCB-35	1.00	1.40e+06	1.06 y	32:36	-	1.19
31	Tri	PCB-37	1.00	1.68e+06	1.09 y	33:02	-	1.43
32	Tetra	PCB-54	1.00	1.33e+06	0.82 y	28:03	-	1.04
33	Tetra	PCB-50	1.00	1.07e+06	0.70 y	29:12	-	0.84
34	Tetra	PCB-53	1.00	1.03e+06	0.70 y	29:51	-	1.14
35	Tetra	PCB-51	1.00	1.14e+06	0.66 y	30:11	-	1.26
36	Tetra	PCB-45	1.00	9.30e-05	0.74 y	30:37	-	1.02
37	Tetra	PCB-46	1.00	9.02e-05	0.68 y	31:07	-	0.99
38	Tetra	PCB-52/69	2.00	2.51e+06	0.71 y	31:35	-	1.38
39	Tetra	PCB-73	1.00	1.38e+06	0.76 y	31:42	-	1.52
40	Tetra	PCB-43/49	2.00	2.07e+06	0.78 y	31:52	-	1.14

41	Tetra	PCB-47	1.00	1.22e+06	0.78	y	32:05	- 1.29
42	Tetra	PCB-48/75	2.00	2.65e+06	0.70	y	32:12	- 1.39
43	Tetra	PCB-65	1.00	1.34e+06	0.70	y	32:28	- 1.41
44	Tetra	PCB-62	1.00	1.39e+06	0.79	y	32:33	- 1.46
45	Tetra	PCB-44	1.00	8.60e+05	0.85	y	32:53	- 0.91
46	Tetra	PCB-42/59	2.00	2.53e+06	0.74	y	33:06	- 1.33
47	Tetra	PCB-41/64/71/72	4.00	5.28e+06	0.74	y	33:40	- 1.39
48	Tetra	PCB-68	1.00	1.60e+06	0.69	y	33:56	- 1.69
49	Tetra	PCB-40	1.00	8.85e+05	0.77	y	34:09	- 0.93
50	Tetra	PCB-57	1.00	1.55e+06	0.69	y	34:31	- 1.23
51	Tetra	PCB-67	1.00	1.49e+06	0.76	y	34:50	- 1.18

52	Tetra	PCB-58	1.00	1.57e+06	0.74 y	34:56	-	1.24
53	Tetra	PCB-63	1.00	1.60e+06	0.74 y	35:06	-	1.26
54	Tetra	PCB-74	1.00	1.66e+06	0.79 y	35:23	-	1.31
55	Tetra	PCB-61/70	2.00	3.08e+06	0.69 y	35:33	-	1.22
56	Tetra	PCB-76/66	2.00	3.16e+06	0.76 y	35:46	-	1.25
57	Tetra	PCB-80	1.00	1.83e+06	0.80 y	36:00	-	1.40
58	Tetra	PCB-55	1.00	1.69e+06	0.72 y	36:19	-	1.29
59	Tetra	PCB-56/60	2.00	3.05e+06	0.71 y	36:49	-	1.17
60	Tetra	PCB-79	1.00	1.60e+06	0.78 y	37:53	-	1.23
61	Tetra	PCB-78	1.00	1.54e+06	0.78 y	38:35	-	1.24
62	Tetra	PCB-81	1.00	1.62e+06	0.72 y	39:06	-	1.31
63	Tetra	PCB-77	1.00	1.58e+06	0.76 y	39:42	-	1.32
64	Penta	PCB-104	1.00	1.21e+06	1.62 y	32:44	-	1.36
65	Penta	PCB-96	1.00	1.03e+06	1.56 y	34:00	-	1.16
66	Penta	PCB-103	1.00	9.77e+05	1.45 y	34:31	-	1.10
67	Penta	PCB-100	1.00	9.21e+05	1.70 y	34:53	-	1.03
68	Penta	PCB-94	1.00	7.88e+05	1.43 y	35:21	-	1.21
69	Penta	PCB-95/98/102	3.00	2.67e+06	1.60 y	35:51	-	1.37
70	Penta	PCB-93	1.00	7.41e+05	1.72 y	35:59	-	1.14
71	Penta	PCB-88/91	2.00	1.65e+06	1.45 y	36:16	-	1.27
72	Penta	PCB-121	1.00	1.20e+06	1.67 y	36:23	-	1.84
73	Penta	PCB-84/92	2.00	1.58e+06	1.55 y	37:12	-	1.11
74	Penta	PCB-89	1.00	7.49e+05	1.60 y	37:23	-	1.05
75	Penta	PCB-90/101	2.00	1.82e+06	1.49 y	37:33	-	1.28
76	Penta	PCB-113	1.00	9.71e+05	1.64 y	37:48	-	1.37
77	Penta	PCB-99	1.00	1.01e+06	1.55 y	37:54	-	1.42
78	Penta	PCB-119	1.00	1.22e+06	1.57 y	38:22	-	2.00
79	Penta	PCB-108/112	2.00	1.82e+06	1.55 y	38:31	-	1.50
80	Penta	PCB-83	1.00	1.07e+06	1.64 y	38:40	-	1.76
81	Penta	PCB-97	1.00	8.40e+05	1.56 y	38:53	-	1.38
82	Penta	PCB-86	1.00	6.57e+05	1.43 y	39:01	-	1.08
83	Penta	PCB-87/117/125	3.00	3.05e+06	1.55 y	39:09	-	1.67
84	Penta	PCB-111/115	2.00	2.31e+06	1.56 y	39:18	-	1.89
85	Penta	PCB-85/116	2.00	1.75e+06	1.73 y	39:26	-	1.44
86	Penta	PCB-120	1.00	1.26e+06	1.71 y	39:41	-	2.06
87	Penta	PCB-110	1.00	1.11e+06	1.71 y	39:49	-	1.82
88	Penta	PCB-82	1.00	6.26e+05	1.67 y	40:26	-	0.78
89	Penta	PCB-124	1.00	1.13e+06	1.44 y	41:07	-	1.41
90	Penta	PCB-107/109	2.00	2.24e+06	1.54 y	41:16	-	1.40
91	Penta	PCB-123	1.00	1.00e+06	1.62 y	41:26	-	1.24
92	Penta	PCB-106/118	2.00	2.26e+06	1.67 y	41:38	-	1.36
93	Penta	PCB-114	1.00	1.30e+06	1.74 y	42:16	-	1.52
94	Penta	PCB-122	1.00	1.06e+06	1.71 y	42:23	-	1.24
95	Penta	PCB-105	1.00	1.35e+06	1.66 y	43:07	-	1.62
96	Penta	PCB-127	1.00	1.18e+06	1.71 y	43:28	-	1.40
97	Penta	PCB-126	1.00	1.09e+06	1.69 y	45:21	-	1.42
98	Hexa	PCB-155	1.00	1.03e+06	1.24 y	37:07	-	1.27
99	Hexa	PCB-150	1.00	9.30e+05	1.32 y	38:22	-	1.15
100	Hexa	PCB-152	1.00	9.81e+05	1.24 y	38:52	-	1.21
101	Hexa	PCB-145	1.00	8.92e+05	1.38 y	39:18	-	1.10

102	Hexa	PCB-136	1.00	9.41e+05	1.33	y	39:37	- 1.16
103	Hexa	PCB-148	1.00	7.03e+05	1.35	y	39:43	- 0.87
104	Hexa	PCB-154	1.00	7.18e+05	1.19	y	40:14	- 0.89
105	Hexa	PCB-151	1.00	6.88e+05	1.33	y	40:51	- 0.85
106	Hexa	PCB-135	1.00	6.28e+05	1.20	y	41:05	- 0.78
107	Hexa	PCB-144	1.00	7.04e+05	1.27	y	41:10	- 0.87
108	Hexa	PCB-147	1.00	6.51e+05	1.41	y	41:18	- 0.80
109	Hexa	PCB-139/149	2.00	1.40e+06	1.21	y	41:34	- 0.87
110	Hexa	PCB-140	1.00	6.48e+05	1.30	y	41:46	- 0.80
111	Hexa	PCB-134/143	2.00	1.60e+06	1.14	y	42:12	- 0.93
112	Hexa	PCB-133/142	2.00	1.64e+06	1.33	y	42:29	- 0.95

113	Hexa	PCB-131	1.00	8.08e+05	1.26 y	42:38	-	0.94
114	Hexa	PCB-146/165	2.00	1.96e+06	1.28 y	42:52	-	1.13
115	Hexa	PCB-132/161	2.00	2.06e+06	1.27 y	43:07	-	1.19
116	Hexa	PCB-153	1.00	1.13e+06	1.23 y	43:18	-	1.31
117	Hexa	PCB-168	1.00	1.18e+06	1.09 y	43:30	-	1.37
118	Hexa	PCB-141	1.00	9.29e+05	1.17 y	44:02	-	1.25
119	Hexa	PCB-137	1.00	9.45e+05	1.20 y	44:25	-	1.27
120	Hexa	PCB-130	1.00	7.07e+05	1.13 y	44:31	-	0.95
121	Hexa	PCB-138/163/164	3.00	3.22e+06	1.21 y	44:54	-	1.43
122	Hexa	PCB-158/160	2.00	2.26e+06	1.24 y	45:08	-	1.51
123	Hexa	PCB-129	1.00	7.93e+05	1.31 y	45:23	-	1.06
124	Hexa	PCB-166	1.00	1.09e+06	1.28 y	45:49	-	1.18
125	Hexa	PCB-159	1.00	1.13e+06	1.11 y	46:09	-	1.21
126	Hexa	PCB-128/162	2.00	1.98e+06	1.23 y	46:26	-	1.07
127	Hexa	PCB-167	1.00	1.15e+06	1.12 y	46:50	-	1.23
128	Hexa	PCB-156	1.00	1.17e+06	1.37 y	48:07	-	1.31
129	Hexa	PCB-157	1.00	1.24e+06	1.29 y	48:23	-	1.29
130	Hexa	PCB-169	1.00	1.00e+06	1.13 y	50:32	-	1.08
131	Hepta	PCB-188	1.00	1.09e+06	1.07 y	42:56	-	1.60
132	Hepta	PCB-184	1.00	9.60e+05	1.07 y	43:22	-	1.42
133	Hepta	PCB-179	1.00	9.94e+05	0.98 y	44:09	-	1.47
134	Hepta	PCB-176	1.00	1.03e+06	1.02 y	44:37	-	1.52
135	Hepta	PCB-186	1.00	1.03e+06	1.08 y	45:13	-	1.52
136	Hepta	PCB-178	1.00	7.97e+05	0.98 y	45:43	-	1.18
137	Hepta	PCB-175	1.00	7.60e+05	1.10 y	46:04	-	1.12
138	Hepta	PCB-182/187	2.00	1.64e+06	0.98 y	46:14	-	1.21
139	Hepta	PCB-183	1.00	9.02e+05	1.10 y	46:33	-	1.33
140	Hepta	PCB-185	1.00	7.20e+05	1.10 y	47:12	-	1.43
141	Hepta	PCB-174	1.00	6.73e+05	0.92 y	47:34	-	1.34
142	Hepta	PCB-181	1.00	6.72e+05	0.96 y	47:41	-	1.34
143	Hepta	PCB-177	1.00	6.37e+05	1.01 y	47:51	-	1.27
144	Hepta	PCB-171	1.00	7.64e+05	1.06 y	48:08	-	1.52
145	Hepta	PCB-173	1.00	5.68e+05	0.94 y	48:34	-	1.13
146	Hepta	PCB-172	1.00	6.81e+05	1.09 y	49:01	-	1.35
147	Hepta	PCB-192	1.00	9.21e+05	1.03 y	49:13	-	1.83
148	Hepta	PCB-180	1.00	7.89e+05	0.96 y	49:25	-	1.57
149	Hepta	PCB-193	1.00	9.90e+05	0.98 y	49:37	-	1.97
150	Hepta	PCB-191	1.00	9.89e+05	0.99 y	49:53	-	1.97
151	Hepta	PCB-170	1.00	7.14e+05	0.92 y	50:56	-	1.73
152	Hepta	PCB-190	1.00	9.30e+05	1.10 y	51:06	-	2.26
153	Hepta	PCB-189	1.00	9.45e+05	1.11 y	52:27	-	1.76
154	Octa	PCB-202	1.00	7.24e+05	0.77 y	48:21	-	1.09
155	Octa	PCB-201	1.00	7.55e+05	0.84 y	48:50	-	1.14
156	Octa	PCB-204	1.00	7.15e+05	0.96 y	48:59	-	1.08
157	Octa	PCB-197	1.00	7.78e+05	0.82 y	49:16	-	1.18
158	Octa	PCB-200	1.00	7.01e+05	0.87 y	50:10	-	1.06
159	Octa	PCB-198	1.00	4.84e+05	0.84 y	51:31	-	0.73
160	Octa	PCB-199	1.00	5.29e+05	0.89 y	51:38	-	0.80
161	Octa	PCB-196/203	2.00	1.12e+06	0.95 y	51:55	-	0.84
162	Octa	PCB-195	1.00	5.76e+05	0.88 y	53:05	-	1.10

163	Octa	PCB-194	1.00	7.18e+05	0.90	y	53:57	-	1.37
164	Octa	PCB-205	1.00	8.28e+05	0.91	y	54:14	-	1.58
165	Nona	PCB-208	1.00	7.99e+05	1.27	y	53:14	-	1.10
166	Nona	PCB-207	1.00	7.76e+05	1.14	y	53:33	-	1.07
167	Nona	PCB-206	1.00	4.50e+05	1.29	y	55:35	-	0.89
168	Deca	PCB-209	1.00	6.79e+05	1.05	y	56:57	-	1.42
169	Tot ╗	Total Mono-PCB	0.00	-	-	n	-	-	1.39
170	Tot ╗	Total Di-PCB	0.00	-	-	n	-	-	1.39

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.28
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.28
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.23
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.32
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.44
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.17
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.44
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.98
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.35
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.04
182	Tot ╗	Total Deca-PCB	1.00	6.79e+05	1.05	y	56:57	-	1.42
183	Mono╗	13C-PCB-1	100.00	1.70e+08	3.57	y	16:10	-	0.97
184	Mono╗	13C-PCB-3	100.00	1.67e+08	3.59	y	18:47	-	0.95
185	Di-IS	13C-PCB-4	100.00	1.06e+08	1.60	y	20:07	-	0.61
186	Di-IS	13C-PCB-9	100.00	1.69e+08	1.58	y	21:55	-	0.97
187	Di-IS	13C-PCB-11	100.00	1.67e+08	1.56	y	25:17	-	0.95
188	Tri-╗	13C-PCB-19	100.00	9.99e+07	1.10	y	24:16	-	0.57
189	Tri-╗	13C-PCB-32	100.00	1.46e+08	1.10	y	27:11	-	0.84
190	Tri-╗	13C-PCB-28	100.00	1.25e+08	1.03	y	29:09	-	1.09
191	Tri-╗	13C-PCB-37	100.00	1.18e+08	1.04	y	33:01	-	1.03
192	Tetr╗	13C-PCB-54	100.00	1.28e+08	0.77	y	28:02	-	1.00
193	Tetr╗	13C-PCB-52	100.00	9.09e+07	0.78	y	31:33	-	0.71
194	Tetr╗	13C-PCB-47	100.00	9.50e+07	0.76	y	32:04	-	0.74
195	Tetr╗	13C-PCB-70	100.00	1.26e+08	0.78	y	35:35	-	0.99
196	Tetr╗	13C-PCB-80	100.00	1.30e+08	0.79	y	36:00	-	1.02
197	Tetr╗	13C-PCB-81	100.00	1.24e+08	0.77	y	39:05	-	0.96
198	Tetr╗	13C-PCB-77	100.00	1.20e+08	0.79	y	39:41	-	0.94
199	Pent╗	13C-PCB-104	100.00	8.90e+07	1.62	y	32:43	-	0.97
200	Pent╗	13C-PCB-95	100.00	6.51e+07	1.60	y	35:52	-	0.71
201	Pent╗	13C-PCB-101	100.00	7.10e+07	1.68	y	37:33	-	0.77
202	Pent╗	13C-PCB-97	100.00	6.10e+07	1.61	y	38:52	-	0.66
203	Pent╗	13C-PCB-123	100.00	8.03e+07	1.65	y	41:25	-	0.87
204	Pent╗	13C-PCB-118	100.00	8.33e+07	1.62	y	41:36	-	0.90
205	Pent╗	13C-PCB-114	100.00	8.57e+07	1.57	y	42:15	-	1.25
206	Pent╗	13C-PCB-105	100.00	8.29e+07	1.58	y	43:07	-	1.21
207	Pent╗	13C-PCB-127	100.00	8.47e+07	1.60	y	43:27	-	1.23
208	Pent╗	13C-PCB-126	100.00	7.66e+07	1.55	y	45:21	-	1.12
209	Hexa╗	13C-PCB-155	100.00	8.10e+07	1.26	y	37:06	-	0.88
210	Hexa╗	13C-PCB-153	100.00	8.63e+07	1.26	y	43:16	-	1.26
211	Hexa╗	13C-PCB-141	100.00	7.46e+07	1.29	y	44:00	-	1.09
212	Hexa	13C-PCB-138	100.00	7.51e+07	1.24	y	44:51	-	1.09
213	Hexa╗	13C-PCB-159	100.00	9.27e+07	1.26	y	46:08	-	1.35
214	Hexa╗	13C-PCB-167	100.00	9.41e+07	1.25	y	46:49	-	1.37
215	Hexa╗	13C-PCB-156	100.00	8.95e+07	1.29	y	48:07	-	1.30
216	Hexa╗	13C-PCB-157	100.00	9.57e+07	1.30	y	48:23	-	1.39
217	Hexa╗	13C-PCB-169	100.00	9.25e+07	1.28	y	50:32	-	1.35
218	Hept╗	13C-PCB-188	100.00	6.78e+07	0.45	y	42:54	-	0.99
219	Hept╗	13C-PCB-180	100.00	5.03e+07	0.47	y	49:24	-	0.73
220	Hept╗	13C-PCB-170	100.00	4.12e+07	0.45	y	50:54	-	0.60
221	Hept╗	13C-PCB-189	100.00	5.36e+07	0.47	y	52:26	-	0.78

222	Octa┐	13C-PCB-202	100.00	6.61e+07	0.92 y	48:19	-	0.96
223	Octa┐	13C-PCB-194	100.00	5.23e+07	0.90 y	53:56	-	0.78
224	Nona┐	13C-PCB-208	100.00	7.26e+07	0.77 y	53:13	-	1.08
225	Nona┐	13C-PCB-206	100.00	5.04e+07	0.78 y	55:34	-	0.75
226	Deca┐	13C-PCB-209	100.00	4.78e+07	1.19 y	56:56	-	0.71
227	DI-RS	13C-PCB-15	100.00	1.75e+08	1.56 y	26:00	-	1.00
228	Tri-┐	13C-PCB-31	100.00	1.15e+08	1.03 y	29:02	-	1.00
229	Tetr┐	13C-PCB-60	100.00	1.28e+08	0.78 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	9.21e+07	1.63 y	39:17	-	1.00
231	Hexa┐	13C-PCB-128	100.00	6.87e+07	1.27 y	46:25	-	1.00

232	Octa╗	13C-PCB-205	100.00	6.70e+07	0.88 y	54:13	-	1.00
233	CRS	13C-PCB-79	100.00	1.34e+08	0.79 y	37:52	-	1.04
234	CRS	13C-PCB-178	100.00	4.42e+07	0.46 y	45:42	-	0.64
235	PS	13C-PCB-79	100.00	1.34e+08	0.79 y	37:52	-	1.08
236	PS	13C-PCB-178	100.00	4.42e+07	0.46 y	45:42	-	0.88

Filename: 150114E1 S: 5 Acquired: 14-JAN-15 16:55:24
Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-4 PCB CS2 14L2904

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	2.50	5.57e+06	3.10 y	16:11	-	1.32
2	Mono	PCB-2	2.50	5.30e+06	3.00 y	18:33	-	1.31
3	Mono	PCB-3	2.50	5.37e+06	3.04 y	18:48	-	1.33
4	Di	PCB-4/10	5.00	8.76e+06	1.64 y	20:10	-	1.67
5	Di	PCB-7/9	5.00	1.06e+07	1.75 y	21:57	-	1.26
6	Di	PCB-6	2.50	5.18e+06	1.70 y	22:36	-	1.24
7	Di	PCB-5/8	5.00	1.05e+07	1.64 y	23:01	-	1.25
8	Di	PCB-14	2.50	6.03e+06	1.67 y	24:06	-	1.45
9	Di	PCB-11	2.50	5.22e+06	1.71 y	25:18	-	1.25
10	Di	PCB-12/13	5.00	1.04e+07	1.62 y	25:41	-	1.25
11	Di	PCB-15	2.50	5.86e+06	1.59 y	26:00	-	1.41
12	Tri	PCB-19	2.50	3.00e+06	1.04 y	24:17	-	1.20
13	Tri	PCB-30	2.50	4.60e+06	1.06 y	25:11	-	1.85
14	Tri	PCB-18	2.50	3.22e+06	1.05 y	25:56	-	0.90
15	Tri	PCB-17	2.50	3.45e+06	1.03 y	26:06	-	0.97
16	Tri	PCB-24/27	5.00	9.33e+06	1.06 y	26:41	-	1.31
17	Tri	PCB-16/32	5.00	7.45e+06	1.05 y	27:11	-	1.04
18	Tri	PCB-34	2.50	4.16e+06	1.01 y	27:59	-	1.41
19	Tri	PCB-23	2.50	3.35e+06	1.05 y	28:05	-	1.14
20	Tri	PCB-29	2.50	3.86e+06	1.02 y	28:20	-	1.31
21	Tri	PCB-26	2.50	3.84e+06	1.08 y	28:32	-	1.30
22	Tri	PCB-25	2.50	3.22e+06	1.07 y	28:41	-	1.09
23	Tri	PCB-31	2.50	3.90e+06	1.02 y	29:03	-	1.32
24	Tri	PCB-28	2.50	3.83e+06	1.03 y	29:09	-	1.30
25	Tri	PCB-20/21/33	7.50	1.09e+07	1.03 y	29:46	-	1.23
26	Tri	PCB-22	2.50	3.46e+06	1.06 y	30:12	-	1.17
27	Tri	PCB-36	2.50	3.56e+06	1.01 y	30:50	-	1.36
28	Tri	PCB-39	2.50	3.61e+06	1.03 y	31:17	-	1.38
29	Tri	PCB-38	2.50	3.19e+06	1.11 y	32:04	-	1.22
30	Tri	PCB-35	2.50	3.11e+06	1.13 y	32:36	-	1.19
31	Tri	PCB-37	2.50	3.49e+06	1.03 y	33:02	-	1.33
32	Tetra	PCB-54	2.50	3.51e+06	0.73 y	28:02	-	1.07
33	Tetra	PCB-50	2.50	2.59e+06	0.74 y	29:12	-	0.78
34	Tetra	PCB-53	2.50	2.54e+06	0.71 y	29:51	-	1.15
35	Tetra	PCB-51	2.50	2.57e+06	0.77 y	30:11	-	1.16
36	Tetra	PCB-45	2.50	2.31e+06	0.78 y	30:37	-	1.04
37	Tetra	PCB-46	2.50	2.17e+06	0.77 y	31:07	-	0.98
38	Tetra	PCB-52/69	5.00	6.13e+06	0.74 y	31:35	-	1.38
39	Tetra	PCB-73	2.50	2.77e+06	0.78 y	31:42	-	1.25
40	Tetra	PCB-43/49	5.00	4.93e+06	0.75 y	31:52	-	1.11
41	Tetra	PCB-47	2.50	2.50e+06	0.77 y	32:04	-	1.11

42	Tetra	PCB-48/75	5.00	5.98e+06	0.73 y	32:11	-	1.32
43	Tetra	PCB-65	2.50	3.01e+06	0.69 y	32:28	-	1.33
44	Tetra	PCB-62	2.50	2.87e+06	0.75 y	32:34	-	1.27
45	Tetra	PCB-44	2.50	1.97e+06	0.67 y	32:52	-	0.87
46	Tetra	PCB-42/59	5.00	5.75e+06	0.74 y	33:06	-	1.27
47	Tetra	PCB-41/64/71/72	10.00	1.22e+07	0.74 y	33:41	-	1.35
48	Tetra	PCB-68	2.50	3.54e+06	0.72 y	33:56	-	1.57
49	Tetra	PCB-40	2.50	1.90e+06	0.77 y	34:09	-	0.84
50	Tetra	PCB-57	2.50	3.26e+06	0.80 y	34:31	-	1.12
51	Tetra	PCB-67	2.50	3.25e+06	0.70 y	34:49	-	1.11
52	Tetra	PCB-58	2.50	3.17e+06	0.72 y	34:56	-	1.09

53	Tetra	PCB-63	2.50	3.38e+06	0.69 y	35:06	-	1.16
54	Tetra	PCB-74	2.50	3.48e+06	0.73 y	35:23	-	1.20
55	Tetra	PCB-61/70	5.00	6.32e+06	0.68 y	35:33	-	1.08
56	Tetra	PCB-76/66	5.00	6.53e+06	0.75 y	35:46	-	1.12
57	Tetra	PCB-80	2.50	3.97e+06	0.74 y	36:00	-	1.32
58	Tetra	PCB-55	2.50	3.60e+06	0.75 y	36:19	-	1.19
59	Tetra	PCB-56/60	5.00	6.76e+06	0.76 y	36:49	-	1.12
60	Tetra	PCB-79	2.50	3.65e+06	0.72 y	37:53	-	1.21
61	Tetra	PCB-78	2.50	3.42e+06	0.74 y	38:35	-	1.16
62	Tetra	PCB-81	2.50	3.78e+06	0.73 y	39:06	-	1.29
63	Tetra	PCB-77	2.50	3.77e+06	0.76 y	39:42	-	1.31
64	Penta	PCB-104	2.50	2.66e+06	1.51 y	32:44	-	1.24
65	Penta	PCB-96	2.50	2.34e+06	1.66 y	33:59	-	1.09
66	Penta	PCB-103	2.50	2.06e+06	1.55 y	34:31	-	0.96
67	Penta	PCB-100	2.50	2.12e+06	1.63 y	34:53	-	0.99
68	Penta	PCB-94	2.50	1.77e+06	1.57 y	35:20	-	1.14
69	Penta	PCB-95/98/102	7.50	6.08e+06	1.61 y	35:50	-	1.31
70	Penta	PCB-93	2.50	1.62e+06	1.42 y	35:58	-	1.05
71	Penta	PCB-88/91	5.00	3.44e+06	1.55 y	36:15	-	1.11
72	Penta	PCB-121	2.50	2.69e+06	1.55 y	36:22	-	1.74
73	Penta	PCB-84/92	5.00	3.93e+06	1.62 y	37:12	-	1.12
74	Penta	PCB-89	2.50	1.84e+06	1.52 y	37:22	-	1.04
75	Penta	PCB-90/101	5.00	4.29e+06	1.56 y	37:33	-	1.22
76	Penta	PCB-113	2.50	2.50e+06	1.56 y	37:48	-	1.42
77	Penta	PCB-99	2.50	2.14e+06	1.54 y	37:54	-	1.22
78	Penta	PCB-119	2.50	2.79e+06	1.62 y	38:21	-	1.89
79	Penta	PCB-108/112	5.00	4.27e+06	1.62 y	38:30	-	1.45
80	Penta	PCB-83	2.50	2.51e+06	1.64 y	38:40	-	1.70
81	Penta	PCB-97	2.50	1.95e+06	1.50 y	38:52	-	1.32
82	Penta	PCB-86	2.50	1.37e+06	1.47 y	39:01	-	0.93
83	Penta	PCB-87/117/125	7.50	7.08e+06	1.62 y	39:08	-	1.60
84	Penta	PCB-111/115	5.00	5.48e+06	1.46 y	39:18	-	1.86
85	Penta	PCB-85/116	5.00	3.87e+06	1.60 y	39:26	-	1.31
86	Penta	PCB-120	2.50	2.96e+06	1.50 y	39:39	-	2.00
87	Penta	PCB-110	2.50	2.50e+06	1.58 y	39:48	-	1.69
88	Penta	PCB-82	2.50	1.46e+06	1.65 y	40:26	-	0.74
89	Penta	PCB-124	2.50	2.56e+06	1.52 y	41:06	-	1.29
90	Penta	PCB-107/109	5.00	5.26e+06	1.53 y	41:15	-	1.33
91	Penta	PCB-123	2.50	2.55e+06	1.55 y	41:25	-	1.29
92	Penta	PCB-106/118	5.00	5.39e+06	1.55 y	41:38	-	1.30
93	Penta	PCB-114	2.50	3.07e+06	1.72 y	42:15	-	1.46
94	Penta	PCB-122	2.50	2.74e+06	1.68 y	42:23	-	1.30
95	Penta	PCB-105	2.50	3.30e+06	1.60 y	43:07	-	1.62
96	Penta	PCB-127	2.50	2.77e+06	1.59 y	43:27	-	1.30
97	Penta	PCB-126	2.50	2.66e+06	1.59 y	45:21	-	1.46
98	Hexa	PCB-155	2.50	2.45e+06	1.27 y	37:07	-	1.21
99	Hexa	PCB-150	2.50	2.17e+06	1.23 y	38:22	-	1.07
100	Hexa	PCB-152	2.50	2.24e+06	1.23 y	38:51	-	1.11
101	Hexa	PCB-145	2.50	2.20e+06	1.31 y	39:18	-	1.09
102	Hexa	PCB-136	2.50	2.25e+06	1.25 y	39:36	-	1.12

103	Hexa	PCB-148	2.50	1.64e+06	1.30 y	39:43	-	0.81
104	Hexa	PCB-154	2.50	1.79e+06	1.26 y	40:12	-	0.89
105	Hexa	PCB-151	2.50	1.62e+06	1.28 y	40:51	-	0.80
106	Hexa	PCB-135	2.50	1.62e+06	1.09 y	41:03	-	0.80
107	Hexa	PCB-144	2.50	1.56e+06	1.28 y	41:10	-	0.77
108	Hexa	PCB-147	2.50	1.45e+06	1.24 y	41:18	-	0.72
109	Hexa	PCB-139/149	5.00	3.45e+06	1.23 y	41:34	-	0.85
110	Hexa	PCB-140	2.50	1.53e+06	1.14 y	41:46	-	0.76
111	Hexa	PCB-134/143	5.00	4.05e+06	1.23 y	42:12	-	0.94
112	Hexa	PCB-133/142	5.00	3.84e+06	1.20 y	42:29	-	0.89
113	Hexa	PCB-131	2.50	1.83e+06	1.25 y	42:38	-	0.85

114	Hexa	PCB-146/165	5.00	4.66e+06	1.26 y	42:52	-	1.08
115	Hexa	PCB-132/161	5.00	4.84e+06	1.19 y	43:07	-	1.12
116	Hexa	PCB-153	2.50	2.56e+06	1.27 y	43:17	-	1.19
117	Hexa	PCB-168	2.50	3.00e+06	1.22 y	43:29	-	1.39
118	Hexa	PCB-141	2.50	2.20e+06	1.20 y	44:00	-	1.16
119	Hexa	PCB-137	2.50	2.20e+06	1.31 y	44:24	-	1.16
120	Hexa	PCB-130	2.50	1.53e+06	1.23 y	44:31	-	0.80
121	Hexa	PCB-138/163/164	7.50	7.63e+06	1.22 y	44:52	-	1.35
122	Hexa	PCB-158/160	5.00	5.45e+06	1.20 y	45:08	-	1.44
123	Hexa	PCB-129	2.50	1.82e+06	1.23 y	45:21	-	0.96
124	Hexa	PCB-166	2.50	2.53e+06	1.20 y	45:49	-	1.10
125	Hexa	PCB-159	2.50	2.81e+06	1.30 y	46:09	-	1.22
126	Hexa	PCB-128/162	5.00	4.82e+06	1.23 y	46:26	-	1.05
127	Hexa	PCB-167	2.50	2.78e+06	1.23 y	46:49	-	1.18
128	Hexa	PCB-156	2.50	2.96e+06	1.27 y	48:07	-	1.30
129	Hexa	PCB-157	2.50	2.84e+06	1.24 y	48:23	-	1.24
130	Hexa	PCB-169	2.50	2.53e+06	1.17 y	50:32	-	1.10
131	Hepta	PCB-188	2.50	2.47e+06	1.00 y	42:55	-	1.46
132	Hepta	PCB-184	2.50	2.33e+06	1.04 y	43:22	-	1.37
133	Hepta	PCB-179	2.50	2.38e+06	1.02 y	44:09	-	1.41
134	Hepta	PCB-176	2.50	2.48e+06	0.98 y	44:36	-	1.46
135	Hepta	PCB-186	2.50	2.44e+06	1.11 y	45:13	-	1.44
136	Hepta	PCB-178	2.50	1.82e+06	1.06 y	45:42	-	1.07
137	Hepta	PCB-175	2.50	1.74e+06	1.03 y	46:03	-	1.03
138	Hepta	PCB-182/187	5.00	3.90e+06	1.11 y	46:13	-	1.15
139	Hepta	PCB-183	2.50	2.14e+06	1.05 y	46:33	-	1.26
140	Hepta	PCB-185	2.50	1.77e+06	1.02 y	47:12	-	1.40
141	Hepta	PCB-174	2.50	1.60e+06	1.07 y	47:34	-	1.26
142	Hepta	PCB-181	2.50	1.81e+06	1.12 y	47:40	-	1.43
143	Hepta	PCB-177	2.50	1.67e+06	1.13 y	47:50	-	1.32
144	Hepta	PCB-171	2.50	1.81e+06	1.05 y	48:08	-	1.43
145	Hepta	PCB-173	2.50	1.39e+06	0.93 y	48:33	-	1.10
146	Hepta	PCB-172	2.50	1.57e+06	1.02 y	49:00	-	1.24
147	Hepta	PCB-192	2.50	2.08e+06	0.99 y	49:12	-	1.64
148	Hepta	PCB-180	2.50	1.80e+06	1.01 y	49:24	-	1.42
149	Hepta	PCB-193	2.50	2.24e+06	1.07 y	49:37	-	1.77
150	Hepta	PCB-191	2.50	2.29e+06	1.00 y	49:52	-	1.81
151	Hepta	PCB-170	2.50	1.64e+06	1.01 y	50:56	-	1.65
152	Hepta	PCB-190	2.50	2.11e+06	1.07 y	51:06	-	2.12
153	Hepta	PCB-189	2.50	2.24e+06	1.04 y	52:27	-	1.69
154	Octa	PCB-202	2.50	1.65e+06	0.92 y	48:20	-	0.99
155	Octa	PCB-201	2.50	1.83e+06	0.88 y	48:49	-	1.10
156	Octa	PCB-204	2.50	1.71e+06	0.88 y	48:59	-	1.02
157	Octa	PCB-197	2.50	1.87e+06	0.88 y	49:17	-	1.12
158	Octa	PCB-200	2.50	1.68e+06	0.82 y	50:10	-	1.01
159	Octa	PCB-198	2.50	1.15e+06	0.85 y	51:31	-	0.69
160	Octa	PCB-199	2.50	1.14e+06	0.89 y	51:38	-	0.68
161	Octa	PCB-196/203	5.00	2.48e+06	0.93 y	51:55	-	0.74
162	Octa	PCB-195	2.50	1.33e+06	0.94 y	53:05	-	1.04
163	Octa	PCB-194	2.50	1.66e+06	0.88 y	53:57	-	1.30

164	Octa		PCB-205	2.50	1.99e+06	0.92	y	54:14	- 1.56
165	Nona		PCB-208	2.50	1.85e+06	1.33	y	53:14	- 1.03
166	Nona		PCB-207	2.50	1.79e+06	1.27	y	53:32	- 1.00
167	Nona		PCB-206	2.50	1.13e+06	1.21	y	55:34	- 0.91
168	Deca		PCB-209	2.50	1.48e+06	1.16	y	56:55	- 1.31
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.32
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.31
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 1.21

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	-	1.27
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	-	1.16
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	-	1.25
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	-	1.43
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	-	0.92
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	-	1.12
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	-	1.36
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	-	0.90
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	-	1.30
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	-	0.99
182	Tot ╗	Total Deca-PCB	2.50	1.48e+06	1.16	y	56:55	-	-	1.31
183	Mono╗	13C-PCB-1	100.00	1.69e+08	3.58	y	16:10	-	-	0.98
184	Mono╗	13C-PCB-3	100.00	1.62e+08	3.60	y	18:46	-	-	0.94
185	Di-IS	13C-PCB-4	100.00	1.05e+08	1.60	y	20:07	-	-	0.61
186	Di-IS	13C-PCB-9	100.00	1.68e+08	1.58	y	21:54	-	-	0.98
187	Di-IS	13C-PCB-11	100.00	1.66e+08	1.56	y	25:17	-	-	0.97
188	Tri-╗	13C-PCB-19	100.00	9.97e+07	1.10	y	24:16	-	-	0.58
189	Tri-╗	13C-PCB-32	100.00	1.43e+08	1.10	y	27:11	-	-	0.83
190	Tri-╗	13C-PCB-28	100.00	1.18e+08	1.06	y	29:08	-	-	1.00
191	Tri-╗	13C-PCB-37	100.00	1.05e+08	1.05	y	33:01	-	-	0.89
192	Tetr╗	13C-PCB-54	100.00	1.32e+08	0.77	y	28:01	-	-	1.08
193	Tetr╗	13C-PCB-52	100.00	8.88e+07	0.77	y	31:33	-	-	0.73
194	Tetr╗	13C-PCB-47	100.00	9.03e+07	0.76	y	32:03	-	-	0.74
195	Tetr╗	13C-PCB-70	100.00	1.16e+08	0.77	y	35:34	-	-	0.95
196	Tetr╗	13C-PCB-80	100.00	1.21e+08	0.78	y	35:59	-	-	0.99
197	Tetr╗	13C-PCB-81	100.00	1.17e+08	0.79	y	39:05	-	-	0.96
198	Tetr╗	13C-PCB-77	100.00	1.15e+08	0.78	y	39:41	-	-	0.94
199	Pent╗	13C-PCB-104	100.00	8.57e+07	1.62	y	32:42	-	-	0.98
200	Pent╗	13C-PCB-95	100.00	6.19e+07	1.62	y	35:52	-	-	0.71
201	Pent╗	13C-PCB-101	100.00	7.03e+07	1.60	y	37:33	-	-	0.80
202	Pent╗	13C-PCB-97	100.00	5.90e+07	1.61	y	38:51	-	-	0.67
203	Pent╗	13C-PCB-123	100.00	7.92e+07	1.59	y	41:25	-	-	0.90
204	Pent╗	13C-PCB-118	100.00	8.31e+07	1.61	y	41:35	-	-	0.95
205	Pent╗	13C-PCB-114	100.00	8.41e+07	1.59	y	42:15	-	-	1.24
206	Pent╗	13C-PCB-105	100.00	8.15e+07	1.57	y	43:06	-	-	1.20
207	Pent╗	13C-PCB-127	100.00	8.51e+07	1.56	y	43:27	-	-	1.25
208	Pent╗	13C-PCB-126	100.00	7.30e+07	1.52	y	45:20	-	-	1.07
209	Hexa╗	13C-PCB-155	100.00	8.08e+07	1.29	y	37:06	-	-	0.92
210	Hexa╗	13C-PCB-153	100.00	8.63e+07	1.25	y	43:16	-	-	1.27
211	Hexa╗	13C-PCB-141	100.00	7.58e+07	1.27	y	44:00	-	-	1.12
212	Hexa	13C-PCB-138	100.00	7.56e+07	1.27	y	44:51	-	-	1.11
213	Hexa╗	13C-PCB-159	100.00	9.21e+07	1.26	y	46:08	-	-	1.36
214	Hexa╗	13C-PCB-167	100.00	9.42e+07	1.28	y	46:49	-	-	1.39
215	Hexa╗	13C-PCB-156	100.00	9.08e+07	1.28	y	48:06	-	-	1.34
216	Hexa╗	13C-PCB-157	100.00	9.19e+07	1.25	y	48:22	-	-	1.35
217	Hexa╗	13C-PCB-169	100.00	9.21e+07	1.27	y	50:32	-	-	1.36
218	Hept╗	13C-PCB-188	100.00	6.77e+07	0.45	y	42:54	-	-	1.00
219	Hept╗	13C-PCB-180	100.00	5.07e+07	0.45	y	49:23	-	-	0.75
220	Hept╗	13C-PCB-170	100.00	3.98e+07	0.46	y	50:54	-	-	0.59
221	Hept╗	13C-PCB-189	100.00	5.32e+07	0.47	y	52:26	-	-	0.78
222	Octa╗	13C-PCB-202	100.00	6.68e+07	0.92	y	48:19	-	-	0.98

223	Octa╗	13C-PCB-194	100.00	5.10e+07	0.91 y	53:56	-	0.77
224	Nona╗	13C-PCB-208	100.00	7.15e+07	0.76 y	53:13	-	1.09
225	Nona╗	13C-PCB-206	100.00	4.98e+07	0.77 y	55:33	-	0.76
226	Deca╗	13C-PCB-209	100.00	4.53e+07	1.18 y	56:54	-	0.69
227	DI-RS	13C-PCB-15	100.00	1.72e+08	1.58 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.18e+08	1.05 y	29:02	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.22e+08	0.78 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	8.77e+07	1.62 y	39:17	-	1.00
231	Hexa╗	13C-PCB-128	100.00	6.80e+07	1.29 y	46:24	-	1.00
232	Octa╗	13C-PCB-205	100.00	6.58e+07	0.89 y	54:13	-	1.00

233	CRS	13C-PCB-79	100.00	1.25e+08	0.78 y	37:51	-	1.02
234	CRS	13C-PCB-178	100.00	4.29e+07	0.46 y	45:41	-	0.63
235	PS	13C-PCB-79	100.00	1.25e+08	0.78 y	37:51	-	1.07
236	PS	13C-PCB-178	100.00	4.29e+07	0.46 y	45:41	-	0.85

Filename: 150114E1 S: 6 Acquired: 14-JAN-15 18:00:03
Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-5 PCB CS3 14L1801

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	8.07e+07	2.99 y	16:11	-	1.23
2	Mono	PCB-2	50.00	8.02e+07	2.99 y	18:33	-	1.26
3	Mono	PCB-3	50.00	8.03e+07	2.98 y	18:47	-	1.26
4	Di	PCB-4/10	100.00	1.30e+08	1.64 y	20:10	-	1.56
5	Di	PCB-7/9	100.00	1.56e+08	1.63 y	21:57	-	1.18
6	Di	PCB-6	50.00	7.76e+07	1.65 y	22:35	-	1.18
7	Di	PCB-5/8	100.00	1.55e+08	1.64 y	23:00	-	1.17
8	Di	PCB-14	50.00	9.12e+07	1.64 y	24:06	-	1.41
9	Di	PCB-11	50.00	7.80e+07	1.68 y	25:17	-	1.21
10	Di	PCB-12/13	100.00	1.55e+08	1.65 y	25:41	-	1.20
11	Di	PCB-15	50.00	8.75e+07	1.65 y	26:00	-	1.36
12	Tri	PCB-19	50.00	4.22e+07	1.06 y	24:17	-	1.13
13	Tri	PCB-30	50.00	6.72e+07	1.05 y	25:11	-	1.80
14	Tri	PCB-18	50.00	4.67e+07	1.06 y	25:55	-	0.85
15	Tri	PCB-17	50.00	5.08e+07	1.05 y	26:06	-	0.92
16	Tri	PCB-24/27	100.00	1.36e+08	1.06 y	26:40	-	1.23
17	Tri	PCB-16/32	100.00	1.08e+08	1.05 y	27:11	-	0.98
18	Tri	PCB-34	50.00	5.36e+07	1.01 y	27:58	-	1.19
19	Tri	PCB-23	50.00	5.23e+07	1.06 y	28:04	-	1.16
20	Tri	PCB-29	50.00	4.77e+07	1.01 y	28:19	-	1.06
21	Tri	PCB-26	50.00	5.01e+07	1.00 y	28:31	-	1.11
22	Tri	PCB-25	50.00	4.54e+07	1.01 y	28:41	-	1.00
23	Tri	PCB-31	50.00	5.13e+07	1.03 y	29:03	-	1.13
24	Tri	PCB-28	50.00	4.84e+07	1.04 y	29:09	-	1.07
25	Tri	PCB-20/21/33	150.00	1.42e+08	1.02 y	29:45	-	1.05
26	Tri	PCB-22	50.00	4.91e+07	1.03 y	30:12	-	1.09
27	Tri	PCB-36	50.00	5.22e+07	1.05 y	30:49	-	1.40
28	Tri	PCB-39	50.00	4.78e+07	1.05 y	31:17	-	1.28
29	Tri	PCB-38	50.00	4.87e+07	1.03 y	32:04	-	1.31
30	Tri	PCB-35	50.00	4.75e+07	1.03 y	32:34	-	1.28
31	Tri	PCB-37	50.00	4.79e+07	1.08 y	33:01	-	1.28
32	Tetra	PCB-54	50.00	4.77e+07	0.74 y	28:02	-	0.95
33	Tetra	PCB-50	50.00	3.65e+07	0.72 y	29:11	-	0.73
34	Tetra	PCB-53	50.00	3.64e+07	0.75 y	29:51	-	1.09
35	Tetra	PCB-51	50.00	3.70e+07	0.72 y	30:11	-	1.11
36	Tetra	PCB-45	50.00	3.37e+07	0.73 y	30:36	-	1.01
37	Tetra	PCB-46	50.00	2.89e+07	0.73 y	31:06	-	0.87
38	Tetra	PCB-52/69	100.00	8.00e+07	0.74 y	31:34	-	1.20
39	Tetra	PCB-73	50.00	4.72e+07	0.75 y	31:41	-	1.42
40	Tetra	PCB-43/49	100.00	7.08e+07	0.73 y	31:51	-	1.06
41	Tetra	PCB-47	50.00	3.98e+07	0.74 y	32:04	-	1.09

42	Tetra	PCB-48/75	100.00	8.76e+07	0.73 y	32:11	-	1.20
43	Tetra	PCB-65	50.00	4.12e+07	0.73 y	32:26	-	1.13
44	Tetra	PCB-62	50.00	4.67e+07	0.74 y	32:33	-	1.28
45	Tetra	PCB-44	50.00	2.93e+07	0.74 y	32:51	-	0.80
46	Tetra	PCB-42/59	100.00	7.65e+07	0.74 y	33:05	-	1.05
47	Tetra	PCB-41/64/71/72	200.00	1.66e+08	0.73 y	33:40	-	1.14
48	Tetra	PCB-68	50.00	4.75e+07	0.73 y	33:55	-	1.30
49	Tetra	PCB-40	50.00	2.57e+07	0.73 y	34:09	-	0.71
50	Tetra	PCB-57	50.00	4.47e+07	0.74 y	34:30	-	1.03
51	Tetra	PCB-67	50.00	4.34e+07	0.73 y	34:49	-	1.00
52	Tetra	PCB-58	50.00	4.85e+07	0.76 y	34:55	-	1.12

53	Tetra	PCB-63	50.00	4.77e+07	0.71 y	35:04	-	1.10
54	Tetra	PCB-74	50.00	4.68e+07	0.74 y	35:21	-	1.08
55	Tetra	PCB-61/70	100.00	9.06e+07	0.73 y	35:33	-	1.04
56	Tetra	PCB-76/66	100.00	9.21e+07	0.74 y	35:45	-	1.06
57	Tetra	PCB-80	50.00	5.39e+07	0.74 y	35:59	-	1.20
58	Tetra	PCB-55	50.00	5.08e+07	0.74 y	36:18	-	1.13
59	Tetra	PCB-56/60	100.00	8.80e+07	0.73 y	36:48	-	0.98
60	Tetra	PCB-79	50.00	4.65e+07	0.73 y	37:53	-	1.03
61	Tetra	PCB-78	50.00	4.56e+07	0.74 y	38:34	-	1.03
62	Tetra	PCB-81	50.00	5.20e+07	0.75 y	39:05	-	1.17
63	Tetra	PCB-77	50.00	5.01e+07	0.76 y	39:41	-	1.18
64	Penta	PCB-104	50.00	4.01e+07	1.59 y	32:44	-	1.16
65	Penta	PCB-96	50.00	3.32e+07	1.56 y	33:59	-	0.96
66	Penta	PCB-103	50.00	2.97e+07	1.54 y	34:31	-	0.86
67	Penta	PCB-100	50.00	3.02e+07	1.57 y	34:52	-	0.87
68	Penta	PCB-94	50.00	2.48e+07	1.56 y	35:20	-	1.06
69	Penta	PCB-95/98/102	150.00	8.16e+07	1.52 y	35:50	-	1.16
70	Penta	PCB-93	50.00	2.65e+07	1.68 y	35:58	-	1.13
71	Penta	PCB-88/91	100.00	5.25e+07	1.56 y	36:15	-	1.12
72	Penta	PCB-121	50.00	3.68e+07	1.57 y	36:22	-	1.57
73	Penta	PCB-84/92	100.00	5.15e+07	1.54 y	37:11	-	1.04
74	Penta	PCB-89	50.00	2.34e+07	1.53 y	37:22	-	0.95
75	Penta	PCB-90/101	100.00	5.59e+07	1.56 y	37:33	-	1.13
76	Penta	PCB-113	50.00	3.44e+07	1.55 y	37:48	-	1.39
77	Penta	PCB-99	50.00	2.56e+07	1.60 y	37:54	-	1.03
78	Penta	PCB-119	50.00	3.83e+07	1.56 y	38:21	-	1.77
79	Penta	PCB-108/112	100.00	5.74e+07	1.56 y	38:30	-	1.33
80	Penta	PCB-83	50.00	3.43e+07	1.57 y	38:40	-	1.58
81	Penta	PCB-97	50.00	2.60e+07	1.55 y	38:52	-	1.20
82	Penta	PCB-86	50.00	2.15e+07	1.46 y	39:00	-	0.99
83	Penta	PCB-87/117/125	150.00	9.85e+07	1.59 y	39:08	-	1.52
84	Penta	PCB-111/115	100.00	7.67e+07	1.56 y	39:17	-	1.77
85	Penta	PCB-85/116	100.00	5.77e+07	1.60 y	39:25	-	1.33
86	Penta	PCB-120	50.00	3.97e+07	1.53 y	39:39	-	1.83
87	Penta	PCB-110	50.00	3.50e+07	1.56 y	39:47	-	1.62
88	Penta	PCB-82	50.00	2.08e+07	1.56 y	40:25	-	0.73
89	Penta	PCB-124	50.00	3.69e+07	1.57 y	41:06	-	1.29
90	Penta	PCB-107/109	100.00	6.93e+07	1.58 y	41:15	-	1.21
91	Penta	PCB-123	50.00	3.47e+07	1.55 y	41:25	-	1.21
92	Penta	PCB-106/118	100.00	7.35e+07	1.54 y	41:38	-	1.20
93	Penta	PCB-114	50.00	4.27e+07	1.62 y	42:15	-	1.36
94	Penta	PCB-122	50.00	3.51e+07	1.63 y	42:23	-	1.12
95	Penta	PCB-105	50.00	4.36e+07	1.65 y	43:07	-	1.47
96	Penta	PCB-127	50.00	3.79e+07	1.69 y	43:27	-	1.24
97	Penta	PCB-126	50.00	3.67e+07	1.64 y	45:20	-	1.39
98	Hexa	PCB-155	50.00	3.43e+07	1.23 y	37:07	-	1.12
99	Hexa	PCB-150	50.00	3.11e+07	1.24 y	38:22	-	1.02
100	Hexa	PCB-152	50.00	3.16e+07	1.25 y	38:51	-	1.03
101	Hexa	PCB-145	50.00	3.04e+07	1.24 y	39:18	-	1.00
102	Hexa	PCB-136	50.00	3.31e+07	1.23 y	39:37	-	1.09

103	Hexa	PCB-148	50.00	2.18e+07	1.24 y	39:43	-	0.71
104	Hexa	PCB-154	50.00	2.45e+07	1.23 y	40:12	-	0.80
105	Hexa	PCB-151	50.00	2.30e+07	1.25 y	40:51	-	0.75
106	Hexa	PCB-135	50.00	2.19e+07	1.23 y	41:04	-	0.72
107	Hexa	PCB-144	50.00	2.39e+07	1.33 y	41:10	-	0.78
108	Hexa	PCB-147	50.00	2.07e+07	1.15 y	41:18	-	0.68
109	Hexa	PCB-139/149	100.00	4.69e+07	1.23 y	41:34	-	0.77
110	Hexa	PCB-140	50.00	2.12e+07	1.24 y	41:45	-	0.70
111	Hexa	PCB-134/143	100.00	5.52e+07	1.22 y	42:11	-	0.85
112	Hexa	PCB-133/142	100.00	5.46e+07	1.24 y	42:29	-	0.85
113	Hexa	PCB-131	50.00	2.55e+07	1.16 y	42:38	-	0.79

Filename: 150114E1 S: 6 Acquired: 14-JAN-15 18:00:03
Run: 150114E1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-5 PCB CS3 14L1801

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	8.07e+07	2.99 y	16:11	-	1.23
2	Mono	PCB-2	50.00	8.02e+07	2.99 y	18:33	-	1.26
3	Mono	PCB-3	50.00	8.03e+07	2.98 y	18:47	-	1.26
4	Di	PCB-4/10	100.00	1.30e+08	1.64 y	20:10	-	1.56
5	Di	PCB-7/9	100.00	1.56e+08	1.63 y	21:57	-	1.18
6	Di	PCB-6	50.00	7.76e+07	1.65 y	22:35	-	1.18
7	Di	PCB-5/8	100.00	1.55e+08	1.64 y	23:00	-	1.17
8	Di	PCB-14	50.00	9.12e+07	1.64 y	24:06	-	1.41
9	Di	PCB-11	50.00	7.80e+07	1.68 y	25:17	-	1.21
10	Di	PCB-12/13	100.00	1.55e+08	1.65 y	25:41	-	1.20
11	Di	PCB-15	50.00	8.75e+07	1.65 y	26:00	-	1.36
12	Tri	PCB-19	50.00	4.22e+07	1.06 y	24:17	-	1.13
13	Tri	PCB-30	50.00	6.72e+07	1.05 y	25:11	-	1.80
14	Tri	PCB-18	50.00	4.67e+07	1.06 y	25:55	-	0.85
15	Tri	PCB-17	50.00	5.08e+07	1.05 y	26:06	-	0.92
16	Tri	PCB-24/27	100.00	1.36e+08	1.06 y	26:40	-	1.23
17	Tri	PCB-16/32	100.00	1.08e+08	1.05 y	27:11	-	0.98
18	Tri	PCB-34	50.00	5.36e+07	1.01 y	27:58	-	1.19
19	Tri	PCB-23	50.00	5.23e+07	1.06 y	28:04	-	1.16
20	Tri	PCB-29	50.00	4.77e+07	1.01 y	28:19	-	1.06
21	Tri	PCB-26	50.00	5.01e+07	1.00 y	28:31	-	1.11
22	Tri	PCB-25	50.00	4.54e+07	1.01 y	28:41	-	1.00
23	Tri	PCB-31	50.00	5.13e+07	1.03 y	29:03	-	1.13
24	Tri	PCB-28	50.00	4.84e+07	1.04 y	29:09	-	1.07
25	Tri	PCB-20/21/33	150.00	1.42e+08	1.02 y	29:45	-	1.05
26	Tri	PCB-22	50.00	4.91e+07	1.03 y	30:12	-	1.09
27	Tri	PCB-36	50.00	5.22e+07	1.05 y	30:49	-	1.40
28	Tri	PCB-39	50.00	4.78e+07	1.05 y	31:17	-	1.28
29	Tri	PCB-38	50.00	4.87e+07	1.03 y	32:04	-	1.31
30	Tri	PCB-35	50.00	4.75e+07	1.03 y	32:34	-	1.28
31	Tri	PCB-37	50.00	4.79e+07	1.08 y	33:01	-	1.28
32	Tetra	PCB-54	50.00	4.77e+07	0.74 y	28:02	-	0.95
33	Tetra	PCB-50	50.00	3.65e+07	0.72 y	29:11	-	0.73
34	Tetra	PCB-53	50.00	3.64e+07	0.75 y	29:51	-	1.09
35	Tetra	PCB-51	50.00	3.70e+07	0.72 y	30:11	-	1.11
36	Tetra	PCB-45	50.00	3.37e+07	0.73 y	30:36	-	1.01
37	Tetra	PCB-46	50.00	2.89e-07	0.73 y	31:06	-	0.87
38	Tetra	PCB-52/69	100.00	8.00e+07	0.74 y	31:34	-	1.20
39	Tetra	PCB-73	50.00	4.72e+07	0.75 y	31:41	-	1.42
40	Tetra	PCB-43/49	100.00	7.08e-07	0.73 y	31:51	-	1.06

41	Tetra	PCB-47	50.00	3.98e+07	0.74 y	32:04	-	1.09
42	Tetra	PCB-48/75	100.00	8.76e+07	0.73 y	32:11	-	1.20
43	Tetra	PCB-65	50.00	4.12e+07	0.73 y	32:26	-	1.13
44	Tetra	PCB-62	50.00	4.67e+07	0.74 y	32:33	-	1.28
45	Tetra	PCB-44	50.00	2.93e+07	0.74 y	32:51	-	0.80
46	Tetra	PCB-42/59	100.00	7.65e+07	0.74 y	33:05	-	1.05
47	Tetra	PCB-41/64/71/72	200.00	1.66e+08	0.73 y	33:40	-	1.14
48	Tetra	PCB-68	50.00	4.75e+07	0.73 y	33:55	-	1.30
49	Tetra	PCB-40	50.00	2.57e+07	0.73 y	34:09	-	0.71
50	Tetra	PCB-57	50.00	4.47e+07	0.74 y	34:30	-	1.03
51	Tetra	PCB-67	50.00	4.34e+07	0.73 y	34:49	-	1.00

52	Tetra	PCB-58	50.00	4.85e+07	0.76 y	34:55	-	1.12
53	Tetra	PCB-63	50.00	4.77e+07	0.71 y	35:04	-	1.10
54	Tetra	PCB-74	50.00	4.68e+07	0.74 y	35:21	-	1.08
55	Tetra	PCB-61/70	100.00	9.06e+07	0.73 y	35:33	-	1.04
56	Tetra	PCB-76/66	100.00	9.21e+07	0.74 y	35:45	-	1.06
57	Tetra	PCB-80	50.00	5.39e+07	0.74 y	35:59	-	1.20
58	Tetra	PCB-55	50.00	5.08e+07	0.74 y	36:18	-	1.13
59	Tetra	PCB-56/60	100.00	8.80e+07	0.73 y	36:48	-	0.98
60	Tetra	PCB-79	50.00	4.65e+07	0.73 y	37:53	-	1.03
61	Tetra	PCB-78	50.00	4.56e+07	0.74 y	38:34	-	1.03
62	Tetra	PCB-81	50.00	5.20e+07	0.75 y	39:05	-	1.17
63	Tetra	PCB-77	50.00	5.01e+07	0.76 y	39:41	-	1.18
64	Penta	PCB-104	50.00	4.01e+07	1.59 y	32:44	-	1.16
65	Penta	PCB-96	50.00	3.32e+07	1.56 y	33:59	-	0.96
66	Penta	PCB-103	50.00	2.97e+07	1.54 y	34:31	-	0.86
67	Penta	PCB-100	50.00	3.02e+07	1.57 y	34:52	-	0.87
68	Penta	PCB-94	50.00	2.48e+07	1.56 y	35:20	-	1.06
69	Penta	PCB-95/98/102	150.00	8.16e+07	1.52 y	35:50	-	1.16
70	Penta	PCB-93	50.00	2.65e+07	1.68 y	35:58	-	1.13
71	Penta	PCB-88/91	100.00	5.25e+07	1.56 y	36:15	-	1.12
72	Penta	PCB-121	50.00	3.68e+07	1.57 y	36:22	-	1.57
73	Penta	PCB-84/92	100.00	5.15e+07	1.54 y	37:11	-	1.04
74	Penta	PCB-89	50.00	2.34e+07	1.53 y	37:22	-	0.95
75	Penta	PCB-90/101	100.00	5.59e+07	1.56 y	37:33	-	1.13
76	Penta	PCB-113	50.00	3.44e+07	1.55 y	37:48	-	1.39
77	Penta	PCB-99	50.00	2.56e+07	1.60 y	37:54	-	1.03
78	Penta	PCB-119	50.00	3.83e+07	1.56 y	38:21	-	1.77
79	Penta	PCB-108/112	100.00	5.74e+07	1.56 y	38:30	-	1.33
80	Penta	PCB-83	50.00	3.43e+07	1.57 y	38:40	-	1.58
81	Penta	PCB-97	50.00	2.60e+07	1.55 y	38:52	-	1.20
82	Penta	PCB-86	50.00	2.15e+07	1.46 y	39:00	-	0.99
83	Penta	PCB-87/117/125	150.00	9.85e+07	1.59 y	39:08	-	1.52
84	Penta	PCB-111/115	100.00	7.67e+07	1.56 y	39:17	-	1.77
85	Penta	PCB-85/116	100.00	5.77e+07	1.60 y	39:25	-	1.33
86	Penta	PCB-120	50.00	3.97e+07	1.53 y	39:39	-	1.83
87	Penta	PCB-110	50.00	3.50e+07	1.56 y	39:47	-	1.62
88	Penta	PCB-82	50.00	2.08e+07	1.56 y	40:25	-	0.73
89	Penta	PCB-124	50.00	3.69e+07	1.57 y	41:06	-	1.29
90	Penta	PCB-107/109	100.00	6.93e+07	1.58 y	41:15	-	1.21
91	Penta	PCB-123	50.00	3.47e+07	1.55 y	41:25	-	1.21
92	Penta	PCB-106/118	100.00	7.35e+07	1.54 y	41:38	-	1.20
93	Penta	PCB-114	50.00	4.27e+07	1.62 y	42:15	-	1.36
94	Penta	PCB-122	50.00	3.51e+07	1.63 y	42:23	-	1.12
95	Penta	PCB-105	50.00	4.36e+07	1.65 y	43:07	-	1.47
96	Penta	PCB-127	50.00	3.79e+07	1.69 y	43:27	-	1.24
97	Penta	PCB-126	50.00	3.67e+07	1.64 y	45:20	-	1.39
98	Hexa	PCB-155	50.00	3.43e+07	1.23 y	37:07	-	1.12
99	Hexa	PCB-150	50.00	3.11e+07	1.24 y	38:22	-	1.02
100	Hexa	PCB-152	50.00	3.16e+07	1.25 y	38:51	-	1.03
101	Hexa	PCB-145	50.00	3.04e+07	1.24 y	39:18	-	1.00

102	Hexa	PCB-136	50.00	3.31e+07	1.23 y	39:37	-	1.09
103	Hexa	PCB-148	50.00	2.18e+07	1.24 y	39:43	-	0.71
104	Hexa	PCB-154	50.00	2.45e+07	1.23 y	40:12	-	0.80
105	Hexa	PCB-151	50.00	2.30e+07	1.25 y	40:51	-	0.75
106	Hexa	PCB-135	50.00	2.19e+07	1.23 y	41:04	-	0.72
107	Hexa	PCB-144	50.00	2.39e+07	1.33 y	41:10	-	0.78
108	Hexa	PCB-147	50.00	2.07e+07	1.15 y	41:18	-	0.68
109	Hexa	PCB-139/149	100.00	4.69e+07	1.23 y	41:34	-	0.77
110	Hexa	PCB-140	50.00	2.12e+07	1.24 y	41:45	-	0.70
111	Hexa	PCB-134/143	100.00	5.52e+07	1.22 y	42:11	-	0.85
112	Hexa	PCB-133/142	100.00	5.46e+07	1.24 y	42:29	-	0.85

113	Hexa	PCB-131	50.00	2.55e+07	1.16 y	42:38	-	0.79
114	Hexa	PCB-146/165	100.00	6.52e+07	1.22 y	42:51	-	1.01
115	Hexa	PCB-132/161	100.00	6.70e+07	1.22 y	43:06	-	1.04
116	Hexa	PCB-153	50.00	3.34e+07	1.21 y	43:17	-	1.04
117	Hexa	PCB-168	50.00	4.08e+07	1.22 y	43:29	-	1.27
118	Hexa	PCB-141	50.00	2.90e+07	1.22 y	44:00	-	1.05
119	Hexa	PCB-137	50.00	2.95e+07	1.18 y	44:24	-	1.07
120	Hexa	PCB-130	50.00	2.45e+07	1.22 y	44:29	-	0.89
121	Hexa	PCB-138/163/164	150.00	1.05e+08	1.21 y	44:52	-	1.27
122	Hexa	PCB-158/160	100.00	7.63e+07	1.22 y	45:06	-	1.37
123	Hexa	PCB-129	50.00	2.45e+07	1.20 y	45:21	-	0.88
124	Hexa	PCB-166	50.00	3.59e+07	1.21 y	45:48	-	1.06
125	Hexa	PCB-159	50.00	3.96e+07	1.22 y	46:08	-	1.17
126	Hexa	PCB-128/162	100.00	6.57e+07	1.20 y	46:25	-	0.97
127	Hexa	PCB-167	50.00	3.85e+07	1.17 y	46:49	-	1.10
128	Hexa	PCB-156	50.00	3.93e+07	1.19 y	48:07	-	1.19
129	Hexa	PCB-157	50.00	3.97e+07	1.21 y	48:23	-	1.13
130	Hexa	PCB-169	50.00	3.46e+07	1.20 y	50:32	-	1.02
131	Hepta	PCB-188	50.00	3.60e+07	1.06 y	42:55	-	1.43
132	Hepta	PCB-184	50.00	3.21e+07	1.05 y	43:21	-	1.27
133	Hepta	PCB-179	50.00	3.36e+07	1.03 y	44:08	-	1.33
134	Hepta	PCB-176	50.00	3.52e+07	1.04 y	44:36	-	1.40
135	Hepta	PCB-186	50.00	3.45e+07	1.05 y	45:12	-	1.37
136	Hepta	PCB-178	50.00	2.51e+07	1.06 y	45:42	-	1.00
137	Hepta	PCB-175	50.00	2.54e+07	1.06 y	46:03	-	1.01
138	Hepta	PCB-182/187	100.00	5.34e+07	1.05 y	46:13	-	1.06
139	Hepta	PCB-183	50.00	2.93e+07	1.04 y	46:32	-	1.16
140	Hepta	PCB-185	50.00	2.52e+07	1.05 y	47:11	-	1.34
141	Hepta	PCB-174	50.00	2.35e+07	1.05 y	47:33	-	1.25
142	Hepta	PCB-181	50.00	2.45e+07	1.08 y	47:40	-	1.30
143	Hepta	PCB-177	50.00	2.19e+07	1.04 y	47:49	-	1.16
144	Hepta	PCB-171	50.00	2.53e+07	1.05 y	48:07	-	1.34
145	Hepta	PCB-173	50.00	2.04e+07	1.04 y	48:33	-	1.08
146	Hepta	PCB-172	50.00	2.39e+07	1.04 y	49:00	-	1.27
147	Hepta	PCB-192	50.00	3.03e+07	1.05 y	49:12	-	1.61
148	Hepta	PCB-180	50.00	2.48e+07	1.03 y	49:24	-	1.32
149	Hepta	PCB-193	50.00	3.25e+07	1.04 y	49:36	-	1.72
150	Hepta	PCB-191	50.00	3.32e+07	1.04 y	49:52	-	1.76
151	Hepta	PCB-170	50.00	2.30e+07	1.02 y	50:55	-	1.56
152	Hepta	PCB-190	50.00	3.20e+07	1.07 y	51:06	-	2.17
153	Hepta	PCB-189	50.00	3.08e+07	1.05 y	52:26	-	1.58
154	Octa	PCB-202	50.00	2.38e+07	0.91 y	48:19	-	0.96
155	Octa	PCB-201	50.00	2.52e+07	0.87 y	48:48	-	1.01
156	Octa	PCB-204	50.00	2.39e+07	0.89 y	48:58	-	0.96
157	Octa	PCB-197	50.00	2.70e+07	0.91 y	49:16	-	1.08
158	Octa	PCB-200	50.00	2.41e+07	0.87 y	50:10	-	0.97
159	Octa	PCB-198	50.00	1.82e+07	0.89 y	51:31	-	0.73
160	Octa	PCB-199	50.00	1.68e+07	0.90 y	51:38	-	0.68
161	Octa	PCB-196/203	100.00	3.74e+07	0.89 y	51:54	-	0.75
162	Octa	PCB-195	50.00	1.90e+07	0.91 y	53:04	-	1.07

163	Octa		PCB-194	50.00	2.09e+07	0.92	y	53:56	- 1.18
164	Octa		PCB-205	50.00	2.74e+07	0.92	y	54:13	- 1.55
165	Nona		PCB-208	50.00	2.49e+07	1.31	y	53:13	- 0.94
166	Nona		PCB-207	50.00	2.55e+07	1.33	y	53:32	- 0.96
167	Nona		PCB-206	50.00	1.42e+07	1.31	y	55:34	- 0.82
168	Deca		PCB-209	50.00	2.15e+07	1.16	y	56:55	- 1.21
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.25
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.25

171	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.14
172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.16
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.06
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.15
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.31
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.85
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.05
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.29
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.88
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.27
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.92
182	Tot ╗	Total Deca-PCB	50.00	2.15e+07	1.16	y	56:55	-	1.21
183	Mono╗	13C-PCB-1	100.00	1.31e+08	3.59	y	16:09	-	0.98
184	Mono╗	13C-PCB-3	100.00	1.27e+08	3.55	y	18:46	-	0.95
185	Di-IS	13C-PCB-4	100.00	8.37e+07	1.59	y	20:07	-	0.62
186	Di-IS	13C-PCB-9	100.00	1.32e+08	1.58	y	21:54	-	0.98
187	Di-IS	13C-PCB-11	100.00	1.29e+08	1.57	y	25:17	-	0.96
188	Tri-╗	13C-PCB-19	100.00	7.48e+07	1.10	y	24:16	-	0.56
189	Tri-╗	13C-PCB-32	100.00	1.10e+08	1.10	y	27:10	-	0.82
190	Tri-╗	13C-PCB-28	100.00	9.04e+07	1.03	y	29:08	-	1.21
191	Tri-╗	13C-PCB-37	100.00	7.45e+07	1.04	y	33:00	-	1.00
192	Tetr╗	13C-PCB-54	100.00	1.00e+08	0.78	y	28:01	-	1.15
193	Tetr╗	13C-PCB-52	100.00	6.66e+07	0.76	y	31:33	-	0.76
194	Tetr╗	13C-PCB-47	100.00	7.29e+07	0.77	y	32:03	-	0.84
195	Tetr╗	13C-PCB-70	100.00	8.67e+07	0.76	y	35:34	-	0.99
196	Tetr╗	13C-PCB-80	100.00	9.01e+07	0.78	y	35:59	-	1.03
197	Tetr╗	13C-PCB-81	100.00	8.87e+07	0.77	y	39:05	-	1.02
198	Tetr╗	13C-PCB-77	100.00	8.51e+07	0.79	y	39:40	-	0.98
199	Pent╗	13C-PCB-104	100.00	6.91e+07	1.61	y	32:42	-	1.05
200	Pent╗	13C-PCB-95	100.00	4.69e+07	1.61	y	35:52	-	0.72
201	Pent╗	13C-PCB-101	100.00	4.96e+07	1.62	y	37:33	-	0.76
202	Pent╗	13C-PCB-97	100.00	4.33e+07	1.65	y	38:51	-	0.66
203	Pent╗	13C-PCB-123	100.00	5.73e+07	1.61	y	41:24	-	0.87
204	Pent╗	13C-PCB-118	100.00	6.14e+07	1.60	y	41:35	-	0.93
205	Pent╗	13C-PCB-114	100.00	6.26e+07	1.57	y	42:14	-	1.25
206	Pent╗	13C-PCB-105	100.00	5.94e+07	1.58	y	43:06	-	1.19
207	Pent╗	13C-PCB-127	100.00	6.10e+07	1.55	y	43:26	-	1.22
208	Pent╗	13C-PCB-126	100.00	5.27e+07	1.61	y	45:20	-	1.06
209	Hexa╗	13C-PCB-155	100.00	6.10e+07	1.23	y	37:05	-	0.93
210	Hexa╗	13C-PCB-153	100.00	6.45e+07	1.29	y	43:15	-	1.29
211	Hexa╗	13C-PCB-141	100.00	5.52e+07	1.29	y	43:59	-	1.11
212	Hexa	13C-PCB-138	100.00	5.55e+07	1.26	y	44:50	-	1.11
213	Hexa╗	13C-PCB-159	100.00	6.75e+07	1.31	y	46:07	-	1.35
214	Hexa╗	13C-PCB-167	100.00	7.02e+07	1.27	y	46:48	-	1.41
215	Hexa╗	13C-PCB-156	100.00	6.63e+07	1.27	y	48:06	-	1.33
216	Hexa╗	13C-PCB-157	100.00	7.04e+07	1.32	y	48:22	-	1.41
217	Hexa╗	13C-PCB-169	100.00	6.82e+07	1.25	y	50:31	-	1.37
218	Hept╗	13C-PCB-188	100.00	5.04e+07	0.46	y	42:53	-	1.01
219	Hept╗	13C-PCB-180	100.00	3.77e+07	0.46	y	49:23	-	0.76
220	Hept╗	13C-PCB-170	100.00	2.95e+07	0.47	y	50:54	-	0.59
221	Hept╗	13C-PCB-189	100.00	3.89e+07	0.45	y	52:25	-	0.78

222	Octa╕	13C-PCB-202	100.00	4.98e+07	0.89 y	48:18	-	1.00
223	Octa╕	13C-PCB-194	100.00	3.54e+07	0.90 y	53:56	-	0.75
224	Nona╕	13C-PCB-208	100.00	5.30e+07	0.77 y	53:13	-	1.11
225	Nona╕	13C-PCB-206	100.00	3.47e+07	0.77 y	55:33	-	0.73
226	Deca╕	13C-PCB-209	100.00	3.56e+07	1.18 y	56:55	-	0.75
227	DI-RS	13C-PCB-15	100.00	1.34e+08	1.56 y	25:59	-	1.00
228	Tri-╕	13C-PCB-31	100.00	7.47e+07	1.02 y	29:01	-	1.00
229	Tetr╕	13C-PCB-60	100.00	8.72e+07	0.74 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	6.56e+07	1.64 y	39:17	-	1.00
231	Hexa╕	13C-PCB-128	100.00	4.99e+07	1.27 y	46:24	-	1.00

232	Octa¶	13C-PCB-205	100.00	4.76e+07	0.89 y	54:12	-	1.00
233	CRS	13C-PCB-79	100.00	8.64e+07	0.77 y	37:51	-	0.99
234	CRS	13C-PCB-178	100.00	3.14e+07	0.45 y	45:41	-	0.63
235	PS	13C-PCB-79	100.00	8.64e+07	0.77 y	37:51	-	0.97
236	PS	13C-PCB-178	100.00	3.14e+07	0.45 y	45:41	-	0.83

Filename: 150114E1 S: 7 Acquired: 14-JAN-15 19:04:40
Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-6 PCB CS4 14L2905

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	6.94e+08	2.96 y	16:11	-	1.32
2	Mono	PCB-2	400.00	7.15e+08	2.99 y	18:34	-	1.21
3	Mono	PCB-3	400.00	7.26e+08	2.99 y	18:48	-	1.23
4	Di	PCB-4/10	800.00	1.13e+09	1.63 y	20:10	-	1.54
5	Di	PCB-7/9	800.00	1.36e+09	1.64 y	21:57	-	1.16
6	Di	PCB-6	400.00	6.64e+08	1.65 y	22:36	-	1.14
7	Di	PCB-5/8	800.00	1.37e+09	1.63 y	23:01	-	1.17
8	Di	PCB-14	400.00	7.93e+08	1.64 y	24:06	-	1.37
9	Di	PCB-11	400.00	6.78e+08	1.65 y	25:18	-	1.17
10	Di	PCB-12/13	800.00	1.36e+09	1.63 y	25:42	-	1.18
11	Di	PCB-15	400.00	7.60e+08	1.64 y	26:00	-	1.32
12	Tri	PCB-19	400.00	3.81e+08	1.06 y	24:17	-	1.11
13	Tri	PCB-30	400.00	5.91e+08	1.06 y	25:11	-	1.72
14	Tri	PCB-18	400.00	4.19e+08	1.05 y	25:56	-	0.82
15	Tri	PCB-17	400.00	4.40e+08	1.06 y	26:06	-	0.86
16	Tri	PCB-24/27	800.00	1.23e+09	1.06 y	26:41	-	1.21
17	Tri	PCB-16/32	800.00	9.74e+08	1.05 y	27:11	-	0.95
18	Tri	PCB-34	400.00	4.41e+08	1.02 y	27:59	-	1.16
19	Tri	PCB-23	400.00	4.64e+08	1.03 y	28:04	-	1.22
20	Tri	PCB-29	400.00	4.32e+08	1.03 y	28:19	-	1.14
21	Tri	PCB-26	400.00	4.32e+08	1.01 y	28:32	-	1.14
22	Tri	PCB-25	400.00	4.27e+08	1.03 y	28:42	-	1.13
23	Tri	PCB-31	400.00	4.79e+08	1.03 y	29:04	-	1.26
24	Tri	PCB-28	400.00	4.54e+08	1.04 y	29:09	-	1.20
25	Tri	PCB-20/21/33	1200.00	1.36e+09	1.02 y	29:47	-	1.19
26	Tri	PCB-22	400.00	4.30e+08	1.01 y	30:13	-	1.13
27	Tri	PCB-36	400.00	3.85e+08	1.00 y	30:49	-	1.10
28	Tri	PCB-39	400.00	3.74e+08	1.01 y	31:18	-	1.07
29	Tri	PCB-38	400.00	4.25e+08	1.04 y	32:04	-	1.22
30	Tri	PCB-35	400.00	4.27e+08	1.04 y	32:35	-	1.23
31	Tri	PCB-37	400.00	4.44e+08	1.06 y	33:02	-	1.27
32	Tetra	PCB-54	400.00	4.13e+08	0.74 y	28:02	-	0.94
33	Tetra	PCB-50	400.00	3.31e+08	0.73 y	29:13	-	0.75
34	Tetra	PCB-53	400.00	3.18e+08	0.73 y	29:51	-	1.09
35	Tetra	PCB-51	400.00	3.35e+08	0.74 y	30:12	-	1.15
36	Tetra	PCB-45	400.00	2.67e+08	0.73 y	30:38	-	0.92
37	Tetra	PCB-46	400.00	2.47e+08	0.72 y	31:07	-	0.85
38	Tetra	PCB-52/69	800.00	6.65e+08	0.72 y	31:36	-	1.15
39	Tetra	PCB-73	400.00	4.07e+08	0.73 y	31:43	-	1.40
40	Tetra	PCB-43/49	800.00	6.39e+08	0.74 y	31:53	-	1.10
41	Tetra	PCB-47	400.00	3.44e+08	0.73 y	32:05	-	1.04

42	Tetra	PCB-48/75	800.00	8.25e+08	0.74	y	32:12	- 1.24
43	Tetra	PCB-65	400.00	4.06e+08	0.73	y	32:28	- 1.22
44	Tetra	PCB-62	400.00	3.83e+08	0.74	y	32:35	- 1.15
45	Tetra	PCB-44	400.00	2.51e+08	0.73	y	32:53	- 0.76
46	Tetra	PCB-42/59	800.00	7.21e+08	0.73	y	33:06	- 1.09
47	Tetra	PCB-41/64/71/72	1600.00	1.70e+09	0.74	y	33:41	- 1.28
48	Tetra	PCB-68	400.00	4.83e+08	0.74	y	33:57	- 1.45
49	Tetra	PCB-40	400.00	2.58e+08	0.74	y	34:09	- 0.78
50	Tetra	PCB-57	400.00	4.23e+08	0.73	y	34:31	- 1.00
51	Tetra	PCB-67	400.00	4.16e+08	0.73	y	34:50	- 0.99
52	Tetra	PCB-58	400.00	4.23e+08	0.74	y	34:57	- 1.00

53	Tetra	PCB-63	400.00	4.44e+08	0.74 y	35:06	-	1.05
54	Tetra	PCB-74	400.00	4.75e+08	0.73 y	35:23	-	1.12
55	Tetra	PCB-61/70	800.00	8.24e+08	0.73 y	35:33	-	0.97
56	Tetra	PCB-76/66	800.00	8.98e+08	0.74 y	35:47	-	1.06
57	Tetra	PCB-80	400.00	5.02e+08	0.75 y	36:01	-	1.18
58	Tetra	PCB-55	400.00	4.59e+08	0.74 y	36:20	-	1.08
59	Tetra	PCB-56/60	800.00	8.76e+08	0.74 y	36:49	-	1.03
60	Tetra	PCB-79	400.00	4.30e+08	0.73 y	37:53	-	1.01
61	Tetra	PCB-78	400.00	4.62e+08	0.73 y	38:35	-	1.11
62	Tetra	PCB-81	400.00	4.78e+08	0.75 y	39:07	-	1.15
63	Tetra	PCB-77	400.00	4.50e+08	0.76 y	39:42	-	1.14
64	Penta	PCB-104	400.00	3.46e+08	1.56 y	32:44	-	1.16
65	Penta	PCB-96	400.00	3.23e+08	1.56 y	33:59	-	1.08
66	Penta	PCB-103	400.00	2.83e+08	1.56 y	34:32	-	0.94
67	Penta	PCB-100	400.00	2.76e+08	1.56 y	34:52	-	0.92
68	Penta	PCB-94	400.00	2.45e+08	1.57 y	35:21	-	1.08
69	Penta	PCB-95/98/102	1200.00	8.28e+08	1.54 y	35:50	-	1.22
70	Penta	PCB-93	400.00	1.85e+08	1.63 y	35:58	-	0.82
71	Penta	PCB-88/91	800.00	4.53e+08	1.54 y	36:15	-	1.00
72	Penta	PCB-121	400.00	3.50e+08	1.58 y	36:22	-	1.55
73	Penta	PCB-84/92	800.00	4.81e+08	1.56 y	37:11	-	1.01
74	Penta	PCB-89	400.00	2.17e+08	1.57 y	37:22	-	0.91
75	Penta	PCB-90/101	800.00	5.22e+08	1.57 y	37:34	-	1.09
76	Penta	PCB-113	400.00	2.96e+08	1.55 y	37:49	-	1.24
77	Penta	PCB-99	400.00	2.51e+08	1.57 y	37:54	-	1.05
78	Penta	PCB-119	400.00	3.64e+08	1.57 y	38:22	-	1.76
79	Penta	PCB-108/112	800.00	5.68e+08	1.57 y	38:31	-	1.37
80	Penta	PCB-83	400.00	3.40e+08	1.58 y	38:41	-	1.64
81	Penta	PCB-97	400.00	2.48e+08	1.55 y	38:52	-	1.20
82	Penta	PCB-86	400.00	1.86e+08	1.65 y	39:01	-	0.90
83	Penta	PCB-87/117/125	1200.00	9.47e+08	1.57 y	39:08	-	1.53
84	Penta	PCB-111/115	800.00	7.12e+08	1.52 y	39:18	-	1.72
85	Penta	PCB-85/116	800.00	5.09e+08	1.62 y	39:26	-	1.23
86	Penta	PCB-120	400.00	3.79e+08	1.56 y	39:40	-	1.83
87	Penta	PCB-110	400.00	3.10e+08	1.58 y	39:49	-	1.50
88	Penta	PCB-82	400.00	1.91e+08	1.57 y	40:27	-	0.68
89	Penta	PCB-124	400.00	3.36e+08	1.55 y	41:07	-	1.20
90	Penta	PCB-107/109	800.00	6.83e+08	1.56 y	41:15	-	1.22
91	Penta	PCB-123	400.00	3.22e+08	1.56 y	41:26	-	1.15
92	Penta	PCB-106/118	800.00	7.08e+08	1.56 y	41:38	-	1.15
93	Penta	PCB-114	400.00	4.01e+08	1.63 y	42:16	-	1.32
94	Penta	PCB-122	400.00	3.55e+08	1.68 y	42:24	-	1.17
95	Penta	PCB-105	400.00	3.96e+08	1.67 y	43:08	-	1.44
96	Penta	PCB-127	400.00	3.51e+08	1.68 y	43:27	-	1.19
97	Penta	PCB-126	400.00	3.80e+08	1.65 y	45:22	-	1.32
98	Hexa	PCB-155	400.00	3.03e+08	1.24 y	37:08	-	1.14
99	Hexa	PCB-150	400.00	2.98e+08	1.23 y	38:23	-	1.12
100	Hexa	PCB-152	400.00	2.90e+08	1.24 y	38:52	-	1.09
101	Hexa	PCB-145	400.00	2.84e+08	1.24 y	39:18	-	1.07
102	Hexa	PCB-136	400.00	2.87e+08	1.24 y	39:38	-	1.08

103	Hexa	PCB-148	400.00	2.10e+08	1.25 y	39:44	-	0.79
104	Hexa	PCB-154	400.00	2.24e+08	1.24 y	40:14	-	0.84
105	Hexa	PCB-151	400.00	2.11e+08	1.25 y	40:52	-	0.79
106	Hexa	PCB-135	400.00	2.08e+08	1.40 y	41:05	-	0.78
107	Hexa	PCB-144	400.00	2.26e+08	1.10 y	41:12	-	0.85
108	Hexa	PCB-147	400.00	1.99e+08	1.23 y	41:19	-	0.75
109	Hexa	PCB-139/149	800.00	4.60e+08	1.23 y	41:35	-	0.86
110	Hexa	PCB-140	400.00	2.02e+08	1.22 y	41:46	-	0.76
111	Hexa	PCB-134/143	800.00	5.51e+08	1.24 y	42:12	-	0.90
112	Hexa	PCB-133/142	800.00	5.43e+08	1.22 y	42:30	-	0.89
113	Hexa	PCB-131	400.00	2.46e+08	1.21 y	42:39	-	0.81

114	Hexa	PCB-146/165	800.00	6.43e+08	1.22 y	42:53	-	1.05
115	Hexa	PCB-132/161	800.00	6.26e+08	1.21 y	43:07	-	1.03
116	Hexa	PCB-153	400.00	3.15e+08	1.21 y	43:17	-	1.03
117	Hexa	PCB-168	400.00	3.92e+08	1.21 y	43:30	-	1.28
118	Hexa	PCB-141	400.00	2.79e+08	1.22 y	44:01	-	1.06
119	Hexa	PCB-137	400.00	2.87e+08	1.17 y	44:24	-	1.09
120	Hexa	PCB-130	400.00	2.37e+08	1.26 y	44:31	-	0.90
121	Hexa	PCB-138/163/164	1200.00	1.05e+09	1.20 y	44:53	-	1.28
122	Hexa	PCB-158/160	800.00	7.31e+08	1.20 y	45:08	-	1.35
123	Hexa	PCB-129	400.00	2.54e+08	1.23 y	45:22	-	0.94
124	Hexa	PCB-166	400.00	3.59e+08	1.21 y	45:50	-	1.06
125	Hexa	PCB-159	400.00	3.81e+08	1.21 y	46:09	-	1.13
126	Hexa	PCB-128/162	800.00	6.54e+08	1.21 y	46:26	-	0.97
127	Hexa	PCB-167	400.00	3.57e+08	1.21 y	46:50	-	1.09
128	Hexa	PCB-156	400.00	3.98e+08	1.22 y	48:07	-	1.19
129	Hexa	PCB-157	400.00	3.91e+08	1.22 y	48:23	-	1.12
130	Hexa	PCB-169	400.00	3.39e+08	1.22 y	50:33	-	1.02
131	Hepta	PCB-188	400.00	3.52e+08	1.05 y	42:56	-	1.38
132	Hepta	PCB-184	400.00	3.14e+08	1.04 y	43:23	-	1.23
133	Hepta	PCB-179	400.00	3.24e+08	1.05 y	44:09	-	1.27
134	Hepta	PCB-176	400.00	3.41e+08	1.04 y	44:37	-	1.34
135	Hepta	PCB-186	400.00	3.41e+08	1.05 y	45:13	-	1.33
136	Hepta	PCB-178	400.00	2.45e+08	1.05 y	45:43	-	0.96
137	Hepta	PCB-175	400.00	2.39e+08	1.05 y	46:04	-	0.94
138	Hepta	PCB-182/187	800.00	5.39e+08	1.05 y	46:14	-	1.05
139	Hepta	PCB-183	400.00	2.80e+08	1.05 y	46:32	-	1.10
140	Hepta	PCB-185	400.00	2.45e+08	1.05 y	47:13	-	1.32
141	Hepta	PCB-174	400.00	2.22e+08	1.04 y	47:34	-	1.19
142	Hepta	PCB-181	400.00	2.44e+08	1.05 y	47:41	-	1.31
143	Hepta	PCB-177	400.00	2.18e+08	1.04 y	47:51	-	1.17
144	Hepta	PCB-171	400.00	2.57e+08	1.04 y	48:08	-	1.38
145	Hepta	PCB-173	400.00	1.93e+08	1.06 y	48:34	-	1.04
146	Hepta	PCB-172	400.00	2.43e+08	1.05 y	49:00	-	1.30
147	Hepta	PCB-192	400.00	3.11e+08	1.04 y	49:12	-	1.67
148	Hepta	PCB-180	400.00	2.42e+08	1.05 y	49:25	-	1.30
149	Hepta	PCB-193	400.00	3.25e+08	1.05 y	49:37	-	1.74
150	Hepta	PCB-191	400.00	3.28e+08	1.04 y	49:53	-	1.76
151	Hepta	PCB-170	400.00	2.28e+08	1.05 y	50:56	-	1.52
152	Hepta	PCB-190	400.00	3.23e+08	1.05 y	51:07	-	2.15
153	Hepta	PCB-189	400.00	3.10e+08	1.04 y	52:27	-	1.56
154	Octa	PCB-202	400.00	2.31e+08	0.89 y	48:21	-	0.95
155	Octa	PCB-201	400.00	2.56e+08	0.88 y	48:50	-	1.06
156	Octa	PCB-204	400.00	2.56e+08	0.88 y	48:50	-	1.06
157	Octa	PCB-197	400.00	2.77e+08	0.89 y	49:17	-	1.14
158	Octa	PCB-200	400.00	2.35e+08	0.89 y	50:11	-	0.97
159	Octa	PCB-198	400.00	1.78e+08	0.90 y	51:32	-	0.73
160	Octa	PCB-199	400.00	1.72e+08	0.89 y	51:39	-	0.71
161	Octa	PCB-196/203	800.00	3.96e+08	0.88 y	51:55	-	0.82
162	Octa	PCB-195	400.00	1.92e+08	0.91 y	53:06	-	1.14
163	Octa	PCB-194	400.00	1.94e+08	0.91 y	53:58	-	1.15

164	Octa	PCB-205	400.00	2.64e+08	0.91 y	54:14	-	1.56
165	Nona	PCB-208	400.00	2.44e+08	1.30 y	53:14	-	0.92
166	Nona	PCB-207	400.00	2.51e+08	1.30 y	53:33	-	0.95
167	Nona	PCB-206	400.00	1.40e+08	1.30 y	55:36	-	0.79
168	Deca	PCB-209	400.00	2.07e+08	1.17 y	56:58	-	1.22
169	Tot ╗	Total Mono-PCB	0.00	-	- n	-	-	1.25
170	Tot ╗	Total Di-PCB	0.00	-	- n	-	-	1.22
171	Tot ╗	Total Tri-PCB	0.00	-	- n	-	-	1.11

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.18
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.08
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.16
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.29
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	0.91
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.06
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.27
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	0.92
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.28
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	0.90
182	Tot ╗	Total Deca-PCB	400.00	2.07e+08	1.17	y	56:58	-	1.22
183	Mono╗	13C-PCB-1	100.00	1.31e+08	3.58	y	16:10	-	0.87
184	Mono╗	13C-PCB-3	100.00	1.48e+08	3.55	y	18:47	-	0.99
185	Di-IS	13C-PCB-4	100.00	9.18e+07	1.61	y	20:07	-	0.61
186	Di-IS	13C-PCB-9	100.00	1.46e+08	1.57	y	21:55	-	0.97
187	Di-IS	13C-PCB-11	100.00	1.45e+08	1.56	y	25:17	-	0.96
188	Tri-╗	13C-PCB-19	100.00	8.61e+07	1.11	y	24:16	-	0.57
189	Tri-╗	13C-PCB-32	100.00	1.28e+08	1.10	y	27:11	-	0.85
190	Tri-╗	13C-PCB-28	100.00	9.48e+07	1.03	y	29:09	-	0.96
191	Tri-╗	13C-PCB-37	100.00	8.72e+07	1.04	y	33:01	-	0.88
192	Tetr╗	13C-PCB-54	100.00	1.10e+08	0.77	y	28:01	-	1.03
193	Tetr╗	13C-PCB-52	100.00	7.25e+07	0.77	y	31:34	-	0.68
194	Tetr╗	13C-PCB-47	100.00	8.30e+07	0.77	y	32:04	-	0.78
195	Tetr╗	13C-PCB-70	100.00	1.06e+08	0.76	y	35:34	-	0.99
196	Tetr╗	13C-PCB-80	100.00	1.06e+08	0.75	y	35:59	-	1.00
197	Tetr╗	13C-PCB-81	100.00	1.04e+08	0.78	y	39:06	-	0.97
198	Tetr╗	13C-PCB-77	100.00	9.87e+07	0.76	y	39:41	-	0.93
199	Pent╗	13C-PCB-104	100.00	7.49e+07	1.60	y	32:43	-	0.95
200	Pent╗	13C-PCB-95	100.00	5.64e+07	1.61	y	35:53	-	0.71
201	Pent╗	13C-PCB-101	100.00	5.96e+07	1.61	y	37:34	-	0.75
202	Pent╗	13C-PCB-97	100.00	5.17e+07	1.63	y	38:51	-	0.65
203	Pent╗	13C-PCB-123	100.00	7.00e+07	1.62	y	41:25	-	0.88
204	Pent╗	13C-PCB-118	100.00	7.68e+07	1.66	y	41:36	-	0.97
205	Pent╗	13C-PCB-114	100.00	7.59e+07	1.59	y	42:15	-	1.23
206	Pent╗	13C-PCB-105	100.00	6.87e+07	1.58	y	43:07	-	1.11
207	Pent╗	13C-PCB-127	100.00	7.37e+07	1.55	y	43:27	-	1.19
208	Pent╗	13C-PCB-126	100.00	7.18e+07	1.55	y	45:21	-	1.16
209	Hexa╗	13C-PCB-155	100.00	6.66e+07	1.26	y	37:06	-	0.84
210	Hexa╗	13C-PCB-153	100.00	7.63e+07	1.28	y	43:16	-	1.23
211	Hexa╗	13C-PCB-141	100.00	6.56e+07	1.29	y	44:01	-	1.06
212	Hexa	13C-PCB-138	100.00	6.79e+07	1.28	y	44:51	-	1.10
213	Hexa╗	13C-PCB-159	100.00	8.47e+07	1.26	y	46:08	-	1.37
214	Hexa╗	13C-PCB-167	100.00	8.20e+07	1.28	y	46:49	-	1.33
215	Hexa╗	13C-PCB-156	100.00	8.33e+07	1.29	y	48:06	-	1.35
216	Hexa╗	13C-PCB-157	100.00	8.77e+07	1.28	y	48:22	-	1.42
217	Hexa╗	13C-PCB-169	100.00	8.32e+07	1.28	y	50:33	-	1.34
218	Hept╗	13C-PCB-188	100.00	6.38e+07	0.45	y	42:54	-	1.03
219	Hept╗	13C-PCB-180	100.00	4.66e+07	0.47	y	49:24	-	0.75
220	Hept╗	13C-PCB-170	100.00	3.75e+07	0.47	y	50:55	-	0.61
221	Hept╗	13C-PCB-189	100.00	4.95e+07	0.46	y	52:26	-	0.80
222	Octa╗	13C-PCB-202	100.00	6.06e+07	0.91	y	48:19	-	0.98

223	Octa╕	13C-PCB-194	100.00	4.22e+07	0.89 y	53:57	-	0.72
224	Nona╕	13C-PCB-208	100.00	6.60e+07	0.76 y	53:14	-	1.12
225	Nona╕	13C-PCB-206	100.00	4.43e+07	0.76 y	55:35	-	0.75
226	Deca╕	13C-PCB-209	100.00	4.22e+07	1.18 y	56:57	-	0.72
227	DI-RS	13C-PCB-15	100.00	1.50e+08	1.58 y	25:59	-	1.00
228	Tri-╕	13C-PCB-31	100.00	9.85e+07	1.04 y	29:02	-	1.00
229	Tetr╕	13C-PCB-60	100.00	1.07e+08	0.78 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	7.92e+07	1.60 y	39:17	-	1.00
231	Hexa╕	13C-PCB-128	100.00	6.19e+07	1.30 y	46:24	-	1.00
232	Octa╕	13C-PCB-205	100.00	5.88e+07	0.91 y	54:14	-	1.00

233	CRS	13C-PCB-79	100.00	1.03e+08	0.76 y	37:52	-	0.97
234	CRS	13C-PCB-178	100.00	3.98e+07	0.46 y	45:42	-	0.64
235	PS	13C-PCB-79	100.00	1.03e+08	0.76 y	37:52	-	0.99
236	PS	13C-PCB-178	100.00	3.98e+07	0.46 y	45:42	-	0.85

Filename: 150114E1 S: 8 Acquired: 14-JAN-15 20:09:16
Run: 150114E1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150114E1-7 PCB CS5 14L2906

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1000.00	1.39e+09	2.97 y	16:11	-	1.34
2	Mono	PCB-2	1000.00	1.43e+09	2.99 y	18:34	-	1.33
3	Mono	PCB-3	1000.00	1.41e+09	2.98 y	18:48	-	1.31
4	Di	PCB-4/10	2000.00	2.31e+09	1.62 y	20:11	-	1.54
5	Di	PCB-7/9	2000.00	2.86e+09	1.64 y	21:57	-	1.18
6	Di	PCB-6	1000.00	1.37e+09	1.64 y	22:36	-	1.13
7	Di	PCB-5/8	2000.00	2.86e+09	1.64 y	23:01	-	1.17
8	Di	PCB-14	1000.00	1.67e+09	1.63 y	24:06	-	1.36
9	Di	PCB-11	1000.00	1.43e+09	1.65 y	25:19	-	1.17
10	Di	PCB-12/13	2000.00	2.95e+09	1.62 y	25:42	-	1.20
11	Di	PCB-15	1000.00	1.65e+09	1.61 y	26:01	-	1.35
12	Tri	PCB-19	1000.00	7.86e+08	1.06 y	24:18	-	1.10
13	Tri	PCB-30	1000.00	1.25e+09	1.07 y	25:12	-	1.75
14	Tri	PCB-18	1000.00	8.43e+08	1.06 y	25:56	-	0.78
15	Tri	PCB-17	1000.00	9.23e+08	1.06 y	26:07	-	0.86
16	Tri	PCB-24/27	2000.00	2.55e+09	1.06 y	26:41	-	1.18
17	Tri	PCB-16/32	2000.00	2.05e+09	1.06 y	27:12	-	0.95
18	Tri	PCB-34	1000.00	9.86e+08	1.02 y	28:00	-	1.21
19	Tri	PCB-23	1000.00	8.98e+08	1.04 y	28:05	-	1.10
20	Tri	PCB-29	1000.00	8.94e+08	1.02 y	28:20	-	1.10
21	Tri	PCB-26	1000.00	1.01e+09	1.03 y	28:32	-	1.24
22	Tri	PCB-25	1000.00	8.93e+08	1.01 y	28:43	-	1.10
23	Tri	PCB-31	1000.00	8.93e+08	1.14 y	29:03	-	1.10
24	Tri	PCB-28	1000.00	9.16e+08	0.92 y	29:10	-	1.13
25	Tri	PCB-20/21/33	3000.00	2.41e+09	1.02 y	29:46	-	0.98
26	Tri	PCB-22	1000.00	8.07e+08	1.02 y	30:14	-	0.99
27	Tri	PCB-36	1000.00	9.15e+08	1.01 y	30:50	-	1.27
28	Tri	PCB-39	1000.00	8.14e+08	1.02 y	31:18	-	1.13
29	Tri	PCB-38	1000.00	8.90e+08	1.03 y	32:05	-	1.24
30	Tri	PCB-35	1000.00	9.47e+08	1.02 y	32:36	-	1.31
31	Tri	PCB-37	1000.00	8.87e+08	1.02 y	33:02	-	1.23
32	Tetra	PCB-54	1000.00	8.93e+08	0.74 y	28:03	-	0.94
33	Tetra	PCB-50	1000.00	6.66e+08	0.73 y	29:13	-	0.70
34	Tetra	PCB-53	1000.00	6.07e+08	0.71 y	29:52	-	0.99
35	Tetra	PCB-51	1000.00	6.35e+08	0.73 y	30:12	-	1.04
36	Tetra	PCB-45	1000.00	6.11e+08	0.73 y	30:38	-	1.00
37	Tetra	PCB-46	1000.00	5.24e+08	0.72 y	31:07	-	0.86
38	Tetra	PCB-52/69	2000.00	1.41e+09	0.71 y	31:36	-	1.15
39	Tetra	PCB-73	1000.00	7.43e+08	0.72 y	31:43	-	1.22
40	Tetra	PCB-43/49	2000.00	1.28e+09	0.73 y	31:53	-	1.05

41	Tetra	PCB-47	1000.00	7.82e+08	0.72	y	32:05	- 1.13
42	Tetra	PCB-48/75	2000.00	1.71e+09	0.73	y	32:12	- 1.23
43	Tetra	PCB-65	1000.00	7.98e+08	0.73	y	32:28	- 1.15
44	Tetra	PCB-62	1000.00	9.11e+08	0.74	y	32:35	- 1.31
45	Tetra	PCB-44	1000.00	5.20e+08	0.73	y	32:53	- 0.75
46	Tetra	PCB-42/59	2000.00	1.48e+09	0.73	y	33:06	- 1.07
47	Tetra	PCB-41/64/71/72	4000.00	3.37e+09	0.74	y	33:42	- 1.21
48	Tetra	PCB-68	1000.00	9.93e+08	0.74	y	33:57	- 1.43
49	Tetra	PCB-40	1000.00	5.33e+08	0.73	y	34:10	- 0.77
50	Tetra	PCB-57	1000.00	8.58e+08	0.72	y	34:32	- 0.90
51	Tetra	PCB-67	1000.00	8.68e+08	0.72	y	34:50	- 0.91

52	Tetra	PCB-58	1000.00	9.49e+08	0.74 y	34:57	-	1.00
53	Tetra	PCB-63	1000.00	9.14e+08	0.73 y	35:06	-	0.96
54	Tetra	PCB-74	1000.00	9.90e+08	0.72 y	35:23	-	1.04
55	Tetra	PCB-61/70	2000.00	1.93e+09	0.73 y	35:34	-	1.01
56	Tetra	PCB-76/66	2000.00	1.96e+09	0.74 y	35:47	-	1.03
57	Tetra	PCB-80	1000.00	1.15e+09	0.72 y	36:01	-	1.20
58	Tetra	PCB-55	1000.00	1.10e+09	0.74 y	36:20	-	1.15
59	Tetra	PCB-56/60	2000.00	1.77e+09	0.73 y	36:50	-	0.93
60	Tetra	PCB-79	1000.00	1.06e+09	0.74 y	37:54	-	1.11
61	Tetra	PCB-78	1000.00	9.51e+08	0.73 y	38:36	-	1.01
62	Tetra	PCB-81	1000.00	1.11e+09	0.74 y	39:07	-	1.17
63	Tetra	PCB-77	1000.00	1.06e+09	0.75 y	39:43	-	1.14
64	Penta	PCB-104	1000.00	7.52e+08	1.57 y	32:44	-	1.17
65	Penta	PCB-96	1000.00	6.57e+08	1.58 y	34:00	-	1.02
66	Penta	PCB-103	1000.00	5.75e+08	1.55 y	34:32	-	0.89
67	Penta	PCB-100	1000.00	5.96e+08	1.56 y	34:53	-	0.92
68	Penta	PCB-94	1000.00	5.00e+08	1.57 y	35:22	-	1.03
69	Penta	PCB-95/98/102	3000.00	1.69e+09	1.56 y	35:51	-	1.16
70	Penta	PCB-93	1000.00	4.91e+08	1.60 y	35:59	-	1.01
71	Penta	PCB-88/91	2000.00	9.64e+08	1.55 y	36:15	-	0.99
72	Penta	PCB-121	1000.00	8.72e+08	1.59 y	36:22	-	1.79
73	Penta	PCB-84/92	2000.00	1.03e+09	1.54 y	37:12	-	0.95
74	Penta	PCB-89	1000.00	4.76e+08	1.58 y	37:23	-	0.87
75	Penta	PCB-90/101	2000.00	1.17e+09	1.56 y	37:33	-	1.07
76	Penta	PCB-113	1000.00	6.26e+08	1.54 y	37:48	-	1.15
77	Penta	PCB-99	1000.00	6.40e+08	1.57 y	37:54	-	1.17
78	Penta	PCB-119	1000.00	7.94e+08	1.57 y	38:22	-	1.72
79	Penta	PCB-108/112	2000.00	1.19e+09	1.57 y	38:31	-	1.29
80	Penta	PCB-83	1000.00	6.87e+08	1.56 y	38:40	-	1.49
81	Penta	PCB-97	1000.00	5.38e+08	1.56 y	38:53	-	1.17
82	Penta	PCB-86	1000.00	4.30e+08	1.55 y	39:01	-	0.93
83	Penta	PCB-87/117/125	3000.00	2.08e+09	1.58 y	39:09	-	1.50
84	Penta	PCB-111/115	2000.00	1.58e+09	1.55 y	39:18	-	1.71
85	Penta	PCB-85/116	2000.00	1.24e+09	1.58 y	39:26	-	1.34
86	Penta	PCB-120	1000.00	8.48e+08	1.57 y	39:41	-	1.84
87	Penta	PCB-110	1000.00	7.10e+08	1.58 y	39:49	-	1.54
88	Penta	PCB-82	1000.00	4.02e+08	1.56 y	40:26	-	0.64
89	Penta	PCB-124	1000.00	8.06e+08	1.55 y	41:07	-	1.28
90	Penta	PCB-107/109	2000.00	1.56e+09	1.57 y	41:16	-	1.24
91	Penta	PCB-123	1000.00	7.24e+08	1.56 y	41:26	-	1.15
92	Penta	PCB-106/118	2000.00	1.59e+09	1.57 y	41:38	-	1.16
93	Penta	PCB-114	1000.00	9.36e+08	1.65 y	42:17	-	1.36
94	Penta	PCB-122	1000.00	7.65e+08	1.67 y	42:25	-	1.11
95	Penta	PCB-105	1000.00	9.43e+08	1.66 y	43:07	-	1.41
96	Penta	PCB-127	1000.00	8.39e+08	1.66 y	43:28	-	1.18
97	Penta	PCB-126	1000.00	8.19e+08	1.68 y	45:22	-	1.33
98	Hexa	PCB-155	1000.00	6.54e+08	1.24 y	37:08	-	1.12
99	Hexa	PCB-150	1000.00	6.42e+08	1.24 y	38:23	-	1.10
100	Hexa	PCB-152	1000.00	6.30e+08	1.24 y	38:52	-	1.08
101	Hexa	PCB-145	1000.00	6.31e+08	1.25 y	39:19	-	1.08

102	Hexa	PCB-136	1000.00	6.49e+08	1.38 y	39:38	-	1.11
103	Hexa	PCB-148	1000.00	4.68e+08	1.07 y	39:44	-	0.80
104	Hexa	PCB-154	1000.00	4.88e+08	1.24 y	40:14	-	0.84
105	Hexa	PCB-151	1000.00	4.67e+08	1.25 y	40:52	-	0.80
106	Hexa	PCB-135	1000.00	4.74e+08	1.23 y	41:05	-	0.81
107	Hexa	PCB-144	1000.00	5.08e+08	1.24 y	41:11	-	0.87
108	Hexa	PCB-147	1000.00	4.71e+08	1.25 y	41:19	-	0.81
109	Hexa	PCB-139/149	2000.00	1.03e+09	1.24 y	41:35	-	0.88
110	Hexa	PCB-140	1000.00	4.41e+08	1.24 y	41:46	-	0.76
111	Hexa	PCB-134/143	2000.00	1.22e+09	1.22 y	42:12	-	0.88
112	Hexa	PCB-133/142	2000.00	1.23e+09	1.22 y	42:29	-	0.88

113	Hexa	PCB-131	1000.00	5.60e+08	1.22 y	42:40	-	0.80
114	Hexa	PCB-146/165	2000.00	1.48e+09	1.21 y	42:52	-	1.06
115	Hexa	PCB-132/161	2000.00	1.49e+09	1.22 y	43:07	-	1.07
116	Hexa	PCB-153	1000.00	7.14e+08	1.23 y	43:18	-	1.02
117	Hexa	PCB-168	1000.00	9.13e+08	1.23 y	43:31	-	1.31
118	Hexa	PCB-141	1000.00	6.28e+08	1.20 y	44:02	-	1.06
119	Hexa	PCB-137	1000.00	6.54e+08	1.18 y	44:25	-	1.10
120	Hexa	PCB-130	1000.00	5.46e+08	1.23 y	44:31	-	0.92
121	Hexa	PCB-138/163/164	3000.00	2.41e+09	1.21 y	44:54	-	1.26
122	Hexa	PCB-158/160	2000.00	1.71e+09	1.21 y	45:08	-	1.34
123	Hexa	PCB-129	1000.00	5.54e+08	1.21 y	45:22	-	0.87
124	Hexa	PCB-166	1000.00	8.34e+08	1.21 y	45:49	-	1.08
125	Hexa	PCB-159	1000.00	8.85e+08	1.18 y	46:09	-	1.15
126	Hexa	PCB-128/162	2000.00	1.48e+09	1.19 y	46:26	-	0.96
127	Hexa	PCB-167	1000.00	8.20e+08	1.22 y	46:49	-	1.09
128	Hexa	PCB-156	1000.00	9.21e+08	1.23 y	48:08	-	1.19
129	Hexa	PCB-157	1000.00	9.13e+08	1.23 y	48:23	-	1.13
130	Hexa	PCB-169	1000.00	7.98e+08	1.22 y	50:33	-	1.03
131	Hepta	PCB-188	1000.00	7.95e+08	1.05 y	42:56	-	1.38
132	Hepta	PCB-184	1000.00	7.03e+08	1.05 y	43:22	-	1.22
133	Hepta	PCB-179	1000.00	7.20e+08	1.05 y	44:09	-	1.25
134	Hepta	PCB-176	1000.00	7.64e+08	1.05 y	44:37	-	1.32
135	Hepta	PCB-186	1000.00	7.73e+08	1.05 y	45:13	-	1.34
136	Hepta	PCB-178	1000.00	5.43e+08	1.05 y	45:43	-	0.94
137	Hepta	PCB-175	1000.00	5.58e+08	1.04 y	46:04	-	0.97
138	Hepta	PCB-182/187	2000.00	1.19e+09	1.05 y	46:14	-	1.03
139	Hepta	PCB-183	1000.00	6.25e+08	1.04 y	46:33	-	1.08
140	Hepta	PCB-185	1000.00	5.42e+08	1.05 y	47:13	-	1.27
141	Hepta	PCB-174	1000.00	5.22e+08	1.04 y	47:35	-	1.22
142	Hepta	PCB-181	1000.00	5.36e+08	1.05 y	47:41	-	1.25
143	Hepta	PCB-177	1000.00	4.84e+08	1.05 y	47:51	-	1.13
144	Hepta	PCB-171	1000.00	5.90e+08	1.05 y	48:08	-	1.38
145	Hepta	PCB-173	1000.00	4.55e+08	1.05 y	48:34	-	1.06
146	Hepta	PCB-172	1000.00	5.42e+08	1.04 y	49:01	-	1.27
147	Hepta	PCB-192	1000.00	6.95e+08	1.06 y	49:13	-	1.63
148	Hepta	PCB-180	1000.00	5.49e+08	1.04 y	49:25	-	1.29
149	Hepta	PCB-193	1000.00	7.36e+08	1.05 y	49:37	-	1.72
150	Hepta	PCB-191	1000.00	7.57e+08	1.05 y	49:53	-	1.77
151	Hepta	PCB-170	1000.00	5.24e+08	1.04 y	50:56	-	1.55
152	Hepta	PCB-190	1000.00	7.39e+08	1.05 y	51:06	-	2.18
153	Hepta	PCB-189	1000.00	7.06e+08	1.05 y	52:27	-	1.55
154	Octa	PCB-202	1000.00	5.29e+08	0.89 y	48:21	-	0.96
155	Octa	PCB-201	1000.00	5.60e+08	0.88 y	48:50	-	1.02
156	Octa	PCB-204	1000.00	5.48e+08	0.88 y	48:59	-	1.00
157	Octa	PCB-197	1000.00	6.09e+08	0.89 y	49:17	-	1.11
158	Octa	PCB-200	1000.00	5.29e+08	0.88 y	50:11	-	0.96
159	Octa	PCB-198	1000.00	4.13e-08	0.96 y	51:32	-	0.75
160	Octa	PCB-199	1000.00	3.88e+08	0.81 y	51:38	-	0.71
161	Octa	PCB-196/203	2000.00	8.89e+08	0.89 y	51:55	-	0.81
162	Octa	PCB-195	1000.00	4.52e-08	0.91 y	53:05	-	1.16

163	Octa		PCB-194	1000.00	4.45e+08	0.90	y	53:58	- 1.14
164	Octa		PCB-205	1000.00	5.99e+08	0.92	y	54:15	- 1.53
165	Nona		PCB-208	1000.00	5.57e+08	1.30	y	53:14	- 0.91
166	Nona		PCB-207	1000.00	5.77e+08	1.31	y	53:33	- 0.95
167	Nona		PCB-206	1000.00	3.20e+08	1.30	y	55:35	- 0.79
168	Deca		PCB-209	1000.00	4.90e+08	1.17	y	56:57	- 1.23
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.33
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.23

171	Tot ก	Total Tri-PCB	0.00	-		-	n	-	-	1.10
172	Tot ก	Total Tri-PCB	0.00	-		-	n	-	-	1.13
173	Tot ก	Total Tetra-PCB	0.00	-		-	n	-	-	1.04
174	Tot ก	Total Penta-PCB	0.00	-		-	n	-	-	1.14
175	Tot ก	Total Penta-PCB	0.00	-		-	n	-	-	1.28
176	Tot ก	Total Hexa-PCB	0.00	-		-	n	-	-	0.93
177	Tot ก	Total Hexa-PCB	0.00	-		-	n	-	-	1.06
178	Tot ก	Total Hepta-PCB	0.00	-		-	n	-	-	1.26
179	Tot ก	Total Octa-PCB	0.00	-		-	n	-	-	0.90
180	Tot ก	Total Octa-PCB	0.00	-		-	n	-	-	1.28
181	Tot ก	Total Nona-PCB	0.00	-		-	n	-	-	0.90
182	Tot ก	Total Deca-PCB	1000.00	4.90e+08	1.17	y	56:57	-		1.23
183	Mono ก	13C-PCB-1	100.00	1.04e+08	3.59	y	16:10	-		0.78
184	Mono ก	13C-PCB-3	100.00	1.08e+08	3.59	y	18:47	-		0.81
185	Di-IS	13C-PCB-4	100.00	7.50e+07	1.62	y	20:07	-		0.57
186	Di-IS	13C-PCB-9	100.00	1.22e+08	1.57	y	21:55	-		0.92
187	Di-IS	13C-PCB-11	100.00	1.23e+08	1.57	y	25:17	-		0.93
188	Tri-ก	13C-PCB-19	100.00	7.15e+07	1.09	y	24:17	-		0.54
189	Tri-ก	13C-PCB-32	100.00	1.08e+08	1.10	y	27:12	-		0.81
190	Tri-ก	13C-PCB-28	100.00	8.14e+07	1.06	y	29:09	-		1.15
191	Tri-ก	13C-PCB-37	100.00	7.21e+07	1.00	y	33:01	-		1.02
192	Tetr ก	13C-PCB-54	100.00	9.52e+07	0.76	y	28:02	-		1.08
193	Tetr ก	13C-PCB-52	100.00	6.10e+07	0.76	y	31:34	-		0.69
194	Tetr ก	13C-PCB-47	100.00	6.93e+07	0.76	y	32:04	-		0.79
195	Tetr ก	13C-PCB-70	100.00	9.52e+07	0.77	y	35:35	-		1.08
196	Tetr ก	13C-PCB-80	100.00	9.56e+07	0.77	y	36:00	-		1.08
197	Tetr ก	13C-PCB-81	100.00	9.43e+07	0.77	y	39:06	-		1.07
198	Tetr ก	13C-PCB-77	100.00	9.31e+07	0.78	y	39:42	-		1.06
199	Pent ก	13C-PCB-104	100.00	6.44e+07	1.60	y	32:43	-		0.89
200	Pent ก	13C-PCB-95	100.00	4.86e+07	1.62	y	35:53	-		0.67
201	Pent ก	13C-PCB-101	100.00	5.46e+07	1.67	y	37:33	-		0.75
202	Pent ก	13C-PCB-97	100.00	4.62e+07	1.66	y	38:52	-		0.64
203	Pent ก	13C-PCB-123	100.00	6.30e+07	1.65	y	41:25	-		0.87
204	Pent ก	13C-PCB-118	100.00	6.84e+07	1.63	y	41:36	-		0.95
205	Pent ก	13C-PCB-114	100.00	6.88e+07	1.63	y	42:15	-		1.25
206	Pent ก	13C-PCB-105	100.00	6.67e+07	1.58	y	43:07	-		1.21
207	Pent ก	13C-PCB-127	100.00	7.14e+07	1.58	y	43:27	-		1.30
208	Pent ก	13C-PCB-126	100.00	6.15e+07	1.59	y	45:21	-		1.12
209	Hexa ก	13C-PCB-155	100.00	5.83e+07	1.23	y	37:06	-		0.81
210	Hexa ก	13C-PCB-153	100.00	6.98e+07	1.26	y	43:17	-		1.27
211	Hexa ก	13C-PCB-141	100.00	5.93e+07	1.28	y	44:01	-		1.08
212	Hexa	13C-PCB-138	100.00	6.37e+07	1.29	y	44:51	-		1.16
213	Hexa ก	13C-PCB-159	100.00	7.72e+07	1.27	y	46:08	-		1.41
214	Hexa ก	13C-PCB-167	100.00	7.55e+07	1.27	y	46:49	-		1.37
215	Hexa ก	13C-PCB-156	100.00	7.74e+07	1.26	y	48:07	-		1.41
216	Hexa ก	13C-PCB-157	100.00	8.11e+07	1.28	y	48:23	-		1.48
217	Hexa ก	13C-PCB-169	100.00	7.75e+07	1.26	y	50:33	-		1.41
218	Hept ก	13C-PCB-188	100.00	5.77e+07	0.46	y	42:55	-		1.05
219	Hept ก	13C-PCB-180	100.00	4.27e+07	0.47	y	49:24	-		0.78
220	Hept ก	13C-PCB-170	100.00	3.39e+07	0.46	y	50:55	-		0.62
221	Hept ก	13C-PCB-189	100.00	4.55e+07	0.47	y	52:26	-		0.83

222	Octa╗	13C-PCB-202	100.00	5.50e+07	0.90 y	48:20	-	1.00
223	Octa╗	13C-PCB-194	100.00	3.90e+07	0.88 y	53:57	-	0.72
224	Nona╗	13C-PCB-208	100.00	6.09e+07	0.76 y	53:14	-	1.13
225	Nona╗	13C-PCB-206	100.00	4.02e+07	0.78 y	55:35	-	0.74
226	Deca╗	13C-PCB-209	100.00	3.99e+07	1.19 y	56:56	-	0.74
227	DI-RS	13C-PCB-15	100.00	1.33e+08	1.59 y	26:00	-	1.00
228	Tri-╗	13C-PCB-31	100.00	7.06e+07	1.04 y	29:03	-	1.00
229	Tetr╗	13C-PCB-60	100.00	8.83e+07	0.76 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	7.23e+07	1.63 y	39:18	-	1.00
231	Hexa╗	13C-PCB-128	100.00	5.49e+07	1.27 y	46:25	-	1.00

232	Octa┐	13C-PCB-205	100.00	5.41e+07	0.88	y	54:14	-	1.00
233	CRS	13C-PCB-79	100.00	9.97e+07	0.78	y	37:53	-	1.13
234	CRS	13C-PCB-178	100.00	3.44e+07	0.46	y	45:42	-	0.63
235	PS	13C-PCB-79	100.00	9.97e+07	0.78	y	37:53	-	1.06
236	PS	13C-PCB-178	100.00	3.44e+07	0.46	y	45:42	-	0.80

Filename: 150116E1 S: 2 Acquired: 16-JAN-15 08:51:27
Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1
Sample text: ST150116E1-2 PCB CS0 14L2902

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	8.23e+05	2.94 y	16:10	-	1.40
2	Mono	PCB-2	0.25	8.54e+05	2.97 y	18:33	-	1.25
3	Mono	PCB-3	0.25	8.73e+05	2.80 y	18:47	-	1.27
4	Di	PCB-4/10	0.50	1.52e+06	1.35 y	20:10	-	1.98
5	Di	PCB-7/9	0.50	1.84e+06	1.60 y	21:57	-	1.43
6	Di	PCB-6	0.25	9.02e+05	1.49 y	22:35	-	1.41
7	Di	PCB-5/8	0.50	1.93e+06	1.40 y	23:00	-	1.50
8	Di	PCB-14	0.25	1.06e+06	1.71 y	24:06	-	1.64
9	Di	PCB-11	0.25	9.73e+05	1.71 y	25:18	-	1.51
10	Di	PCB-12/13	0.50	1.86e+06	1.64 y	25:41	-	1.44
11	Di	PCB-15	0.25	1.11e+06	1.59 y	25:59	-	1.72
12	Tri	PCB-19	0.25	4.86e+05	1.00 y	24:16	-	1.32
13	Tri	PCB-30	0.25	7.78e+05	1.01 y	25:10	-	2.11
14	Tri	PCB-18	0.25	5.31e+05	1.06 y	25:55	-	0.98
15	Tri	PCB-17	0.25	5.95e+05	0.99 y	26:05	-	1.10
16	Tri	PCB-24/27	0.50	1.64e+06	1.07 y	26:40	-	1.52
17	Tri	PCB-16/32	0.50	1.35e+06	1.01 y	27:10	-	1.25
18	Tri	PCB-34	0.25	6.39e+05	1.00 y	27:59	-	1.53
19	Tri	PCB-23	0.25	5.74e+05	1.11 y	28:05	-	1.37
20	Tri	PCB-29	0.25	5.69e+05	0.97 y	28:19	-	1.36
21	Tri	PCB-26	0.25	5.52e+05	1.11 y	28:32	-	1.32
22	Tri	PCB-25	0.25	4.36e+05	1.04 y	28:41	-	1.04
23	Tri	PCB-31	0.25	5.79e+05	1.08 y	29:02	-	1.38
24	Tri	PCB-28	0.25	5.76e+05	1.10 y	29:08	-	1.38
25	Tri	PCB-20/21/33	0.75	1.58e+06	1.08 y	29:46	-	1.26
26	Tri	PCB-22	0.25	5.67e+05	1.08 y	30:12	-	1.36
27	Tri	PCB-36	0.25	5.70e+05	0.95 y	30:49	-	1.42
28	Tri	PCB-39	0.25	5.42e+05	0.91 y	31:18	-	1.35
29	Tri	PCB-38	0.25	4.87e+05	1.13 y	32:03	-	1.22
30	Tri	PCB-35	0.25	5.42e+05	0.99 y	32:35	-	1.35
31	Tri	PCB-37	0.25	6.21e+05	1.00 y	33:01	-	1.55
32	Tetra	PCB-54	0.25	5.77e+05	0.67 y	28:01	-	1.21
33	Tetra	PCB-50	0.25	4.13e+05	0.75 y	29:12	-	0.87
34	Tetra	PCB-53	0.25	4.43e+05	0.78 y	29:50	-	1.36
35	Tetra	PCB-51	0.25	4.07e+05	0.88 y	30:11	-	1.25
36	Tetra	PCB-45	0.25	4.06e+05	0.68 y	30:37	-	1.25
37	Tetra	PCB-46	0.25	3.73e+05	0.69 y	31:06	-	1.15
38	Tetra	PCB-52/69	0.50	9.67e+05	0.72 y	31:35	-	1.49
39	Tetra	PCB-73	0.25	5.44e+05	0.66 y	31:42	-	1.67
40	Tetra	PCB-43/49	0.50	8.95e+05	0.73 y	31:52	-	1.37
41	Tetra	PCB-47	0.25	5.18e+05	0.66 y	32:04	-	1.53

42	Tetra	PCB-48/75	0.50	1.05e+06	0.73	y	32:11	-	1.56
43	Tetra	PCB-65	0.25	5.56e+05	0.78	y	32:27	-	1.64
44	Tetra	PCB-62	0.25	5.62e-05	0.80	y	32:33	-	1.66
45	Tetra	PCB-44	0.25	3.84e+05	0.80	y	32:52	-	1.13
46	Tetra	PCB-42/59	0.50	1.09e+06	0.73	y	33:05	-	1.61
47	Tetra	PCB-41/64/71/72	1.00	2.24e+06	0.68	y	33:40	-	1.65
48	Tetra	PCB-68	0.25	7.48e+05	0.76	y	33:56	-	2.21
49	Tetra	PCB-40	0.25	3.78e+05	0.77	y	34:08	-	1.11
50	Tetra	PCB-57	0.25	6.40e+05	0.76	y	34:30	-	1.44
51	Tetra	PCB-67	0.25	6.01e+05	0.76	y	34:48	-	1.35
52	Tetra	PCB-58	0.25	6.11e+05	0.84	y	34:56	-	1.37

53	Tetra	PCB-63	0.25	6.42e+05	0.73 y	35:05	-	1.44
54	Tetra	PCB-74	0.25	6.79e+05	0.76 y	35:22	-	1.52
55	Tetra	PCB-61/70	0.50	1.26e+06	0.79 y	35:32	-	1.42
56	Tetra	PCB-76/66	0.50	1.38e+06	0.72 y	35:46	-	1.55
57	Tetra	PCB-80	0.25	7.76e+05	0.66 y	36:00	-	1.65
58	Tetra	PCB-55	0.25	7.25e+05	0.69 y	36:19	-	1.54
59	Tetra	PCB-56/60	0.50	1.33e+06	0.69 y	36:48	-	1.40
60	Tetra	PCB-79	0.25	6.44e+05	0.72 y	37:52	-	1.37
61	Tetra	PCB-78	0.25	7.03e+05	0.86 y	38:34	-	1.51
62	Tetra	PCB-81	0.25	7.65e+05	0.71 y	39:06	-	1.64
63	Tetra	PCB-77	0.25	7.30e+05	0.72 y	39:41	-	1.65
64	Penta	PCB-104	0.25	5.67e+05	1.55 y	32:43	-	1.50
65	Penta	PCB-96	0.25	4.70e+05	1.56 y	33:59	-	1.25
66	Penta	PCB-103	0.25	3.98e+05	1.40 y	34:31	-	1.05
67	Penta	PCB-100	0.25	3.93e+05	1.57 y	34:52	-	1.04
68	Penta	PCB-94	0.25	3.35e+05	1.51 y	35:21	-	1.26
69	Penta	PCB-95/98/102	0.75	1.21e+06	1.44 y	35:49	-	1.52
70	Penta	PCB-93	0.25	3.27e+05	1.57 y	35:58	-	1.23
71	Penta	PCB-88/91	0.50	6.67e+05	1.73 y	36:14	-	1.26
72	Penta	PCB-121	0.25	5.54e+05	1.37 y	36:21	-	2.09
73	Penta	PCB-84/92	0.50	7.20e+05	1.52 y	37:11	-	1.20
74	Penta	PCB-89	0.25	3.45e+05	1.57 y	37:22	-	1.15
75	Penta	PCB-90/101	0.50	8.67e+05	1.49 y	37:33	-	1.45
76	Penta	PCB-113	0.25	4.42e+05	1.63 y	37:47	-	1.48
77	Penta	PCB-99	0.25	4.77e+05	1.32 y	37:53	-	1.59
78	Penta	PCB-119	0.25	5.55e+05	1.73 y	38:22	-	2.15
79	Penta	PCB-108/112	0.50	7.83e+05	1.67 y	38:31	-	1.51
80	Penta	PCB-83	0.25	4.64e+05	1.57 y	38:40	-	1.80
81	Penta	PCB-97	0.25	3.95e+05	1.40 y	38:52	-	1.53
82	Penta	PCB-86	0.25	3.56e+05	1.44 y	39:00	-	1.38
83	Penta	PCB-87/117/125	0.75	1.35e+06	1.64 y	39:08	-	1.74
84	Penta	PCB-111/115	0.50	1.14e+06	1.55 y	39:17	-	2.20
85	Penta	PCB-85/116	0.50	8.83e+05	1.60 y	39:25	-	1.71
86	Penta	PCB-120	0.25	6.10e+05	1.61 y	39:40	-	2.36
87	Penta	PCB-110	0.25	5.31e+05	1.49 y	39:48	-	2.05
88	Penta	PCB-82	0.25	3.08e+05	1.51 y	40:25	-	0.89
89	Penta	PCB-124	0.25	4.70e+05	1.54 y	41:06	-	1.36
90	Penta	PCB-107/109	0.50	1.12e+06	1.59 y	41:14	-	1.62
91	Penta	PCB-123	0.25	5.08e+05	1.71 y	41:26	-	1.47
92	Penta	PCB-106/118	0.50	1.14e+06	1.54 y	41:37	-	1.58
93	Penta	PCB-114	0.25	6.35e+05	1.49 y	42:16	-	1.70
94	Penta	PCB-122	0.25	5.14e+05	1.72 y	42:23	-	1.38
95	Penta	PCB-105	0.25	6.49e+05	1.73 y	43:07	-	1.79
96	Penta	PCB-127	0.25	5.82e+05	1.76 y	43:28	-	1.53
97	Penta	PCB-126	0.25	5.40e+05	1.61 y	45:21	-	1.55
98	Hexa	PCB-155	0.25	4.38e+05	1.32 y	37:07	-	1.33
99	Hexa	PCB-150	0.25	4.32e+05	1.10 y	38:22	-	1.31
100	Hexa	PCB-152	0.25	4.91e+05	1.20 y	38:51	-	1.49
101	Hexa	PCB-145	0.25	4.05e+05	1.30 y	39:17	-	1.23
102	Hexa	PCB-136	0.25	4.29e+05	1.20 y	39:37	-	1.30

103	Hexa	PCB-148	0.25	3.04e+05	1.36 y	39:43	-	0.92
104	Hexa	PCB-154	0.25	3.60e+05	1.19 y	40:13	-	1.09
105	Hexa	PCB-151	0.25	3.00e+05	1.24 y	40:50	-	0.91
106	Hexa	PCB-135	0.25	2.94e+05	1.38 y	41:04	-	0.89
107	Hexa	PCB-144	0.25	3.27e+05	1.29 y	41:10	-	0.99
108	Hexa	PCB-147	0.25	3.02e+05	1.31 y	41:18	-	0.92
109	Hexa	PCB-139/149	0.50	6.50e+05	1.18 y	41:34	-	0.99
110	Hexa	PCB-140	0.25	2.95e+05	1.42 y	41:45	-	0.90
111	Hexa	PCB-134/143	0.50	8.06e+05	1.27 y	42:11	-	1.08
112	Hexa	PCB-133/142	0.50	7.42e+05	1.18 y	42:29	-	1.00
113	Hexa	PCB-131	0.25	3.29e+05	1.26 y	42:39	-	0.89

114	Hexa	PCB-146/165	0.50	8.57e+05	1.23 y	42:52	-	1.15
115	Hexa	PCB-132/161	0.50	9.37e+05	1.30 y	43:07	-	1.26
116	Hexa	PCB-153	0.25	5.93e+05	1.35 y	43:16	-	1.60
117	Hexa	PCB-168	0.25	5.66e+05	1.42 y	43:30	-	1.52
118	Hexa	PCB-141	0.25	4.25e+05	1.18 y	44:01	-	1.36
119	Hexa	PCB-137	0.25	4.29e+05	1.26 y	44:24	-	1.38
120	Hexa	PCB-130	0.25	3.31e+05	1.11 y	44:30	-	1.06
121	Hexa	PCB-138/163/164	0.75	1.63e+06	1.16 y	44:53	-	1.69
122	Hexa	PCB-158/160	0.50	1.19e+06	1.31 y	45:07	-	1.84
123	Hexa	PCB-129	0.25	3.95e+05	1.21 y	45:21	-	1.23
124	Hexa	PCB-166	0.25	5.35e+05	1.28 y	45:49	-	1.37
125	Hexa	PCB-159	0.25	5.69e+05	1.35 y	46:08	-	1.46
126	Hexa	PCB-128/162	0.50	9.34e+05	1.12 y	46:26	-	1.20
127	Hexa	PCB-167	0.25	5.71e+05	1.24 y	46:49	-	1.42
128	Hexa	PCB-156	0.25	5.58e+05	1.24 y	48:06	-	1.44
129	Hexa	PCB-157	0.25	5.78e+05	1.29 y	48:22	-	1.41
130	Hexa	PCB-169	0.25	4.98e+05	1.30 y	50:32	-	1.20
131	Hepta	PCB-188	0.25	5.36e+05	0.97 y	42:55	-	1.88
132	Hepta	PCB-184	0.25	4.31e+05	1.00 y	43:22	-	1.51
133	Hepta	PCB-179	0.25	4.62e+05	1.08 y	44:08	-	1.62
134	Hepta	PCB-176	0.25	4.83e+05	1.07 y	44:36	-	1.69
135	Hepta	PCB-186	0.25	4.94e+05	1.00 y	45:13	-	1.73
136	Hepta	PCB-178	0.25	3.70e+05	1.00 y	45:42	-	1.30
137	Hepta	PCB-175	0.25	3.47e+05	1.08 y	46:02	-	1.22
138	Hepta	PCB-182/187	0.50	7.45e+05	1.05 y	46:13	-	1.31
139	Hepta	PCB-183	0.25	4.00e+05	0.93 y	46:33	-	1.40
140	Hepta	PCB-185	0.25	3.66e+05	0.97 y	47:12	-	1.68
141	Hepta	PCB-174	0.25	3.21e+05	1.06 y	47:34	-	1.47
142	Hepta	PCB-181	0.25	3.20e+05	1.15 y	47:40	-	1.46
143	Hepta	PCB-177	0.25	3.38e+05	1.05 y	47:50	-	1.55
144	Hepta	PCB-171	0.25	3.67e+05	1.16 y	48:07	-	1.68
145	Hepta	PCB-173	0.25	2.66e+05	1.19 y	48:33	-	1.22
146	Hepta	PCB-172	0.25	3.69e+05	0.98 y	48:59	-	1.69
147	Hepta	PCB-192	0.25	4.47e+05	1.15 y	49:11	-	2.05
148	Hepta	PCB-180	0.25	3.93e+05	1.10 y	49:24	-	1.80
149	Hepta	PCB-193	0.25	4.76e+05	0.93 y	49:36	-	2.18
150	Hepta	PCB-191	0.25	4.59e+05	1.01 y	49:51	-	2.10
151	Hepta	PCB-170	0.25	3.50e+05	0.92 y	50:55	-	2.01
152	Hepta	PCB-190	0.25	4.53e+05	1.20 y	51:05	-	2.60
153	Hepta	PCB-189	0.25	4.45e+05	1.16 y	52:25	-	1.88
154	Octa	PCB-202	0.25	3.30e+05	0.89 y	48:20	-	1.16
155	Octa	PCB-201	0.25	3.56e+05	0.82 y	48:49	-	1.25
156	Octa	PCB-204	0.25	3.77e+05	0.86 y	48:58	-	1.33
157	Octa	PCB-197	0.25	3.89e+05	0.83 y	49:17	-	1.37
158	Octa	PCB-200	0.25	3.52e+05	0.82 y	50:10	-	1.24
159	Octa	PCB-198	0.25	2.51e+05	0.98 y	51:31	-	0.88
160	Octa	PCB-199	0.25	2.48e+05	0.90 y	51:38	-	0.87
161	Octa	PCB-196/203	0.50	5.74e+05	0.85 y	51:54	-	1.01
162	Octa	PCB-195	0.25	2.88e-05	0.95 y	53:05	-	1.34
163	Octa	PCB-194	0.25	3.47e+05	0.88 y	53:37	-	1.61

164	Octa		PCB-205	0.25	4.05e+05	0.83	y	54:13	- 1.88
165	Nona		PCB-208	0.25	3.37e+05	1.26	y	53:14	- 1.18
166	Nona		PCB-207	0.25	3.54e+05	1.38	y	53:33	- 1.24
167	Nona		PCB-206	0.25	2.13e+05	1.52	y	55:34	- 1.08
168	Deca		PCB-209	0.25	3.27e+05	1.27	y	56:56	- 1.69
169	Tot ╗	Total Mono-PCB		0.00	-	-	n	-	- 1.30
170	Tot ╗	Total Di-PCB		0.00	-	-	n	-	- 1.52
171	Tot ╗	Total Tri-PCB		0.00	-	-	n	-	- 1.39

172	Tot ╗	Total Tri-PCB	0.00	-	-	n	-	-	1.34
173	Tot ╗	Total Tetra-PCB	0.00	-	-	n	-	-	1.42
174	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.42
175	Tot ╗	Total Penta-PCB	0.00	-	-	n	-	-	1.59
176	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.09
177	Tot ╗	Total Hexa-PCB	0.00	-	-	n	-	-	1.32
178	Tot ╗	Total Hepta-PCB	0.00	-	-	n	-	-	1.61
179	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.12
180	Tot ╗	Total Octa-PCB	0.00	-	-	n	-	-	1.61
181	Tot ╗	Total Nona-PCB	0.00	-	-	n	-	-	1.18
182	Tot ╗	Total Deca-PCB	0.25	3.27e+05	1.27	y	56:56	-	1.69
183	Mono╗	13C-PCB-1	100.00	2.35e+08	3.49	y	16:09	-	0.87
184	Mono╗	13C-PCB-3	100.00	2.74e+08	3.42	y	18:46	-	1.01
185	Di-IS	13C-PCB-4	100.00	1.53e+08	1.60	y	20:06	-	0.57
186	Di-IS	13C-PCB-9	100.00	2.57e+08	1.58	y	21:53	-	0.95
187	Di-IS	13C-PCB-11	100.00	2.58e+08	1.57	y	25:16	-	0.95
188	Tri-╗	13C-PCB-19	100.00	1.47e+08	1.12	y	24:15	-	0.54
189	Tri-╗	13C-PCB-32	100.00	2.16e+08	1.11	y	27:10	-	0.80
190	Tri-╗	13C-PCB-28	100.00	1.67e+08	1.03	y	29:08	-	1.00
191	Tri-╗	13C-PCB-37	100.00	1.60e+08	1.04	y	33:00	-	0.96
192	Tetr╗	13C-PCB-54	100.00	1.91e+08	0.76	y	28:01	-	1.03
193	Tetr╗	13C-PCB-52	100.00	1.30e+08	0.78	y	31:32	-	0.70
194	Tetr╗	13C-PCB-47	100.00	1.36e+08	0.78	y	32:03	-	0.73
195	Tetr╗	13C-PCB-70	100.00	1.78e+08	0.78	y	35:33	-	0.96
196	Tetr╗	13C-PCB-80	100.00	1.89e+08	0.79	y	35:59	-	1.02
197	Tetr╗	13C-PCB-81	100.00	1.86e+08	0.78	y	39:05	-	1.00
198	Tetr╗	13C-PCB-77	100.00	1.77e+08	0.79	y	39:41	-	0.95
199	Pent╗	13C-PCB-104	100.00	1.51e+08	1.58	y	32:42	-	0.96
200	Pent╗	13C-PCB-95	100.00	1.06e+08	1.59	y	35:52	-	0.68
201	Pent╗	13C-PCB-101	100.00	1.20e+08	1.60	y	37:33	-	0.76
202	Pent╗	13C-PCB-97	100.00	1.03e+08	1.63	y	38:51	-	0.66
203	Pent╗	13C-PCB-123	100.00	1.38e+08	1.61	y	41:25	-	0.88
204	Pent╗	13C-PCB-118	100.00	1.44e+08	1.62	y	41:35	-	0.91
205	Pent╗	13C-PCB-114	100.00	1.49e+08	1.59	y	42:15	-	1.32
206	Pent╗	13C-PCB-105	100.00	1.45e+08	1.60	y	43:06	-	1.29
207	Pent╗	13C-PCB-127	100.00	1.52e+08	1.58	y	43:26	-	1.34
208	Pent╗	13C-PCB-126	100.00	1.39e+08	1.58	y	45:20	-	1.23
209	Hexa╗	13C-PCB-155	100.00	1.32e+08	1.26	y	37:05	-	0.84
210	Hexa╗	13C-PCB-153	100.00	1.49e+08	1.28	y	43:16	-	1.31
211	Hexa╗	13C-PCB-141	100.00	1.25e+08	1.29	y	44:00	-	1.10
212	Hexa	13C-PCB-138	100.00	1.29e+08	1.29	y	44:51	-	1.14
213	Hexa╗	13C-PCB-159	100.00	1.56e+08	1.29	y	46:07	-	1.38
214	Hexa╗	13C-PCB-167	100.00	1.61e+08	1.27	y	46:49	-	1.42
215	Hexa╗	13C-PCB-156	100.00	1.55e+08	1.30	y	48:06	-	1.37
216	Hexa╗	13C-PCB-157	100.00	1.64e+08	1.33	y	48:22	-	1.45
217	Hexa╗	13C-PCB-169	100.00	1.66e+08	1.26	y	50:32	-	1.46
218	Hept╗	13C-PCB-188	100.00	1.14e+08	0.45	y	42:54	-	1.01
219	Hept╗	13C-PCB-180	100.00	8.73e+07	0.47	y	49:23	-	0.77
220	Hept╗	13C-PCB-170	100.00	6.97e+07	0.45	y	50:54	-	0.62
221	Hept╗	13C-PCB-189	100.00	9.47e+07	0.46	y	52:25	-	0.84
222	Octa╗	13C-PCB-202	100.00	1.14e+08	0.93	y	48:19	-	1.00

223	Octa╗	13C-PCB-194	100.00	8.63e+07	0.90 y	53:56	-	0.73
224	Nona╗	13C-PCB-208	100.00	1.14e+08	0.77 y	53:13	-	0.97
225	Nona╗	13C-PCB-206	100.00	7.88e+07	0.76 y	55:34	-	0.67
226	Deca╗	13C-PCB-209	100.00	7.76e+07	1.20 y	56:55	-	0.66
227	DI-RS	13C-PCB-15	100.00	2.71e+08	1.57 y	25:59	-	1.00
228	Tri-╗	13C-PCB-31	100.00	1.67e+08	1.05 y	29:01	-	1.00
229	Tetr╗	13C-PCB-60	100.00	1.85e+08	0.79 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	1.57e+08	1.61 y	39:17	-	1.00
231	Hexa╗	13C-PCB-128	100.00	1.13e+08	1.27 y	46:23	-	1.00
232	Octa╗	13C-PCB-205	100.00	1.18e+08	0.91 y	54:13	-	1.00

233	CRS		13C-PCB-79	100.00	1.81e+08	0.78 y	37:52	-	0.97
234	CRS		13C-PCB-178	100.00	7.34e+07	0.47 y	45:41	-	0.65
235	PS		13C-PCB-79	100.00	1.81e+08	0.78 y	37:52	-	0.97
236	PS		13C-PCB-178	100.00	7.34e+07	0.47 y	45:41	-	0.84

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150114E1-5 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: PCBVG8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150114E1 S#6 Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.99	2.66-3.60	y	46.1	37.5-62.5
PCB-2	2.99	2.66-3.60	y	48.8	37.5-62.5
PCB-3	2.98	2.66-3.60	y	48.7	37.5-62.5
PCB-4/10	1.64	1.33-1.79	y	93.0	75-125
PCB-7/9	1.63	1.33-1.79	y	94.5	75-125
PCB-6	1.65	1.33-1.79	y	47.6	37.5-62.5
PCB-5/8	1.64	1.33-1.79	y	92.5	75-125
PCB-14	1.64	1.33-1.79	y	48.1	37.5-62.5
PCB-11	1.68	1.33-1.79	y	47.1	37.5-62.5
PCB-12/13	1.65	1.33-1.79	y	94.6	75-125
PCB-15	1.65	1.33-1.79	y	47.1	37.5-62.5
PCB-19	1.06	0.88-1.20	y	47.6	37.5-62.5
PCB-30	1.05	0.88-1.20	y	47.9	37.5-62.5
PCB-18	1.06	0.88-1.20	y	47.8	37.5-62.5
PCB-17	1.05	0.88-1.20	y	48.2	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	95.1	75.0-125
PCB-16/32	1.05	0.88-1.20	y	93.3	75.0-125
PCB-34	1.01	0.88-1.20	y	45.7	37.5-62.5
PCB-23	1.06	0.88-1.20	y	47.9	37.5-62.5
PCB-29	1.01	0.88-1.20	y	43.7	37.5-62.5
PCB-26	1.00	0.88-1.20	y	44.9	37.5-62.5
PCB-25	1.01	0.88-1.20	y	45.8	37.5-62.5
PCB-31	1.03	0.88-1.20	y	45.4	37.5-62.5
PCB-28	1.04	0.88-1.20	y	43.3	37.5-62.5
PCB-20/21/33	1.02	0.88-1.20	y	136.2	112.5-225
PCB-22	1.03	0.88-1.20	y	46.7	37.5-62.5
PCB-36	1.05	0.88-1.20	y	53.8	37.5-62.5
PCB-39	1.05	0.88-1.20	y	50.8	37.5-62.5
PCB-38	1.03	0.88-1.20	y	52.5	37.5-62.5
PCB-35	1.03	0.88-1.20	y	50.7	37.5-62.5
PCB-37	1.08	0.88-1.20	y	47.6	37.5-62.5
PCB-54	0.74	0.65-0.89	y	46.6	37.5-62.5
PCB-50	0.72	0.65-0.89	y	46.9	37.5-62.5
PCB-53	0.75	0.65-0.89	y	48.1	37.5-62.5
PCB-51	0.72	0.65-0.89	y	47.8	37.5-62.5
PCB-45	0.73	0.65-0.89	y	48.7	37.5-62.5
PCB-46	0.73	0.65-0.89	y	45.8	37.5-62.5

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-52/69	0.74	0.65-0.89	y	93.1	75.0-125
PCB-73	0.75	0.65-0.89	y	50.2	37.5-62.5
PCB-43/49	0.73	0.65-0.89	y	93.4	75.0-125
PCB-47	0.74	0.65-0.89	y	45.6	37.5-62.5
PCB-48/75	0.73	0.65-0.89	y	90.7	75.0-125
PCB-65	0.73	0.65-0.89	y	42.9	37.5-62.5
PCB-62	0.74	0.65-0.89	y	47.2	37.5-62.5
PCB-44	0.74	0.65-0.89	y	46.2	37.5-62.5
PCB-42/59	0.74	0.65-0.89	y	85.0	75.0-125
PCB-41/64/71/72	0.73	0.65-0.89	y	170.4	150-250
PCB-68	0.73	0.65-0.89	y	40.2	37.5-62.5
PCB-40	0.73	0.65-0.89	y	40.8	37.5-62.5
PCB-57	0.74	0.65-0.89	y	46.0	37.5-62.5
PCB-67	0.73	0.65-0.89	y	45.9	37.5-62.5
PCB-58	0.76	0.65-0.89	y	49.2	37.5-62.5
PCB-63	0.71	0.65-0.89	y	47.3	37.5-62.5
PCB-74	0.74	0.65-0.89	y	44.5	37.5-62.5
PCB-61/70	0.73	0.65-0.89	y	92.8	75.0-125
PCB-76/66	0.74	0.65-0.89	y	90.0	75.0-125
PCB-80	0.74	0.65-0.89	y	45.2	37.5-62.5
PCB-55	0.74	0.65-0.89	y	45.9	37.5-62.5
PCB-56/60	0.73	0.65-0.89	y	88.4	75.0-125
PCB-79	0.73	0.65-0.89	y	44.5	37.5-62.5
PCB-78	0.74	0.65-0.89	y	43.6	37.5-62.5
PCB-81	0.75	0.65-0.89	y	45.5	37.5-62.5
PCB-77	0.76	0.65-0.89	y	45.7	37.5-62.5
PCB-104	1.59	1.32-1.78	y	45.9	37.5-62.5
PCB-96	1.56	1.32-1.78	y	43.9	37.5-62.5
PCB-103	1.54	1.32-1.78	y	44.4	37.5-62.5
PCB-100	1.57	1.32-1.78	y	45.3	37.5-62.5
PCB-94	1.56	1.32-1.78	y	46.8	37.5-62.5
PCB-95/98/102	1.52	1.32-1.78	y	134.8	112.5-225
PCB-93	1.68	1.32-1.78	y	53.0	37.5-62.5
PCB-88/91	1.56	1.32-1.78	y	99.5	75.0-125
PCB-121	1.57	1.32-1.78	y	44.4	37.5-62.5

Analyst: DMS

Date: 1/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150114E1-5 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: pcbvg8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150114E1 S#6 Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.54	1.32-1.78	y	97.1	75.0-125
PCB-89	1.53	1.32-1.78	y	47.5	37.5-62.5
PCB-90/101	1.56	1.32-1.78	y	93.5	75.0-125
PCB-113	1.55	1.32-1.78	y	51.7	37.5-62.5
PCB-99	1.60	1.32-1.78	y	41.4	37.5-62.5
PCB-119	1.56	1.32-1.78	y	47.0	37.5-62.5
PCB-108/112	1.56	1.32-1.78	y	94.2	75.0-125
PCB-83	1.57	1.32-1.78	y	47.6	37.5-62.5
PCB-97	1.55	1.32-1.78	y	46.2	37.5-62.5
PCB-86	1.46	1.32-1.78	y	48.0	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	142.8	112.5-225
PCB-111/115	1.56	1.32-1.78	y	95.3	75.0-125
PCB-85/116	1.60	1.32-1.78	y	95.6	75.0-125
PCB-120	1.53	1.32-1.78	y	46.1	37.5-62.5
PCB-110	1.56	1.32-1.78	y	47.5	37.5-62.5
PCB-82	1.56	1.32-1.78	y	48.9	37.5-62.5
PCB-124	1.57	1.32-1.78	y	49.4	37.5-62.5
PCB-107/109	1.58	1.32-1.78	y	90.6	75.0-125
PCB-123	1.55	1.32-1.78	y	48.4	37.5-62.5
PCB-106/118	1.54	1.32-1.78	y	92.8	75.0-125
PCB-114	1.62	1.32-1.78	y	46.9	37.5-62.5
PCB-122	1.63	1.32-1.78	y	45.9	37.5-62.5
PCB-105	1.65	1.32-1.78	y	47.1	37.5-62.5
PCB-127	1.69	1.32-1.78	y	47.5	37.5-62.5
PCB-126	1.64	1.32-1.78	y	49.3	37.5-62.5
PCB-155	1.23	1.05-1.43	y	46.8	37.5-62.5
PCB-150	1.24	1.05-1.43	y	45.2	37.5-62.5
PCB-152	1.25	1.05-1.43	y	44.2	37.5-62.5
PCB-145	1.24	1.05-1.43	y	45.5	37.5-62.5
PCB-136	1.23	1.05-1.43	y	47.5	37.5-62.5
PCB-148	1.24	1.05-1.43	y	43.6	37.5-62.5
PCB-154	1.23	1.05-1.43	y	45.1	37.5-62.5
PCB-151	1.25	1.05-1.43	y	46.1	37.5-62.5
PCB-135	1.23	1.05-1.43	y	45.1	37.5-62.5
PCB-144	1.33	1.05-1.43	y	45.7	37.5-62.5
PCB-147	1.15	1.05-1.43	y	43.6	37.5-62.5
PCB-139/149	1.23	1.05-1.43	y	88.3	75.0-125
PCB-140	1.24	1.05-1.43	y	44.8	37.5-62.5
PCB-134/143	1.22	1.05-1.43	y	91.8	75.0-125
PCB-133/142	1.24	1.05-1.43	y	93.1	75.0-125
PCB-131	1.16	1.05-1.43	y	46.7	37.5-62.5
PCB-146/165	1.22	1.05-1.43	y	93.5	75.0-125
PCB-132/161	1.22	1.05-1.43	y	92.8	75.0-125
PCB-153	1.21	1.05-1.43	y	43.2	37.5-62.5
PCB-168	1.22	1.05-1.43	y	46.7	37.5-62.5
PCB-141	1.22	1.05-1.43	y	45.4	37.5-62.5
PCB-137	1.18	1.05-1.43	y	45.4	37.5-62.5
PCB-130	1.21	1.05-1.43	y	48.2	37.5-62.5
PCB-138/163/164	1.21	1.05-1.43	y	137.7	112.5-225
PCB-158/160	1.22	1.05-1.43	y	93.2	75.0-125
PCB-129	1.20	1.05-1.43	y	44.6	37.5-62.5
PCB-166	1.21	1.05-1.43	y	46.6	37.5-62.5
PCB-159	1.22	1.05-1.43	y	47.9	37.5-62.5
PCB-128/162	1.20	1.05-1.43	y	94.0	75.0-125
PCB-167	1.17	1.05-1.43	y	46.3	37.5-62.5
PCB-156	1.19	1.05-1.43	y	46.7	37.5-62.5
PCB-157	1.21	1.05-1.43	y	46.2	37.5-62.5
PCB-169	1.20	1.05-1.43	y	47.2	37.5-62.5
PCB-188	1.06	0.89-1.21	y	47.0	37.5-62.5
PCB-184	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-179	1.03	0.89-1.21	y	47.9	37.5-62.5
PCB-176	1.04	0.89-1.21	y	48.0	37.5-62.5
PCB-186	1.05	0.89-1.21	y	46.9	37.5-62.5
PCB-178	1.06	0.89-1.21	y	46.4	37.5-62.5
PCB-175	1.06	0.89-1.21	y	48.1	37.5-62.5
PCB-182/187	1.05	0.89-1.21	y	93.3	75.0-125
PCB-183	1.04	0.89-1.21	y	47.4	37.5-62.5
PCB-185	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-174	1.05	0.89-1.21	y	48.5	37.5-62.5
PCB-181	1.08	0.89-1.21	y	48.3	37.5-62.5
PCB-177	1.04	0.89-1.21	y	45.9	37.5-62.5
PCB-171	1.05	0.89-1.21	y	46.1	37.5-62.5
PCB-173	1.04	0.89-1.21	y	49.0	37.5-62.5
PCB-172	1.04	0.89-1.21	y	46.8	37.5-62.5

Analyst: DMS

Date: 1/16/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150114E1-5 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: pcbvg8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150114E1 S#6 Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	46.3	37.5-62.5
PCB-180	1.03	0.89-1.21	y	45.4	37.5-62.5
PCB-193	1.04	0.89-1.21	y	46.5	37.5-62.5
PCB-191	1.04	0.89-1.21	y	47.3	37.5-62.5
PCB-170	1.02	0.89-1.21	y	46.7	37.5-62.5
PCB-190	1.07	0.89-1.21	y	48.3	37.5-62.5
PCB-189	1.05	0.89-1.21	y	47.3	37.5-62.5
PCB-202	0.91	0.76-1.02	y	47.0	37.5-62.5
PCB-201	0.87	0.76-1.02	y	46.2	37.5-62.5
PCB-204	0.89	0.76-1.02	y	44.7	37.5-62.5
PCB-197	0.91	0.76-1.02	y	46.5	37.5-62.5
PCB-200	0.87	0.76-1.02	y	46.9	37.5-62.5
PCB-198	0.89	0.76-1.02	y	48.5	37.5-62.5
PCB-199	0.90	0.76-1.02	y	45.7	37.5-62.5
PCB-196/203	0.89	0.76-1.02	y	90.5	75.0-125
PCB-195	0.91	0.76-1.02	y	46.9	37.5-62.5
PCB-194	0.92	0.76-1.02	y	45.7	37.5-62.5
PCB-205	0.92	0.76-1.02	y	48.0	37.5-62.5
PCB-208	1.31	1.14-1.54	y	46.2	37.5-62.5
PCB-207	1.33	1.14-1.54	y	46.8	37.5-62.5
PCB-206	1.31	1.14-1.54	y	46.5	37.5-62.5
PCB-209	1.16	0.99-1.33	y	44.9	37.5-62.5

Analyst: DMS

Date: 1/20/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Lab ID: ST150114E1-5 Instrument ID: VG-8

Initial Calibration Date: 1-14-15 ICal ID: pcbvg8-1-14-15 GC Column ID: ZB-1

VER Data Filename: 150114E1 S#6 Analysis Date: 14-JAN-15 Time: 18:00:03

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.59	2.66-3.60	y	107.5	50.0-145
13C-PCB-3	3.55	2.66-3.60	y	100.5	50.0-145
13C-PCB-4	1.59	1.33-1.79	y	104.5	50.0-145
13C-PCB-9	1.58	1.33-1.79	y	102.4	50.0-145
13C-PCB-11	1.57	1.33-1.79	y	100.8	50.0-145
13C-PCB-19	1.10	0.88-1.20	y	99.4	50.0-145
13C-PCB-32	1.10	0.88-1.20	y	99.7	50.0-145
13C-PCB-28	1.03	0.88-1.20	y	113.1	50.0-145
13C-PCB-37	1.04	0.88-1.20	y	103.7	50.0-145
13C-PCB-54	0.78	0.65-0.89	y	108.1	50.0-145
13C-PCB-52	0.76	0.65-0.89	y	107.2	50.0-145
13C-PCB-47	0.77	0.65-0.89	y	108.7	50.0-145
13C-PCB-70	0.76	0.65-0.89	y	100.0	50.0-145
13C-PCB-80	0.78	0.65-0.89	y	101.0	50.0-145
13C-PCB-81	0.77	0.65-0.89	y	101.8	50.0-145
13C-PCB-77	0.79	0.65-0.89	y	101.1	50.0-145
13C-PCB-104	1.61	1.32-1.78	y	109.1	50.0-145
13C-PCB-95	1.61	1.32-1.78	y	102.4	50.0-145
13C-PCB-101	1.62	1.32-1.78	y	98.6	50.0-145
13C-PCB-97	1.65	1.32-1.78	y	100.4	50.0-145
13C-PCB-123	1.61	1.32-1.78	y	99.1	50.0-145
13C-PCB-118	1.60	1.32-1.78	y	99.9	50.0-145
13C-PCB-114	1.57	1.32-1.78	y	99.9	50.0-145
13C-PCB-105	1.58	1.32-1.78	y	99.1	50.0-145
13C-PCB-127	1.55	1.32-1.78	y	97.3	50.0-145
13C-PCB-126	1.61	1.32-1.78	y	93.9	50.0-145
13C-PCB-155	1.23	1.05-1.43	y	106.9	50.0-145
13C-PCB-153	1.29	1.05-1.43	y	101.6	50.0-145
13C-PCB-141	1.29	1.05-1.43	y	101.3	50.0-145
13C-PCB-138	1.26	1.05-1.43	y	99.4	50.0-145
13C-PCB-159	1.31	1.05-1.43	y	98.9	50.0-145
13C-PCB-167	1.27	1.05-1.43	y	101.9	50.0-145
13C-PCB-156	1.27	1.05-1.43	y	98.5	50.0-145
13C-PCB-157	1.32	1.05-1.43	y	99.7	50.0-145

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-169	1.25	1.05-1.43	y	99.0	50 - 145
13C-PCB-188	0.46	0.38-0.52	y	99.7	50 - 145
13C-PCB-180	0.46	0.38-0.52	y	100.0	50 - 145
13C-PCB-170	0.47	0.38-0.52	y	98.2	50 - 145
13C-PCB-189	0.45	0.38-0.52	y	97.3	50 - 145
13C-PCB-202	0.89	0.76-1.02	y	101.0	50 - 145
13C-PCB-194	0.90	0.76-1.02	y	100.0	50 - 145
13C-PCB-208	0.77	0.65-0.89	y	102.9	50 - 145
13C-PCB-206	0.77	0.65-0.89	y	99.6	50 - 145
13C-PCB-209	1.18	0.99-1.33	y	105.5	50 - 145

CRS vs. RS

13C-PCB-79	0.77	0.65-0.89	y	97.0	75 - 125
13C-PCB-178	0.45	0.38-0.52	y	98.8	75 - 125

Analyst: DMS

Date: 1/20/15

Client ID: PCB CS3 14L1801 Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03 ConCal: NA

Lab ID: ST150114E1-5 GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-1	8.07e+07	2.99	y	1.33	16:11	1.001	0.997	1.007	52.0249
	PCB-2	8.02e+07	2.99	y	1.30	18:33	0.988	0.983	0.993	54.7140
	PCB-3	8.03e+07	2.98	y	1.30	18:47	1.001	0.996	1.006	54.6072
	PCB-4/10	1.30e+08	1.64	y	1.67	20:10	1.002	0.997	1.007	93.0306
	PCB-7/9	1.56e+08	1.63	y	1.25	21:57	0.868	0.864	0.872	94.4847
	PCB-6	7.76e+07	1.65	y	1.24	22:35	0.893	0.888	0.897	47.5758
	PCB-5/8	1.55e+08	1.64	y	1.27	23:00	0.910	0.905	0.915	92.4994
	PCB-14	9.12e+07	1.64	y	1.47	24:06	0.953	0.948	0.958	48.1061
	PCB-11	7.80e+07	1.68	y	1.28	25:17	1.000	0.995	1.005	47.0854
	PCB-12/13	1.55e+08	1.65	y	1.27	25:41	1.016	1.011	1.021	94.5607
	PCB-15	8.75e+07	1.65	y	1.44	26:00	1.028	1.023	1.031	47.1177
	PCB-19	4.22e+07	1.06	y	1.18	24:17	1.001	0.996	1.006	47.5975
	PCB-30	6.72e+07	1.05	y	1.87	25:11	1.038	1.033	1.043	47.8879
	PCB-18	4.67e+07	1.06	y	0.89	25:55	0.954	0.949	0.959	47.7748
	PCB-17	5.08e+07	1.05	y	0.96	26:06	0.961	0.956	0.966	48.1501
	PCB-24/27	1.36e+08	1.06	y	1.30	26:40	0.982	0.977	0.987	95.1310
-	PCB-16/32	1.08e+08	1.05	y	1.05	27:11	1.001	0.996	1.006	93.2649
-	PCB-34	5.36e+07	1.01	y	1.30	27:58	0.960	0.955	0.965	45.6626
	PCB-23	5.23e+07	1.06	y	1.21	28:04	0.963	0.958	0.968	47.8931
	PCB-29	4.77e+07	1.01	y	1.21	28:19	0.972	0.967	0.977	43.6736
	PCB-26	5.01e+07	1.00	y	1.24	28:31	0.979	0.974	0.984	44.8563
	PCB-25	4.54e+07	1.01	y	1.10	28:41	0.985	0.980	0.990	45.8240
	PCB-31	5.13e+07	1.03	y	1.25	29:03	0.997	0.992	1.002	45.3770
	PCB-28	4.84e+07	1.04	y	1.24	29:09	1.001	0.996	1.006	43.3229
	PCB-20/21/33	1.42e+08	1.02	y	1.16	29:45	1.021	1.016	1.026	136.238
	PCB-22	4.91e+07	1.03	y	1.16	30:12	1.037	1.032	1.042	46.7230
	PCB-36	5.22e+07	1.05	y	1.30	30:49	0.934	0.929	0.939	53.8213
	PCB-39	4.78e+07	1.05	y	1.26	31:17	0.948	0.943	0.953	50.8404
	PCB-38	4.87e+07	1.03	y	1.24	32:04	0.972	0.967	0.977	52.5442
	PCB-35	4.75e+07	1.03	y	1.26	32:34	0.987	0.982	0.992	50.7102
	PCB-37	4.79e+07	1.08	y	1.35	33:01	1.001	0.996	1.006	47.5517
	PCB-54	4.77e+07	0.74	y	1.02	28:02	1.001	0.996	1.006	46.5543
	PCB-50	3.65e+07	0.72	y	0.78	29:12	1.042	1.037	1.047	46.9035
	PCB-53	3.64e+07	0.75	y	1.14	29:51	0.946	0.941	0.951	48.0525
	PCB-51	3.70e+07	0.72	y	1.16	30:11	0.957	0.952	0.962	47.8251
	PCB-45	3.37e+07	0.73	y	1.04	30:37	0.970	0.965	0.975	48.6868
	PCB-46	2.89e+07	0.73	y	0.95	31:06	0.986	0.981	0.991	45.7766

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-52/69	8.00e+07	0.74	y	1.29	31:35	1.001	0.996	1.006	93.0967
	PCB-73	4.72e+07	0.75	y	1.41	31:42	1.005	0.999	1.009	50.2177
	PCB-43/49	7.08e+07	0.73	y	1.14	31:52	1.010	1.005	1.015	93.3696
	PCB-47	3.98e+07	0.74	y	1.20	32:04	1.001	0.996	1.006	45.5825
	PCB-48/75	8.76e+07	0.73	y	1.33	32:11	1.004	0.999	1.009	90.7089
	PCB-65	4.12e+07	0.73	y	1.32	32:26	1.012	1.007	1.017	42.9478
	PCB-62	4.67e+07	0.74	y	1.36	32:33	1.016	1.011	1.021	47.2058
	PCB-44	2.93e+07	0.74	y	0.87	32:51	1.025	1.020	1.030	46.1675
	PCB-42/59	7.65e+07	0.74	y	1.24	33:05	1.032	1.027	1.037	85.0074
	PCB-41/64/71/72	1.66e+08	0.73	y	1.34	33:40	1.050	1.045	1.055	170.423
	PCB-68	4.72e+07	0.73	y	1.61	33:56	1.059	1.053	1.063	40.2479
	PCB-40	2.55e+07	0.73	y	0.86	34:09	1.066	1.061	1.071	40.7920
	PCB-57	4.47e+07	0.74	y	1.12	34:30	0.970	0.965	0.975	46.0101
	PCB-67	4.34e+07	0.73	y	1.09	34:49	0.979	0.974	0.984	45.9086
	PCB-58	4.85e+07	0.76	y	1.14	34:55	0.982	0.977	0.987	49.2155
	PCB-63	4.77e+07	0.71	y	1.16	35:05	0.986	0.981	0.991	47.3221
	PCB-74	4.68e+07	0.74	y	1.21	35:22	0.994	0.989	0.999	44.4585
	PCB-61/70	9.06e+07	0.73	y	1.13	35:33	1.000	0.995	1.005	92.8240
	PCB-76/66	9.21e+07	0.74	y	1.18	35:46	1.006	1.000	1.010	90.0496
	PCB-80	5.39e+07	0.74	y	1.32	36:00	1.000	0.995	1.005	45.2354
	PCB-55	5.08e+07	0.74	y	1.23	36:19	1.009	1.004	1.014	45.9074
	PCB-56/60	8.80e+07	0.73	y	1.11	36:49	1.023	1.018	1.028	88.4456
	PCB-79	4.65e+07	0.73	y	1.16	37:53	1.053	1.048	1.058	44.5110
	PCB-78	4.56e+07	0.74	y	1.18	38:34	0.987	0.982	0.992	43.6493
	PCB-81	5.20e+07	0.75	y	1.29	39:06	1.000	0.995	1.005	45.4820
	PCB-77	5.01e+07	0.76	y	1.29	39:42	1.001	0.995	1.005	45.6501
	PCB-104	4.01e+07	1.59	y	1.26	32:44	1.001	0.996	1.006	45.8646
	PCB-96	3.32e+07	1.56	y	1.09	33:59	1.039	1.034	1.044	43.9315
	PCB-103	2.97e+07	1.54	y	0.97	34:31	1.056	1.051	1.061	44.3834
	PCB-100	3.02e+07	1.57	y	0.96	34:52	1.066	1.061	1.071	45.2813
	PCB-94	2.48e+07	1.56	y	1.13	35:20	0.985	0.980	0.990	46.7663
	PCB-95/98/102	8.16e+07	1.52	y	1.29	35:50	0.999	0.994	1.004	134.832
	PCB-93	2.65e+07	1.68	y	1.06	35:58	1.003	0.998	1.008	53.0450
	PCB-88/91	5.25e+07	1.56	y	1.12	36:15	1.011	1.006	1.016	99.4803
	PCB-121	3.67e+07	1.57	y	1.76	36:22	1.014	1.009	1.019	44.4163
	PCB-84/92	5.15e+07	1.54	y	1.07	37:11	0.990	0.985	0.995	97.0520
	PCB-89	2.34e+07	1.53	y	1.00	37:22	0.995	0.990	1.000	47.4938

RL: MONO, TRI - DECA: —

RL: DI : —

Integrations by Analyst: DMS Date: 1/16/15

Reviewed by Analyst: _____ Date: _____

Client ID: PCB CS3 14L1801 Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03 ConCal: NA

Lab ID: ST150114E1-5 GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-90/101	5.59e+07	1.56	y	1.21	37:33	1.000	0.995	1.005	93.4510
	PCB-113	3.44e+07	1.55	y	1.34	37:48	1.007	1.002	1.012	51.7174
	PCB-99	2.56e+07	1.60	y	1.25	37:54	1.009	1.004	1.014	41.4323
	PCB-119	3.83e+07	1.56	y	1.88	38:21	0.987	0.982	0.992	46.9690
	PCB-108/112	5.74e+07	1.56	y	1.41	38:30	0.991	0.986	0.996	94.2376
	PCB-83	3.43e+07	1.57	y	1.66	38:40	0.995	0.990	1.000	47.6313
	PCB-97	2.60e+07	1.55	y	1.30	38:52	1.000	0.995	1.005	46.2488
	PCB-86	2.15e+07	1.46	y	1.03	39:00	1.004	0.999	1.009	47.9826
	B-87/117/125	9.85e+07	1.59	y	1.59	39:08	1.007	1.002	1.012	142.777
	PCB-111/115	7.67e+07	1.56	y	1.86	39:17	1.011	1.006	1.016	95.2753
	PCB-85/116	5.77e+07	1.60	y	1.39	39:25	1.015	1.010	1.020	95.6148
	PCB-120	3.97e+07	1.53	y	1.99	39:39	1.021	1.016	1.026	46.1066
	PCB-110	3.50e+07	1.56	y	1.70	39:47	1.024	1.019	1.029	47.4714
	PCB-82	2.08e+07	1.56	y	0.74	40:25	0.976	0.971	0.981	48.9430
	PCB-124	3.69e+07	1.57	y	1.30	41:06	0.993	0.988	0.998	49.3629
	PCB-107/109	6.93e+07	1.58	y	1.34	41:15	0.996	0.991	1.001	90.5539
	PCB-123	3.47e+07	1.55	y	1.25	41:25	1.000	0.995	1.005	48.3609
-	PCB-106/118	7.35e+07	1.54	y	1.29	41:38	1.001	0.996	1.006	92.8153
-	PCB-114	4.27e+07	1.62	y	1.45	42:15	1.000	0.995	1.005	46.8884
	PCB-122	3.51e+07	1.63	y	1.22	42:23	1.004	0.999	1.009	45.9413
	PCB-105	4.36e+07	1.65	y	1.56	43:07	1.000	0.995	1.005	47.0955
	PCB-127	3.79e+07	1.69	y	1.31	43:27	1.000	0.995	1.005	47.5187
	PCB-126	3.67e+07	1.64	y	1.41	45:20	1.000	0.995	1.005	49.2617
	PCB-155	3.43e+07	1.23	y	1.20	37:07	1.001	0.966	1.006	46.8420
	PCB-150	3.11e+07	1.24	y	1.13	38:22	1.035	1.030	1.040	45.1927
	PCB-152	3.16e+07	1.25	y	1.17	38:51	1.048	1.043	1.053	44.2320
	PCB-145	3.04e+07	1.24	y	1.09	39:18	1.060	1.055	1.065	45.5249
	PCB-136	3.31e+07	1.23	y	1.14	39:37	1.068	1.063	1.073	47.5060
	PCB-148	2.18e+07	1.24	y	0.82	39:43	1.071	1.066	1.076	43.6154
	PCB-154	2.45e+07	1.23	y	0.89	40:12	1.084	1.079	1.089	45.0618
	PCB-151	2.30e+07	1.25	y	0.82	40:51	1.102	1.097	1.107	46.1089
	PCB-135	2.19e+07	1.23	y	0.80	41:04	1.107	1.101	1.113	45.0763
	PCB-144	2.39e+07	1.33	y	0.86	41:10	1.110	1.105	1.116	45.7102
	PCB-147	2.07e+07	1.15	y	0.78	41:18	1.114	1.108	1.120	43.6051
	PCB-139/149	4.69e+07	1.23	y	0.87	41:34	1.121	1.115	1.127	88.2749
-	PCB-140	2.12e+07	1.24	y	0.78	41:45	1.126	1.120	1.132	44.7555
-	PCB-134/143	5.52e+07	1.22	y	0.93	42:11	0.975	0.970	0.980	91.8432

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-133/142	5.46e+07	1.24	y	0.91	42:29	0.982	0.977	0.987	93.0668
	PCB-131	2.55e+07	1.16	y	0.85	42:38	0.986	0.981	0.991	46.7153
	PCB-146/165	6.52e+07	1.22	y	1.08	42:51	0.991	0.986	0.996	93.4865
	PCB-132/161	6.70e+07	1.22	y	1.12	43:06	0.997	0.992	1.002	92.8456
	PCB-153	3.34e+07	1.21	y	1.20	43:17	1.001	0.996	1.006	43.2433
	PCB-168	4.08e+07	1.22	y	1.36	43:29	1.005	1.000	1.010	46.6695
	PCB-141	2.90e+07	1.22	y	1.16	44:00	1.000	0.995	1.005	45.4172
	PCB-137	2.95e+07	1.18	y	1.18	44:24	1.009	1.004	1.014	45.3841
	PCB-130	2.45e+07	1.21	y	0.92	44:29	1.011	1.006	1.016	48.1957
	PCB-138/163/164	1.05e+08	1.21	y	1.38	44:52	1.001	0.996	1.006	137.688
	PCB-158/160	7.63e+07	1.22	y	1.48	45:06	1.006	1.001	1.011	93.2016
	PCB-129	2.45e+07	1.20	y	0.99	45:21	1.012	1.007	1.017	44.6385
	PCB-166	3.59e+07	1.21	y	1.14	45:48	0.993	0.988	0.998	46.5698
	PCB-159	3.96e+07	1.22	y	1.22	46:08	1.000	0.995	1.005	47.9497
	PCB-128/162	6.57e+07	1.20	y	1.03	46:25	1.007	1.002	1.012	94.0179
	PCB-167	3.85e+07	1.17	y	1.18	46:49	1.000	0.995	1.005	46.3110
	PCB-156	3.93e+07	1.19	y	1.27	48:07	1.000	0.995	1.005	46.6553
	PCB-157	3.97e+07	1.21	y	1.22	48:23	1.000	0.995	1.005	46.2329
	PCB-169	3.46e+07	1.20	y	1.07	50:32	1.000	0.995	1.005	47.2196
	PCB-188	3.60e+07	1.06	y	1.52	42:55	1.001	0.996	1.006	46.9710
	PCB-184	3.21e+07	1.05	y	1.34	43:21	1.011	1.006	1.016	47.6292
	PCB-179	3.36e+07	1.03	y	1.39	44:08	1.029	1.024	1.034	47.9352
	PCB-176	3.52e+07	1.04	y	1.45	44:36	1.040	1.035	1.045	48.0468
	PCB-186	3.45e+07	1.05	y	1.46	45:12	1.054	1.049	1.059	46.9300
	PCB-178	2.51e+07	1.06	y	1.07	45:42	1.066	1.061	1.071	46.3910
	PCB-175	2.54e+07	1.06	y	1.05	46:03	1.074	1.069	1.079	48.0617
	PCB-182/187	5.34e+07	1.05	y	1.14	46:13	1.078	1.073	1.083	93.2941
	PCB-183	2.93e+07	1.04	y	1.22	46:32	1.085	1.080	1.090	47.4465
	PCB-185	2.52e+07	1.05	y	1.40	47:11	0.955	0.950	0.960	47.6023
	PCB-174	2.35e+07	1.05	y	1.29	47:33	0.963	0.958	0.968	48.4673
	PCB-181	2.45e+07	1.08	y	1.35	47:40	0.965	0.960	0.970	48.2534
	PCB-177	2.19e+07	1.04	y	1.27	47:49	0.968	0.963	0.973	45.9044
	PCB-171	2.53e+07	1.05	y	1.46	48:07	0.974	0.969	0.979	46.0900
	PCB-173	2.04e+07	1.04	y	1.10	48:33	0.983	0.978	0.988	48.9835
	PCB-172	2.39e+07	1.04	y	1.35	49:00	0.992	0.987	0.997	46.7746
	PCB-192	3.03e+07	1.05	y	1.74	49:12	0.996	0.991	1.001	46.2733
	PCB-180	2.48e+07	1.03	y	1.45	49:24	1.000	0.995	1.005	45.3976

RL: MONO, TRI - DECA: ——

Integrations by Analyst: DMS

Date: 1/16/15

Client ID: PCB CS3 14L1801 Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03 ConCal: NA
Lab ID: ST150114E1-5 GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

	Name	Resp	RA		RRF	RT	RRT	LCL	UCL	Conc
	PCB-193	3.25e+07	1.04	y	1.85	49:36	1.004	0.999	1.009	46.5289
	PCB-191	3.32e+07	1.04	y	1.86	49:52	1.010	1.005	1.015	47.3156
	PCB-170	2.30e+07	1.02	y	1.67	50:55	1.000	0.995	1.005	46.7443
	PCB-190	3.20e+07	1.07	y	2.25	51:06	1.004	0.999	1.009	48.2533
	PCB-189	3.08e+07	1.05	y	1.67	52:26	1.000	0.995	1.005	47.3113
	PCB-202	2.38e+07	0.91	y	1.02	48:19	1.000	0.995	1.005	46.9721
	PCB-201	2.52e+07	0.87	y	1.10	48:48	1.010	1.005	1.015	46.1751
	PCB-204	2.39e+07	0.89	y	1.07	48:58	1.014	1.009	1.019	44.7059
	PCB-197	2.70e+07	0.91	y	1.17	49:16	1.020	1.015	1.025	46.4964
	PCB-200	2.41e+07	0.87	y	1.03	50:10	1.039	1.034	1.044	46.8569
	PCB-198	1.82e+07	0.89	y	0.75	51:31	1.067	1.062	1.072	48.5071
	PCB-199	1.68e+07	0.90	y	0.74	51:38	1.069	1.064	1.074	45.6525
-	PCB-196/203	3.74e+07	0.89	y	0.83	51:54	1.075	1.070	1.080	90.5292
-	PCB-195	1.90e+07	0.91	y	1.14	53:04	0.984	0.979	0.989	46.9126
	PCB-194	2.09e+07	0.92	y	1.29	53:56	1.000	0.995	1.005	45.7200
	PCB-205	2.74e+07	0.92	y	1.61	54:13	1.005	1.001	1.010	48.0015
	PCB-208	2.49e+07	1.31	y	1.01	53:13	1.000	0.995	1.005	46.1981
	PCB-207	2.55e+07	1.33	y	1.03	53:32	1.006	1.001	1.011	46.8056
	PCB-206	1.42e+07	1.31	y	0.88	55:34	1.000	0.995	1.005	46.5433
	PCB-209	2.15e+07	1.16	y	1.35	56:55	1.000	0.995	1.005	44.8746

Name	Resp	RA		RT	RRF	Conc	
Total Mono-PCB	2.41e+08	2.99	y	16:11	1.31	143.595	
Total Di-PCB	9.32e+08	1.64	y	20:10	1.32	565.796	
Total Tri-PCB	4.51e+08	1.06	y	24:17	1.20	379.806	
Total Tri-PCB	8.18e+08	1.01	y	27:58	1.23	787.958	Sum:1167.76
Total Tetra-PCB	1.80e+09	0.74	y	28:02	1.17	1928.65	
Total Penta-PCB	1.27e+09	1.59	y	32:44	1.24	1932.56	
Total Penta-PCB	2.15e+08	1.62	y	42:15	1.39	259.871	Sum:2192.43
Total Hexa-PCB	3.64e+08	1.23	y	37:07	0.94	631.506	
Total Hexa-PCB	9.40e+08	1.22	y	42:11	1.13	1319.24	Sum:1950.75
Total Hepta-PCB	6.80e+08	1.06	y	42:55	1.37	1139.00	
Total Octa-PCB	1.96e+08	0.91	y	48:19	0.95	415.895	
Total Octa-PCB	6.97e+07	0.91	y	53:04	1.35	145.548	Sum:561.443
Total Nona-PCB	6.53e+07	1.31	y	53:13	0.99	140.996	
Total Deca-PCB	2.15e+07	1.16	y	56:55	1.35	44.8746	

Total PCB Conc:9715.75044600

RL: MONO, TRI - DECA: ~~~~

Integrations by Analyst: DMS

Date: 1/20/15

Client ID: PCB CS3 14L1801 Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03 ConCal: NA
Lab ID: ST150114E1-5 GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol:1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.31e+08	3.59 y	0.91	16:09	0.622	0.619	0.625	108	108
13C-PCB-3	1.27e+08	3.55 y	0.94	18:46	0.722	0.718	0.726	101	101
13C-PCB-4	8.37e+07	1.59 y	0.60	20:07	0.774	0.770	0.778	104	104
13C-PCB-9	1.32e+08	1.58 y	0.96	21:54	0.843	0.839	0.847	102	102
13C-PCB-11	1.29e+08	1.57 y	0.95	25:17	0.973	0.968	0.978	101	101
13C-PCB-19	7.48e+07	1.10 y	0.56	24:16	0.934	0.929	0.939	99.4	99.4
13C-PCB-28	9.04e+07	1.03 y	1.07	29:08	1.004	0.999	1.009	113	113
13C-PCB-32	1.10e+08	1.10 y	0.83	27:10	1.046	1.041	1.051	99.7	99.7
13C-PCB-37	7.45e+07	1.04 y	0.96	33:00	1.137	1.131	1.143	104	104
13C-PCB-47	7.29e+07	0.77 y	0.77	32:03	0.871	0.867	0.875	109	109
13C-PCB-52	6.66e+07	0.76 y	0.71	31:33	0.857	0.853	0.861	107	107
13C-PCB-54	1.00e+08	0.78 y	1.06	28:01	0.761	0.757	0.765	108	108
13C-PCB-70	8.67e+07	0.76 y	0.99	35:34	0.966	0.961	0.971	100	100
13C-PCB-77	8.51e+07	0.79 y	0.96	39:40	1.078	1.073	1.083	101	101
13C-PCB-80	9.01e+07	0.78 y	1.02	35:59	0.978	0.973	0.983	101	101
13C-PCB-81	8.87e+07	0.77 y	1.00	39:05	1.062	1.057	1.067	102	102
13C-PCB-95	4.69e+07	1.61 y	0.70	35:52	0.913	0.908	0.918	102	102
13C-PCB-97	4.33e+07	1.65 y	0.66	38:51	0.989	0.984	0.994	100	100
13C-PCB-101	4.96e+07	1.62 y	0.77	37:33	0.956	0.951	0.961	98.6	98.6
13C-PCB-104	6.91e+07	1.61 y	0.97	32:42	0.832	0.828	0.836	109	109
13C-PCB-105	5.94e+07	1.58 y	1.20	43:06	0.929	0.924	0.934	99.1	99.1
13C-PCB-114	6.26e+07	1.57 y	1.26	42:14	0.910	0.905	0.915	99.9	99.9
13C-PCB-118	6.14e+07	1.60 y	0.94	41:35	1.059	1.054	1.064	99.9	99.9
13C-PCB-123	5.73e+07	1.61 y	0.88	41:24	1.054	1.049	1.059	99.1	99.1
13C-PCB-126	5.27e+07	1.61 y	1.13	45:20	0.977	0.972	0.982	93.9	93.9
13C-PCB-127	6.10e+07	1.55 y	1.26	43:26	0.936	0.931	0.941	97.3	97.3
13C-PCB-138	5.55e+07	1.26 y	1.12	44:50	0.966	0.961	0.971	99.4	99.4
13C-PCB-141	5.52e+07	1.29 y	1.09	43:59	0.948	0.943	0.953	101	101
13C-PCB-153	6.45e+07	1.29 y	1.27	43.15	0.932	0.927	0.937	102	102
13C-PCB-155	6.10e+07	1.23 y	0.87	37:05	0.944	0.939	0.949	107	107
13C-PCB-156	6.63e+07	1.27 y	1.35	48:06	1.037	1.032	1.042	98.5	98.5
13C-PCB-157	7.04e+07	1.32 y	1.42	48:22	1.042	1.037	1.047	99.7	99.7
13C-PCB-159	6.75e+07	1.31 y	1.37	46:07	0.994	0.989	0.999	98.9	98.9
13C-PCB-167	7.02e+07	1.27 y	1.38	46:48	1.009	1.004	1.014	102	102
13C-PCB-169	6.82e+07	1.25 y	1.38	50:31	1.089	1.084	1.094	99.0	99.0
13C-PCB-170	2.95e+07	0.47 y	0.60	50:54	1.097	1.091	1.103	98.2	98.2
13C-PCB-180	3.77e+07	0.46 y	0.76	49:23	1.064	1.059	1.069	100.0	100.0
13C-PCB-188	5.04e+07	0.46 y	1.01	42:53	0.924	0.919	0.929	99.7	99.7
13C-PCB-189	3.89e+07	0.45 y	0.80	52:25	1.130	1.124	1.136	97.3	97.3
13C-PCB-194	3.54e+07	0.90 y	0.75	53:56	0.995	0.990	1.000	100	100
13C-PCB-202	4.98e+07	0.89 y	0.99	48:18	1.041	1.036	1.046	101	101
13C-PCB-206	3.47e+07	0.77 y	0.73	55:33	1.025	1.020	1.301	99.6	99.6
13C-PCB-208	5.30e+07	0.77 y	1.08	53:13	0.982	0.977	0.987	103	103
13C-PCB-209	3.56e+07	1.18 y	0.71	56:55	1.050	1.045	1.055	105	105

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.64e+07	0.77 y	1.02	37:51	1.029	1.024	1.033	97.0	97.0
13C-PCB-178	3.14e+07	0.45 y	0.64	45:41	0.985	0.980	0.989	98.8	98.8

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	8.64e+07	0.77 y	1.02	37:51	0.968	0.963	0.973	95.2	95.2
13C-PCB-178	3.14e+07	0.45 y	0.84	45:41	0.925	0.920	0.930	98.7	98.7

RS

Name	Resp	RA		RRF	RT	Conc
13C-PCB-15	1.34e+08	1.56	y	1.00	25:59	100
13C-PCB-31	7.47e+07	1.02	y	1.00	29:01	100
13C-PCB-60	8.72e+07	0.74	y	1.00	36:48	100
13C-PCB-111	6.56e+07	1.64	y	1.00	39:17	100
13C-PCB-128	4.99e+07	1.27	y	1.00	46:24	100
13C-PCB-205	4.76e+07	0.89	y	1.00	54:12	100

Analyst: DMS

Date: 1/22/15

Vista Analytical Laboratory - Injection Log Run file: Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150114E1	4	ST150114E1-3	dms	14-JAN-15	15:50:46	NA	NA
150114E1	5	ST150114E1-4	dms	14-JAN-15	16:55:24	NA	NA
150114E1	6	ST150114E1-5	dms	14-JAN-15	18:00:03	NA	NA
150114E1	7	ST150114E1-6	dms	14-JAN-15	19:04:40	NA	NA
150114E1	8	ST150114E1-7	dms	14-JAN-15	20:09:16	NA	NA
150114E1	9	SOLVENT BLANK	dms	14-JAN-15	21:13:53	NA	NA
150114E1	10	ST150114E1-8	dms	14-JAN-15	22:18:30	NA	NA
150114E1	11	SOLVENT BLANK	dms	14-JAN-15	23:23:07	NA	NA

Vista Analytical Laboratory - Injection Log Run file: 150116E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150116E1	2	STi150116E1-2	dms	16-JAN-15	08:51:27	NA	NA

Attachment R-5
Split Sample Results

Table of Contents: ARI Job ZP17, ZP18

Client: The Boeing Company Project: NPDES

Signature

December-22-2014
Date

Table of Contents: ARI Job ZP17, ZP18

Client: The Boeing Company

Project: NPDES

	Page From:	Page To:
General Chemistry Raw Data		
Analyst Notes and Raw Data	737	791

BC

Signature

December-22-2014

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 15, 2015

Dale Meland
The Boeing Company
PO Box 3707
Seattle, WA 98124-2499

Project: NPDES
ARI Job No.: ZP17 and ZP18

Dear Mr. Meland:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: ZP17, ZP18

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager:	Site Contact:	Date: 12/15/14	COC No:
Boeing EAL Daley Meland	Tel/Fax:	Lab Contact:	Carrier: Courier	1 of 1 COCs
Phone	Analysis Turnaround Time ☐ CALENDAR DAYS ☑ WORKING DAYS TAT if different from Below 3 Weeks			Sampler:
FAX	☐ 2 weeks			For Lab Use Only:
Project Name:	☐ 1 week			Walk-in Client:
Site:	☐ 2 days			Lab Sampling:
PO #	☐ 1 day			Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	PCB congeners	Dioxins/Furans	Sample Specific Notes:
BD-MH-11.31-20141215-W	12/15/14	0910	G	W	13	N		2	1		2			1	2	1	2	2	
BD-MH-5.16-20141215-W	12/15/14	1030	G	W	13	N		2	1	√2	√2	√2	√2	1	2	1	2	2	
									4					3					

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by: Melissa Ivancevich Melissa Ivancevich	Leidos	12/15/14 1320	Received by:	Boeing	12-15-14 1320
Relinquished by: Jolene Bowersmith	Boeing	12/15/14 1353	Received by:	AKT	12/15/14 1353
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing EAL Project Name: NPDES

COC No(s): _____ NA Delivered by. Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: ZP17 Tracking No. _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry) 4.5 4.7

Time _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JN Date 12/15/14 Time 1353

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? (YES) NO

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA (YES) NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI.... (NA) _____

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment _____ Split by: _____

Samples Logged by: _____ Date: 12.15.14 Time: 1415

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~ 2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• • •	• • • •	● ● ●

Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

PRESERVATION VERIFICATION 12/15/14
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **ZP17**

Inquiry Number: NONE
Analysis Requested: 12/15/14
Contact: Meland, Dale
Client: The Boeing Company
Logged by: TS
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 12/15/14

Project #:
Project: NPDES
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
14-27407 **ZP17A**	BD-MH-11.31-20141215-W						TOT Pres					P					N	DOC *	*	9N H_2SO_4	0.5 mL	12-15-14 cm
14-27408 **ZP17B**	BD-MH-5.16-20141215-W						TOT Pres					P					N	↓	↓	↓	↓	↓

* filtered then preserved for D.O.C.
12-15-14 cm

ZP17:00005

Checked By TS Date 12-15-14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Boeing CAL Project Name: NPDES

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: ZP17 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? ... YES NO

Were custody papers properly filled out (ink, signed, etc) . YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.5 4.7

Time _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by JM Date: 12/15/14 Time: 1353

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA (YES) NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI. (NA) _____

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: _____ Date: 12.15.14 Time: 1445

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles – 2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
●	●	●

Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

PRESERVATION VERIFICATION 12/15/14

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **ZP18**

Inquiry Number: NONE
Analysis Requested: 12/15/14
Contact: Meland, Dale
Client: The Boeing Company
Logged by: TS
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 12/15/14

Project #:
Project: NPDES
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
14-27431 **ZP18A**	BD-MH-11.31-20141215-W						TOT Pass															
14-27432 **ZP18B**	BD-MH-5.16-20141215-W						TOT Pass															

Checked By [signature] Date 12/15/14

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: ZP17, ZP18

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: NPDES
ARI Job No.: ZP17 and ZP18
January 15, 2015

Sample Receipt:

Please find enclosed the original and revised chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted two samples in good condition on December 14, 2014. The samples were received with cooler temperatures of 4.5 and 4.7°C. Please see the Cooler Receipt Form for further details.

The PCB Congeners were subcontracted to SGS and a copy of that report has been included for your review.

Semivolatiles by Method 8270D:

The Laboratory extracted the samples on 12/18/14 and analyzed the samples on 12/31/14 within the method recommended holding time.

Initial calibration (s): Are in control.

Continuing calibration (s): The CCAL is out of control high for all associated FORM III "Q" flagged analytes with the exception of pentachlorophenol which is out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Samples: There were no anomalies associated with these samples.

Surrogates: Are in control.

LCS/LCSD (s): The LCSD is out of control low for 2,4-Dimethylphenol with the RPD outside of control limits. The LCS is in control.

Method Blank: The method blank is non-detect.

Dioxin/Furans by EPA 1613B

The samples were extracted and analyzed within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique elution order and selectivity for the target compounds, as well as a unique isomer separation for the 2378-TCDF. A resolution test mixture was designed specifically for this column, consisting of 2348-TCDF, 2378-TCDF and 3467-TCDF to evaluate the method required minimum valley between isomer of 25%. Use of the RTX-Dioxin2 column eliminates the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

The method blank contained reportable responses below the reporting limits for several compounds. "B" qualifiers were applied to associated results that were less than ten times the levels found in the method blank. No qualifiers were applied to sample results that were greater than ten times the levels found in the method blank.

The OPR (Ongoing Precision and Accuracy or LCS) sample percent recoveries were within control limits with the exception of 1,2,3,4,6,7,8-HCPDF which is out of control high.

The TEQ was calculated with WHO2005 with both ND=0 for undetects (flagged "U") and ND= ½ EDL. The TEC includes EMPC values in the calculation.

Total Metals by 200.8 and 7470A

The samples were digested on 12/17/14 and analyzed between 12/18/14 and 12/26/14 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): All method blanks were free of contamination.

LCS: Is in control.

Matrix spike/ Matrix spike duplicate/RPD (s): Is in control.

Conventionals Analyses:

The Laboratory analyzed the samples between 12/15/14 and 12/17/14 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Method Blank (s): The method blank is non-detect.

Samples: There were no anomalies associated with these samples.

Matrix spike /RPDs: Are in control.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ZP17
Client: The Boeing Company
Project Event: N/A
Project Name: NPDES

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	BD-MH-11.31-20141215-W	ZP17A	14-27407	Water	12/15/14 09:10	12/15/14 13:53
2.	BD-MH-5.16-20141215-W	ZP17B	14-27408	Water	12/15/14 10:30	12/15/14 13:53

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ZP18
Client: The Boeing Company
Project Event: N/A
Project Name: NPDES

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	BD-MH-11.31-20141215-W	ZP18A	14-27431	Water	12/15/14 09:10	12/15/14 13:53
2.	BD-MH-5.16-20141215-W	ZP18B	14-27432	Water	12/15/14 10:30	12/15/14 13:53

Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
8270D SVOC in Water (EPA 8270D)								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 8 oz		**Amount Required:** 200 g				**Hold Time:** 14 days		
Phenol	0.271	1.00 ug/kg		30	48 - 120	30	48 - 120	30
bis(2-chloroethyl) ether	0.248	1.00 ug/kg		30	50 - 120	30	50 - 120	30
2-Chlorophenol	0.220	1.00 ug/kg		30	48 - 120	30	48 - 120	30
1,3-Dichlorobenzene	0.266	1.00 ug/kg		30	24 - 120	30	24 - 120	30
1,4-Dichlorobenzene	0.267	1.00 ug/kg		30	24 - 120	30	24 - 120	30
Benzyl Alcohol	0.552	2.00 ug/kg		30	26 - 120	30	26 - 120	30
1,2-Dichlorobenzene	0.250	1.00 ug/kg		30	28 - 120	30	28 - 120	30
2-Methylphenol	0.211	1.00 ug/kg		30	44 - 120	30	44 - 120	30
2,2'-Oxybis(1-chloropropane)	0.241	1.00 ug/kg		30	47 - 120	30	47 - 120	30
4-Methylphenol	0.468	2.00 ug/kg		30	48 - 120	30	48 - 120	30
N-Nitroso-di-n-Propylamine	0.269	1.00 ug/kg		30	50 - 120	30	50 - 120	30
Hexachloroethane	0.300	2.00 ug/kg		30	18 - 120	30	18 - 120	30
Nitrobenzene	0.253	1.00 ug/kg		30	49 - 120	30	49 - 120	30
Isophorone	0.423	1.00 ug/kg		30	57 - 120	30	57 - 120	30
2-Nitrophenol	0.263	3.00 ug/kg		30	47 - 120	30	47 - 120	30
2,4-Dimethylphenol	1.12	3.00 ug/kg		30	37 - 120	30	37 - 120	30
Bis(2-Chloroethoxy)methane	0.237	1.00 ug/kg		30	48 - 120	30	48 - 120	30
Benzoic acid	3.92	20.0 ug/kg		30	37 - 120	30	37 - 120	30
2,4-Dichlorophenol	1.11	3.00 ug/kg		30	54 - 120	30	54 - 120	30
1,2,4-Trichlorobenzene	0.254	1.00 ug/kg		30	28 - 120	30	28 - 120	30
Naphthalene	0.246	1.00 ug/kg		30	34 - 120	30	34 - 120	30
4-Chloroaniline	1.73	5.00 ug/kg		30	10 - 132	30	10 - 132	30
Hexachlorobutadiene	0.335	3.00 ug/kg		30	18 - 120	30	18 - 120	30
4-Chloro-3-Methylphenol	1.12	3.00 ug/kg		30	59 - 120	30	59 - 120	30
2-Methylnaphthalene	0.295	1.00 ug/kg		30	27 - 120	30	27 - 120	30
Hexachlorocyclopentadiene	1.08	5.00 ug/kg		30	16 - 120	30	16 - 120	30
2,4,6-Trichlorophenol	1.04	3.00 ug/kg		30	53 - 120	30	53 - 120	30
2,4,5-Trichlorophenol	1.10	5.00 ug/kg		30	58 - 120	30	58 - 120	30
2-Chloronaphthalene	0.248	1.00 ug/kg		30	42 - 120	30	42 - 120	30
2-Nitroaniline	1.46	3.00 ug/kg		30	31 - 120	30	31 - 120	30
Dimethylphthalate	0.259	1.00 ug/kg		30	61 - 120	30	61 - 120	30
Acenaphthylene	0.268	1.00 ug/kg		30	46 - 120	30	46 - 120	30
2,6-Dinitrotoluene	1.14	3.00 ug/kg		30	52 - 120	30	52 - 120	30
3-Nitroaniline	1.53	3.00 ug/kg		30	36 - 120	30	36 - 120	30
Acenaphthene	0.254	1.00 ug/kg		30	43 - 120	30	43 - 120	30
2,4-Dinitrophenol	3.35	20.0 ug/kg		30	40 - 120	30	40 - 120	30
Dibenzofuran	0.309	1.00 ug/kg		30	36 - 120	30	36 - 120	30
4-Nitrophenol	1.75	10.0 ug/kg		30	44 - 129	30	44 - 129	30
2,4-Dinitrotoluene	1.12	3.00 ug/kg		30	51 - 120	30	51 - 120	30
Fluorene	0.291	1.00 ug/kg		30	42 - 120	30	42 - 120	30
Diethyl phthalate	0.273	1.00 ug/kg		30	60 - 120	30	60 - 120	30
4-Chlorophenylphenyl ether	0.267	1.00 ug/kg		30	54 - 120	30	54 - 120	30
4-Nitroaniline	2.02	3.00 ug/kg		30	25 - 132	30	25 - 132	30
4,6-Dinitro-2-methylphenol	3.61	10.0 ug/kg		30	56 - 120	30	56 - 120	30
N-Nitrosodiphenylamine	0.299	1.00 ug/kg		30	48 - 120	30	48 - 120	30
4-Bromophenyl phenyl ether	0.238	1.00 ug/kg		30	56 - 120	30	56 - 120	30

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Hexachlorobenzene	0.280	1.00 ug/kg		30	54 - 120	30	54 - 120	30
Pentachlorophenol	1.89	10.0 ug/kg		30	40 - 131	30	40 - 131	30
Phenanthrene	0.318	1.00 ug/kg		30	53 - 120	30	53 - 120	30
Anthracene	0.265	1.00 ug/kg		30	47 - 120	30	47 - 120	30
Carbazole	0.310	1.00 ug/kg		30	57 - 120	30	57 - 120	30
Di-n-Butylphthalate	0.291	1.00 ug/kg		30	65 - 120	30	65 - 120	30
Fluoranthene	0.297	1.00 ug/kg		30	53 - 120	30	53 - 120	30
Pyrene	0.284	1.00 ug/kg		30	47 - 120	30	47 - 120	30
Butylbenzylphthalate	0.299	1.00 ug/kg		30	54 - 120	30	54 - 120	30
Benzo(a)anthracene	0.287	1.00 ug/kg		30	51 - 120	30	51 - 120	30
3,3'-Dichlorobenzidine	1.77	5.00 ug/kg		30	44 - 120	30	44 - 120	30
Chrysene	0.321	1.00 ug/kg		30	48 - 120	30	48 - 120	30
bis(2-Ethylhexyl)phthalate	2.14	3.00 ug/kg		30	58 - 120	30	58 - 120	30
Di-n-Octylphthalate	0.268	1.00 ug/kg		30	62 - 120	30	62 - 120	30
Benzo(b)fluoranthene	0.317	1.00 ug/kg		30	42 - 132	30	42 - 132	30
Benzo(k)fluoranthene	0.335	1.00 ug/kg		30	39 - 129	30	39 - 129	30
Benzo(a)pyrene	0.297	1.00 ug/kg		30	45 - 120	30	45 - 120	30
Indeno(1,2,3-cd)pyrene	0.359	1.00 ug/kg		30	41 - 120	30	41 - 120	30
Dibenzo(a,h)anthracene	0.394	1.00 ug/kg		30	35 - 120	30	35 - 120	30
Benzo(g,h,i)perylene	0.391	1.00 ug/kg		30	35 - 120	30	35 - 120	30
Benzofluoranthenes, Total	0.801	2.00 ug/kg		30	30 - 160	30	30 - 160	30
1-Methylnaphthalene	0.258	1.00 ug/kg		30	55 - 120	30	55 - 120	30
N-Nitrosodimethylamine	1.33	3.00 ug/kg		30	41 - 120	30	41 - 120	30
Aniline	0.973	1.00 ug/kg		30	21 - 120	30	21 - 120	30
Benzidine				30	57 - 120	30	57 - 120	30
Retene				40		40		40
Perylene								
Pyridine				40	15 - 118	40	15 - 118	40
N-Nitrosomethylethylamine								
2,6-Dichlorophenol								
alpha-Terpineol				40		40		40
1,4-Dioxane				40	45 - 120	40		40
2,3,4,6-Tetrachlorophenol	0.244	1.00 ug/kg		30		30		30
Triphenyl Phosphate	0.520	1.00 ug/kg		40		40		40
Butyl Diphenyl Phosphate	0.190	1.00 ug/kg		40		40		40
Dibutyl Phenyl Phosphate	0.120	1.00 ug/kg		40		40		40
Tributyl Phosphate	0.160	1.00 ug/kg		40		40		40
Butylated Hydroxytoluene	0.210	1.00 ug/kg		40		40		40
Azobenzene (1,2-DP-Hydrazine)	0.228	1.00 ug/kg		30	55 - 120	30	55 - 120	30
Tetrachloroguaiacol				30		30		30
3,4,5-Trichloroguaiacol				40		40		40
3,4,6-Trichloroguaiacol				40		40		40
4,5,6-Trichloroguaiacol				40		40		40
Guaiacol				40		40		40
1,2,4,5-Tetrachlorobenzene				30		30		30
surr: 2-Fluorophenol			33 - 120					
surr: Phenol-d5			38 - 120					
surr: 2-Chlorophenol-d4			41 - 120					
surr: 1,2-Dichlorobenzene-d4			20 - 120					
surr: Nitrobenzene-d5			27 - 120					

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
surr: 2-Fluorobiphenyl			33 - 120					
surr: 2,4,6-Tribromophenol			52 - 120					
surr: p-Terphenyl-d14			28 - 120					
1,4-Dichlorobenzene-d4								
Naphthalene-d8								
Acenaphthene-d10								
Phenanthrene-d10								
Chrysene-d12								
Di-n-Octylphthalate-d4								
Perylene-d12								

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
1613B Dioxin in Water (EPA 1613B)								
Preservation: Cool <6°C								
Container: Glass NM, Amber, 1000 mL		**Amount Required:**2000 ml				**Hold Time:**365 days		
2,3,7,8-TCDF	0.265	10.0 pg/L		25			75 - 158	25
2,3,7,8-TCDD	0.313	10.0 pg/L		25			67 - 158	25
1,2,3,7,8-PeCDF	1.34	10.0 pg/L		25			80 - 134	25
2,3,4,7,8-PeCDF	1.40	10.0 pg/L		25			68 - 160	25
1,2,3,7,8-PeCDD	1.41	10.0 pg/L		25			70 - 142	25
1,2,3,4,7,8-HxCDF	1.34	10.0 pg/L		25			72 - 134	25
1,2,3,6,7,8-HxCDF	1.38	10.0 pg/L		25			84 - 130	25
2,3,4,6,7,8-HxCDF	1.45	10.0 pg/L		25			70 - 156	25
1,2,3,7,8,9-HxCDF	1.25	10.0 pg/L		25			78 - 130	25
1,2,3,4,7,8-HxCDD	1.32	10.0 pg/L		25			70 - 164	25
1,2,3,6,7,8-HxCDD	1.43	10.0 pg/L		25			76 - 134	25
1,2,3,7,8,9-HxCDD	1.29	10.0 pg/L		25			64 - 162	25
1,2,3,4,6,7,8-HpCDF	1.28	10.0 pg/L		25			82 - 122	25
1,2,3,4,7,8,9-HpCDF	1.20	10.0 pg/L		25			78 - 138	25
1,2,3,4,6,7,8-HpCDD	0.982	10.0 pg/L		25			70 - 140	25
OCDF	2.59	20.0 pg/L		25			63 - 170	25
OCDD	3.14	20.0 pg/L		25			78 - 144	25
Total TCDF		10.0 pg/L						
Total TCDD		10.0 pg/L						
Total PeCDF		10.0 pg/L						
Total PeCDD		10.0 pg/L						
Total HxCDF		10.0 pg/L						
Total HxCDD		10.0 pg/L						
Total HpCDF		10.0 pg/L						
Total HpCDD		10.0 pg/L						
surr: 13C-2,3,7,8-TCDF			24 - 169					
surr: 13C-2,3,7,8-TCDD			25 - 164					
surr: 13C-1,2,3,7,8-PeCDF			24 - 185					
surr: 13C-2,3,4,7,8-PeCDF			21 - 178					
surr: 13C-1,2,3,7,8-PeCDD			25 - 181					
surr: 13C-1,2,3,4,7,8-HxCDF			26 - 152					
surr: 13C-1,2,3,6,7,8-HxCDF			26 - 123					
surr: 13C-2,3,4,6,7,8-HxCDF			28 - 136					
surr: 13C-1,2,3,7,8,9-HxCDF			29 - 147					
surr: 13C-1,2,3,4,7,8-HxCDD			32 - 141					
surr: 13C-1,2,3,6,7,8-HxCDD			28 - 130					
surr: 13C-1,2,3,4,6,7,8-HpCDF			28 - 143					
surr: 13C-1,2,3,4,7,8,9-HpCDF			26 - 138					
surr: 13C-1,2,3,4,6,7,8-HpCDD			23 - 140					
surr: 13C-OCDD			17 - 157					
surr: 37Cl-2,3,7,8-TCDD			35 - 197					
13C-1,2,3,4-TCDD								
13C-1,2,3,7,8,9-HxCDD								

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 200.8 in Water (EPA 200.8)								
Preservation: pH<2; HNO3, Cool <6°C								
Container: HDPE NM, 500 mL, 1:1 HNO3		**Amount Required:** 500 mL				**Hold Time:** 180 days		
Aluminum-27	0.00160	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-121	0.0000100	.000200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-123	0.0000110	.000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75a	0.0000480	.000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75b	0.0000920	.000500 mg/L		20	75 - 125	20	80 - 120	20
Barium-135	0.0000200	.000500 mg/L		20	75 - 125	20	80 - 120	20
Barium-137	0.0000190	.000500 mg/L		20	75 - 125	20	80 - 120	20
Beryllium-9	0.0000210	.000200 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-111	0.0000100	.000100 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-114	0.00000500	.000100 mg/L		20	75 - 125	20	80 - 120	20
Calcium-43	0.00398	0.0500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-52	0.0000450	.000500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-53	0.000118	.000500 mg/L		20	75 - 125	20	80 - 120	20
Cobalt-59	0.0000110	.000200 mg/L		20	75 - 125	20	80 - 120	20
Copper-63	0.000158	.000500 mg/L		20	75 - 125	20	80 - 120	20
Copper-65	0.000236	.000500 mg/L		20	75 - 125	20	80 - 120	20
Iron-54	0.00575	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Iron-57	0.00388	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Lead-208	0.0000460	.000100 mg/L		20	75 - 125	20	80 - 120	20
Magnesium-24	0.000297	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Manganese-55	0.0000220	.000500 mg/L		20	75 - 125	20	80 - 120	20
Molybdenum-98	0.0000130	.000200 mg/L		20	75 - 125	20	80 - 120	20
Nickel-60	0.0000790	.000500 mg/L		20	75 - 125	20	80 - 120	20
Nickel-62	0.0000890	.000500 mg/L		20	75 - 125	20	80 - 120	20
Potassium-39	0.00294	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Selenium-82	0.000127	.000500 mg/L		20	75 - 125	20	80 - 120	20
Selenium-78	0.000324	0.00200 mg/L		20	75 - 125	20	80 - 120	20
Silver-107	0.00000800	.000200 mg/L		20	75 - 125	20	80 - 120	20
Sodium-23	0.00283	0.100 mg/L		20	75 - 125	20	80 - 120	20
Thallium-205	0.00000400	.000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51a	0.0000430	.000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51b	0.0000430	.000200 mg/L		20	75 - 125	20	80 - 120	20
Zinc-66	0.000497	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-67	0.000531	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-68	0.000524	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 7470A Hg Low Level in Water (EPA 7470A)								
Preservation: pH<2; HNO3, Cool <6°C								
Container: HDPE NM, 500 mL, 1:1 HNO3		**Amount Required:** 500 mL				**Hold Time:** 28 days		
Mercury	0.00000260	)000200 mg/L		20	75 - 125	20	80 - 120	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
pH, EPA 9040C in Water (EPA 9040C)								
Preservation: None								
Container: Small OJ, 500 mL			**Amount Required:** 250 mL			**Hold Time:** 0.01 days		
pH		1100 pH Units		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Carbonate SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL				**Hold Time:** 14 days		
Alkalinity, Carbonate		mg/L CaCO3		20				

Analytical Resources, Inc.

1/9/2015

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Bicarbonate SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL					**Hold Time:** 14 days	
Alkalinity, Bicarbonate		mg/L CaCO3		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Hydroxide SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL				**Hold Time:** 14 days		
Alkalinity, Hydroxide		mg/L CaCO3		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Chromium, Hexavalent, SM 3500-Cr B-09 in Water (SM 3500-Cr B-09)								
Preservation: Cool <6°C								
Container: Glass NM, Amber, 250 mL		**Amount Required:** 250 mL				**Hold Time:** 1 day		
Hexavalent Chromium	0.00300	0.0100 mg/L		20	75 - 125		75 - 125	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Solids, Total Suspended SM 2540 D-97 in Water (SM 2540 D-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 1000 mL		**Amount Required:** 1000 mL				**Hold Time:** 7 days		
Suspended Solids		1.00 mg/L		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Anions, EPA 300.0 in Water (EPA 300.0)								
Preservation: None								
Container: Small OJ, 500 mL		**Amount Required:** 500 mL			**Hold Time:** 28 days			
Fluoride	0.0110	0.100 mg/L		20	75 - 125		90 - 110	20
Chloride	0.0300	0.100 mg/L		20	75 - 125		90 - 110	20
Nitrite-N	0.0240	0.100 mg/L		20	75 - 125		90 - 110	20
Bromide	0.00700	0.100 mg/L		20	75 - 125		90 - 110	20
Nitrate-N	0.0180	0.100 mg/L		20	75 - 125		90 - 110	20
Phosphate-P	0.0200	0.100 mg/L		20	75 - 125		90 - 110	20
Sulfate	0.0460	0.100 mg/L		20	75 - 125		90 - 110	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Organic Carbon, Total, 9060A in Water (EPA 9060A)								
Preservation: pH<2; H2SO4, Cool <6°C								
Container: Glass NM, Amber, 250 mL, 9N H2SO4		**Amount Required:** 250 mL				**Hold Time:** 28 days		
Total Organic Carbon		1.50 mg/L		20	75 - 125		75 - 125	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Organic Carbon, Dissolved EPA 9060A in Water (EPA 9060A)								
Preservation: pH<2; H2SO4, Cool <6°C								
Container: Glass NM, Amber, 250 mL, 9N H2SO4		**Amount Required:** 250 mL				**Hold Time:** 28 days		
Total Organic Carbon		1.50 mg/L		20	75 - 125		75 - 125	20

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: ZP17, ZP18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
Page 1 of 2

Sample ID: BD-MH-11.31-20141215-W
SAMPLE

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 12/18/14
Date Analyzed: 12/31/14 22:49
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: BD-MH-11.31-20141215-W
SAMPLE

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Date Analyzed: 12/31/14 22:49

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	75.2%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	84.0%	d4-1,2-Dichlorobenzene	66.8%
d5-Phenol	104%	2-Fluorophenol	93.9%
2,4,6-Tribromophenol	90.1%	d4-2-Chlorophenol	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
Page 1 of 2

Sample ID: BD-MH-5.16-20141215-W
SAMPLE

Lab Sample ID: ZP17B
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 12/18/14
Date Analyzed: 12/31/14 23:23
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: BD-MH-5.16-20141215-W
SAMPLE

Lab Sample ID: ZP17B
LIMS ID: 14-27408
Matrix: Water
Date Analyzed: 12/31/14 23:23

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	91.7%	2-Fluorophenol	83.2%
2,4,6-Tribromophenol	86.7%	d4-2-Chlorophenol	89.3%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZP17-The Boeing Company
Project: NPDES

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-121814	72.0%	62.4%	89.2%	50.4%	104%	89.1%	94.4%	98.9%	0
LCS-121814	76.8%	79.6%	88.0%	63.6%	113%	94.9%	110%	104%	0
LCSD-121814	65.2%	68.4%	82.4%	53.6%	90.7%	77.6%	96.8%	87.7%	0
BD-MH-11.31-201412	75.2%	73.2%	84.0%	66.8%	104%	93.9%	90.1%	101%	0
BD-MH-5.16-2014121	69.2%	69.6%	75.6%	58.0%	91.7%	83.2%	86.7%	89.3%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(27-120)	(27-120)
(FBP) = 2-Fluorobiphenyl	(33-120)	(33-120)
(TPH) = d14-p-Terphenyl	(28-130)	(28-130)
(DCB) = d4-1,2-Dichlorobenzene	(20-120)	(20-120)
(PHL) = d5-Phenol	(38-120)	(38-120)
(2FP) = 2-Fluorophenol	(33-120)	(33-120)
(TBP) = 2,4,6-Tribromophenol	(52-131)	(52-131)
(2CP) = d4-2-Chlorophenol	(41-120)	(41-120)

Prep Method: SW3520C
Log Number Range: 14-27407 to 14-27408

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-121814
LCS/LCSD

Lab Sample ID: LCS-121814
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted LCS/LCSD: 12/18/14

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 12/31/14 21:42
LCSD: 12/31/14 22:15

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Phenol	20.8		25.0	83.2%	17.8		25.0	71.2%	15.5%
Bis-(2-Chloroethyl) Ether	18.2		25.0	72.8%	16.0		25.0	64.0%	12.9%
2-Chlorophenol	19.9		25.0	79.6%	17.0		25.0	68.0%	15.7%
1,3-Dichlorobenzene	14.1		25.0	56.4%	12.3		25.0	49.2%	13.6%
1,4-Dichlorobenzene	14.6		25.0	58.4%	12.6		25.0	50.4%	14.7%
Benzyl Alcohol	20.7		25.0	82.8%	17.2		25.0	68.8%	18.5%
1,2-Dichlorobenzene	14.9		25.0	59.6%	13.3		25.0	53.2%	11.3%
2-Methylphenol	17.9		25.0	71.6%	14.6		25.0	58.4%	20.3%
2,2'-Oxybis(1-Chloropropane)	18.0		25.0	72.0%	15.8		25.0	63.2%	13.0%
4-Methylphenol	19.7		25.0	78.8%	16.2		25.0	64.8%	19.5%
N-Nitroso-Di-N-Propylamine	18.3		25.0	73.2%	16.3		25.0	65.2%	11.6%
Hexachloroethane	13.3		25.0	53.2%	11.8		25.0	47.2%	12.0%
Nitrobenzene	19.1		25.0	76.4%	16.9		25.0	67.6%	12.2%
Isophorone	20.2		25.0	80.8%	18.2		25.0	72.8%	10.4%
2-Nitrophenol	23.0		25.0	92.0%	20.5		25.0	82.0%	11.5%
2,4-Dimethylphenol	32.8		75.0	43.7%	21.1		75.0	28.1%	43.4%
Benzoic Acid	144	Q	138	104%	132	Q	138	95.7%	8.7%
bis(2-Chloroethoxy) Methane	19.6		25.0	78.4%	17.4		25.0	69.6%	11.9%
2,4-Dichlorophenol	65.5		75.0	87.3%	56.2		75.0	74.9%	15.3%
1,2,4-Trichlorobenzene	15.9		25.0	63.6%	14.0		25.0	56.0%	12.7%
Naphthalene	19.6		25.0	78.4%	17.2		25.0	68.8%	13.0%
4-Chloroaniline	63.8		75.0	85.1%	51.8		75.0	69.1%	20.8%
Hexachlorobutadiene	13.1		25.0	52.4%	11.6		25.0	46.4%	12.1%
4-Chloro-3-methylphenol	65.7		75.0	87.6%	56.8		75.0	75.7%	14.5%
2-Methylnaphthalene	20.4		25.0	81.6%	17.2		25.0	68.8%	17.0%
Hexachlorocyclopentadiene	34.6		75.0	46.1%	30.8		75.0	41.1%	11.6%
2,4,6-Trichlorophenol	70.4		75.0	93.9%	60.7		75.0	80.9%	14.8%
2,4,5-Trichlorophenol	72.8		75.0	97.1%	63.0		75.0	84.0%	14.4%
2-Chloronaphthalene	20.3		25.0	81.2%	17.4		25.0	69.6%	15.4%
2-Nitroaniline	78.9		75.0	105%	71.9		75.0	95.9%	9.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-121814
LCS/LCSD

Lab Sample ID: LCS-121814
LIMS ID: 14-27407
Matrix: Water
Date Analyzed LCS: 12/31/14 21:42
LCSD: 12/31/14 22:15

QC Report No: ZP17-The Boeing Company
Project: NPDES

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Dimethylphthalate	22.5		25.0	90.0%	20.6		25.0	82.4%	8.8%
Acenaphthylene	22.3		25.0	89.2%	19.0		25.0	76.0%	16.0%
3-Nitroaniline	89.4		75.0	119%	79.4		75.0	106%	11.8%
Acenaphthene	22.7		25.0	90.8%	19.2		25.0	76.8%	16.7%
2,4-Dinitrophenol	129		138	93.5%	117		138	84.8%	9.8%
4-Nitrophenol	73.2		75.0	97.6%	64.4		75.0	85.9%	12.8%
Dibenzofuran	22.3		25.0	89.2%	20.1		25.0	80.4%	10.4%
2,6-Dinitrotoluene	70.9		75.0	94.5%	63.1		75.0	84.1%	11.6%
2,4-Dinitrotoluene	69.8		75.0	93.1%	63.0		75.0	84.0%	10.2%
Diethylphthalate	20.8		25.0	83.2%	20.1		25.0	80.4%	3.4%
4-Chlorophenyl-phenylether	19.9		25.0	79.6%	18.5		25.0	74.0%	7.3%
Fluorene	21.3		25.0	85.2%	19.5		25.0	78.0%	8.8%
4-Nitroaniline	81.3	Q	75.0	108%	81.0	Q	75.0	108%	0.4%
4,6-Dinitro-2-Methylphenol	146		138	106%	132		138	95.7%	10.1%
N-Nitrosodiphenylamine	21.8		25.0	87.2%	17.9		25.0	71.6%	19.6%
4-Bromophenyl-phenylether	25.8		25.0	103%	20.7		25.0	82.8%	21.9%
Hexachlorobenzene	22.8		25.0	91.2%	19.5		25.0	78.0%	15.6%
Pentachlorophenol	51.0	Q	75.0	68.0%	47.7	Q	75.0	63.6%	6.7%
Phenanthrene	23.8		25.0	95.2%	21.2		25.0	84.8%	11.6%
Carbazole	24.9		25.0	99.6%	23.1		25.0	92.4%	7.5%
Anthracene	23.1		25.0	92.4%	20.5		25.0	82.0%	11.9%
Di-n-Butylphthalate	21.4		25.0	85.6%	20.2		25.0	80.8%	5.8%
Fluoranthene	22.2		25.0	88.8%	20.5		25.0	82.0%	8.0%
Pyrene	24.8		25.0	99.2%	24.0		25.0	96.0%	3.3%
Butylbenzylphthalate	22.6		25.0	90.4%	22.0		25.0	88.0%	2.7%
3,3'-Dichlorobenzidine	44.6		75.0	59.5%	35.4		75.0	47.2%	23.0%
Benzo(a)anthracene	24.0		25.0	96.0%	22.8		25.0	91.2%	5.1%
bis(2-Ethylhexyl)phthalate	23.8		25.0	95.2%	23.7		25.0	94.8%	0.4%
Chrysene	24.4		25.0	97.6%	22.9		25.0	91.6%	6.3%
Di-n-Octyl phthalate	23.3		25.0	93.2%	22.6		25.0	90.4%	3.1%
Benzo(a)pyrene	24.5		25.0	98.0%	23.0		25.0	92.0%	6.3%
Indeno(1,2,3-cd)pyrene	25.2		25.0	101%	23.6		25.0	94.4%	6.6%
Dibenz(a,h)anthracene	24.8		25.0	99.2%	23.6		25.0	94.4%	5.0%
Benzo(g,h,i)perylene	25.0		25.0	100%	23.2		25.0	92.8%	7.5%
1-Methylnaphthalene	21.4		25.0	85.6%	18.6		25.0	74.4%	14.0%
Total Benzofluoranthenes	47.6		50.0	95.2%	46.2		50.0	92.4%	3.0%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	76.8%	65.2%
2-Fluorobiphenyl	79.6%	68.4%
d14-p-Terphenyl	88.0%	82.4%
d4-1,2-Dichlorobenzene	63.6%	53.6%
d5-Phenol	113%	90.7%
2-Fluorophenol	94.9%	77.6%
2,4,6-Tribromophenol	110%	96.8%
d4-2-Chlorophenol	104%	87.7%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

ZP17MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING COMPANY

ARI Job No: ZP17
Project: NPDES

Lab File ID: 12311416
Date Extracted: 12/18/14

Instrument ID: NT6
Date Analyzed: 12/31/14

Matrix: LIQUID
Time Analyzed: 2108

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	ZP17LCSW1	ZP17LCSW1	12311417	12/31/14
02	ZP17LCSDW1	ZP17LCSDW1	12311418	12/31/14
03	BD-MH-11.31-2014	ZP17A	12311419	12/31/14
04	BD-MH-5.16-20141	ZP17B	12311420	12/31/14
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
Page 1 of 2

Sample ID: MB-121814
METHOD BLANK

Lab Sample ID: MB-121814
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 12/18/14
Date Analyzed: 12/31/14 21:08
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-121814**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-121814 QC Report No: ZP17-The Boeing Company
LIMS ID: 14-27407 Project: NPDES
Matrix: Water NA
Date Analyzed: 12/31/14 21:08

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	89.2%	d4-1,2-Dichlorobenzene	50.4%
d5-Phenol	104%	2-Fluorophenol	89.1%
2,4,6-Tribromophenol	94.4%	d4-2-Chlorophenol	98.9%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

Instrument ID: NT6 Project: NPDES

DFTPP Injection Date: 12/11/14 DFTPP Injection Time: 1053

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	40.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	29.9
365	Greater than 1.0% of mass 198	3.58
441	0.0 - 24.0% of mass 442	13.4 (15.5)2
442	50.0 - 200.0% of mass 198	86.4
443	15.0 - 24.0% of mass 442	16.9 (19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	ICV1211	SCL0017-CAL4	12111401	12/11/14	1053
02	IC021211	SCL0017-CAL8	12111402	12/11/14	1128
03	IC11211	SCL0017-CAL1	12111403	12/11/14	1202
04	IC51211	SCL0017-CAL2	12111404	12/11/14	1236
05	IC101211	SCL0017-CAL3	12111405	12/11/14	1310
06	IC401211	SCL0017-CAL5	12111406	12/11/14	1344
07	IC601211	SCL0017-CAL6	12111407	12/11/14	1418
08	IC801211	SCL0017-CAL7	12111408	12/11/14	1452
09					
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

Instrument ID: NT6 Project: NPDES

DFTPP Injection Date: 12/31/14 DFTPP Injection Time: 1241

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.7
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	43.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	30.5
365	Greater than 1.0% of mass 198	3.58
441	0.0 - 24.0% of mass 442	12.7 (15.2)2
442	50.0 - 200.0% of mass 198	83.4
443	15.0 - 24.0% of mass 442	16.3 (19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	ICV1231	ICV1231	12311401	12/31/14	1241
02	ZP17MBW1	ZP17MBW1	12311416	12/31/14	2108
03	ZP17LCSW1	ZP17LCSW1	12311417	12/31/14	2142
04	ZP17LCSDW1	ZP17LCSDW1	12311418	12/31/14	2215
05	BD-MH-11.31-2014	ZP17A	12311419	12/31/14	2249
06	BD-MH-5.16-20141	ZP17B	12311420	12/31/14	2323
07					
08					
09					
10					
11					
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14					
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17					
18					
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20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.607	1.512	1.541	1.614	1.582	1.636	1.608		1.586	2.8
Bis(2-Chloroethyl)ether	1.102	1.171	1.237	1.272	1.258	1.305	1.285		1.233	5.8
2-Chlorophenol	1.327	1.194	1.213	1.301	1.285	1.320	1.302		1.277	4.1
1,3-Dichlorobenzene	1.677	1.388	1.490	1.518	1.511	1.546	1.509		1.520	5.6
1,4-Dichlorobenzene	1.651	1.421	1.473	1.503	1.508	1.547	1.505		1.515	4.7
1,2-Dichlorobenzene	1.502	1.338	1.392	1.441	1.455	1.489	1.462		1.440	4.0
Benzyl alcohol	0.695	0.699	0.754	0.792	0.799	0.680	0.818		0.748	7.6
2,2'-oxybis(1-Chloropropane)	1.513	1.304	1.364	1.408	1.372	1.396	1.370		1.390	4.6
2-Methylphenol	1.102	1.067	1.102	1.143	1.110	1.151	1.128		1.115	2.6
Hexachloroethane	0.505	0.493	0.543	0.552	0.561	0.576	0.568		0.542	5.9
N-Nitroso-di-n-propylamine	1.024	0.927	0.996	1.023	1.022	1.042	1.022		1.008	3.8
4-Methylphenol	1.112	1.080	1.145	1.199	1.171	1.195	1.199		1.157	4.1
Nitrobenzene	0.403	0.381	0.390	0.396	0.401	0.409	0.390		0.396	2.4
Isophorone	0.664	0.636	0.662	0.677	0.672	0.681	0.648		0.663	2.4
2-Nitrophenol	0.134	0.152	0.168	0.183	0.186	0.193	0.187		0.172	12.6
2,4-Dimethylphenol	0.344	0.328	0.330	0.348	0.344	0.352	0.339		0.341	2.7
Bis(2-Chloroethoxy)methane	0.418	0.374	0.389	0.399	0.395	0.403	0.386		0.395	3.6
2,4-Dichlorophenol	0.268	0.262	0.278	0.301	0.300	0.310	0.305		0.289	6.8
1,2,4-Trichlorobenzene	0.378	0.340	0.345	0.366	0.363	0.378	0.365		0.362	4.0
Naphthalene	1.014	0.925	0.949	0.984	0.964	0.974	0.911		0.960	3.7
Benzoic acid		0.060	0.093	0.155	0.163	0.190	0.186		0.141	0.995
4-Chloroaniline	0.325	0.332	0.330	0.308	0.346	0.252	0.327		0.317	9.7
Hexachlorobutadiene	0.243	0.227	0.232	0.240	0.242	0.253	0.244		0.240	3.6
4-Chloro-3-methylphenol	0.276	0.263	0.281	0.292	0.293	0.301	0.291		0.285	4.4
2-Methylnaphthalene	0.579	0.538	0.551	0.576	0.588	0.488	0.562		0.554	6.1
Hexachlorocyclopentadiene		0.143	0.228	0.288	0.322	0.342	0.360		0.280	0.998
2,4,6-Trichlorophenol	0.334	0.328	0.345	0.392	0.381	0.398	0.396		0.368	8.4
2,4,5-Trichlorophenol	0.344	0.326	0.352	0.415	0.398	0.422	0.414		0.382	10.4
2-Chloronaphthalene	1.196	1.019	1.054	1.117	1.105	1.118	1.068		1.097	5.2
2-Nitroaniline	0.200	0.253	0.272	0.287	0.286	0.240	0.280		0.260	12.1
Acenaphthylene	1.588	1.500	1.550	1.636	1.589	1.608	1.520		1.570	3.1
Dimethylphthalate	1.253	1.140	1.159	1.217	1.200	1.225	1.171		1.195	3.3
2,6-Dinitrotoluene	0.203	0.239	0.258	0.278	0.280	0.293	0.283		0.262	12.1
Acenaphthene	1.181	0.968	1.001	1.064	1.041	1.063	1.021		1.048	6.5
3-Nitroaniline	0.171	0.198	0.217	0.186	0.206	0.176	0.216		0.196	9.6
2,4-Dinitrophenol		0.021	0.054	0.098	0.130	0.156	0.164		0.104	0.992
Dibenzofuran	1.507	1.335	1.363	1.481	1.452	1.214	1.401		1.393	7.2

<- Outside QC limits: %RSD <20% or R^2 > 0.990

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2		RRF	%RSD /R^2	
4-Nitrophenol	0.072	0.091	0.111	0.124	0.125	0.129	0.130			0.112	19.9	
2,4-Dinitrotoluene	0.245	0.305	0.348	0.374	0.375	0.396	0.381			0.346	15.4	
Fluorene	1.295	1.124	1.192	1.254	1.252	1.279	1.203			1.228	4.8	
4-Chlorophenyl-phenylether	0.765	0.625	0.658	0.697	0.697	0.736	0.717			0.699	6.7	
Diethylphthalate	1.231	1.080	1.118	1.138	1.171	1.182	1.095			1.145	4.6	
4-Nitroaniline	0.144	0.174	0.165	0.157	0.176	0.152	0.196			0.166	10.7	
4,6-Dinitro-2-methylphenol		0.047	0.080	0.102	0.118	0.132	0.140			0.103	0.998	
N-Nitrosodiphenylamine (1)	0.534	0.477	0.497	0.500	0.488	0.502	0.488			0.498	3.6	
4-Bromophenyl-phenylether	0.247	0.220	0.228	0.242	0.247	0.254	0.262			0.243	6.0	
Hexachlorobenzene	0.265	0.232	0.245	0.252	0.261	0.270	0.274			0.257	5.8	
Pentachlorophenol		0.062	0.082	0.130	0.133	0.148	0.156			0.118	0.998	
Phenanthrene	1.156	0.958	0.978	1.008	0.990	0.977	0.965			1.004	6.8	
Anthracene	0.965	0.931	0.959	1.002	0.982	0.972	0.931			0.963	2.7	
Carbazole	0.896	0.743	0.699	0.639	0.575	0.640	0.684			0.696	14.7	
Di-n-butylphthalate	1.018	1.037	1.061	1.121	1.077	1.049	0.997			1.051	3.9	
Fluoranthene	1.114	1.006	1.051	1.133	1.103	1.096	1.048			1.079	4.2	
Pyrene	1.268	1.124	1.182	1.143	1.101	1.041	0.982			1.120	8.3	
Butylbenzylphthalate	0.351	0.401	0.450	0.469	0.458	0.447	0.426			0.429	9.5	
Benzo(a)anthracene	1.224	1.032	1.050	1.089	1.067	1.043	1.003			1.072	6.7	
3,3'-Dichlorobenzidine	0.348	0.338	0.311	0.323	0.296	0.264	0.329			0.316	9.0	
Chrysene	1.155	0.986	1.029	1.038	1.024	0.992	0.944			1.024	6.5	
bis(2-Ethylhexyl)phthalate	0.470	0.507	0.546	0.559	0.567	0.562	0.548			0.537	6.6	
Di-n-octylphthalate	1.105	0.948	0.966	0.970	0.946	0.926	0.873			0.962	7.4	
Benzo(b)fluoranthene	1.008	0.915	0.985	1.025	1.029	1.064	1.042			1.010	4.8	
Benzo(k)fluoranthene	1.204	1.040	1.059	1.074	1.034	0.959	0.872			1.034	9.9	
Benzo(a)pyrene	0.883	0.827	0.870	0.916	0.894	0.891	0.854			0.876	3.3	
Indeno(1,2,3-cd)pyrene	1.414	1.252	1.324	1.360	1.312	1.305	1.251			1.317	4.4	
Dibenzo(a,h)anthracene	1.160	1.037	1.100	1.118	1.082	1.030	0.988			1.074	5.5	
Benzo(g,h,i)perylene	1.174	1.069	1.123	1.172	1.124	1.112	1.078			1.122	3.6	
N-Nitrosodimethylamine	0.762	0.727	0.759	0.786	0.764	0.757	0.750			0.758	2.3	
Aniline	1.736	1.614	1.672	1.610	1.683	1.360	1.660			1.619	7.5	
Benzidine		0.166	0.102	0.065	0.081	0.089				0.101	38.8	<-
Perylene	1.133	0.963	0.964	1.021	1.003	0.805	0.908			0.971	10.4	
Pyridine	1.139	1.169	1.285	1.451	1.403	1.401	1.393			1.320	9.4	
1-methylnaphthalene	0.546	0.508	0.510	0.543	0.553	0.455	0.526			0.520	6.5	
Azobenzene (1,2-DP-Hydrazine	0.732	0.686	0.702	0.730	0.702	0.684	0.662			0.700	3.6	
Biphenyl	1.291	1.133	1.125	1.239	1.220	1.016	1.136			1.166	7.8	

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Diphenyl Oxide	0.768	0.661	0.639	0.721	0.702	0.731	0.700		0.703	6.1
Tributyl Phosphate	0.571	0.649	0.656	0.734	0.707	0.680	0.675		0.667	7.8
Dibutyl Phenyl Phosphate	0.358	0.427	0.442	0.521	0.514	0.519	0.508		0.470	13.4
Butyl Diphenyl Phosphate	0.105	0.127	0.135	0.150	0.143	0.137	0.133		0.133	10.8
Triphenyl Phosphate	0.153	0.167	0.176	0.204	0.205	0.207	0.203		0.188	11.7
2,3,4,6-Tetrachlorophenol	0.219	0.231	0.247	0.298	0.300	0.323	0.318		0.276	15.6
Acetophenone	1.397	1.388	1.496	1.518	1.500	1.528	1.507		1.476	4.0
Butylatedhydroxytoluene	1.131	1.037	1.001	1.116	1.097	1.086	0.992		1.066	5.2
1,4-Dioxane	0.605	0.554	0.565	0.575	0.591	0.581	0.585	0.714	0.596	8.4
alpha-Terpineol	0.217	0.212	0.213	0.231	0.228	0.186	0.218		0.215	6.8
1,2,4,5-Tetrachlorobenzene	0.579	0.516	0.522	0.552	0.536	0.559	0.543		0.544	4.0
Pentachlorobenzene	0.490	0.420	0.434	0.465	0.466	0.491	0.491		0.465	6.2
2-Benzyl-4-Chlorophenol	0.136	0.143	0.146	0.172	0.172	0.177	0.178		0.160	11.3
Total Benzofluoranthenes	1.028	0.919	0.969	0.988	0.973	0.951	0.897		0.961	4.5
2-Fluorophenol	1.302	1.254	1.174	1.269	1.249	1.248	1.235		1.247	3.1
Phenol-d5	1.395	1.385	1.375	1.458	1.457	1.446	1.443		1.423	2.5
2-Chlorophenol-d4	1.284	1.176	1.187	1.251	1.267	1.281	1.270		1.245	3.6
1,2-Dichlorobenzene-d4	1.050	0.909	0.898	0.955	0.966	0.966	0.964		0.958	5.2
Nitrobenzene-d5	0.392	0.381	0.374	0.392	0.400	0.394	0.387		0.388	2.3
2-Fluorobiphenyl	1.531	1.264	1.192	1.281	1.275	1.260	1.224		1.290	8.6
2,4,6-Tribromophenol	0.152	0.162	0.163	0.202	0.211	0.226	0.228		0.192	16.9
Terphenyl-d14	0.763	0.646	0.655	0.670	0.672	0.651	0.638		0.671	6.3
d8-1,4-Dioxane	0.534	0.489	0.502	0.516	0.526	0.530	0.523		0.517	3.2

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Cont. Calib. Date: 12/31/14

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1241

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.586	1.684	0.800	AVRG	6.2	
Bis(2-Chloroethyl)ether	1.233	1.211	0.700	AVRG	-1.8	
2-Chlorophenol	1.277	1.305	0.800	AVRG	2.2	
1,3-Dichlorobenzene	1.520	1.527	0.010	AVRG	0.5	
1,4-Dichlorobenzene	1.515	1.503	0.010	AVRG	-0.8	
1,2-Dichlorobenzene	1.440	1.421	0.010	AVRG	-1.3	
Benzyl alcohol	0.748	0.610	0.010	AVRG	-18.4	
2,2'-oxybis(1-Chloropropane)	1.390	1.332	0.010	AVRG	-4.2	
2-Methylphenol	1.115	1.072	0.700	AVRG	-3.8	
Hexachloroethane	0.542	0.552	0.300	AVRG	1.8	
N-Nitroso-di-n-propylamine	1.008	0.973	0.500	AVRG	-3.5	
4-Methylphenol	1.157	1.155	0.600	AVRG	-0.2	
Nitrobenzene	0.396	0.387	0.200	AVRG	-2.3	
Isophorone	0.663	0.650	0.400	AVRG	-2.0	
2-Nitrophenol	0.172	0.194	0.100	AVRG	12.8	
2,4-Dimethylphenol	0.341	0.351	0.200	AVRG	2.9	
Bis(2-Chloroethoxy)methane	0.395	0.395	0.300	AVRG	0.0	
2,4-Dichlorophenol	0.289	0.310	0.200	AVRG	7.3	
1,2,4-Trichlorobenzene	0.362	0.368	0.010	AVRG	1.6	
Naphthalene	0.960	0.968	0.700	AVRG	0.8	
Benzoic acid	50.00	62.39	0.010	2ORDR	24.8	<-
4-Chloroaniline	0.317	0.372	0.010	AVRG	17.4	
Hexachlorobutadiene	0.240	0.240	0.010	AVRG	0.0	
4-Chloro-3-methylphenol	0.285	0.296	0.200	AVRG	3.8	
2-Methylnaphthalene	0.554	0.586	0.400	AVRG	5.8	
Hexachlorocyclopentadiene	25.00	28.89	0.050	2ORDR	15.6	
2,4,6-Trichlorophenol	0.368	0.368	0.200	AVRG	0.0	
2,4,5-Trichlorophenol	0.382	0.383	0.200	AVRG	0.3	
2-Chloronaphthalene	1.097	1.100	0.800	AVRG	0.3	
2-Nitroaniline	0.260	0.308	0.010	AVRG	18.5	
Acenaphthylene	1.570	1.542	0.900	AVRG	-1.8	
Dimethylphthalate	1.195	1.163	0.010	AVRG	-2.7	
2,6-Dinitrotoluene	0.262	0.268	0.200	AVRG	2.3	
Acenaphthene	1.048	1.057	0.900	AVRG	0.8	
3-Nitroaniline	0.196	0.228	0.010	AVRG	16.3	
2,4-Dinitrophenol	50.00	57.87	0.010	2ORDR	15.7	
Dibenzofuran	1.393	1.370	0.800	AVRG	-1.6	

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Cont. Calib. Date: 12/31/14

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1241

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.112	0.111	0.010	AVRG	-0.9	
2,4-Dinitrotoluene	0.346	0.362	0.200	AVRG	4.6	
Fluorene	1.228	1.225	0.900	AVRG	-0.2	
4-Chlorophenyl-phenylether	0.699	0.664	0.400	AVRG	-5.0	
Diethylphthalate	1.145	1.083	0.010	AVRG	-5.4	
4-Nitroaniline	0.166	0.200	0.010	AVRG	20.5	<-
4,6-Dinitro-2-methylphenol	50.00	58.44	0.010	2ORDR	16.9	
N-Nitrosodiphenylamine(1)	0.498	0.541	0.010	AVRG	8.6	
4-Bromophenyl-phenylether	0.243	0.251	0.100	AVRG	3.3	
Hexachlorobenzene	0.257	0.259	0.100	AVRG	0.8	
Pentachlorophenol	25.00	18.86	0.050	2ORDR	-24.6	<-
Phenanthrene	1.004	0.992	0.700	AVRG	-1.2	
Anthracene	0.963	0.995	0.700	AVRG	3.3	
Carbazole	0.696	0.632	0.010	AVRG	-9.2	
Di-n-butylphthalate	1.051	0.916	0.010	AVRG	-12.8	
Fluoranthene	1.079	1.006	0.600	AVRG	-6.8	
Pyrene	1.120	1.273	0.600	AVRG	13.7	
Butylbenzylphthalate	0.429	0.417	0.010	AVRG	-2.8	
Benzo(a)anthracene	1.072	1.102	0.800	AVRG	2.8	
3,3'-Dichlorobenzidine	0.316	0.372	0.010	AVRG	17.7	
Chrysene	1.024	1.040	0.700	AVRG	1.6	
bis(2-Ethylhexyl)phthalate	0.537	0.554	0.010	AVRG	3.2	
Di-n-octylphthalate	0.962	0.970	0.010	AVRG	0.8	
Benzo(b)fluoranthene	1.010	1.056	0.700	AVRG	4.6	
Benzo(k)fluoranthene	1.034	1.052	0.700	AVRG	1.7	
Benzo(a)pyrene	0.876	0.930	0.700	AVRG	6.2	
Indeno(1,2,3-cd)pyrene	1.317	1.498	0.500	AVRG	13.7	
Dibenzo(a,h)anthracene	1.074	1.210	0.400	AVRG	12.7	
Benzo(g,h,i)perylene	1.122	1.329	0.500	AVRG	18.4	
N-Nitrosodimethylamine	0.758	0.843	0.010	AVRG	11.2	
Aniline	1.619	1.723	0.010	AVRG	6.4	
Benzidine	0.101		0.010	AVRG		
Pyridine	1.320	1.440	0.010	AVRG	9.1	
1-methylnaphthalene	0.520	0.538	0.010	AVRG	3.5	
Azobenzene (1,2-DP-Hydrazine	0.700	0.762	0.010	AVRG	8.8	
Total Benzofluoranthenes	0.961	0.995	0.010	AVRG	3.5	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Instrument ID: NT6 Cont. Calib. Date: 12/31/14

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1241

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
2-Fluorophenol	1.247	1.244	0.010	AVRG	-0.2
Phenol-d5	1.423	1.485	0.010	AVRG	4.4
2-Chlorophenol-d4	1.245	1.289	0.010	AVRG	3.5
1,2-Dichlorobenzene-d4	0.958	0.964	0.010	AVRG	0.6
Nitrobenzene-d5	0.388	0.384	0.010	AVRG	-1.0
2-Fluorobiphenyl	1.290	1.238	0.010	AVRG	-4.0
2,4,6-Tribromophenol	0.192	0.178	0.010	AVRG	-7.3
Terphenyl-d14	0.671	0.736	0.010	AVRG	9.7

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Ical Midpoint ID: 12111401 Ical Date: 12/11/14

Instrument ID: NT6 Cont. Cal Date: 12/31/14

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	332777	7.51	1213545	9.56	750982	12.39
	UPPER LIMIT	665554		2427090		1501964	
	LOWER LIMIT	166388		606772		375491	
	CCAL	597617	7.40	2076327	9.44	1258649	12.26
	UPPER LIMIT		7.90		9.94		12.76
	LOWER LIMIT		6.90		8.94		11.76
01	ZP17MBW1	597820	7.40	2094515	9.44	1280106	12.26
02	ZP17LCSW1	583174	7.40	2049886	9.44	1202307	12.27
03	ZP17LCSDW1	592755	7.40	2072292	9.44	1227292	12.26
04	BD-MH-11.31-	601993	7.39	2100021	9.44	1234595	12.26
05	BD-MH-5.16-2	564937	7.40	1886284	9.44	1088447	12.26
06							
07							
08							
09							
10							
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14							
15							
16							
17							
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21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Ical Midpoint ID: 12111401 Ical Date: 12/11/14

Instrument ID: NT6 Cont. Cal Date: 12/31/14

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1314646	14.74	1335763	19.01	1539932	21.15
	UPPER LIMIT	2629292		2671526		3079864	
	LOWER LIMIT	657323		667882		769966	
	CCAL	1992345	14.60	1588171	18.86	1829999	20.99
	UPPER LIMIT		15.10		19.36		21.49
	LOWER LIMIT		14.10		18.36		20.49
01	ZP17MBW1	2092115	14.60	1671070	18.86	1977092	20.99
02	ZP17LCSW1	1697089	14.61	1503875	18.86	2020832	20.99
03	ZP17LCSDW1	1901791	14.60	1605217	18.86	2057397	21.00
04	BD-MH-11.31-	1922991	14.60	1455995	18.86	1763918	20.99
05	BD-MH-5.16-2	1680128	14.60	1478892	18.86	1749151	20.99
06							
07							
08							
09							
10							
11							
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14							
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16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: BOEING

ARI Job No: ZP17 Project: NPDES

Ical Midpoint ID: 12111401 Ical Date: 12/11/14

Instrument ID: NT6 Cont. Cal Date: 12/31/14

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1626181	20.20				
	UPPER LIMIT	3252362					
	LOWER LIMIT	813090					
	CCAL	1576018	20.06				
	UPPER LIMIT		20.56				
	LOWER LIMIT		19.56				
01	ZP17MBW1	1609479	20.06				
02	ZP17LCSW1	1490655	20.06				
03	ZP17LCSDW1	1524167	20.06				
04	BD-MH-11.31-	1295848	20.06				
05	BD-MH-5.16-2	1288721	20.06				
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: ZP17, ZP18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: BD-MH-11.31-20141215-W**

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 16:01
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.720	10.0	< 0.720	U
2,3,7,8-TCDD		0.65-0.89	0.600	10.0	< 0.600	U
1,2,3,7,8-PeCDF	1.14	1.32-1.78		10.0	2.34	BEMPC
2,3,4,7,8-PeCDF	1.37	1.32-1.78		10.0	1.76	J
1,2,3,7,8-PeCDD	2.31	1.32-1.78		10.0	1.38	JEMPC
1,2,3,4,7,8-HxCDF	1.60	1.05-1.43		10.0	2.12	JEMPC
1,2,3,6,7,8-HxCDF	0.97	1.05-1.43		10.0	2.36	JEMPC
2,3,4,6,7,8-HxCDF		1.05-1.43	0.960	10.0	< 0.960	U
1,2,3,7,8,9-HxCDF	0.91	1.05-1.43		10.0	2.70	BJEMPC
1,2,3,4,7,8-HxCDD	1.71	1.05-1.43		10.0	1.38	JEMPC
1,2,3,6,7,8-HxCDD	1.03	1.05-1.43		10.0	1.90	JEMPC
1,2,3,7,8,9-HxCDD	1.53	1.05-1.43		10.0	1.68	JEMPC
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20		10.0	6.52	BJ
1,2,3,4,7,8,9-HpCDF	2.24	0.88-1.20		10.0	2.56	BJEMPC
1,2,3,4,6,7,8-HpCDD	0.82	0.88-1.20		10.0	11.6	BEMPC
OCDF	0.82	0.76-1.02		20.0	9.46	BJ
OCDD	0.79	0.76-1.02		20.0	102	B

Homologue Group	EDL	RL	Result	
Total TCDF	0.720	10.0	< 0.720	U
Total TCDD	0.600	10.0	< 0.600	U
Total PeCDF		20.0	7.64	EMPC
Total PeCDD		10.0	1.38	EMPC
Total HxCDF		20.0	13.7	EMPC
Total HxCDD		20.0	4.97	EMPC
Total HpCDF		20.0	14.3	EMPC
Total HpCDD		20.0	21.8	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 3.43

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 3.82

Reported in pg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: BD-MH-11.31-20141215-W**
Page 1 of 1

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 16:01
Instrument/Analyst: AS1/PK

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	75.8	24-169	
13C-2,3,7,8-TCDD	0.80	0.65-0.89	81.6	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	83.0	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	69.6	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	80.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	87.2	26-152	
13C-1,2,3,6,7,8-HxCDF	0.50	0.43-0.59	107	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	89.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	70.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	104	32-141	
13C-1,2,3,6,7,8-HxCDD	1.30	1.05-1.43	109	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	76.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	65.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	89.1	23-140	
13C-OCDD	0.88	0.76-1.02	66.1	17-157	
37Cl4-2,3,7,8-TCDD			96.8	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: BD-MH-5.16-20141215-W**
Page 1 of 1

Lab Sample ID: ZP17B
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized: MW
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 16:55
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.900	10.0	< 0.900	U
2,3,7,8-TCDD		0.65-0.89	0.700	10.0	< 0.700	U
1,2,3,7,8-PeCDF	1.25	1.32-1.78		10.0	1.58	JXEMPC
2,3,4,7,8-PeCDF		1.32-1.78	1.04	10.0	< 1.04	U
1,2,3,7,8-PeCDD		1.32-1.78	0.820	10.0	< 0.820	U
1,2,3,4,7,8-HxCDF	0.76	1.05-1.43		10.0	2.14	JEMPC
1,2,3,6,7,8-HxCDF	0.77	1.05-1.43		10.0	2.26	JEMPC
2,3,4,6,7,8-HxCDF		1.05-1.43	1.26	10.0	< 1.26	U
1,2,3,7,8,9-HxCDF	1.02	1.05-1.43		10.0	2.04	BJEMPC
1,2,3,4,7,8-HxCDD	0.73	1.05-1.43		10.0	0.780	JEMPC
1,2,3,6,7,8-HxCDD	0.71	1.05-1.43		10.0	1.14	JEMPC
1,2,3,7,8,9-HxCDD	1.31	1.05-1.43		10.0	1.30	J
1,2,3,4,6,7,8-HpCDF	1.10	0.88-1.20		10.0	15.4	
1,2,3,4,7,8,9-HpCDF		0.88-1.20	1.30	10.0	< 1.30	U
1,2,3,4,6,7,8-HpCDD	0.95	0.88-1.20		10.0	20.3	B
OCDF	0.76	0.76-1.02		20.0	20.9	B
OCDD	0.94	0.76-1.02		20.0	162	B

Homologue Group	EDL	RL	Result	
Total TCDF	0.900	10.0	14.1	EMPC
Total TCDD	0.700	10.0	< 0.700	U
Total PeCDF		20.0	22.1	EMPC
Total PeCDD	0.820	10.0	< 0.820	U
Total HxCDF		20.0	25.3	EMPC
Total HxCDD		20.0	4.46	EMPC
Total HpCDF		20.0	31.6	EMPC
Total HpCDD		20.0	39.9	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 1.43

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.46

Reported in pg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: BD-MH-5.16-20141215-W**
Page 1 of 1

Lab Sample ID: ZP17B
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized: MW
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 16:55
Instrument/Analyst: AS1/PK

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	75.8	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	78.0	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	77.4	24-185	
13C-2,3,4,7,8-PeCDF	1.59	1.32-1.78	66.8	21-178	
13C-1,2,3,7,8-PeCDD	1.60	1.32-1.78	76.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	84.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.50	0.43-0.59	101	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	84.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	66.1	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	97.4	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	101	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	72.2	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	60.5	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	80.6	23-140	
13C-OCDD	0.89	0.76-1.02	59.9	17-157	
37Cl4-2,3,7,8-TCDD			93.9	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-010515**

Lab Sample ID: OPR-010515
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized: MW
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 15:07
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.73	0.65-0.89	10.0	223
2,3,7,8-TCDD	0.82	0.65-0.89	10.0	224
1,2,3,7,8-PeCDF	1.46	1.32-1.78	10.0	1,060
2,3,4,7,8-PeCDF	1.44	1.32-1.78	10.0	1,050
1,2,3,7,8-PeCDD	1.55	1.32-1.78	10.0	1,000
1,2,3,4,7,8-HxCDF	1.14	1.05-1.43	10.0	1,070
1,2,3,6,7,8-HxCDF	1.13	1.05-1.43	10.0	1,040
2,3,4,6,7,8-HxCDF	1.15	1.05-1.43	10.0	1,050
1,2,3,7,8,9-HxCDF	1.13	1.05-1.43	10.0	1,090
1,2,3,4,7,8-HxCDD	1.23	1.05-1.43	10.0	1,020
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	10.0	1,060
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43	10.0	986
1,2,3,4,6,7,8-HpCDF	0.95	0.88-1.20	10.0	1,440
1,2,3,4,7,8,9-HpCDF	0.94	0.88-1.20	10.0	1,080
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	10.0	1,040
OCDF	0.83	0.76-1.02	20.0	1,610
OCDD	0.91	0.76-1.02	20.0	2,070

Homologue Group	EDL	RL	Result	
Total TCDF		10.0	302	EMPC
Total TCDD		10.0	231	EMPC
Total PeCDF		20.0	2,300	EMPC
Total PeCDD		10.0	1,020	EMPC
Total HxCDF		20.0	4,310	
Total HxCDD		20.0	3,070	EMPC
Total HpCDF		20.0	2,540	EMPC
Total HpCDD		20.0	1,060	EMPC

Reported in pg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-010515**

Lab Sample ID: OPR-010515
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 15:07
Instrument/Analyst: AS1/PK

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	71.3	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	76.8	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	80.4	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	69.1	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	78.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	79.2	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	98.2	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	82.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.50	0.43-0.59	66.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.31	1.05-1.43	97.1	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	99.7	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	74.4	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	66.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	87.6	23-140	
13C-OCDD	0.89	0.76-1.02	69.4	17-157	
37Cl4-2,3,7,8-TCDD			93.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-010515**

Lab Sample ID: OPR-010515
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 15:07
Instrument/Analyst: AS1/PK

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	223	200	112	75-158
2,3,7,8-TCDD	224	200	112	67-158
1,2,3,7,8-PeCDF	1060	1000	106	80-134
2,3,4,7,8-PeCDF	1050	1000	105	68-160
1,2,3,7,8-PeCDD	1000	1000	100	70-142
1,2,3,4,7,8-HxCDF	1070	1000	107	72-134
1,2,3,6,7,8-HxCDF	1040	1000	104	84-130
2,3,4,6,7,8-HxCDF	1050	1000	105	70-156
1,2,3,7,8,9-HxCDF	1090	1000	109	78-130
1,2,3,4,7,8-HxCDD	1020	1000	102	70-164
1,2,3,6,7,8-HxCDD	1060	1000	106	76-134
1,2,3,7,8,9-HxCDD	986	1000	98.6	64-162
1,2,3,4,6,7,8-HpCDF	1440	1000	144	82-132
1,2,3,4,7,8,9-HpCDF	1080	1000	108	78-138
1,2,3,4,6,7,8-HpCDD	1040	1000	104	70-140
OCDF	1610	2000	80.5	63-170
OCDD	2070	2000	104	78-144

Reported in pg/L

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
ZP17MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: BOEING

Lab Code: ZP17 Project: NPDES

Matrix:(Soil/Water/Ash/Tissue/Oil) WATER Lab Sample ID: ZP17MBS

Sample wt/vol: 1000 (g/ml) ml Lab File ID: 15010805

Water Sample Prep: SPE (sep/spe) Date Received: 15-DEC-14

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 05-JAN-14

Instrument ID: AUTOSPEC1 Date Analyzed: 08-JAN-15

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
ZP17OPR	ZP17OPR	15010806	01/08/15
BD-MH-11.31-20141215-W	ZP17A	15010807	01/08/15
BD-MH-5.16-20141215-W	ZP17B	15010808	01/08/15

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-010515**
Page 1 of 1

Lab Sample ID: MB-010515
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 14:14
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.540	10.0	< 0.540	U
2,3,7,8-TCDD	0.18	0.65-0.89		10.0	1.70	JEMPC
1,2,3,7,8-PeCDF		1.32-1.78	0.620	10.0	< 0.620	U
2,3,4,7,8-PeCDF		1.32-1.78	0.700	10.0	< 0.700	U
1,2,3,7,8-PeCDD		1.32-1.78	0.600	10.0	< 0.600	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.560	10.0	< 0.560	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.480	10.0	< 0.480	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.580	10.0	< 0.580	U
1,2,3,7,8,9-HxCDF	0.93	1.05-1.43		10.0	1.42	JEMPC
1,2,3,4,7,8-HxCDD		1.05-1.43	0.660	10.0	< 0.660	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.700	10.0	< 0.700	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.700	10.0	< 0.700	U
1,2,3,4,6,7,8-HpCDF	0.27	0.88-1.20		10.0	1.06	JEMPC
1,2,3,4,7,8,9-HpCDF	0.86	0.88-1.20		10.0	0.800	JEMPC
1,2,3,4,6,7,8-HpCDD	0.97	0.88-1.20		10.0	2.30	J
OCDF	0.97	0.76-1.02		20.0	4.34	J
OCDD	0.92	0.76-1.02		20.0	49.0	

Homologue Group	EDL	RL	Result	
Total TCDF	0.540	10.0	< 0.540	U
Total TCDD		10.0	1.70	EMPC
Total PeCDF	0.700	20.0	0.696	EMPC
Total PeCDD	0.600	10.0	< 0.600	U
Total HxCDF		20.0	1.41	EMPC
Total HxCDD	0.700	20.0	< 0.700	U
Total HpCDF		20.0	3.14	EMPC
Total HpCDD		20.0	7.04	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 1.90

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.52

Reported in pg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-010515**

Lab Sample ID: MB-010515
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized: MW
Reported: 01/09/15

QC Report No: ZP17-The Boeing Company
Project: NPDES
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/05/15
Date Analyzed: 01/08/15 14:14
Instrument/Analyst: AS1/PK

Sample Amount: 1000 mL
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	84.4	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	85.8	25-164	
13C-1,2,3,7,8-PeCDF	1.62	1.32-1.78	108	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	92.2	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	106	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	93.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.54	0.43-0.59	115	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	95.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	71.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	111	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	115	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	83.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	67.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20	92.7	23-140	
13C-OCDD	0.89	0.76-1.02	74.0	17-157	
37Cl4-2,3,7,8-TCDD			104	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: BOEING

Lab Code: ZP17 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 15010802

Instrument ID: AUTOSPEC1 Date Analyzed: 08-JAN-15

Time Analyzed: 11:31

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.99	27.45
TCDF	22.70	27.71
PeCDD	29.24	32.37
PeCDF	27.56	32.75
HxCDD	34.46	37.18
HxCDF	33.67	37.63
HpCDD	40.25	41.53
HpCDF	39.70	42.43

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.
TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: ZP17
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument: AUTOSPEC1

Contract: BOEING
Project: NPDES
Lab File ID: 15010803
Date Analyzed: 01/08/15
Time Analyzed: 12:22

Percent Valley determination for RTX-DIOXIN2 column -

1278-TCDD/2378-TCDD: 19.0

3467-TCDF/2378-TCDF: 17.8

QC Limits:
Percent Valley between TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: BOEING

Lab Code: ZP17 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 21-NOV-14

Init: Calib. Times: 17:27 to 21:53

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	15010802	01/08/15	1131
ISC	ISC	15010803	01/08/15	1222
ZP17MB	ZP17MBW	15010805	01/08/15	1414
ZP17OPR	ZP17OPR	15010206	01/08/15	1507
BD-MH-11.31-20141215-W	ZP17A	15010807	01/08/15	1601
BD-MH-5.16-20141215-W	ZP17B	15010808	01/08/15	1655
CS3	CS3	15010809	01/08/15	1748

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	BOEING
Lab Code:	ZP17	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID.	AUTOSPEC1		
Init.Calib.Date CSL:	21-Nov-14	Init.Calib.Time CSL:	17:27:25
Init.Calib.Date CS1:	21-Nov-14	Init.Calib.Time CS1:	18:20:42
Init.Calib.Date CS2:	21-Nov-14	Init.Calib.Time CS2:	19:13:56
Init.Calib.Date CS3:	21-Nov-14	Init.Calib.Time CS3:	20:07:19
Init.Calib.Date CS4:	21-Nov-14	Init.Calib.Time CS4:	21:00:32
Init.Calib.Date CS5:	21-Nov-14	Init.Calib.Time CS5:	21:53:46

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.03	0.98	0.96	1.00	1.04	1.16	1.03	6.8	20.0
2378-TCDF	0.81	0.79	0.81	0.84	0.88	0.89	0.84	4.8	20.0
12378-PeCDF	0.79	0.81	0.85	0.87	0.89	0.91	0.85	5.6	20.0
12378-PeCDD	1.04	0.94	0.98	0.98	1.03	1.02	1.00	3.9	20.0
23478-PeCDF	0.85	0.85	0.86	0.90	0.91	0.93	0.88	3.7	20.0
123478-HxCDF	0.93	0.98	1.02	1.04	1.08	1.10	1.02	6.2	20.0
123678-HxCDF	0.91	0.95	1.00	1.04	1.05	1.07	1.00	6.0	20.0
123478-HxCDD	1.01	0.91	0.97	1.00	1.03	1.04	0.99	4.9	20.0
123678-HxCDD	0.93	0.88	0.91	0.92	0.93	0.96	0.92	3.1	20.0
123789-HxCDD[2]	0.91	0.88	0.91	0.96	0.96	0.96	0.93	4.0	20.0
234678-HxCDF	0.96	1.05	1.07	1.11	1.13	1.14	1.08	6.1	20.0
123789-HxCDF	0.94	0.91	0.92	0.98	0.99	1.08	0.97	6.6	20.0
1234678-HpCDF	1.10	1.15	1.17	1.22	1.25	1.27	1.19	5.4	20.0
1234678-HpCDD	0.98	0.90	0.93	1.00	1.00	1.04	0.98	5.4	20.0
1234789-HpCDF	1.13	1.14	1.18	1.23	1.25	1.28	1.20	4.9	20.0
OCDD	1.06	0.96	0.95	1.02	1.00	1.01	1.00	4.0	20.0
OCDF[1]	1.09	1.04	1.06	1.10	1.17	1.16	1.10	4.8	20.0
37CL-2378-TCDD	1.00	0.97	0.97	1.06	1.10	1.14	1.04	6.8	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs
(2) The RR is calculated based on the labeled analog of OCDD

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.97	0.95	0.93	0.98	0.99	0.93	0.96	2.4	35.0
13C-12378-PeCDD	0.80	0.77	0.75	0.81	0.83	0.82	0.80	3.8	35.0
13C-123478-HxCDD	0.98	1.02	1.03	1.05	1.00	1.08	1.03	3.5	35.0
13C-123678-HxCDD	1.00	1.07	1.07	1.11	1.05	1.12	1.07	4.0	35.0
13C-1234678-HpCDD	0.88	0.91	0.89	0.93	0.91	0.86	0.90	2.9	35.0
13C-OCDD	0.80	0.81	0.79	0.88	0.87	0.75	0.82	6.0	35.0
13C-2378-TCDF	1.54	1.46	1.45	1.52	1.52	1.53	1.50	2.5	35.0
13C-12378-PeCDF	1.31	1.25	1.23	1.31	1.35	1.35	1.30	3.7	35.0
13C-23478-PeCDF	1.27	1.22	1.20	1.28	1.32	1.30	1.26	3.6	35.0
13C-123478-HxCDF	1.22	1.29	1.29	1.32	1.25	1.36	1.29	3.9	35.0
13C-123678-HxCDF	1.25	1.35	1.35	1.36	1.31	1.43	1.34	4.5	35.0
13C-234678-HxCDF	1.23	1.20	1.20	1.24	1.18	1.27	1.22	2.7	35.0
13C-123789-HxCDF	1.12	1.13	1.13	1.21	1.17	1.08	1.14	3.9	35.0
13C-1234678-HpCDF	1.04	1.07	1.08	1.11	1.07	1.09	1.08	2.4	35.0
13C-1234789-HpCDF	0.82	0.82	0.80	0.88	0.85	0.78	0.83	4.5	35.0

6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	BOEING
Lab Code:	ZP17	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	21-Nov-14	Init.Calib.Time CSL:	17:27:25
Init.Calib.Date CS1:	21-Nov-14	Init.Calib.Time CS1:	18:20:42
Init.Calib.Date CS2:	21-Nov-14	Init.Calib.Time CS2:	19:13:56
Init Calib.Date CS3:	21-Nov-14	Init.Calib.Time CS3:	20:07:19
Init.Calib.Date CS4:	21-Nov-14	Init.Calib.Time CS4:	21:00:32
Init.Calib.Date CS5:	21-Nov-14	Init.Calib.Time CS5:	21:53:46

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.86	0.81	0.77	0.81	0.78	0.78		0.65 - 0.89
2378-TCDF	304/306	0.67	0.68	0.68	0.69	0.69	0.70		0.65 - 0.89
12378-PeCDF	340/342	1.54	1.37	1.43	1.42	1.43	1.44		1.32 - 1.78
12378-PeCDD	356/358	1.51	1.58	1.52	1.55	1.57	1.56		1.32 - 1.78
23478-PeCDF	340/342	1.36	1.49	1.44	1.44	1.44	1.43		1.32 - 1.78
123478-HxCDF	374/376	1.11	1.14	1.15	1.15	1.17	1.18		1.05 - 1.43
123678-HxCDF	374/376	1.06	1.14	1.15	1.16	1.17	1.15		1.05 - 1.43
123478-HxCDD	390/392	1.28	1.21	1.29	1.27	1.25	1.25		1.05 - 1.43
123678-HxCDD	390/392	1.33	1.23	1.20	1.27	1.24	1.24		1.05 - 1.43
123789-HxCDD	390/392	1.21	1.25	1.27	1.26	1.24	1.23		1.05 - 1.43
234678-HxCDF	374/376	1.11	1.17	1.17	1.17	1.16	1.17		1.05 - 1.43
123789-HxCDF	374/376	1.11	1.17	1.18	1.16	1.17	1.17		1.05 - 1.43
1234678-HpCDF	408/410	1.05	0.95	0.93	0.96	0.98	0.97		0.89 - 1.21
1234678-HpCDD	424/426	0.91	1.07	1.01	1.05	1.04	1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.04	0.90	0.97	0.95	0.97	0.97		0.89 - 1.21
OCDD	458/460	0.91	0.87	0.88	0.90	0.89	0.89		0.76 - 1.02
OCDF	442/444	0.83	0.84	0.85	0.83	0.84	0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.79	0.79	0.79	0.79	0.79	0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	1.57	1.57	1.57	1.57	1.57	1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.28	1.28	1.27	1.28	1.28	1.28		1.05 - 1.43
13C-123678-HxCDD	402/404	1.27	1.27	1.26	1.26	1.26	1.27		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.05	1.04	1.07	1.05	1.06	1.04		0.89 - 1.21
13C-OCDD	470/472	0.90	0.91	0.91	0.89	0.90	0.90		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.77	0.77	0.77	0.77	0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.56	1.57	1.58	1.58	1.57	1.58		1.32 - 1.78
13C-23478-PeCDF	352/354	1.56	1.56	1.59	1.58	1.56	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.52	0.51	0.52	0.51	0.51	0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	0.52	0.52	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.52	0.53	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.51	0.52	0.51	0.52	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.44	0.45	0.44	0.45	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.44	0.45	0.44	0.44	0.45	0.45		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.80	0.79	0.79	0.79	0.79	0.80		0.65 - 0.89
13C-123789-HxCDD	402/404	1.25	1.25	1.26	1.27	1.26	1.26		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract	BOEING
Lab Code	ZP17	Case No	NPDES
TO No		SDG No.:	
GC Column	RTX-DIOXIN2	ID (mm):	25
Instrument ID	AUTOSPEC1	Lab File ID	15010802
Date Analysed	08-Jan-15	Time Analysed	11:31.33
Init Calib Date	21-NOV-14	Init Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.01	1 03	-2 0		0.79		0 65 - 0 89
2378-TCDF	304/306	0.82	0 84	-1.7		0.68		0 65 - 0.89
12378-PeCDF	340/342	0 87	0.85	2.4		1 46		1.32 - 1.78
12378-PeCDD	356/358	0 98	1.00	-1.9		1.54		1 32 - 1 78
23478-PeCDF	340/342	0.89	0 88	0.7		1.49		1 32 - 1.78
123478-HxCDF	374/376	1.04	1 02	1.3		1 15		1 05 - 1.43
123678-HxCDF	374/376	1 02	1 00	1 2		1.16		1.05 - 1 43
123478-HxCDD	390/392	0 96	0.99	-3 2		1.25		1 05 - 1.43
123678-HxCDD	390/392	0.93	0.92	0.7		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.82	0 93	-11 5		1.23		1.05 - 1.43
234678-HxCDF	374/376	1 10	1.08	2.4		1 14		1.05 - 1 43
123789-HxCDF	374/376	0 95	0.97	-2 2		1.17		1 05 - 1 43
1234678-HpCDF	408/410	1 21	1.19	1.2		0 97		0.89 - 1.21
1234678-HpCDD	424/426	1.00	0 98	2.1		1 07		0.89 - 1 21
1234789-HpCDF	408/410	1 21	1 20	0 5		0 95		0 89 - 1.21
OCDD	458/460	1 02	1 00	2 2		0.89		0 76 - 1.02
OCDF	442/444	1 10	1.10	-0 4		0.85		0.76 - 1 02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0 90	0.96	-6 1		0.78		0.65 - 0 89
13C-12378-PeCDD	368/370	0.65	0.80	-18.6		1 59		1.32 - 1.78
13C-123478-HxCDD	402/404	1 16	1 03	12 7		1.27		1 05 - 1.43
13C-123678-HxCDD	402/404	1 28	1 07	19 3		1.23		1.05 - 1 43
13C-1234678-HpCDD	436/438	0 83	0 90	-7.7		1.06		0.89 - 1 21
13C-OCDD	470/472	0 62	0.82	-24.3		0 91		0 76 - 1.02
13C-2378-TCDF	316/318	1.45	1.50	-3 6		0.77		0 65 - 0.89
13C-12378-PeCDF	352/354	1.11	1 30	-14.3		1 55		1.32 - 1 78
13C-23478-PeCDF	352/354	1.05	1 26	-16 7		1.58		1.32 - 1 78
13C-123478-HxCDF	384/386	1 48	1 29	14.6		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1 65	1.34	23.0		0 54		0 43 - 0.59
13C-234678-HxCDF	384/386	1.35	1.22	10 5		0.52		0 43 - 0 59
13C-123789-HxCDF	384/386	1.15	1.14	0.9		0.49		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.12	1.08	3.9		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0 72	0 83	-12.2		0.43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	0 96	1.04	-7.7		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.80		0 65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.26		1 05 - 1 43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	BOEING
Lab Code:	ZP17	Case No.:	NPDES
TO No :		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	15010802
Date Analysed	08-Jan-15	Time Analysed	11:31:33
Init.Calib.Date:	21-NOV-14	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1 00	26 85
2378-TCDF	1 00	26 21
12378-PeCDF	1 00	30.36
12378-PeCDD	1.00	31.96
23478-PeCDF	1.00	31 71
123478-HxCDF	1.00	35 39
123678-HxCDF	1 00	35 54
123478-HxCDD	1 00	36 62
123678-HxCDD	1 00	36 75
123789-HxCDD	1 01	37.18
234678-HxCDF	1.00	36 49
123789-HxCDF	1 00	37 63
1234678-HpCDF	1 00	39.70
1234678-HpCDD	1 00	41.53
1234789-HpCDF	1 00	42 43
OCDD	1.00	47 51
OCDF	1.01	47 78

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26 83
13C-12378-PeCDD	1.23	31 95
13C-123478-HxCDD	0 99	36 61
13C-123678-HxCDD	0.99	36.74
13C-1234678-HpCDD	1.12	41 51
13C-OCDD	1 28	47.49
13C-2378-TCDF	1.01	26 20
13C-12378-PeCDF	1.17	30.35
13C-23478-PeCDF	1.22	31.70
13C-123478-HxCDF	0 95	35.38
13C-123678-HxCDF	0 96	35 52
13C-234678-HxCDF	0.98	36 47
13C-123789-HxCDF	1 01	37.61
13C-1234678-HpCDF	1.07	39.68
13C-1234789-HpCDF	1.14	42.41

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1 03	26 85

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.02
13C-123789-HxCDD	0.00	37.17

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract	BOEING
Lab Code:	ZP17	Case No.	NPDES
TO No .		SDG No.	
GC Column.	RTX-DIOXIN2	ID (mm).	25
Instrument ID:	AUTOSPEC1	Lab File ID	15010809
Date Analysed	08-Jan-15	Time Analysed	17 48.56
Init.Calib Date:	21-NOV-14	Init.Calib.Time	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.02	1 03	-1 2		0 79		0 65 - 0.89
2378-TCDF	304/306	0.85	0.84	1.9		0.73		0.65 - 0.89
12378-PeCDF	340/342	0 89	0.85	4.3		1 49		1 32 - 1 78
12378-PeCDD	356/358	0.98	1.00	-1.7		1 58		1 32 - 1.78
23478-PeCDF	340/342	0.90	0.88	1.7		1.49		1.32 - 1.78
123478-HxCDF	374/376	1.05	1 02	2.8		1.15		1.05 - 1 43
123678-HxCDF	374/376	1 03	1 00	2.2		1.16		1.05 - 1.43
123478-HxCDD	390/392	0 97	0.99	-2.8		1.26		1 05 - 1.43
123678-HxCDD	390/392	0.93	0.92	0 6		1 25		1.05 - 1.43
123789-HxCDD	390/392	0.87	0.93	-6 8		1.27		1.05 - 1 43
234678-HxCDF	374/376	1.09	1 08	0.9		1.17		1.05 - 1 43
123789-HxCDF	374/376	0 96	0 97	-1.4		1.15		1 05 - 1.43
1234678-HpCDF	408/410	1 23	1.19	3 1		0 96		0.89 - 1 21
1234678-HpCDD	424/426	0 98	0.98	0.9		1.05		0.89 - 1 21
1234789-HpCDF	408/410	1.23	1.20	2.0		0.96		0.89 - 1 21
OCDD	458/460	1.04	1.00	4.3		0.89		0 76 - 1.02
OCDF	442/444	1 10	1 10	-0 3		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.94	0.96	-2.4		0.79		0.65 - 0 89
13C-12378-PeCDD	368/370	0 69	0 80	-13.8		1 55		1 32 - 1.78
13C-123478-HxCDD	402/404	1 14	1.03	10.4		1.30		1 05 - 1.43
13C-123678-HxCDD	402/404	1 26	1.07	17 5		1.30		1 05 - 1.43
13C-1234678-HpCDD	436/438	0.86	0.90	-3 6		1 07		0.89 - 1.21
13C-OCDD	470/472	0.66	0.82	-19 3		0 88		0.76 - 1.02
13C-2378-TCDF	316/318	1.50	1.50	-0.1		0 77		0 65 - 0.89
13C-12378-PeCDF	352/354	1 17	1.30	-10.0		1.59		1 32 - 1.78
13C-23478-PeCDF	352/354	1 12	1 26	-11.3		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.45	1.29	12.3		0 51		0.43 - 0 59
13C-123678-HxCDF	384/386	1.63	1.34	21 2		0 53		0.43 - 0 59
13C-234678-HxCDF	384/386	1.35	1.22	10 4		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1 20	1.14	5.7		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1 13	1.08	4 5		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0 76	0.83	-7.7		0.44		0 37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 04	1 04	-0.5		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0 80		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1 26		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	BOEING
Lab Code:	ZP17	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	15010809
Date Analysed	08-Jan-15	Time Analysed	17:48:56
Init.Calib.Date:	21-NOV-14	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1 00	26 84
2378-TCDF	1 00	26 20
12378-PeCDF	1.00	30.35
12378-PeCDD	1.00	31 95
23478-PeCDF	1.00	31.70
123478-HxCDF	1.00	35 38
123678-HxCDF	1 00	35 53
123478-HxCDD	1 00	36.61
123678-HxCDD	1 00	36 74
123789-HxCDD	1.01	37.17
234678-HxCDF	1.00	36.48
123789-HxCDF	1.00	37 62
1234678-HpCDF	1 00	39 69
1234678-HpCDD	1 00	41.52
1234789-HpCDF	1.00	42.43
OCDD	1.00	47.51
OCDF	1.01	47.78

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.81
13C-12378-PeCDD	1.23	31.93
13C-123478-HxCDD	0.99	36.60
13C-123678-HxCDD	0.99	36 73
13C-1234678-HpCDD	1 12	41 51
13C-OCDD	1 28	47.48
13C-2378-TCDF	1 01	26.17
13C-12378-PeCDF	1.17	30.33
13C-23478-PeCDF	1.22	31 68
13C-123478-HxCDF	0.95	35 37
13C-123678-HxCDF	0.96	35.51
13C-234678-HxCDF	0 98	36 45
13C-123789-HxCDF	1 01	37.59
13C-1234678-HpCDF	1 07	39.68
13C-1234789-HpCDF	1.14	42.41

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.84

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.00
13C-123789-HxCDD	0.00	37.16

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

Metals Analysis
Report and Summary QC Forms

ARI Job ID: ZP17, ZP18

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP17

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
BD-MH-11.31-201412	ZP17A	14-27407	
BD-MH-11.31-201412D	ZP17ADUP	14-27407	
BD-MH-11.31-201412S	ZP17ASPK	14-27407	
BD-MH-5.16-2014121	ZP17B	14-27408	
PBW	ZP17MB1	14-27408	
LCSW	ZP17MB1SPK	14-27408	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 12/29/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-11.31-20141215-W
SAMPLE

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/17/14	200.8	12/19/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	**7440-38-2**	**Arsenic**	0.048	0.2	**1.5**	
200.8	12/17/14	200.8	12/26/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/17/14	200.8	12/19/14	**7440-47-3**	**Chromium**	0.045	0.5	**0.8**	
200.8	12/17/14	200.8	12/19/14	**7440-50-8**	**Copper**	0.158	0.5	**2.0**	
200.8	12/17/14	200.8	12/19/14	**7439-92-1**	**Lead**	0.046	0.1	**0.1**	
200.8	12/17/14	200.8	12/19/14	**7440-02-0**	**Nickel**	0.079	0.5	**1.4**	
200.8	12/17/14	200.8	12/19/14	**7782-49-2**	**Selenium**	0.127	0.5	**2.9**	
200.8	12/17/14	200.8	12/19/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	**7440-66-6**	**Zinc**	0.50	4	**5**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-5.16-20141215-W
SAMPLE

Lab Sample ID: ZP17B
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/17/14	200.8	12/19/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	**7440-38-2**	**Arsenic**	0.048	0.2	**1.0**	
200.8	12/17/14	200.8	12/26/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/17/14	200.8	12/19/14	**7440-47-3**	**Chromium**	0.045	0.5	**1.0**	
200.8	12/17/14	200.8	12/19/14	**7440-50-8**	**Copper**	0.158	0.5	**2.8**	
200.8	12/17/14	200.8	12/19/14	**7439-92-1**	**Lead**	0.046	0.1	**0.7**	
200.8	12/17/14	200.8	12/19/14	**7440-02-0**	**Nickel**	0.079	0.5	**1.2**	
200.8	12/17/14	200.8	12/19/14	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	12/17/14	200.8	12/19/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	**7440-66-6**	**Zinc**	0.50	4	**15**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: BD-MH-11.31-20141215-W
MATRIX SPIKE

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.2 U	23.6	25.0	94.4%	
Arsenic	200.8	1.5	27.7	25.0	105%	
Beryllium	200.8	0.2 U	24.6	25.0	98.4%	
Cadmium	200.8	0.1 U	21.0	25.0	84.0%	
Chromium	200.8	0.8	23.3	25.0	90.0%	
Copper	200.8	2.0	27.1	25.0	100%	
Lead	200.8	0.1	22.4	25.0	89.2%	
Nickel	200.8	1.36	26.5	25.0	101%	
Selenium	200.8	2.9	75.6	80.0	90.9%	
Silver	200.8	0.2 U	22.4	25.0	89.6%	
Thallium	200.8	0.2 U	21.6	25.0	86.4%	
Zinc	200.8	5	70	80	81.2%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: BD-MH-11.31-20141215-W
DUPLICATE

Lab Sample ID: ZP17A
LIMS ID: 14-27407
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	1.5	1.4	6.9%	+/- 20%	
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	0.8	1.0	22.2%	+/- 0.5	L
Copper	200.8	2.0	2.3	14.0%	+/- 0.5	L
Lead	200.8	0.1	0.1	0.0%	+/- 0.1	L
Nickel	200.8	1.4	1.4	0.0%	+/- 0.5	L
Selenium	200.8	2.9	2.0	36.7%	+/- 0.5	L*
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	5	5	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: ZP17LCS
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.3	25.0	97.2%	
Arsenic	200.8	26.4	25.0	106%	
Beryllium	200.8	25.3	25.0	101%	
Cadmium	200.8	25.4	25.0	102%	
Chromium	200.8	26.1	25.0	104%	
Copper	200.8	27.8	25.0	111%	
Lead	200.8	26.3	25.0	105%	
Nickel	200.8	27.0	25.0	108%	
Selenium	200.8	81.5	80.0	102%	
Silver	200.8	26.8	25.0	107%	
Thallium	200.8	25.6	25.0	102%	
Zinc	200.8	81	80	101%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: ZP17MB
LIMS ID: 14-27408
Matrix: Water
Data Release Authorized:
Reported: 12/29/14

QC Report No: ZP17-The Boeing Company
Project: NPDES

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/17/14	200.8	12/19/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	12/17/14	200.8	12/26/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/17/14	200.8	12/19/14	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	12/17/14	200.8	12/19/14	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	12/17/14	200.8	12/19/14	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	12/17/14	200.8	12/19/14	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	12/17/14	200.8	12/19/14	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	12/17/14	200.8	12/19/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/17/14	200.8	12/19/14	7440-66-6	Zinc	0.50	4	4	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ug/L

SDG: ZP17

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS121911	50.0	49.22	**98.4**	50.0	49.48	**99.0**	49.28	**98.6**	49.03	**98.1**	48.77	**97.5**	49.54	**99.1**
Arsenic	AS	PMS	MS121911	50.0	50.83	**101.7**	50.0	49.40	**98.8**	49.65	**99.3**	49.79	**99.6**	50.15	**100.3**	50.61	**101.2**
Cadmium	CD	PMS	MS121911	50.0	48.32	**96.6**	50.0	50.65	**101.3**	50.26	**100.5**	49.91	**99.8**	49.80	**99.6**	49.47	**98.9**
Chromium	CR	PMS	MS121911	50.0	49.46	**98.9**	50.0	47.76	**95.5**	48.71	**97.4**	47.55	**95.1**	47.27	**94.5**	47.60	**95.2**
Copper	CU	PMS	MS121911	50.0	52.02	**104.0**	50.0	50.03	**100.1**	49.98	**100.0**	50.42	**100.8**	49.89	**99.8**	50.06	**100.1**
Lead	PB	PMS	MS121911	50.0	48.67	**97.3**	50.0	48.64	**97.3**	48.49	**97.0**	48.59	**97.2**	47.80	**95.6**	48.34	**96.7**
Nickel	NI	PMS	MS121911	50.0	51.05	**102.1**	50.0	49.44	**98.9**	49.11	**98.2**	49.74	**99.5**	49.61	**99.2**	49.61	**99.2**
Selenium	SE	PMS	MS121911	80.0	77.00	**96.3**	50.0	49.97	**99.9**	50.47	**100.9**	50.44	**100.9**	50.86	**101.7**	50.83	**101.7**
Silver	AG	PMS	MS121911	50.0	48.83	**97.7**	50.0	49.72	**99.4**	49.34	**98.7**	49.75	**99.5**	49.85	**99.7**	49.74	**99.5**
Thallium	TL	PMS	MS121911	50.0	46.45	**92.9**	50.0	47.59	**95.2**	47.79	**95.6**	47.74	**95.5**	46.99	**94.0**	46.85	**93.7**
Zinc	ZN	PMS	MS121911	50.0	50.95	**101.9**	50.0	49.65	**99.3**	50.02	**100.0**	50.33	**100.7**	50.23	**100.5**	50.38	**100.8**

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

ZP17 : 59591

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS:ug/L

SDG: ZP17

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS121911	50.0	50.32	100.6	50.10	100.2	49.76	99.5	48.67	97.3				
Arsenic	AS	PMS	MS121911	50.0	50.63	101.3	50.51	101.0	49.56	99.1	50.39	100.8				
Cadmium	CD	PMS	MS121911	50.0	49.57	99.1	50.42	100.8	49.28	98.6	48.50	97.0				
Chromium	CR	PMS	MS121911	50.0	48.53	97.1	49.43	98.9	48.56	97.1	48.64	97.3				
Copper	CU	PMS	MS121911	50.0	50.25	100.5	49.51	99.0	48.80	97.6	57.66	115.3				
Lead	PB	PMS	MS121911	50.0	48.50	97.0	48.78	97.6	47.41	94.8	48.26	96.5				
Nickel	NI	PMS	MS121911	50.0	49.28	98.6	49.93	99.9	48.24	96.5	49.13	98.3				
Selenium	SE	PMS	MS121911	50.0	50.92	101.8	51.31	102.6	49.49	99.0	51.57	103.1				
Silver	AG	PMS	MS121911	50.0	50.41	100.8	51.52	103.0	50.25	100.5	49.41	98.8				
Thallium	TL	PMS	MS121911	50.0	47.38	94.8	47.06	94.1	45.95	91.9	46.89	93.8				
Zinc	ZN	PMS	MS121911	50.0	50.89	101.8	49.90	99.8	49.12	98.2	49.40	98.8				

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ug/L

SDG: ZP17

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Beryllium	BE	PMS	MS122681	50.0	49.33	**98.7**	50.0	50.61	**101.2**	51.80	**103.6**	51.10	**102.2**				

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS:ug/L

SDG: ZP17

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS121911	0.2	0.22	**110.0**										
Arsenic	AS	PMS	MS121911	0.2	0.20	**100.0**										
Cadmium	CD	PMS	MS121911	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS121911	0.5	0.50	**100.0**										
Copper	CU	PMS	MS121911	0.5	0.50	**100.0**										
Lead	PB	PMS	MS121911	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS121911	0.5	0.49	**98.0**										
Selenium	SE	PMS	MS121911	0.5	0.49	**98.0**										
Silver	AG	PMS	MS121911	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS121911	0.2	0.19	**95.0**										
Zinc	ZN	PMS	MS121911	4.0	4.00	**100.0**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ug/L

SDG: ZP17

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Beryllium	BE	PMS	MS122681		0.2	0.20	**100.0**										

ZP17:9985

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ug/L

SDG: ZP17

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS121911	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS121911	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS121911	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS121911	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Lead	PB	PMS	MS121911	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS121911	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS121911	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS121911	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ug/L

SDG: ZP17

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS121911	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Arsenic	AS	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Cadmium	CD	PMS	MS121911	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Chromium	CR	PMS	MS121911	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Copper	CU	PMS	MS121911	25.0	0.5	0.5	U	0.5	U	0.5	U	5.4	B				
Lead	PB	PMS	MS121911	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Nickel	NI	PMS	MS121911	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Selenium	SE	PMS	MS121911	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Silver	AG	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Thallium	TL	PMS	MS121911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Zinc	ZN	PMS	MS121911	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U				

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS:ug/L

SDG: ZP17

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Beryllium	BE	PMS	MS122681	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				

ZP17:00088

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP17

ICS SOURCE: I.V.

RUNID: MS121911

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.0	18.9	**94.5**						
Cadmium		20	0.1	19.1	**95.5**						
Chromium		20	0.6	19.4	**97.0**						
Cobalt		20	0.0	18.2	**91.0**						
Copper		20	0.9	20.0	**100.0**						
Manganese		20	0.1	18.8	**94.0**						
Molybdenum	400	400	422.9	415.8	**104.0**						
Nickel		20	0.5	20.1	**100.5**						
Selenium			-0.2	-0.1							
Silver		20	0.0	19.1	**95.5**						
Zinc		20	1.1	19.7	**98.5**						

ZP17:0009

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

ANALYSIS METHOD: PMS

SDG: ZP17

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.07	U	0.10	B		
Arsenic	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	1.50	B	1.45	B	3.3	
Cadmium	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.06	U	0.25	B		
Chromium	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.76	B	1.50	B	97.4	
Copper	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	1.97	B	13.20	B	570.1	
Lead	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.14	B	0.15	B	7.1	
Nickel	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	1.36	B	1.35	B	0.7	
Selenium	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	2.94	B	2.90	B	1.4	
Silver	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.01	U	0.00	B		
Thallium	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	0.01	U	0.00	B		
Zinc	BD-MH-11.31-201412L	ZP17A-L	Water	MS121911	5.17	B	6.05	B	17.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

ANALYSIS METHOD: PMS

SDG: ZP17

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Beryllium	BD-MH-11.31-201412L	ZP17A-L	Water	MS122681	0.01	U	0.00	B		

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP17 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	PMS	PE ELAN 6000 MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP17

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 12/17/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
BD-MH-11.31-201412	ZP17A	0.000	50.0	25.0
BD-MH-11.31-201412D	ZP17ADUP	0.000	50.0	25.0
BD-MH-11.31-201412S	ZP17ASPK	0.000	50.0	25.0
BD-MH-5.16-2014121	ZP17B	0.000	50.0	25.0
PBW	ZP17MB1	0.000	50.0	25.0
LCSW	ZP17MB1SPK	0.000	50.0	25.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES | INSTRUMENT ID: NEXION 300D MS | START DATE: 12/19/2014

SDG: ZP17 | RUNID: MS121911 METHOD: PMS | END DATE: 12/19/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08180		X		X					X		X	X								X	X	X	X				X			X
S1	S1	1.00	08230		X		X					X		X	X								X	X	X	X				X			X
S2	S2	1.00	08270		X		X					X		X	X								X	X	X	X				X			X
S3	S3	1.00	08310		X		X					X		X	X								X	X	X	X				X			X
S4	S4	1.00	08360		X		X					X		X	X								X	X	X	X				X			X
S5	S5	1.00	08410																														
ZZZZZZ	Rinse sampl	1.00	08460																														
ICV	MICV	1.00	08540		X		X					X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	09010		X		X					X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	09050		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	09120		X		X					X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	09160		X		X					X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	09200		X		X					X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	09260		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	09330																														
ZZZZZZ	LR300	1.00	09400																														
ZZZZZZ	B1	1.00	09470																														
ZZZZZZ	B2	1.00	09530																														
CCV	MCCV2	1.00	09590		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10060		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZO94MB1	20.00	10100																														
ZZZZZZ	ZP14MB	20.00	10140																														
ZZZZZZ	ZP33MB1	20.00	10180																														
ZZZZZZ	ZO63J	200.00	10230																														
ZZZZZZ	ZO23A	20.00	10270																														
ZZZZZZ	ZO23B	20.00	10310																														
ZZZZZZ	ZP33MB1SPK	20.00	10350																														
ZZZZZZ	ZP33MB1SPD	20.00	10390																														
ZZZZZZ	ZP14MBSPK	20.00	10430																														
ZZZZZZ	ZO94MB1SPK	20.00	10470																														
CCV	MCCV3	1.00	10530		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11000		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZO23C	20.00	11040																														
ZZZZZZ	ZO23D	20.00	11080																														
ZZZZZZ	ZO23E	20.00	11120																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES | INSTRUMENT ID: NEXION 300D MS | START DATE: 12/19/2014

SDG: ZP17 | RUNID: MS121911 METHOD: PMS | END DATE: 12/19/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	ZO23F	20.00	11160																														
ZZZZZZ	ZO23G	20.00	11200																														
ZZZZZZ	ZO23H	20.00	11240																														
ZZZZZZ	ZO23I	20.00	11290																														
ZZZZZZ	ZO23J	20.00	11330																														
ZZZZZZ	ZO23K	20.00	11370																														
ZZZZZZ	ZO94B	20.00	11410																														
CCV	MCCV4	1.00	11460		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	11530		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZO94ADUP	20.00	11570																														
ZZZZZZ	ZO94A	20.00	12010																														
ZZZZZZ	ZO94ASPK	20.00	12060																														
ZZZZZZ	ZZZZZZ	20.00	12100																														
ZZZZZZ	ZO94C	20.00	12140																														
ZZZZZZ	ZO94D	20.00	12180																														
ZZZZZZ	ZO94E	20.00	12220																														
ZZZZZZ	ZP14ADUP	20.00	12260																														
ZZZZZZ	ZP14A	20.00	12300																														
ZZZZZZ	ZP14ASPK	20.00	12350																														
CCV	MCCV5	1.00	12400		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	12470		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZP14B	20.00	12510																														
ZZZZZZ	ZP14C	20.00	12550																														
ZZZZZZ	ZP14D	20.00	12590																														
ZZZZZZ	ZP14E	20.00	13030																														
ZZZZZZ	ZP14F	20.00	13070																														
ZZZZZZ	ZP33ADUP	20.00	13110																														
ZZZZZZ	ZP33A	20.00	13160																														
ZZZZZZ	ZP33ASPK	20.00	13200																														
ZZZZZZ	ZP33B	20.00	13240																														
ZZZZZZ	ZP33C	20.00	13280																														
CCV	MCCV6	1.00	13330		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB6	1.00	13400		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZO28MB	20.00	13440																														
ZZZZZZ	ZP33D	20.00	13480																														

ZP17 09505

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES | INSTRUMENT ID: NEXION 300D MS | START DATE: 12/19/2014

SDG: ZP17 | RUNID: MS121911 METHOD: PMS | END DATE: 12/19/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	ZP33E	20.00	13530																														
ZZZZZZ	ZP33F	20.00	13570																														
ZZZZZZ	ZP33G	20.00	14010																														
ZZZZZZ	ZP33H	20.00	14050																														
ZZZZZZ	ZP33I	20.00	14090																														
ZZZZZZ	ZP33J	20.00	14130																														
ZZZZZZ	ZO28B	20.00	14170																														
ZZZZZZ	ZO28MBSPK	20.00	14220																														
CCV	MCCV7	1.00	14270		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB7	1.00	14340		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZO28ADUP	20.00	14380																														
ZZZZZZ	ZO28A	20.00	14420																														
ZZZZZZ	ZO28ASPK	20.00	14460																														
ZZZZZZ	ZO28C	20.00	14500																														
ZZZZZZ	ZO28D	20.00	14540																														
ZZZZZZ	ZO28E	20.00	14580																														
ZZZZZZ	ZO28F	20.00	15030																														
ZZZZZZ	ZO28G	20.00	15070																														
ZZZZZZ	ZO28H	20.00	15110																														
CCV	MCCV8	1.00	15160		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB8	1.00	15230		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZP25MB1	20.00	15270																														
PBW	ZP17MB1	2.00	15320		X		X					X		X	X								X	X	X	X				X			X
BD-MH-11.31-201412L	ZP17A-L	10.00	15360		X		X					X		X	X								X	X	X	X				X			X
BD-MH-11.31-201412	ZP17A	2.00	15400		X		X					X		X	X								X	X	X	X				X			X
BD-MH-11.31-201412D	ZP17ADUP	2.00	15440		X		X					X		X	X								X	X	X	X				X			X
BD-MH-11.31-201412S	ZP17ASPK	2.00	15480		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	2.00	15520																														
BD-MH-5.16-2014121	ZP17B	2.00	15560		X		X					X		X	X								X	X	X	X				X			X
LCSW	ZP17MB1SPK	2.00	16000		X		X					X		X	X								X	X	X	X				X			X
ZZZZZZ	ZP25MB1SPK	20.00	16050																														
CCV	MCCV9	1.00	16100		X		X					X		X	X								X	X	X	X				X			X
CCB	CCB9	1.00	16170		X		X					X		X	X								X	X	X	X				X			X

ZP17 09996

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 12/26/2014

SDG: ZP17 | RUNID: MS122681 METHOD: PMS | END DATE: 12/26/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08400							X																							
S1	S1	1.00	08430							X																							
S2	S2	1.00	08470							X																							
S3	S3	1.00	08500							X																							
S4	S4	1.00	08540							X																							
ZZZZZZ	Rinse Sampl	1.00	08580																														
ICV	MICV	1.00	09020							X																							
ICB	ICB	1.00	09060							X																							
CCV	MCCV1	1.00	09080							X																							
CCB	CCB1	1.00	09120							X																							
CRI	MCRI	1.00	09140							X																							
ICSA	ICSAI	1.00	09170							X																							
ICSAB	ICSABI	1.00	09200							X																							
CCV	MCCV2	1.00	09230							X																							
CCB	CCB2	1.00	09270							X																							
PBW	ZP17MB1	2.00	09290							X																							
BD-MH-11.31-201412L	ZP17A-L	10.00	09330							X																							
BD-MH-11.31-201412	ZP17A	2.00	09360							X																							
BD-MH-11.31-201412D	ZP17ADUP	2.00	09390							X																							
BD-MH-11.31-201412S	ZP17ASPK	2.00	09420							X																							
BD-MH-5.16-2014121	ZP17B	2.00	09450							X																							
LCSW	ZP17MB1SPK	2.00	09480							X																							
CCV	MCCV3	1.00	09520							X																							
CCB	CCB3	1.00	09550							X																							

ZP17 09552

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: ZP17, ZP18

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP18

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
BD-MH-11.31-201412	ZP18A	14-27431	
BD-MH-11.31-201412D	ZP18ADUP	14-27431	
BD-MH-11.31-201412S	ZP18ASPK	14-27431	
BD-MH-5.16-2014121	ZP18B	14-27432	
PBW	ZP18MB1	14-27432	
LCSW	ZP18MB1SPK	14-27432	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 12/19/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 12/19/14
Date Received: 12/15/14
Page 1 of 1

QC Report No: ZP18-The Boeing Company
Project: NPDES

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
BD-MH-11.31-20141215-W ZP18A 14-27431	12/15/14	Water	12/17/14 12/18/14	20.0	20.0 U
BD-MH-5.16-20141215-W ZP18B 14-27432	12/15/14	Water	12/17/14 12/18/14	20.0	20.0 U
MB-121714 Method Blank	NA	Water	12/17/14 12/18/14	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-11.31-20141215-W
MATRIX SPIKE

Lab Sample ID: ZP18A
LIMS ID: 14-27431
Matrix: Water
Data Release Authorized:
Reported: 12/19/14

QC Report No: ZP18-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	102	100	102%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-11.31-20141215-W
DUPLICATE

Lab Sample ID: ZP18A
LIMS ID: 14-27431
Matrix: Water
Data Release Authorized:
Reported: 12/19/14

QC Report No: ZP18-The Boeing Company
Project: NPDES

Date Sampled: 12/15/14
Date Received: 12/15/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: ZP18LCS
LIMS ID: 14-27432
Matrix: Water
Data Release Authorized:
Reported: 12/19/14

QC Report No: ZP18-The Boeing Company
Project: NPDES

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	220	200	110%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP18

UNITS: ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG121801	500.0	475.00	**95.0**	500.0	484.00	**96.8**	487.00	**97.4**						

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS: ng/L

SDG: ZP18

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG121801	20.0	25.60	**128.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

UNITS:ng/L

SDG: ZP18

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG121801	25.0	20.0	20.0	U	20.0	U	20.0	U						

ZP17 0551 05

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP18 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES

SDG: ZP18

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 12/17/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
BD-MH-11.31-201412	ZP18A	0.000	20.0	20.0
BD-MH-11.31-201412D	ZP18ADUP	0.000	20.0	20.0
BD-MH-11.31-201412S	ZP18ASPK	0.000	20.0	20.0
BD-MH-5.16-2014121	ZP18B	0.000	20.0	20.0
PBW	ZP18MB1	0.000	20.0	20.0
LCSW	ZP18MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NPDES | INSTRUMENT ID: CETAC MERCURY | START DATE: 12/18/2014

SDG: ZP18 | RUNID: HG121801 | METHOD: CVL | END DATE: 12/18/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11212														X																
S20	S20	1.00	11240														X																
S50	S50	1.00	11264														X																
S100	S100	1.00	11292														X																
S200	S200	1.00	11320														X																
S400	S400	1.00	11345														X																
S1000	S1000	1.00	11373														X																
ICV	AICV	1.00	11411														X																
ICB	ICB	1.00	11435														X																
CCV	ACCV1	1.00	11464														X																
CCB	CCB1	1.00	11492														X																
CRA	CRA	1.00	11520														X																
PBW	ZP18MB1	1.00	11544														X																
LCSW	ZP18MB1SPK	1.00	11572														X																
BD-MH-11.31-201412	ZP18A	1.00	12000														X																
BD-MH-11.31-201412D	ZP18ADUP	1.00	12025														X																
BD-MH-11.31-201412S	ZP18ASPK	1.00	12053														X																
BD-MH-5.16-2014121	ZP18B	1.00	12081														X																
ZZZZZZ	ZP54MB1	1.00	12105																														
ZZZZZZ	ZP54MB1SPK	1.00	12133																														
ZZZZZZ	ZP54A	1.00	12162																														
CCV	ACCV2	1.00	12190														X																
CCB	CCB2	1.00	12215														X																

ZP17.55159

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: ZP17, ZP18

SAMPLE RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Client ID: BD-MH-11.31-20141215-W
ARI ID: 14-27407 ZP17A

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/15/14 121514#1	EPA 150.1	std units	0.01	6.74
Alkalinity	12/17/14 121714#1	SM 2320	mg/L CaCO3	1.0	40.4
Carbonate	12/17/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/17/14	SM 2320	mg/L CaCO3	1.0	40.4
Hydroxide	12/17/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Hexavalent Chromium	12/15/14 121514#1	SM3500Cr-B	mg/L	0.010	< 0.010 U
Conductivity	12/16/14 121614#1	EPA 120.1	umhos/cm	1.00	3,510
Total Suspended Solids	12/17/14 121714#1	SM2540D	mg/L	1.1	3.0
Chloride	12/16/14 121614#1	EPA 300.0	mg/L	50.0	993
N-Nitrate	12/16/14 121614#1	EPA 300.0	mg-N/L	0.1	0.4
Sulfate	12/16/14 121614#1	EPA 300.0	mg/L	10.0	140
Total Organic Carbon	12/15/14 121514#1	EPA 9060	mg/L	1.50	2.45
Dissolved Organic Carbon	12/15/14 121514#1	EPA 9060	mg/L	1.50	2.71

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Client ID: BD-MH-5.16-20141215-W
ARI ID: 14-27408 ZP17B

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/15/14 121514#1	EPA 150.1	std units	0.01	6.99
Alkalinity	12/17/14 121714#1	SM 2320	mg/L CaCO3	1.0	35.2
Carbonate	12/17/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/17/14	SM 2320	mg/L CaCO3	1.0	35.2
Hydroxide	12/17/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Hexavalent Chromium	12/15/14 121514#1	SM3500Cr-B	mg/L	0.010	< 0.010 U
Conductivity	12/16/14 121614#1	EPA 120.1	umhos/cm	1.00	553
Total Suspended Solids	12/17/14 121714#1	SM2540D	mg/L	1.1	28.0
Chloride	12/16/14 121614#1	EPA 300.0	mg/L	5.0	123
N-Nitrate	12/16/14 121614#1	EPA 300.0	mg-N/L	0.1	0.5
Sulfate	12/16/14 121614#1	EPA 300.0	mg/L	0.5	20.6
Total Organic Carbon	12/15/14 121514#1	EPA 9060	mg/L	1.50	2.86
Dissolved Organic Carbon	12/15/14 121514#1	EPA 9060	mg/L	1.50	2.90

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: ZP17A Client ID: BD-MH-11.31-20141215-W							
Dissolved Organic Carbon	EPA 9060	12/15/14	mg/L	2.71	21.9	20.0	96.0%

REPLICATE RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: 12/15/14
Date Received: 12/15/14

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: ZP17A Client ID: BD-MH-11.31-20141215-W						
pH	EPA 150.1	12/15/14	std units	6.74	6.73	0.01
Alkalinity	SM 2320	12/17/14	mg/L CaCO3	40.4	40.1	0.7%
Carbonate	SM 2320	12/17/14	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	12/17/14	mg/L CaCO3	40.4	40.1	0.7%
Hydroxide	SM 2320	12/17/14	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	12/16/14	umhos/cm	3,510	3,510	0.0%
Dissolved Organic Carbo	EPA 9060	12/15/14	mg/L	2.71	2.60	4.1%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	12/15/14	std units	7.00	7.00	0.00
Total Suspended Solids SM2540D	ICVL	12/17/14	mg/L	47.7	50.0	95.4%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

Project: NPDES
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Hexavalent Chromium	SM3500Cr-B	12/15/14	mg/L	< 0.010 U	
Conductivity	EPA 120.1	12/16/14	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	12/17/14	mg/L	< 1.0 U	
Chloride	EPA 300.0	12/16/14	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	12/16/14	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	12/16/14	mg/L	< 0.1 U	
Total Organic Carbon	EPA 9060	12/15/14	mg/L	< 1.50 U	
Dissolved Organic Carbon	EPA 9060	12/15/14	mg/L	< 1.50 U	
		12/15/14		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
ZP17-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 12/23/14

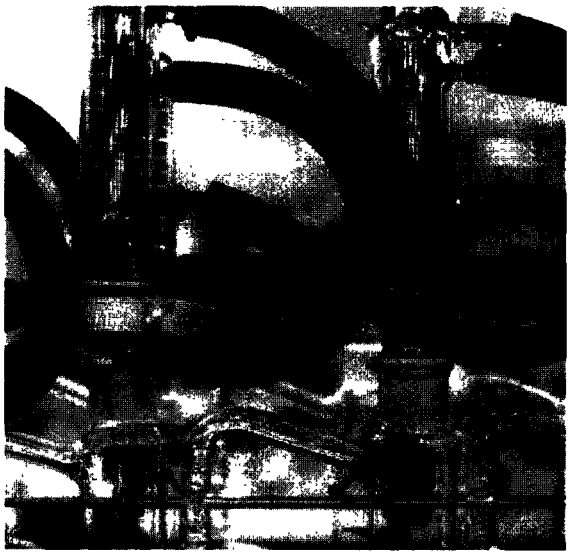
Project: NPDES
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	12/17/14	mg/L CaCO3	61.7	61.7	100.0%
Hexavalent Chromium ERA #300614	SM3500Cr-B	12/15/14	mg/L	0.635	0.630	100.8%
Conductivity Ricca #4401B14	EPA 120.1	12/16/14	umhos/cm	975	1,000	97.5%
Chloride ERA #290313	EPA 300.0	12/16/14	mg/L	2.8	3.0	93.3%
N-Nitrate ERA #320614	EPA 300.0	12/16/14	mg-N/L	2.8	3.0	93.3%
Sulfate ERA 131013	EPA 300.0	12/16/14	mg/L	2.9	3.0	96.7%
Total Organic Carbon ERA #0408-13-02	EPA 9060	12/15/14	mg/L	20.8	20.0	104.0%
Dissolved Organic Carbon ERA #0408-13-02	EPA 9060	12/15/14	mg/L	20.8	20.0	104.0%

Subcontracted Results
pcb congeners Analyzed by SGS

ARI Job ID: ZP17, ZP18

SGS



FINAL LAB REPORT

NPDES

A7461

13-Jan-2015

Prepared by

SGS NORTH AMERICA

Prepared for

Analytical Resources, Inc.

Kelly Frances Bottem

4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
Phone: 206-695-6211
Email: kellyb@arilabs.com

This report is approved by

Heather Distel Digitally signed by Heather Distel
Date 2015 01 13 17 04 57 -05'00'

Heather Distel
Senior Project Scientist/Team Lead
AK/ak

SGS

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	NPDES
SGS Project #	A7461
Analytical Protocol(s)	Method 1668A
No Samples Submitted	2
Additional QC Sample(s)	0
No Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	16-Dec-14
Condition Received	Good
Temperature upon Receipt (°C)	4
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1 Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project

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APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value "H" is assigned. If the obtained value is less than half the specified value "h" is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect
NR or R	Indicates a value that is not reportable
PR	Due to interference, the associated congener is poorly resolved
QI	Indicates the presence of a quantitative interference.
SI	Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

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APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate The value is less than the minimum calibration level but greater than the estimated detection limit (EDL)
U	The analyte was not detected in the sample at the estimated detection limit (EDL)
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve)
D	Dilution Data. Result was obtained from the analysis of a dilution
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener
NR	Analyte is not reportable because of problems in sample preparation or analysis
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor

SGS

SGS CERTIFICATIONS

Arkansas	88-0682
California (ELAP)	Interim ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-14-00135
DoD	2726 01
Florida (Primary NELAP)	E87634
ISO 17025/IEC	2726.01
Louisiana	4115
Maine	#2014020
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	Lab #037-999-459 Cert #688823
New Jersey	NC100
New York	11685
North Carolina DWR	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	Lab #99029 Cert #99029002
Texas	T104704260-13-5
US Coast Guard	16714/159 317/SGS
Virginia	Lab #460214 Cert #3006
Washington	C913
West Virginia	293

PCB Report — Method 1668A

Analyte	Method Blank A7461_12930	BD-MH-11.31-20141215-W	BD-MH-5.16-20141215-W
	pg/L	pg/L	pg/L
PCB-77	(3.23)	(7.55)	20.5
PCB-81	(3.35)	(6.67)	(2.51)
PCB-105	(2.82)	28.1	168
PCB-114	(2.57)	(7.02)	8.89
PCB-118	(2.52)	63.7	407
PCB-123	(2.56)	(7.11)	7.36
PCB-126	(4.24)	(8.86)	(2.62)
PCB-156/157	(4.49)	12.4	76.9
PCB-167	(2.88)	(6 79)	29.9
PCB-169	(3.22)	(8.47)	(3.86)
PCB-189	(3.35)	(7.61)	6.62
Total Mono-CB	(3.36)	(4.16)	(2.25)
Total Di-CB	(6.91)	19.5	50.7
Total Tri-CB	(3.95)	148	280
Total Tetra-CB	5.07	357	938
Total Penta-CB	(2.87)	479	3,250
Total Hexa-CB	(3.23)	454	4,100
Total Hepta-CB	(3.35)	158	1,880
Total Octa-CB	(3.85)	15.3	350
Total Nona-CB	(5.01)	(11.5)	20.5
Total Deca-CB	(6.22)	(14)	(6.78)

[redacted]

Checkcode	320-132-FTP/A	740-703-FZT/A	684-576-GWX/A

() = DL
[] = EMPC

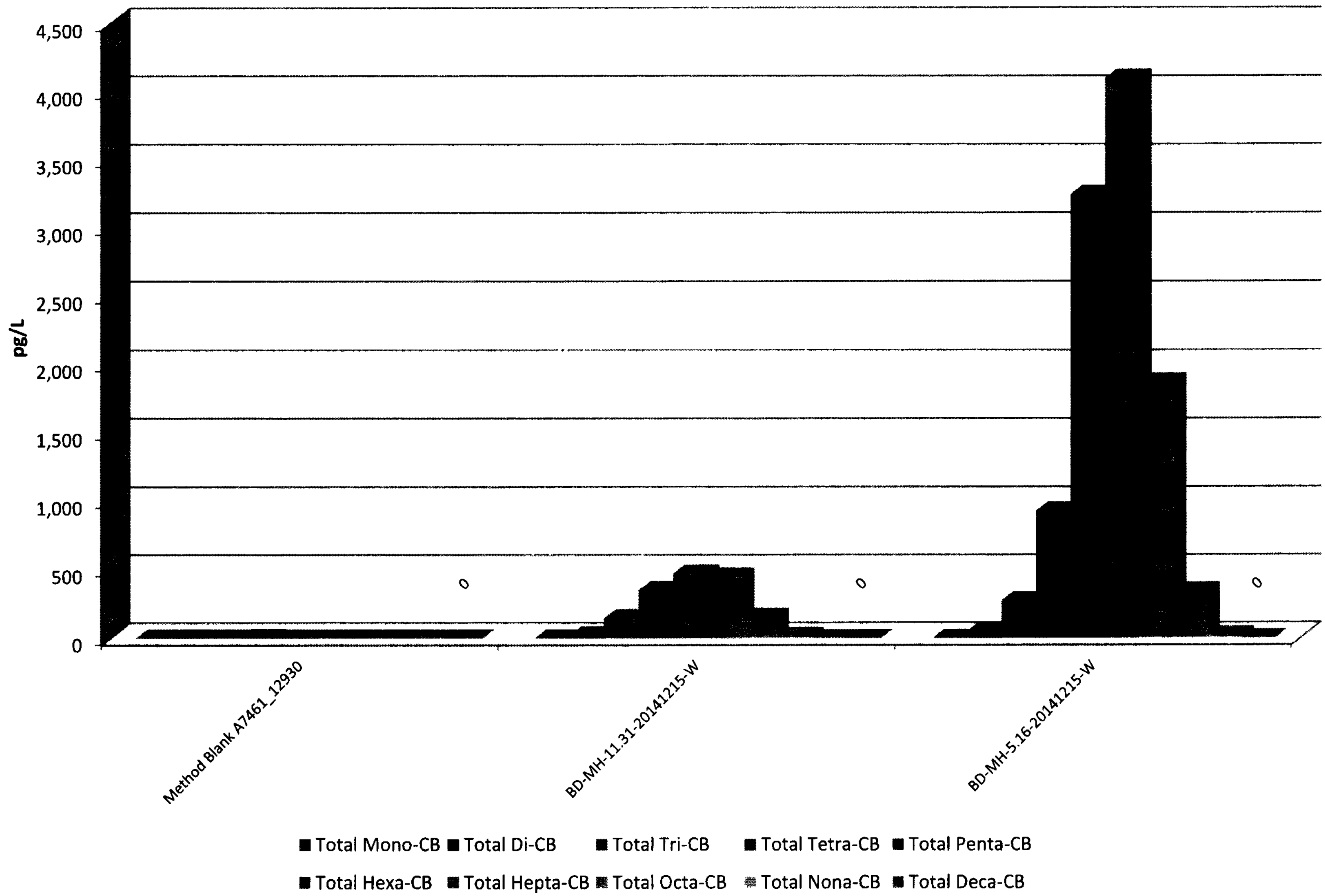
1/13/2015 3:29 PM

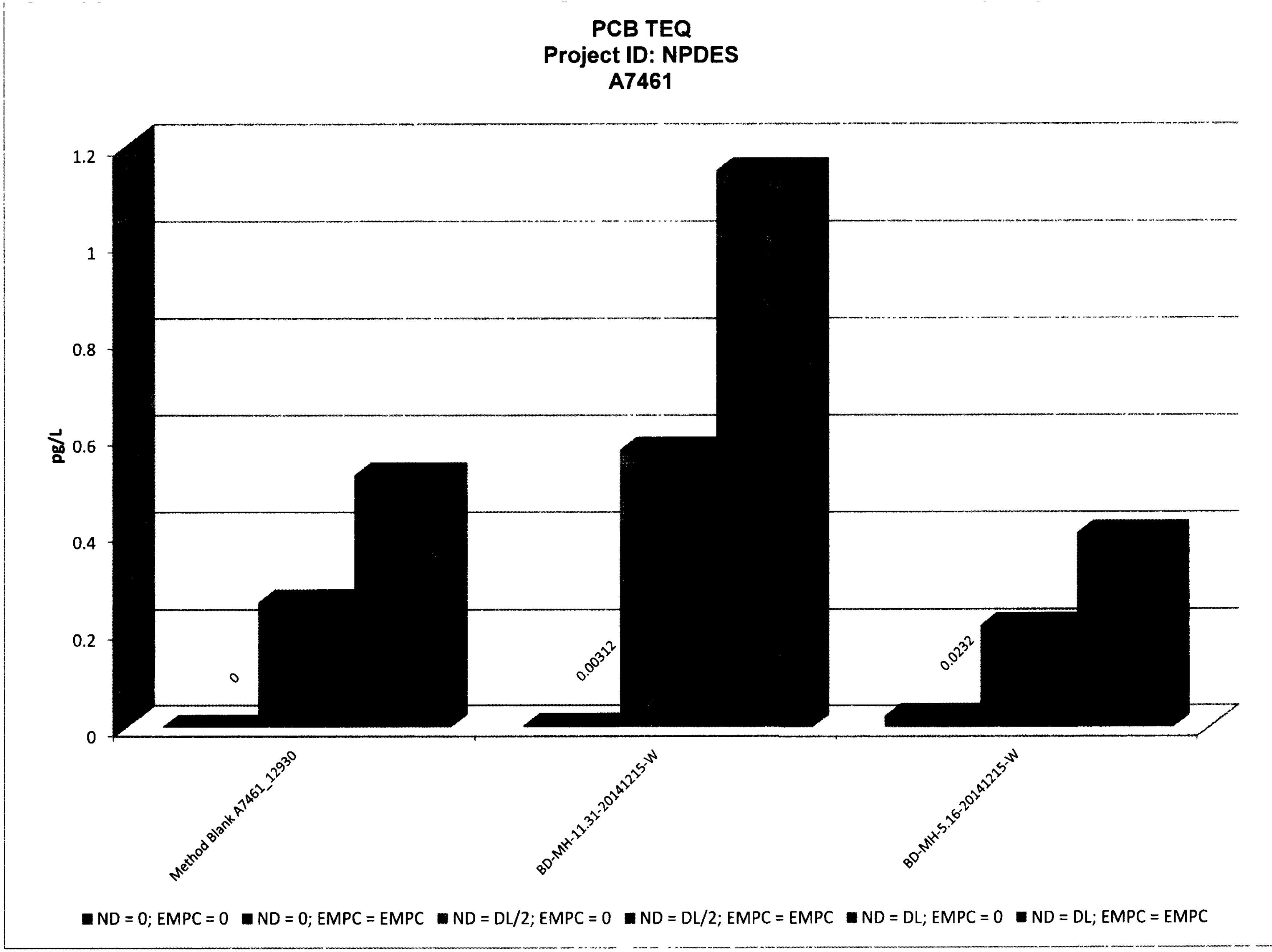
ZP17:00125

PCB Recoveries — Method 1668A

Standard	Method Blank A7461_12930	BD-MH-11.31-20141215-W	BD-MH-5.16-20141215-W
ES PCB-1	43.6	80.5	60.9
ES PCB-3	48.1	73 7	67.5
ES PCB-4	66	103	88.9
ES PCB-15	62.7	75.1	86.6
ES PCB-19	72.9	107	99.2
ES PCB-39	59.6	62.7	68.6
ES PCB-54	62.1	81.8	70
ES PCB-77	60.4	61.2	71.7
ES PCB-81	60.2	63.4	71.3
ES PCB-104	73	87.8	80.6
ES PCB-105	79.6	80.5	84.2
ES PCB-114	81.5	82.2	85.7
ES PCB-118	79.3	82.9	86
ES PCB-123	80.5	80.5	85.2
ES PCB-126	66.7	64.7	69.8
ES PCB-153	76.1	79.7	82.3
ES PCB-155	71.9	79.6	80.8
ES PCB-156/157	74.4	74.3	77.1
ES PCB-167	71.2	72 1	75
ES PCB-169	74.3	71.7	74.1
ES PCB-170	87.9	92.8	94
ES PCB-180	84.7	87.8	92.4
ES PCB-188	75.2	79.7	78.5
ES PCB-189	68.3	68	69
ES PCB-202	77	78.6	78.5
ES PCB-205	82.5	80.5	79.4
ES PCB-206	90.4	85	83.1
ES PCB-208	83.8	83.9	88.1
ES PCB-209	88.1	84.7	81.2
Checkcode	320-132-FTP/A	740-703-FZT/A	684-576-GWX/A

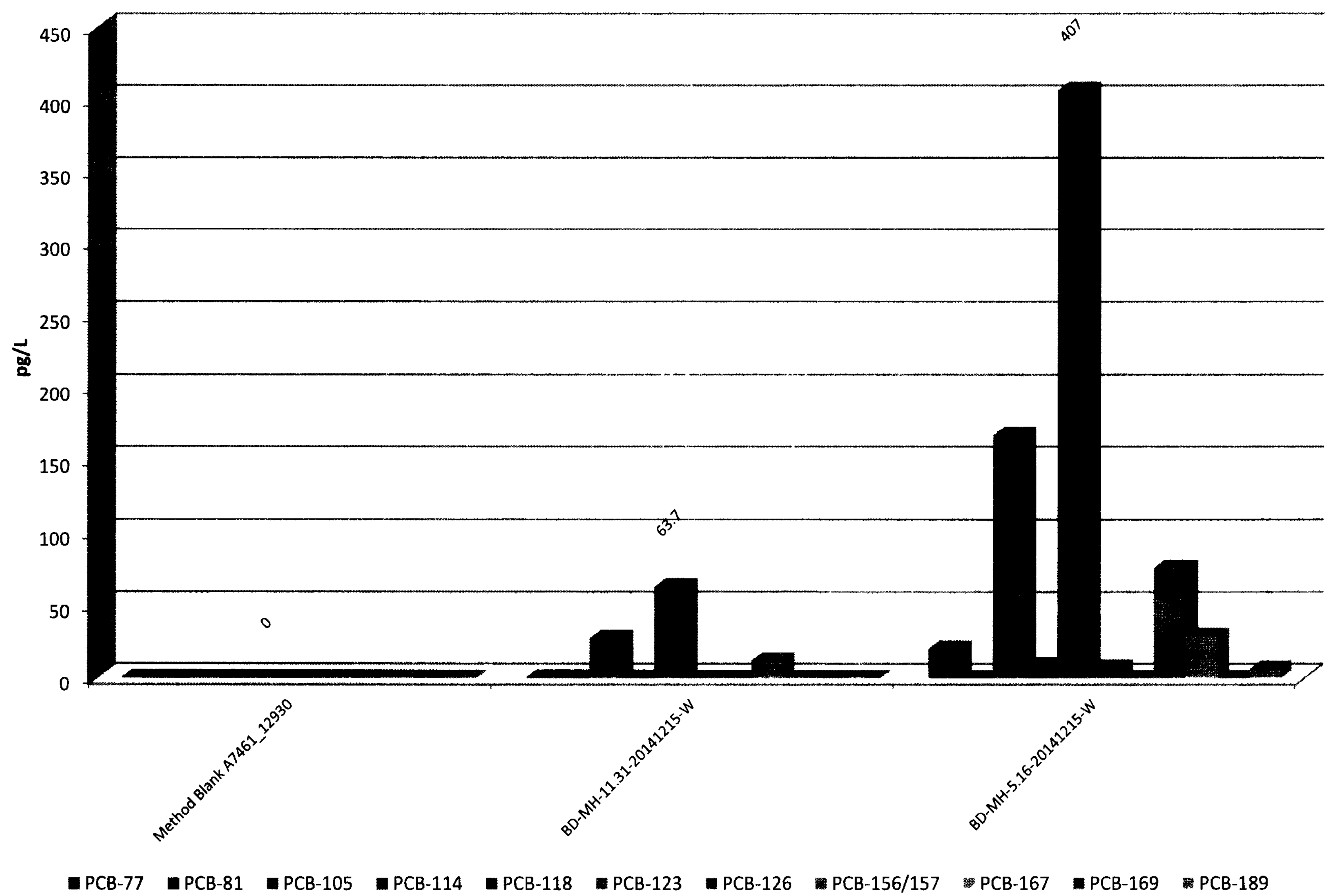
PCB Homologues
Project ID: NPDES
A7461



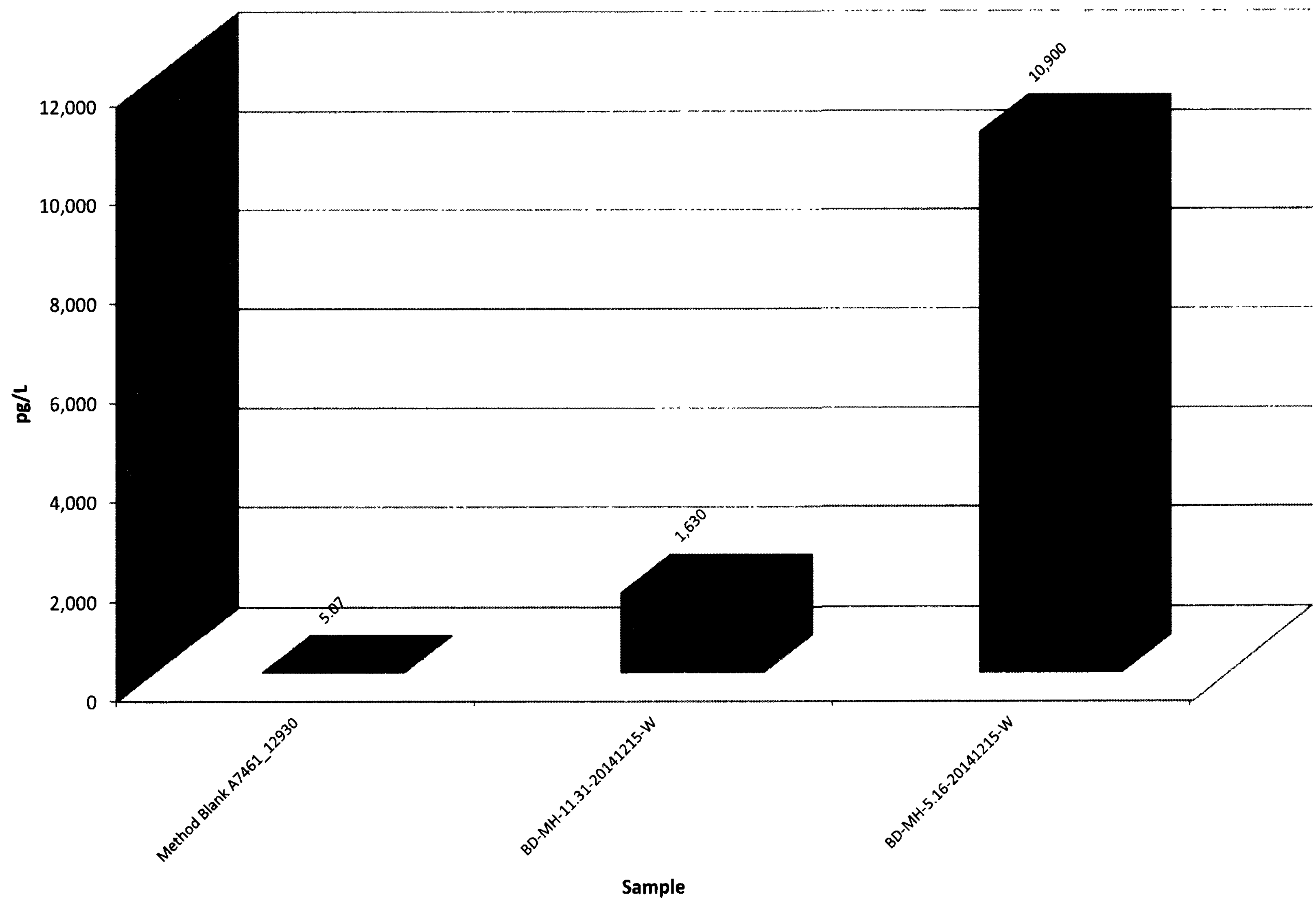

PCB TEQ
Project ID: NPDES
A7461
pg/L
1.2
1
0.8
0.6
0.4
0.2
0
0
0.00312
0.0232
Method Blank A7461_12930
BD-MH-11.31-20141215-W
BD-MH-5.16-20141215-W
ND = 0; EMPC = 0
ND = 0; EMPC = EMPC
ND = DL/2; EMPC = 0
ND = DL/2; EMPC = EMPC
ND = DL; EMPC = 0
ND = DL; EMPC = EMPC

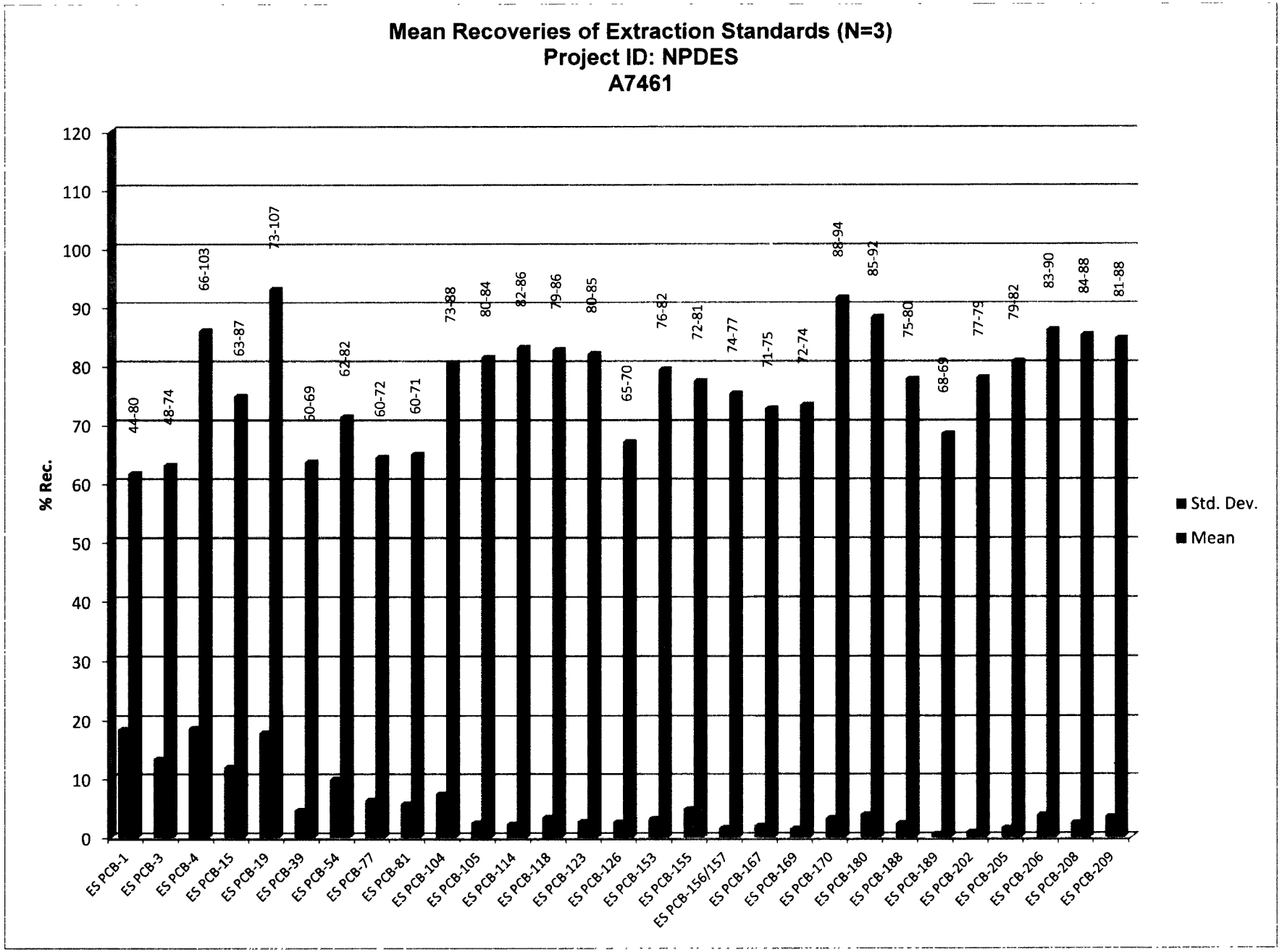
ZP17 : 00128

PCB WHO
Project ID: NPDES
A7461



Total PCBs
Project ID: NPDES
A7461




Mean Recoveries of Extraction Standards (N=3)
Project ID: NPDES
A7461
% Rec.
120
110
100
90
80
70
60
50
40
30
20
10
0
44-80
48-74
66-103
63-87
73-107
50-69
62-82
60-72
60-71
73-88
80-84
82-86
79-86
80-85
65-70
76-82
72-81
74-77
71-75
72-74
88-94
85-92
75-80
68-69
77-79
79-82
83-90
84-88
81-88
ES PCB-1
ES PCB-3
ES PCB-4
ES PCB-15
ES PCB-19
ES PCB-39
ES PCB-54
ES PCB-77
ES PCB-81
ES PCB-104
ES PCB-105
ES PCB-114
ES PCB-118
ES PCB-123
ES PCB-126
ES PCB-153
ES PCB-155
ES PCB-156/157
ES PCB-167
ES PCB-169
ES PCB-170
ES PCB-180
ES PCB-188
ES PCB-189
ES PCB-202
ES PCB-205
ES PCB-206
ES PCB-208
ES PCB-209
Std. Dev.
Mean

SGS

Sample ID: Method Blank A7461_12930

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix:	Aqueous	Project No..	A7461	Date Received:	n/a
Project ID:	NPDES	Weight/Volume:	1.00 L	Sample ID.	MB1_12930_PCB_TLX-RJ	Date Extracted:	29-Dec-2014
Date Collected:	n/a	pH	n/a	QC Batch No.:	12930	Date Analyzed:	13-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**3.23**			**ES PCB-1**	**43.6**
PCB-81 344'5-TeCB	ND	3.35			ES PCB-3	48.1
PCB-105 233'44'-PeCB	**ND**	**2.82**			**ES PCB-4**	**66**
PCB-114 2344'5-PeCB	ND	2.57			ES PCB-15	62.7
PCB-118 23'44'5-PeCB	**ND**	**2.52**			**ES PCB-19**	**72.9**
PCB-123 23'44'5'-PeCB	ND	2.56			ES PCB-37	59.6
PCB-126 33'44'5-PeCB	**ND**	**4.24**			**ES PCB-54**	**62.1**
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	4.49		C	ES PCB-77	60.4
PCB-167 23'44'55'-HxCB	**ND**	**2.88**			**ES PCB-81**	**60.2**
PCB-169 33'44'55'-HxCB	ND	3.22			ES PCB-104	73
PCB-189 233'44'55'-HpCB	**ND**	**3.35**			**ES PCB-105**	**79.6**
					ES PCB-114	81.5
TEQs (WHO 2005 M/H)					**ES PCB-118**	**79.3**
					ES PCB-123	80.5
ND = 0	**0**		**0**		**ES PCB-126**	**66.7**
ND = 0.5 x DL	0.261		0.261		ES PCB-153	76.1
ND = DL	**0.523**		**0.523**		**ES PCB-155**	**71.9**
					ES PCB-156/157	74.4
Totals					**ES PCB-167**	**71.2**
Mono-CB	ND	3.36			ES PCB-169	74.3
Di-CB	**ND**	**6.91**			**ES PCB-170**	**87.9**
Tri-CB	ND	3.95			ES PCB-180	84.7
Tetra-CB	**5.07**				**ES PCB-188**	**75.2**
Penta-CB	ND	2.87			ES PCB-189	68.3
Hexa-CB	**ND**	**3.23**			**ES PCB-202**	**77**
Hepta-CB	ND	3.35			ES PCB-205	82.5
Octa-CB	**ND**	**3.85**			**ES PCB-206**	**90.4**
Nona-CB	ND	5.01			ES PCB-208	83.8
Deca-CB	**ND**	**6.22**			**ES PCB-209**	**88.1**
					CS PCB-28	74.7
Total PCB (Mono-Deca)	**5.07**		**5.07**		**CS PCB-111**	**95.2**
					CS PCB-178	91.2

Checkcode: 320-132-FTP/A SGS Environmental Services - PCB v0.34 Report Created. 13-Jan-2015 14.53 Analyst: SF

ZL-17-0512

Sample ID: Method Blank A7461_12930 — Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix	Aqueous	Project No.	A7461	Date Received	n/a
Project ID	NPDES	Weight/Volume	1.00 L	Sample ID	MB1_12930_PCB_TLX-RJ	Date Extracted	29-Dec-2014
Date Collected	n/a	pH	n/a	QC Batch No.	12930	Date Analyzed	13-Jan-2015
		Units	pg/L	Checkcode	320-132-FTP/A	Time Analyzed	00.30 01

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(3.01)		PCB-19	(4.62)		PCB-54	(2.32)		PCB-72	(2.83)	
PCB-2	**(3.77)**		[illegible]	[illegible]	C	**PCB-50/53**	**(3.18)**	C	**PCB-68**	**(2.59)**	
PCB-3	(3.72)		PCB-17	(4.16)		PCB-45	(4.01)		PCB-57	(2.93)	
			PCB-27	[illegible]		**PCB-51**	**(3.55)**		**PCB-58**	**(2.91)**	
Conc.	0		PCB-24	(3 16)		PCB-46	(4.06)		PCB-67	(2.82)	
EMPC	0		PCB-16	[illegible]		**PCB-52**	**5.07**	J	**PCB-63**	**(2.66)**	
			PCB-32	(2.91)		PCB-73	(2 68)		PCB-61/70/74/76	(2.84)	C
DI	**Conc.**	**Qualifiers**	PCB-34	[illegible]		**PCB-43**	**(4.22)**		**PCB-66**	**(3.11)**	
PCB-4	(7 35)		PCB-23	(2.75)		PCB-69/49	(2.8)	C	PCB-55	(2.92)	
PCB-10	**(4.8)**		[illegible]	[illegible]	C	**PCB-48**	**(3.39)**		**PCB-56**	**(3.11)**	
PCB-9	(6.08)		PCB-25	(2.78)		PCB-44/47/65	(3 13)	C	PCB-60	(2.93)	
PCB-7	**(5.26)**		PCB-31	[illegible]		**PCB-59/62/75**	**(2.45)**	C	**PCB-80**	**(2.53)**	
PCB-6	(5.61)		PCB-28/20	(2.86)	C	PCB-42	(3.57)		PCB-79	(2 74)	
PCB-5	**(5.86)**		[illegible]	[illegible]	C	**PCB-41**	**(4.15)**		**PCB-78**	**(3.28)**	
PCB-8	(5 36)		PCB-22	(2.98)		PCB-71/40	(3.26)	C	PCB-81	(3.35)	
PCB-14	**(4.92)**		[illegible]	[illegible]		**PCB-64**	**(2.36)**		**PCB-77**	**(3.23)**	
PCB-11	(5 93)		PCB-39	(2.72)							
PCB-13/12	**(5.86)**	C	[illegible]	[illegible]							
PCB-15	(6 47)		PCB-35	(3 14)							
			PCB-37	[illegible]							
Conc.	**0**		**Conc.**	[illegible]					**Conc.**	**5.07**	
EMPC	0		EMPC	0					EMPC	5.07	

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Wilmington, NC 28405, USA
Tel +1 910 794-1613
www us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	0	0
Tetra-Hexa	5.07	5.07
Hepta-Deca	0	0
Mono-Deca	5 07	5.07

SGS

Sample ID: Method Blank A7461_12930 — Method 1668A

[redacted]						Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(2.49)		PCB-108/119/86/97/125/87	(2.7)	C	PCB-155	(2.33)		PCB-165	(2 6)	
[redacted]						PCB-152	(2.27)		PCB-146	(2.9)	
PCB-103	(2 93)		PCB-116/85	(2 94)	C	PCB-150	(2.16)		PCB-161	(2.31)	
[redacted]						PCB-136	(2.41)		PCB-153/168	(2.41)	C
PCB-95	(3.13)		PCB-115	(2 54)		PCB-145	(2.33)		PCB-141	(3.1)	
[redacted]						PCB-148	(2.99)		PCB-130	(3.46)	
PCB-102	(2 98)		PCB-111	(2 3)		PCB-151/135	(3.07)	C	PCB-137	(2.92)	
[redacted]						PCB-154	(2.69)		PCB-164	(2.29)	
PCB-88	(3.75)		PCB-107/124	(2.5)	C	PCB-144	(2.97)		PCB-163/138/129	(2.85)	C
[redacted]						PCB-147/149	(2.94)	C	PCB-160	(2.32)	
PCB-84	(3.64)		PCB-123	(2.56)		PCB-134	(3 48)		PCB-158	(2 15)	
[redacted]						PCB-143	(3.28)		PCB-128/166	(3.36)	C
PCB-121	(2.27)		PCB-118	(2.52)		PCB-139/140	(2.94)	C	PCB-159	(2 99)	
[redacted]						PCB-131	(3.33)		PCB-162	(2.83)	
PCB-113/90/101	(2.79)	C	PCB-114	(2 57)		PCB-142	(3.37)		PCB-167	(2 88)	
[redacted]						PCB-132	(3.32)		PCB-156/157	(4.49)	C
PCB-99	(2 78)		PCB-127	(2.73)		PCB-133	(3.22)		PCB-169	(3 22)	
[redacted]									Conc.	0	
			EMPC	0					EMPC	0	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	[redacted]			Nona	Conc.	Qualifiers
PCB-188	(2.13)		PCB-174	(4.21)		PCB-202	(3.18)		PCB-208	(4.41)	
PCB-179	(2.16)		PCB-177	(4.19)		[redacted]			PCB-207	(4.06)	
PCB-184	(2.21)		PCB-181	(3.77)		PCB-204	(3.12)		PCB-206	(5.61)	
PCB-176	(1.97)		PCB-171/173	(4.17)	C	[redacted]					
PCB-186	(2.13)		PCB-172	(4.1)		PCB-200	(2 83)		Conc.	0	
PCB-178	(2.87)		PCB-192	(3.13)		[redacted]			EMPC	0	
PCB-175	(3.81)		PCB-180/193	(3.34)	C	PCB-196	(4.18)				
PCB-187	(3.85)		PCB-191	(3.01)		[redacted]			Deca	Conc.	Qualifiers
PCB-182	(3.54)		PCB-170	(4 11)		PCB-195	(5.88)		PCB-209	(6 22)	
PCB-183	(3.51)		PCB-190	(3)		[redacted]					
PCB-185	(3.71)		PCB-189	(3.35)		PCB-205	(4 51)				
			Conc.	0		[redacted]					
			EMPC	0		EMPC	0				

ZP17:00134

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Sample ID: BD-MH-11.31-20141215-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc.	Matrix:	Aqueous	Project No.:	A7461	Date Received:	16-Dec-2014
Project ID:	NPDES	Weight/Volume:	1.04 L	Sample ID	A7461_12930_PCB_001-RJ	Date Extracted:	29-Dec-2014
Date Collected:	15-Dec-2014	pH	7	QC Batch No.	12930	Date Analyzed.	13-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**7.55**			**ES PCB-1**	**80.5**
PCB-81 344'5-TeCB	ND	6.67			ES PCB-3	73.7
PCB-105 233'44'-PeCB	**28.1**				**ES PCB-4**	**103**
PCB-114 2344'5-PeCB	ND	7.02			ES PCB-15	75.1
PCB-118 23'44'5-PeCB	**63.7**				**ES PCB-19**	**107**
PCB-123 23'44'5'-PeCB	ND	7.11			ES PCB-37	62.7
PCB-126 33'44'5-PeCB	**ND**	**8.86**			**ES PCB-54**	**81.8**
PCB-156/157 233'44'5/233'44'5'-HxCB	12.4			J C	ES PCB-77	61.2
PCB-167 23'44'55'-HxCB	**ND**	**6.79**			**ES PCB-81**	**63.4**
PCB-169 33'44'55'-HxCB	ND	8.47			ES PCB-104	87.8
PCB-189 233'44'55'-HpCB	**ND**	**7.61**			**ES PCB-105**	**80.5**
					ES PCB-114	82.2
TEQs (WHO 2005 M/H)					**ES PCB-118**	**82.9**
					ES PCB-123	80.5
ND = 0	**0.00312**		**0.00312**		**ES PCB-126**	**64.7**
ND = 0.5 x DL	0.575		0.575		ES PCB-153	79.7
ND = DL	**1.15**		**1.15**		**ES PCB-155**	**79.6**
					ES PCB-156/157	74.3
Totals					**ES PCB-167**	**72.1**
Mono-CB	ND	4.16			ES PCB-169	71.7
Di-CB	**19.5**				**ES PCB-170**	**92.8**
Tri-CB	148		186		ES PCB-180	87.8
Tetra-CB	**357**		**370**		**ES PCB-188**	**79.7**
Penta-CB	479		506		ES PCB-189	68
Hexa-CB	**454**		**463**		**ES PCB-202**	**78.6**
Hepta-CB	158		169		ES PCB-205	80.5
Octa-CB	**15.3**				**ES PCB-206**	**85**
Nona-CB	ND	11.5			ES PCB-208	83.9
Deca-CB	**ND**	**14**			**ES PCB-209**	**84.7**
					CS PCB-28	75.2
Total PCB (Mono-Deca)	**1,630**		**1,730**		**CS PCB-111**	**91.6**
					CS PCB-178	87.2

Checkcode: 740-703-FZT/A SGS Environmental Services - PCB v0.34 Report Created: 13-Jan-2015 14:53 Analyst: SF

Sample ID: BD-MH-11.31-20141215-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc	Matrix	Aqueous	Project No	A7461	Date Received.	16-Dec-2014
Project ID	NPDES	Weight/Volume	1.04 L	Sample ID	A7461_12930_PCB_001-RJ	Date Extracted	29-Dec-2014
Date Collected:	15-Dec-2014	pH	7	QC Batch No.	12930	Date Analyzed	13-Jan-2015
		Units	pg/L	Checkcode	740-703-FZT/A	Time Analyzed.	01 26 43

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(3.32)		PCB-19	[7.58]	J EMPC	PCB-54	(3.88)		PCB-72	(5.63)	
PCB-2	**(5.06)**		PCB-30/18	[illegible]	C	**PCB-50/53**	**18.7**	**J C**	**PCB-68**	**(5.15)**	
PCB-3	(5)		PCB-17	9.82		PCB-45	(8.61)		PCB-57	(5.82)	
			PCB-27	[illegible]	J EMPC	**PCB-51**	**7.63**	**J**	**PCB-58**	**(5.78)**	
Conc.	0		PCB-24	(4.06)		PCB-46	(8.71)		PCB-67	(5.61)	
EMPC	**0**		PCB-16	[illegible]	J EMPC	**PCB-52**	**75.4**		**PCB-63**	**(5.34)**	
			PCB-32	14.5		PCB-73	(5.75)		PCB-61/70/74/76	59	C
Di	**Conc.**	**Qualifiers**	[illegible]	[illegible]		**PCB-43**	**(9.04)**		**PCB-66**	**42**	
PCB-4	11		PCB-23	(6.22)		PCB-69/49	42.4	C	PCB-55	(5.81)	
PCB-10	**(5.15)**		PCB-26/29	[illegible]	J C	**PCB-48**	**(7.27)**		**PCB-56**	**20.6**	
PCB-9	(9.08)		PCB-25	(6.3)		PCB-44/47/65	54.4	C	PCB-60	(5.82)	
PCB-7	**(7.85)**		[illegible]	[illegible]		**PCB-59/62/75**	**(5.26)**	**C**	**PCB-80**	**(5.04)**	
PCB-6	(8.38)		PCB-28/20	48 5	C	PCB-42	[13]	EMPC	PCB-79	(5.44)	
PCB-5	**(8.48)**		PCB-21/33	[illegible]	J EMPC C	**PCB-41**	**(6.9)**		**PCB-78**	**(6.53)**	
PCB-8	8.56	J	PCB-22	11.1		PCB-71/40	23.5	C	PCB-81	(6 67)	
PCB-14	**(7.36)**		[illegible]	[illegible]		**PCB-64**	**15.9**		**PCB-77**	**(7.55)**	
PCB-11	(8.86)		PCB-39	(6.15)							
PCB-13/12	**(8.75)**	**C**	[illegible]	[illegible]							
PCB-15	(9.67)		PCB-35	(7 11)							
			PCB-37	[illegible]	EMPC						
Conc.	**19.5**		Conc.	[illegible]					**Conc.**	**357**	
EMPC	19 5		**EMPC**	186					**EMPC**	370	

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Totals	Conc.	EMPC
Mono-Tri	168	205
Tetra-Hexa	1,290	1,340
Hepta-Deca	173	185
Mono-Deca	1,630	1,730

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Sample ID: BD-MH-11.31-20141215-W

Method 1668A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(5.1)		PCB-108/119/86/97/125/87	52.6	J C	PCB-155	(4.65)		PCB-165	(5.34)	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-152	(4.52)		PCB-146	14.7	
PCB-103	(8.14)		PCB-116/85	(8.17)	C	PCB-150	(4 3)		PCB-161	(4.74)	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-136	14.7		PCB-153/168	84.3	C
PCB-95	73.3		PCB-115	(7.06)		PCB-145	(4.65)		PCB-141	19.6	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-148	(6.15)		PCB-130	(7.11)	
PCB-102	(8.28)		PCB-111	(6 39)		PCB-151/135	33.8	C	PCB-137	(6.01)	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-154	(5.54)		PCB-164	[9.1]	J EMPC
PCB-88	(10.4)		PCB-107/124	(6 95)	C	PCB-144	(6.11)		PCB-163/138/129	119	C
[illegible]	[illegible]		[illegible]	[illegible]		PCB-147/149	85.7	C	PCB-160	(4.77)	
PCB-84	[26.7]	EMPC	PCB-123	(7.11)		PCB-134	(7.15)		PCB-158	10.8	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-143	(6.74)		PCB-128/166	18.5	J C
PCB-121	(6.31)		PCB-118	63.7		PCB-139/140	(6.03)	C	PCB-159	(7.03)	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-131	(6.84)		PCB-162	(6.66)	
PCB-113/90/101	76.1	C	PCB-114	(7.02)		PCB-142	(6.93)		PCB-167	(6.79)	
[illegible]	[illegible]		[illegible]	[illegible]		PCB-132	40.1		PCB-156/157	12.4	J C
PCB-99	37.6		PCB-127	(7 33)		PCB-133	(6 61)		PCB-169	(8.47)	
[illegible]	[illegible]		[illegible]	[illegible]							
[illegible]	[illegible]		[illegible]	[illegible]					Conc.	454	
			EMPC	506					EMPC	463	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	[illegible]	[illegible]	[illegible]	Nona	Conc.	Qualifiers
PCB-188	(4.26)		PCB-174	29.1		PCB-202	(6.58)		PCB-208	(9.9)	
PCB-179	11.9		PCB-177	[11.8]	EMPC	[illegible]	[illegible]		PCB-207	(9.12)	
PCB-184	(4 43)		PCB-181	(8 49)		PCB-204	(6.46)		PCB-206	(13)	
PCB-176	(3.94)		PCB-171/173	(9.38)	C	[illegible]	[illegible]				
PCB-186	(4.26)		PCB-172	(9.23)		PCB-200	(5 86)		Conc.	0	
PCB-178	(5.75)		PCB-192	(7.05)		[illegible]	[illegible]	[illegible]	EMPC	0	
PCB-175	(8.57)		PCB-180/193	52 2	C	PCB-196	(8.65)				
PCB-187	26		PCB-191	(6.77)		[illegible]	[illegible]		Deca	Conc.	Qualifiers
PCB-182	(7.97)		PCB-170	23.9		PCB-195	(11.7)		PCB-209	(14)	
PCB-183	14.6		PCB-190	(7)		[illegible]	[illegible]				
PCB-185	(8.36)		PCB-189	(7 61)		PCB-205	(9)				
			Conc.	158		[illegible]	[illegible]				
			EMPC	169		EMPC	15.3				

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Sample ID: BD-MH-5.16-20141215-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc.	Matrix:	Aqueous	Project No.	A7461	Date Received:	16-Dec-2014
Project ID:	NPDES	Weight/Volume.	1.03 L	Sample ID	A7461_12930_PCB_002-RJ	Date Extracted:	29-Dec-2014
Date Collected	15-Dec-2014	pH	7	QC Batch No.	12930	Date Analyzed	13-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**20.5**				**ES PCB-1**	**60.9**
PCB-81 344'5-TeCB	ND	2.51			ES PCB-3	67.5
PCB-105 233'44'-PeCB	**168**				**ES PCB-4**	**88.9**
PCB-114 2344'5-PeCB	8.89			J	ES PCB-15	86.6
PCB-118 23'44'5-PeCB	**407**				**ES PCB-19**	**99.2**
PCB-123 23'44'5'-PeCB	7.36			J	ES PCB-37	68.6
PCB-126 33'44'5-PeCB	**ND**	**2.62**			**ES PCB-54**	**70**
PCB-156/157 233'44'5/233'44'5'-HxCB	76.9			C	ES PCB-77	71.7
PCB-167 23'44'55'-HxCB	**29.9**				**ES PCB-81**	**71.3**
PCB-169 33'44'55'-HxCB	ND	3.86			ES PCB-104	80.6
PCB-189 233'44'55'-HpCB	**6.62**			**J**	**ES PCB-105**	**84.2**
					ES PCB-114	85.7
TEQs (WHO 2005 M/H)					**ES PCB-118**	**86**
					ES PCB-123	85.2
ND = 0	**0.0232**		**0.0232**		**ES PCB-126**	**69.8**
ND = 0.5 x DL	0.213		0.213		ES PCB-153	82.3
ND = DL	**0.402**		**0.402**		**ES PCB-155**	**80.8**
					ES PCB-156/157	77.1
Totals					**ES PCB-167**	**75**
Mono-CB	ND	2.25			ES PCB-169	74.1
Di-CB	**50.7**				**ES PCB-170**	**94**
Tri-CB	280				ES PCB-180	92.4
Tetra-CB	**938**		**956**		**ES PCB-188**	**78.5**
Penta-CB	3,250		3,270		ES PCB-189	69
Hexa-CB	**4,100**				**ES PCB-202**	**78.5**
Hepta-CB	1,880				ES PCB-205	79.4
Octa-CB	**350**				**ES PCB-206**	**83.1**
Nona-CB	20.5				ES PCB-208	88.1
Deca-CB	**ND**	**6.78**			**ES PCB-209**	**81.2**
					CS PCB-28	75
Total PCB (Mono-Deca)	**10,900**		**10,900**		**CS PCB-111**	**96.6**
					CS PCB-178	86.5

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Sample ID: BD-MH-5.16-20141215-W

Method 1668A

Client Data		**Sample Data**		**Laboratory Data**			
Name	Analytical Resources, Inc	Matrix	Aqueous	Project No.	A7461	Date Received	16-Dec-2014
Project ID	NPDES	Weight/Volume	1 03 L	Sample ID	A7461_12930_PCB_002-RJ	Date Extracted	29-Dec-2014
Date Collected	15-Dec-2014	pH	7	QC Batch No.	12930	Date Analyzed.	13-Jan-2015
		Units	pg/L	Checkcode	684-576-GWX/A	Time Analyzed	02.23 19

Mono	Conc.	Qualifiers	[redacted]			Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(2 05)		PCB-19	6 35	J	PCB-54	2 34	J	PCB-72	(2 12)	
PCB-2	**(2.49)**		[redacted]			**PCB-50/53**	**25**	**C**	**PCB-68**	**(1.93)**	
PCB-3	(2 46)		PCB-17	17		PCB-45	12		PCB-57	(2 19)	
			[redacted]			**PCB-51**	**[12.8]**	**EMPC**	**PCB-58**	**(2.17)**	
Conc.	0		PCB-24	(2.37)		PCB-46	[5 04]	J EMPC	PCB-67	(2.11)	
EMPC	**0**		[redacted]			**PCB-52**	**212**		**PCB-63**	**(2.01)**	
			PCB-32	20.9		PCB-73	(2.25)		PCB-61/70/74/76	202	C
Di	**Conc.**	**Qualifiers**	[redacted]			**PCB-43**	**(3.54)**		**PCB-66**	**99.5**	
PCB-4	8 85	J	PCB-23	(2.54)		PCB-69/49	70 3	C	PCB-55	(2.19)	
PCB-10	**(2.57)**		[redacted]			**PCB-48**	**8.87**	**J**	**PCB-56**	**47.5**	
PCB-9	(4.69)		PCB-25	7.98	J	PCB-44/47/65	121	C	PCB-60	18.6	
PCB-7	**(4.06)**		[redacted]			**PCB-59/62/75**	**5.36**	**J C**	**PCB-80**	**(1.89)**	
PCB-6	(4.33)		PCB-28/20	60	C	PCB-42	21.5		PCB-79	(2 05)	
PCB-5	**(4.38)**		[redacted]			**PCB-41**	**(3.48)**		**PCB-78**	**(2.46)**	
PCB-8	6.11	J	PCB-22	18.2		PCB-71/40	37.6	C	PCB-81	(2.51)	
PCB-14	**(3.8)**		[redacted]			**PCB-64**	**34.5**		**PCB-77**	**20.5**	
PCB-11	22.2		PCB-39	(2.51)							
PCB-13/12	**(4.52)**	**C**	[redacted]								
PCB-15	13.5		PCB-35	(2.9)							
			[redacted]								
Conc.	**50.7**		[redacted]						**Conc.**	**938**	
EMPC	50.7		EMPC	280					EMPC	956	

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Totals	Conc.	EMPC
Mono-Tri	330	330
Tetra-Hexa	8,290	8,330
Hepta-Deca	2,250	2,250
Mono-Deca	10,900	10,900

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Sample ID: BD-MH-5.16-20141215-W — Method 1668A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.45)		PCB-108/119/86/97/125/87	326	C	PCB-155	(1 54)		PCB-165	(1.81)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-152	(1.5)		PCB-146	118	
PCB-103	(2 72)		PCB-116/85	76.7	C	PCB-150	(1.43)		PCB-161	(1 6)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-136	104		PCB-153/168	703	C
PCB-95	385		PCB-115	16		PCB-145	(1.54)		PCB-141	199	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-148	(2.08)		PCB-130	55.9	
PCB-102	10 1		PCB-111	(2.13)		PCB-151/135	283	C	PCB-137	36 3	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-154	8.97	J	PCB-164	66.8	
PCB-88	(3.48)		PCB-107/124	16.7	J C	PCB-144	42 8		PCB-163/138/129	1,010	C
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-147/149	711	C	PCB-160	(1.62)	
PCB-84	115		PCB-123	7.36	J	PCB-134	50 1		PCB-158	91 8	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-143	(2.28)		PCB-128/166	137	C
PCB-121	(2.11)		PCB-118	407		PCB-139/140	15 1	J C	PCB-159	7 72	J
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-131	13.2		PCB-162	(3.17)	
PCB-113/90/101	522	C	PCB-114	8 89	J	PCB-142	(2 35)		PCB-167	29 9	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-132	327		PCB-156/157	76.9	C
PCB-99	187		PCB-127	(2.34)		PCB-133	13		PCB-169	(3.86)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				Conc.	4,100	
			EMPC	3,270					EMPC	4,100	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	[illegible]	[illegible]	[illegible]	Nona	Conc.	Qualifiers
PCB-188	(1.61)		PCB-174	277		PCB-202	13.9		PCB-208	6.73	J
PCB-179	67.8		PCB-177	144		[illegible]	[illegible]	[illegible]	PCB-207	(3.83)	
PCB-184	(1 67)		PCB-181	(2.66)		PCB-204	(2.82)		PCB-206	13.7	
PCB-176	25.4		PCB-171/173	71.5	C	[illegible]	[illegible]	[illegible]			
PCB-186	(1.61)		PCB-172	40.8		PCB-200	9.31	J	Conc.	20 5	
PCB-178	45.1		PCB-192	(2.21)		[illegible]	[illegible]	[illegible]	EMPC	20.5	
PCB-175	10 9		PCB-180/193	484	C	PCB-196	43.3				
PCB-187	261		PCB-191	9.74		[illegible]	[illegible]	[illegible]	Deca	Conc.	Qualifiers
PCB-182	(2 5)		PCB-170	227		PCB-195	38 9		PCB-209	(6 78)	
PCB-183	123		PCB-190	44.6		[illegible]	[illegible]	[illegible]			
PCB-185	18 8		PCB-189	6.62	J	PCB-205	7 51	J			
			Conc.	1,880		[illegible]	[illegible]	[illegible]			
			EMPC	1,880		EMPC	350				

ZP17 : 00140

Sample Receipt Notification

SGS

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	Heather Distel
Receipt Date & Time:	16-Dec-14 at 12:20
AP Project name:	A7461
Requested TAT:	30 days
Projected due date:	15-Jan-15
Matrix:	Aqueous
Phone#:	910-794-1613
Email Address:	Heather.Distel@sgs.com

Company Contact:	Kelly Frances Bottem
Company:	Analytical Resources, Inc.
Project Name & Site:	NPDES
Project PO#:	NA
QAAP/Contract #:	N/A
Requested Analysis:	Method 1668A
Phone#:	206-695-6211
Email Address:	kellyb@arilabs.com

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
BD-MH-11.31-20141215-W	A7461_001	14-27407-ZP17A	2	1L amber	15-Dec-14	09:10	4	1	1Z 832 695 01 5623 5494
BD-MH-5.16-20141215-W	A7461_002	14-27408-ZP17B	2	1L amber	15-Dec-14	10:30	4	1	1Z 832 695 01 5623 5494

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by Barbara Hager Logged in by Barbara Hager QC'ed by AK 16 Dec 14

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 12/15/14

ANALYTICAL RESOURCES INCORPORATED

ARI Project: ZP17

attached

Laboratory: SGS
Lab Contact: Sample Recieving
Lab Address: 5500 Buisness DR
Wilmington, NC 28405
Phone: 910.794.1613
Fax:

ARI Client: The Boeing Company
Project ID: NPDES
ARI PM: Kelly Bottem
Phone: 206-695-6211
Fax: 206-695-6201
Email: subdata@arilabs.com

Analytical Protocol: In-house
Special Instructions:

Requested Turn Around:
Email Results (Y/N): **email**

Limits of Liability. *Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or sucessors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.*

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
14-27407-ZP17A	BD-MH-11.31-20141215-W	12/15/14 09:10	Water		pcb congeners
Special Instructions: None					
14-27408-ZP17B	BD-MH-5.16-20141215-W	12/15/14 10:30	Water		pcb congeners
Special Instructions: None					

Carrier UPS	Airbill 1Z 832 695 01 5623 5494		Date 12-15-14
Relinquished by	Company ARI	Date 12-15-14	Time 1500
Received by Barbara Hagen	Company SGS	Date 16-Dec-14	Time 1220

4°

ZP17:00142

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BC
Signature

January-08-2015
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 15, 2015

Dale Meland
The Boeing Company
PO Box 3707
Seattle, WA 98124-2499

Project: NPDES
ARI Job No.: ZQ41 and ZQ42

Dear Mr. Meland:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: ZQ41, ZQ42

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
phone 253.922.2310 fax

2641

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date: 12/22/14	COC No:
	Tel/Fax:	Lab Contact:	Carrier: Courier	1 of 1 COCs

Analysis Turnaround Time
☐ CALENDAR DAYS ☑ WORKING DAYS
TAT if different from Below 3 Weeks
☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day

Phone
FAX
Project Name:
Site:
P O #

Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	PCB Congeners	Dioxins/Furans	Sample Specific Notes:
BD-OWS-14-20141222-W	12/22/14	0840	G	W	13	N		2	1	2				1	2	1	2	2	Hold Dioxin Samples
BD-MH-12.56-20141222-W	12/22/14	1010	G	W	13	N		2	1	½	½	½	½	1	2	1	2	2	Hold Dioxin Samples
BD-MH-1.32-20141222-W	12/22/14	1140	G	W	13	N		2	1	½	½	½	½	1	2	1	2	2	Hold Dioxin Samples
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH									4					3					

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by: Melissa Ivancevich	Leidos	12/22/14; 1242		Boeing	12-22-14 1242
Relinquished by:	Boeing	1259			12/22/14 1259
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing
COC No(s): _____ (NA)
Assigned ARI Job No: 7041

Project Name: _____
Delivered by. Fed-Ex UPS Courier (Hand Delivered) Other: _____
Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry): 5.1 5.1 ___ ___ ___ ___
Time: 1259
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 90837952

Cooler Accepted by: AV Date 12/22/14 Time: 1259

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		(YES)	NO
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)..	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI.	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

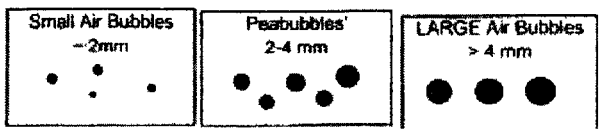
Samples Logged by: AV Date: 12/22/14 Time: 1406

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **ZQ41**

Inquiry Number: NONE
Analysis Requested: 12/22/14
Contact: Meland, Dale
Client: The Boeing Company
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 12/22/14

Project #:
Project:
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
14-28174 **ZQ41A**	BD-OWS-14-20141222-W						TOT pass					pass					N	DOC	Filtered into pre-pres. amber bottles			
14-28175 **ZQ41B**	BD-MH-12.56-20141222-W						TOT pass					pass					N					
14-28176 **ZQ41C**	BD-MH-1.32-20141222-W						TOT pass					pass					N					ee 12/22/14

TOC = unfiltered/unpreserved

Checked By AV Date 12/22/14

ZQ41 : 00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing

COC No(s): _____ (NA)

Assigned ARI Job No: ZQ43

Project Name _____

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 5.1 5.1 ___ ___ ___ ___

Time: 0859

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90270795

Cooler Accepted by: AV Date: 12/22/14 Time: 1259

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI..	(NA)	_____	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 12/22/14 Time: 1406

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
●	●	●

Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

PRESERVATION VERIFICATION 12/22/14
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **ZQ42**

Inquiry Number: NONE
Analysis Requested: 12/22/14
Contact: Meland, Dale
Client: The Boeing Company
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 12/22/14

Project #:
Project:
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
14-28177 **ZQ42A**	BD-OWS-14-20141222-W						TOT Pass															
14-28178 **ZQ42B**	BD-MH-12.56-20141222-W						TOT Pass															
14-28179 **ZQ42C**	BD-MH-1.32-20141222-W						TOT Pass															

Checked By AV Date 12/22/14

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: ZQ41, ZQ42

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: NPDES
ARI Job No.: ZQ41 and ZQ42
January 15, 2015

Sample Receipt:

Please find enclosed the original and revised chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted three samples in good condition on December 22, 2014. The samples were received with a cooler temperature of 5.1°C. Please see the Cooler Receipt Form for further details.

The PCB Congeners were subcontracted to SGS and a copy of that report has been included for your review.

Semivolatiles by Method 8270D:

The Laboratory extracted the samples on 12/26/14 and analyzed the samples on 1/6/15 within the method recommended holding time.

Initial calibration (s): Are in control.

Continuing calibration (s): The CCAL is out of control high for all associated FORM III "Q" flagged analytes with the exception of pentachlorophenol which is out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Samples: There were no anomalies associated with these samples.

Surrogates: Are in control.

LCS/LCSD (s): Are in control.

Method Blank: The method blank is non-detect.

Total Metals by 200.8 and 7470A

The samples were digested on 12/22/14 and 12/24/14 and analyzed between 12/23/14 and 12/31/14 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): All method blanks were free of contamination.

LCS: Is in control.

Matrix spike/ Matrix spike duplicate/RPD (s): Is in control.

Conventionals Analyses:

The Laboratory analyzed the samples between 12/22/14 and 12/30/14 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Method Blank (s): The method blank is non-detect.

Samples: There were no anomalies associated with these samples.

Matrix spike /RPDs: Are in control.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ZQ41
Client: The Boeing Company
Project Event: N/A
Project Name: N/A

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	BD-OWS-14-20141222-W	ZQ41A	14-28174	Water	12/22/14 08:40	12/22/14 12:59
2.	BD-MH-12.56-20141222-W	ZQ41B	14-28175	Water	12/22/14 10:10	12/22/14 12:59
3.	BD-MH-1.32-20141222-W	ZQ41C	14-28176	Water	12/22/14 11:40	12/22/14 12:59

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ZQ42
Client: The Boeing Company
Project Event: N/A
Project Name: N/A

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	BD-OWS-14-20141222-W	ZQ42A	14-28177	Water	12/22/14 08:40	12/22/14 12:59
2.	BD-MH-12.56-20141222-W	ZQ42B	14-28178	Water	12/22/14 10:10	12/22/14 12:59
3.	BD-MH-1.32-20141222-W	ZQ42C	14-28179	Water	12/22/14 11:40	12/22/14 12:59

Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
8270D SVOC in Water (EPA 8270D)								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 8 oz		**Amount Required:** 200 g				**Hold Time:** 14 days		
Phenol	0.271	1.00 ug/kg		30	48 - 120	30	48 - 120	30
bis(2-chloroethyl) ether	0.248	1.00 ug/kg		30	50 - 120	30	50 - 120	30
2-Chlorophenol	0.220	1.00 ug/kg		30	48 - 120	30	48 - 120	30
1,3-Dichlorobenzene	0.266	1.00 ug/kg		30	24 - 120	30	24 - 120	30
1,4-Dichlorobenzene	0.267	1.00 ug/kg		30	24 - 120	30	24 - 120	30
Benzyl Alcohol	0.552	2.00 ug/kg		30	26 - 120	30	26 - 120	30
1,2-Dichlorobenzene	0.250	1.00 ug/kg		30	28 - 120	30	28 - 120	30
2-Methylphenol	0.211	1.00 ug/kg		30	44 - 120	30	44 - 120	30
2,2'-Oxybis(1-chloropropane)	0.241	1.00 ug/kg		30	47 - 120	30	47 - 120	30
4-Methylphenol	0.468	2.00 ug/kg		30	48 - 120	30	48 - 120	30
N-Nitroso-di-n-Propylamine	0.269	1.00 ug/kg		30	50 - 120	30	50 - 120	30
Hexachloroethane	0.300	2.00 ug/kg		30	18 - 120	30	18 - 120	30
Nitrobenzene	0.253	1.00 ug/kg		30	49 - 120	30	49 - 120	30
Isophorone	0.423	1.00 ug/kg		30	57 - 120	30	57 - 120	30
2-Nitrophenol	0.263	3.00 ug/kg		30	47 - 120	30	47 - 120	30
2,4-Dimethylphenol	1.12	3.00 ug/kg		30	37 - 120	30	37 - 120	30
Bis(2-Chloroethoxy)methane	0.237	1.00 ug/kg		30	48 - 120	30	48 - 120	30
Benzoic acid	3.92	20.0 ug/kg		30	37 - 120	30	37 - 120	30
2,4-Dichlorophenol	1.11	3.00 ug/kg		30	54 - 120	30	54 - 120	30
1,2,4-Trichlorobenzene	0.254	1.00 ug/kg		30	28 - 120	30	28 - 120	30
Naphthalene	0.246	1.00 ug/kg		30	34 - 120	30	34 - 120	30
4-Chloroaniline	1.73	5.00 ug/kg		30	10 - 132	30	10 - 132	30
Hexachlorobutadiene	0.335	3.00 ug/kg		30	18 - 120	30	18 - 120	30
4-Chloro-3-Methylphenol	1.12	3.00 ug/kg		30	59 - 120	30	59 - 120	30
2-Methylnaphthalene	0.295	1.00 ug/kg		30	27 - 120	30	27 - 120	30
Hexachlorocyclopentadiene	1.08	5.00 ug/kg		30	16 - 120	30	16 - 120	30
2,4,6-Trichlorophenol	1.04	3.00 ug/kg		30	53 - 120	30	53 - 120	30
2,4,5-Trichlorophenol	1.10	5.00 ug/kg		30	58 - 120	30	58 - 120	30
2-Chloronaphthalene	0.248	1.00 ug/kg		30	42 - 120	30	42 - 120	30
2-Nitroaniline	1.46	3.00 ug/kg		30	31 - 120	30	31 - 120	30
Dimethylphthalate	0.259	1.00 ug/kg		30	61 - 120	30	61 - 120	30
Acenaphthylene	0.268	1.00 ug/kg		30	46 - 120	30	46 - 120	30
2,6-Dinitrotoluene	1.14	3.00 ug/kg		30	52 - 120	30	52 - 120	30
3-Nitroaniline	1.53	3.00 ug/kg		30	36 - 120	30	36 - 120	30
Acenaphthene	0.254	1.00 ug/kg		30	43 - 120	30	43 - 120	30
2,4-Dinitrophenol	3.35	20.0 ug/kg		30	40 - 120	30	40 - 120	30
Dibenzofuran	0.309	1.00 ug/kg		30	36 - 120	30	36 - 120	30
4-Nitrophenol	1.75	10.0 ug/kg		30	44 - 129	30	44 - 129	30
2,4-Dinitrotoluene	1.12	3.00 ug/kg		30	51 - 120	30	51 - 120	30
Fluorene	0.291	1.00 ug/kg		30	42 - 120	30	42 - 120	30
Diethyl phthalate	0.273	1.00 ug/kg		30	60 - 120	30	60 - 120	30
4-Chlorophenylphenyl ether	0.267	1.00 ug/kg		30	54 - 120	30	54 - 120	30
4-Nitroaniline	2.02	3.00 ug/kg		30	25 - 132	30	25 - 132	30
4,6-Dinitro-2-methylphenol	3.61	10.0 ug/kg		30	56 - 120	30	56 - 120	30
N-Nitrosodiphenylamine	0.299	1.00 ug/kg		30	48 - 120	30	48 - 120	30
4-Bromophenyl phenyl ether	0.238	1.00 ug/kg		30	56 - 120	30	56 - 120	30

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Hexachlorobenzene	0.280	1.00 ug/kg		30	54 - 120	30	54 - 120	30
Pentachlorophenol	1.89	10.0 ug/kg		30	40 - 131	30	40 - 131	30
Phenanthrene	0.318	1.00 ug/kg		30	53 - 120	30	53 - 120	30
Anthracene	0.265	1.00 ug/kg		30	47 - 120	30	47 - 120	30
Carbazole	0.310	1.00 ug/kg		30	57 - 120	30	57 - 120	30
Di-n-Butylphthalate	0.291	1.00 ug/kg		30	65 - 120	30	65 - 120	30
Fluoranthene	0.297	1.00 ug/kg		30	53 - 120	30	53 - 120	30
Pyrene	0.284	1.00 ug/kg		30	47 - 120	30	47 - 120	30
Butylbenzylphthalate	0.299	1.00 ug/kg		30	54 - 120	30	54 - 120	30
Benzo(a)anthracene	0.287	1.00 ug/kg		30	51 - 120	30	51 - 120	30
3,3'-Dichlorobenzidine	1.77	5.00 ug/kg		30	44 - 120	30	44 - 120	30
Chrysene	0.321	1.00 ug/kg		30	48 - 120	30	48 - 120	30
bis(2-Ethylhexyl)phthalate	2.14	3.00 ug/kg		30	58 - 120	30	58 - 120	30
Di-n-Octylphthalate	0.268	1.00 ug/kg		30	62 - 120	30	62 - 120	30
Benzo(b)fluoranthene	0.317	1.00 ug/kg		30	42 - 132	30	42 - 132	30
Benzo(k)fluoranthene	0.335	1.00 ug/kg		30	39 - 129	30	39 - 129	30
Benzo(a)pyrene	0.297	1.00 ug/kg		30	45 - 120	30	45 - 120	30
Indeno(1,2,3-cd)pyrene	0.359	1.00 ug/kg		30	41 - 120	30	41 - 120	30
Dibenzo(a,h)anthracene	0.394	1.00 ug/kg		30	35 - 120	30	35 - 120	30
Benzo(g,h,i)perylene	0.391	1.00 ug/kg		30	35 - 120	30	35 - 120	30
Benzofluoranthenes, Total	0.801	2.00 ug/kg		30	30 - 160	30	30 - 160	30
1-Methylnaphthalene	0.258	1.00 ug/kg		30	55 - 120	30	55 - 120	30
N-Nitrosodimethylamine	1.33	3.00 ug/kg		30	41 - 120	30	41 - 120	30
Aniline	0.973	1.00 ug/kg		30	21 - 120	30	21 - 120	30
Benzidine				30	57 - 120	30	57 - 120	30
Retene				40		40		40
Perylene								
Pyridine				40	15 - 118	40	15 - 118	40
N-Nitrosomethylethylamine								
2,6-Dichlorophenol								
alpha-Terpineol				40		40		40
1,4-Dioxane				40	45 - 120	40		40
2,3,4,6-Tetrachlorophenol	0.244	1.00 ug/kg		30		30		30
Triphenyl Phosphate	0.520	1.00 ug/kg		40		40		40
Butyl Diphenyl Phosphate	0.190	1.00 ug/kg		40		40		40
Dibutyl Phenyl Phosphate	0.120	1.00 ug/kg		40		40		40
Tributyl Phosphate	0.160	1.00 ug/kg		40		40		40
Butylated Hydroxytoluene	0.210	1.00 ug/kg		40		40		40
Azobenzene (1,2-DP-Hydrazine)	0.228	1.00 ug/kg		30	55 - 120	30	55 - 120	30
Tetrachloroguaiacol				30		30		30
3,4,5-Trichloroguaiacol				40		40		40
3,4,6-Trichloroguaiacol				40		40		40
4,5,6-Trichloroguaiacol				40		40		40
Guaiacol				40		40		40
1,2,4,5-Tetrachlorobenzene				30		30		30
surr: 2-Fluorophenol			33 - 120					
surr: Phenol-d5			38 - 120					
surr: 2-Chlorophenol-d4			41 - 120					
surr: 1,2-Dichlorobenzene-d4			20 - 120					
surr: Nitrobenzene-d5			27 - 120					

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
surr: 2-Fluorobiphenyl			33 - 120					
surr: 2,4,6-Tribromophenol			52 - 120					
surr: p-Terphenyl-d14			28 - 120					
1,4-Dichlorobenzene-d4								
Naphthalene-d8								
Acenaphthene-d10								
Phenanthrene-d10								
Chrysene-d12								
Di-n-Octylphthalate-d4								
Perylene-d12								

Analytical Method Information

Met 200.8 in Water (EPA 200.8)

Preservation: pH<2; HNO3, Cool <6°C
Container: HDPE NM, 500 mL, 1:1 HNO3
Amount Required: 500 mL
Hold Time: 180 days

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Aluminum-27	0.00160	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-121	0.0000100	.000200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-123	0.0000110	.000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75a	0.0000480	.000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75b	0.0000920	.000500 mg/L		20	75 - 125	20	80 - 120	20
Barium-135	0.0000200	.000500 mg/L		20	75 - 125	20	80 - 120	20
Barium-137	0.0000190	.000500 mg/L		20	75 - 125	20	80 - 120	20
Beryllium-9	0.0000210	.000200 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-111	0.0000100	.000100 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-114	0.00000500	.000100 mg/L		20	75 - 125	20	80 - 120	20
Calcium-43	0.00398	0.0500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-52	0.0000450	.000500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-53	0.000118	.000500 mg/L		20	75 - 125	20	80 - 120	20
Cobalt-59	0.0000110	.000200 mg/L		20	75 - 125	20	80 - 120	20
Copper-63	0.000158	.000500 mg/L		20	75 - 125	20	80 - 120	20
Copper-65	0.000236	.000500 mg/L		20	75 - 125	20	80 - 120	20
Iron-54	0.00575	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Iron-57	0.00388	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Lead-208	0.0000460	.000100 mg/L		20	75 - 125	20	80 - 120	20
Magnesium-24	0.000297	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Manganese-55	0.0000220	.000500 mg/L		20	75 - 125	20	80 - 120	20
Molybdenum-98	0.0000130	.000200 mg/L		20	75 - 125	20	80 - 120	20
Nickel-60	0.0000790	.000500 mg/L		20	75 - 125	20	80 - 120	20
Nickel-62	0.0000890	.000500 mg/L		20	75 - 125	20	80 - 120	20
Potassium-39	0.00294	0.0200 mg/L		20	75 - 125	20	80 - 120	20
Selenium-82	0.000127	.000500 mg/L		20	75 - 125	20	80 - 120	20
Selenium-78	0.000324	0.00200 mg/L		20	75 - 125	20	80 - 120	20
Silver-107	0.00000800	.000200 mg/L		20	75 - 125	20	80 - 120	20
Sodium-23	0.00283	0.100 mg/L		20	75 - 125	20	80 - 120	20
Thallium-205	0.00000400	.000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51a	0.0000430	.000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51b	0.0000430	.000200 mg/L		20	75 - 125	20	80 - 120	20
Zinc-66	0.000497	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-67	0.000531	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-68	0.000524	0.00400 mg/L		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 7470A Hg Low Level in Water (EPA 7470A)								
Preservation: pH<2; HNO3, Cool <6°C								
Container: HDPE NM, 500 mL, 1:1 HNO3		**Amount Required:** 500 mL				**Hold Time:** 28 days		
Mercury	0.00000260	0000200 mg/L		20	75 - 125	20	80 - 120	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
pH, EPA 9040C in Water (EPA 9040C)								
Preservation: None								
Container: Small OJ, 500 mL			**Amount Required:** 250 mL			**Hold Time:** 0.01 days		
pH		1100 pH Units		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Carbonate SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL					**Hold Time:** 14 days	
Alkalinity, Carbonate		mg/L CaCO3		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Bicarbonate SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL					**Hold Time:** 14 days	
Alkalinity, Bicarbonate		mg/L CaCO3		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Alkalinity, Hydroxide SM 2320 B-97 in Water (SM 2320 B-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 500 mL, No Headspace		**Amount Required:** 500 mL					**Hold Time:** 14 days	
Alkalinity, Hydroxide		mg/L CaCO3		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Chromium, Hexavalent, SM 3500-Cr B-09 in Water (SM 3500-Cr B-09)								
Preservation: Cool <6°C								
Container: Glass NM, Amber, 250 mL		**Amount Required:** 250 mL				**Hold Time:** 1 day		
Hexavalent Chromium	0.00300	0.0100 mg/L		20	75 - 125		75 - 125	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Conductivity, Specific Conductance, 120.1 in Water (EPA 120.1)								
Preservation: Cool <6°C								
Container: Small OJ, 500 mL			**Amount Required:** 500 mL				**Hold Time:** 28 days	
Conductivity	0.120	1.00 µS/cm		20				

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Solids, Total Suspended SM 2540 D-97 in Water (SM 2540 D-97)								
Preservation: Cool <6°C								
Container: HDPE NM, 1000 mL		**Amount Required:** 1000 mL				**Hold Time:** 7 days		
Suspended Solids		1.00 mg/L		20				

Analytical Resources, Inc.

1/14/2015

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Anions, EPA 300.0 in Water (EPA 300.0)								
Preservation: None								
Container: Small OJ, 500 mL		**Amount Required:** 500 mL			**Hold Time:** 28 days			
Fluoride	0.0110	0.100 mg/L		20	75 - 125		90 - 110	20
Chloride	0.0300	0.100 mg/L		20	75 - 125		90 - 110	20
Nitrite-N	0.0240	0.100 mg/L		20	75 - 125		90 - 110	20
Bromide	0.00700	0.100 mg/L		20	75 - 125		90 - 110	20
Nitrate-N	0.0180	0.100 mg/L		20	75 - 125		90 - 110	20
Phosphate-P	0.0200	0.100 mg/L		20	75 - 125		90 - 110	20
Sulfate	0.0460	0.100 mg/L		20	75 - 125		90 - 110	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Organic Carbon, Total, 9060A in Water (EPA 9060A)								
Preservation: pH<2; H2SO4, Cool <6°C								
Container: Glass NM, Amber, 250 mL, 9N H2SO4		**Amount Required:** 250 mL				**Hold Time:** 28 days		
Total Organic Carbon		1.50 mg/L		20	75 - 125		75 - 125	20

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Organic Carbon, Dissolved EPA 9060A in Water (EPA 9060A)								
Preservation: pH<2; H2SO4, Cool <6°C								
Container: Glass NM, Amber, 250 mL, 9N H2SO4		**Amount Required:** 250 mL				**Hold Time:** 28 days		
Total Organic Carbon		1.50 mg/L		20	75 - 125		75 - 125	20

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: ZQ41, ZQ42

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
Page 1 of 2

Sample ID: BD-OWS-14-20141222-W
SAMPLE

Lab Sample ID: ZQ41A
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/07/15

QC Report No: ZQ41-The Boeing Company
Project: NA
NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Date Extracted: 12/26/14
Date Analyzed: 01/06/15 18:19
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: BD-OWS-14-20141222-W
SAMPLE

Lab Sample ID: ZQ41A
LIMS ID: 14-28174
Matrix: Water
Date Analyzed: 01/06/15 18:19

QC Report No: ZQ41-The Boeing Company
Project: NA
NA

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	80.4%	2-Fluorobiphenyl	75.2%
d14-p-Terphenyl	68.8%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	104%	2-Fluorophenol	94.9%
2,4,6-Tribromophenol	98.4%	d4-2-Chlorophenol	99.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: BD-MH-12.56-20141222-W
SAMPLE

Lab Sample ID: ZQ41B
LIMS ID: 14-28175
Matrix: Water
Data Release Authorized:
Reported: 01/07/15

QC Report No: ZQ41-The Boeing Company
Project: NA
NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Date Extracted: 12/26/14
Date Analyzed: 01/06/15 18:53
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

Sample ID: BD-MH-12.56-20141222-W
SAMPLE

Lab Sample ID: ZQ41B
LIMS ID: 14-28175
Matrix: Water
Date Analyzed: 01/06/15 18:53

QC Report No: ZQ41-The Boeing Company
Project: NA
NA

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	91.2%	2-Fluorophenol	80.3%
2,4,6-Tribromophenol	92.3%	d4-2-Chlorophenol	86.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: BD-MH-1.32-20141222-W
SAMPLE

Lab Sample ID: ZQ41C
LIMS ID: 14-28176
Matrix: Water
Data Release Authorized:
Reported: 01/07/15

QC Report No: ZQ41-The Boeing Company
Project: NA
NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Date Extracted: 12/26/14
Date Analyzed: 01/06/15 19:27
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

Lab Sample ID: ZQ41C
LIMS ID: 14-28176
Matrix: Water
Date Analyzed: 01/06/15 19:27

QC Report No: ZQ41-The Boeing Company
Project: NA
NA

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2.1**	**3.0**	**2.4 J**
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	59.6%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	82.4%	2-Fluorophenol	72.3%
2,4,6-Tribromophenol	94.7%	d4-2-Chlorophenol	80.3%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZQ41-The Boeing Company
Project:

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-122614	72.8%	69.2%	81.2%	62.4%	105%	94.4%	91.5%	99.7%	0
LCS-122614	73.2%	70.4%	82.8%	61.2%	108%	89.1%	110%	97.6%	0
LCSD-122614	70.8%	72.8%	86.4%	63.6%	113%	91.5%	109%	101%	0
BD-OWS-14-20141222	80.4%	75.2%	68.8%	65.2%	104%	94.9%	98.4%	99.7%	0
BD-MH-12.56-201412	63.2%	59.2%	73.6%	52.8%	91.2%	80.3%	92.3%	86.9%	0
BD-MH-1.32-2014122	61.2%	59.6%	66.8%	50.0%	82.4%	72.3%	94.7%	80.3%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(27-120)	(27-120)
(FBP) = 2-Fluorobiphenyl	(33-120)	(33-120)
(TPH) = d14-p-Terphenyl	(28-130)	(28-130)
(DCB) = d4-1,2-Dichlorobenzene	(20-120)	(20-120)
(PHL) = d5-Phenol	(38-120)	(38-120)
(2FP) = 2-Fluorophenol	(33-120)	(33-120)
(TBP) = 2,4,6-Tribromophenol	(52-131)	(52-131)
(2CP) = d4-2-Chlorophenol	(41-120)	(41-120)

Prep Method: SW3520C
Log Number Range: 14-28174 to 14-28176

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-122614
LCS/LCSD

Lab Sample ID: LCS-122614
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/07/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

Date Extracted LCS/LCSD: 12/26/14

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 01/06/15 16:04
LCSD: 01/06/15 16:38

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	21.0	25.0	84.0%	21.7	25.0	86.8%	3.3%
Bis-(2-Chloroethyl) Ether	19.0	25.0	76.0%	19.7	25.0	78.8%	3.6%
2-Chlorophenol	18.5	25.0	74.0%	19.9	25.0	79.6%	7.3%
1,3-Dichlorobenzene	13.6	25.0	54.4%	14.6	25.0	58.4%	7.1%
1,4-Dichlorobenzene	14.4	25.0	57.6%	15.1	25.0	60.4%	4.7%
Benzyl Alcohol	19.5	25.0	78.0%	18.2	25.0	72.8%	6.9%
1,2-Dichlorobenzene	14.6	25.0	58.4%	15.5	25.0	62.0%	6.0%
2-Methylphenol	16.2	25.0	64.8%	18.9	25.0	75.6%	15.4%
2,2'-Oxybis(1-Chloropropane)	15.5	25.0	62.0%	17.8	25.0	71.2%	13.8%
4-Methylphenol	17.2	25.0	68.8%	20.2	25.0	80.8%	16.0%
N-Nitroso-Di-N-Propylamine	16.8	25.0	67.2%	18.4	25.0	73.6%	9.1%
Hexachloroethane	12.7	25.0	50.8%	14.6	25.0	58.4%	13.9%
Nitrobenzene	18.4	25.0	73.6%	18.7	25.0	74.8%	1.6%
Isophorone	19.5	25.0	78.0%	20.2	25.0	80.8%	3.5%
2-Nitrophenol	20.8	25.0	83.2%	22.2	25.0	88.8%	6.5%
2,4-Dimethylphenol	45.3	75.0	60.4%	51.1	75.0	68.1%	12.0%
Benzoic Acid	136	138	98.6%	147	138	107%	7.8%
bis(2-Chloroethoxy) Methane	18.5	25.0	74.0%	19.3	25.0	77.2%	4.2%
2,4-Dichlorophenol	61.5	75.0	82.0%	64.3	75.0	85.7%	4.5%
1,2,4-Trichlorobenzene	15.5	25.0	62.0%	16.2	25.0	64.8%	4.4%
Naphthalene	18.5	25.0	74.0%	19.3	25.0	77.2%	4.2%
4-Chloroaniline	67.0	75.0	89.3%	64.6	75.0	86.1%	3.6%
Hexachlorobutadiene	13.9	25.0	55.6%	14.4	25.0	57.6%	3.5%
4-Chloro-3-methylphenol	65.8	75.0	87.7%	68.0	75.0	90.7%	3.3%
2-Methylnaphthalene	19.9	25.0	79.6%	20.2	25.0	80.8%	1.5%
Hexachlorocyclopentadiene	29.7	75.0	39.6%	33.5	75.0	44.7%	12.0%
2,4,6-Trichlorophenol	61.3	75.0	81.7%	65.2	75.0	86.9%	6.2%
2,4,5-Trichlorophenol	62.4	75.0	83.2%	68.4	75.0	91.2%	9.2%
2-Chloronaphthalene	18.1	25.0	72.4%	19.2	25.0	76.8%	5.9%
2-Nitroaniline	75.2	75.0	100%	77.6	75.0	103%	3.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-122614**
 LCS/LCSD

Lab Sample ID: LCS-122614 QC Report No: ZQ41-The Boeing Company
LIMS ID: 14-28174 Project:
Matrix: Water
Date Analyzed LCS: 01/06/15 16:04
LCSD: 01/06/15 16:38

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dimethylphthalate	22.0	25.0	88.0%	22.9	25.0	91.6%	4.0%
Acenaphthylene	21.0	25.0	84.0%	22.0	25.0	88.0%	4.7%
3-Nitroaniline	85.4	75.0	114%	89.9	75.0	120%	5.1%
Acenaphthene	21.1	25.0	84.4%	22.1	25.0	88.4%	4.6%
2,4-Dinitrophenol	134	138	97.1%	141	138	102%	5.1%
4-Nitrophenol	75.4	75.0	101%	73.3	75.0	97.7%	2.8%
Dibenzofuran	22.3	25.0	89.2%	22.9	25.0	91.6%	2.7%
2,6-Dinitrotoluene	66.9	75.0	89.2%	70.9	75.0	94.5%	5.8%
2,4-Dinitrotoluene	68.2	75.0	90.9%	72.2	75.0	96.3%	5.7%
Diethylphthalate	22.0	25.0	88.0%	22.9	25.0	91.6%	4.0%
4-Chlorophenyl-phenylether	20.0	25.0	80.0%	20.9	25.0	83.6%	4.4%
Fluorene	21.5	25.0	86.0%	22.3	25.0	89.2%	3.7%
4-Nitroaniline	85.0	75.0	113%	88.2	75.0	118%	3.7%
4,6-Dinitro-2-Methylphenol	131	138	94.9%	140	138	101%	6.6%
N-Nitrosodiphenylamine	18.6	25.0	74.4%	19.2	25.0	76.8%	3.2%
4-Bromophenyl-phenylether	20.8	25.0	83.2%	22.9	25.0	91.6%	9.6%
Hexachlorobenzene	19.9	25.0	79.6%	21.9	25.0	87.6%	9.6%
Pentachlorophenol	47.4 Q	75.0	63.2%	50.0 Q	75.0	66.7%	5.3%
Phenanthrene	22.2	25.0	88.8%	23.3	25.0	93.2%	4.8%
Carbazole	21.0	25.0	84.0%	22.7	25.0	90.8%	7.8%
Anthracene	20.3	25.0	81.2%	22.6	25.0	90.4%	10.7%
Di-n-Butylphthalate	21.4	25.0	85.6%	22.8	25.0	91.2%	6.3%
Fluoranthene	21.5	25.0	86.0%	23.0	25.0	92.0%	6.7%
Pyrene	22.2	25.0	88.8%	24.1	25.0	96.4%	8.2%
Butylbenzylphthalate	22.5	25.0	90.0%	23.2	25.0	92.8%	3.1%
3,3'-Dichlorobenzidine	65.0 Q	75.0	86.7%	61.9 Q	75.0	82.5%	4.9%
Benzo(a)anthracene	22.9	25.0	91.6%	23.7	25.0	94.8%	3.4%
bis(2-Ethylhexyl)phthalate	20.8	25.0	83.2%	23.1	25.0	92.4%	10.5%
Chrysene	22.6	25.0	90.4%	23.3	25.0	93.2%	3.1%
Di-n-Octyl phthalate	22.2	25.0	88.8%	22.7	25.0	90.8%	2.2%
Benzo(a)pyrene	22.9	25.0	91.6%	24.1	25.0	96.4%	5.1%
Indeno(1,2,3-cd)pyrene	23.2	25.0	92.8%	24.6	25.0	98.4%	5.9%
Dibenz(a,h)anthracene	21.8	25.0	87.2%	22.5	25.0	90.0%	3.2%
Benzo(g,h,i)perylene	23.3	25.0	93.2%	24.4	25.0	97.6%	4.6%
1-Methylnaphthalene	20.6	25.0	82.4%	21.5	25.0	86.0%	4.3%
Total Benzofluoranthenes	47.3	50.0	94.6%	52.1	50.0	104%	9.7%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	73.2%	70.8%
2-Fluorobiphenyl	70.4%	72.8%
d14-p-Terphenyl	82.8%	86.4%
d4-1,2-Dichlorobenzene	61.2%	63.6%
d5-Phenol	108%	113%
2-Fluorophenol	89.1%	91.5%
2,4,6-Tribromophenol	110%	109%
d4-2-Chlorophenol	97.6%	101%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

ZQ41MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: The Boeing Company

ARI Job No: ZQ41

Project:

Lab File ID: 01061502

Date Extracted: 12/26/14

Instrument ID: NT6

Date Analyzed: 01/06/15

Matrix: LIQUID

Time Analyzed: 1530

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	ZQ24LCSW1	ZQ24LCSW1	01061503	01/06/15
02	ZQ24LCSDW1	ZQ24LCSDW1	01061504	01/06/15
03	BD-OWS-14-201412	ZQ41A	01061507	01/06/15
04	BD-MH-12.56-2014	ZQ41B	01061508	01/06/15
05	BD-MH-1.32-20141	ZQ41C	01061509	01/06/15
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: MB-122614
METHOD BLANK

Lab Sample ID: MB-122614
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/07/15

QC Report No: ZQ41-The Boeing Company
Project: NA
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 12/26/14
Date Analyzed: 01/06/15 15:30
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.27	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.25	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.22	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.27	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.27	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.55	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.25	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.21	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.24	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.47	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.27	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.30	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.25	1.0	< 1.0 U
78-59-1	Isophorone	0.42	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.26	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	1.1	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.9	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.24	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.25	1.0	< 1.0 U
91-20-3	Naphthalene	0.25	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.34	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.1	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.30	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.1	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.0	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.1	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.25	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.5	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.5	3.0	< 3.0 U
83-32-9	Acenaphthene	0.25	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	3.4	20	< 20 U
100-02-7	4-Nitrophenol	1.8	10	< 10 U
132-64-9	Dibenzofuran	0.31	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.1	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.1	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-122614**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-122614 QC Report No: ZQ41-The Boeing Company
LIMS ID: 14-28174 Project: NA
Matrix: Water NA
Date Analyzed: 01/06/15 15:30

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.27	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.27	1.0	< 1.0 U
86-73-7	Fluorene	0.29	1.0	< 1.0 U
100-01-6	4-Nitroaniline	2.0	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.6	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.30	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.24	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.28	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.9	10	< 10 U
85-01-8	Phenanthrene	0.32	1.0	< 1.0 U
86-74-8	Carbazole	0.31	1.0	< 1.0 U
120-12-7	Anthracene	0.26	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.29	1.0	< 1.0 U
206-44-0	Fluoranthene	0.30	1.0	< 1.0 U
129-00-0	Pyrene	0.28	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.30	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.8	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.29	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	2.1	3.0	< 3.0 U
218-01-9	Chrysene	0.32	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.27	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.30	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.39	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.39	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.26	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.80	2.0	< 2.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.8%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	105%	2-Fluorophenol	94.4%
2,4,6-Tribromophenol	91.5%	d4-2-Chlorophenol	99.7%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

Instrument ID: NT6 Project:

DFTPP Injection Date: 12/11/14 DFTPP Injection Time: 1053

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	40.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	29.9
365	Greater than 1.0% of mass 198	3.58
441	0.0 - 24.0% of mass 442	13.4 (15.5)2
442	50.0 - 200.0% of mass 198	86.4
443	15.0 - 24.0% of mass 442	16.9 (19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	ICV1211	SCL0017-CAL4	12111401	12/11/14	1053
02	IC021211	SCL0017-CAL8	12111402	12/11/14	1128
03	IC11211	SCL0017-CAL1	12111403	12/11/14	1202
04	IC51211	SCL0017-CAL2	12111404	12/11/14	1236
05	IC101211	SCL0017-CAL3	12111405	12/11/14	1310
06	IC401211	SCL0017-CAL5	12111406	12/11/14	1344
07	IC601211	SCL0017-CAL6	12111407	12/11/14	1418
08	IC801211	SCL0017-CAL7	12111408	12/11/14	1452
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

Instrument ID: NT6 Project:

DFTPP Injection Date: 01/06/15 DFTPP Injection Time: 1456

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.0
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	10.0 - 80.0% of mass 198	43.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	30.3
365	Greater than 1.0% of mass 198	3.53
441	0.0 - 24.0% of mass 442	13.9 (15.4)2
442	50.0 - 200.0% of mass 198	90.7
443	15.0 - 24.0% of mass 442	17.0 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	ICV0106	ICV0106	01061501	01/06/15	1456
02	ZQ24MBW1	ZQ24MBW1	01061502	01/06/15	1530
03	ZQ24LCSW1	ZQ24LCSW1	01061503	01/06/15	1604
04	ZQ24LCSDW1	ZQ24LCSDW1	01061504	01/06/15	1638
05	BD-OWS-14-201412	ZQ41A	01061507	01/06/15	1819
06	BD-MH-12.56-2014	ZQ41B	01061508	01/06/15	1853
07	BD-MH-1.32-20141	ZQ41C	01061509	01/06/15	1927
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.607	1.512	1.541	1.614	1.582	1.636	1.608		1.586	2.8
Bis(2-Chloroethyl)ether	1.102	1.171	1.237	1.272	1.258	1.305	1.285		1.233	5.8
2-Chlorophenol	1.327	1.194	1.213	1.301	1.285	1.320	1.302		1.277	4.1
1,3-Dichlorobenzene	1.677	1.388	1.490	1.518	1.511	1.546	1.509		1.520	5.6
1,4-Dichlorobenzene	1.651	1.421	1.473	1.503	1.508	1.547	1.505		1.515	4.7
1,2-Dichlorobenzene	1.502	1.338	1.392	1.441	1.455	1.489	1.462		1.440	4.0
Benzyl alcohol	0.695	0.699	0.754	0.792	0.799	0.680	0.818		0.748	7.6
2,2'-oxybis(1-Chloropropane)	1.513	1.304	1.364	1.408	1.372	1.396	1.370		1.390	4.6
2-Methylphenol	1.102	1.067	1.102	1.143	1.110	1.151	1.128		1.115	2.6
Hexachloroethane	0.505	0.493	0.543	0.552	0.561	0.576	0.568		0.542	5.9
N-Nitroso-di-n-propylamine	1.024	0.927	0.996	1.023	1.022	1.042	1.022		1.008	3.8
4-Methylphenol	1.112	1.080	1.145	1.199	1.171	1.195	1.199		1.157	4.1
Nitrobenzene	0.403	0.381	0.390	0.396	0.401	0.409	0.390		0.396	2.4
Isophorone	0.664	0.636	0.662	0.677	0.672	0.681	0.648		0.663	2.4
2-Nitrophenol	0.134	0.152	0.168	0.183	0.186	0.193	0.187		0.172	12.6
2,4-Dimethylphenol	0.344	0.328	0.330	0.348	0.344	0.352	0.339		0.341	2.7
Bis(2-Chloroethoxy)methane	0.418	0.374	0.389	0.399	0.395	0.403	0.386		0.395	3.6
2,4-Dichlorophenol	0.268	0.262	0.278	0.301	0.300	0.310	0.305		0.289	6.8
1,2,4-Trichlorobenzene	0.378	0.340	0.345	0.366	0.363	0.378	0.365		0.362	4.0
Naphthalene	1.014	0.925	0.949	0.984	0.964	0.974	0.911		0.960	3.7
Benzoic acid		0.060	0.093	0.155	0.163	0.190	0.186		0.141	0.995
4-Chloroaniline	0.325	0.332	0.330	0.308	0.346	0.252	0.327		0.317	9.7
Hexachlorobutadiene	0.243	0.227	0.232	0.240	0.242	0.253	0.244		0.240	3.6
4-Chloro-3-methylphenol	0.276	0.263	0.281	0.292	0.293	0.301	0.291		0.285	4.4
2-Methylnaphthalene	0.579	0.538	0.551	0.576	0.588	0.488	0.562		0.554	6.1
Hexachlorocyclopentadiene		0.143	0.228	0.288	0.322	0.342	0.360		0.280	0.998
2,4,6-Trichlorophenol	0.334	0.328	0.345	0.392	0.381	0.398	0.396		0.368	8.4
2,4,5-Trichlorophenol	0.344	0.326	0.352	0.415	0.398	0.422	0.414		0.382	10.4
2-Chloronaphthalene	1.196	1.019	1.054	1.117	1.105	1.118	1.068		1.097	5.2
2-Nitroaniline	0.200	0.253	0.272	0.287	0.286	0.240	0.280		0.260	12.1
Acenaphthylene	1.588	1.500	1.550	1.636	1.589	1.608	1.520		1.570	3.1
Dimethylphthalate	1.253	1.140	1.159	1.217	1.200	1.225	1.171		1.195	3.3
2,6-Dinitrotoluene	0.203	0.239	0.258	0.278	0.280	0.293	0.283		0.262	12.1
Acenaphthene	1.181	0.968	1.001	1.064	1.041	1.063	1.021		1.048	6.5
3-Nitroaniline	0.171	0.198	0.217	0.186	0.206	0.176	0.216		0.196	9.6
2,4-Dinitrophenol		0.021	0.054	0.098	0.130	0.156	0.164		0.104	0.992
Dibenzofuran	1.507	1.335	1.363	1.481	1.452	1.214	1.401		1.393	7.2

<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2	
4-Nitrophenol	0.072	0.091	0.111	0.124	0.125	0.129	0.130		0.112	19.9	
2,4-Dinitrotoluene	0.245	0.305	0.348	0.374	0.375	0.396	0.381		0.346	15.4	
Fluorene	1.295	1.124	1.192	1.254	1.252	1.279	1.203		1.228	4.8	
4-Chlorophenyl-phenylether	0.765	0.625	0.658	0.697	0.697	0.736	0.717		0.699	6.7	
Diethylphthalate	1.231	1.080	1.118	1.138	1.171	1.182	1.095		1.145	4.6	
4-Nitroaniline	0.144	0.174	0.165	0.157	0.176	0.152	0.196		0.166	10.7	
4,6-Dinitro-2-methylphenol		0.047	0.080	0.102	0.118	0.132	0.140		0.103	0.998	
N-Nitrosodiphenylamine (1)	0.534	0.477	0.497	0.500	0.488	0.502	0.488		0.498	3.6	
4-Bromophenyl-phenylether	0.247	0.220	0.228	0.242	0.247	0.254	0.262		0.243	6.0	
Hexachlorobenzene	0.265	0.232	0.245	0.252	0.261	0.270	0.274		0.257	5.8	
Pentachlorophenol		0.062	0.082	0.130	0.133	0.148	0.156		0.118	0.998	
Phenanthrene	1.156	0.958	0.978	1.008	0.990	0.977	0.965		1.004	6.8	
Anthracene	0.965	0.931	0.959	1.002	0.982	0.972	0.931		0.963	2.7	
Carbazole	0.896	0.743	0.699	0.639	0.575	0.640	0.684		0.696	14.7	
Di-n-butylphthalate	1.018	1.037	1.061	1.121	1.077	1.049	0.997		1.051	3.9	
Fluoranthene	1.114	1.006	1.051	1.133	1.103	1.096	1.048		1.079	4.2	
Pyrene	1.268	1.124	1.182	1.143	1.101	1.041	0.982		1.120	8.3	
Butylbenzylphthalate	0.351	0.401	0.450	0.469	0.458	0.447	0.426		0.429	9.5	
Benzo(a)anthracene	1.224	1.032	1.050	1.089	1.067	1.043	1.003		1.072	6.7	
3,3'-Dichlorobenzidine	0.348	0.338	0.311	0.323	0.296	0.264	0.329		0.316	9.0	
Chrysene	1.155	0.986	1.029	1.038	1.024	0.992	0.944		1.024	6.5	
bis(2-Ethylhexyl)phthalate	0.470	0.507	0.546	0.559	0.567	0.562	0.548		0.537	6.6	
Di-n-octylphthalate	1.105	0.948	0.966	0.970	0.946	0.926	0.873		0.962	7.4	
Benzo(b)fluoranthene	1.008	0.915	0.985	1.025	1.029	1.064	1.042		1.010	4.8	
Benzo(k)fluoranthene	1.204	1.040	1.059	1.074	1.034	0.959	0.872		1.034	9.9	
Benzo(a)pyrene	0.883	0.827	0.870	0.916	0.894	0.891	0.854		0.876	3.3	
Indeno(1,2,3-cd)pyrene	1.414	1.252	1.324	1.360	1.312	1.305	1.251		1.317	4.4	
Dibenzo(a,h)anthracene	1.160	1.037	1.100	1.118	1.082	1.030	0.988		1.074	5.5	
Benzo(g,h,i)perylene	1.174	1.069	1.123	1.172	1.124	1.112	1.078		1.122	3.6	
N-Nitrosodimethylamine	0.762	0.727	0.759	0.786	0.764	0.757	0.750		0.758	2.3	
Aniline	1.736	1.614	1.672	1.610	1.683	1.360	1.660		1.619	7.5	
Benzidine		0.166	0.102	0.065	0.081	0.089			0.101	38.8	<-
Perylene	1.133	0.963	0.964	1.021	1.003	0.805	0.908		0.971	10.4	
Pyridine	1.139	1.169	1.285	1.451	1.403	1.401	1.393		1.320	9.4	
1-methylnaphthalene	0.546	0.508	0.510	0.543	0.553	0.455	0.526		0.520	6.5	
Azobenzene (1,2-DP-Hydrazine	0.732	0.686	0.702	0.730	0.702	0.684	0.662		0.700	3.6	
Biphenyl	1.291	1.133	1.125	1.239	1.220	1.016	1.136		1.166	7.8	

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Calibration Date: 12/11/14

LAB FILE ID: RRF1 =12111403 RRF5 =12111404 RRF10 =12111405
RRF25 =12111401 RRF40 =12111406 RRF60 =12111407
RRF80 =12111408 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Diphenyl Oxide	0.768	0.661	0.639	0.721	0.702	0.731	0.700		0.703	6.1
Tributyl Phosphate	0.571	0.649	0.656	0.734	0.707	0.680	0.675		0.667	7.8
Dibutyl Phenyl Phosphate	0.358	0.427	0.442	0.521	0.514	0.519	0.508		0.470	13.4
Butyl Diphenyl Phosphate	0.105	0.127	0.135	0.150	0.143	0.137	0.133		0.133	10.8
Triphenyl Phosphate	0.153	0.167	0.176	0.204	0.205	0.207	0.203		0.188	11.7
2,3,4,6-Tetrachlorophenol	0.219	0.231	0.247	0.298	0.300	0.323	0.318		0.276	15.6
Acetophenone	1.397	1.388	1.496	1.518	1.500	1.528	1.507		1.476	4.0
Butylatedhydroxytoluene	1.131	1.037	1.001	1.116	1.097	1.086	0.992		1.066	5.2
1,4-Dioxane	0.605	0.554	0.565	0.575	0.591	0.581	0.585	0.714	0.596	8.4
alpha-Terpineol	0.217	0.212	0.213	0.231	0.228	0.186	0.218		0.215	6.8
1,2,4,5-Tetrachlorobenzene	0.579	0.516	0.522	0.552	0.536	0.559	0.543		0.544	4.0
Pentachlorobenzene	0.490	0.420	0.434	0.465	0.466	0.491	0.491		0.465	6.2
2-Benzyl-4-Chlorophenol	0.136	0.143	0.146	0.172	0.172	0.177	0.178		0.160	11.3
Total Benzofluoranthenes	1.028	0.919	0.969	0.988	0.973	0.951	0.897		0.961	4.5
2-Fluorophenol	1.302	1.254	1.174	1.269	1.249	1.248	1.235		1.247	3.1
Phenol-d5	1.395	1.385	1.375	1.458	1.457	1.446	1.443		1.423	2.5
2-Chlorophenol-d4	1.284	1.176	1.187	1.251	1.267	1.281	1.270		1.245	3.6
1,2-Dichlorobenzene-d4	1.050	0.909	0.898	0.955	0.966	0.966	0.964		0.958	5.2
Nitrobenzene-d5	0.392	0.381	0.374	0.392	0.400	0.394	0.387		0.388	2.3
2-Fluorobiphenyl	1.531	1.264	1.192	1.281	1.275	1.260	1.224		1.290	8.6
2,4,6-Tribromophenol	0.152	0.162	0.163	0.202	0.211	0.226	0.228		0.192	16.9
Terphenyl-d14	0.763	0.646	0.655	0.670	0.672	0.651	0.638		0.671	6.3
d8-1,4-Dioxane	0.534	0.489	0.502	0.516	0.526	0.530	0.523		0.517	3.2

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Cont. Calib. Date: 01/06/15

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1456

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.586	1.633	0.800	AVRG	3.0
Bis(2-Chloroethyl)ether	1.233	1.231	0.700	AVRG	-0.2
2-Chlorophenol	1.277	1.322	0.800	AVRG	3.5
1,3-Dichlorobenzene	1.520	1.506	0.010	AVRG	-0.9
1,4-Dichlorobenzene	1.515	1.512	0.010	AVRG	-0.2
1,2-Dichlorobenzene	1.440	1.426	0.010	AVRG	-1.0
Benzyl alcohol	0.748	0.629	0.010	AVRG	-15.9
2,2'-oxybis(1-Chloropropane)	1.390	1.309	0.010	AVRG	-5.8
2-Methylphenol	1.115	1.120	0.700	AVRG	0.4
Hexachloroethane	0.542	0.549	0.300	AVRG	1.3
N-Nitroso-di-n-propylamine	1.008	0.954	0.500	AVRG	-5.4
4-Methylphenol	1.157	1.192	0.600	AVRG	3.0
Nitrobenzene	0.396	0.387	0.200	AVRG	-2.3
Isophorone	0.663	0.644	0.400	AVRG	-2.9
2-Nitrophenol	0.172	0.193	0.100	AVRG	12.2
2,4-Dimethylphenol	0.341	0.352	0.200	AVRG	3.2
Bis(2-Chloroethoxy)methane	0.395	0.390	0.300	AVRG	-1.3
2,4-Dichlorophenol	0.289	0.306	0.200	AVRG	5.9
1,2,4-Trichlorobenzene	0.362	0.364	0.010	AVRG	0.6
Naphthalene	0.960	0.968	0.700	AVRG	0.8
Benzoic acid	50.00	56.72	0.010	2ORDR	13.4
4-Chloroaniline	0.317	0.380	0.010	AVRG	19.9
Hexachlorobutadiene	0.240	0.240	0.010	AVRG	0.0
4-Chloro-3-methylphenol	0.285	0.294	0.200	AVRG	3.2
2-Methylnaphthalene	0.554	0.594	0.400	AVRG	7.2
Hexachlorocyclopentadiene	25.00	23.64	0.050	2ORDR	-5.4
2,4,6-Trichlorophenol	0.368	0.382	0.200	AVRG	3.8
2,4,5-Trichlorophenol	0.382	0.386	0.200	AVRG	1.0
2-Chloronaphthalene	1.097	1.115	0.800	AVRG	1.6
2-Nitroaniline	0.260	0.291	0.010	AVRG	11.9
Acenaphthylene	1.570	1.624	0.900	AVRG	3.4
Dimethylphthalate	1.195	1.200	0.010	AVRG	0.4
2,6-Dinitrotoluene	0.262	0.274	0.200	AVRG	4.6
Acenaphthene	1.048	1.052	0.900	AVRG	0.4
3-Nitroaniline	0.196	0.234	0.010	AVRG	19.4
2,4-Dinitrophenol	50.00	55.98	0.010	2ORDR	12.0
Dibenzofuran	1.393	1.469	0.800	AVRG	5.4

<- Exceeds QC limit of 20% D
* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Cont. Calib. Date: 01/06/15

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1456

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.112	0.103	0.010	AVRG	-8.0	
2,4-Dinitrotoluene	0.346	0.372	0.200	AVRG	7.5	
Fluorene	1.228	1.235	0.900	AVRG	0.6	
4-Chlorophenyl-phenylether	0.699	0.694	0.400	AVRG	-0.7	
Diethylphthalate	1.145	1.145	0.010	AVRG	0.0	
4-Nitroaniline	0.166	0.183	0.010	AVRG	10.2	
4,6-Dinitro-2-methylphenol	50.00	59.81	0.010	2ORDR	19.6	
N-Nitrosodiphenylamine(1)	0.498	0.532	0.010	AVRG	6.8	
4-Bromophenyl-phenylether	0.243	0.244	0.100	AVRG	0.4	
Hexachlorobenzene	0.257	0.253	0.100	AVRG	-1.6	
Pentachlorophenol	25.00	16.62	0.050	2ORDR	-33.5	<-
Phenanthrene	1.004	1.004	0.700	AVRG	0.0	
Anthracene	0.963	0.950	0.700	AVRG	-1.3	
Carbazole	0.696	0.695	0.010	AVRG	-0.1	
Di-n-butylphthalate	1.051	1.014	0.010	AVRG	-3.5	
Fluoranthene	1.079	1.058	0.600	AVRG	-1.9	
Pyrene	1.120	1.043	0.600	AVRG	-6.9	
Butylbenzylphthalate	0.429	0.427	0.010	AVRG	-0.5	
Benzo(a)anthracene	1.072	1.106	0.800	AVRG	3.2	
3,3'-Dichlorobenzidine	0.316	0.383	0.010	AVRG	21.2	<-
Chrysene	1.024	1.026	0.700	AVRG	0.2	
bis(2-Ethylhexyl)phthalate	0.537	0.516	0.010	AVRG	-3.9	
Di-n-octylphthalate	0.962	0.962	0.010	AVRG	0.0	
Benzo(b)fluoranthene	1.010	1.062	0.700	AVRG	5.1	
Benzo(k)fluoranthene	1.034	1.049	0.700	AVRG	1.4	
Benzo(a)pyrene	0.876	0.913	0.700	AVRG	4.2	
Indeno(1,2,3-cd)pyrene	1.317	1.377	0.500	AVRG	4.6	
Dibenzo(a,h)anthracene	1.074	1.133	0.400	AVRG	5.5	
Benzo(g,h,i)perylene	1.122	1.214	0.500	AVRG	8.2	
N-Nitrosodimethylamine	0.758	0.772	0.010	AVRG	1.8	
Aniline	1.619	1.654	0.010	AVRG	2.2	
Benzidine	0.101		0.010	AVRG		
Pyridine	1.320	1.358	0.010	AVRG	2.9	
1-methylnaphthalene	0.520	0.543	0.010	AVRG	4.4	
Azobenzene (1,2-DP-Hydrazine	0.700	0.733	0.010	AVRG	4.7	
Total Benzofluoranthenes	0.961	0.989	0.010	AVRG	2.9	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Instrument ID: NT6 Cont. Calib. Date: 01/06/15

Init. Calib. Date: 12/11/14 Cont. Calib. Time: 1456

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
2-Fluorophenol	1.247	1.253	0.010	AVRG	0.5
Phenol-d5	1.423	1.525	0.010	AVRG	7.2
2-Chlorophenol-d4	1.245	1.300	0.010	AVRG	4.4
1,2-Dichlorobenzene-d4	0.958	0.948	0.010	AVRG	-1.0
Nitrobenzene-d5	0.388	0.386	0.010	AVRG	-0.5
2-Fluorobiphenyl	1.290	1.290	0.010	AVRG	0.0
2,4,6-Tribromophenol	0.192	0.191	0.010	AVRG	-0.5
Terphenyl-d14	0.671	0.634	0.010	AVRG	-5.5

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Ical Midpoint ID: 12111401 Ical Date: 12/11/14

Instrument ID: NT6 Cont. Cal Date: 01/06/15

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	332777	7.51	1213545	9.56	750982	12.39
	UPPER LIMIT	665554		2427090		1501964	
	LOWER LIMIT	166388		606772		375491	
	CCAL	503525	7.36	1792397	9.40	1127038	12.22
	UPPER LIMIT		7.86		9.90		12.72
	LOWER LIMIT		6.86		8.90		11.72
01	ZQ24MBW1	480359	7.35	1663226	9.40	1002076	12.22
02	ZQ24LCSW1	503861	7.36	1703287	9.40	1120022	12.23
03	ZQ24LCSDW1	496372	7.36	1828091	9.40	1160712	12.23
04	BD-OWS-14-20	415434	7.36	1438437	9.40	881363	12.22
05	BD-MH-12.56-	485481	7.36	1735474	9.40	1078226	12.22
06	BD-MH-1.32-2	465273	7.36	1592392	9.40	1020370	12.22
07							
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22							
23							
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25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING COMPANY

ARI Job No: ZQ41 Project:

Ical Midpoint ID: 12111401 Ical Date: 12/11/14

Instrument ID: NT6 Cont. Cal Date: 01/06/15

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1314646	14.74	1335763	19.01	1539932	21.15
	UPPER LIMIT	2629292		2671526		3079864	
	LOWER LIMIT	657323		667882		769966	
	CCAL	1914174	14.56	1965573	18.82	2322431	20.95
	UPPER LIMIT		15.06		19.32		21.45
	LOWER LIMIT		14.06		18.32		20.45
01	ZQ24MBW1	1589462	14.56	1619418	18.81	1844388	20.94
02	ZQ24LCSW1	1879955	14.56	1848706	18.82	2004715	20.95
03	ZQ24LCSDW1	1898795	14.57	1785879	18.82	1962428	20.95
04	BD-OWS-14-20	1496511	14.56	1534270	18.81	1725630	20.94
05	BD-MH-12.56-	1816675	14.56	1717781	18.81	2085854	20.94
06	BD-MH-1.32-2	1578956	14.56	1857934	18.82	2305499	20.95
07							
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23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: THE BOEING COMPANY

ARI Job No: ZQ41 | Project:

Ical Midpoint ID: 12111401 | Ical Date: 12/11/14

Instrument ID: NT6 | Cont. Cal Date: 01/06/15

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1626181	20.20				
	UPPER LIMIT	3252362					
	LOWER LIMIT	813090					
	CCAL	2461441	20.03				
	UPPER LIMIT		20.53				
	LOWER LIMIT		19.53				
01	ZQ24MBW1	1886034	20.02				
02	ZQ24LCSW1	2211536	20.02				
03	ZQ24LCSDW1	2085237	20.03				
04	BD-OWS-14-20	1825741	20.02				
05	BD-MH-12.56-	2126973	20.02				
06	BD-MH-1.32-2	2226997	20.02				
07							
08							
09							
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25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

Metals Analysis
Report and Summary QC Forms

ARI Job ID: ZQ41, ZQ42

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
BD-OWS-14-20141222	ZQ41A	14-28174	
BD-OWS-14-20141222D	ZQ41ADUP	14-28174	
BD-OWS-14-20141222S	ZQ41ASPK	14-28174	
BD-MH-12.56-201412	ZQ41B	14-28175	
PBW	ZQ41MB1	14-28175	
LCSW	ZQ41MB1SPK	14-28175	
BD-MH-1.32-2014122	ZQ41C	14-28176	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 1/6/15 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-OWS-14-20141222-W
SAMPLE

Lab Sample ID: ZQ41A
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/24/14	200.8	12/29/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/24/14	200.8	12/31/14	**7440-38-2**	**Arsenic**	0.048	0.2	**1.0**	
200.8	12/24/14	200.8	12/29/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/24/14	200.8	12/29/14	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	**7440-50-8**	**Copper**	0.158	0.5	**1.8**	
200.8	12/24/14	200.8	12/29/14	**7439-92-1**	**Lead**	0.046	0.1	**0.2**	
200.8	12/24/14	200.8	12/29/14	**7440-02-0**	**Nickel**	0.079	0.5	**0.9**	
200.8	12/24/14	200.8	12/31/14	**7782-49-2**	**Selenium**	0.127	0.5	**0.9**	
200.8	12/24/14	200.8	12/29/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	**7440-66-6**	**Zinc**	0.50	4	**24**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-12.56-20141222-W
SAMPLE

Lab Sample ID: ZQ41B
LIMS ID: 14-28175
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/24/14	200.8	12/29/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/24/14	200.8	12/31/14	**7440-38-2**	**Arsenic**	0.048	0.2	**1.0**	
200.8	12/24/14	200.8	12/29/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/24/14	200.8	12/29/14	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	**7440-50-8**	**Copper**	0.158	0.5	**1.5**	
200.8	12/24/14	200.8	12/29/14	**7439-92-1**	**Lead**	0.046	0.1	**0.2**	
200.8	12/24/14	200.8	12/29/14	**7440-02-0**	**Nickel**	0.079	0.5	**0.8**	
200.8	12/24/14	200.8	12/31/14	**7782-49-2**	**Selenium**	0.127	0.5	**1.2**	
200.8	12/24/14	200.8	12/29/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	**7440-66-6**	**Zinc**	0.50	4	**16**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-MH-1.32-20141222-W
SAMPLE

Lab Sample ID: ZQ41C
LIMS ID: 14-28176
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/24/14	200.8	12/29/14	**7440-36-0**	**Antimony**	0.010	0.2	**3.0**	
200.8	12/24/14	200.8	12/29/14	**7440-38-2**	**Arsenic**	0.048	0.2	**0.8**	
200.8	12/24/14	200.8	12/29/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	**7440-43-9**	**Cadmium**	0.010	0.1	**0.2**	
200.8	12/24/14	200.8	12/29/14	**7440-47-3**	**Chromium**	0.045	0.5	**0.6**	
200.8	12/24/14	200.8	12/29/14	**7440-50-8**	**Copper**	0.158	0.5	**5.7**	
200.8	12/24/14	200.8	12/29/14	**7439-92-1**	**Lead**	0.046	0.1	**2.3**	
200.8	12/24/14	200.8	12/29/14	**7440-02-0**	**Nickel**	0.079	0.5	**1.7**	
200.8	12/24/14	200.8	12/29/14	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	**7440-66-6**	**Zinc**	0.50	4	**46**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: BD-OWS-14-20141222-W
MATRIX SPIKE

Lab Sample ID: ZQ41A
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.2 U	25.1	25.0	100%	
Arsenic	200.8	1.0	25.9	25.0	99.6%	
Beryllium	200.8	0.2 U	24.5	25.0	98.0%	
Cadmium	200.8	0.1 U	23.0	25.0	92.0%	
Chromium	200.8	0.5 U	22.2	25.0	88.8%	
Copper	200.8	1.8	25.3	25.0	94.0%	
Lead	200.8	0.2	23.9	25.0	94.8%	
Nickel	200.8	0.91	24.1	25.0	92.8%	
Selenium	200.8	0.9	74.2	80.0	91.6%	
Silver	200.8	0.2 U	21.9	25.0	87.6%	
Thallium	200.8	0.2 U	24.0	25.0	96.0%	
Zinc	200.8	24	89	80	81.2%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-OWS-14-20141222-W
DUPLICATE

Lab Sample ID: ZQ41A
LIMS ID: 14-28174
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	1.0	1.0	0.0%	+/- 0.2	L
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Copper	200.8	1.8	1.8	0.0%	+/- 0.5	L
Lead	200.8	0.2	0.2	0.0%	+/- 0.1	L
Nickel	200.8	0.9	0.9	0.0%	+/- 0.5	L
Selenium	200.8	0.9	0.9	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	24	23	4.3%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: ZQ41LCS
LIMS ID: 14-28175
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.3	25.0	97.2%	
Arsenic	200.8	24.6	25.0	98.4%	
Beryllium	200.8	23.4	25.0	93.6%	
Cadmium	200.8	23.6	25.0	94.4%	
Chromium	200.8	24.4	25.0	97.6%	
Copper	200.8	25.2	25.0	101%	
Lead	200.8	25.1	25.0	100%	
Nickel	200.8	24.3	25.0	97.2%	
Selenium	200.8	73.5	80.0	91.9%	
Silver	200.8	24.1	25.0	96.4%	
Thallium	200.8	25.5	25.0	102%	
Zinc	200.8	77	80	96.2%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: ZQ41MB
LIMS ID: 14-28175
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ41-The Boeing Company
Project:

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	12/24/14	200.8	12/29/14	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	12/24/14	200.8	12/29/14	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	12/24/14	200.8	12/29/14	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	12/24/14	200.8	12/29/14	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	12/24/14	200.8	12/29/14	7440-66-6	Zinc	0.50	4	4	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS:ug/L

SDG: ZQ41

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS122981	50.0	50.34	**100.7**	50.0	50.00	**100.0**	50.44	**100.9**	51.20	**102.4**	51.23	**102.5**	51.38	**102.8**
Arsenic	AS	PMS	MS122981	50.0	52.41	**104.8**	50.0	50.81	**101.6**	49.68	**99.4**	49.99	**100.0**	50.75	**101.5**	50.36	**100.7**
Beryllium	BE	PMS	MS122981	50.0	48.10	**96.2**	50.0	49.97	**99.9**	50.46	**100.9**	51.13	**102.3**	50.61	**101.2**	51.12	**102.2**
Cadmium	CD	PMS	MS122981	50.0	50.04	**100.1**	50.0	49.94	**99.9**	49.85	**99.7**	49.55	**99.1**	49.90	**99.8**	49.46	**98.9**
Chromium	CR	PMS	MS122981	50.0	51.39	**102.8**	50.0	50.96	**101.9**	50.34	**100.7**	50.21	**100.4**	50.81	**101.6**	50.09	**100.2**
Copper	CU	PMS	MS122981	50.0	51.70	**103.4**	50.0	50.86	**101.7**	50.47	**100.9**	49.93	**99.9**	50.28	**100.6**	49.47	**98.9**
Lead	PB	PMS	MS122981	50.0	50.93	**101.9**	50.0	50.82	**101.6**	50.86	**101.7**	51.00	**102.0**	50.85	**101.7**	50.85	**101.7**
Nickel	NI	PMS	MS122981	50.0	52.10	**104.2**	50.0	50.93	**101.9**	49.68	**99.4**	49.64	**99.3**	49.61	**99.2**	48.89	**97.8**
Selenium	SE	PMS	MS122981	80.0	80.02	**100.0**	50.0	51.54	**103.1**	48.02	**96.0**	48.20	**96.4**	49.32	**98.6**	47.70	**95.4**
Silver	AG	PMS	MS122981	50.0	50.90	**101.8**	50.0	50.11	**100.2**	50.69	**101.4**	50.77	**101.5**	51.37	**102.7**	50.93	**101.9**
Thallium	TL	PMS	MS122981	50.0	50.58	**101.2**	50.0	51.54	**103.1**	51.80	**103.6**	51.62	**103.2**	51.39	**102.8**	51.43	**102.9**
Zinc	ZN	PMS	MS122981	50.0	50.88	**101.8**	50.0	50.51	**101.0**	50.53	**101.1**	49.34	**98.7**	49.71	**99.4**	48.72	**97.4**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS: ug/L

SDG: ZQ41

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS122981	50.0	51.50	**103.0**	51.96	**103.9**	50.05	**100.1**						
Arsenic	AS	PMS	MS122981	50.0	50.98	**102.0**	50.40	**100.8**	50.03	**100.1**						
Beryllium	BE	PMS	MS122981	50.0	51.44	**102.9**	50.90	**101.8**	49.91	**99.8**						
Cadmium	CD	PMS	MS122981	50.0	49.45	**98.9**	50.68	**101.4**	49.73	**99.5**						
Chromium	CR	PMS	MS122981	50.0	50.85	**101.7**	50.22	**100.4**	50.38	**100.8**						
Copper	CU	PMS	MS122981	50.0	49.66	**99.3**	49.23	**98.5**	50.12	**100.2**						
Lead	PB	PMS	MS122981	50.0	50.96	**101.9**	51.43	**102.9**	51.31	**102.6**						
Nickel	NI	PMS	MS122981	50.0	48.61	**97.2**	48.80	**97.6**	50.06	**100.1**						
Selenium	SE	PMS	MS122981	50.0	48.14	**96.3**	49.54	**99.1**	49.34	**98.7**						
Silver	AG	PMS	MS122981	50.0	51.02	**102.0**	50.95	**101.9**	49.70	**99.4**						
Thallium	TL	PMS	MS122981	50.0	52.03	**104.1**	51.98	**104.0**	52.31	**104.6**						
Zinc	ZN	PMS	MS122981	50.0	49.68	**99.4**	50.24	**100.5**	51.00	**102.0**						

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS123181	50.0	52.26	**104.5**	50.0	50.54	**101.1**	50.47	**100.9**	49.83	**99.7**	50.47	**100.9**	50.29	**100.6**
Selenium	SE	PMS	MS123181	80.0	79.72	**99.7**	50.0	50.68	**101.4**	51.68	**103.4**	50.69	**101.4**	49.89	**99.8**	51.00	**102.0**

ZQ41:S0056

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	PMS	MS123181	50.0	50.39	**100.8**										
Selenium	SE	PMS	MS123181	50.0	49.50	**99.0**										

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS: ug/L

SDG: ZQ41

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS122981	0.2	0.20	**100.0**										
Arsenic	AS	PMS	MS122981	0.2	0.23	**115.0**										
Beryllium	BE	PMS	MS122981	0.2	0.17	**85.0**										
Cadmium	CD	PMS	MS122981	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS122981	0.5	0.50	**100.0**										
Copper	CU	PMS	MS122981	0.5	0.53	**106.0**										
Lead	PB	PMS	MS122981	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS122981	0.5	0.52	**104.0**										
Selenium	SE	PMS	MS122981	0.5	0.54	**108.0**										
Silver	AG	PMS	MS122981	0.2	0.21	**105.0**										
Thallium	TL	PMS	MS122981	0.2	0.21	**105.0**										
Zinc	ZN	PMS	MS122981	4.0	3.87	**96.8**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS: ug/L

SDG: ZQ41

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	PMS	MS123181	0.2	0.22	**110.0**										
Selenium	SE	PMS	MS123181	0.5	0.52	**104.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS:ug/L

SDG: ZQ41

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS122981	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	PMS	MS122981	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS122981	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS122981	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS122981	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Lead	PB	PMS	MS122981	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS122981	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS122981	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS122981	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

UNITS: ug/L

SDG: ZQ41

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS122981	60.0	0.2	0.2	U	0.2	U	0.2	U						
Arsenic	AS	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U						
Beryllium	BE	PMS	MS122981	5.0	0.2	0.2	U	0.2	U	0.2	U						
Cadmium	CD	PMS	MS122981	5.0	0.1	0.1	U	0.1	U	0.1	U						
Chromium	CR	PMS	MS122981	10.0	0.5	0.5	U	0.5	U	0.5	U						
Copper	CU	PMS	MS122981	25.0	0.5	0.5	U	0.5	U	0.5	U						
Lead	PB	PMS	MS122981	3.0	0.1	0.1	U	0.1	U	0.1	U						
Nickel	NI	PMS	MS122981	40.0	0.5	0.5	U	0.5	U	0.5	U						
Selenium	SE	PMS	MS122981	5.0	0.5	0.5	U	0.5	U	0.5	U						
Silver	AG	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U						
Thallium	TL	PMS	MS122981	10.0	0.2	0.2	U	0.2	U	0.2	U						
Zinc	ZN	PMS	MS122981	20.0	4.0	4.0	U	4.0	U	4.0	U						

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS123181	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Selenium	SE	PMS	MS123181	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

ZQ41 - 655572

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	PMS	MS123181	10.0	0.2	0.2	U										
Selenium	SE	PMS	MS123181	5.0	0.5	0.5	U										

ZQ41 : 69573

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

ICS SOURCE: I.V.

RUNID: MS122981

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.0	0.1							
Cadmium		20	0.0	19.7	**98.5**						
Chromium		20	0.5	20.2	**101.0**						
Cobalt		20	0.0	19.7	**98.5**						
Copper		20	0.5	19.8	**99.0**						
Lead			0.0	0.1							
Manganese		20	0.2	20.0	**100.0**						
Molybdenum	400	400	387.0	386.7	**96.7**						
Nickel		20	0.3	19.8	**99.0**						
Silver		20	0.0	19.5	**97.5**						
Vanadium			0.0	-0.5							
Zinc		20	0.7	19.9	**99.5**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

ICS SOURCE: I.V.

RUNID: MS123181

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.0	19.4	**97.0**						
Cadmium		20	0.1	19.9	**99.5**						
Chromium		20	0.5	20.3	**101.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.5	19.9	**99.5**						
Lead			0.1	0.1							
Manganese		20	0.2	20.3	**101.5**						
Molybdenum	400	400	395.5	396.7	**99.2**						
Nickel		20	0.4	19.9	**99.5**						
Selenium			-0.1	-0.1							
Silver		20	0.0	19.7	**98.5**						
Vanadium			0.0	-0.4							
Zinc		20	1.1	20.4	**102.0**						

ZQ41 : 9995

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

ANALYSIS METHOD: PMS

SDG: ZQ41

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.16	U	0.15	B		
Beryllium	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.11	U	0.50	B		
Cadmium	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	-0.20	U	-0.05	B		
Chromium	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.35	U	0.65	B		
Copper	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	1.84	B	8.05	B	337.5	
Lead	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.22	B	0.50	B	127.3	
Nickel	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.91	B	1.10	B	20.9	
Silver	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.01	U	0.00	B		
Thallium	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	0.00	U	0.00	B		
Zinc	BD-OWS-14-20141222L	ZQ41A-L	Water	MS122981	23.69		31.50	B	33.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

ANALYSIS METHOD: PMS

SDG: ZQ41

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Arsenic	BD-OWS-14-20141222L	ZQ41A-L	Water	MS123181	0.97	B	1.20	B	23.7	
Selenium	BD-OWS-14-20141222L	ZQ41A-L	Water	MS123181	0.88	B	0.95	B	8.0	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	PE ELAN 6000 MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	PMS	PE ELAN 6000 MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	PE ELAN 6000 MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	PE ELAN 6000 MS	0.00		10	0.5	4/1/2012		
Copper	CU	PMS	PE ELAN 6000 MS	0.00		25	0.5	4/1/2012		
Lead	PB	PMS	PE ELAN 6000 MS	0.00		3	0.1	4/1/2012		
Nickel	NI	PMS	PE ELAN 6000 MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	PE ELAN 6000 MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	PMS	PE ELAN 6000 MS	0.00		20	4.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

ANALYSIS METHOD: PMS

PROJECT: NA

ARI PREP CODE: REN

SDG: ZQ41

PREPDATE: 12/24/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
BD-OWS-14-20141222	ZQ41A	0.000	50.0	25.0
BD-OWS-14-20141222D	ZQ41ADUP	0.000	50.0	25.0
BD-OWS-14-20141222S	ZQ41ASPK	0.000	50.0	25.0
BD-MH-12.56-201412	ZQ41B	0.000	50.0	25.0
BD-MH-1.32-2014122	ZQ41C	0.000	50.0	25.0
PBW	ZQ41MB1	0.000	50.0	25.0
LCSW	ZQ41MB1SPK	0.000	50.0	25.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA — INSTRUMENT ID: PE ELAN 6000 MS — START DATE: 12/29/2014

SDG: ZQ41 — RUNID: MS122981 — METHOD: PMS — END DATE: 12/29/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08210		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	08270		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	08330		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	08380		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	08440		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	Rinse Sampl	1.00	08510																														
ICV	MICV	1.00	08580		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	09040		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	09110		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	09170		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	09230		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	09290		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	09340		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	09400		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	09460																														
ZZZZZZ	LR300	1.00	09520																														
ZZZZZZ	B1	1.00	09590																														
CCV	MCCV2	1.00	10040		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10100		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZQ10MB1	20.00	10160																														
ZZZZZZ	ZQ10G-L	100.00	10220																														
ZZZZZZ	ZQ10G	20.00	10280																														
ZZZZZZ	ZQ10GDUP	20.00	10340																														
ZZZZZZ	ZQ10GSPK	20.00	10400																														
ZZZZZZ	ZZZZZZ	20.00	10460																														
ZZZZZZ	ZQ10H	20.00	10520																														
ZZZZZZ	ZQ10I	20.00	10580																														
ZZZZZZ	ZQ10J	20.00	11040																														
ZZZZZZ	ZQ10MB1SPK	20.00	11100																														
CCV	MCCV3	1.00	11160		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11220		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZP87MB	1.00	11270																														
ZZZZZZ	ZP87AaDUP	1.00	11330																														
ZZZZZZ	ZP87Aa	1.00	11390																														
ZZZZZZ	ZP87AaSPK	20.00	11450																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 12/29/2014

SDG: ZQ41 | RUNID: MS122981 | METHOD: PMS | END DATE: 12/29/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	ZP87Ba	1.00	11510																														
ZZZZZZ	ZP87Ca	1.00	11570																														
ZZZZZZ	ZP87Da	1.00	12030																														
ZZZZZZ	ZP87Ea	1.00	12090																														
ZZZZZZ	ZP87Fa	1.00	12150																														
ZZZZZZ	ZP87Ga	1.00	12210																														
CCV	MCCV4	1.00	12270		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	12340		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZP83MB	1.00	12390																														
ZZZZZZ	ZP83AaDUP	1.00	12450																														
ZZZZZZ	ZP83Aa	1.00	12510																														
ZZZZZZ	ZP83AaSPK	20.00	12570																														
ZZZZZZ	ZP87Ha	1.00	13030																														
ZZZZZZ	ZP87Ia	1.00	13090																														
ZZZZZZ	ZP87Ja	1.00	13150																														
CCV	MCCV5	1.00	13210		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	13270		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZQ15MB1	2.00	13330																														
ZZZZZZ	ZQ25MB	2.00	13390																														
ZZZZZZ	ZQ39MB	2.00	13450																														
ZZZZZZ	ZQ39A	2.00	13510																														
ZZZZZZ	ZQ25C	2.00	13570																														
ZZZZZZ	ZQ15B	2.00	14030																														
ZZZZZZ	ZQ15MB1SPK	2.00	14090																														
ZZZZZZ	ZQ25MBSPK	2.00	14150																														
ZZZZZZ	ZQ39MBSPK	2.00	14200																														
CCV	MCCV6	1.00	14260		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB6	1.00	14330		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZQ81MB	2.00	14380																														
ZZZZZZ	ZQ81A	2.00	14440																														
ZZZZZZ	ZQ82A	2.00	14500																														
ZZZZZZ	ZQ83A	2.00	14560																														
ZZZZZZ	ZQ81MBSPK	2.00	15020																														
ZZZZZZ	ZQ81MB	2.00	15080																														
ZZZZZZ	ZQ83A	5.00	15140																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

INSTRUMENT ID: PE ELAN 6000 MS

RUNID: MS122981 METHOD: PMS

START DATE: 12/29/2014

END DATE: 12/29/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	MCCV7	1.00	15200		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB7	1.00	15260		X		X			X		X		X	X								X	X	X	X				X			X
PBW	ZQ41MB1	2.00	15320		X		X			X		X		X	X								X	X	X	X				X			X
BD-OWS-14-20141222L	ZQ41A-L	10.00	15380		X					X		X		X	X								X	X	X					X			X
BD-OWS-14-20141222	ZQ41A	2.00	15440		X					X		X		X	X								X	X	X					X			X
BD-OWS-14-20141222D	ZQ41ADUP	2.00	15500		X					X		X		X	X								X	X	X					X			X
BD-OWS-14-20141222S	ZQ41ASPK	2.00	15560		X					X		X		X	X								X	X	X					X			X
ZZZZZZ	ZZZZZZ	2.00	16020																														
BD-MH-12.56-201412	ZQ41B	2.00	16080		X					X		X		X	X								X	X	X					X			X
BD-MH-1.32-2014122	ZQ41C	2.00	16140		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	ZQ41MB1SPK	2.00	16200		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV8	1.00	16260		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB8	1.00	16320		X		X			X		X		X	X								X	X	X	X				X			X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ41

INSTRUMENT ID: PE ELAN 6000 MS

RUNID: MS123181 METHOD: PMS

START DATE: 12/31/2014

END DATE: 12/31/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08180				X																			X							
S1	S1	1.00	08240				X																			X							
S2	S2	1.00	08300				X																			X							
S3	S3	1.00	08350				X																			X							
S4	S4	1.00	08410				X																			X							
ZZZZZZ	Rinse Sampl	1.00	08480																														
ICV	MICV	1.00	08550				X																			X							
ICB	ICB	1.00	09010				X																			X							
S0	S0	1.00	09080				X																			X							
CCV	MCCV1	1.00	09140				X																			X							
CCB	CCB1	1.00	09200				X																			X							
CRI	MCRI	1.00	09250				X																			X							
ICSA	ICSAI	1.00	09310				X																			X							
ICSAB	ICSABI	1.00	09370				X																			X							
ZZZZZZ	LR200	1.00	09430																														
ZZZZZZ	LR300	1.00	09490																														
ZZZZZZ	B1	1.00	09550																														
CCV	MCCV2	1.00	10010				X																			X							
CCB	CCB2	1.00	10070				X																			X							
ZZZZZZ	ZQ95MB	2.00	10150																														
ZZZZZZ	ZQ93MB	2.00	10210																														
ZZZZZZ	ZQ93A	2.00	10270																														
ZZZZZZ	ZQ94A	2.00	10330																														
ZZZZZZ	ZQ95A	2.00	10390																														
ZZZZZZ	ZQ95MBSPK	2.00	10450																														
ZZZZZZ	ZQ93MBSPK	2.00	10510																														
CCV	MCCV3	1.00	10570				X																			X							
CCB	CCB3	1.00	11040				X																			X							
ZZZZZZ	ZQ92MB	20.00	11090																														
ZZZZZZ	ZQ92A	20.00	11150																														
ZZZZZZ	ZQ92B	20.00	11210																														
ZZZZZZ	ZQ92C	20.00	11270																														
ZZZZZZ	ZQ92D	20.00	11330																														
ZZZZZZ	ZQ92E	20.00	11390																														
ZZZZZZ	ZQ92MBSPK	20.00	11450																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 12/31/2014

SDG: ZQ41 | RUNID: MS123181 METHOD: PMS | END DATE: 12/31/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	MCCV4	1.00	11510				X																			X							
CCB	CCB4	1.00	11570				X																			X							
ZZZZZZ	ZP26MB1	2.00	12030																														
ZZZZZZ	ZP26MB2	2.00	12090																														
ZZZZZZ	ZP37MB	20.00	12150																														
ZZZZZZ	ZP78Q	20.00	12210																														
ZZZZZZ	ZP78R	20.00	12270																														
ZZZZZZ	ZP78S	20.00	12330																														
ZZZZZZ	ZP78T	20.00	12390																														
ZZZZZZ	ZP26MB1SPK	2.00	12450																														
ZZZZZZ	ZP26MB2SPK	2.00	12510																														
CCV	MCCV5	1.00	12570				X																			X							
CCB	CCB5	1.00	13030				X																			X							
ZZZZZZ	ZQ48MB	2.00	13110																														
ZZZZZZ	ZQ61MB	2.00	13170																														
BD-OWS-14-20141222L	ZQ41A-L	10.00	13230				X																			X							
BD-OWS-14-20141222	ZQ41A	2.00	13290				X																			X							
BD-OWS-14-20141222D	ZQ41ADUP	2.00	13350				X																			X							
BD-OWS-14-20141222S	ZQ41ASPK	2.00	13410				X																			X							
ZZZZZZ	ZZZZZZ	2.00	13470																														
BD-MH-12.56-201412	ZQ41B	2.00	13530				X																			X							
ZZZZZZ	ZQ61A	2.00	13590																														
ZZZZZZ	ZQ61MBSPK	2.00	14050																														
CCV	MCCV6	1.00	14110				X																			X							
CCB	CCB6	1.00	14170				X																			X							

ZQ41 SDG

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: ZQ41, ZQ42

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
BD-OWS-14-20141222	ZQ42A	14-28177	
BD-OWS-14-20141222D	ZQ42ADUP	14-28177	
BD-OWS-14-20141222S	ZQ42ASPK	14-28177	
BD-MH-12.56-201412	ZQ42B	14-28178	
PBW	ZQ42MB1	14-28178	
LCSW	ZQ42MB1SPK	14-28178	
BD-MH-1.32-2014122	ZQ42C	14-28179	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 4/5/15 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 01/05/15
Date Received: 12/22/14
Page 1 of 1

QC Report No: ZQ42-The Boeing Company
Project:

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
BD-OWS-14-20141222-W ZQ42A 14-28177	12/22/14	Water	12/23/14 01/05/15	20.0	20.0 U
BD-MH-12.56-20141222-W ZQ42B 14-28178	12/22/14	Water	12/23/14 01/05/15	20.0	20.0 U
BD-MH-1.32-20141222-W ZQ42C 14-28179	12/22/14	Water	12/23/14 01/05/15	20.0	20.0 U
MB-122314 Method Blank	NA	Water	12/23/14 01/05/15	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: BD-OWS-14-20141222-W
MATRIX SPIKE

Lab Sample ID: ZQ42A
LIMS ID: 14-28177
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ42-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	85.1	100	85.1%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: BD-OWS-14-20141222-W
DUPLICATE

Lab Sample ID: ZQ42A
LIMS ID: 14-28177
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ42-The Boeing Company
Project:

Date Sampled: 12/22/14
Date Received: 12/22/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: ZQ42LCS
LIMS ID: 14-28178
Matrix: Water
Data Release Authorized:
Reported: 01/05/15

QC Report No: ZQ42-The Boeing Company
Project:

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	199	200	99.5%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42

UNITS:ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG010501	500.0	499.00	**99.8**	500.0	496.00	**99.2**	466.00	**93.2**						

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42

UNITS: ng/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG010501	20.0	19.40	**97.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42

UNITS:ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG010501	25.0	20.0	20.0	U	20.0	U	20.0	U						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA

SDG: ZQ42

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 12/23/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
BD-OWS-14-20141222	ZQ42A	0.000	20.0	20.0
BD-OWS-14-20141222D	ZQ42ADUP	0.000	20.0	20.0
BD-OWS-14-20141222S	ZQ42ASPK	0.000	20.0	20.0
BD-MH-12.56-201412	ZQ42B	0.000	20.0	20.0
BD-MH-1.32-2014122	ZQ42C	0.000	20.0	20.0
PBW	ZQ42MB1	0.000	20.0	20.0
LCSW	ZQ42MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: The Boeing Company

PROJECT: NA | INSTRUMENT ID: CETAC MERCURY | START DATE: 1/5/2015

SDG: ZQ42 | RUNID: HG010501 | METHOD: CVL | END DATE: 1/5/2015

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11164														X																
S20	S20	1.00	11192														X																
S50	S50	1.00	11220														X																
S100	S100	1.00	11244														X																
S200	S200	1.00	11272														X																
S400	S400	1.00	11301														X																
S1000	S1000	1.00	11325														X																
ICV	AICV	1.00	11403														X																
ICB	ICB	1.00	11431														X																
CCV	ACCV1	1.00	11455														X																
ICV	AICV	1.00	11495														X																
ICB	ICB	1.00	11523														X																
CCV	ACCV1	1.00	11552														X																
CCB	CCB1	1.00	11580														X																
CRA	CRA	1.00	12004														X																
PBW	ZQ42MB1	1.00	12032														X																
LCSW	ZQ42MB1SPK	1.00	12060														X																
BD-OWS-14-20141222	ZQ42A	1.00	12085														X																
BD-OWS-14-20141222D	ZQ42ADUP	1.00	12113														X																
BD-OWS-14-20141222S	ZQ42ASPK	1.00	12141														X																
BD-MH-12.56-201412	ZQ42B	1.00	12165														X																
BD-MH-1.32-2014122	ZQ42C	1.00	12193														X																
ZZZZZZ	ZQ44MB1	1.00	12222																														
ZZZZZZ	ZQ44MB1SPK	1.00	12250																														
CCV	ACCV2	1.00	12274														X																
CCB	CCB2	1.00	12303														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: ZQ41, ZQ42

SAMPLE RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Client ID: BD-OWS-14-20141222-W
ARI ID: 14-28174 ZQ41A

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/14 122214#1	EPA 150.1	std units	0.01	6.78
Alkalinity	12/30/14 123014#1	SM 2320	mg/L CaCO3	1.0	30.8
Carbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	30.8
Hydroxide	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Hexavalent Chromium	12/22/14 122214#1	SM3500Cr-B	mg/L	0.010	< 0.010 U
Conductivity	12/26/14 122614#1	EPA 120.1	umhos/cm	1.00	983
Total Suspended Solids	12/26/14 122614#1	SM2540D	mg/L	1.1	5.5
Chloride	12/29/14 122914#1	EPA 300.0	mg/L	10.0	245
N-Nitrate	12/22/14 122214#1	EPA 300.0	mg-N/L	0.1	0.4
Sulfate	12/29/14 122914#1	EPA 300.0	mg/L	1.0	36.8
Total Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	4.38
Dissolved Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	2.76

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Client ID: BD-MH-12.56-20141222-W
ARI ID: 14-28175 ZQ41B

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/14 122214#1	EPA 150.1	std units	0.01	6.73
Alkalinity	12/30/14 123014#1	SM 2320	mg/L CaCO3	1.0	30.7
Carbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	30.7
Hydroxide	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Hexavalent Chromium	12/22/14 122214#1	SM3500Cr-B	mg/L	0.010	< 0.010 U
Conductivity	12/26/14 122614#1	EPA 120.1	umhos/cm	1.00	1,720
Total Suspended Solids	12/26/14 122614#1	SM2540D	mg/L	1.2	5.5
Chloride	12/29/14 122914#1	EPA 300.0	mg/L	20.0	405
N-Nitrate	12/22/14 122214#1	EPA 300.0	mg-N/L	0.1	0.5
Sulfate	12/29/14 122914#1	EPA 300.0	mg/L	2.0	60.6
Total Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	3.21
Dissolved Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	3.04

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Client ID: BD-MH-1.32-20141222-W
ARI ID: 14-28176 ZQ41C

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/14 122214#1	EPA 150.1	std units	0.01	6.59
Alkalinity	12/30/14 123014#1	SM 2320	mg/L CaCO3	1.0	21.6
Carbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/30/14	SM 2320	mg/L CaCO3	1.0	21.6
Hydroxide	12/30/14	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Hexavalent Chromium	12/22/14 122214#1	SM3500Cr-B	mg/L	0.010	< 0.010 U
Conductivity	12/26/14 122614#1	EPA 120.1	umhos/cm	1.00	51.0
Total Suspended Solids	12/26/14 122614#1	SM2540D	mg/L	1.1	16.0
Chloride	12/22/14 122214#1	EPA 300.0	mg/L	0.1	1.1
N-Nitrate	12/22/14 122214#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	12/22/14 122214#1	EPA 300.0	mg/L	0.1	0.5
Total Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	5.55
Dissolved Organic Carbon	12/30/14 123014#1	EPA 9060	mg/L	1.50	4.77

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: ZQ41A Client ID: BD-OWS-14-20141222-W							
Hexavalent Chromium	SM3500Cr-B	12/22/14	mg/L	< 0.010	0.065	0.063	103.2%
Chloride	EPA 300.0	12/29/14	mg/L	245	697	400	113.0%
N-Nitrate	EPA 300.0	12/22/14	mg-N/L	0.4	2.3	2.0	95.0%
Sulfate	EPA 300.0	12/29/14	mg/L	36.8	83.1	40.0	115.8%
Total Organic Carbon	EPA 9060	12/30/14	mg/L	4.38	22.8	20.0	92.1%
Dissolved Organic Carbon	EPA 9060	12/30/14	mg/L	2.76	21.9	20.0	95.7%

REPLICATE RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: 12/22/14
Date Received: 12/22/14

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: ZQ41A Client ID: BD-OWS-14-20141222-W						
pH	EPA 150.1	12/22/14	std units	6.78	6.81	0.03
Hexavalent Chromium	SM3500Cr-B	12/22/14	mg/L	< 0.010	< 0.010	NA
Chloride	EPA 300.0	12/29/14	mg/L	245	247	0.8%
N-Nitrate	EPA 300.0	12/22/14	mg-N/L	0.4	0.4	0.0%
Sulfate	EPA 300.0	12/29/14	mg/L	36.8	37.0	0.5%
Total Organic Carbon	EPA 9060	12/30/14	mg/L	4.38	3.43	24.3%
Dissolved Organic Carbo	EPA 9060	12/30/14	mg/L	2.76	2.69	2.6%
ARI ID: ZQ41B Client ID: BD-MH-12.56-20141222-W						
Conductivity	EPA 120.1	12/26/14	umhos/cm	1,720	1,760	2.3%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	12/22/14	std units	6.98	7.00	0.02
Total Suspended Solids SM2540D	ICVL	12/26/14	mg/L	49.4	50.0	98.8%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

Project: NA
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Hexavalent Chromium	SM3500Cr-B	12/22/14	mg/L	< 0.010 U	
Conductivity	EPA 120.1	12/26/14	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	12/26/14	mg/L	< 1.0 U	
Chloride	EPA 300.0	12/22/14	mg/L	< 0.1 U	
		12/29/14		< 0.1 U	
N-Nitrate	EPA 300.0	12/22/14	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	12/22/14	mg/L	< 0.1 U	
		12/29/14		< 0.1 U	
Total Organic Carbon	EPA 9060	12/30/14	mg/L	< 1.50 U	
Dissolved Organic Carbon	EPA 9060	12/30/14	mg/L	< 1.50 U	
		12/30/14		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
ZQ41-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 01/05/15

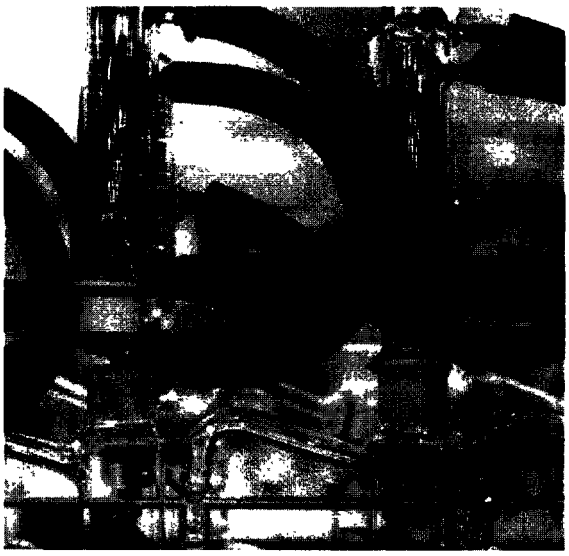
Project: NA
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	12/30/14	mg/L CaCO3	62.0	61.7	100.5%
Hexavalent Chromium ERA #300614	SM3500Cr-B	12/22/14	mg/L	0.644	0.630	102.2%
Conductivity Ricca #4401B14	EPA 120.1	12/26/14	umhos/cm	979	1,000	97.9%
Chloride ERA #290313	EPA 300.0	12/22/14 12/29/14	mg/L	2.8 2.8	3.0 3.0	93.3% 93.3%
N-Nitrate ERA #320614	EPA 300.0	12/22/14	mg-N/L	2.9	3.0	96.7%
Sulfate ERA 131013	EPA 300.0	12/22/14 12/29/14	mg/L	2.9 2.9	3.0 3.0	96.7% 96.7%
Total Organic Carbon ERA #0408-13-02	EPA 9060	12/30/14	mg/L	21.3	20.0	106.5%
Dissolved Organic Carbon ERA #0408-13-02	EPA 9060	12/30/14	mg/L	21.3	20.0	106.5%

Subcontracted Results
PCB Congeners Analyzed by SGS ENVIROMENTAL SERVICES INC.

ARI Job ID: ZQ41, ZQ42

SGS



FINAL LAB REPORT

The Boeing Company

A7496

13-Jan-2015

Prepared by

SGS NORTH AMERICA

Prepared for

Analytical Resources, Inc.

Kelly Frances Bottem

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This report is approved by

Heather Distel Digitally signed by Heather Distel
Date 2015 01 13 12 52.30 -05'00'

Heather Distel

Senior Project Scientist/Team Lead

SGS

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	The Boeing Company
SGS Project #	A7496
Analytical Protocol(s)	1668A
No. Samples Submitted	3
Additional QC Sample(s)	0
No Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	24-Dec-14
Condition Received	Good
Temperature upon Receipt (°C)	8
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

SGS

QC ANNOTATIONS:

1 Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project

SGS

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value "H" is assigned If the obtained value is less than half the specified value "h" is assigned
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits

SGS

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL)
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS

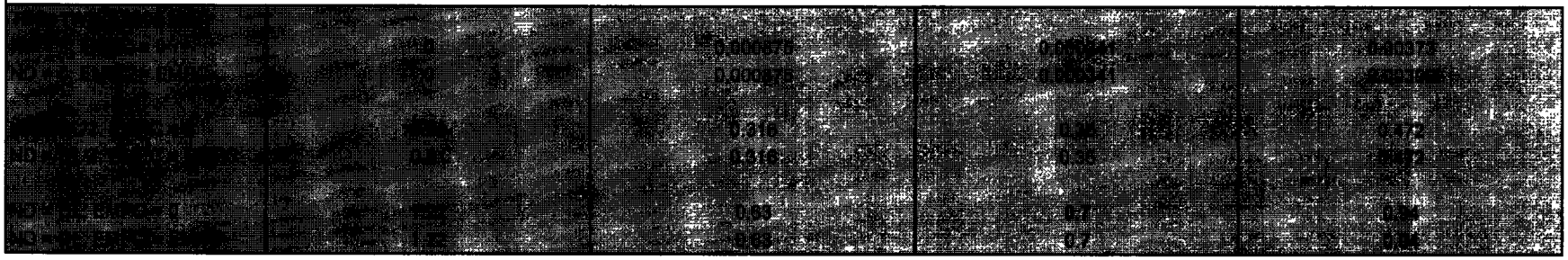
SGS CERTIFICATIONS

Arkansas	88-0682
California (ELAP)	Interim ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-14-00135
DoD	2726.01
Florida (Primary NELAP)	E87634
ISO 17025/IEC	2726.01
Louisiana	4115
Maine	#2014020
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	Lab #037-999-459 Cert #688823
New Jersey	NC100
New York	11685
North Carolina DWR	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	Lab #99029 Cert #99029002
Texas	T104704260-13-5
US Coast Guard	16714/159.317/SGS
Virginia	Lab #460214 Cert #3006
Washington	C913
West Virginia	293

Rev 04-Sep-2014

PCB Report — Method 1668A

Analyte	Method Blank A7496_12944	BD-OWS-14-20141222-W	BD-MH-12.56-20141222-W	BD-MH-1.32-20141222-W
	pg/L	pg/L	pg/L	pg/L
PCB-77	(7.17)	(4.52)	(4.75)	(6.28)
PCB-81	(6.76)	(4.1)	(4.43)	(5.57)
PCB-105	(7.38)	7.09	(5.22)	35.8
PCB-114	(6.79)	(3.88)	(4.75)	(6.04)
PCB-118	(7.01)	22.1	11.4	69.1
PCB-123	(7.14)	(3.95)	(4.86)	(6.03)
PCB-126	(9.73)	(4.84)	(5.43)	(6.83)
PCB-156/157	(10.9)	(6.06)	(6.52)	19.4
PCB-167	(6.95)	(4.07)	(4.55)	[8.69]
PCB-169	(8.09)	(4.76)	(5.14)	(8.33)
PCB-189	(7.85)	(4.68)	(5.36)	(8.17)
Total Mono-CB	(6.72)	5.21	(4.84)	(5.38)
Total Di-CB	(11.1)	89.4	27.2	37.2
Total Tri-CB	(8.1)	157	40.9	27.6
Total Tetra-CB	7.54	92.7	97.4	142
Total Penta-CB	(7.09)	160	58.9	439
Total Hexa-CB	(7.87)	121	51.7	537
Total Hepta-CB	(7.04)	51.6	[6.23]	303
Total Octa-CB	(6.87)	8.16	(5.48)	79.7
Total Nona-CB	(9.9)	(6.31)	(7.54)	(14.6)
Total Deca-CB	(11.5)	(8.06)	(8.03)	(20.4)

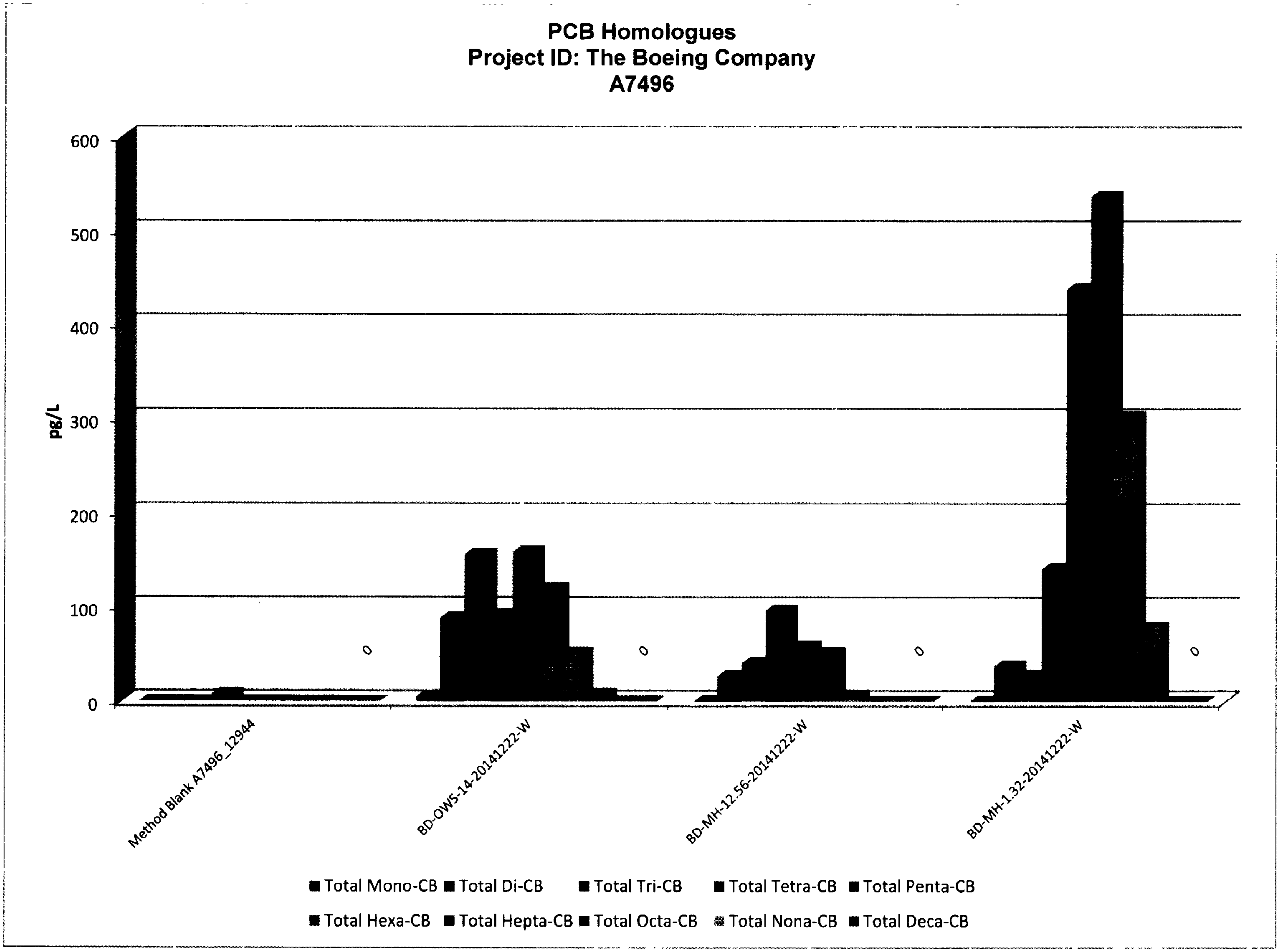


Checkcode	077-509-FVD/A	486-339-BZS/A	456-157-PJY/A	402-888-KYQ/A

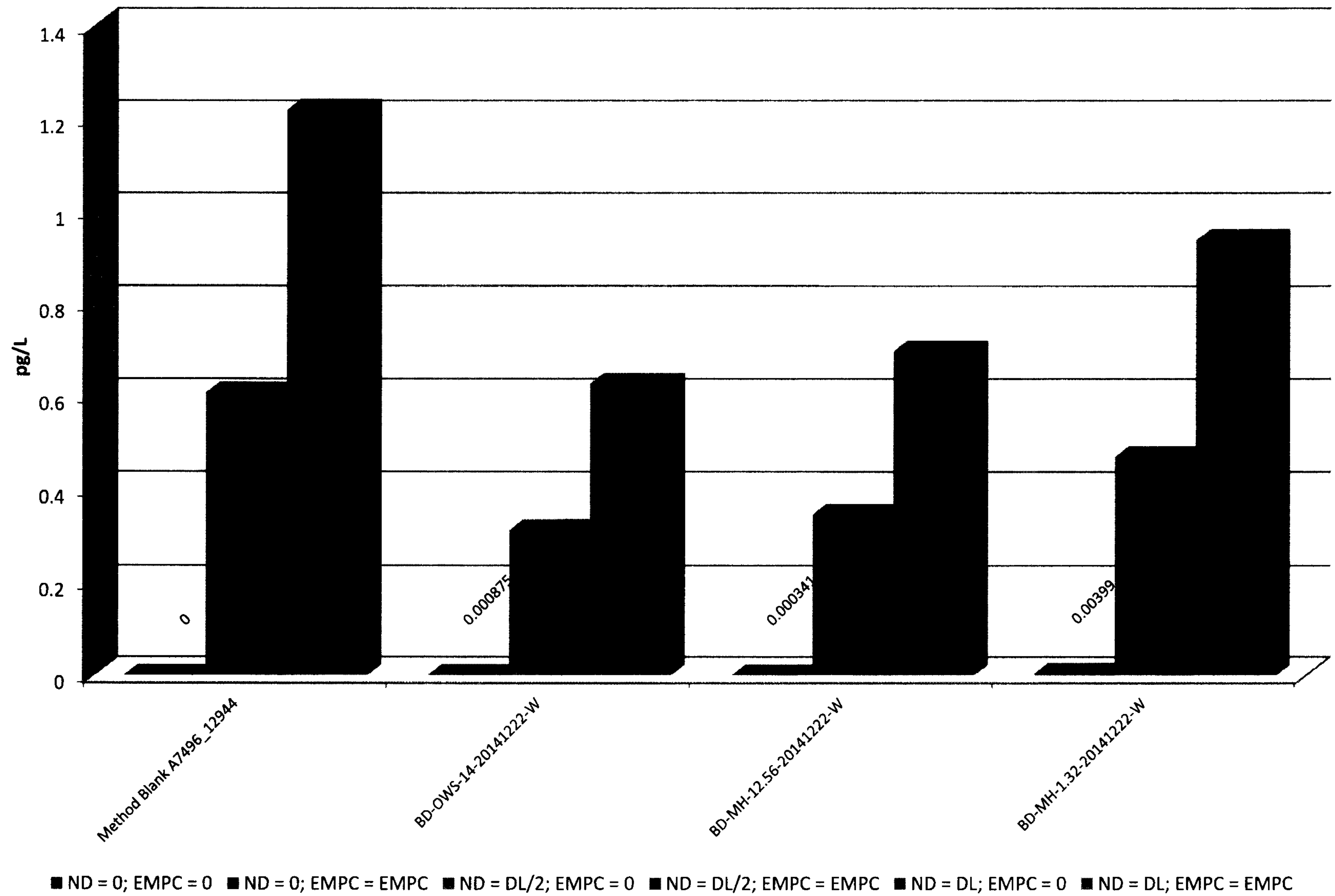
() = DL
[] = EMPC

PCB Recoveries — Method 1668A

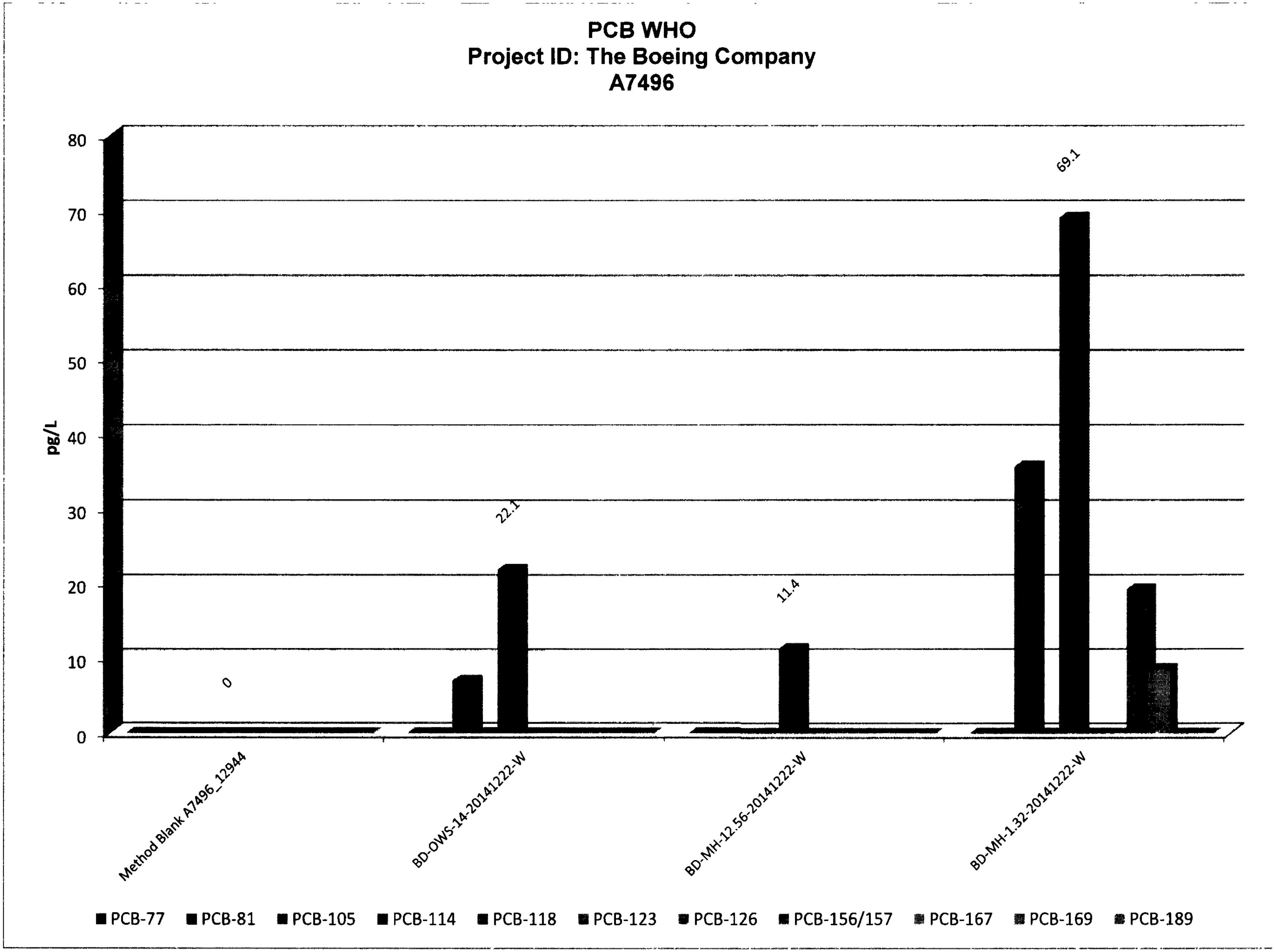
Standard	Method Blank A7496_12944	BD-OWS-14-20141222-W	BD-MH-12.56-20141222-W	BD-MH-1.32-20141222-W
ES PCB-1	50.9	46.6	61.3	48.5
ES PCB-3	52.8	50.8	61.5	51.4
ES PCB-4	82.4	67.9	85.7	68.2
ES PCB-15	68.5	67.2	77.4	65.1
ES PCB-19	84.2	76.5	98.1	75.5
ES PCB-39	58.1	61.4	69.3	65.4
ES PCB-54	71	73.3	75	69
ES PCB-77	59.7	62.7	71.4	66.1
ES PCB-81	59.9	63.4	71.3	68.3
ES PCB-104	90.1	77.8	87.2	80.1
ES PCB-105	88.3	82.8	94.1	82.7
ES PCB-114	89	82.4	97.7	85
ES PCB-118	87.7	81.4	96.6	84.7
ES PCB-123	89.1	82.6	94.6	85.8
ES PCB-126	71.9	68.3	76.4	65.4
ES PCB-153	86.2	76.5	96.2	82.7
ES PCB-155	73.8	72.9	88	82.2
ES PCB-156/157	77.1	72.1	89.3	73.3
ES PCB-167	74.3	72.1	87.9	73.9
ES PCB-169	79	71.3	85.1	59.5
ES PCB-170	91.1	91	109	79.1
ES PCB-180	86.8	85.6	103	81
ES PCB-188	86	74.3	92.4	79.5
ES PCB-189	70.5	68.5	83.7	56.7
ES PCB-202	88.8	74.8	96.4	74.8
ES PCB-205	89.2	80.2	99.9	56.6
ES PCB-206	111	83 3	107	57.5
ES PCB-208	89.8	84.7	102	70
ES PCB-209	109	81.5	105	53.5
Checkcode	077-509-FVD/A	486-339-BZS/A	456-157-PJY/A	402-888-KYQ/A


PCB Homologues
Project ID: The Boeing Company
A7496
600
500
400
300
200
100
0
pg/L
0
0
0
0
Method Blank A7496_12944
BD-OWS-14-20141222-W
BD-MH-12.56-20141222-W
BD-MH-1.32-20141222-W
Total Mono-CB
Total Di-CB
Total Tri-CB
Total Tetra-CB
Total Penta-CB
Total Hexa-CB
Total Hepta-CB
Total Octa-CB
Total Nona-CB
Total Deca-CB

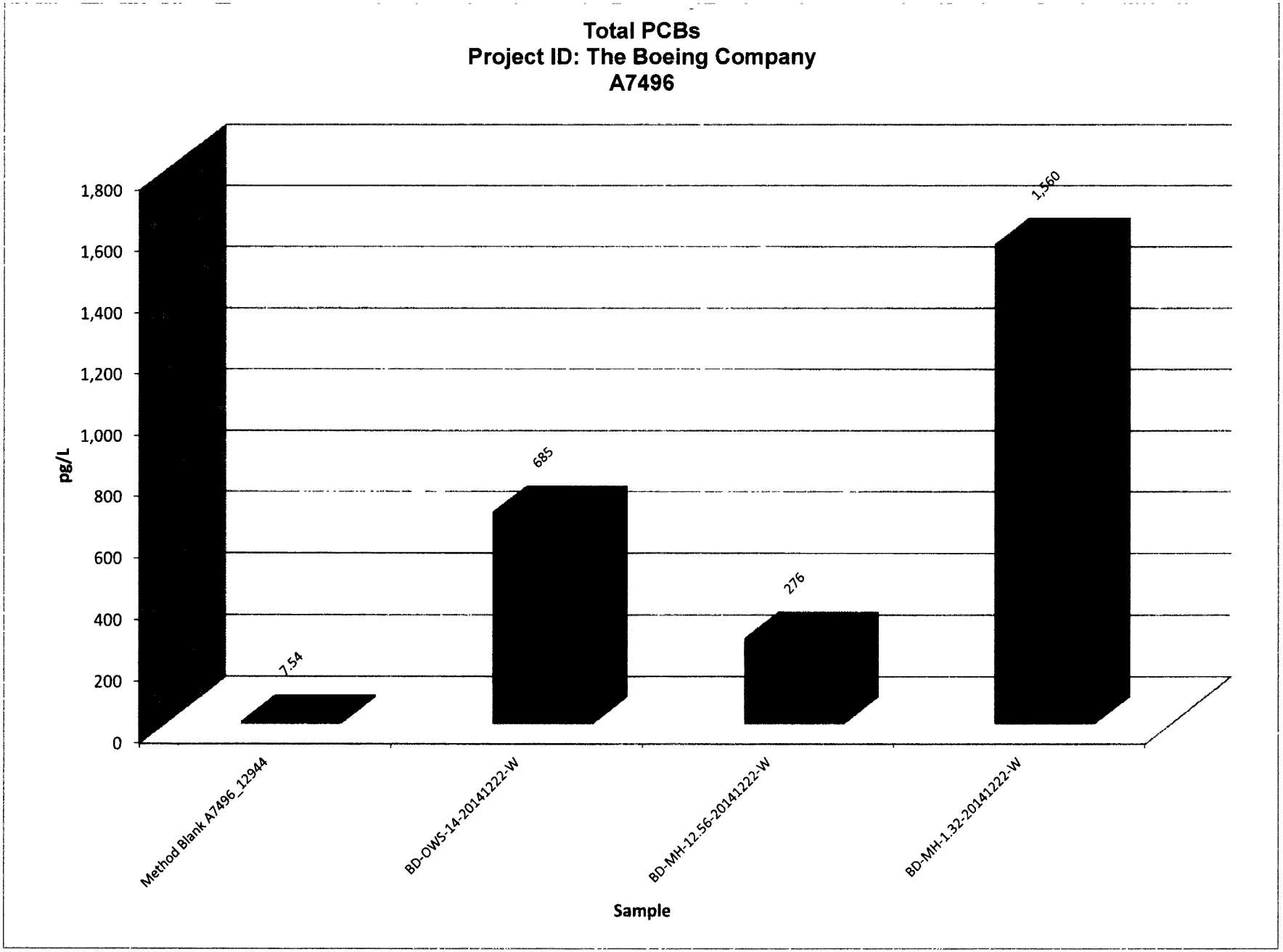
PCB TEQ
Project ID: The Boeing Company
A7496



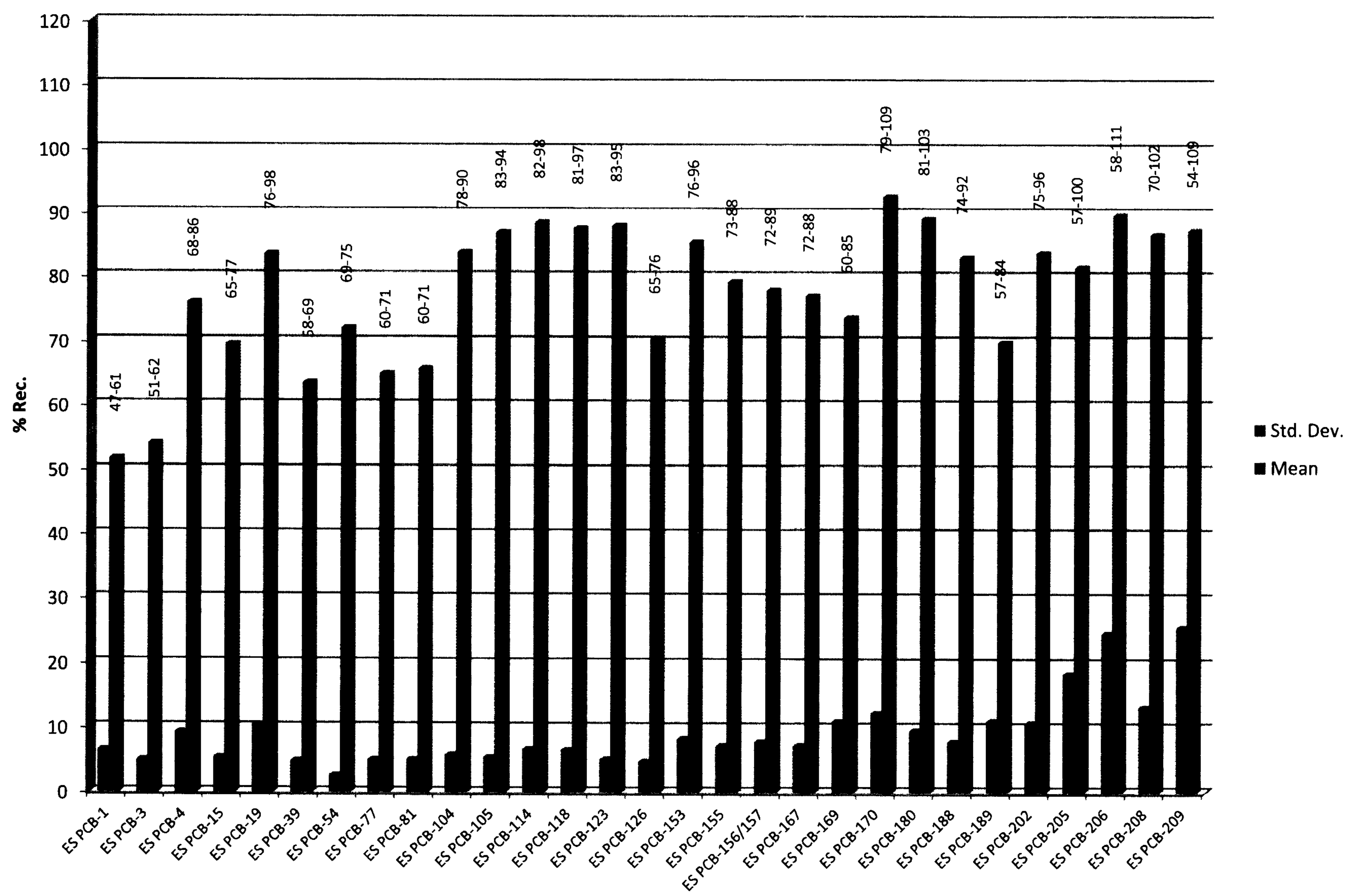
ZQ41 : 00116


PCB WHO
Project ID: The Boeing Company
A7496
pg/L
80
70
60
50
40
30
20
10
0
0
22.1
11.4
69.1
Method Blank A7496_12944
BD-OWS-14-20141222-W
BD-MH-12.56-20141222-W
BD-MH-1.32-20141222-W
PCB-77
PCB-81
PCB-105
PCB-114
PCB-118
PCB-123
PCB-126
PCB-156/157
PCB-167
PCB-169
PCB-189

ZQ41 : 00117


Total PCBs
Project ID: The Boeing Company
A7496
pg/L
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
7.54
685
276
1,560
Method Blank A7496_12944
BD-OW5-14-20141222-W
BD-MH-12.56-20141222-W
BD-MH-1.32-20141222-W
Sample

Mean Recoveries of Extraction Standards (N=4)
Project ID: The Boeing Company
A7496



SGS

Sample ID: Method Blank A7496_12944

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc.	Matrix.	Aqueous	Project No..	A7496	Date Received:	n/a
Project ID:	The Boeing Company	Weight/Volume:	1.00 L	Sample ID.	MB1_12944_PCB_TLX	Date Extracted:	05-Jan-2015
Date Collected:	n/a	pH	n/a	QC Batch No.:	12944	Date Analyzed:	09-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**7.17**			**ES PCB-1**	**50.9**
PCB-81 344'5-TeCB	ND	6.76			ES PCB-3	52.8
PCB-105 233'44'-PeCB	**ND**	**7.38**			**ES PCB-4**	**82.4**
PCB-114 2344'5-PeCB	ND	6.79			ES PCB-15	68.5
PCB-118 23'44'5-PeCB	**ND**	**7.01**			**ES PCB-19**	**84.2**
PCB-123 23'44'5'-PeCB	ND	7.14			ES PCB-37	58.1
PCB-126 33'44'5-PeCB	**ND**	**9.73**			**ES PCB-54**	**71**
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	10.9		C	ES PCB-77	59.7
PCB-167 23'44'55'-HxCB	**ND**	**6.95**			**ES PCB-81**	**59.9**
PCB-169 33'44'55'-HxCB	ND	8.09			ES PCB-104	90.1
PCB-189 233'44'55'-HpCB	**ND**	**7.85**			**ES PCB-105**	**88.3**
					ES PCB-114	89
TEQs (WHO 2005 M/H)					**ES PCB-118**	**87.7**
					ES PCB-123	89.1
ND = 0	**0**		**0**		**ES PCB-126**	**71.9**
ND = 0.5 x DL	0.61		0.61		ES PCB-153	86.2
ND = DL	**1.22**		**1.22**		**ES PCB-155**	**73.8**
					ES PCB-156/157	77.1
Totals					**ES PCB-167**	**74.3**
Mono-CB	ND	6.72			ES PCB-169	79
Di-CB	**ND**	**11.1**			**ES PCB-170**	**91.1**
Tri-CB	ND	8.1			ES PCB-180	86.8
Tetra-CB	**7.54**				**ES PCB-188**	**86**
Penta-CB	ND	7.09			ES PCB-189	70.5
Hexa-CB	**ND**	**7.87**			**ES PCB-202**	**88.8**
Hepta-CB	ND	7.04			ES PCB-205	89.2
Octa-CB	**ND**	**6.87**			**ES PCB-206**	**111**
Nona-CB	ND	9.9			ES PCB-208	89.8
Deca-CB	**ND**	**11.5**			**ES PCB-209**	**109**
					CS PCB-28	71.4
Total PCB (Mono-Deca)	**7.54**		**7.54**		**CS PCB-111**	**99.8**
					CS PCB-178	99.7

Checkcode. 077-509-FVD/A SGS Environmental Services - PCB v0.34 Report Created: 13-Jan-2015 11:59 Analyst: SF

SGS - 1507

Sample ID: Method Blank A7496_12944 — Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix	Aqueous	Project No.	A7496	Date Received	n/a
Project ID	The Boeing Company	Weight/Volume	1 00 L	Sample ID	MB1_12944_PCB_TLX	Date Extracted	05-Jan-2015
Date Collected	n/a	pH	n/a	QC Batch No.	12944	Date Analyzed	09-Jan-2015
		Units	pg/L	Checkcode	077-509-FVD/A	Time Analyzed	19 27 34

Mono	Conc.	Qualifiers	[redacted]			Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(5.92)		PCB-19	(8.74)		PCB-54	(5 03)		PCB-72	(5.87)	
PCB-2	**(7.25)**		[redacted]			**PCB-50/53**	**(6.9)**	C	**PCB-68**	**(5.58)**	
PCB-3	(7.53)		PCB-17	(7.98)		PCB-45	(7.73)		PCB-57	(6.09)	
			[redacted]			**PCB-51**	**(6.8)**		**PCB-58**	**(5.95)**	
Conc.	0		PCB-24	(6.21)		PCB-46	(8.24)		PCB-67	(5 99)	
EMPC	**0**		[redacted]			**PCB-52**	**7.54**	J	**PCB-63**	**(5.41)**	
			PCB-32	(5.66)		PCB-73	(5.22)		PCB-61/70/74/76	(5.9)	C
Di	**Conc.**	**Qualifiers**	[redacted]			**PCB-43**	**(8.39)**		**PCB-66**	**(6.18)**	
PCB-4	(10.6)		PCB-23	(6 64)		PCB-69/49	(5.9)	C	PCB-55	(6 08)	
PCB-10	**(7.22)**		[redacted]			**PCB-48**	**(6.84)**		**PCB-56**	**(6.25)**	
PCB-9	(11 2)		PCB-25	(6.65)		PCB-44/47/65	(6 49)	C	PCB-60	(6.03)	
PCB-7	**(9.63)**		[redacted]			**PCB-59/62/75**	**(5.13)**	C	**PCB-80**	**(5.32)**	
PCB-6	(10.6)		PCB-28/20	(6 72)	C	PCB-42	(7.47)		PCB-79	(5 44)	
PCB-5	**(10.4)**		[redacted]			**PCB-41**	**(8.77)**		**PCB-78**	**(6.41)**	
PCB-8	(10.2)		PCB-22	(7.12)		PCB-71/40	(6.71)	C	PCB-81	(6.76)	
PCB-14	**(9.04)**		[redacted]			**PCB-64**	**(4.82)**		**PCB-77**	**(7.17)**	
PCB-11	(10.4)		PCB-39	(6 25)							
PCB-13/12	**(10.5)**	C	[redacted]								
PCB-15	(11.5)		PCB-35	(7 2)							
			[redacted]								
Conc.	**0**		[redacted]						**Conc.**	**7.54**	
EMPC	0		EMPC	0					EMPC	7.54	

Totals	Conc.	EMPC
Mono-Tri	0	0
Tetra-Hexa	7.54	7 54
Hepta-Deca	0	0
Mono-Deca	7.54	7.54

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Sample ID: Method Blank A7496_12944 — Method 1668A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(4 5)		PCB-108/119/86/97/125/87	(8.03)	C	PCB-155	(5 59)		PCB-165	(5 91)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-152	(5.52)		PCB-146	(7)	
PCB-103	(8.73)		PCB-116/85	(8.15)	C	PCB-150	(5.32)		PCB-161	(5.28)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-136	(5.75)		PCB-153/168	(5.49)	C
PCB-95	(9.4)		PCB-115	(6 84)		PCB-145	(5.66)		PCB-141	(7.18)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-148	(6.9)		PCB-130	(8.16)	
PCB-102	(8.02)		PCB-111	(6.64)		PCB-151/135	(7 02)	C	PCB-137	(6 51)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-154	(6.3)		PCB-164	(5.7)	
PCB-88	(10.5)		PCB-107/124	(7 16)	C	PCB-144	(6.79)		PCB-163/138/129	(6 58)	C
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-147/149	(6.85)	C	PCB-160	(5.71)	
PCB-84	(10.9)		PCB-123	(7.14)		PCB-134	(9.18)		PCB-158	(5 09)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-143	(6.67)		PCB-128/166	(8.37)	C
PCB-121	(6.73)		PCB-118	(7.01)		PCB-139/140	(6.7)	C	PCB-159	(7.28)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-131	(7.71)		PCB-162	(7.11)	
PCB-113/90/101	(8.26)	C	PCB-114	(6.79)		PCB-142	(7.72)		PCB-167	(6.95)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-132	(7.65)		PCB-156/157	(10.9)	C
PCB-99	(8 81)		PCB-127	(7 28)		PCB-133	(7.39)		PCB-169	(8.09)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				Conc.	0	
			EMPC	0					EMPC	0	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	[illegible]	[illegible]	[illegible]	Nona	Conc.	Qualifiers
PCB-188	(4.38)		PCB-174	(8.52)		PCB-202	(6.67)		PCB-208	(9.55)	
PCB-179	(4.67)		PCB-177	(8.54)		[illegible]	[illegible]	[illegible]	PCB-207	(8.62)	
PCB-184	(4.83)		PCB-181	(7 5)		PCB-204	(6.53)		PCB-206	(10.2)	
PCB-176	(4.27)		PCB-171/173	(8.42)	C	[illegible]	[illegible]	[illegible]			
PCB-186	(4.63)		PCB-172	(8.04)		PCB-200	(6.33)		Conc.	0	
PCB-178	(6.23)		PCB-192	(6.13)		[illegible]	[illegible]	[illegible]	EMPC	0	
PCB-175	(7.87)		PCB-180/193	(6.41)	C	PCB-196	(7.77)				
PCB-187	(7.41)		PCB-191	(5.67)		[illegible]	[illegible]	[illegible]	Deca	Conc.	Qualifiers
PCB-182	(7.16)		PCB-170	(8.12)		PCB-195	(9.51)		PCB-209	(11.5)	
PCB-183	(7)		PCB-190	(5.82)		[illegible]	[illegible]	[illegible]			
PCB-185	(7.6)		PCB-189	(7.85)		PCB-205	(7 08)				
			Conc.	0		[illegible]	[illegible]	[illegible]			
			EMPC	0		EMPC	0				

ZQ41 : 00122

SGS

Sample ID: BD-OWS-14-20141222-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc.	Matrix.	Aqueous	Project No.	A7496	Date Received.	24-Dec-2014
Project ID:	The Boeing Company	Weight/Volume	1.04 L	Sample ID	A7496_12944_PCB_001-RJ2	Date Extracted.	05-Jan-2015
Date Collected:	22-Dec-2014	pH	6	QC Batch No.:	12944	Date Analyzed:	12-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**4.52**			**ES PCB-1**	**46.6**
PCB-81 344'5-TeCB	ND	4.1			ES PCB-3	50.8
PCB-105 233'44'-PeCB	**7.09**			J	**ES PCB-4**	**67.9**
PCB-114 2344'5-PeCB	ND	3.88			ES PCB-15	67.2
PCB-118 23'44'5-PeCB	**22.1**				**ES PCB-19**	**76.5**
PCB-123 23'44'5'-PeCB	ND	3.95			ES PCB-37	61.4
PCB-126 33'44'5-PeCB	**ND**	**4.84**			**ES PCB-54**	**73.3**
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	6.06		C	ES PCB-77	62.7
PCB-167 23'44'55'-HxCB	**ND**	**4.07**			**ES PCB-81**	**63.4**
PCB-169 33'44'55'-HxCB	ND	4.76			ES PCB-104	77.8
PCB-189 233'44'55'-HpCB	**ND**	**4.68**			**ES PCB-105**	**82.8**
					ES PCB-114	82.4
TEQs (WHO 2005 M/H)					**ES PCB-118**	**81.4**
					ES PCB-123	82.6
ND = 0	**0.000875**		**0.000875**		**ES PCB-126**	**68.3**
ND = 0.5 x DL	0.316		0.316		ES PCB-153	76.5
ND = DL	**0.63**		**0.63**		**ES PCB-155**	**72.9**
					ES PCB-156/157	72.1
Totals					**ES PCB-167**	**72.1**
Mono-CB	5.21				ES PCB-169	71.3
Di-CB	**89.4**				**ES PCB-170**	**91**
Tri-CB	157		173		ES PCB-180	85.6
Tetra-CB	**92.7**		**110**		**ES PCB-188**	**74.3**
Penta-CB	160		168		ES PCB-189	68.5
Hexa-CB	**121**				**ES PCB-202**	**74.8**
Hepta-CB	51.6				ES PCB-205	80.2
Octa-CB	**8.16**				**ES PCB-206**	**83.3**
Nona-CB	ND	6.31			ES PCB-208	84.7
Deca-CB	**ND**	**8.06**			**ES PCB-209**	**81.5**
					CS PCB-28	81.6
Total PCB (Mono-Deca)	**685**		**727**		**CS PCB-111**	**97.6**
					CS PCB-178	89.6

Sample ID: BD-OWS-14-20141222-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc	Matrix	Aqueous	Project No.	A7496	Date Received	24-Dec-2014
Project ID	The Boeing Company	Weight/Volume	1 04 L	Sample ID	A7496_12944_PCB_001-RJ2	Date Extracted	05-Jan-2015
Date Collected	22-Dec-2014	pH	6	QC Batch No.	12944	Date Analyzed	12-Jan-2015
		Units	pg/L	Checkcode	486-339-BZS/A	Time Analyzed	17 43 28

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	5 21	J	PCB-19	[10.2]	EMPC	PCB-54	(2.91)		PCB-72	(3 59)	
PCB-2	(3.84)		[illegible]	[illegible]	[illegible]	PCB-50/53	7.11	J C	PCB-68	(3.33)	
PCB-3	(3.62)		PCB-17	20.4		PCB-45	(5 62)		PCB-57	(3 75)	
			[illegible]	[illegible]	[illegible]	PCB-51	(3.9)		PCB-58	(3.61)	
Conc.	5.21		PCB-24	(3.18)		PCB-46	(5 36)		PCB-67	(3 65)	
EMPC	5.21		[illegible]	[illegible]		PCB-52	36.7	B	PCB-63	(3.34)	
			PCB-32	18		PCB-73	(3 63)		PCB-61/70/74/76	18	J C
Di	Conc.	Qualifiers	[illegible]	[illegible]		PCB-43	(5.48)		PCB-66	[10.5]	EMPC
PCB-4	40.6		PCB-23	(3.9)		PCB-69/49	15.3	J C	PCB-55	(3.7)	
PCB-10	(5.24)		[illegible]	[illegible]	[illegible]	PCB-48	(4.5)		PCB-56	(3.92)	
PCB-9	(6.91)		PCB-25	[5 48]	J EMPC	PCB-44/47/65	15.7	J C	PCB-60	(3.75)	
PCB-7	(6.05)		[illegible]	[illegible]	[illegible]	PCB-59/62/75	(3.31)	C	PCB-80	(3.3)	
PCB-6	9 7		PCB-28/20	17.4	J C	PCB-42	(4.74)		PCB-79	(3.42)	
PCB-5	(6.58)		[illegible]	[illegible]	[illegible]	PCB-41	(5.56)		PCB-78	(4.04)	
PCB-8	17.4		PCB-22	5.33	J	PCB-71/40	[4.15]	J EMPC C	PCB-81	(4.1)	
PCB-14	(5.63)		[illegible]	[illegible]		PCB-64	[2.71]	J EMPC	PCB-77	(4.52)	
PCB-11	12 4		PCB-39	(3.79)							
PCB-13/12	(6.62)	C	[illegible]	[illegible]							
PCB-15	9.36	J	PCB-35	(4.38)							
			[illegible]	[illegible]							
Conc.	89.4		[illegible]	[illegible]					Conc.	92.7	
EMPC	89.4		EMPC	173					EMPC	110	

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Totals	Conc.	EMPC
Mono-Tri	252	267
Tetra-Hexa	373	399
Hepta-Deca	59.8	59.8
Mono-Deca	685	727

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Sample ID: BD-OWS-14-20141222-W Method 1668A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(3.04)		PCB-108/119/86/97/125/87	20.8	J C	PCB-155	(3 01)		PCB-165	(3.24)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-152	(2.97)		PCB-146	(3.79)	
PCB-103	(4.69)		PCB-116/85	(4 45)	C	PCB-150	(3)		PCB-161	(2.91)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-136	4.85	J	PCB-153/168	28.6	C
PCB-95	28.9		PCB-115	(3.88)		PCB-145	(3 03)		PCB-141	(3 97)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-148	(3.77)		PCB-130	(4.51)	
PCB-102	(5.01)		PCB-111	(3.64)		PCB-151/135	12 7	J C	PCB-137	(3 92)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-154	(3.46)		PCB-164	(2.89)	
PCB-88	(6 3)		PCB-107/124	(3.96)	C	PCB-144	(3 77)		PCB-163/138/129	35.8	C
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-147/149	26.6	C	PCB-160	(2.96)	
PCB-84	[8.59]	J EMPC	PCB-123	(3.95)		PCB-134	(4.63)		PCB-158	(2 79)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-143	(3.9)		PCB-128/166	(4.77)	C
PCB-121	(3.63)		PCB-118	22.1		PCB-139/140	(3.68)	C	PCB-159	(4.31)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-131	(4.28)		PCB-162	(4.14)	
PCB-113/90/101	28.7	J C	PCB-114	(3 88)		PCB-142	(4.21)		PCB-167	(4.07)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-132	12.5		PCB-156/157	(6.06)	C
PCB-99	14		PCB-127	(4.13)		PCB-133	(3.96)		PCB-169	(4.76)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				Conc.	121	
			EMPC	168					EMPC	121	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	[illegible]	[illegible]	[illegible]	Nona	Conc.	Qualifiers
PCB-188	(2 8)		PCB-174	10.8		PCB-202	(4.2)		PCB-208	(5 53)	
PCB-179	(2.88)		PCB-177	(5.03)		[illegible]	[illegible]	[illegible]	PCB-207	(5.06)	
PCB-184	(2.98)		PCB-181	(4 34)		PCB-204	(4.21)		PCB-206	(7.1)	
PCB-176	(2.66)		PCB-171/173	(4.86)	C	[illegible]	[illegible]	[illegible]			
PCB-186	(2 86)		PCB-172	(4 77)		PCB-200	(4 14)		Conc.	0	
PCB-178	(3.86)		PCB-192	(3.7)		[illegible]	[illegible]	[illegible]	EMPC	0	
PCB-175	(4.48)		PCB-180/193	21	C	PCB-196	(5.22)				
PCB-187	11		PCB-191	(3.54)		[illegible]	[illegible]	[illegible]	Deca	Conc.	Qualifiers
PCB-182	(4.19)		PCB-170	8.81	J	PCB-195	(7 75)		PCB-209	(8 06)	
PCB-183	(4.24)		PCB-190	(3.48)		[illegible]	[illegible]	[illegible]			
PCB-185	(4.3)		PCB-189	(4.68)		PCB-205	(5.73)				
			Conc.	51.6		[illegible]	[illegible]	[illegible]			
			EMPC	51.6		EMPC	8.16				

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Sample ID: BD-MH-12.56-20141222-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name:	Analytical Resources, Inc.	Matrix:	Aqueous	Project No.:	A7496	Date Received	24-Dec-2014
Project ID:	The Boeing Company	Weight/Volume:	1.04 L	Sample ID:	A7496_12944_PCB_002-RJ2	Date Extracted:	05-Jan-2015
Date Collected:	22-Dec-2014	pH	6	QC Batch No.	12944	Date Analyzed.	12-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**4.75**			**ES PCB-1**	**61.3**
PCB-81 344'5-TeCB	ND	4.43			ES PCB-3	61.5
PCB-105 233'44'-PeCB	**ND**	**5.22**			**ES PCB-4**	**85.7**
PCB-114 2344'5-PeCB	ND	4.75			ES PCB-15	77.4
PCB-118 23'44'5-PeCB	**11.4**				**ES PCB-19**	**98.1**
PCB-123 23'44'5'-PeCB	ND	4.86			ES PCB-37	69.3
PCB-126 33'44'5-PeCB	**ND**	**5.43**			**ES PCB-54**	**75**
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	6.52		C	ES PCB-77	71.4
PCB-167 23'44'55'-HxCB	**ND**	**4.55**			**ES PCB-81**	**71.3**
PCB-169 33'44'55'-HxCB	ND	5.14			ES PCB-104	87.2
PCB-189 233'44'55'-HpCB	**ND**	**5.36**			**ES PCB-105**	**94.1**
					ES PCB-114	97.7
TEQs (WHO 2005 M/H)					**ES PCB-118**	**96.6**
					ES PCB-123	94.6
ND = 0	**0.000341**		**0.000341**		**ES PCB-126**	**76.4**
ND = 0.5 x DL	0.35		0.35		ES PCB-153	96.2
ND = DL	**0.7**		**0.7**		**ES PCB-155**	**88**
					ES PCB-156/157	89.3
Totals					**ES PCB-167**	**87.9**
Mono-CB	ND	4.84			ES PCB-169	85.1
Di-CB	**27.2**				**ES PCB-170**	**109**
Tri-CB	40.9		44.7		ES PCB-180	103
Tetra-CB	**97.4**		**104**		**ES PCB-188**	**92.4**
Penta-CB	58.9		76		ES PCB-189	83.7
Hexa-CB	**51.7**				**ES PCB-202**	**96.4**
Hepta-CB			6.23		ES PCB-205	99.9
Octa-CB	**ND**	**5.48**			**ES PCB-206**	**107**
Nona-CB	ND	7.54			ES PCB-208	102
Deca-CB	**ND**	**8.03**			**ES PCB-209**	**105**
					CS PCB-28	98
Total PCB (Mono-Deca)	**276**		**310**		**CS PCB-111**	**117**
					CS PCB-178	114

Checkcode: 456-157-PJY/A SGS Environmental Services - PCB v0.34 Report Created: 13-Jan-2015 12:04 Analyst. SF

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Sample ID: BD-MH-12.56-20141222-W

Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix	Aqueous	Project No	A7496	Date Received	24-Dec-2014
Project ID	The Boeing Company	Weight/Volume	1.04 L	Sample ID	A7496_12944_PCB_002-RJ2	Date Extracted	05-Jan-2015
Date Collected	22-Dec-2014	pH	6	QC Batch No.	12944	Date Analyzed	12-Jan-2015
		Units	pg/L	Checkcode	456-157-PJY/A	Time Analyzed	18 38 45

Mono	Conc.	Qualifiers
PCB-1	(3.93)	
PCB-2	**(5.76)**	
PCB-3	(5.75)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	19.9	
PCB-10	**(6.64)**	
PCB-9	(10.3)	
PCB-7	**(9.04)**	
PCB-6	(9.54)	
PCB-5	**(9.83)**	
PCB-8	(9.19)	
PCB-14	**(8.42)**	
PCB-11	7.3	J
PCB-13/12	**(9.69)**	C
PCB-15	(10.6)	
Conc.	**27.2**	
EMPC	27.2	

Tri	Conc.	Qualifiers
PCB-19	(5.84)	
[illegible]	[illegible]	J C
PCB-17	(5 37)	
[illegible]	[illegible]	
PCB-24	(4.17)	
[illegible]	[illegible]	
PCB-32	5.98	J
[illegible]	[illegible]	
PCB-23	(4.88)	
[illegible]	[illegible]	J C
PCB-25	[3.78]	J EMPC
[illegible]	[illegible]	J
PCB-28/20	8.05	J C
[illegible]	[illegible]	C
PCB-22	(5.17)	
[illegible]	[illegible]	
PCB-39	(4.75)	
[illegible]	[illegible]	
PCB-35	(5.48)	
[illegible]	[illegible]	
Conc.	[illegible]	
EMPC	44.7	

Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-54	(3.54)		PCB-72	(3 87)	
PCB-50/53	**(6.15)**	**C**	**PCB-68**	**23.7**	
PCB-45	(8 11)		PCB-57	(4 05)	
PCB-51	**[7.02]**	**J EMPC**	**PCB-58**	**(3.9)**	
PCB-46	(7 74)		PCB-67	(3.94)	
PCB-52	**25.7**	**B**	**PCB-63**	**(3.61)**	
PCB-73	(5.23)		PCB-61/70/74/76	9.33	J C
PCB-43	**(7.9)**		**PCB-66**	**(4.12)**	
PCB-69/49	9.78	J C	PCB-55	(4)	
PCB-48	**(6.49)**		**PCB-56**	**(4.24)**	
PCB-44/47/65	28 8	C	PCB-60	(4.05)	
PCB-59/62/75	**(4.77)**	**C**	**PCB-80**	**(3.56)**	
PCB-42	(6.83)		PCB-79	(3.69)	
PCB-41	**(8.02)**		**PCB-78**	**(4.36)**	
PCB-71/40	(6 15)	C	PCB-81	(4.43)	
PCB-64	**(4.49)**		**PCB-77**	**(4.75)**	
			Conc.	**97.4**	
			EMPC	104	

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Totals	Conc.	EMPC
Mono-Tri	68	71.8
Tetra-Hexa	208	232
Hepta-Deca	0	6.23
Mono-Deca	276	310

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Sample ID: BD-MH-12.56-20141222-W

Method 1668A

						Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(3.9)		PCB-108/119/86/97/125/87	(5 27)	C	PCB-155	(3.74)		PCB-165	(3.86)	
						PCB-152	(3.7)		PCB-146	(4.52)	
PCB-103	(5.77)		PCB-116/85	(5 48)	C	PCB-150	(3.73)		PCB-161	(3.47)	
						PCB-136	(3.89)		PCB-153/168	14	J C
PCB-95	20.5		PCB-115	(4 78)		PCB-145	(3.76)		PCB-141	(4.73)	
						PCB-148	(4.49)		PCB-130	(5.38)	
PCB-102	(6 16)		PCB-111	(4.48)		PCB-151/135	(4.71)	C	PCB-137	(4.68)	
						PCB-154	(4.13)		PCB-164	(3.44)	
PCB-88	(7.75)		PCB-107/124	(4.87)	C	PCB-144	(4.5)		PCB-163/138/129	23.3	J C
						PCB-147/149	14.4	J C	PCB-160	(3.53)	
PCB-84	(7.15)		PCB-123	(4 86)		PCB-134	(5 52)		PCB-158	(3 32)	
						PCB-143	(4.65)		PCB-128/166	(5.34)	C
PCB-121	(4.47)		PCB-118	11 4		PCB-139/140	(4 39)	C	PCB-159	(4 83)	
						PCB-131	(5.1)		PCB-162	(4.64)	
PCB-113/90/101	[17.1]	J EMPC C	PCB-114	(4 75)		PCB-142	(5 02)		PCB-167	(4.55)	
						PCB-132	(4.98)		PCB-156/157	(6.52)	C
PCB-99	8.95	J	PCB-127	(5 23)		PCB-133	(4.72)		PCB-169	(5.14)	
									Conc.	51.7	
			EMPC	76					EMPC	51 7	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Deca			Nona	Conc.	Qualifiers
PCB-188	(3.38)		PCB-174	(5 79)		PCB-202	(4.59)		PCB-208	(6.58)	
PCB-179	(3.47)		PCB-177	(6.05)		PCB-201	(4.33)		PCB-207	(6.03)	
PCB-184	(3 6)		PCB-181	(5.22)		PCB-204	(4.6)		PCB-206	(8.49)	
PCB-176	(3.21)		PCB-171/173	(5.84)	C	PCB-197	(4.1)				
PCB-186	(3.45)		PCB-172	(5 74)		PCB-200	(4.52)		Conc.	0	
PCB-178	(4.69)		PCB-192	(4.45)		PCB-198/199	(5.88)	C	EMPC	0	
PCB-175	(5.38)		PCB-180/193	[6 23]	J EMPC C	PCB-196	(5 7)				
PCB-187	(5.17)		PCB-191	(4.25)		PCB-203	(5.03)		Deca	Conc.	Qualifiers
PCB-182	(5.04)		PCB-170	(5.55)		PCB-195	(8.61)		PCB-209	(8.03)	
PCB-183	(5.09)		PCB-190	(3.89)		PCB-194	(5.04)				
PCB-185	(5.17)		PCB-189	(5.36)		PCB-205	(6.37)				
			Conc.	0		Conc.	0				
			EMPC	6.23		EMPC	0				

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Sample ID: BD-MH-1.32-20141222-W — Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix	Aqueous	Project No.	A7496	Date Received:	24-Dec-2014
Project ID:	The Boeing Company	Weight/Volume:	1.04 L	Sample ID	A7496_12944_PCB_003-RJ2	Date Extracted.	05-Jan-2015
Date Collected:	22-Dec-2014	pH	5	QC Batch No.	12944	Date Analyzed	12-Jan-2015

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	**ND**	**6.28**			**ES PCB-1**	**48.5**
PCB-81 344'5-TeCB	ND	5.57			ES PCB-3	51.4
PCB-105 233'44'-PeCB	**35.8**				**ES PCB-4**	**68.2**
PCB-114 2344'5-PeCB	ND	6.04			ES PCB-15	65.1
PCB-118 23'44'5-PeCB	**69.1**				**ES PCB-19**	**75.5**
PCB-123 23'44'5'-PeCB	ND	6.03			ES PCB-37	65.4
PCB-126 33'44'5-PeCB	**ND**	**6.83**			**ES PCB-54**	**69**
PCB-156/157 233'44'5/233'44'5'-HxCB	19.4			C	ES PCB-77	66.1
PCB-167 23'44'55'-HxCB	**EMPC**		**8.69**	J	**ES PCB-81**	**68.3**
PCB-169 33'44'55'-HxCB	ND	8.33			ES PCB-104	80.1
PCB-189 233'44'55'-HpCB	**ND**	**8.17**			**ES PCB-105**	**82.7**
					ES PCB-114	85
TEQs (WHO 2005 M/H)					**ES PCB-118**	**84.7**
					ES PCB-123	85.8
ND = 0	**0.00373**		**0.00399**		**ES PCB-126**	**65.4**
ND = 0.5 x DL	0.472		0.472		ES PCB-153	82.7
ND = DL	**0.94**		**0.94**		**ES PCB-155**	**82.2**
					ES PCB-156/157	73.3
Totals					**ES PCB-167**	**73.9**
Mono-CB	ND	5.38			ES PCB-169	59.5
Di-CB	**37.2**				**ES PCB-170**	**79.1**
Tri-CB	27.6				ES PCB-180	81
Tetra-CB	**142**		**171**		**ES PCB-188**	**79.5**
Penta-CB	439		460		ES PCB-189	56.7
Hexa-CB	**537**		**551**		**ES PCB-202**	**74.8**
Hepta-CB	303		362		ES PCB-205	56.6
Octa-CB	**79.7**		**86.7**		**ES PCB-206**	**57.5**
Nona-CB	ND	14.6			ES PCB-208	70
Deca-CB	**ND**	**20.4**			**ES PCB-209**	**53.5**
					CS PCB-28	82.2
Total PCB (Mono-Deca)	**1,560**		**1,700**		**CS PCB-111**	**98.2**
					CS PCB-178	89.1

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Sample ID: BD-MH-1.32-20141222-W — Method 1668A

Client Data		Sample Data		Laboratory Data			
Name	Analytical Resources, Inc.	Matrix	Aqueous	Project No.	A7496	Date Received	24-Dec-2014
Project ID	The Boeing Company	Weight/Volume	1 04 L	Sample ID	A7496_12944_PCB_003-RJ2	Date Extracted	05-Jan-2015
Date Collected	22-Dec-2014	pH	5	QC Batch No	12944	Date Analyzed	12-Jan-2015
		Units	pg/L	Checkcode	402-888-KYQ/A	Time Analyzed	19 35 24

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(4 6)		PCB-19	(6 87)		PCB-54	(3 41)		PCB-72	(4 87)	
PCB-2	**(6.18)**		[illegible]	[illegible]	[illegible]	**PCB-50/53**	**(5.52)**	**C**	**PCB-68**	**15.8**	
PCB-3	(6 16)		PCB-17	(6 31)		PCB-45	(7.28)		PCB-57	(5 1)	
			[illegible]	[illegible]		**PCB-51**	**(5.05)**		**PCB-58**	**(4.9)**	
Conc.	0		PCB-24	(4.9)		PCB-46	(6.95)		PCB-67	(4 96)	
EMPC	**0**		[illegible]	[illegible]		**PCB-52**	**32.9**	**B**	**PCB-63**	**(4.53)**	
			PCB-32	(4.46)		PCB-73	(4.7)		PCB-61/70/74/76	35.7	J C
Di	**Conc.**	**Qualifiers**	[illegible]	[illegible]		**PCB-43**	**(7.09)**		**PCB-66**	**[13.6]**	**EMPC**
PCB-4	(9.03)		PCB-23	(5 82)		PCB-69/49	11.7	J C	PCB-55	(5.03)	
PCB-10	**(5.97)**		[illegible]	[illegible]	[illegible]	**PCB-48**	**(5.83)**		**PCB-56**	**[8.62]**	**J EMPC**
PCB-9	(9.06)		PCB-25	(5.94)		PCB-44/47/65	37.1	C	PCB-60	(5.1)	
PCB-7	**(7.94)**		[illegible]	[illegible]	[illegible]	**PCB-59/62/75**	**(4.28)**	**C**	**PCB-80**	**(4.48)**	
PCB-6	(8.38)		PCB-28/20	10.4	J C	PCB-42	(6.14)		PCB-79	(4.64)	
PCB-5	**(8.63)**		[illegible]	[illegible]	[illegible]	**PCB-41**	**(7.2)**		**PCB-78**	**(5.49)**	
PCB-8	(8 07)		PCB-22	(6.16)		PCB-71/40	9 16	J C	PCB-81	(5.57)	
PCB-14	**(7.39)**		[illegible]	[illegible]		**PCB-64**	**[6.23]**	**J EMPC**	**PCB-77**	**(6.28)**	
PCB-11	37 2		PCB-39	(5 66)							
PCB-13/12	**(8.68)**	**C**	[illegible]	[illegible]							
PCB-15	(9.29)		PCB-35	(6.54)							
			[illegible]	[illegible]							
Conc.	**37.2**		**Conc.**	[illegible]					**Conc.**	**142**	
EMPC	37.2		**EMPC**	27.6					**EMPC**	171	

Totals	Conc.	EMPC
Mono-Tri	64.8	64 8
Tetra-Hexa	1,120	1,180
Hepta-Deca	382	449
Mono-Deca	1,560	1,700

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Sample ID: BD-MH-1.32-20141222-W — Method 1668A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(4.16)		PCB-108/119/86/97/125/87	51.5	J C	PCB-155	(4.17)		PCB-165	(4.85)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-152	(4.12)		PCB-146	18.1	
PCB-103	(7.16)		PCB-116/85	12 9	J C	PCB-150	(4.15)		PCB-161	(4 36)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-136	13.2		PCB-153/168	95.3	C
PCB-95	56.6		PCB-115	(5.93)		PCB-145	(4 2)		PCB-141	23.3	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-148	(5.84)		PCB-130	(6.75)	
PCB-102	(7.65)		PCB-111	(5.55)		PCB-151/135	39.3	C	PCB-137	(5 87)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-154	(5.18)		PCB-164	[5.66]	J EMPC
PCB-88	(9.62)		PCB-107/124	(6.05)	C	PCB-144	(5.65)		PCB-163/138/129	143	C
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-147/149	99.5	C	PCB-160	(4.43)	
PCB-84	[21]	EMPC	PCB-123	(6.03)		PCB-134	(6 94)		PCB-158	11.4	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-143	(5.84)		PCB-128/166	26.6	C
PCB-121	(5 54)		PCB-118	69.1		PCB-139/140	(5.51)	C	PCB-159	(6)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-131	(6.4)		PCB-162	(5.76)	
PCB-113/90/101	74.5	C	PCB-114	(6.04)		PCB-142	(6 31)		PCB-167	[8.69]	J EMPC
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PCB-132	48.1		PCB-156/157	19.4	C
PCB-99	30 6		PCB-127	(6.62)		PCB-133	(5 92)		PCB-169	(8.33)	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	Conc.	[illegible]	[illegible]				Conc.	537	
			EMPC	460					EMPC	551	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(3.95)		PCB-174	50 1		PCB-202	14		PCB-208	(11)	
PCB-179	15.3		PCB-177	[28.4]	EMPC	[illegible]	[illegible]	[illegible]	PCB-207	(10)	
PCB-184	(4.2)		PCB-181	(8 01)		PCB-204	(6.36)		PCB-206	(18.2)	
PCB-176	[5.29]	J EMPC	PCB-171/173	[19.7]	EMPC C	[illegible]	[illegible]	[illegible]			
PCB-186	(4.03)		PCB-172	14.1		PCB-200	(6.24)		Conc.	0	
PCB-178	[5.98]	J EMPC	PCB-192	(6.83)		[illegible]	[illegible]	[illegible]	EMPC	0	
PCB-175	(8.27)		PCB-180/193	89.4	C	PCB-196	[6.96]	J EMPC			
PCB-187	67.9		PCB-191	(6.53)		[illegible]	[illegible]	[illegible]	Deca	Conc.	Qualifiers
PCB-182	(7.73)		PCB-170	35.1		PCB-195	(18)		PCB-209	(20.4)	
PCB-183	30.6		PCB-190	(6.6)		[illegible]	[illegible]	[illegible]			
PCB-185	(7.94)		PCB-189	(8.17)		PCB-205	(13.3)				
			Conc.	303		[illegible]	[illegible]	[illegible]			
			EMPC	362		EMPC	86.7				